

Hypertext marks in L^AT_EX

Sebastian Rahtz

Email: `sebastian.rahtz at oucs.ox.ac.uk`

Heiko Oberdiek

Email: `heiko.oberdiek at gmail.com`

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1 Documentation overview for hyperref

The documentation for package hyperref consists of several files:

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

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


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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File hycheck.tex

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

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

```

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

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

```

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

`\HyC@checkPackage`

```

18 \def\HyC@checkPackage{\%
19 \typeout{}}\%
20 \begingroup
21 \edef\x{\endgroup
22 \noexpand\RequirePackage{\HyC@package}}\%
23 \ifx\HyC@date\@empty\relax\else[\HyC@date]\fi\%
24 }\%
25 \x
26 \typeout{}}\%
27 \typeout{\%
28 * Package '\HyC@package'\%
29 \ifx\HyC@date\@empty
30 \else
31 \space\HyC@date
32 \fi
33 }\%
34 \@ifundefined{ver@\HyC@package.sty}{\%
35 }\%
36 \typeout{\%
37 \space\space Loaded: '\HyC@package' \%
38 \csname ver@\HyC@package.sty\endcsname
39 }\%
40 }\%
41 }
```

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

```

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

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

```

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

`\HyC@checkcommand` The optional star of \LaTeX 's definitions is parsed.

```

59 \def\HyC@checkcommand{%
60   \ifx\HyC@next\relax
61     \PackageError{hyccheck}{%
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 `\cmdl` 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#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\l%
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```
231 \Hy@SetCatcodes
```

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

```

232 \RequirePackage{ltxcmds}[2010/03/09]
233 \RequirePackage{keyval}[1997/11/10]
234 \RequirePackage{kvsetkeys}[2007/09/29]
235 \RequirePackage{pdfescape}[2007/11/11]
236 \RequirePackage{ifpdf}[2006/02/20]
237 \RequirePackage{ifvtex}
238 \RequirePackage{ifxetex}[2006/08/21]
239 \RequirePackage{hycolor}
240 \RequirePackage{letltxmacro}[2008/06/13]
241 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
242 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
243 \def\Hy@Info#1{\PackageInfo{hyperref}{#1}}

```

4.2 Compatibility with format dumps

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

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

```

244 \ifundefined{AfterBeginDocument}{%
245   \def\AfterBeginDocument{\AtBeginDocument}%
246 }{%

```

`\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.

```

247 \def\Hy@AtBeginDocument{%
248   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
249 }

```

`\Hy@AtEndOfPackage`

```
250 \def\Hy@AtEndOfPackage{%
```

```

251 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
252 }

```

\Hy@AtBeginDocumentHook

```

253 \def\Hy@AtBeginDocumentHook{}

```

\Hy@AtEndOfPackageHook

```

254 \def\Hy@AtEndOfPackageHook{}

```

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

```

255 \AtEndOfPackage{%
256   \Hy@AtEndOfPackageHook
257   \let\Hy@AtEndOfPackageHook\@undefined
258   \AfterBeginDocument{%
259     \Hy@AtBeginDocumentHook}%
260   \let\Hy@AtBeginDocumentHook\@undefined
261   }%
262 }

```

4.3 Switches

```

263 \newif\ifHy@typexml
264 \newif\ifHy@activeanchor
265 \newif\ifHy@backref
266 \newif\ifHy@bookmarks
267 \newif\ifHy@bookmarksnumbered
268 \newif\ifHy@bookmarksopen
269 \newif\ifHy@breaklinks
270 \newif\ifHy@centerwindow
271 \newif\ifHy@CJKbookmarks
272 \newif\ifHy@colorlinks
273 \newif\ifHy@draft
274 \let\Hy@finaltrue\Hy@draftfalse
275 \let\Hy@finalfalse\Hy@drafttrue
276 \newif\ifHy@escapeform
277 \newif\ifHy@figures
278 \newif\ifHy@fitwindow
279 \newif\ifHy@frenchlinks
280 \newif\ifHy@hyperfootnotes
281 \newif\ifHy@hyperindex
282 \newif\ifHy@hypertextnames
283 \newif\ifHy@implicit
284 \newif\ifHy@linktocpage
285 \newif\ifHy@localanchorname
286 \newif\ifHy@menubar
287 \newif\ifHy@naturalnames
288 \newif\ifHy@nesting
289 \newif\ifHy@newwindowset
290 \newif\ifHy@newwindow
291 \newif\ifHy@ocgcolorlinks
292 \newif\ifHy@pageanchor
293 \newif\ifHy@pagelabels
294 \newif\ifHy@pdfpagehidden
295 \newif\ifHy@pdfstring
296 \newif\ifHy@plainpages
297 \newif\ifHy@psize
298 \newif\ifHy@raiselinks

```

```

299 \newif\ifHy@seminarslides
300 \newif\ifHy@setpagesize
301 \newif\ifHy@texht
302 \newif\ifHy@toolbar
303 \newif\ifHy@unicode
304 \newif\ifHy@usetitle
305 \newif\ifHy@verbose
306 \newif\ifHy>windowui
307 \newif\ifHy@displaydoctitle
308 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

309 \Hy@backreffalse
310 \Hy@bookmarksnumberedfalse
311 \Hy@bookmarksopenfalse
312 \Hy@bookmarkstrue
313 \Hy@breaklinksfalse
314 \Hy@centerwindowfalse
315 \Hy@CJKbookmarksfalse
316 \Hy@escapeformfalse
317 \Hy@figuresfalse
318 \Hy@fitwindowfalse
319 \Hy@hyperfootnotetrue
320 \Hy@hyperindextrue
321 \Hy@hypertextnamestrue
322 \Hy@implicittrue
323 \Hy@linktocpagefalse
324 \Hy@localanchornamefalse
325 \Hy@menubartrue
326 \Hy@naturalnamesfalse
327 \Hy@nestingfalse
328 \Hy@newwindowsetfalse
329 \Hy@newwindowfalse
330 \Hy@pageanchortrue
331 \Hy@pagelabelstrue
332 \Hy@pdfpagehiddenfalse
333 \Hy@pdfstringfalse
334 \Hy@plainpagesfalse
335 \Hy@raiselinksfalse
336 \Hy@setpagesizetrue
337 \Hy@texhtfalse
338 \Hy@toolbartrue
339 \Hy@typexmlfalse
340 \Hy@unicodefalse
341 \Hy@usetitlefalse
342 \Hy@verbosefalse
343 \Hy>windowuitrue
344 \Hy@displaydoctitlefalse
345 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

348 \newdimen\@linkdim
349 \let\Hy@driver\@empty
350 \let\MaybeStopEarly\relax
351 \newcount\Hy@linkcounter
352 \newcount\Hy@pagecounter
353 \Hy@linkcounter0
354 \Hy@pagecounter0

```

5.1 Macros for recursions

`\Hy@ReturnAfterElseFi` The commands `\Hy@ReturnAfterElseFi` and `\Hy@ReturnAfterFi` avoid a too deep
`\Hy@ReturnAfterFi` \if-nesting especially for recursive macros.

```

355 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
356 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

357 \let\Hy@ReturnEnd\@empty
358 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
359 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

```

360 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
361 \def\Hy@safe@activetruefalse{\csname @safe@activetruefalse\endcsname}

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

```

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

```

`\hypercalcbp`

```

362 \begingroup\expandafter\expandafter\expandafter\endgroup
363 \expandafter\ifx\csname dimexpr\endcsname\relax
364 \def\hypercalcbpdef#1#2{%
365 \begingroup
366 \toks@{%
367 \HyCal@scan#2\hypercalcbp\@nil
368 \expandafter\endgroup
369 \expandafter\def\expandafter#1\expandafter{\the\toks@}%
370 }%
371 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
372 \toks@\expandafter{\the\toks@ #1}%
373 \ifx\#2\%
374 \else
375 \Hy@ReturnAfterFi{%
376 \HyCal@do#2\@nil
377 }%
378 \fi
379 }%
380 \def\HyCal@do#1#2\@nil{%
381 \ifpackageloaded{calc}{}%
382 \Hy@Warning{%
383 For calculations \string\hypercalcbp\space needs\MessageBreak
384 package calc or e-TeX%
385 }%
386 }%
387 \setlength{\dimen@}{#1}%
388 \setlength{\dimen@}{0.99626401\dimen@}%
389 \edef\x{%
390 \toks@{%
391 \the\toks@
392 \strip@pt\dimen@
393 }%
394 }\x
395 \HyCal@scan#2\@nil
396 }%
397 \else
398 \def\hypercalcbp#1{%
399 \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
400 }%
401 \def\hypercalcbpdef{\def}%
402 \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 ISOLatin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
404 \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 (v \TeX 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.

```
405 \escapechar'\%
```

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

```
406 \edef\0{\string\0}%
407 \edef\1{\string\1}%
408 \edef\2{\string\2}%
409 \edef\3{\string\3}%
```

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

The encoding is set by $\backslash \text{enc@update}$ for optimizing reasons.

```
410 \ifHy@unicode
411 \edef\8{\string\8}%
412 \edef\9{\string\9}%
413 \fontencoding{PU}%
414 \HyPsd@UTFviii
415 \def\ifpdfstringunicode##1##2{##1}%
416 \else
417 \fontencoding{PD1}%
418 \def\ifpdfstringunicode##1##2{##2}%
419 \fi
420 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
421 \enc@update
```

Internal encoding commands. $\backslash \text{pdfstringdef}$ 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 $\backslash \text{@inmathwarn}$ will be disabled (see below).

```
422 \@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 ($\backslash \text{edef}$), so that the assignments of $\backslash \text{@changed@cmd}$ don't take place. To patch this behaviour I only found $\backslash \text{@inmathwarn}$ as a usable hook. While an $\backslash \text{edef}$ a warning message by $\backslash \text{@inmathwarn}$ or $\backslash \text{TextSymbolUnavailable}$ cannot be give out, so $\backslash \text{@inmathwarn}$ should be disabled. And with the help of it the assignments in $\backslash \text{@changed@cmd}$ can easily be caught (see below).

```
423 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
424 \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.

```
425 \let\{\textbraceleft
426 \let\}\textbraceright
427 \let\\textbackslash
428 \let\#\textnumbersign
```

```

429 \let\$ \textdollar
430 \let\%\textpercent
431 \let\&\textampersand
432 % \let\~\textasciitilde
433 \let\_ \textunderscore
434 \let\P\textparagraph
435 \let\ldots\textellipsis
436 \let\dots\textellipsis

```

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.

```

437 \def\{\pdfstringdefWarn\\}%
438 \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.

```

439 \def\TeX{\TeX}%
440 \def\LaTeX{\LaTeX}%
441 \def\LaTeXe{%
442   \LaTeX2%
443   \ifHy@unicode\textepsilon\else e\fi
444 }%
445 \def\eTeX{%
446   \ifHy@unicode\textepsilon\else e\fi
447   -\TeX%
448 }%
449 \def\SliTeX{\SliTeX}%
450 \def\MF{Metafont}%
451 \def\MP{Metapost}%

```

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

```

452 \let\fontencoding\@gobble
453 \let\fontfamily\@gobble
454 \let\fontseries\@gobble
455 \let\fontshape\@gobble
456 \let\fontsize\@gobbletwo
457 \let\selectfont\@empty
458 \let\usefont\@gobblefour
459 \let\emph\@firstofone
460 \let\textnormal\@firstofone
461 \let\textrm\@firstofone
462 \let\textsf\@firstofone
463 \let\texttt\@firstofone
464 \let\textbf\@firstofone
465 \let\textmd\@firstofone

```

```

466 \let\textit\@firstofone
467 \let\textsc\@firstofone
468 \let\textsl\@firstofone
469 \let\textup\@firstofone
470 \let\normalfont\@empty
471 \let\rmfamily\@empty
472 \let\sffamily\@empty
473 \let\ttfamily\@empty
474 \let\bfseries\@empty
475 \let\mdseries\@empty
476 \let\itshape\@empty
477 \let\scshape\@empty
478 \let\slshape\@empty
479 \let\upshape\@empty
480 \let\em\@empty
481 \let\rm\@empty
482 \let\Huge\@empty
483 \let\LARGE\@empty
484 \let\Large\@empty
485 \let\footnotesize\@empty
486 \let\huge\@empty
487 \let\large\@empty
488 \let\normalsize\@empty
489 \let\scriptsize\@empty
490 \let\small\@empty
491 \let\tiny\@empty
492 \let\mathversion\@gobble
493 \let\phantom\@gobble
494 \let\vphantom\@gobble
495 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

497 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
498 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

499 \let\textlatin\@firstofone
500 \let\IfUndefined{language@group}{-}{%
501   \csname HyPsd@babel@language@group\endcsname
502 }%
503 \HyPsd@GreekPatch
504 \HyPsd@SpanishPatch
505 \HyPsd@RussianPatch
506 \HyPsd@BabelPatch
507 \let\@safe@activetrue\relax
508 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

509 \let\cyr\relax

```

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

```

510 \let\es@roman\@Roman

```

Package german.

```
511 \let\glqq\textglqq
512 \let\grqq\textgrqq
513 \let\glq\textglq
514 \let\grq\textgrq
515 \let\flqq\textflqq
516 \let\frqq\textfrqq
517 \let\flq\textflq
518 \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}
519 \let\if@mid@expandable\@firstoftwo
```

AMS classes.

```
520 \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.

```
521 \let\hspace\HyPsd@hspace
```

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

```
522 \let\label\@gobble
523 \let\index\@gobble
524 \let\glossary\@gobble
525 \let\href\@secondoftwo
526 \let\@mkboth\@gobbletwo
```

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

```
527 \let\ref\HyPsd@ref
528 \let\pageref\HyPsd@pageref
529 \let\nameref\HyPsd@nameref
530 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
531 \let\leavevmode\@empty
532 \let\mbox\@empty
```

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

```
533 \def\halign{\pdfstringdefWarn\halign\@gobble}%
534 \let\ignorespaces\HyPsd@ignorespaces
535 \let\Hy@SectionAnchorHref\@gobble
```

Patch for cjk bookmarks.

```
536 \HyPsd@CJKhook
```

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

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

```
537 \Hy@pdfstringtrue
538 \pdfstringdefPreHook
```

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

```
539 \HyPsd@LetUnexpandableSpace\space
540 \HyPsd@LetUnexpandableSpace\ %
541 \HyPsd@LetUnexpandableSpace~%
542 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
543 \ltx@ifundefined{@xspace}{%
544   \let\xspace\HyPsd@ITALCORR
545 }{%
546   \let\xspace\HyPsd@XSPACE
547 }%
548 \let\/\HyPsd@ITALCORR
549 \let\bgroup\/%
550 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
551 \let\discretionary\@gobbletwo
    \@ifstar is defined in  $\LaTeX$  as follows:
```

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

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

A mimicry of `\@ifnextchar` only with expandable 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:

```
552 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
553 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
554 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
555 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

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

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

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

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

```

557 \begingroup
558   \let\GenericError\@gobblefour
559   \let\GenericWarning\@gobbletwo
560   \let\GenericInfo\@gobbletwo

```

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

```

561 \ifx\nofrenchguillemets\@undefined
562   \else
563     \nofrenchguillemets
564   \fi

```

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

```

565 \let\Hy@temp\xdef
566 \let\def\HyPsd@DefCommand
567 \let\gdef\HyPsd@DefCommand
568 \let\edef\HyPsd@DefCommand
569 \let\xdef\HyPsd@DefCommand
570 \let\futurelet\HyPsd@LetCommand
571 \let\let\HyPsd@LetCommand
572 \Hy@temp#1{#2}%
573 \endgroup

```

6.2.3 Postprocessing

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

```
574 \ifx#1\@empty
575 \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.

```
576 \HyPsd@ProtectSpaces#1%
577 \let\HyPsd@String\@empty
578 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
579 \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 $\backslash\text{HyPsd@CheckCatcodes}$ the command $\backslash\text{HyPsd@RemoveMask}$ is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if $\backslash\text{HyPsd@CheckCatcodes}$ is called.

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

```
580 \let\HyPsd@SPACEOPTI\relax
581 {%
582 \let\HyPsd@String\@empty
583 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@end
584 \global\let#1\HyPsd@String
585}%
586 \expandafter\HyPsd@RemoveMask\expandafter
587 \expandafter\@empty#1\HyPsd@end#1%
```


\HyPsd@CheckCatcodes should no have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause to many errors before, there should now be only tokens with catcodes 11 or 12. So I think there is no need for a safety step like:

```
\xdef#1{\expandafter\strip@prefix\meaning#1}%
```

Looking for wrong glyphs. The case that glyphs aren't defined in the PD1 encoding is caught above in such a way, that the glyph name and a marker is inserted into the string. Now we can safely scan the string for this marker and provide a descriptive warning.

```
588 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
589 \let\HyPsd@String\@empty
590 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
591 \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.

```
592 \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.

```
593 \ifHy@unicode
594 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
595 \HyPsd@SPACEOPTI#1%
596 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
597 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
598 {\HyPsd@SPACEOPTI\80\273}#1%
599 \else
600 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
601 \expandafter\HyPsd@Subst\expandafter{%
602 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
603 \string\273}{\HyPsd@SPACEOPTI\273}#1%
604 \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.

```
605 \ifHy@unicode
606 \HyPsd@StringSubst{\)}{\80\051}#1%
607 \HyPsd@Subst){\80\051}#1%
608 \let\HyPsd@empty\relax
609 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
610 {\HyPsd@empty\80\051}#1%
611 \else
612 \HyPsd@StringSubst{\)}{\051}#1%
613 \HyPsd@Subst){\051}#1%
614 \let\HyPsd@empty\relax
```

```

615      \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
616      \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`.

```

617      \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
618      \ltx@ifundefined{@xspace}{%
619      }{%
620          \let\HyPsd@xspace\relax
621          \expandafter\HyPsd@Subst\expandafter
622              {\HyPsd@XSPACE}\HyPsd@xspace#1%
623          \let\HyPsd@xspace\HyPsd@doxspace
624      }%
625      \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 6.781.

```

626      \HyPsd@Subst{---}\textemdash#1%
627      \HyPsd@Subst{--}\textendash#1%
628 %      \HyPsd@Subst{fi}\textfi#1%
629 %      \HyPsd@Subst{fl}\textfl#1%
630      \HyPsd@Subst{!'}\textexclamdown#1%
631      \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

632      \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.

```

633      \ifHy@unicode
634          \HyPsd@StringSubst{\textparenleft#1%
635          \HyPsd@Subst(\textparenleft#1%
636      \else

```

```

637 \HyPsd@StringSubst\({\050}#1%
638 \HyPsd@Subst({\050}#1%
639 \HyPsd@StringSubst{\050}{\string\{ }#1%
640 \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.

```

641 \ifHy@unicode
642 \edef\HyPsd@SPACEOPTI{\80\040}%
643 \else
644 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
645 \fi
646 \xdef#1{#1\@empty}%
647 \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.

```

648 \endgroup
649 \begingroup
650 \ifHy@unicode
651 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

652 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
653 \ltx@ifundefined{StringEncodingConvertTest}{%
654 }{%
655 \EdefUnescapeString\HyPsd@temp#1%
656 \ifxetex
657 \let\HyPsd@UnescapedString\HyPsd@temp
658 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
659 {utf16be}{ascii-print}{%
660 \EdefEscapeString\HyPsd@temp\HyPsd@temp
661 \global\let#1\HyPsd@temp
662 \HyPsd@EscapeTeX#1%
663 \Hy@unicodedefalse
664 }{%
665 \HyPsd@ToBigChars#1%
666 }%
667 \else
668 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
669 {utf16be}{pdfdoc}{%
670 \EdefEscapeString\HyPsd@temp\HyPsd@temp
671 \global\let#1\HyPsd@temp
672 \HyPsd@EscapeTeX#1%
673 \Hy@unicodedefalse
674 }{%
675 \fi
676 }%
677 \fi
678 \fi
679 \HyPsd@XeTeXBigCharsfalse

```

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

```
680 \pdfstringdefPostHook#1%
681 \endgroup
682 }
```

`\Hy@pdfstringdef`

```
683 \def\Hy@pdfstringdef#1#2{%
684 \pdfstringdef\Hy@gtemp{#2}%
685 \let#1\Hy@gtemp
686 }
```

6.3 Encodings

6.3.1 Xe_{TeX}

```
687 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
688 \catcode\z@=12 %
689 \ifxetex
690 \expandafter\@firstofone
691 \else
692 \let\HyPsd@XeTeXBigCharstrue\@empty
693 \let\HyPsd@XeTeXBigCharsfalse\@empty
694 \expandafter\@gobble
695 \fi
696 {%
697 \newif\ifHyPsd@XeTeXBigChars
698 \def\HyPsd@XeTeXBigCharsfalse{%
699 \global\let\ifHyPsd@XeTeXBigChars\iffalse
700 }%
701 \def\HyPsd@XeTeXBigCharstrue{%
702 \global\let\ifHyPsd@XeTeXBigChars\iftrue
703 }%
704 \def\HyPsd@ToBigChars#1{%
705 \ifHyPsd@XeTeXBigChars
706 \EdefEscapeHex\HyPsd@UnescapedString{%
707 \expandafter\@gobbletwo\HyPsd@UnescapedString
708 }%
709 \begingroup
710 \toks@{%
711 \escapechar=92\relax
712 \let\x\HyPsd@ToBigChar
713 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
714 \relax\relax\relax\relax\relax\relax
715 \edef\x{%
716 \endgroup
717 \gdef\noexpand#1{\the\toks@}%
718 }%
719 \x
720 \fi
721 }%
722 \def\HyPsd@ToBigChar#1#2#3#4{%
723 \ifx\relax#1\relax
724 \let\x\relax
725 \else
726 \count@=#1#2#3#4\relax
727 \let\y\@empty
```

```

728 \lccode\z@=\count@
729 \ifnum\count@=40 % (
730 \let\y\@backslashchar
731 \else
732 \ifnum\count@=41 % )
733 \let\y\@backslashchar
734 \else
735 \ifnum\count@=92 % backslash
736 \let\y\@backslashchar
737 \else
738 \ifnum\count@=10 % newline
739 \edef\y###1{\string\n}%
740 \else
741 \ifnum\count@=13 % carriage return
742 \edef\y###1{\string\r}%
743 \fi
744 \fi
745 \fi
746 \fi
747 \fi
748 \lowercase{%
749 \toks@\expandafter{%
750 \the\expandafter\toks@
751 \y
752 ^^@%
753 }%
754 }%
755 \fi
756 \x
757 }%
758 }
759 \Hy@temp

```

6.3.2 Workaround for package linguex

```

760 \ifpackageloaded{linguex}{%
761 \let\HyLinguex@OrgB\b
762 \let\HyLinguex@OrgC\c
763 \let\HyLinguex@OrgD\d
764 \def\HyLinguex@Restore{%
765 \let\b\HyLinguex@OrgB
766 \let\c\HyLinguex@OrgC
767 \let\d\HyLinguex@OrgD
768 }%
769 \Hy@AtEndOfPackage{%
770 \pdfstringdefDisableCommands{%
771 \ltx@ifundefined{oldb}{\let\b\oldb}%
772 \ltx@ifundefined{oldc}{\let\c\oldc}%
773 \ltx@ifundefined{oldd}{\let\d\oldd}%
774 }%
775 }%
776 }{%
777 \let\HyLinguex@Restore\relax
778 }%

```

6.3.3 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with $\text{\LaTeX 2}_{\epsilon}$'s NFSS. Because the informational strings are not set by \TeX 's typesetting mechanism but for inter-

preting 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.

```

779 \ifundefined{T@PD1}{%
780   \input{pdlenc.def}%
781   \HyLinguex@Restore
782 }{}
783 \DeclareFontFamily{PD1}{pdf}{}
784 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
785 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.4 PU encoding

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

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

```

786 \def\HyPsd@InitUnicode{%
787   \ifundefined{T@PU}{%
788     \input{puenc.def}%
789     \HyLinguex@Restore
790   }{}%
791   \DeclareFontFamily{PU}{pdf}{}%
792   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
793   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
794   \let\HyPsd@InitUnicode\relax
795 }

```

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 expandable macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```

796 \def\texorpdfstring{%
797   \ifHy@pdfstring
798     \expandafter\@secondoftwo
799   \else
800     \expandafter\@firstoftwo
801   \fi
802 }

```

6.4.2 Hooks for \pdfstringdef

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

```

803 \ifundefined{pdfstringdefPreHook}{%
804   \let\pdfstringdefPreHook\@empty
805 }{}

```

```

806 \@ifundefined{pdfstringdefPostHook}{%
807   \let\pdfstringdefPostHook\@gobble
808 }{}

```

`\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`.

```

809 \def\pdfstringdefDisableCommands{%
810   \begingroup
811   \makeatletter
812   \HyPsd@DisableCommands
813 }

```

`\HyPsd@DisableCommands`

```

814 \long\def\HyPsd@DisableCommands#1{%
815   \toks0=\expandafter{\pdfstringdefPreHook}%
816   \toks1={#1}%
817   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
818   \endgroup
819 }

```

`\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`.

```

820 \def\pdfstringdefWarn#1{%
821   \expandafter\noexpand\csname\<>-string#1\endcsname
822 }

```

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.

```

823 \begingroup

```

```

824 \catcode0=12 %
825 \def\x{\endgroup
826 \def\HyPsd@ignorespaces{%
827 \romannumeral\expandafter'\expandafter^^@%
828 \romannumeral'^^@%
829 }%
830 }%
831 \x

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

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

```

832 \def\HyPsd@BabelPatch{%
833 \let\HyOrg@languageshorthands\languageshorthands
834 \let\languageshorthands\HyPsd@LanguageShorthands
835 }
836 \RequirePackage{pdfdoccmds}[2009/04/10]
837 \begingroup\expandafter\expandafter\expandafter\endgroup
838 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
839 \let\HyPsd@langshort@system\@empty
840 \def\HyPsd@LanguageShorthands#1{%
841 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
842 \HyPsd@langshort@system
843 \expandafter\@gobble
844 \else
845 \expandafter\@firstofone
846 \fi
847 {%
848 \HyOrg@languageshorthands{#1}%
849 }%
850 }%
851 \else
852 \def\HyPsd@LanguageShorthands#1{%
853 \ifnum\pdf@strcmp{#1}{system}=\z@
854 \expandafter\@gobble
855 \else
856 \expandafter\@firstofone
857 \fi
858 {%
859 \HyOrg@languageshorthands{#1}%
860 }%
861 }%
862 \fi
863 \def\Hy@temp{%
864 \@ifpackageloaded{babel}{%
865 \@ifpackagelater{babel}{2008/03/16}{%
866 \let\Hy@temp\@empty
867 }{%

```



```

868 \def\HyPsd@BabelPatch{%
869 \let\HyOrg@languageshorthands\languageshorthands
870 }%
871 }%
872 }{}%
873 }
874 \Hy@temp
875 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
876 \newif\ifHy@next

Nothing to do for english.
877 \ltx@ifundefined{danish@sh@@"@sel}{-}{%
878 \def\HyPsd@babel@danish{%
879 \declare@shorthand{danish}{-}{-}%
880 \declare@shorthand{danish}{-}{-}%
881 }%
882 }
883 \ltx@ifundefined{dutch@sh@@"@sel}{-}{%
884 \def\HyPsd@babel@dutch{%
885 \declare@shorthand{dutch}{-}{-}%
886 \declare@shorthand{dutch}{-}{-}%
887 }%
888 }
889 \ltx@ifundefined{finnish@sh@@"@sel}{-}{%
890 \def\HyPsd@babel@finnish{%
891 \declare@shorthand{finnish}{-}{-}%
892 }%
893 }
894 \ltx@ifundefined{french@sh@@"@sel}{-}{%
895 \def\HyPsd@babel@frenchb{%
896 \def\guill@spacing{ }%
897 }%
898 }
899 \ltx@ifundefined{german@sh@@"@sel}{-}{%
900 \def\HyPsd@babel@german{%
901 \declare@shorthand{german}{f}{f}%
902 \declare@shorthand{german}{-}{-}%
903 \declare@shorthand{german}{-}{-}%
904 }%
905 }
906 \ltx@ifundefined{macedonian@sh@@"@sel}{-}{%
907 \def\HyPsd@babel@macedonian{%
908 \declare@shorthand{macedonian}{-}{-}%
909 \declare@shorthand{macedonian}{-}{-}%
910 }%
911 }{}
912 \ltx@ifundefined{ngerman@sh@@"@sel}{-}{%
913 \def\HyPsd@babel@ngerman{%
914 \declare@shorthand{ngerman}{-}{-}%
915 \declare@shorthand{ngerman}{-}{-}%
916 }%
917 }
918 \ltx@ifundefined{portuges@sh@@"@sel}{-}{%
919 \def\HyPsd@babel@portuges{%
920 \declare@shorthand{portuges}{-}{-}%
921 }%
922 }

```

```

923 \ltx@ifundefined{russian@sh@"@sel}{-}{%
924   \def\HyPsd@babel@russian{%
925     \declare@shorthand{russian}{-}{-}%
926     \declare@shorthand{russian}{-}{-}%
927   }%
928 }
929 \ltx@ifundefined{slovene@sh@"@sel}{-}{%
930   \def\HyPsd@babel@slovene{%
931     \declare@shorthand{slovene}{-}{-}%
932   }%
933 }

```

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

```

934 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
935   \def\HyPsd@babel@spanish{%
936     \declare@shorthand{spanish}{<<}{\guillemotleft}%
937     \declare@shorthand{spanish}{>>}{\guillemotright}%
938     \declare@shorthand{spanish}{=}{}-%
939     \declare@shorthand{spanish}{-}{-}%
940     \declare@shorthand{spanish}{!}{\textexclamdown}%
941     \declare@shorthand{spanish}{?}{\textquestiondown}%
942   }%
943 }
944 \ltx@ifundefined{swedish@sh@"@sel}{-}{%
945   \def\HyPsd@babel@swedish{%
946     \declare@shorthand{swedish}{-}{-}%
947     \declare@shorthand{swedish}{-}{-}%
948   }%
949 }
950 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
951   \def\HyPsd@babel@ukrainian{%
952     \declare@shorthand{ukrainian}{-}{-}%
953     \declare@shorthand{ukrainian}{-}{-}%
954   }%
955 }
956 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
957   \def\HyPsd@babel@usorbian{%
958     \declare@shorthand{usorbian}{f}{f}%
959     \declare@shorthand{usorbian}{-}{-}%
960   }%
961 }
962 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
963   \let\HyPsd@GreekPatch\@empty
964 }{%
965   \def\HyPsd@GreekPatch{%
966     \let\greeknumeral\HyPsd@greeknumeral
967     \let\Greeknatural\HyPsd@greeknumeral
968   }%
969 }
970 \def\HyPsd@greeknumeral#1{%
971   \HyPsd@GreekNum\@firstoftwo{#1}%
972 }
973 \def\HyPsd@Greeknumeral#1{%
974   \HyPsd@GreekNum\@secondoftwo{#1}%
975 }
976 \def\HyPsd@GreekNum#1#2{%
977   \ifHy@unicode
978     \ifnum#2<\@ne

```

```

979 \@arabic{#2}%
980 \else
981 \ifnum#2<1000000 %
982 \HyPsd@@GreekNum#1{#2}%
983 \else
984 \@arabic{#2}%
985 \fi
986 \fi
987 \else
988 \@arabic{#2}%
989 \fi
990 }
991 \def\HyPsd@@GreekNum#1#2{%
992 \ifnum#2<\@m
993 \ifnum#2<10 %
994 \expandafter\HyPsd@GreekNumI
995 \expandafter\@gobble\expandafter#1\number#2%
996 \else
997 \ifnum#2<100 %
998 \expandafter\HyPsd@GreekNumII
999 \expandafter\@gobble\expandafter#1\number#2%
1000 \else
1001 \expandafter\HyPsd@GreekNumIII
1002 \expandafter\@gobble\expandafter#1\number#2%
1003 \fi
1004 \fi
1005 \ifnum#2>\z@
1006 \textnumeralsigngreek
1007 \fi
1008 \else
1009 \ifnum#2<\@M
1010 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1011 \else
1012 \ifnum#2<100000 %
1013 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1014 \else
1015 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1016 \fi
1017 \fi
1018 \fi
1019 }
1020 \def\HyPsd@GreekNumI#1#2#3{%
1021 #1{%
1022 \ifnum#3>\z@
1023 \textnumeralsignlowergreek
1024 \fi
1025 }%
1026 \expandafter#2%
1027 \ifcase#3 %
1028 {}{}%
1029 \or\textalpha\textAlpha
1030 \or\textbeta\textBeta
1031 \or\textgamma\textGamma
1032 \or\textdelta\textDelta
1033 \or\textepsilon\textEpsilon
1034 \or\textstigmagreek\textStigmagreek
1035 \or\textzeta\textZeta

```

```

1036 \or\texteta\textEta
1037 \or\texttheta\textTheta
1038 \else
1039   {}{}%
1040 \fi
1041 }
1042 \def\HyPsd@GreekNumII#1#2#3#4{%
1043   #1{%
1044     \ifnum#3>\z@
1045       \textnumeralsignlowergreek
1046     \fi
1047   }%
1048   \expandafter#2%
1049   \ifcase#3 %
1050     {}{}%
1051   \or\textiota\textIota
1052   \or\textkappa\textKappa
1053   \or\textlambda\textLambda
1054   \or\textmu\textMu
1055   \or\textnu\textNu
1056   \or\textxi\textXi
1057   \or\textomicron\textOmicron
1058   \or\textpi\textPi
1059   \or\textkoppagreek\textKoppagreek
1060   \else
1061     {}{}%
1062   \fi
1063   \HyPsd@GreekNumI#1#2#4%
1064 }
1065 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1066   #1{%
1067     \ifnum#3>\z@
1068       \textnumeralsignlowergreek
1069     \fi
1070   }%
1071   \expandafter#2%
1072   \ifcase#3 %
1073     {}{}%
1074   \or\textrho\textRho
1075   \or\textsigma\textSigma
1076   \or\texttau\textTau
1077   \or\textupsilon\textUpsilon
1078   \or\textphi\textPhi
1079   \or\textchi\textChi
1080   \or\textpsi\textPsi
1081   \or\textomega\textOmega
1082   \or\textsampigreek\textSampigreek
1083   \else
1084     {}{}%
1085   \fi
1086   \HyPsd@GreekNumII#1#2#4#5%
1087 }
1088 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1089   \HyPsd@GreekNumI\@firstofone#1#2%
1090   \HyPsd@@GreekNum#1{#3#4#5}%
1091 }
1092 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%

```

```

1093 \HyPsd@GreekNumII\@firstofone#1#2#3%
1094 \HyPsd@@GreekNum#1{#4#5#6}%
1095 }
1096 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1097 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1098 \HyPsd@@GreekNum#1{#5#6#7}%
1099 }

1100 \def\HyPsd@SpanishPatch{%
1101 \ltx@ifundefined{es@save@dot}{%
1102 }{%
1103 \let\.\es@save@dot
1104 }%
1105 }

```

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

```

1106 \def\HyPsd@RussianPatch{%
1107 \ltx@ifundefined{russian@sh@"@-@}{%
1108 }{%
1109 \@namedef{russian@sh@"@-@}{-}%
1110 }%
1111 }

```

6.5.3 CJK patch

```

1112 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1113 \def\HyPsd@CJKhook{%
1114 \ltx@ifpackageloaded{CJK}{%
1115 \let\CJK@kern\relax
1116 \let\CJKkern\relax
1117 \let\CJK@CJK\relax
1118 \ifHy@CJKbookmarks
1119 \HyPsd@CJKhook@bookmarks
1120 \fi
1121 \HyPsd@CJKhook@unicode
1122 }{%
1123 }

```

6.5.4 CJK bookmarks

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

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

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

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

```

1124 \begingroup
1125 \catcode"7F=\active
1126 \toks@{%
1127 \let\CJK@ignorespaces\empty
1128 \def\CJK@char#1{\@gobbletwo}%

```

```

1129 \let\CJK@charx\@gobblefour
1130 \let\CJK@punctchar\@gobblefour
1131 \def\CJK@punctcharx#1{\@gobblefour}%
1132 \catcode"7F=\active
1133 \def^^7f#1^^7f#2^^7f{%
1134   \string #1\HyPsd@DecimalToOctal{#2}%
1135 }%
1136 % ... ?
1137 \ifHy@unicode
1138   \def\Hy@cjku{\80}%
1139 \else
1140   \let\Hy@cjku\@empty
1141 \fi
1142 \HyPsd@CJKActiveChars
1143 }%
1144 \count@=127 %
1145 \@whilenum\count@<255 \do{%
1146   \advance\count@ by 1 %
1147   \lccode'\~=\count@
1148   \lowercase{%
1149     \toks@\expandafter{\the\toks@ ~}%
1150   }%
1151 }%
1152 \toks@\expandafter{\the\toks@ !}%
1153 \xdef\HyPsd@CJKhook@bookmarks{%
1154   \the\toks@
1155 }%
1156 \endgroup

```

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

```

1157 \def\HyPsd@CJKActiveChars#1{%
1158   \ifx#1!%
1159     \let\HyPsd@CJKActiveChars\relax
1160   \else
1161     \edef#1{\noexpand\Hy@cjku\string#1}%
1162   \fi
1163   \HyPsd@CJKActiveChars
1164 }

```

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

```

1165 \def\HyPsd@DecimalToOctal#1{%
1166   \ifcase #1 %
1167     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1168     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1169     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1170     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1171     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1172     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1173     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1174     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1175     \or @\or A\or B\or C\or D\or E\or F\or G%
1176     \or H\or I\or J\or K\or L\or M\or N\or O%
1177     \or P\or Q\or R\or S\or T\or U\or V\or W%
1178     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1179     \or \140\or a\or b\or c\or d\or e\or f\or g%
1180     \or h\or i\or j\or k\or l\or m\or n\or o%

```

```

1181 \or p\or q\or r\or s\or t\or u\or v\or w%
1182 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1183 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1184 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1185 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1186 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1187 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1188 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1189 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1190 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1191 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1192 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1193 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1194 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1195 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1196 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1197 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1198 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1199 \fi
1200 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1201 \def\HyPsd@CJKhook@unicode{%
1202 \let\Unicode\HyPsd@CJK@Unicode
1203 \let\CJKnumber\HyPsd@CJKnumber
1204 \let\CJKdigits\HyPsd@CJKdigits
1205 }

```

\HyPsd@CJK@Unicode

```

1206 \def\HyPsd@CJK@Unicode#1#2{%
1207 \ifnum#1<256 %
1208 \HyPsd@DecimalToOctalFirst{#1}%
1209 \HyPsd@DecimalToOctalSecond{#2}%
1210 \else
1211 \933%
1212 \expandafter\expandafter\expandafter\HyPsd@HighA
1213 \intcalcDiv{#1}{4}!%
1214 \933%
1215 \ifcase\intcalcMod{#1}{4} %
1216 4\or 5\or 6\or 7%
1217 \fi
1218 \HyPsd@DecimalToOctalSecond{#2}%
1219 \fi
1220 }

1221 \def\HyPsd@HighA#1!{%
1222 \expandafter\expandafter\expandafter\HyPsd@HighB
1223 \IntCalcDiv#1!64!!%
1224 \expandafter\expandafter\expandafter\HyPsd@HighD
1225 \IntCalcMod#1!64!!%
1226 }
1227 \def\HyPsd@HighB#1!{%
1228 \expandafter\expandafter\expandafter\HyPsd@HighC
1229 \IntCalcDec#1!!%
1230 }

```

```

1231 \def\HyPsd@HighC#1!{%
1232   \IntCalcDiv#1!4!%
1233   \@backslashchar
1234   \IntCalcMod#1!4!%
1235 }
1236 \def\HyPsd@HighD#1!{%
1237   \ifcase\IntCalcDiv#1!8! %
1238     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1239   \fi
1240   \ifcase\IntCalcMod#1!8! %
1241     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1242   \fi
1243 }
1244 \def\HyPsd@DecimalToOctalFirst#1{%
1245   \9%
1246   \ifcase#1 %
1247     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1248     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1249     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1250     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1251     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1252     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1253     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1254     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1255     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1256     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1257     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1258     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1259     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1260     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1261     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1262     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1263     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1264     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1265     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1266     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1267     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1268     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1269     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1270     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1271     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1272     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1273     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1274     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1275     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1276     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1277     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1278     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1279   \fi
1280 }
1281 \def\HyPsd@DecimalToOctalSecond#1{%
1282   \ifcase #1 %
1283     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1284     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1285     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1286     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1287     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%

```



```

1288 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1289 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1290 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1291 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1292 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1293 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1294 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1295 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1296 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1297 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1298 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1299 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1300 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1301 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1302 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1303 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1304 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1305 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1306 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1307 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1308 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1309 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1310 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1311 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1312 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1313 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1314 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1315 \fi
1316 }

1317 \def\HyPsd@CJKnumber#1{%
1318 \ifnum#1<\z@
1319 \CJK@minus
1320 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1321 \else
1322 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1323 \fi
1324 }

1325 \def\HyPsd@@CJKnumber#1{%
1326 \ifcase#1 %
1327 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1328 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1329 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1330 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1331 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1332 \CJK@ten\CJK@nine
1333 \else
1334 \ifnum#1<10000 %
1335 \HyPsd@CJKnumberFour#1!\@empty{20}%
1336 \@empty
1337 \else
1338 \ifnum#1<100000000 %
1339 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1340 \IntCalcDiv#1!10000!%
1341 !\{20}%
1342 \CJK@tenthousand
1343 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1344 \IntCalcMod#1!10000!%

```

```

1345      !\CJK@zero{10}%
1346      \@empty
1347      \else
1348      \expandafter\HyPsd@CJKnumberLarge
1349      \number\IntCalcDiv#1!100000000!\expandafter!%
1350      \number\IntCalcMod#1!100000000!!%
1351      \fi
1352      \fi
1353      \fi
1354  }
1355  \def\HyPsd@CJKnumberLarge#1!#2!{%
1356  \HyPsd@CJKnumberFour#1!{}{20}%
1357  \CJK@hundredmillion
1358  \ifnum#2=\z@
1359  \else
1360  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1361  \IntCalcDiv#2!10000!%
1362  !\CJK@zero{10}%
1363  \CJK@tenthousand
1364  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1365  \IntCalcMod#2!10000!%
1366  !\CJK@zero{10}%
1367  \@empty
1368  \fi
1369  }
1370  \def\HyPsd@CJKnumberFour#1!#2#3{%
1371  \ifnum#1=\z@
1372  \expandafter\@gobble
1373  \else
1374  \ifnum#1<1000 %
1375  #2%
1376  \HyPsd@CJKnumberThree#1!{}{#3}%
1377  \else
1378  \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1379  \CJK@thousand
1380  \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1381  \IntCalcMod#1!1000!%
1382  !\CJK@zero{10}%
1383  \fi
1384  \fi
1385  }
1386  \def\HyPsd@CJKnumberThree#1!#2#3{%
1387  \ifnum#1=\z@
1388  \else
1389  \ifnum#1<100 %
1390  #2%
1391  \HyPsd@CJKnumberTwo#1!{}{#3}%
1392  \else
1393  \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1394  \CJK@hundred
1395  \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1396  \IntCalcMod#1!100!%
1397  !\CJK@zero{10}%
1398  \fi
1399  \fi
1400  }
1401  \def\HyPsd@CJKnumberTwo#1!#2#3{%

```

```

1402 \ifnum#1=\z@
1403 \else
1404 \ifnum#1<#3 %
1405   #2%
1406   \HyPsd@@CJKnumber{#1}%
1407 \else
1408   \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1409   \CJK@ten
1410   \ifnum\IntCalcMod#1!10!=\z@
1411   \else
1412     \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1413   \fi
1414 \fi
1415 \fi
1416 }

1417 \def\HyPsd@CJKdigits#1{%
1418   \ifx*#1\relax
1419     \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1420   \else
1421     \HyPsd@@CJKdigits\CJK@null{#1}%
1422   \fi
1423 }

1424 \def\HyPsd@@CJKdigits#1#2{%
1425   \ifx\#2\%
1426   \else
1427     \HyPsd@@@CJKdigits#1#2\@nil
1428   \fi
1429 }%

1430 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1431   \HyPsd@CJKdigit#1{#2}%
1432   \ifx\#3\%
1433     \expandafter\@gobble
1434   \else
1435     \expandafter\@firstofone
1436   \fi
1437   {%
1438     \HyPsd@@@CJKdigits#1#3\@nil
1439   }%
1440 }

1441 \def\HyPsd@CJKdigit#1#2{%
1442   \ifcase#2 %
1443     #1\or
1444     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1445     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1446   \fi
1447 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

1448 \def\HyPsd@inmathwarn#1#2{%
1449   \ifx#2\expandafter
1450     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1451       \HyPsd@GLYPHERR
1452       \expandafter\@gobble\string#1%
1453     >%
1454     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1455   \else
1456     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1457   \fi
1458 \else
1459   \expandafter#2%
1460 \fi
1461 }
1462 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1463 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1464 \def\HyPsd@add@accent#1#2{%
1465   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1466   #2%
1467 }%

```

6.5.7 Unexpandable spaces

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

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

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

```
1468 \def\HyPsd@LetUnexpandableSpace#1{%
1469   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1470 }
```

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

```
1471 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

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

```
1472 \edef\HyPsd@XSPACE{\string#\string X}
1473 \edef\HyPsd@ITALCORR{\string#\string I}
1474 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace fix`

`\HyPsd@hspace`

```
1475 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1476 \def\HyPsd@@hspace#1*#2\END{%
1477   \ifx\#2\%
1478     \HyPsd@hspacetest{#1}%
1479   \else
1480     \expandafter\HyPsd@hspacetest
1481   \fi
1482 }
```

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

```
1483 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1484 \ltx@ifundefined{tocsection}{%
1485   \let\HyPsd@AMSclassfix\relax
1486 }{%
1487   \def\HyPsd@AMSclassfix{%
1488     \let\tocpart\HyPsd@tocsection
1489     \let\tocchapter\HyPsd@tocsection
1490     \let\tocappendix\HyPsd@tocsection
```

```

1491 \let\tocsection\HyPsd@tocsection
1492 \let\tocsubsection\HyPsd@tocsection
1493 \let\tocsubsubsection\HyPsd@tocsection
1494 \let\tocparagraph\HyPsd@tocsection
1495 }%
1496 \def\HyPsd@tocsection#1#2#3{%
1497 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1498 #3%
1499 }%
1500 }

```

6.5.11 Reference commands

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

```

1501 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1502 \def\HyPsd@@ref#1*#2\END{%
1503 \ifx\#2\%
1504 \HyPsd@@@ref{#1}%
1505 \else
1506 \expandafter\HyPsd@@@ref
1507 \fi
1508 }%

```

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

```

1509 \def\HyPsd@@@ref#1{%
1510 \expandafter\ifx\csname r@#1\endcsname\relax
1511 ??%
1512 \else
1513 \expandafter\expandafter\expandafter
1514 \@car\csname r@#1\endcsname\@nil
1515 \fi
1516 }

```

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

```

1517 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1518 \def\HyPsd@@pageref#1*#2\END{%
1519 \ifx\#2\%
1520 \HyPsd@@@pageref{#1}%
1521 \else
1522 \expandafter\HyPsd@@@pageref
1523 \fi
1524 }

```

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

```

1525 \def\HyPsd@@@pageref#1{%
1526 \expandafter\ifx\csname r@#1\endcsname\relax
1527 ??%
1528 \else
1529 \expandafter\expandafter\expandafter\expandafter
1530 \expandafter\expandafter\expandafter\@car
1531 \expandafter\expandafter\expandafter\@gobble

```

```

1532 \csname r@#1\endcsname{}\@nil
1533 \fi
1534 }

```

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

```

1535 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1536 \def\HyPsd@@nameref#1*#2\END{%
1537 \ifx\#2\%
1538 \HyPsd@@@nameref{#1}%
1539 \else
1540 \expandafter\HyPsd@@@nameref
1541 \fi
1542 }

```

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

```

1543 \def\HyPsd@@@nameref#1{%
1544 \expandafter\ifx\csname r@#1\endcsname\relax
1545 ??%
1546 \else
1547 \expandafter\expandafter\expandafter\expandafter
1548 \expandafter\expandafter\expandafter\@car
1549 \expandafter\expandafter\expandafter\@gobbletwo
1550 \csname r@#1\endcsname{}\}\@nil
1551 \fi
1552 }

```

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

```

1553 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1554 \def\HyPsd@@autoref#1*#2\END{%
1555 \ifx\#2\%
1556 \HyPsd@@@autoref{#1}%
1557 \else
1558 \expandafter\HyPsd@@@autoref
1559 \fi
1560 }

```

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

```

1561 \def\HyPsd@@@autoref#1{%
1562 \expandafter\ifx\csname r@#1\endcsname\relax
1563 ??%
1564 \else
1565 \expandafter\expandafter\expandafter\HyPsd@autorefname
1566 \csname r@#1\endcsname{}\}\}\@nil
1567 \expandafter\expandafter\expandafter
1568 \@car\csname r@#1\endcsname\@nil
1569 \fi
1570 }

```

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

```

1571 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%

```

```

1572 \ifx\#4\%
1573 \else
1574 \HyPsd@@autorefname#4.\@nil
1575 \fi
1576 }

```

\HyPsd@@autorefname

```

1577 \def\HyPsd@@autorefname#1.#2\@nil{%
1578 \ltx@ifundefined{#1autorefname}{%
1579 \ltx@ifundefined{#1name}{%
1580 }{%
1581 \csname#1name\endcsname\space
1582 }%
1583 }{%
1584 \csname#1autorefname\endcsname\space
1585 }%
1586 }

```

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 argument, 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 unbalanced \if... tokens, the cases \let\if...\iftrue and \let\if...\iffalse are checked and ignored.

\HyPsd@DefCommand

\HyPsd@LetCommand

```

1587 \begingroup
1588 \def\x#1#2{%
1589 \endgroup
1590 \let#1\def
1591 \def\HyPsd@DefCommand##1##2##{%
1592 #1%
1593 \expandafter\noexpand

```



```

1594     \csname\expandafter\@gobble\string##1\@empty\endcsname
1595     \@gobble
1596 }%
1597 \let#2\let
1598 \def\HyPsd@@LetCommand##1{%
1599     \expandafter\ifx\csname##1\expandafter\endcsname
1600         \csname iftrue\endcsname
1601         \pdfstringdefWarn\let
1602         \expandafter\@gobble
1603     \else
1604         \expandafter\ifx\csname##1\expandafter\endcsname
1605             \csname iffalse\endcsname
1606             \pdfstringdefWarn\let
1607             \expandafter\expandafter\expandafter\@gobble
1608         \else
1609             #2%
1610             \expandafter\noexpand
1611             \csname##1\expandafter\expandafter\expandafter\endcsname
1612         \fi
1613     \fi
1614 }%
1615 }%
1616 \expandafter\x\csname <def>-command\expandafter\endcsname
1617     \csname <let>-command\endcsname
1618 \def\HyPsd@LetCommand#1{%
1619     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1620     \expandafter\expandafter\expandafter{%
1621     \expandafter\@gobble\string#1\@empty
1622 }%
1623 }

```

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).

```

1624 \def\HyPsd@ifnextchar#1{%
1625     \pdfstringdefWarn#1%
1626     \expandafter\@gobbletwo\@gobble
1627 }

```

6.5.14 \@protected@testoptifnextchar

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

```

1628 \def\HyPsd@protected@testopt#1{%

```

```

1629 \pdfstringdefWarn#1%
1630 \@gobbletwo
1631 }

```

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:

```

1632 \def\HyPsd@Warning#1{%
1633   \begingroup
1634   \def\space{ }%
1635   \Hy@Warning{#1}%
1636   \endgroup
1637 }

```

6.6.2 Protecting spaces

```

1638 \RequirePackage{etexcmds}[2007/09/09]
1639 \ifetex@unexpanded
1640   \expandafter\@secondoftwo
1641 \else
1642   \expandafter\@firstoftwo
1643 \fi
1644 {%

```

`\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`.

```

1645 \def\HyPsd@ProtectSpaces#1{%
1646   \iftrue
1647     \expandafter\HyPsd@@ProtectSpacesFi
1648     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1649   \fi
1650 }%

```

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

```

1651 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1652   \fi
1653   \ifx\scrollmode#2\scrollmode
1654     \HyPsd@RemoveMask#1\HyPsd@End#3%
1655   \else
1656     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1657     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1658   \fi
1659 }%

```

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.

```

1660 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1661   \toks@\expandafter{#1}%
1662   \xdef#2{\the\toks@}%
1663 }%

```

```

1664 }{%
1665   \let\HyPsd@fi\fi
1666   \def\HyPsd@ProtectSpaces#1{%
1667     \xdef#1{%
1668       \iftrue
1669         \expandafter\HyPsd@@ProtectSpacesFi
1670         \expandafter|\expandafter\@empty#1| %
1671       \HyPsd@fi
1672     }%
1673     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1674   }%
1675   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1676     \fi
1677     \etex@unexpanded{#1}%
1678     \ifx\scrollmode#2\scrollmode
1679     \else
1680       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1681     \HyPsd@fi
1682   }%
1683   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1684     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1685   }%
1686 }

```

6.6.3 Remove grouping braces

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

```

1687 \def\HyPsd@RemoveBraces#1{%
1688   \ifx\scrollmode#1\scrollmode
1689   \else
1690     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1691   \fi
1692 }

```

`\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 `\Hy@ReturnAfterFi`.

```

1693 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1694   \fi
1695   \def\Hy@temp@A{#1#2}%
1696   \def\Hy@temp@B{#3}%
1697   \ifx\Hy@temp@A\Hy@temp@B
1698     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1699       \HyPsd@String#1%
1700     }%
1701   \ifx\scrollmode#2\scrollmode
1702   \else
1703     \Hy@ReturnAfterFiFiEnd{%
1704       \HyPsd@RemoveBraces{#2}%
1705     }%

```

```

1706 \fi
1707 \else
1708 \def\Hy@temp@A{#1}%
1709 \HyPsd@AppendItalcrr\HyPsd@String
1710 \ifx\Hy@temp@A\@empty
1711 \Hy@ReturnAfterElseFiFiEnd{%
1712 \HyPsd@RemoveBraces{#2}%
1713 }%
1714 \else
1715 \HyPsd@ProtectSpaces\Hy@temp@A
1716 \HyPsd@AppendItalcrr\Hy@temp@A
1717 \Hy@ReturnAfterFiFiEnd{%
1718 \expandafter\HyPsd@RemoveBraces\expandafter
1719 {\Hy@temp@A#2}%
1720 }%
1721 \fi
1722 \fi
1723 \Hy@ReturnEnd
1724 }

```

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

```

1725 \def\HyPsd@AppendItalcrr#1{%
1726 \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1}%
1727 }
1728 \def\HyPsd@@AppendItalcrr#1#2{%
1729 \expandafter\def\expandafter#2\expandafter{#2#1}%
1730 }

```

6.6.4 Catcode check

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).

```

1731 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1732 \global\let\HyPsd@Rest\relax
1733 \ifcat\relax\noexpand#1\relax
1734 \ifx#1\protect
1735 \else
1736 \ifx#1\penalty
1737 \setbox\z@=\hbox{%
1738 \afterassignment\HyPsd@AfterCountRemove
1739 \count@=#2\HyPsd@End
1740 }%
1741 \else
1742 \ifx#1\kern
1743 \setbox\z@=\hbox{%
1744 \afterassignment\HyPsd@AfterDimenRemove

```

```

1745     \dimen@=#2\HyPsd@End
1746   }%
1747 \else
1748   \ifx#1\hskip
1749     \setbox\z@=\hbox{%
1750       \afterassignment\HyPsd@AfterSkipRemove
1751       \skip@=#2\HyPsd@End
1752     }%
1753 \else
1754   \HyPsd@CatcodeWarning{#1}%
1755 \fi
1756 \fi
1757 \fi
1758 \fi
1759 \else
1760   \ifcat#1A% letter
1761     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1762       \HyPsd@String#1%
1763     }%
1764 \else
1765   \ifcat#1 % SPACE
1766     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1767       \HyPsd@String\HyPsd@SPACEOPTI
1768     }%
1769 \else
1770   \ifcat$#1%
1771     \HyPsd@CatcodeWarning{math shift}%
1772 \else
1773   \ifcat&#1%
1774     \HyPsd@CatcodeWarning{alignment tab}%
1775 \else
1776   \ifcat^#1%
1777     \HyPsd@CatcodeWarning{superscript}%
1778 \else
1779   \ifcat_#1%
1780     \HyPsd@CatcodeWarning{subscript}%
1781 \else
1782     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1783       \HyPsd@String#1%
1784     }%
1785   \fi
1786 \fi
1787 \fi
1788 \fi
1789 \fi
1790 \fi
1791 \fi
1792 \ifx\HyPsd@Rest\relax
1793   \ifx\scrollmode#2\scrollmode
1794 \else
1795   \Hy@ReturnAfterFiFiEnd{%
1796     \HyPsd@CheckCatcodes#2\HyPsd@End
1797   }%
1798 \fi
1799 \else
1800   \ifx\HyPsd@Rest\@empty
1801 \else

```

```

1802 \Hy@ReturnAfterFiFiEnd{%
1803 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1804 }%
1805 \fi
1806 \fi
1807 \Hy@ReturnEnd
1808 }

```

Remove counts, dimens, skips.

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

```

1809 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1810 \gdef\HyPsd@Rest{#1}%
1811 }

```

`\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.

```

1812 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1813 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@\fi>1ex %
1814 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1815 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1816 \else
1817 \ifdim\dimen@=\z@
1818 \else
1819 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1820 \fi
1821 \gdef\HyPsd@Rest{#1}%
1822 \fi
1823 }

```

`\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).

```

1824 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1825 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@\fi>1ex %
1826 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1827 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1828 \else
1829 \ifdim\skip@=\z@
1830 \else
1831 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1832 \fi
1833 \gdef\HyPsd@Rest{#1}%
1834 \fi
1835 }

```

Catcode warnings.

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

```

1836 \def\HyPsd@CatcodeWarning#1{%
1837 \HyPsd@Warning{%
1838 Token not allowed in a PDF string (%
1839 \ifHy@unicode
1840 Unicode%
1841 \else

```

```

1842     PDFDocEncoding%
1843     \fi
1844   ):%
1845   \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1846 }%
1847 }
1848 \begingroup
1849 \catcode‘\|=0 %
1850 \catcode‘\|=12 %
1851 |gdef|HyPsd@RemoveCmdPrefix#1{%
1852 |expandafter|HyPsd@@RemoveCmdPrefix
1853 |string#1|@empty\<>-|@empty|@empty
1854 }%
1855 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1856 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1857 \def\HyPsd@RemoveSpaceWarning#1{%
1858   \HyPsd@Warning{%
1859     Token not allowed in a PDF string (%)
1860     \ifHy@unicode
1861       Unicode%
1862     \else
1863       PDFDocEncoding%
1864     \fi
1865   ):%
1866   \MessageBreak #1\MessageBreak
1867   removed%
1868 }%
1869 }

```

\HyPsd@ReplaceSpaceWarning

```

1870 \def\HyPsd@ReplaceSpaceWarning#1{%
1871   \HyPsd@Warning{%
1872     Token not allowed in a PDF string (%)
1873     \ifHy@unicode
1874       Unicode%
1875     \else
1876       PDFDocEncoding%
1877     \fi
1878   ):%
1879   \MessageBreak #1\MessageBreak
1880   replaced by space%
1881 }%
1882 }

```

6.6.5 Check for wrong glyphs

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

```

1883 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1884   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1885     \HyPsd@String#1%
1886   }%
1887   \ifx\\#2\\%
1888   \else
1889     \Hy@ReturnAfterFi{%

```

```

1890 \HyPsd@GlyphProcessWarning#2\@empty
1891 }%
1892 \fi
1893 }
1894 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1895 \HyPsd@@GlyphProcessWarning#1++>%
1896 \HyPsd@GlyphProcess#2\@empty
1897 }
1898 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1899 \ifx\#2\%
1900 \HyPsd@Warning{%
1901 Glyph not defined in %
1902 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1903 removing \@backslashchar#1'%
1904 }%
1905 \else
1906 \HyPsd@Warning{%
1907 Composite letter \@backslashchar#1+#2'\MessageBreak
1908 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1909 \MessageBreak
1910 removing \@backslashchar#1'%
1911 }%
1912 \fi
1913 }

```

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.

```

1914 \def\HyPsd@spaceopti#1{ % first space
1915 \ifx\HyPsd@spaceopti#1%
1916 \040%
1917 \else
1918 #1%
1919 \fi
1920 }%

```

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.

1921 \def\HyPsd@Subst#1#2#3{%
1922 \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1923 \fi
1924 ##1%
1925 \ifx\scrollmode##2\scrollmode
1926 \else
1927 #2%
1928 \HyPsd@@ReplaceFi##2\END
1929 \fi
1930 }%

```



```

1931 \xdef#3{%
1932   \iftrue
1933     \expandafter\HyPsd@@ReplaceFi#3#1\END
1934   \fi
1935 }%
1936 }

```

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

```

1937 \def\HyPsd@StringSubst#1{%
1938   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1939 }

```

`\HyPsd@EscapeTeX`

```

1940 \begingroup
1941   \lccode'\!='\%%
1942   \lccode'\|='\%%
1943   \lccode'\(='\{%
1944   \lccode'\)='\}%
1945   \lccode'0=\ltx@zero
1946   \lccode'1=\ltx@zero
1947   \lccode'3=\ltx@zero
1948   \lccode'4=\ltx@zero
1949   \lccode'5=\ltx@zero
1950   \lccode'7=\ltx@zero
1951 \lowercase{\endgroup
1952 \def\HyPsd@EscapeTeX#1{%
1953   \HyPsd@Subst!{|045}#1%
1954   \HyPsd@Subst({|173}#1%
1955   \HyPsd@Subst){|175}#1%
1956 }%
1957 }

```

6.6.7 Support for package `xspace`

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

```

1958 \def\HyPsd@doxspace#1{%
1959   \ifx#1\relax\else
1960     \ifx#1.\else
1961       \ifx#1:\else
1962         \ifx#1,\else
1963           \ifx#1;\else
1964             \ifx#1!\else
1965               \ifx#1?\else
1966                 \ifx#1/\else
1967                   \ifx#1-\else
1968                     \ifx#1'\else
1969                       \HyPsd@SPACEOPTI
1970                     \fi
1971                   \fi
1972                 \fi
1973               \fi
1974             \fi
1975           \fi

```

```

1976  \fi
1977  \fi
1978  \fi
1979  \fi
1980  #1%
1981 }%

```

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.

```

1982 \begingroup
1983 \catcode'\|=0 %
1984 \catcode'\=12 %

```

\HyPsd@ConvertToUnicode

```

1985 |gdef|HyPsd@ConvertToUnicode#1{%
1986 |xdef#1{%
1987 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1988 }%
1989 |ifx#1|@empty
1990 |else
1991 |xdef#1{%
1992 \376\377%
1993 #1%
1994 }%
1995 |fi
1996 }%

```

\HyPsd@DoConvert

```

1997 |gdef|HyPsd@DoConvert#1{%
1998 |ifx#1|@empty
1999 |else
2000 |Hy@ReturnAfterFi{%
2001 |ifx#1\%%
2002 \%%
2003 |expandafter|HyPsd@DoEscape
2004 |else
2005 |HyPsd@Char{#1}%
2006 |expandafter|HyPsd@DoConvert
2007 |fi
2008 }%
2009 |fi
2010 }%

```

\HyPsd@DoEscape

```

2011 |gdef|HyPsd@DoEscape#1{%
2012 |ifx#19%
2013 |expandafter|HyPsd@GetTwoBytes
2014 |else
2015 |Hy@ReturnAfterFi{%
2016 |ifx#18%
2017 00%
2018 |expandafter|HyPsd@GetTwoBytes
2019 |else

```

```

2020      #1%
2021      |expandafter|HyPsd@GetOneByte
2022      |fi
2023      }%
2024      |fi
2025      }%

```

\HyPsd@GetTwoBytes

```

2026 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2027   #1\#2#3#4%
2028   |HyPsd@DoConvert
2029   }%

```

\HyPsd@GetOneByte

```

2030 |gdef|HyPsd@GetOneByte#1#2{%
2031   #1#2%
2032   |HyPsd@DoConvert
2033   }%
2034 |endgroup

```

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

```

2035 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2036   \xdef#4{#4#1#2}%
2037   \HyPsd@@ConvertToUnicode#3\END#4%
2038 }

```

\HyPsd@Char

```

2039 \begingroup
2040 \catcode0=9 %
2041 \catcode'\^=7 %
2042 \catcode'\^^=12 %
2043 \def\x{^^^0000}%
2044 \expandafter\endgroup
2045 \ifx\x\@empty
2046   \def\HyPsd@Char#1{%
2047     \ifnum'#1<128 %
2048       \@backslashchar 000#1%
2049     \else
2050       \ifnum'#1<65536 %
2051         \expandafter\HyPsd@CharTwoByte\number'#1!%
2052       \else
2053         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2054         \intcalcSub{'#1}{65536}!%
2055       \fi
2056     \fi
2057   }%
2058 \def\HyPsd@CharTwoByte#1!{%
2059   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2060   \IntCalcDiv#1!256!!%
2061   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2062   \IntCalcMod#1!256!!%
2063 }%
2064 \def\HyPsd@CharOctByte#1!{%
2065   \@backslashchar
2066   \IntCalcDiv#1!64!%
2067   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2068   \IntCalcMod#1!8!%

```

```

2069 }%
2070 \def\HyPsd@CharSurrogate#1!{%
2071   \@backslashchar 33%
2072   \IntCalcDiv#1!262144!%
2073   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2074   \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2075   \@backslashchar 33%
2076   \expandafter\expandafter\expandafter\IntCalcAdd
2077   \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2078   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2079   \IntCalcMod#1!256!!%
2080 }%
2081 \else
2082 \def\HyPsd@Char#1{%
2083   \@backslashchar 000#1%
2084 }%
2085 \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`

```

2086 \begingroup\expandafter\expandafter\expandafter\endgroup
2087 \expandafter\ifx\csname numexpr\endcsname\relax
2088   \let\HyPsd@UTFviii\relax
2089 \else
2090   \begingroup
2091     \lccode'\~='^f4\relax
2092     \lowercase{\endgroup
2093       \def\HyPsd@UTFviii{%
2094         \let\UTFviii@two@octets\HyPsd@UTFviii@two
2095         \let\UTFviii@three@octets\HyPsd@UTFviii@three
2096         \let\UTFviii@four@octets\HyPsd@UTFviii@four
2097         \ifx~\HyPsd@UTFviii@ccxliv@undef
2098           \let~\HyPsd@UTFviii@ccxliv@def
2099         \fi
2100         \let\unichar\HyPsd@unichar
2101       }%
2102     }%
2103     \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2104     \edef\HyPsd@UTFviii@ccxliv@def{%
2105       \noexpand\UTFviii@four@octets\string ~^f4%
2106     }%

```

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.

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

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

```

2107 \def\HyPsd@UTFviii@two#1#2{%
2108 \expandafter\HyPsd@UTFviii@@two
2109 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2110 \number'#1\expandafter| %
2111 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2112 \number'#2 \@nil
2113 }%
2114 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2115 \expandafter\8%
2116 \number\numexpr #1-48\expandafter\relax
2117 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2118 \number\numexpr #3-8*%
2119 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2120 \number\numexpr #4-8*#3\relax
2121 }%

```

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

$$\begin{aligned}
a &:= A/4 - 56 & (6) \\
b &:= 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) & (7) \\
c &:= B/4 - 32 - ((B - 128 < 32)?0 : 8) & (8) \\
d &:= B - 4 * (B/4) & (9) \\
e &:= C/8 - 16 & (10) \\
f &:= C - 8 * (C/8) & (11) \\
& & (12)
\end{aligned}$$

```

2122 \def\HyPsd@UTFviii@three#1#2#3{%
2123 \expandafter\HyPsd@UTFviii@@three
2124 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2125 \number'#1\expandafter| %
2126 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2127 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2128 \number'#2\expandafter| %
2129 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2130 \number'#3 \@nil
2131 }%
2132 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2133 \expandafter\9%
2134 \number\numexpr #1-56\expandafter\relax
2135 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2136 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2137 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2138 \number\numexpr #6-16\expandafter\relax
2139 \number\numexpr #7-8*#6\relax
2140 }%

```

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 = uuuuu - 1
UTF-16: 110110ww wwzzzzyy 110111yy yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

2141 \def\HyPsd@UTFviii@four#1#2{%
2142 \expandafter\HyPsd@@UTFviii@four\number
2143 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2144 \expandafter|\number
2145 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2146 }%
2147 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2148 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2149 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2150 \ifodd#2 %
2151 \number\dimexpr(#2-1)/2\relax
2152 \else
2153 \number\dimexpr#2/2\relax
2154 \fi
2155 \number\dimexpr\ifodd#2 4+\fi
2156 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2157 \933%
2158 \expandafter\HyPsd@@@UTFviii@four\number
2159 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2160 }%
2161 \def\HyPsd@@@UTFviii@four#1|#2{%
2162 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2163 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2164 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2165 \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2166 }%

```

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

```

2167 \def\HyPsd@unichar#1{%
2168 \ifHy@unicode
2169 \ifnum#1>"10FFFF %
2170 \HyPsd@UnicodeReplacementCharacter % illegal
2171 \else
2172 \ifnum#1>"FFFF %

```

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

```

2173 \expandafter\HyPsd@unichar\expandafter{%
2174 \number\dimexpr 55296+ %
2175 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2176 \relax\relax\relax
2177 }%

```

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

```

2178 \expandafter\HyPsd@unichar\expandafter{%
2179 \number\dimexpr#1-9216%
2180 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2181 \relax\relax\relax
2182 }%
2183 \else
2184 \ifnum#1>"7FF %
2185 \9%
2186 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2187 \number
2188 \dimexpr.00390625\dimexpr\number#1sp\relax\relax

```

```

2189     }%
2190     \else
2191     \8%
2192     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2193     \fi
2194     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2195     \number
2196     \numexpr#1-256*\number
2197     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2198     }%
2199     \fi
2200     \fi
2201     \else
2202     .% unsupported (Unicode -> PDF Doc Encoding)
2203     \fi
2204     }%
2205     \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2206     \def\HyPsd@unichar@first@byte#1{%
2207     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2208     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2209     \number
2210     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2211     \relax\relax\relax
2212     }%
2213     }%
2214     \def\HyPsd@unichar@second@byte#1{%
2215     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2216     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2217     \number
2218     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2219     \relax\relax\relax
2220     }%
2221     }%
2222     \def\HyPsd@unichar@octtwo#1{%
2223     \number\dimexpr.125\dimexpr#1sp\relax\relax
2224     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2225     \relax\relax\relax
2226     }%
2227     \fi

```

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

```

2228 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2229 \ifx\@gobble#1%
2230 \else
2231 [Please insert \textbackslash PrerenderUnicode%
2232 \textbraceleft#1\textbraceright\space
2233 into preamble]%
2234 \fi
2235 }%

```

7 Support of other packages

7.1 Class memoir

```

2236 \@ifclassloaded{memoir}{%
2237 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%

```

```
2238 }{}
```

7.2 Package subfigure

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

```
2239 \ifpackageloaded{subfigure}{%
2240   \ltx@ifundefined{sub@label}{%
2241     \Hy@hypertextnamesfalse
2242   }{%
2243     \renewcommand*{\sub@label}[1]{%
2244       \bsphack
2245       \subfig@oldlabel{#1}%
2246       \if@filesw
2247         \begingroup
2248         \edef\@currentlabstr{%
2249           \expandafter\strip@prefix\meaning\@currentlabelname
2250         }%
2251         \protected@write\@auxout{}{%
2252           \string\newlabel{sub@#1}{%
2253             {\@nameuse{\@thesub\@cptype}}%
2254             {\thepage}%
2255             {%
2256               \expandafter\strip@period\@currentlabstr
2257               \relax.\relax\@@@%
2258             }%
2259             {\@currentHref}%
2260             {}%
2261           }%
2262         }%
2263       \endgroup
2264     \fi
2265     \esphack
2266   }%
2267   \@ifpackagelater{subfigure}{2002/03/26}{%
2268     \providecommand*\toclevel@subfigure{1}%
2269     \providecommand*\toclevel@subtable{1}%
2270   }%
2271 }%
2272 }{}
```

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:

```
2273 \ltx@ifundefined{XR@addURL}{%
2274 }{%
```

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.

```
2275 \def\XR@addURL#1{\XR@@dURL#1{}{}{}\\}%
2276 \def\XR@@dURL#1#2#3#4#5\\{%
2277   {#1}{#2}%
2278   \if!#4!%
2279   \else
2280     {#3}{#4}{\XR@URL}%
2281   \fi
2282 }%
2283 }
```



```

2284 \def\Hy@true{true}
2285 \def\Hy@false{false}

```

Providing dummy definitions.

```

2286 \let\literalps@out\@gobble
2287 \newcommand\pdfbookmark[3][]{ }
2288 \def\Acrobatmenu#1#2{\leavevmode#2}
2289 \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

```

2290 \let\HyperRaiseLinkHook\@empty
2291 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

2292 \newcount\Hy@SavedSpaceFactor
2293 \def\Hy@SaveSpaceFactor{%
2294   \global\Hy@SavedSpaceFactor=\spacefactor
2295 }
2296 \def\Hy@RestoreSpaceFactor{%
2297   \spacefactor=\Hy@SavedSpaceFactor
2298 }
2299 \def\Hy@SaveSavedSpaceFactor{%
2300   \edef\Hy@RestoreSavedSpaceFactor{%
2301     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2302   }%
2303 }
2304 \def\Hy@raisedlink#1{%
2305   \ifvmode
2306     #1%
2307   \else
2308     \Hy@SaveSpaceFactor
2309     \penalty\@M
2310     \smash{%
2311       \begingroup
2312         \let\HyperRaiseLinkLength\@tempdima
2313         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2314         \HyperRaiseLinkHook
2315         \expandafter\endgroup
2316         \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2317           \Hy@RestoreSpaceFactor
2318           #1%
2319           \Hy@SaveSpaceFactor
2320         }%
2321       }%

```

```

2322 \Hy@RestoreSpaceFactor
2323 \fi
2324 }

```

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

```

2325 \def\Hy@SaveLastskip{%
2326 \let\Hy@RestoreLastskip\relax
2327 \ifvmode
2328 \ifdim\lastskip=\z@
2329 \let\Hy@RestoreLastskip\nobreak
2330 \else
2331 \begingroup
2332 \skip@=-\lastskip
2333 \edef\x{%
2334 \endgroup
2335 \def\noexpand\Hy@RestoreLastskip{%
2336 \noexpand\ifvmode
2337 \noexpand\nobreak
2338 \vskip\the\skip@
2339 \vskip\the\lastskip\relax
2340 \noexpand\fi
2341 }%
2342 }%
2343 \x
2344 \fi
2345 \else
2346 \ifhmode
2347 \ifdim\lastskip=\z@
2348 \let\Hy@RestoreLastskip\nobreak
2349 \else
2350 \begingroup
2351 \skip@=-\lastskip
2352 \edef\x{%
2353 \endgroup
2354 \def\noexpand\Hy@RestoreLastskip{%
2355 \noexpand\ifhmode
2356 \noexpand\nobreak
2357 \hskip\the\skip@
2358 \hskip\the\lastskip\relax
2359 \noexpand\fi
2360 }%
2361 }%
2362 \x
2363 \fi
2364 \fi
2365 \fi
2366 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2367 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2368 \def\Hy@@boolkey[#1]#2#3{%
2369 \edef\Hy@tempa{#3}%

```

```

2370 \lowercase\expandafter{%
2371 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2372 }%
2373 \ifx\Hy@tempa\@empty
2374 \let\Hy@tempa\Hy@true
2375 \fi
2376 \ifx\Hy@tempa\Hy@true
2377 \else
2378 \ifx\Hy@tempa\Hy@false
2379 \else
2380 \let\Hy@tempa\relax
2381 \fi
2382 \fi
2383 \ifx\Hy@tempa\relax
2384 \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2385 \else
2386 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2387 \csname Hy@#2\Hy@tempa\endcsname
2388 \fi
2389 }

```

\Hy@WarnOptionValue

```

2390 \def\Hy@WarnOptionValue#1#2#3{%
2391 \Hy@Warning{%
2392 Unexpected value ‘#1’\MessageBreak
2393 of option ‘#2’ instead of\MessageBreak
2394 #3%
2395 }%
2396 }

```

\Hy@DisableOption

```

2397 \def\Hy@DisableOption#1{%
2398 \@ifundefined{KV@Hyp@#1@default}{%
2399 \define@key{Hyp}{#1}%
2400 }{%
2401 \define@key{Hyp}{#1}[]%
2402 }%
2403 {\Hy@WarnOptionDisabled{#1}}%
2404 }

```

\Hy@WarnOptionDisabled

```

2405 \def\Hy@WarnOptionDisabled#1{%
2406 \Hy@Warning{%
2407 Option ‘#1’ has already been used,\MessageBreak
2408 setting the option has no effect%
2409 }%
2410 }

```

\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.

```

2411 \def\Hy@CheckOptionValue#1#2#3{%
2412 \begingroup
2413 \edef\x{#1}%
2414 \@onelevel@sanitize\x
2415 \let\y=y%
2416 \def\do##1##2{%
2417 \def\z{##1}%

```

```

2418 \@onelevel@sanitize\z
2419 \ifx\x\z
2420 \let\y=n%
2421 \let\do\@gobbletwo
2422 \fi
2423 }%
2424 #3%
2425 \ifx\y y%
2426 \def\do##1##2{%
2427 * '##1'%
2428 \ifx\##2\\\else\space(##2)\fi
2429 \MessageBreak
2430 }%
2431 \Hy@Warning{%
2432 Values of option '#2':\MessageBreak
2433 #3%
2434 * An empty value disables the option.\MessageBreak
2435 Unknown value '\x'%
2436 }%
2437 \fi
2438 \endgroup
2439 }

```

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

```

2440 \def\Hy@DefNameKey#1{%
2441 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2442 }

```

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

```

2443 \def\Hy@@DefNameKey#1#2#3{%
2444 \define@key{Hyp}{#2}{%
2445 \edef#1{##1}%
2446 \ifx#1\@empty
2447 \else
2448 \Hy@CheckOptionValue{##1}{#2}{#3}%
2449 \fi
2450 }%
2451 \let#1\@empty
2452 }

```

`\Hy@UseNameKey`

```

2453 \def\Hy@UseNameKey#1#2{%
2454 \ifx#2\@empty
2455 \else
2456 /#1/#2%
2457 \fi
2458 }

```

9.2 Defining the options

```

2459 \define@key{Hyp}{implicit}[true]{%
2460 \Hy@boolkey{implicit}{#1}%

```

```

2461 }
2462 \define@key{Hyp}{draft}[true]{%
2463   \Hy@boolkey{draft}{#1}%
2464 }
2465 \define@key{Hyp}{final}[true]{%
2466   \Hy@boolkey{final}{#1}%
2467 }
2468 \let\KV@Hyp@nolinks\KV@Hyp@draft

2469 \def\Hy@ObsoletePaperOption#1{%
2470   \Hy@WarningNoLine{%
2471     Option ‘#1’ is no longer used%
2472   }%
2473   \define@key{Hyp}{#1}[true]{}%
2474 }
2475 \def\Hy@temp#1{%
2476   \define@key{Hyp}{#1}[true]{%
2477     \Hy@ObsoletePaperOption{#1}%
2478   }%
2479 }
2480 \Hy@temp{a4paper}
2481 \Hy@temp{a5paper}
2482 \Hy@temp{b5paper}
2483 \Hy@temp{letterpaper}
2484 \Hy@temp{legalpaper}
2485 \Hy@temp{executivepaper}

2486 \define@key{Hyp}{setpagesize}[true]{%
2487   \Hy@boolkey{setpagesize}{#1}%
2488 }
2489 \define@key{Hyp}{debug}[true]{%
2490   \Hy@boolkey{debug}{verbose}{#1}%
2491 }
2492 \define@key{Hyp}{linktocpage}[true]{%
2493   \Hy@boolkey{linktocpage}{#1}%
2494   \ifHy@linktocpage
2495     \let\Hy@linktoc\Hy@linktoc@page
2496   \else
2497     \let\Hy@linktoc\Hy@linktoc@section
2498   \fi
2499 }
2500 \chardef\Hy@linktoc@none=0 %
2501 \chardef\Hy@linktoc@section=1 %
2502 \chardef\Hy@linktoc@page=2 %
2503 \chardef\Hy@linktoc@all=3 %
2504 \ifHy@linktocpage
2505   \let\Hy@linktoc\Hy@linktoc@page
2506 \else
2507   \let\Hy@linktoc\Hy@linktoc@section
2508 \fi
2509 \define@key{Hyp}{linktoc}{%
2510   \@ifundefined{Hy@linktoc@#1}{%
2511     \Hy@Warning{%
2512       Unexpected value ‘#1’ of\MessageBreak
2513       option ‘linktoc’ instead of ‘none’,\MessageBreak
2514       ‘section’, ‘page’ or ‘all’%
2515     }%
2516   }{%
2517     \expandafter\let\expandafter\Hy@linktoc

```

```

2518 \csname Hy@linktoc@#1\endcsname
2519 }%
2520 }
2521 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2522 \let\XR@ext\relax
2523 \define@key{Hyp}{verbose}[true]{%
2524 \Hy@boolkey{verbose}{#1}%
2525 }
2526 \define@key{Hyp}{typexml}[true]{%
2527 \Hy@boolkey{typexml}{#1}%
2528 }

```

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.

```

2529 \define@key{Hyp}{raiselinks}[true]{%
2530 \Hy@boolkey{raiselinks}{#1}%
2531 }

```

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

```

2532 \def\Hy@setbreaklinks#1{%
2533 \csname breaklinks#1\endcsname
2534 }
2535 \def\Hy@breaklinks@unsupported{%
2536 \ifx\Hy@setbreaklinks\@gobble
2537 \ifHy@breaklinks
2538 \Hy@WarningNoLine{%
2539 You have enabled option 'breaklinks'.\MessageBreak
2540 But driver '\Hy@driver.def' does not support this.\MessageBreak
2541 Expect trouble with the link areas of broken links%
2542 }%
2543 \fi
2544 \fi
2545 }
2546 \define@key{Hyp}{breaklinks}[true]{%
2547 \Hy@boolkey{breaklinks}{#1}%
2548 \let\Hy@setbreaklinks\@gobble
2549 }
2550 \define@key{Hyp}{localanchorname}[true]{%
2551 \Hy@boolkey{localanchorname}{#1}%
2552 }

```

Determines whether an automatic anchor is put on each page

```

2553 \define@key{Hyp}{pageanchor}[true]{%
2554 \Hy@boolkey{pageanchor}{#1}%
2555 }

```

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.

```

2556 \define@key{Hyp}{plainpages}[true]{%
2557 \Hy@boolkey{plainpages}{#1}%
2558 }

```

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

```

2559 \define@key{Hyp}{naturalnames}[true]{%
2560 \Hy@boolkey{naturalnames}{#1}%
2561 }

```

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

```
2562 \define@key{Hyp}{hypertexnames}[true]{%
2563   \Hy@boolkey{hypertexnames}{#1}%
2564 }
```

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

```
2565 \define@key{Hyp}{nesting}[true]{%
2566   \Hy@boolkey{nesting}{#1}%
2567 }

2568 \define@key{Hyp}{unicode}[true]{%
2569   \Hy@boolkey{unicode}{#1}%
2570   \ifHy@unicode
2571     \def\HyPsd@pdfencoding{unicode}%
2572     \HyPsd@LoadUnicode
2573   \else
2574     \def\HyPsd@pdfencoding{pdfdoc}%
2575   \fi
2576 }

2577 \def\HyPsd@LoadUnicode{%
2578   \@ifundefined{T@PU}{%
2579     \input{puenc.def}%
2580     \HyLinguex@Restore
2581   }{}%
2582   \DeclareFontFamily{PU}{pdf}{}%
2583   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2584   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2585   \global\let\HyPsd@LoadUnicode\relax
2586 }

2587 \Hy@AtBeginDocument{%
2588   \ifx\HyPsd@LoadUnicode\relax
2589   \else
2590     \def\HyPsd@LoadUnicode{%
2591       \PackageError{hyperref}{%
2592         Unicode support for bookmarks is not available.\MessageBreak
2593         Activate unicode support by using one of the options\MessageBreak
2594         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2595         in the preamble%
2596       }\@ehc
2597       \global\let\HyPsd@LoadUnicode\relax
2598       \global\Hy@unicodedefalse
2599       \global\let\Hy@unicodetrue\Hy@unicodedefalse
2600     }%
2601   \fi
2602 }

2603 \define@key{Hyp}{pdfencoding}{%
2604   \edef\HyPsd@temp{#1}%
2605   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2606     \let\HyPsd@pdfencoding\HyPsd@temp
2607     \Hy@unicodedefalse
2608   \else
2609     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2610       \z@
2611     \else
2612       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2613         \z@
2614       \else
```

```

2615         \@ne
2616         \fi
2617     \fi
2618     \let\HyPsd@pdfencoding\HyPsd@temp
2619     \hypersetup{unicode}%
2620     \ifHy@unicode
2621         \def\HyPsd@pdfencoding{#1}%
2622         \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2623             \HyPsd@LoadStringEnc
2624         \fi
2625     \else
2626         \Hy@Warning{Cannot switch to unicode bookmarks}%
2627         \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2628     \fi
2629 \else
2630     \@onelevel@sanitize\HyPsd@temp
2631     \Hy@Warning{%
2632         Values of option 'pdfencoding':\MessageBreak
2633         'pdfdoc', 'unicode', 'auto'.\MessageBreak
2634         Ignoring unknown value '\HyPsd@temp'%
2635     }%
2636     \fi
2637 \fi
2638 }
2639 \def\HyPsd@pdfencoding@auto{auto}
2640 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2641 \def\HyPsd@pdfencoding@unicode{unicode}
2642 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2643 \def\HyPsd@LoadStringEnc{%
2644     \RequirePackage{stringenc}[2009/12/15]%
2645     \let\HyPsd@LoadStringEnc\relax
2646 }
2647 \Hy@AtBeginDocument{%
2648     \@ifpackageloaded{stringenc}{%
2649         \let\HyPsd@LoadStringEnc\relax
2650     }{%
2651         \def\HyPsd@LoadStringEnc{%
2652             \Hy@WarningNoLine{%
2653                 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2654                 in the preamble or load the package there%
2655             }%
2656         }%
2657     }%
2658 }
2659 \def\hypersetup{\kvsetkeys{Hyp}}
2660 \newif\ifHy@setpdfversion
2661 \define@key{Hyp}{pdfversion}{%
2662     \@ifundefined{Hy@pdfversion@#1}{%
2663         \PackageWarning{hyperref}{%
2664             Unsupported PDF version '#1'.\MessageBreak
2665             Valid values: 1.2 until 1.9%
2666         }%
2667     }{%
2668         \Hy@setpdfversiontrue
2669         \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2670     }%
2671 }

```



```

2672 \@namedef{Hy@pdfversion@1.2}{2}%
2673 \@namedef{Hy@pdfversion@1.3}{3}%
2674 \@namedef{Hy@pdfversion@1.4}{4}%
2675 \@namedef{Hy@pdfversion@1.5}{5}%
2676 \@namedef{Hy@pdfversion@1.6}{6}%
2677 \@namedef{Hy@pdfversion@1.7}{7}%
2678 \@namedef{Hy@pdfversion@1.8}{8}%
2679 \@namedef{Hy@pdfversion@1.9}{9}%
2680 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2681 \define@key{Hyp}{hyperref}[true]{%
2682 \define@key{Hyp}{tex4ht}[true]{%
2683 \Hy@texhttrue
2684 \kvsetkeys{Hyp}{colorlinks=true}%
2685 \def\BeforeTeXIVht{\usepackage{color}}%
2686 \def\Hy@driver{htex4ht}%
2687 \def\MaybeStopEarly{%
2688 \typeout{Hyperref stopped early}%
2689 \Hy@AtBeginDocument{%
2690 \PDF@FinishDoc
2691 \gdef\PDF@FinishDoc{}%
2692 }%
2693 \endinput
2694 }%
2695 }
2696 \define@key{Hyp}{pdftex}[true]{%
2697 \def\Hy@driver{hpdftex}%
2698 }
2699 \define@key{Hyp}{nativepdf}[true]{%
2700 \def\Hy@driver{hdvips}%
2701 }
2702 \define@key{Hyp}{dvipdfm}[true]{%
2703 \def\Hy@driver{hdvipdfm}%
2704 }
2705 \define@key{Hyp}{dvipdfmx}[true]{%
2706 \def\Hy@driver{hdvipdfm}%
2707 }
2708 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2709 \expandafter\ifx\csname if#1\expandafter\endcsname
2710 \csname iftrue\endcsname
2711 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2712 \else
2713 \chardef\SpecialDvipdfmxOutlineOpen\z@
2714 \fi
2715 }
2716 \define@key{Hyp}{xetex}[true]{%
2717 \def\Hy@driver{hxetex}%
2718 }
2719 \define@key{Hyp}{pdfmark}[true]{%
2720 \def\Hy@driver{hdvips}%
2721 }
2722 \define@key{Hyp}{dvips}[true]{%
2723 \def\Hy@driver{hdvips}%
2724 }
2725 \define@key{Hyp}{hypertex}[true]{%

```

```

2726 \def\Hy@driver{hypertex}%
2727 }
2728 \let\Hy@MaybeStopNow\relax
2729 \define@key{Hyp}{vtex}[true]{%
2730 \begingroup\expandafter\expandafter\expandafter\endgroup
2731 \expandafter\ifx\csname OpMode\endcsname\relax
2732 \latex@error{Non-VTeX processor}{}%
2733 \global\let\Hy@MaybeStopNow\endinput
2734 \endinput
2735 \else
2736 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2737 \def\Hy@driver{hvtex}%
2738 \else
2739 \ifnum\OpMode=10\relax
2740 \def\Hy@driver{hvtexhtm}%
2741 \def\MaybeStopEarly{%
2742 \typeout{Hyperref stopped early}%
2743 \Hy@AtBeginDocument{%
2744 \PDF@FinishDoc
2745 \gdef\PDF@FinishDoc{}}%
2746 }%
2747 \endinput
2748 }%
2749 \else
2750 \latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2751 \global\let\Hy@MaybeStopNow\endinput
2752 \endinput
2753 \fi
2754 \fi
2755 \fi
2756 }
2757 \define@key{Hyp}{vtexpdfmark}[true]{%
2758 \begingroup\expandafter\expandafter\expandafter\endgroup
2759 \expandafter\ifx\csname OpMode\endcsname\relax
2760 \latex@error{Non-VTeX processor}{}%
2761 \let\Hy@MaybeStopNow\endinput
2762 \endinput
2763 \else
2764 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2765 \def\Hy@driver{hvtexmrk}%
2766 \else
2767 \latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2768 \let\Hy@MaybeStopNow\endinput
2769 \endinput
2770 \fi
2771 \fi
2772 }
2773 \define@key{Hyp}{dviwindo}[true]{%
2774 \def\Hy@driver{hdviwind}%
2775 \kvsetkeys{Hyp}{colorlinks}%
2776 \ifpdf
2777 \else
2778 \ifxetex
2779 \else
2780 \PassOptionsToPackage{dviwindo}{color}%
2781 \fi
2782 \fi

```

```

2783 }
2784 \define@key{Hyp}{dvipsone}[true]{%
2785   \def\Hy@driver{hdvipson}%
2786 }
2787 \define@key{Hyp}{textures}[true]{%
2788   \def\Hy@driver{htexture}%
2789 }
2790 \define@key{Hyp}{latex2html}[true]{%
2791   \Hy@AtBeginDocument{\@@@latex2htmlX}%
2792 }

```

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

```

2793 \define@key{Hyp}{ps2pdf}[true]{%
2794   \def\Hy@driver{hdvips}%
2795   \providecommand*\@pdfborder{0 0 1}%
2796 }

```

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.

```

2797 \define@key{Hyp}{hyperfigures}[true]{%
2798   \Hy@boolkey[hyperfigures]{figures}{#1}%
2799 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2800 \define@key{Hyp}{hyperfootnotes}[true]{%
2801   \Hy@boolkey{hyperfootnotes}{#1}%
2802 }

```

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

```

2803 \def\back@none{none}
2804 \def\back@section{section}
2805 \def\back@page{page}
2806 \def\back@slide{slide}
2807 \define@key{Hyp}{backref}[section]{%
2808   \lowercase{\def\Hy@tempa{#1}}%
2809   \ifx\Hy@tempa\@empty
2810     \let\Hy@tempa\back@section
2811   \fi
2812   \ifx\Hy@tempa\Hy@false
2813     \let\Hy@tempa\back@none
2814   \fi
2815   \ifx\Hy@tempa\back@slide
2816     \let\Hy@tempa\back@section
2817   \fi
2818   \ifx\Hy@tempa\back@page
2819     \PassOptionsToPackage{hyperpageref}{backref}%
2820     \Hy@backreftrue
2821   \else
2822     \ifx\Hy@tempa\back@section
2823       \PassOptionsToPackage{hyperref}{backref}%
2824       \Hy@backreftrue
2825     \else
2826       \ifx\Hy@tempa\back@none
2827         \Hy@backreffalse
2828       \else
2829         \Hy@WarnOptionValue{#1}{backref}{%

```

```

2830      'section', 'slide', 'page', 'none', \MessageBreak
2831      or 'false'}%
2832    \fi
2833  \fi
2834 \fi
2835 }
2836 \define@key{Hyp}{pagebackref}[true]{%
2837   \edef\Hy@tempa{#1}%
2838   \lowercase\expandafter{%
2839     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2840   }%
2841   \ifx\Hy@tempa\@empty
2842     \let\Hy@tempa\Hy@true
2843   \fi
2844   \ifx\Hy@tempa\Hy@true
2845     \PassOptionsToPackage{hyperpageref}{backref}%
2846     \Hy@backreftrue
2847   \else
2848     \ifx\Hy@tempa\Hy@false
2849       \Hy@backreffalse
2850     \else
2851       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2852     \fi
2853   \fi
2854 }

```

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

```

2855 \define@key{Hyp}{hyperindex}[true]{%
2856   \Hy@boolkey{hyperindex}{#1}%
2857 }

```

Configuration of encap char.

```

2858 \define@key{Hyp}{encap}[||]{%
2859   \def\HyInd@EncapChar{#1}%
2860 }

```

12 Language options

The \autoref feature depends on the language.

```

2861 \def\HyLang@afrikaans{%
2862   \def\equationautorefname{Vergelyking}%
2863   \def\footnoteautorefname{Voetnota}%
2864   \def\itemautorefname{Item}%
2865   \def\figureautorefname{Figuur}%
2866   \def\tableautorefname{Tabel}%
2867   \def\partautorefname{Deel}%
2868   \def\appendixautorefname{Bylae}%
2869   \def\chapterautorefname{Hoofstuk}%
2870   \def\sectionautorefname{Afdeling}%
2871   \def\subsectionautorefname{Subafdeling}%
2872   \def\subsubsectionautorefname{Subsubafdeling}%
2873   \def\paragraphautorefname{Paragraaf}%
2874   \def\subparagraphautorefname{Subparagraaf}%
2875   \def\FancyVerbLineautorefname{Lyn}%
2876   \def\theoremautorefname{Teorema}%
2877   \def\pageautorefname{Bladsy}%

```

```

2878 }
2879 \def\HyLang@english{%
2880 \def\equationautorefname{Equation}%
2881 \def\footnoteautorefname{footnote}%
2882 \def\itemautorefname{item}%
2883 \def\figureautorefname{Figure}%
2884 \def\tableautorefname{Table}%
2885 \def\partautorefname{Part}%
2886 \def\appendixautorefname{Appendix}%
2887 \def\chapterautorefname{chapter}%
2888 \def\sectionautorefname{section}%
2889 \def\subsectionautorefname{subsection}%
2890 \def\subsubsectionautorefname{subsubsection}%
2891 \def\paragraphautorefname{paragraph}%
2892 \def\subparagraphautorefname{subparagraph}%
2893 \def\FancyVerbLineautorefname{line}%
2894 \def\theoremautorefname{Theorem}%
2895 \def\pageautorefname{page}%
2896 }
2897 \def\HyLang@french{%
2898 \def\equationautorefname{'Equation}%
2899 \def\footnoteautorefname{note}%
2900 \def\itemautorefname{item}%
2901 \def\figureautorefname{Figure}%
2902 \def\tableautorefname{Tableau}%
2903 \def\partautorefname{Partie}%
2904 \def\appendixautorefname{Appendice}%
2905 \def\chapterautorefname{chapitre}%
2906 \def\sectionautorefname{section}%
2907 \def\subsectionautorefname{sous-section}%
2908 \def\subsubsectionautorefname{sous-sous-section}%
2909 \def\paragraphautorefname{paragraphe}%
2910 \def\subparagraphautorefname{sous-paragraphe}%
2911 \def\FancyVerbLineautorefname{ligne}%
2912 \def\theoremautorefname{Th\'eor\'eme}%
2913 \def\pageautorefname{page}%
2914 }
2915 \def\HyLang@german{%
2916 \def\equationautorefname{Gleichung}%
2917 \def\footnoteautorefname{Fu\ss note}%
2918 \def\itemautorefname{Punkt}%
2919 \def\figureautorefname{Abbildung}%
2920 \def\tableautorefname{Tabelle}%
2921 \def\partautorefname{Teil}%
2922 \def\appendixautorefname{Anhang}%
2923 \def\chapterautorefname{Kapitel}%
2924 \def\sectionautorefname{Abschnitt}%
2925 \def\subsectionautorefname{Unterabschnitt}%
2926 \def\subsubsectionautorefname{Unterunterabschnitt}%
2927 \def\paragraphautorefname{Absatz}%
2928 \def\subparagraphautorefname{Unterabsatz}%
2929 \def\FancyVerbLineautorefname{Zeile}%
2930 \def\theoremautorefname{Theorem}%
2931 \def\pageautorefname{Seite}%
2932 }
2933 \def\HyLang@italian{%
2934 \def\equationautorefname{Equazione}%

```

```

2935 \def\footnoteautorefname{nota}%
2936 \def\itemautorefname{punto}%
2937 \def\figureautorefname{Figura}%
2938 \def\tableautorefname{Tabella}%
2939 \def\partautorefname{Parte}%
2940 \def\appendixautorefname{Appendice}%
2941 \def\chapterautorefname{Capitolo}%
2942 \def\sectionautorefname{sezione}%
2943 \def\subsectionautorefname{sottosezione}%
2944 \def\subsubsectionautorefname{sottosottosezione}%
2945 \def\paragraphautorefname{paragrafo}%
2946 \def\subparagraphautorefname{sottoparagrafo}%
2947 \def\FancyVerbLineautorefname{linea}%
2948 \def\theoremautorefname{Teorema}%
2949 \def\pageautorefname{Pag.\@}%
2950 }
2951 \def\HyLang@magyar{%
2952 \def\equationautorefname{Egyenlet}%
2953 \def\footnoteautorefname{!\'abjegyzet}%
2954 \def\itemautorefname{Elem}%
2955 \def\figureautorefname{\'Abra}%
2956 \def\tableautorefname{T\'abl\'azat}%
2957 \def\partautorefname{R\'esz}%
2958 \def\appendixautorefname{F\'uggel\'ek}%
2959 \def\chapterautorefname{fejezet}%
2960 \def\sectionautorefname{szakasz}%
2961 \def\subsectionautorefname{alszakasz}%
2962 \def\subsubsectionautorefname{alalszakasz}%
2963 \def\paragraphautorefname{bekezd\'es}%
2964 \def\subparagraphautorefname{albekezd\'es}%
2965 \def\FancyVerbLineautorefname{sor}%
2966 \def\theoremautorefname{T\'etel}%
2967 \def\pageautorefname{oldal}%
2968 }
2969 \def\HyLang@portuges{%
2970 \def\equationautorefname{Equa\c c\~ao}%
2971 \def\footnoteautorefname{Nota de rodap\'e}%
2972 \def\itemautorefname{Item}%
2973 \def\figureautorefname{Figura}%
2974 \def\tableautorefname{Tabela}%
2975 \def\partautorefname{Parte}%
2976 \def\appendixautorefname{Ap\^endice}%
2977 \def\chapterautorefname{Cap\'itulo}%
2978 \def\sectionautorefname{Se\c c\~ao}%
2979 \def\subsectionautorefname{Subse\c c\~ao}%
2980 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2981 \def\paragraphautorefname{par\'agrafo}%
2982 \def\subparagraphautorefname{subpar\'agrafo}%
2983 \def\FancyVerbLineautorefname{linha}%
2984 \def\theoremautorefname{Teorema}%
2985 \def\pageautorefname{P\'agina}%
2986 }

```

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`.

```
2987 \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`?

```
2988 \def\equationautorefname{\cyr\cyrv\cyrrery\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`.

```
2989 % \def\equationautorefname{%
2990 %   \cyr\cyrv\cyrrery\cyrr\cyra\cyrzh\cyre\cyrn\cyri\cyre
2991 % }%
```

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

```
2992 \def\footnoteautorefname{%
2993   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
2994 }%
```

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}`”

```
2995 % \def\footnoteautorefname{%
2996 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
2997 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2998 % }%
```

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

```
2999 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3000 % \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.

```
3001 \def\itemautorefname{\cyr\cyrp.}%
3002 % \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.

```
3003 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3004 \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.

```
3005 \def\partautorefname{\cyr\cyrch.}%
3006 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3007 \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.

```
3008 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3009 % \def\appendixautorefname{%
3010 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrzh\cyre\cyrn\cyri\cyre
3011 % }%
```

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.

```
3012 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3013 \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.

```
3014 \def\paragraphautorefname{\cyr\cyrp.}%
3015 \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.

```
3016 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3017 % \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.

```
3018 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3019 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3020 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3021 % \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 . . .

```
3022 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3023 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3024 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3025 \def\pageautorefname{\cyr\cyrs.}%
3026 }
```

```
3027 \def\HyLang@spanish{%
3028 \def\equationautorefname{Ecuaci'on}%
3029 \def\footnoteautorefname{Nota a pie de p'agina}%
3030 \def\itemautorefname{Elemento}%
3031 \def\figureautorefname{Figura}%
3032 \def\tableautorefname{Tabla}%
3033 \def\partautorefname{Parte}%
3034 \def\appendixautorefname{Ap'endice}%
3035 \def\chapterautorefname{Cap'itulo}%
3036 \def\sectionautorefname{Secci'on}%
3037 \def\subsectionautorefname{Subsecci'on}%
3038 \def\subsubsectionautorefname{Subsubsecci'on}%
3039 \def\paragraphautorefname{P'arrafo}%
3040 \def\subparagraphautorefname{Subp'arrafo}%
3041 \def\FancyVerbLineautorefname{L'inea}%
```



```

3042 \def\theoremautorefname{Teorema}%
3043 \def\pageautorefname{P\'agina}%
3044 }
3045 \def\HyLang@vietnamese{%
3046 \def\equationautorefname{Ph\uhorn{}}\ohorn{ng tr\'inh}%
3047 \def\footnoteautorefname{Ch\'u th\'ich}%
3048 \def\itemautorefname{m\du{c}}%
3049 \def\figureautorefname{H\'inh}%
3050 \def\tableautorefname{B\h{a}ng}%
3051 \def\partautorefname{Ph\'acircumflex{n}}%
3052 \def\appendixautorefname{Ph\du{ }l\du{c}}%
3053 \def\chapterautorefname{ch\uhorn{}}\ohorn{ng}%
3054 \def\sectionautorefname{m\du{c}}%
3055 \def\subsectionautorefname{m\du{c}}%
3056 \def\subsubsectionautorefname{m\du{c}}%
3057 \def\paragraphautorefname{\dj{ }o\da{n}}%
3058 \def\subparagraphautorefname{\dj{ }o\da{n}}%
3059 \def\FancyVerbLineautorefname{d\'ong}%
3060 \def\theoremautorefname{DJ{ }\di{nh l\'y}}%
3061 \def\pageautorefname{Trang}%
3062 }

```

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

```

3063 \def\HyLang@addto#1#2{%
3064   #2%
3065   \@temptokena{#2}%
3066   \ifx#1\relax
3067     \let#1\@empty
3068   \fi
3069   \ifx#1\@undefined
3070     \edef#1{\the\@temptokena}%
3071   \else
3072     \toks@\expandafter{#1}%
3073     \edef#1{\the\toks@\the\@temptokena}%
3074   \fi
3075   \@temptokena{}\toks@\@temptokena
3076 }
3077 \def\HyLang@DeclareLang#1#2#3{%
3078   \ifpackagewith{babel}{#1}{%
3079     \expandafter\HyLang@addto
3080     \csname extras#1\expandafter\endcsname
3081     \csname HyLang@#2\endcsname
3082     \begingroup
3083     \edef\x{\endgroup
3084       #3%
3085     }%
3086     \x
3087     \@namedef{HyLang@#1@done}{}%
3088   }{%
3089     \begingroup
3090     \edef\x##1##2{%
3091       \noexpand\ifx##2\relax
3092         \errmessage{No definitions for language #2' found!}%
3093       \noexpand\fi
3094     }%
3095     \noexpand\define@key{Hyp}{#1}[]{}%

```

```

3096 \noexpand\@ifundefined{HyLang@#1@done}{}%
3097 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3098 ##3%
3099 \noexpand\@namedef{HyLang@#1@done}{}%
3100 }{}%
3101 }%
3102 }%
3103 \expandafter\x\csname extras#1\expandafter\endcsname
3104 \csname HyLang@#2\endcsname
3105 }
3106 \HyLang@DeclareLang{english}{english}{}
3107 \HyLang@DeclareLang{UKenglish}{english}{}
3108 \HyLang@DeclareLang{british}{english}{}
3109 \HyLang@DeclareLang{USenglish}{english}{}
3110 \HyLang@DeclareLang{american}{english}{}
3111 \HyLang@DeclareLang{german}{german}{}
3112 \HyLang@DeclareLang{austrian}{german}{}
3113 \HyLang@DeclareLang{ngerman}{german}{}
3114 \HyLang@DeclareLang{naustrian}{german}{}
3115 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3116 \HyLang@DeclareLang{brazil}{portuges}{}
3117 \HyLang@DeclareLang{brazilian}{portuges}{}
3118 \HyLang@DeclareLang{portuguese}{portuges}{}
3119 \HyLang@DeclareLang{spanish}{spanish}{}
3120 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3121 \HyLang@DeclareLang{french}{french}{}
3122 \HyLang@DeclareLang{frenchb}{french}{}
3123 \HyLang@DeclareLang{français}{french}{}
3124 \HyLang@DeclareLang{acadian}{french}{}
3125 \HyLang@DeclareLang{canadien}{french}{}
3126 \HyLang@DeclareLang{italian}{italian}{}
3127 \HyLang@DeclareLang{magyar}{magyar}{}
3128 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3129 \define@key{Hyp}{vietnamese}[]{}%
3130 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3131 \Hy@AtEndOfPackage{%
3132 \@ifundefined{T@PU}{}{}%
3133 \input{pvnenc.def}%
3134 }%
3135 }%
3136 }
3137 \define@key{Hyp}{vietnam}[]{}%
3138 \HyLang@addto\extravietnam\HyLang@vietnamese
3139 \Hy@AtEndOfPackage{%
3140 \@ifundefined{T@PU}{}{}%
3141 \input{pvnenc.def}%
3142 }%
3143 }%
3144 }

```

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

```

3145 \define@key{Hyp}{arabic}[]{}%
3146 \Hy@AtEndOfPackage{%
3147 \@ifundefined{T@PU}{}{}%
3148 \input{puarenc.def}%
3149 }%

```

```

3150 }%
3151 }

```

13 Options to change appearance of links

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

```

3152 \define@key{Hyp}{colorlinks}[true]{%
3153   \Hy@boolkey{colorlinks}{#1}%
3154 }
3155 \define@key{Hyp}{ocgcolorlinks}[true]{%
3156   \Hy@boolkey{ocgcolorlinks}{#1}%
3157 }
3158 \Hy@AtBeginDocument{%
3159   \begingroup
3160     \ifundefined{OBJ@OCG@view}{%
3161       \ifHy@ocgcolorlinks
3162         \Hy@Warning{%
3163           Driver does not support ‘ocgcolorlinks’,\MessageBreak
3164           using ‘colorlinks’ instead%
3165         }%
3166       \fi
3167     }{}%
3168   \endgroup
3169 }
3170 \define@key{Hyp}{frenchlinks}[true]{%
3171   \Hy@boolkey{frenchlinks}{#1}%
3172 }

```

14 Bookmarking

```

3173 \begingroup\expandafter\expandafter\expandafter\endgroup
3174 \expandafter\ifx\csname chapter\endcsname\relax
3175   \def\toclevel@part{0}%
3176 \else
3177   \def\toclevel@part{-1}%
3178 \fi
3179 \def\toclevel@chapter{0}
3180 \def\toclevel@section{1}
3181 \def\toclevel@subsection{2}
3182 \def\toclevel@subsubsection{3}
3183 \def\toclevel@paragraph{4}
3184 \def\toclevel@subparagraph{5}
3185 \def\toclevel@figure{0}
3186 \def\toclevel@table{0}
3187 \ifpackageloaded{listings}{%
3188   \providecommand*\theHlstlisting{\thelstlisting}%
3189   \providecommand*\toclevel@lstlisting{0}%
3190 }{}
3191 \ifpackageloaded{listing}{%
3192   \providecommand*\theHlisting{\thelisting}%
3193   \providecommand*\toclevel@listing{0}%
3194 }{}
3195 \define@key{Hyp}{bookmarks}[true]{%
3196   \Hy@boolkey{bookmarks}{#1}%
3197 }

```

```

3198 \define@key{Hyp}{bookmarksopen}[true]{%
3199   \Hy@boolkey{bookmarksopen}{#1}%
3200 }

```

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.

```

3201 \let\Hy@bookmarksdepth\c@tocdepth
3202 \define@key{Hyp}{bookmarksdepth}[]{}%
3203 \begingroup
3204   \edef\x{#1}%
3205   \ifx\x\empty
3206     \global\let\Hy@bookmarksdepth\c@tocdepth
3207   \else
3208     \ifundefined{toclevel@\x}{%
3209       \@onelevel@sanitize\x
3210       \edef\y{\expandafter\@car\x\@nil}%
3211       \ifcase 0\expandafter\ifx\y-1\fi
3212         \expandafter\ifnum\expandafter\y>47 %
3213         \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
3214       \Hy@Warning{Unknown document division name (\x)}%
3215     \else
3216       \setbox\z@=\hbox{%
3217         \count@=\x
3218         \xdef\Hy@bookmarksdepth{\the\count@}%
3219       }%
3220     \fi
3221   }{}%
3222   \setbox\z@=\hbox{%
3223     \count@=\csname toclevel@\x\endcsname
3224     \xdef\Hy@bookmarksdepth{\the\count@}%
3225   }%
3226 }%
3227 \fi
3228 \endgroup
3229 }

```

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

```

3230 \define@key{Hyp}{bookmarksopenlevel}{%
3231   \def\@bookmarksopenlevel{#1}%
3232 }
3233 \def\@bookmarksopenlevel{\maxdimen}
3234 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3235 \define@key{Hyp}{bookmarkstype}{%
3236   \def\Hy@bookmarkstype{#1}%
3237 }
3238 \def\Hy@bookmarkstype{toc}

```

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

```

3239 \define@key{Hyp}{bookmarksnumbered}[true]{%

```

```

3240 \Hy@boolkey{bookmarksnumbered}{#1}%
3241 }

Option CJKbookmarks enables the patch for CJK bookmarks.

3242 \define@key{Hyp}{CJKbookmarks}[true]{%
3243 \Hy@boolkey{CJKbookmarks}{#1}%
3244 }

3245 \def\Hy@temp#1{%
3246 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3247 }
3248 \def\Hy@@temp#1#2#3{%
3249 \define@key{Hyp}{#2color}{%
3250 \HyColor@HyperrefColor{##1}#1%
3251 }%
3252 \def#1{#3}%
3253 }
3254 \Hy@temp{link}{red}
3255 \Hy@temp{anchor}{black}
3256 \Hy@temp{cite}{green}
3257 \Hy@temp{file}{cyan}
3258 \Hy@temp{url}{magenta}
3259 \Hy@temp{menu}{red}
3260 \Hy@temp{run}{\@filecolor}
3261 \define@key{Hyp}{pagecolor}{%
3262 \Hy@WarningPageColor
3263 }
3264 \def\Hy@WarningPageColor{%
3265 \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3266 \global\let\Hy@WarningPageColor\relax
3267 }

3268 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3269 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3270 \let\@baseurl\@empty
3271 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3272 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3273 \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.

```

3274 \let\@pdfpagetransition\relax
3275 \define@key{Hyp}{pdfpagetransition}{\def\@pdfpagetransition{#1}}

```

`\@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.

```

3276 \let\@pdfpageduration\relax
3277 \define@key{Hyp}{pdfpageduration}{\def\@pdfpageduration{#1}}

```

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

```

3278 \newif\ifHy@useHidKey

```

```

3279 \Hy@useHidKeyfalse
3280 \define@key{Hyp}{pdfpagehidden}[true]{%
3281   \Hy@boolkey{pdfpagehidden}{#1}%
3282   \ifHy@pdfpagehidden
3283     \global\Hy@useHidKeytrue
3284   \fi
3285 }

```

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).

```

3286 \def\Hy@ColorList{cite,file,link,menu,run,url}
3287 \@for\Hy@temp:=\Hy@ColorList\do{%
3288   \edef\Hy@temp{%
3289     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3290       \noexpand\Hy@Color@HyperrefBorderColor
3291       {##1}%
3292       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3293       {hyperref}%
3294       {\Hy@temp bordercolor}%
3295     }%
3296   }%
3297   \Hy@temp
3298 }
3299 \define@key{Hyp}{pagebordercolor}{%
3300   \Hy@WarningPageBorderColor
3301 }
3302 \def\Hy@WarningPageBorderColor{%
3303   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3304   \global\let\Hy@WarningPageBorderColor\relax
3305 }
3306 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3307 \Hy@DefNameKey{pdfhighlight}{%
3308   \do{/I}{Invert}%
3309   \do{/N}{None}%
3310   \do{/O}{Outline}%
3311   \do{/P}{Push}%
3312 }
3313 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
3314 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3315 \def\Hy@setpdfborder{%
3316   \ifx\@pdfborder\@empty
3317     \else
3318       /Border[\@pdfborder]%
3319     \fi
3320   \ifx\@pdfborderstyle\@empty
3321     \else
3322       /BS<<\@pdfborderstyle>>%
3323     \fi
3324 }
3325 \Hy@DefNameKey{pdfpagemode}{%
3326   \do{UseNone}{}%
3327   \do{UseOutlines}{}%

```

```

3328 \do{UseThumbs}{}%
3329 \do{FullScreen}{}%
3330 \do{UseOC}{PDF 1.5}%
3331 \do{UseAttachments}{PDF 1.6}%
3332 }
3333 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3334 \do{UseNone}{}%
3335 \do{UseOutlines}{}%
3336 \do{UseThumbs}{}%
3337 \do{FullScreen}{}%
3338 \do{UseOC}{PDF 1.5}%
3339 \do{UseAttachments}{PDF 1.6}%
3340 }
3341 \Hy@DefNameKey{pdfdirection}{%
3342 \do{L2R}{Left to right}%
3343 \do{R2L}{Right to left}%
3344 }
3345 \Hy@DefNameKey{pdfviewarea}{%
3346 \do{MediaBox}{}%
3347 \do{CropBox}{}%
3348 \do{BleedBox}{}%
3349 \do{TrimBox}{}%
3350 \do{ArtBox}{}%
3351 }
3352 \Hy@DefNameKey{pdfviewclip}{%
3353 \do{MediaBox}{}%
3354 \do{CropBox}{}%
3355 \do{BleedBox}{}%
3356 \do{TrimBox}{}%
3357 \do{ArtBox}{}%
3358 }
3359 \Hy@DefNameKey{pdfprintarea}{%
3360 \do{MediaBox}{}%
3361 \do{CropBox}{}%
3362 \do{BleedBox}{}%
3363 \do{TrimBox}{}%
3364 \do{ArtBox}{}%
3365 }
3366 \Hy@DefNameKey{pdfprintclip}{%
3367 \do{MediaBox}{}%
3368 \do{CropBox}{}%
3369 \do{BleedBox}{}%
3370 \do{TrimBox}{}%
3371 \do{ArtBox}{}%
3372 }
3373 \Hy@DefNameKey{pdfprintscaling}{%
3374 \do{AppDefault}{}%
3375 \do{None}{}%
3376 }
3377 \Hy@DefNameKey{pdfduplex}{%
3378 \do{Simplex}{}%
3379 \do{DuplexFlipShortEdge}{}%
3380 \do{DuplexFlipLongEdge}{}%
3381 }
3382 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3383 \do{true}{}%
3384 \do{false}{}%

```

```

3385 }
3386 \define@key{Hyp}{pdfprintpagerange}{%
3387   \def\@pdfprintpagerange{#1}%
3388 }
3389 \Hy@DefNameKey{pdfnumcopies}{%
3390   \do{2}{two copies}%
3391   \do{3}{three copies}%
3392   \do{4}{four copies}%
3393   \do{5}{five copies}%
3394 }

3395 \define@key{Hyp}{pdfusetitle}[true]{%
3396   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3397 }
3398 \def\HyXeTeX@CheckUnicode{%
3399   \ifxetex
3400     \ifHy@unicode
3401     \else
3402       \Hy@WarningNoLine{%
3403         XeTeX driver only supports unicode.\MessageBreak
3404         Enabling option 'unicode'%
3405       }%
3406       \kvsetkeys{Hyp}{unicode}%
3407     \fi
3408   \else
3409     \let\HyXeTeX@CheckUnicode\relax
3410   \fi
3411 }
3412 \def\HyPsd@PrerenderUnicode#1{%
3413   \begingroup
3414     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3415     \else
3416       \sbox0{%
3417         \let\GenericInfo\@gobbletwo
3418         \let\GenericWarning\@gobbletwo
3419         \let\GenericError\@gobblefour
3420         \PrerenderUnicode{#1}%
3421       }%
3422     \fi
3423   \endgroup
3424 }
3425 \define@key{Hyp}{pdftitle}{%
3426   \HyXeTeX@CheckUnicode
3427   \HyPsd@XeTeXBigCharstrue
3428   \HyPsd@PrerenderUnicode{#1}%
3429   \pdfstringdef\@pdftitle{#1}%
3430 }
3431 \define@key{Hyp}{pdfauthor}{%
3432   \HyXeTeX@CheckUnicode
3433   \HyPsd@XeTeXBigCharstrue
3434   \HyPsd@PrerenderUnicode{#1}%
3435   \pdfstringdef\@pdfauthor{#1}%
3436 }
3437 \define@key{Hyp}{pdfproducer}{%
3438   \HyXeTeX@CheckUnicode
3439   \HyPsd@XeTeXBigCharstrue
3440   \HyPsd@PrerenderUnicode{#1}%
3441   \pdfstringdef\@pdfproducer{#1}%

```



```

3442 }
3443 \define@key{Hyp}{pdfcreator}{%
3444   \HyXeTeX@CheckUnicode
3445   \HyPsd@XeTeXBigCharstrue
3446   \HyPsd@PrerenderUnicode{#1}%
3447   \pdfstringdef\@pdfcreator{#1}%
3448 }
3449 \define@key{Hyp}{pdfcreationdate}{%
3450   \begingroup
3451     \Hy@unicodedefalse
3452     \pdfstringdef\@pdfcreationdate{#1}%
3453   \endgroup
3454 }
3455 \define@key{Hyp}{pdfmoddate}{%
3456   \begingroup
3457     \Hy@unicodedefalse
3458     \pdfstringdef\@pdfmoddate{#1}%
3459   \endgroup
3460 }
3461 \define@key{Hyp}{pdfsubject}{%
3462   \HyXeTeX@CheckUnicode
3463   \HyPsd@XeTeXBigCharstrue
3464   \HyPsd@PrerenderUnicode{#1}%
3465   \pdfstringdef\@pdfsubject{#1}%
3466 }
3467 \define@key{Hyp}{pdfkeywords}{%
3468   \HyXeTeX@CheckUnicode
3469   \HyPsd@XeTeXBigCharstrue
3470   \HyPsd@PrerenderUnicode{#1}%
3471   \pdfstringdef\@pdfkeywords{#1}%
3472 }
3473 \define@key{Hyp}{pdftrapped}{%
3474   \lowercase{\edef\Hy@temp{#1}}%
3475   \ifx\Hy@temp\HyInfo@trapped@true
3476     \def\@pdftrapped{True}%
3477   \else
3478     \ifx\Hy@temp\HyInfo@trapped@false
3479       \def\@pdftrapped{False}%
3480     \else
3481       \ifx\Hy@temp\HyInfo@trapped@unknown
3482         \def\@pdftrapped{Unknown}%
3483       \else
3484         \ifx\Hy@temp\@empty
3485           \else
3486             \Hy@Warning{%
3487               Unsupported value ‘#1’\MessageBreak
3488               for option ‘pdftrapped’%
3489             }%
3490         \fi
3491       \def\@pdftrapped{}%
3492     \fi
3493   \fi
3494 \fi
3495 }
3496 \def\HyInfo@trapped@true{true}
3497 \def\HyInfo@trapped@false{false}
3498 \def\HyInfo@trapped@unknown{unknown}

```

```

3499 \def\HyInfo@TrappedUnsupported{%
3500   \ifx\@pdftrapped\@empty
3501   \else
3502     \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3503     \gdef\HyInfo@TrappedUnsupported{%
3504     \fi
3505   }
3506 \define@key{Hyp}{pdfinfo}{%
3507   \kvsetkeys{pdfinfo}{#1}%
3508 }
3509 \def\Hy@temp#1{%
3510   \lowercase{\Hy@temp@A{#1}}{#1}%
3511 }
3512 \def\Hy@temp@A#1#2{%
3513   \define@key{pdfinfo}{#2}{%
3514     \hypersetup{pdf#1={##1}}%
3515   }%
3516 }
3517 \Hy@temp{Title}
3518 \Hy@temp{Author}
3519 \Hy@temp{Keywords}
3520 \Hy@temp{Subject}
3521 \Hy@temp{Creator}
3522 \Hy@temp{Producer}
3523 \Hy@temp{CreationDate}
3524 \Hy@temp{ModDate}
3525 \Hy@temp{Trapped}
3526 \newif\ifHyInfo@AddonUnsupported
3527 \kv@set@family@handler{pdfinfo}{%
3528   \HyInfo@AddonHandler{#1}{#2}%
3529 }
3530 \let\HyInfo@do\relax
3531 \def\HyInfo@AddonHandler#1#2{%
3532   \ifx\kv@value\relax
3533     \Hy@Warning{%
3534       Option 'pdfinfo': ignoring key '\kv@key' without value%
3535     }%
3536   \else
3537     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3538     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3539     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3540       \ifHyInfo@AddonUnsupported
3541         \Hy@Warning{%
3542           This driver does not support additional\MessageBreak
3543           information entries, therefore\MessageBreak
3544           '\kv@key' is ignored%
3545         }%
3546       \else
3547         \define@key{pdfinfo}{\HyInfo@Key}{%
3548           \HyXeTeX@CheckUnicode
3549           \HyPsd@XeTeXBigCharstrue
3550           \HyPsd@PrerenderUnicode{##1}%
3551           \pdfstringdef\HyInfo@Value{##1}%
3552           \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3553             \HyInfo@Value
3554         }%
3555       \edef\HyInfo@AddonList{%

```

```

3556     \HyInfo@AddonList
3557     \HyInfo@do{\HyInfo@Key}%
3558 }%
3559 \kv@parse@normalized{%
3560     \HyInfo@Key={#2}%
3561 }{%
3562     \kv@processor@default{pdfinfo}%
3563 }%
3564 \fi
3565 \else
3566     \kv@parse@normalized{%
3567         \HyInfo@Key={#2}%
3568     }{%
3569         \kv@processor@default{pdfinfo}%
3570     }%
3571 \fi
3572 \fi
3573 }
3574 \def\HyInfo@GenerateAddons{%
3575     \ifHyInfo@AddonUnsupported
3576     \def\HyInfo@Addons{}%
3577 \else
3578     \begingroup
3579     \toks@{}%
3580     \def\HyInfo@do##1{%
3581         \edefEscapeName\HyInfo@Key{##1}%
3582         \edef\x{%
3583             \toks@{%
3584                 \the\toks@
3585                 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3586             }%
3587         }%
3588         \x
3589     }%
3590     \HyInfo@AddonList
3591     \edef\x{\endgroup
3592         \def\noexpand\HyInfo@Addons{\the\toks@}%
3593     }%
3594     \x
3595 \fi
3596 }
3597 \def\HyInfo@AddonList{}
3598 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3599 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3600 \let\setpdfinkmargin\@gobble
3601 \def\calculate@pdfview#1 #2\{%
3602     \def\@pdfview{#1}%
3603     \ifx\@#2\%
3604         \def\@pdfviewparams{-32768}%
3605     \else
3606         \def\@pdfviewparams{#2}%
3607     \fi
3608 }
3609 \begingroup\expandafter\expandafter\expandafter\endgroup
3610 \expandafter\ifx\csname numexpr\endcsname\relax
3611     \def\Hy@number#1{%
3612         \expandafter\@firstofone\expandafter{\number#1}%

```

```

3613 }%
3614 \else
3615   \def\Hy@number#1{%
3616     \the\numexpr#1\relax
3617   }%
3618 \fi
3619 \define@key{Hyp}{pdfstartpage}{%
3620   \ifx\#1\%
3621     \def\@pdfstartpage{}%
3622   \else
3623     \edef\@pdfstartpage{\Hy@number{#1}}%
3624   \fi
3625 }%
3626 \define@key{Hyp}{pdfstartview}{%
3627   \ifx\#1\%
3628     \def\@pdfstartview{}%
3629   \else
3630     \hypercalcbpdef\@pdfstartview{ /#1 }%
3631   \fi
3632 }
3633 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3634 \define@key{Hyp}{pdftoolbar}[true]{%
3635   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3636 }
3637 \define@key{Hyp}{pdfmenubar}[true]{%
3638   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3639 }
3640 \define@key{Hyp}{pdfwindowui}[true]{%
3641   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3642 }
3643 \define@key{Hyp}{pdffitwindow}[true]{%
3644   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3645 }
3646 \define@key{Hyp}{pdfcenterwindow}[true]{%
3647   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3648 }
3649 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3650   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3651 }
3652 \define@key{Hyp}{pdfa}[true]{%
3653   \Hy@boolkey[pdfa]{#1}%
3654 }
3655 \define@key{Hyp}{pdfnewwindow}[true]{%
3656   \def\Hy@temp{#1}%
3657   \ifx\Hy@temp\@empty
3658     \Hy@newwindowsetfalse
3659   \else
3660     \Hy@newwindowsettrue
3661     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3662   \fi
3663 }
3664 \def\Hy@SetNewWindow{%
3665   \ifHy@newwindowset
3666     /NewWindow %
3667   \ifHy@newwindow true\else false\fi
3668 \fi
3669 }

```

```

3670 \Hy@DefNameKey{pdfpagelayout}{%
3671   \do{SinglePage}{}%
3672   \do{OneColumn}{}%
3673   \do{TwoColumnLeft}{}%
3674   \do{TwoColumnRight}{}%
3675   \do{TwoPageLeft}{PDF 1.5}%
3676   \do{TwoPageRight}{PDF 1.5}%
3677 }
3678 \define@key{Hyp}{pdflang}{%
3679   \def\@pdflang{#1}%
3680 }
3681 \define@key{Hyp}{pdfpagelabels}[true]{%
3682   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3683 }
3684 \define@key{Hyp}{pdfescapeform}[true]{%
3685   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3686 }

```

Default values:

```

3687 \def\@linkbordercolor{1 0 0}
3688 \def\@urlbordercolor{0 1 1}
3689 \def\@menubordercolor{1 0 0}
3690 \def\@filebordercolor{0 .5 .5}
3691 \def\@runbordercolor{0 .7 .7}
3692 \def\@citebordercolor{0 1 0}
3693 \def\@pdfhighlight{/I}
3694 \def\@pdftitle{}
3695 \def\@pdfauthor{}
3696 \let\@pdfproducer\relax
3697 \def\@pdfcreator{LaTeX with hyperref package}
3698 \def\@pdfcreationdate{}
3699 \def\@pdfmoddate{}
3700 \def\@pdfsubject{}
3701 \def\@pdfkeywords{}
3702 \def\@pdftrapped{}
3703 \def\@pdfpagescrop{}
3704 \def\@pdfstartview{/Fit }
3705 \def\@pdfstartpage{1}
3706 \def\@pdfprintpagerange{}
3707 \def\@pdflang{}
3708 \let\PDF@SetupDoc\@empty
3709 \let\PDF@FinishDoc\@empty
3710 \let\phantomsection\@empty
3711 \let\special@paper\@empty
3712 \def\HyperDestNameFilter#1{#1}
3713 \Hy@AtBeginDocument{%
3714   \begingroup
3715     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3716     \dimen@=\x\relax
3717     \ifdim\dimen@>\z@
3718       \else
3719         \dimen@=11in\relax
3720         \Hy@WarningNoLine{%
3721           Height of page (\expandafter\string\x) %
3722           is invalid (\the\x),\MessageBreak
3723           using 11in%
3724         }%
3725       \fi

```

```

3726 \dimen@=0.99626401\dimen@
3727 \xdef\Hy@pageheight{\strip@pt\dimen@}%
3728 \endgroup
3729 }
3730 \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.

```

3731 \let\hyper@normalise\ExecuteOptions
3732 \let\ExecuteOptions\hypersetup
3733 \Hy@RestoreCatcodes
3734 \InputIfFileExists{hyperref.cfg}{-}{-}
3735 \Hy@SetCatcodes
3736 \let\ExecuteOptions\hyper@normalise
3737 \Hy@MaybeStopNow

```

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.

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

```

3738 \RequirePackage{kvoptions}[2009/07/21]
3739 \SetupKeyvalOptions{family=Hyp}
3740 \DeclareLocalOptions{%
3741   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3742 }

```

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

```

3743 \ifpackageloaded{tex4ht}{-%
3744   \ifpackagewith{hyperref}{tex4ht}{-}{-%
3745     \PassOptionsToPackage{tex4ht}{hyperref}%
3746   }-%
3747 }{-}

3748 \let\ReadBookmarks\relax
3749 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3750 \Hy@AtBeginDocument{%
3751   \ifHy@draft
3752     \let\hyper@@anchor\@gobble
3753     \gdef\hyper@link#1#2#3{#3}%
3754     \let\hyper@anchorstart\@gobble
3755     \let\hyper@anchorend\@empty
3756     \let\hyper@linkstart\@gobbletwo
3757     \let\hyper@linkend\@empty
3758     \def\hyper@linkurl#1#2{#1}%
3759     \def\hyper@linkfile#1#2#3{#1}%
3760     \def\hyper@link@{#1}#2#3{}%
3761     \def\Acrobatmenu#1#2{\leavevmode#2}%
3762     \let\PDF@SetupDoc\@empty
3763     \let\PDF@FinishDoc\@empty
3764     \let\@fifthoffive\@secondoftwo
3765     \let\@secondoffive\@secondoftwo
3766     \let\ReadBookmarks\relax
3767     \let\WriteBookmarks\relax
3768     \Hy@WarningNoLine{Draft mode on}%
3769   \fi

```

```

3770 \Hy@DisableOption{draft}%
3771 \Hy@DisableOption{nolinks}%
3772 \Hy@DisableOption{final}%
3773 }

```

15.1 PDF/A

```

3774 \Hy@DisableOption{pdfa}

3775 \ifHy@pdfa
3776 \kvsetkeys{Hyp}{pdfversion=1.4}%
3777 \def\Hy@Acrobatmenu#1#2{%
3778 \leavevmode
3779 \begingroup
3780 \edef\x{#1}%
3781 \@onelevel@sanitize\x
3782 \ifx\x\Hy@NextPage
3783 \let\y=Y%
3784 \else
3785 \ifx\x\Hy@PrevPage
3786 \let\y=Y%
3787 \else
3788 \ifx\x\Hy@FirstPage
3789 \let\y=Y%
3790 \else
3791 \ifx\x\Hy@LastPage
3792 \let\y=Y%
3793 \else
3794 \let\y=N%
3795 \fi
3796 \fi
3797 \fi
3798 \fi
3799 \expandafter\endgroup
3800 \ifx\y Y%
3801 \else
3802 \PackageError{hyperref}{%
3803 PDF/A: Named action ‘#1’ is not permitted%
3804 }\@ehc
3805 {#2}%
3806 \expandafter\@gobble
3807 \fi
3808 }%
3809 \def\Hy@temp#1{%
3810 \expandafter\def\csname Hy@#1\endcsname{#1}%
3811 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3812 }%
3813 \Hy@temp{NextPage}%
3814 \Hy@temp{PrevPage}%
3815 \Hy@temp{FirstPage}%
3816 \Hy@temp{LastPage}%
3817 \else
3818 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3819 \fi

```

15.2 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.

```
3820 \Hy@nextfalse
3821 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3822 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3823 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3824 \ifHy@next
3825   \let\texttilde\~%
3826 \fi

3827 \ifHy@figures
3828   \Hy@Info{Hyper figures ON}%
3829 \else
3830   \Hy@Info{Hyper figures OFF}%
3831 \fi

3832 \ifHy@nesting
3833   \Hy@Info{Link nesting ON}%
3834 \else
3835   \Hy@Info{Link nesting OFF}%
3836 \fi

3837 \ifHy@hyperindex
3838   \Hy@Info{Hyper index ON}%
3839 \else
3840   \Hy@Info{Hyper index OFF}%
3841 \fi

3842 \ifHy@plainpages
3843   \Hy@Info{Plain pages ON}%
3844 \else
3845   \Hy@Info{Plain pages OFF}%
3846 \fi

3847 \ifHy@backref
3848   \Hy@Info{Backreferencing ON}%
3849 \else
3850   \Hy@Info{Backreferencing OFF}%
3851 \fi

3852 \ifHy@typexml
3853   \Hy@AtEndOfPackage{%
3854     \RequirePackage{color}%
3855     \RequirePackage{nameref}%
3856   }%
3857 \fi

3858 \Hy@DisableOption{typexml}
3859 \ifHy@implicit
3860   \typeout{Implicit mode ON; LaTeX internals redefined}%
3861 \else
3862   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3863   \def\MaybeStopEarly{%
3864     \typeout{Hyperref stopped early}%
3865     \Hy@AtBeginDocument{%
3866       \PDF@FinishDoc
3867       \gdef\PDF@FinishDoc{}%
3868     }%
3869     \endinput
3870   }%
3871   \Hy@AtBeginDocument{%
3872     \let\autoref\ref
```



```

3873 \let\autopageref\pageref
3874 \ifx\@pdfpagemode\@empty
3875 \gdef\@pdfpagemode{UseNone}%
3876 \fi
3877 \global\Hy@backreffalse
3878 }%
3879 \Hy@AtEndOfPackage{%
3880 \global\let\ReadBookmarks\relax
3881 \global\let\WriteBookmarks\relax
3882 }%
3883 \fi
3884 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3885 \Hy@AtEndOfPackage{%
3886 \@ifpackageloaded{tex4ht}{%
3887 \def\Hy@driver{htex4ht}%
3888 \Hy@texhttrue
3889 }{}%

```

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.

```

3890 \ifx\Hy@driver\@empty
3891 \else
3892 \def\Hy@temp{hpdfTeX}%
3893 \ifpdf
3894 \ifx\Hy@driver\Hy@temp
3895 \else
3896 \Hy@WarningNoLine{%
3897 Wrong driver '\Hy@driver.def';\MessageBreak
3898 pdfTeX is running in PDF mode.\MessageBreak
3899 Forcing driver '\Hy@temp.def'%
3900 }%
3901 \let\Hy@driver\Hy@temp
3902 \fi
3903 \else
3904 \ifx\Hy@driver\Hy@temp
3905 \Hy@WarningNoLine{%
3906 Wrong driver '\Hy@driver.def';\MessageBreak
3907 pdfTeX is not running in PDF mode.\MessageBreak
3908 Using default driver%
3909 }%
3910 \let\Hy@driver\@empty
3911 \fi
3912 \fi
3913 \fi
3914 \ifx\Hy@driver\@empty
3915 \else
3916 \def\Hy@temp{hXeTeX}%
3917 \ifXeTeX
3918 \ifx\Hy@driver\Hy@temp
3919 \else
3920 \Hy@WarningNoLine{%
3921 Wrong driver '\Hy@driver.def';\MessageBreak
3922 XeTeX is running.\MessageBreak
3923 Forcing driver '\Hy@temp.def' for XeTeX%
3924 }%

```

```

3925     \let\Hy@driver\Hy@temp
3926     \fi
3927 \fi
3928 \fi
3929 \ifx\Hy@driver\@empty
3930 \else
3931   \def\Hy@temp{hvtexhtm}%
3932   \ifvtexhtml
3933     \ifx\Hy@driver\Hy@temp
3934     \else
3935       \Hy@WarningNoLine{%
3936         Wrong driver '\Hy@driver.def';\MessageBreak
3937         VTeX is running in HTML mode.\MessageBreak
3938         Forcing driver '\Hy@temp.def'%
3939       }%
3940     \let\Hy@driver\Hy@temp
3941     \fi
3942   \else
3943     \ifx\Hy@driver\Hy@temp
3944       \Hy@WarningNoLine{%
3945         Wrong driver '\Hy@driver.def';\MessageBreak
3946         VTeX is not running in HTML mode.\MessageBreak
3947         Using default driver%
3948       }%
3949     \let\Hy@driver\@empty
3950   \fi
3951 \fi
3952 \fi

```

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

```

3953 \ifx\Hy@driver\@empty
3954   \providecommand*{\Hy@defaultdriver}{hypertex}%
3955   \ifpdf
3956     \def\Hy@driver{hpdfTeX}%
3957   \else
3958     \ifxetex
3959       \def\Hy@driver{hxetex}%
3960     \else
3961       \ifvtexhtml
3962         \def\Hy@driver{hvtexhtm}%
3963         \def\MaybeStopEarly{%
3964           \typeout{Hyperref stopped early}%
3965           \Hy@AtBeginDocument{%
3966             \PDF@FinishDoc
3967             \gdef\PDF@FinishDoc{}}%
3968         }%
3969       \endinput
3970     }%
3971   \else
3972     \ifvtexpdf
3973       \def\Hy@driver{hvtex}%
3974     \else
3975       \ifvtexps
3976         \def\Hy@driver{hvtex}%
3977       \else
3978         \let\Hy@driver\Hy@defaultdriver
3979     \fi
3980 \fi

```

```

3981     \fi
3982   \fi
3983 \fi
3984 \ifx\Hy@driver\Hy@defaultdriver
3985   \def\Hy@temp{hdvwind}%
3986   \ifx\Hy@temp\Hy@driver
3987     \kvsetkeys{Hyp}{colorlinks}%
3988     \PassOptionsToPackage{dviwindo}{color}%
3989   \fi
3990 \fi
3991 \typeout{* hyperref using default driver \Hy@driver\ltx@space*}%
3992 \else
3993 \typeout{* hyperref using driver \Hy@driver\ltx@space*}%
3994 \fi
3995 \input{\Hy@driver.def}%
3996 \let\@unprocessedoptions\relax
3997 \Hy@RestoreCatcodes
3998 }

```

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.

```

3999 \newif\ifHy@DvipdfmxOutlineOpen
4000 \ifxetex
4001   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4002   \else
4003     \Hy@DvipdfmxOutlineOpenttrue
4004   \fi
4005 \fi
4006 \begingroup\expandafter\expandafter\expandafter\endgroup
4007 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4008 \else
4009   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4010     \Hy@DvipdfmxOutlineOpenttrue
4011   \fi
4012 \fi
4013 \Hy@DisableOption{tex4ht}
4014 \Hy@DisableOption{pdftex}
4015 \Hy@DisableOption{nativepdf}
4016 \Hy@DisableOption{dvipdfm}
4017 \Hy@DisableOption{dvipdfmx}
4018 \Hy@DisableOption{dvipdfmx-outline-open}
4019 \Hy@DisableOption{pdfmark}
4020 \Hy@DisableOption{dvips}
4021 \Hy@DisableOption{hypertex}
4022 \Hy@DisableOption{vtex}
4023 \Hy@DisableOption{vtxpdfmark}
4024 \Hy@DisableOption{dviwindo}
4025 \Hy@DisableOption{dvipsone}
4026 \Hy@DisableOption{textures}
4027 \Hy@DisableOption{latex2html}
4028 \Hy@DisableOption{ps2pdf}
4029 \Hy@DisableOption{xetex}
4030 \Hy@AtEndOfPackage{%
4031   \Hy@DisableOption{pdfversion}%
4032 }

```

15.2.2 Bookmarks

```

4033 \def\WriteBookmarks{0}
4034 \def\@bookmarkopenstatus#1{%
4035   \ifHy@bookmarksopen

```

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

```

4036   \ifnum#1<\expandafter\@firstofone\expandafter
4037     {\number\@bookmarksopenlevel} % explicit space
4038   \else
4039     -%
4040   \fi
4041 \else
4042   -%
4043 \fi
4044 }
4045 \ifHy@bookmarks
4046   \Hy@Info{Bookmarks ON}%
4047   \ifx\@pdfpagemode\@empty
4048     \def\@pdfpagemode{UseOutlines}%
4049   \fi
4050 \else
4051   \def\@bookmarkopenstatus#1{%
4052     \Hy@Info{Bookmarks OFF}%
4053     \Hy@AtEndOfPackage{%
4054       \global\let\ReadBookmarks\relax
4055       \global\let\WriteBookmarks\relax
4056     }%
4057     \ifx\@pdfpagemode\@empty
4058       \def\@pdfpagemode{UseNone}%
4059     \fi
4060   \fi
4061   \Hy@DisableOption{bookmarks}

```

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

```

4062 \def\Hy@CatcodeWrapper#1{%
4063   \def\Hy@EndWrap{%
4064     \def\TMP@EnsureCode##1##2{%
4065       \edef\Hy@EndWrap{%
4066         \Hy@EndWrap
4067         \catcode##1 \the\catcode##1\relax
4068       }%
4069       \catcode##1 ##2\relax
4070     }%
4071     \TMP@EnsureCode{10}{12}% ^^J
4072     \TMP@EnsureCode{33}{12}% !
4073     \TMP@EnsureCode{34}{12}% "
4074     \TMP@EnsureCode{36}{3}% $ (math)
4075     \TMP@EnsureCode{38}{4}% & (alignment)
4076     \TMP@EnsureCode{39}{12}% '
4077     \TMP@EnsureCode{40}{12}% (
4078     \TMP@EnsureCode{41}{12}% )
4079     \TMP@EnsureCode{42}{12}% *
4080     \TMP@EnsureCode{43}{12}% +
4081     \TMP@EnsureCode{44}{12}% ,
4082     \TMP@EnsureCode{45}{12}% -
4083     \TMP@EnsureCode{46}{12}% .
4084     \TMP@EnsureCode{47}{12}% /
4085     \TMP@EnsureCode{58}{12}% :
4086     \TMP@EnsureCode{59}{12}% ;

```

```

4087 \TMP@EnsureCode{60}{12}% <
4088 \TMP@EnsureCode{61}{12}% =
4089 \TMP@EnsureCode{62}{12}% >
4090 \TMP@EnsureCode{63}{12}% ?
4091 \TMP@EnsureCode{91}{12}% [
4092 \TMP@EnsureCode{93}{12}% ]
4093 \TMP@EnsureCode{94}{7}% ^ (superscript)
4094 \TMP@EnsureCode{95}{8}% _ (subscript)
4095 \TMP@EnsureCode{96}{12}% '
4096 \TMP@EnsureCode{124}{12}% |
4097 \TMP@EnsureCode{126}{13}% ~ (active)
4098 #1\relax
4099 \Hy@endWrap
4100 }

```

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

```

4101 \Hy@AtBeginDocument{%
4102   \ifHy@ocgcolorlinks
4103     \kvsetkeys{Hyp}{colorlinks}%
4104     \ifHy@pdfa
4105       \Hy@Warning{%
4106         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4107         using 'colorlinks' instead of 'ocgcolorlinks'%
4108       }%
4109     \Hy@ocgcolorlinksfalse
4110   \fi
4111 \fi
4112 \ifHy@ocgcolorlinks
4113 \else
4114   \Hy@DisableOption{ocgcolorlinks}%
4115 \fi
4116 \ifHy@colorlinks
4117   \def\@pdfborder{0 0 0}%
4118   \let\@pdfborderstyle\@empty
4119   \ifHy@typexml
4120   \else
4121     \Hy@CatcodeWrapper{%
4122       \RequirePackage{color}%
4123     }%
4124   \fi
4125   \def\Hy@colorlink#1{%
4126     \begingroup
4127     \HyColor@UseColor#1%
4128   }%
4129   \def\Hy@endcolorlink{\endgroup}%
4130   \Hy@Info{Link coloring ON}%
4131 \else
4132   \ifHy@frenchlinks
4133     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4134     \def\Hy@endcolorlink{\endgroup}%
4135     \Hy@Info{French linking ON}%
4136   \else

```

for grouping consistency:

```

4137   \def\Hy@colorlink#1{\begingroup}%
4138   \def\Hy@endcolorlink{\endgroup}%
4139   \Hy@Info{Link coloring OFF}%
4140 \fi

```

```

4141 \fi
4142 \Hy@DisableOption{colorlinks}%
4143 \Hy@DisableOption{frenchlinks}%
4144 \ifHy@texht
4145 \long\def\@firstoffive#1#2#3#4#5{#1}%
4146 \long\def\@secondoffive#1#2#3#4#5{#2}%
4147 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4148 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4149 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4150 \providecommand*\@safe@activestruetrue{}%
4151 \providecommand*\@safe@activesfalse{}%
4152 \def\T@ref#1{%
4153   \Hy@safe@activestruetrue
4154   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4155   \Hy@safe@activesfalse
4156 }%
4157 \def\T@pageref#1{%
4158   \Hy@safe@activestruetrue
4159   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4160   \Hy@safe@activesfalse
4161 }%
4162 \else
4163 \ifHy@typexml
4164 \else
4165   \Hy@CatcodeWrapper{%
4166     \RequirePackage{nameref}%
4167   }%
4168 \fi
4169 \fi
4170 \DeclareRobustCommand\ref{%
4171   \@ifstar\@refstar\T@ref
4172 }%
4173 \DeclareRobustCommand\pageref{%
4174   \@ifstar\@pagerefstar\T@pageref
4175 }%
4176 % \ifclassloaded{memoir}{%
4177 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4178 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4179 %   }%
4180 % } \ltx@secondoftwo
4181 % {%
4182 %   \DeclareRobustCommand*\{ \nameref }{%
4183 %     \@ifstar\@mem@titlerefno link\@mem@titleref
4184 %   }%
4185 % }%
4186 \DeclareRobustCommand*\{ \nameref }{%
4187   \@ifstar\@namerefstar\T@nameref
4188 }%
4189 % }%
4190 }
4191 \Hy@AtBeginDocument{%
4192 \ifHy@texht
4193 \else
4194   \Hy@CatcodeWrapper{%
4195     \ReadBookmarks
4196   }%
4197 \fi

```

```

4198 }
4199 \ifHy@backref
4200 \RequirePackage{backref}%
4201 \else
4202 \let\Hy@backout\@gobble
4203 \fi
4204 \Hy@DisableOption{backref}
4205 \Hy@DisableOption{pagebackref}
4206 \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.

```

4207 \begingroup
4208 \endlinechar=-1 %
4209 \catcode'\^^A=14 %
4210 \catcode'\^^M\active
4211 \catcode'\%\active
4212 \catcode'\#\active
4213 \catcode'\_\active
4214 \catcode'\$\active
4215 \catcode'\&\active
4216 \gdef\hyper@normalise{^^A
4217 \begingroup
4218 \catcode'\^^M\active
4219 \def^^M{ }^^A
4220 \catcode'\%\active
4221 \let%\@percentchar
4222 \let\%\@percentchar
4223 \catcode'\#\active
4224 \def#{\hyper@hash}^^A
4225 \def\#{\hyper@hash}^^A
4226 \@makeother\&^^A
4227 \edef&{\string&}^^A
4228 \edef\&{\string&}^^A
4229 \edef\textunderscore{\string_}^^A
4230 \let_\textunderscore
4231 \catcode'\_\active
4232 \let_\textunderscore
4233 \let~\hyper@tilde
4234 \let\~\hyper@tilde
4235 \let\textasciitilde\hyper@tilde
4236 \let\\ \@backslashchar
4237 \edef$\string$}^^A
4238 \Hy@safe@activetrue
4239 \hyper@n@rmalise
4240 }^^A
4241 \catcode'\#=6 ^^A
4242 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4243 \gdef\hyper@n@rmalise#1#2{^^A
4244 \def\Hy@tempa{#2}^^A

```

```

4245 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4246 \Hy@ReturnAfterElseFi{^^A
4247 \hyper@@normalise{#1}^^A
4248 }^^A
4249 \else
4250 \Hy@ReturnAfterFi{^^A
4251 \hyper@@normalise{#1}{#2}^^A
4252 }^^A
4253 \fi
4254 }^^A
4255 \gdef\hyper@@normalise#1#2{^^A
4256 \edef\Hy@tempa{^^A
4257 \endgroup
4258 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4259 }^^A
4260 \Hy@tempa
4261 }^^A
4262 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4263 #1^^A
4264 \ifx\limits#2\limits
4265 \else
4266 \Hy@ReturnAfterFi{^^A
4267 \Hy@RemovePercentCr #2\@nil
4268 }^^A
4269 \fi
4270 }^^A
4271 \endgroup
4272 \providecommand*\hyper@chars{%
4273 \let\#\hyper@hash
4274 \let\%\@percentchar
4275 \Hy@safe@activetrue
4276 }

4277 \def\hyperlink#1#2{%
4278 \hyper@@link{#1}{#2}%
4279 }

4280 \def\Hy@VerboseLinkStart#1#2{%
4281 \ifHy@verbose
4282 \begingroup
4283 \Hy@safe@activetrue
4284 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4285 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4286 \xdef\Hy@VerboseGlobalTemp{%
4287 \Hy@VerboseGlobalTemp, %
4288 line \the\inputlineno
4289 }%
4290 \endgroup
4291 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4292 \@onelevel@sanitize\Hy@VerboseLinkInfo
4293 \fi
4294 }

4295 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4296 \def\Hy@VerboseLinkStop{%
4297 \ifHy@verbose
4298 \begingroup
4299 \edef\x{\endgroup
4300 \write\m@ne{%

```



```

4301      Package 'hyperref' Info: %
4302      End of reference \Hy@VerboseLinkInfo.%
4303    }%
4304  }%
4305  \x
4306  \fi
4307 }

4308 \def\Hy@VerboseAnchor#1{%
4309   \ifHy@verbose
4310     \begingroup
4311       \Hy@safe@activetrue
4312       \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4313     \endgroup
4314   \fi
4315 }

4316 \def\Hy@AllowHyphens{%
4317   \relax
4318   \ifhmode
4319     \penalty\@M
4320     \hskip\z@skip
4321   \fi
4322 }

4323 \DeclareRobustCommand*\href{%
4324   \@ifnextchar\bgrouph\Hy@href{\hyper@normalise\href}%
4325 }
4326 \def\Hy@href#1{%
4327   \hyper@normalise\href@
4328 }
4329 \begingroup
4330 \catcode'\$=6 %
4331 \catcode'\#=12 %
4332 \gdef\href@#1{\expandafter\href@split$1##\}%
4333 \gdef\href@split$1#\$2#\$3\{%
4334   \hyper@@link{#1}{#2}%
4335 }%
4336 \endgroup

```

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

```

4337 \RequirePackage{url}
4338 \let\HyOrg@url\url
4339 \def\Hurl{\begingroup \Url}
4340 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4341 \def\nolinkurl@#1{\Hurl{#1}}
4342 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4343 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
4344 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4345 \providecommand\hyper@image[2]{#2}

4346 \def\hypertarget#1#2{%
4347   \ifHy@nesting
4348     \hyper@@anchor{#1}{#2}%
4349   \else
4350     \hyper@@anchor{#1}{\relax}#2%
4351   \fi
4352 }

```

\hyperref is more complicated, as it includes the concept of a category of link, used to make the name. This is not really used in this package. \hyperdef sets up an anchor in

the same way. They each have three parameters of category, linkname, and marked text, and `\hyperref` also has a first parameter of URL. If there is an optional first parameter to `\hyperdef`, it is the name of a \LaTeX label which can be used in a short form of `\hyperref` later, to avoid remembering the name and category.

```

4353 \DeclareRobustCommand*{\hyperref}{%
4354   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
4355 }
4356 \def\Hy@babelnormalise#1[#2]{%
4357   \begingroup
4358     \Hy@safe@activetrue
4359     \edef\Hy@tempa{%
4360       \endgroup
4361       \noexpand#1[#2]}%
4362   }%
4363   \Hy@tempa
4364 }
4365 \def\@hyperref{\hyper@normalise\@hyperref}
4366 \def\@hyperref#1#2#3{%
4367   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4368   \expandafter\tryhyper@link\ref@one\{#1}%
4369 }
4370 \def\tryhyper@link#1\#2{%
4371   \hyper@@link{#2}{#1}%
4372 }
4373 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}}
4374 \def\@hyperdef#1#2#3{%, category, name, text
4375   \ifx\#1\%
4376     \def\Hy@AnchorName{#2}%
4377   \else
4378     \def\Hy@AnchorName{#1.#2}%
4379   \fi
4380   \ifHy@nesting
4381     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4382   \else
4383     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4384   \fi
4385 }

```

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

```

4386 \def\label@hyperref[#1]{%
4387   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4388 }%
4389 \def\label@@hyperref#1#2#3{%
4390   \ifx#1\relax
4391     \protect\G@refundefinedtrue
4392     \@latex@warning{%
4393       Hyper reference ‘#2’ on page \thepage \space undefined%
4394     }%
4395     \hyper@@link{}{??}{#3}%
4396   \else
4397     \hyper@@link{\expandafter\@fifthoffive#1}%
4398     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4399   \fi
4400 }
4401 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4402                               % anchor text

```

```

4403 \@bsphack
4404 \ifx\#2\%
4405   \def\Hy@AnchorName{#3}%
4406 \else
4407   \def\Hy@AnchorName{#2.#3}%
4408 \fi
4409 \if@filesw
4410   \protected@write\@auxout{}\{
4411     \string\newlabel{#1}\{ }\{ }\{ \Hy@AnchorName\} \}
4412   \}%
4413 \fi
4414 \@esphack
4415 \ifHy@nesting
4416   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4417 \else
4418   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4419 \fi
4420 }

```

17 Underlying basic hypertext macros

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

```

4421 \def\hyper@@link{\let\Hy@reserved@a\relax
4422   \@ifnextchar[\hyper@link@]{\hyper@link@[link]}%
4423 }
4424 \def\hyper@link@[#1]#2#3#4{%
4425   \begingroup
4426     \protected@edef\Hy@tempa{#2}%
4427     \Hy@safe@activestrue
4428     \edef\x{#3}%
4429     \ifx\Hy@tempa\@empty
4430       \toks0{\hyper@link{#1}}%
4431     \else
4432       \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4433     \fi
4434     \toks2{%
4435       \Hy@safe@activesfalse
4436       #4%
4437     }%
4438     \edef\Hy@tempa{\the\toks2}%
4439     \edef\x{\endgroup
4440       \ifx\Hy@tempa\@empty
4441         \noexpand\Hy@Warning{Suppressing empty link}%
4442       \else
4443         \the\toks0 \x{\the\toks2}%
4444       \fi
4445     }%
4446   \x
4447 }

```

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.

```
4448 \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.

```
4449 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\|#1}%  
4450 }
```

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

```
4451 \def\@pdftempwordfile{file}%  
4452 \def\@pdftempwordrun{run}%  
4453 \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:

```
4454 \ifx\|#6\|  
4455 \expandafter\@hyper@linkfile file:#7\|#3}{#2}%  
4456 \else  
4457 \ifx\|#4\|  
4458 \expandafter\@hyper@linkfile file:#7\|#3}{#2}%  
4459 \else
```

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

```
4460 \def\@pdftempa{#4}%  
4461 \ifx\@pdftempa\@pdftempwordfile  
4462 \expandafter\@hyper@linkfile#7\|#3}{#2}%  
4463 \else
```

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

```
4464 \ifx\@pdftempa\@pdftempwordrun  
4465 \ifHy@pdfa  
4466 \PackageError{hyperref}{%  
4467 PDF/A: Launch action is prohibited%  
4468 }{\@ehc  
4469 \begingroup  
4470 \leavevmode  
4471 #2%  
4472 \endgroup  
4473 \else  
4474 \expandafter\@hyper@launch#7\|#3}{#2}%  
4475 \fi  
4476 \else
```

otherwise its a URL

```
4477 \hyper@linkurl{#3}{#7\ifx\|#2\|\else\hyper@hash#2\fi}%  
4478 \fi
```

```

4479 \fi
4480 \fi
4481 \fi
4482 }

```

By default, turn run: into file:

```

4483 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text, linkname
4484 \hyper@linkurl{#2}{%
4485 \Hy@linkfileprefix
4486 #1%
4487 \ifx\|#3\|%
4488 \else
4489 \hyper@hash
4490 #3%
4491 \fi
4492 }%
4493 }

```

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

```

4494 \def\@hyper@linkfile file:#1\|#2#3{%
4495 %file url,link string, name
4496 \filename@parse{#1}%
4497 \ifx\filename@ext\relax
4498 \edef\filename@ext{\XR@ext}%
4499 \fi
4500 \def\use@file{\filename@area\filename@base.\filename@ext}%
4501 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
4502 \hyper@linkfile{#2}{\use@file}{#3}%
4503 }{%
4504 \ifx\@baseurl\@empty
4505 \hyper@linkurl{#2}{%
4506 \Hy@linkfileprefix\use@file\ifx\|#3\|\\else\hyper@hash#3\fi
4507 }%
4508 \else
4509 \hyper@linkurl{#2}{\use@file\ifx\|#3\|\\else\hyper@hash#3\fi}%
4510 \fi
4511 }%
4512 }

4513 \def\Hy@IfStringEndsWith#1#2{%
4514 \begingroup
4515 \edef\x{#1}%
4516 \@onelevel@sanitize\x
4517 \edef\x{.\x$}%
4518 \edef\y{#2}%
4519 \@onelevel@sanitize\y
4520 \edef\y{.\y$}%
4521 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4522 \endgroup
4523 \ifx\relax##2\relax
4524 \expandafter\ltx@secondoftwo
4525 \else
4526 \expandafter\ltx@firstoftwo
4527 \fi
4528 }%
4529 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4530 }

```

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.

```

4531 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4532 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4533   \ifx\#1\%
4534     #2\Hy@Warning{Ignoring empty anchor}%
4535   \else
4536     \def\anchor@spot{#2#3}%
4537     \let\put@me@back\@empty
4538     \ifx\relax#2\relax
4539     \else
4540       \ifHy@nesting
4541       \else
4542         \ifcat a\noexpand#2\relax
4543         \else
4544           \ifcat 0\noexpand#2 \relax
4545           \else
4546             \typeout{Anchor start is not alphanumeric %
4547             on input line\the\inputlineno%
4548             }%
4549             \let\anchor@spot\@empty
4550             \def\put@me@back{#2#3}%
4551           \fi
4552         \fi
4553       \fi
4554     \fi
4555     \ifHy@activeanchor
4556       \anchor@spot
4557     \else
4558       \hyper@anchor{#1}%
4559     \fi
4560     \expandafter\put@me@back
4561   \fi
4562   \let\anchor@spot\@empty
4563 }
4564 \def\anchor@spot{}

```

18 Compatibility with the *LT_ε2html* 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.

```

4565 \let\htmladdimg\hyperimage
4566 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4567 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4568 \def\htmlref#1#2{% anchor text, label

```

```

4569 \label@hyperref[#{#2}]{#1}%
4570 }

```

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.

```

4571 \def\@latex2htmlX{%
4572   \let\hhyperref\hyperref
4573   \def\hyperref##1##2##3##4{% anchor text for HTML
4574     % text to print before label in print
4575     % label
4576     % post-label text in print
4577     ##2\ref{##4}##3%
4578   }%
4579 }

```

19 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.

19.1 Field flags

The field flags are organized in a bit set.

```

4580 \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
4581 \def\HyField@NewFlag#1#2{%
4582   \lowercase{\HyField@NewOption{#2}}%
4583   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4584 }

```

```

\HyField@NewFlagOnly
4585 \def\HyField@NewFlagOnly#1#2{%
4586   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4587 }

```

```

\HyField@NewOption #1: option name
4588 \def\HyField@NewOption#1{%
4589   \expandafter\newif\csname ifFld@#1\endcsname
4590   \define@key{Field}{#1}[true]{%
4591     \lowercase{\Field@boolkey{##1}}{#1}%
4592   }%
4593 }

```

`\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

```
4594 \def\HyField@NewBitsetFlag#1#2#3#4{%
4595   \begingroup
4596   \count@=#4\relax
4597   \advance\count@\m@ne
4598   \def\x##1{%
4599     \endgroup
4600     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4601     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4602       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4603         (\number#4) #2%
4604       }%
4605     \else
4606       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4607         \csname HyField@#3@##1\endcsname
4608         /#2%
4609       }%
4610     \fi
4611   }%
4612   \expandafter\x\expandafter{\the\count@}%
4613 }
```

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

```
4614 \def\HyField@UseFlag#1#2{%
4615   \lowercase{\HyField@@UseFlag{#2}}{#1}%
4616 }
```

`\HyField@@UseFlag`

```
4617 \def\HyField@@UseFlag#1#2{%
4618   \bitsetSetValue{HyField@#2}{%
4619     \csname HyField@#2@#1\endcsname
4620   }{%
4621     \csname ifFld@#1\endcsname 1\else 0\fi
4622   }%
4623 }
```

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

```
4624 \def\HyField@SetFlag#1#2{%
4625   \lowercase{\HyField@@SetFlag{#2}}{#1}%
4626 }
```

`\HyField@@SetFlag`

```
4627 \def\HyField@@SetFlag#1#2{%
4628   \bitsetSetValue{HyField@#2}{%
4629     \csname HyField@#2@#1\endcsname
4630   }{1}%
4631 }
```

`\HyField@PrintFlags`

```
4632 \def\HyField@PrintFlags#1#2{%
4633   \ifHy@verbose
4634     \begingroup
```



```

4635 \let\Hy@temp\@empty
4636 \let\MessageBreak\relax
4637 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4638 \bitsetGetSetBitList{HyField@#1}\do{%
4639 \edef\Hy@temp{%
4640 \Hy@temp
4641 \csname HyField@#1@\x\endcsname\MessageBreak
4642 }%
4643 }%
4644 \edef\x{\endgroup
4645 \noexpand\Hy@Info{%
4646 Field flags: %
4647 \expandafter\ifx\@car#1\@nil S\else/\fi
4648 #1 %
4649 \bitsetGetDec{HyField@#1} %
4650 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4651 \Hy@temp
4652 for #2%
4653 }%
4654 }\x
4655 \fi
4656 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4657 \HyField@NewFlag{Ff}{ReadOnly}{1}
4658 \HyField@NewFlag{Ff}{Required}{2}
4659 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4660 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4661 \HyField@NewFlag{Ff}{Radio}{16}
4662 \HyField@NewFlag{Ff}{Pushbutton}{17}
4663 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4664 \HyField@NewFlag{Ff}{Multiline}{13}
4665 \HyField@NewFlag{Ff}{Password}{14}
4666 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4667 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4668 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4669 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4670 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4671 \HyField@NewFlag{Ff}{Combo}{18}
4672 \HyField@NewFlag{Ff}{Edit}{19}
4673 \HyField@NewFlag{Ff}{Sort}{20}
4674 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4675 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4676 \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.

```

4677 \newif\iffld@popdown
4678 \define@key{Field}{popdown}[true]{%

```

```

4679 \lowercase{\Field@boolkey{#1}}{popdown}%
4680 }

```

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.

```

4681 \HyField@NewFlag{F}{Invisible}{1}
4682 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4683 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4684 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4685 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4686 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4687 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4688 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4689 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4690 \ifHy@pdfa
4691 \def\HyField@PDFAFldWarning#1#2{%
4692   \Hy@Warning{%
4693     PDF/A: Annotation flag '#1' must\MessageBreak
4694     be set to '#2'%
4695   }%
4696 }%
4697 \Fld@invisiblefalse
4698 \def\Fld@invisibletrue{%
4699   \HyField@PDFAFldWarning{invisible}{false}%
4700 }%
4701 \Fld@hiddenfalse
4702 \def\Fld@hiddentrue{%
4703   \HyField@PDFAFldWarning{hidden}{false}%
4704 }%
4705 \Fld@printtrue
4706 \def\Fld@printfalse{%
4707   \HyField@PDFAFldWarning{print}{true}%
4708 }%
4709 \Fld@nozoomtrue
4710 \def\Fld@nozoomfalse{%
4711   \HyField@PDFAFldWarning{nozoom}{true}%
4712 }%
4713 \Fld@norotatetrue
4714 \def\Fld@norotatefalse{%
4715   \HyField@PDFAFldWarning{norotate}{true}%
4716 }%
4717 \Fld@noviewfalse
4718 \def\Fld@noviewtrue{%
4719   \HyField@PDFAFldWarning{noview}{false}%
4720 }%
4721 \fi

```

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

```

4722 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4723 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4724 \HyField@NewFlag{Submit}{GetMethod}{4}
4725 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4726 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4727 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}

```

```

4728 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4729 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4730 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4731 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4732 \HyField@NewFlag{Submit}{ExclFKey}{12}
4733 \HyField@NewFlag{Submit}{EmbedForm}{14}

4734 \define@key{Field}{export}{%
4735   \lowercase{\def\Hy@temp{#1}}%
4736   \@ifundefined{Fld@export@\Hy@temp}{%
4737     \@onelevel@sanitize\Hy@temp
4738     \PackageError{hyperref}{%
4739       Unknown export format '\Hy@temp'.\MessageBreak
4740       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4741     }\@ehc
4742   }{%
4743     \let\Fld@export\Hy@temp
4744   }%
4745 }
4746 \def\Fld@export{fdf}
4747 \@namedef{Fld@export@fdf}{0}%
4748 \@namedef{Fld@export@html}{1}%
4749 \@namedef{Fld@export@xfdf}{2}%
4750 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4751 \def\HyField@FlagsSubmit{%
4752   \bitsetReset{HyField@Submit}%
4753   \ifcase\@nameuse{Fld@export@\Fld@export} %
4754     % FDF
4755     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4756     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4757     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4758     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4759     \HyField@UseFlag{Submit}{CanonicalFormat}%
4760     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4761     \HyField@UseFlag{Submit}{ExclFKey}%
4762     \HyField@UseFlag{Submit}{EmbedForm}%
4763   \or % HTML
4764     \HyField@SetFlag{Submit}{ExportFormat}%
4765     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4766     \HyField@UseFlag{Submit}{GetMethod}%
4767     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4768     \HyField@UseFlag{Submit}{CanonicalFormat}%
4769   \or % XFDF
4770     \HyField@SetFlag{Submit}{XFDF}%
4771     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4772     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4773     \HyField@UseFlag{Submit}{CanonicalFormat}%
4774   \or % PDF
4775     \HyField@SetFlag{Submit}{SubmitPDF}%
4776     \HyField@UseFlag{Submit}{GetMethod}%
4777   \fi
4778   \HyField@PrintFlags{Submit}{submit button field}%
4779   \bitsetIsEmpty{HyField@Submit}{%
4780     \def\Fld@submitflags{%

```

```

4781 }{%
4782   \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
4783 }%
4784 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4785 \def\HyField@FlagsAnnot#1{%
4786   \bitsetReset{HyField@F}%
4787   \HyField@UseFlag{F}{Invisible}%
4788   \HyField@UseFlag{F}{Hidden}%
4789   \HyField@UseFlag{F}{Print}%
4790   \HyField@UseFlag{F}{NoZoom}%
4791   \HyField@UseFlag{F}{NoRotate}%
4792   \HyField@UseFlag{F}{NoView}%
4793   \HyField@UseFlag{F}{Locked}%
4794   \HyField@UseFlag{F}{ToggleNoView}%
4795   \HyField@UseFlag{F}{LockedContents}%
4796   \HyField@PrintFlags{F}{#1}%
4797   \bitsetIsEmpty{HyField@F}{%
4798     \def\Fld@annotflags{%
4799     }{%
4800     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
4801   }%
4802 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4803 \def\HyField@FlagsPushButton{%
4804   \HyField@FlagsAnnot{push button field}%
4805   \bitsetReset{HyField@Ff}%
4806   \HyField@UseFlag{Ff}{ReadOnly}%
4807   \HyField@UseFlag{Ff}{Required}%
4808   \HyField@UseFlag{Ff}{NoExport}%
4809   \HyField@SetFlag{Ff}{Pushbutton}%
4810   \HyField@PrintFlags{Ff}{push button field}%
4811   \bitsetIsEmpty{HyField@Ff}{%
4812     \def\Fld@flags{%
4813     }{%
4814     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4815   }%
4816 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4817 \def\HyField@FlagsCheckBox{%
4818   \HyField@FlagsAnnot{check box field}%
4819   \bitsetReset{HyField@Ff}%
4820   \HyField@UseFlag{Ff}{ReadOnly}%
4821   \HyField@UseFlag{Ff}{Required}%
4822   \HyField@UseFlag{Ff}{NoExport}%
4823   \HyField@PrintFlags{Ff}{check box field}%
4824   \bitsetIsEmpty{HyField@Ff}{%

```

```

4825 \def\Fld@flags{%
4826 }{%
4827 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4828 }%
4829 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4830 \def\HyField@FlagsRadioButton{%
4831 \HyField@FlagsAnnot{radio button field}%
4832 \bitsetReset{HyField@Ff}%
4833 \HyField@UseFlag{Ff}{ReadOnly}%
4834 \HyField@UseFlag{Ff}{Required}%
4835 \HyField@UseFlag{Ff}{NoExport}%
4836 \HyField@UseFlag{Ff}{NoToggleToOff}%
4837 \HyField@SetFlag{Ff}{Radio}%
4838 \HyField@UseFlag{Ff}{RadiosInUnison}%
4839 \HyField@PrintFlags{Ff}{radio button field}%
4840 \bitsetIsEmpty{HyField@Ff}{%
4841 \def\Fld@flags{%
4842 }{%
4843 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4844 }%
4845 }

```

19.1.7 Text fields

\HyField@FlagsText

```

4846 \def\HyField@FlagsText{%
4847 \HyField@FlagsAnnot{text field}%
4848 \bitsetReset{HyField@Ff}%
4849 \HyField@UseFlag{Ff}{ReadOnly}%
4850 \HyField@UseFlag{Ff}{Required}%
4851 \HyField@UseFlag{Ff}{NoExport}%
4852 \HyField@UseFlag{Ff}{Multiline}%
4853 \HyField@UseFlag{Ff}{Password}%
4854 \HyField@UseFlag{Ff}{FileSelect}%
4855 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4856 \HyField@UseFlag{Ff}{DoNotScroll}%
4857 \ifFld@comb
4858 \ifcase0\ifFld@multiline
4859 \else\ifFld@password
4860 \else\ifFld@fileselect
4861 \else 1\fi\fi\fi\relax
4862 \PackageError{hyperref}{%
4863 Field option ‘comb’ cannot be used together with\MessageBreak
4864 ‘multiline’, ‘password’, or ‘fileselect’%
4865 }\@ehc
4866 \else
4867 \HyField@UseFlag{Ff}{Comb}%
4868 \fi
4869 \fi
4870 \HyField@UseFlag{Ff}{RichText}%
4871 \HyField@PrintFlags{Ff}{text field}%
4872 \bitsetIsEmpty{HyField@Ff}{%

```

```

4873 \def\Fld@flags{%
4874 }{%
4875 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4876 }%
4877 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4878 \def\HyField@FlagsChoice{%
4879 \HyField@FlagsAnnot{choice field}%
4880 \bitsetReset{HyField@Ff}%
4881 \HyField@UseFlag{Ff}{ReadOnly}%
4882 \HyField@UseFlag{Ff}{Required}%
4883 \HyField@UseFlag{Ff}{NoExport}%
4884 \HyField@UseFlag{Ff}{Combo}%
4885 \ifFld@combo
4886 \HyField@UseFlag{Ff}{Edit}%
4887 \fi
4888 \HyField@UseFlag{Ff}{Sort}%
4889 \HyField@UseFlag{Ff}{MultiSelect}%
4890 \ifFld@combo
4891 \ifFld@edit
4892 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4893 \fi
4894 \fi
4895 \HyField@UseFlag{Ff}{CommitOnSelChange}%
4896 \HyField@PrintFlags{Ff}{choice field}%
4897 \bitsetIsEmpty{HyField@Ff}{%
4898 \def\Fld@flags{%
4899 }{%
4900 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4901 }%
4902 }

```

19.2 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.

```

4903 \def\HyField@PDFChoices#1{%
4904 \begingroup
4905 \gdef\Fld@choices{%
4906 \def\HyTmp@Optlist{%
4907 \let\HyTmp@Optitem\relax
4908 \count@=0 %
4909 \kv@parse{#1}{%
4910 \Hy@pdfstringdef\kv@key\kv@key
4911 \ifx\kv@value\relax
4912 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4913 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4914 \else
4915 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4916 \fi
4917 \else
4918 \Hy@pdfstringdef\kv@value\kv@value

```

```

4919 \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4920 \fi
4921 \edef\HyTmp@optlist{%
4922 \HyTmp@optlist
4923 \HyTmp@optitem{\the\count@}{\kv@key}0%
4924 }%
4925 \advance\count@ by 1 %
4926 \@gobbletwo
4927 }%
4928 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4929 \ifFld@multiselect
4930 \HyField@@PDFChoices{DV}\Fld@default
4931 \HyField@@PDFChoices{V}\Fld@value
4932 \else
4933 \ifx\Fld@default\relax
4934 \else
4935 \pdfstringdef\Hy@gtemp\Fld@default
4936 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4937 \fi
4938 \ifx\Fld@value\relax
4939 \else
4940 \pdfstringdef\Hy@gtemp\Fld@value
4941 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4942 \fi
4943 \fi
4944 \endgroup
4945 }

```

\HyField@@PDFChoices

```

4946 \def\HyField@@PDFChoices#1#2{%
4947 \ifx#2\relax
4948 \else
4949 \count@=0 %
4950 \def\HyTmp@optitem##1##2##3{%
4951 \def\HyTmp@key{##2}%
4952 \ifx\HyTmp@key\Hy@gtemp
4953 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4954 \HyTmp@optlist
4955 \HyTmp@optitem{##1}{##2}1%
4956 }%
4957 \let\HyTmp@found=Y%
4958 \else
4959 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4960 \HyTmp@optlist
4961 \HyTmp@optitem{##1}{##2}##3%
4962 }%
4963 \fi
4964 }%
4965 \expandafter\comma@parse\expandafter{#2}{%
4966 \pdfstringdef\Hy@gtemp\comma@entry
4967 \let\HyTmp@found=N %
4968 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4969 \HyTmp@optlist
4970 \ifx\HyTmp@found Y%
4971 \advance\count@ by 1 %
4972 \else
4973 \@onelevel@sanitize\comma@entry

```

```

4974 \PackageWarning{hyperref}{%
4975 \string\ChoiceBox: Ignoring value '\comma@entry',%
4976 \MessageBreak
4977 it cannot be found in the choices%
4978 }%
4979 \fi
4980 \@gobble
4981 }%
4982 \def\HyTmp@optitem##1##2##3{%
4983 \ifnum##3=1 %
4984 (##2)%
4985 \fi
4986 }%
4987 \ifcase\count@
4988 \or
4989 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4990 \else
4991 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4992 \ifx#1V%
4993 \def\HyTmp@optitem##1##2##3{%
4994 \ifnum##3=1 %
4995 \@firstofone{ ##1}%
4996 \fi
4997 }%
4998 \edef\HyTmp@optlist{\HyTmp@optlist}%
4999 \xdef\Fld@choices{%
5000 \Fld@choices
5001 /I[\expandafter\@firstofone\HyTmp@optlist]%
5002 }%
5003 \fi
5004 \fi
5005 \fi
5006 }

```

19.3 Forms

\HyField@SetKeys

```

5007 \def\HyField@SetKeys{%
5008 \kvsetkeys{Field}%
5009 }

5010 \newif\ifFld@checked
5011 \newif\ifFld@disabled
5012 \Fld@checkedfalse
5013 \Fld@disabledfalse
5014 \newcount\Fld@menulength
5015 \newdimen\Fld@Width
5016 \newdimen\Fld@charsize
5017 \Fld@charsize=10\p@
5018 \def\Fld@maxlen{0}
5019 \def\Fld@align{0}
5020 \def\Fld@color{0 0 0 rg}
5021 \def\Fld@bcolor{1 1 1}
5022 \def\Fld@bordercolor{1 0 0}
5023 \def\Fld@bordersep{1\p@}
5024 \def\Fld@borderwidth{1}
5025 \def\Fld@borderstyle{S}

```



```

5026 \def\Fld@cbsymbol{4}
5027 \def\Fld@radiosymbol{H}
5028 \def\Fld@rotation{0}
5029 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5030 \def\endForm{\@endForm}
5031 \newif\ifForm@html
5032 \Form@htmlfalse
5033 \def\Form@boolkey#1#2{%
5034   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5035 }
5036 \define@key{Form}{action}{%
5037   \hyper@normalise\Hy@DefFormAction{#1}%
5038 }
5039 \def\Hy@DefFormAction{\def\Form@action}
5040 \def\enc@html{html}
5041 \define@key{Form}{encoding}{%
5042   \def\Hy@tempa{#1}%
5043   \ifx\Hy@tempa\enc@html
5044     \Form@htmltrue
5045     \def\Fld@export{html}%
5046   \else
5047     \Hy@Warning{%
5048       Form 'encoding' key with \MessageBreak
5049       unknown value '#1'%
5050     }%
5051     \Form@htmlfalse
5052   \fi
5053 }
5054 \define@key{Form}{method}{%
5055   \lowercase{\def\Hy@temp{#1}}%
5056   \@ifundefined{Form@method@\Hy@temp}{%
5057     \@onelevel@sanitize\Hy@temp
5058     \PackageError{hyperref}{%
5059       Unknown method '\Hy@temp'\MessageBreak
5060       Known values are 'post' and 'get'%
5061     }{\@ehc
5062   }{%
5063     \let\Form@method\Hy@temp
5064     \ifcase\@nameuse{Form@method@\Hy@temp} %
5065       \Fld@getmethodfalse
5066     \else
5067       \Fld@getmethodtrue
5068     \fi
5069   }%
5070 }
5071 \def\Form@method{}
5072 \@namedef{Form@method@post}{0}
5073 \@namedef{Form@method@get}{1}
5074 \def\Field@boolkey#1#2{%
5075   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5076 }
5077 \ifHy@texht
5078   \newtoks\Field@toks
5079   \Field@toks={ }%
5080   \def\Field@addtoks#1#2{%
5081     \edef\@processme{\Field@toks{the\Field@toks\space #1="#2"}}%
5082     \@processme

```

```

5083 }%
5084 \else
5085 \def\Hy@WarnHTMLFieldOption#1{%
5086 \Hy@Warning{%
5087 HTML field option '#1'\MessageBreak
5088 is ignored%
5089 }%
5090 }%
5091 \fi
5092 \def\Fld@checkequals#1=#2=#3\\{%
5093 \def\@currDisplay{#1}%
5094 \ifx\\#2\\%
5095 \def\@currValue{#1}%
5096 \else
5097 \def\@currValue{#2}%
5098 \fi
5099 }
5100 \define@key{Field}{loc}{%
5101 \def\Fld@loc{#1}%
5102 }
5103 \define@key{Field}{checked}[true]{%
5104 \lowercase{\Field@boolkey{#1}}{checked}%
5105 }
5106 \define@key{Field}{disabled}[true]{%
5107 \lowercase{\Field@boolkey{#1}}{disabled}%
5108 }
5109 \ifHy@texht
5110 \define@key{Field}{accesskey}{%
5111 \Field@addtoks{accesskey}{#1}%
5112 }%
5113 \define@key{Field}{tabkey}{%
5114 \Field@addtoks{tabkey}{#1}%
5115 }%
5116 \else
5117 \define@key{Field}{accesskey}{%
5118 \Hy@WarnHTMLFieldOption{accesskey}%
5119 }%
5120 \define@key{Field}{tabkey}{%
5121 \Hy@WarnHTMLFieldOption{tabkey}%
5122 }%
5123 \fi
5124 \define@key{Field}{name}{%
5125 \def\Fld@name{#1}%
5126 }
5127 \define@key{Field}{width}{%
5128 \def\Fld@width{#1}%
5129 \Field@Width#1\setbox0=\hbox{m}%
5130 }
5131 \define@key{Field}{maxlen}{%
5132 \def\Fld@maxlen{#1}%
5133 }
5134 \define@key{Field}{menulength}{%
5135 \Fld@menulength=#1\relax
5136 }
5137 \define@key{Field}{height}{%
5138 \def\Fld@height{#1}%
5139 }

```

```

5140 \define@key{Field}{charsize}{%
5141   \Fld@charsize#1%
5142 }
5143 \define@key{Field}{borderwidth}{%
5144   \def\Fld@borderwidth{#1}%
5145 }
5146 \define@key{Field}{borderstyle}{%
5147   \def\Fld@borderstyle{#1}%
5148 }
5149 \define@key{Field}{bordersep}{%
5150   \def\Fld@bordersep{#1}%
5151 }
5152 \define@key{Field}{default}{%
5153   \def\Fld@default{#1}%
5154 }
5155 \define@key{Field}{align}{%
5156   \def\Fld@align{#1}%
5157 }
5158 \define@key{Field}{value}{%
5159   \def\Fld@value{#1}%
5160 }
5161 \define@key{Field}{checkboxsymbol}{%
5162   \Fld@DingDef\Fld@cbsymbol{#1}%
5163 }
5164 \define@key{Field}{radiosymbol}{%
5165   \Fld@DingDef\Fld@radiosymbol{#1}%
5166 }
5167 \def\Fld@DingDef#1#2{%
5168   \def\Fld@temp{}%
5169   \Fld@@DingDef#2\ding{}\@nil
5170   \let#1\Fld@temp
5171 }
5172 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5173   \expandafter\def\expandafter\Fld@temp\expandafter{%
5174     \Fld@temp
5175     #1%
5176   }%
5177   \ifx\\#3\\%
5178     \expandafter\@gobble
5179   \else
5180     \begingroup
5181     \lccode'0=#2\relax
5182     \lowercase{\endgroup
5183     \expandafter\def\expandafter\Fld@temp\expandafter{%
5184       \Fld@temp
5185       0%
5186     }%
5187   }%
5188   \expandafter\@firstofone
5189 \fi
5190 {%
5191   \Fld@@DingDef#3\@nil
5192 }%
5193 }

5194 \define@key{Field}{rotation}{%
5195   \def\Fld@rotation{#1}%
5196 }

```

```

5197 \define@key{Field}{backgroundcolor}{%
5198   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5199 }
5200 \define@key{Field}{bordercolor}{%
5201   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5202 }
5203 \define@key{Field}{color}{%
5204   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5205 }

5206 \def\Fld@onclick@code{}
5207 \def\Fld@format@code{}
5208 \def\Fld@validate@code{}
5209 \def\Fld@calculate@code{}
5210 \def\Fld@keystroke@code{}
5211 \def\Fld@onfocus@code{}
5212 \def\Fld@onblur@code{}
5213 \def\Fld@onmousedown@code{}
5214 \def\Fld@onmouseup@code{}
5215 \def\Fld@onenter@code{}
5216 \def\Fld@onexit@code{}
5217 \def\Hy@temp#1{%
5218   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5219 }
5220 \def\Hy@@temp#1#2{%
5221   \ifHy@pdfa
5222     \define@key{Field}{#2}{%
5223       \PackageError{hyperref}{%
5224         PDF/A: Additional action ‘#2’ is prohibited%
5225       }\@ehc
5226     }%
5227   \else
5228     \define@key{Field}{#2}{%
5229       \def#1{##1}%
5230     }%
5231   \fi
5232 }
5233 \Hy@temp{keystroke}
5234 \Hy@temp{format}
5235 \Hy@temp{validate}
5236 \Hy@temp{calculate}
5237 \Hy@temp{onfocus}
5238 \Hy@temp{onblur}
5239 \Hy@temp{onenter}
5240 \Hy@temp{onexit}
5241 \ifHy@texht
5242   \def\Hy@temp#1{%
5243     \define@key{Field}{#1}{%
5244       \Field@addtoks{#1}{##1}%
5245     }%
5246   }%
5247 \else
5248   \def\Hy@temp#1{%
5249     \define@key{Field}{#1}{%
5250       \Hy@WarnHTMLFieldOption{#1}%
5251     }%
5252   }%
5253 \fi

```

```

5254 \Hy@temp{ondblclick}
5255 \Hy@temp{onmousedown}
5256 \Hy@temp{onmouseup}
5257 \Hy@temp{onmouseover}
5258 \Hy@temp{onmousemove}
5259 \Hy@temp{onmouseout}
5260 \Hy@temp{onkeydown}
5261 \Hy@temp{onkeyup}
5262 \Hy@temp{onselect}
5263 \Hy@temp{onchange}
5264 \Hy@temp{onkeypress}
5265 \ifHy@texht
5266   \define@key{Field}{onclick}{%
5267     \Field@addtoks{onclick}{#1}%
5268   }%
5269 \else
5270   \ifHy@pdfa
5271     \define@key{Field}{onclick}{%
5272       \PackageError{hyperref}{%
5273         PDF/A: Action 'onclick' is prohibited%
5274       }\@ehc
5275     }%
5276   \else
5277     \define@key{Field}{onclick}{%
5278       \def\Fld@onclick@code{#1}%
5279     }%
5280   \fi
5281 \fi

5282 \DeclareRobustCommand\TextField{%
5283   \@ifnextchar[{\@TextField}{\@TextField[]}%
5284 }
5285 \DeclareRobustCommand\ChoiceMenu{%
5286   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5287 }
5288 \DeclareRobustCommand\CheckBox{%
5289   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5290 }
5291 \DeclareRobustCommand\PushButton{%
5292   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5293 }
5294 \DeclareRobustCommand\Gauge{%
5295   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5296 }
5297 \DeclareRobustCommand\Submit{%
5298   \@ifnextchar[{\@Submit}{\@Submit[]}%
5299 }
5300 \DeclareRobustCommand\Reset{%
5301   \@ifnextchar[{\@Reset}{\@Reset[]}%
5302 }
5303 \def\LayoutTextField#1#2{% label, field
5304   #1 #2%
5305 }
5306 \def\LayoutChoiceField#1#2{% label, field
5307   #1 #2%
5308 }
5309 \def\LayoutCheckField#1#2{% label, field
5310   #1 #2%

```

```

5311 }
5312 \def\LayoutPushButtonField#1{% button
5313   #1%
5314 }
5315 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5316 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5317 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5318 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5319 \def\MakeButtonField#1{%
5320   \sbox0{%
5321     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5322   }%
5323   \@tempdima\ht0 %
5324   \advance\@tempdima by \Fld@borderwidth bp %
5325   \advance\@tempdima by \Fld@borderwidth bp %
5326   \ht0\@tempdima
5327   \@tempdima\dp0 %
5328   \advance\@tempdima by \Fld@borderwidth bp %
5329   \advance\@tempdima by \Fld@borderwidth bp %
5330   \dp0\@tempdima
5331   \box0\relax
5332 }
5333 \def\DefaultHeightofSubmit{14pt}
5334 \def\DefaultWidthofSubmit{2cm}
5335 \def\DefaultHeightofReset{14pt}
5336 \def\DefaultWidthofReset{2cm}
5337 \def\DefaultHeightofCheckBox{\baselineskip}
5338 \def\DefaultWidthofCheckBox{\baselineskip}
5339 \def\DefaultHeightofChoiceMenu{\baselineskip}
5340 \def\DefaultWidthofChoiceMenu{\baselineskip}
5341 \def\DefaultHeightofText{\baselineskip}
5342 \def\DefaultHeightofTextMultiline{4\baselineskip}
5343 \def\DefaultWidthofText{3cm}
5344 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5345 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5346 \def\DefaultOptionsofPushButton{print}
5347 \def\DefaultOptionsofCheckBox{print}
5348 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5349 \def\DefaultOptionsofListBox{print}
5350 \def\DefaultOptionsofComboBox{print,edit,sort}
5351 \def\DefaultOptionsofPopdownBox{print}
5352 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5353 \ifHy@figures
5354   \Hy@Info{Hyper figures ON}%
5355 \else
5356   \Hy@Info{Hyper figures OFF}%
5357 \fi
5358 \ifHy@nesting
5359   \Hy@Info{Link nesting ON}%
5360 \else
5361   \Hy@Info{Link nesting OFF}%
5362 \fi

```

```

5363 \ifHy@hyperindex
5364 \Hy@Info{Hyper index ON}%
5365 \else
5366 \Hy@Info{Hyper index OFF}%
5367 \fi
5368 \ifHy@backref
5369 \Hy@Info{backreferencing ON}%
5370 \else
5371 \Hy@Info{backreferencing OFF}%
5372 \fi
5373 \ifHy@colorlinks
5374 \Hy@Info{Link coloring ON}%
5375 \else
5376 \Hy@Info{Link coloring OFF}%
5377 \fi
5378 \ifHy@ocgcolorlinks
5379 \Hy@Info{Link coloring with OCG ON}%
5380 \else
5381 \Hy@Info{Link coloring with OCG OFF}%
5382 \fi
5383 \ifHy@pdfa
5384 \Hy@Info{PDF/A mode ON}%
5385 \else
5386 \Hy@Info{PDF/A mode OFF}%
5387 \fi

```

21 Low-level utility macros

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

```

5388 \edef\hyper@hash{\string#}
5389 \edef\hyper@tilde{\string~}
5390 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5391 \def\@currentHref{Doc-Start}
5392 \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.

```

5393 \Hy@AtBeginDocument{%
5394 \Hy@pdfstringtrue
5395 \PDF@SetupDoc
5396 \let\PDF@SetupDoc\@empty
5397 \Hy@DisableOption{pdfpagescrop}%
5398 \Hy@DisableOption{pdfpagemode}%
5399 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5400 \Hy@DisableOption{pdfdirection}%
5401 \Hy@DisableOption{pdfviewarea}%
5402 \Hy@DisableOption{pdfviewclip}%
5403 \Hy@DisableOption{pdfprintarea}%
5404 \Hy@DisableOption{pdfprintclip}%
5405 \Hy@DisableOption{pdfprintscaling}%
5406 \Hy@DisableOption{pdfduplex}%
5407 \Hy@DisableOption{pdfpicktraybypdfsize}%
5408 \Hy@DisableOption{pdfprintpagerange}%
5409 \Hy@DisableOption{pdfnumcopies}%
5410 \Hy@DisableOption{pdfstartview}%
5411 \Hy@DisableOption{pdfstartpage}%

```

```

5412 \Hy@DisableOption{pdftoolbar}%
5413 \Hy@DisableOption{pdfmenubar}%
5414 \Hy@DisableOption{pdfwindowui}%
5415 \Hy@DisableOption{pdffitwindow}%
5416 \Hy@DisableOption{pdfcenterwindow}%
5417 \Hy@DisableOption{pdfdisplaydoctitle}%
5418 \Hy@DisableOption{pdfpagelayout}%
5419 \Hy@DisableOption{pdflang}%
5420 \Hy@DisableOption{baseurl}%
5421 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5422 \Hy@pdfstringfalse
5423 }

```

Ignore star from referencing macros:

```

5424 \LetLtxMacro\NoHy@OrgRef\ref
5425 \DeclareRobustCommand*{\ref}{%
5426 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5427 }
5428 \LetLtxMacro\NoHy@OrgPageRef\pageref
5429 \DeclareRobustCommand*{\pageref}{%
5430 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5431 }

```

22 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.

```

5432 \def\NoHyper{%
5433 \def\hyper@link@{##1}##2##3##4{##4}%
5434 \def\hyper@@anchor##1{}%
5435 \global\let\hyper@livelink\hyper@link
5436 \gdef\hyper@link##1##2##3{##3}%
5437 \def\hyper@anchor##1{}%
5438 \def\hyper@anchorstart##1{}%
5439 \let\hyper@anchorend\@empty
5440 \def\hyper@linkstart##1##2{}%
5441 \let\hyper@linkend\@empty
5442 \def\hyper@linkurl##1##2{##1}%
5443 \def\hyper@linkfile##1##2##3{##1}%
5444 \def\hyper@link@{##1}##2##3{}%
5445 \let\Hy@backout\@gobble
5446 }
5447 \def\stop@hyper{%
5448 \def\hyper@link@{##1}##2##3##4{##4}%
5449 \let\Hy@backout\@gobble
5450 \def\hyper@@anchor##1{}%
5451 \def\hyper@link##1##2##3{##3}%
5452 \def\hyper@anchor##1{}%
5453 \def\hyper@anchorstart##1{}%
5454 \let\hyper@anchorend\@empty
5455 \def\hyper@linkstart##1##2{}%
5456 \let\hyper@linkend\@empty
5457 \def\hyper@linkurl##1##2{##1}%
5458 \def\hyper@linkfile##1##2##3{##1}%

```



```

5459 \def\hyper@link@{##1}##2##3}%
5460 }
5461 \def\endNoHyper{%
5462 \global\let\hyper@link\hyper@livelink
5463 }
5464 \</package>

```

23 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:

```

5465 \<*nohyperref>
5466 \RequirePackage{letltxmacro}[2008/06/13]
5467 \let\hyper@@anchor\@gobble
5468 \def\hyper@link#1##2##3{##3}%
5469 \let\hyper@anchorstart\@gobble
5470 \let\hyper@anchorend\@empty
5471 \let\hyper@linkstart\@gobbletwo
5472 \let\hyper@linkend\@empty
5473 \def\hyper@linkurl#1##2{##1}%
5474 \def\hyper@linkfile#1##2##3{##1}%
5475 \def\hyper@link@{##1}##2##3}%
5476 \let\PDF@SetupDoc\@empty
5477 \let\PDF@FinishDoc\@empty
5478 \def\nohyperpage#1{##1}

```

Some top-level commands:

```

5479 \def\Acrobatmenu#1##2{\leavevmode##2}
5480 \let\pdfstringdefDisableCommands\@gobbletwo
5481 \let\texorpdfstring\@firstoftwo
5482 \let\pdfbookmark\@undefined
5483 \newcommand\pdfbookmark[3]{}{}
5484 \let\phantomsection\@empty
5485 \let\hypersetup\@gobble
5486 \let\hyperbaseurl\@gobble
5487 \let\href\@gobble
5488 \let\hyperdef\@gobbletwo
5489 \let\hyperlink\@gobble
5490 \let\hypertarget\@gobble
5491 \def\hyperref{%
5492 \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5493 }
5494 \long\def\@gobbleopt[#1]{}
5495 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5496 \LetLtxMacro\NoHy@OrgRef\ref
5497 \DeclareRobustCommand*\ref{%
5498 \ifstar\NoHy@OrgRef\NoHy@OrgRef
5499 }
5500 \LetLtxMacro\NoHy@OrgPageRef\pageref
5501 \DeclareRobustCommand*\pageref{%

```

```

5502 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5503 }
5504 \nohyperref

```

24 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}`

```

5505 \*package
5506 \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.

```

5507 \if@filesw
5508 \ifHy@typexml
5509 \immediate\closeout\@mainaux
5510 \immediate\openout\@mainaux\jobname.aux\relax
5511 \immediate\write\@auxout{<relaxxml>\relax}%
5512 \fi
5513 \immediate\write\@auxout{%
5514 \string\providecommand\string\HyperFirstAtBeginDocument{%
5515 \string\AtBeginDocument}^^J%
5516 \string\HyperFirstAtBeginDocument{%
5517 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5518 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5519 \string\gdef\string\contentsline%
5520 \string#1\string#2\string#3\string#4{%
5521 \string\oldcontentsline%
5522 {\string#1}{\string#2}{\string#3}^^J%
5523 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5524 \string\gdef\string\newlabel\string#1\string#2{%
5525 \string\newlabelxx{\string#1}\string#2}^^J%
5526 \string\gdef\string\newlabelxx%
5527 \string#1\string#2\string#3\string#4\string#5\string#6{%
5528 \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.

```

5529 \string\AtEndDocument{%
5530 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5531 \string\let\string\contentsline\string\oldcontentsline^^J%
5532 \string\let\string\newlabel\string\oldnewlabel^^J%
5533 \string\fi%
5534 }^^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.

```

5535 \string\fi%
5536 }^^J%
5537 \string\global\string\let\string\hyper@last\relax^^J%
5538 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5539 }%
5540 \fi
5541 \def\HyperFirstAtBeginDocument#1{#1}%

```

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.

```

5542 \ifx\hyper@last\@undefined
5543 \def\@starttoc#1{%
5544 \begingroup
5545 \makeatletter
5546 \IfFileExists{\jobname.#1}{%
5547 \Hy@WarningNoLine{%
5548 old #1 file detected, not used; run LaTeX again%
5549 }%
5550 }{}%
5551 \if@filesw
5552 \expandafter\newwrite\csname tf@#1\endcsname
5553 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5554 \fi
5555 \@nobreakfalse
5556 \endgroup
5557 }%
5558 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5559 \fi
5560 }

```

25 Title strings

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

```

5561 \ifHy@usetitle
5562 \let\HyOrg@title\title
5563 \let\HyOrg@author\author
5564 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5565 \def\Hy@scanopttitle[#1]{%
5566 \gdef\Hy@title{#1}%
5567 \HyOrg@title{#1}%
5568 }%
5569 \def\Hy@scantitle#1{%
5570 \gdef\Hy@title{#1}%
5571 \HyOrg@title{#1}%
5572 }%
5573 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5574 \def\Hy@scanoptauthor[#1]{%
5575 \gdef\Hy@author{#1}%
5576 \HyOrg@author{#1}%
5577 }%
5578 \def\Hy@scanauthor#1{%
5579 \gdef\Hy@author{#1}%
5580 \HyOrg@author{#1}%
5581 }%

```

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

```

5582 \begingroup
5583 \def\process@me#1\@nil#2{%
5584 \expandafter\let\expandafter\x\csname @#2\endcsname

```

```

5585 \edef\y{\expandafter\strip@prefix\meaning\x}%
5586 \def\c##1##2\@nil{%
5587 \ifx\\##1\\%
5588 \else
5589 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5590 \expandafter{x}%
5591 \fi
5592 }%
5593 \expandafter\c\y\relax#1\@nil
5594 }%
5595 \expandafter\process@me\string\@latex@\@nil{title}%
5596 \expandafter\process@me\string\@latex@\@nil{author}%
5597 \endgroup
5598 \fi
5599 \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.

```

5600 \def\Hy@UseMaketitleString#1{%
5601 \ltx@ifundefined{Hy@#1}{}{%
5602 \begingroup
5603 \let\Hy@saved@hook\pdfstringdefPreHook
5604 \pdfstringdefDisableCommands{%
5605 \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
5606 \let\newline\\%
5607 }%
5608 \expandafter\ifx\csname @pdf#1\endcsname\@empty
5609 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5610 \csname Hy@#1\endcsname\@empty
5611 }%
5612 \fi
5613 \global\let\pdfstringdefPreHook\Hy@saved@hook
5614 \endgroup
5615 }%
5616 }
5617 \def\Hy@newline@title#1{ #1}
5618 \def\Hy@newline@author#1{, #1}
5619 \def\Hy@UseMaketitleInfos{%
5620 \Hy@UseMaketitleString{title}%
5621 \Hy@UseMaketitleString{author}%
5622 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5623 \RequirePackage{atbegshi}[2007/09/09]
5624 \def\Hy@EveryPageHook{}
5625 \def\Hy@EveryPageBoxHook{}
5626 \def\Hy@FirstPageHook{}
5627 \AtBeginShipout{%
5628   \Hy@EveryPageHook
5629   \ifx\Hy@EveryPageBoxHook\@empty
5630   \else
5631     \setbox\AtBeginShipoutBox=\vbox{%
5632       \offinterlineskip
5633       \Hy@EveryPageBoxHook
5634       \box\AtBeginShipoutBox
5635     }%
5636   \fi
5637 }
5638 \AtBeginShipoutFirst{%
5639   \Hy@FirstPageHook
5640 }
5641 \g@addto@macro\Hy@FirstPageHook{%
5642   \PDF@FinishDoc
5643   \gdef\PDF@FinishDoc{}}%
5644 }

```

27.1 PDF /PageLabels

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

```

5645 \ifHy@pagelabels
5646   \begingroup\expandafter\expandafter\expandafter\endgroup
5647   \expandafter\ifx\csname thepage\endcsname\relax
5648     \Hy@pagelabelsfalse
5649     \Hy@WarningNoLine{%
5650       Option 'pdfpagelabels' is turned off\MessageBreak
5651       because \string\thepage\space is undefined%
5652     }%
5653     \csname fi\endcsname
5654     \csname iffalse\expandafter\endcsname
5655   \fi

```

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

```

5656 \def\thispdfpagelabel#1{%
5657   \gdef\HyPL@thisLabel{#1}%
5658 }%
5659 \global\let\HyPL@thisLabel\relax

```

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

```

5660 \def\HyPL@Labels{}%

```

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

```

5661 \newcount\Hy@abspage
5662 \Hy@abspage=0 %

```

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

```

5663 \def\HyPL@LastType{init}%
5664 \def\HyPL@LastNumber{0}%
5665 \def\HyPL@LastPrefix{}%

```

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

```
5666 \def\HyPL@arabic{D}%
5667 \def\HyPL@Roman{R}%
5668 \def\HyPL@roman{r}%
5669 \def\HyPL@Alph{A}%
5670 \def\HyPL@alph{a}%
```

`\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.

```
5671 \def\HyPL@EveryPage{%
5672   \begingroup
5673   \ifx\HyPL@thisLabel\relax
5674     \let\HyPL@page\thepage
5675   \else
5676     \let\HyPL@page\HyPL@thisLabel
5677   \global\let\HyPL@thisLabel\relax
5678   \fi
5679   \let\HyPL@Type\relax
5680   \ifnum\the\c@page>0 %
5681     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5682   \fi
5683   \let\Hy@temp Y%
5684   \ifx\HyPL@Type\HyPL@LastType
5685   \else
5686     \let\Hy@temp N%
5687   \fi
5688   \ifx\HyPL@Type\relax
5689     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5690   \else
5691     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5692   \fi
5693   \ifx\HyPL@Prefix\HyPL@LastPrefix
5694   \else
5695     \let\Hy@temp N%
5696   \fi
5697   \if Y\Hy@temp
5698     \advance\c@page by -1 %
5699     \ifnum\HyPL@LastNumber=\the\c@page\relax
5700   \else
5701     \let\Hy@temp N%
5702   \fi
5703   \Hy@StepCount\c@page
5704   \fi
5705   \if N\Hy@temp
5706     \ifx\HyPL@Type\relax
5707       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5708     \else
5709       \HyPL@StorePageLabel{%
5710         \ifx\HyPL@Prefix\@empty
5711         \else
5712           /P(\HyPL@Prefix)%
5713         \fi
5714         /S/\csname HyPL\HyPL@Type\endcsname
5715         \ifnum\the\c@page=1 %
5716         \else
5717           \space/St \the\c@page
5718         \fi
```

```

5719     }%
5720     \fi
5721     \fi
5722     \xdef\HyPL@LastNumber{\the\c@page}%
5723     \global\let\HyPL@LastType\HyPL@Type
5724     \global\let\HyPL@LastPrefix\HyPL@Prefix
5725     \endgroup
5726     \Hy@GlobalStepCount\Hy@abspage
5727 }%

```

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

```

5728 \def\HyPL@CheckThePage#1\@nil{%
5729   \HyPL@@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5730 }%

```

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

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

```

5731 \def\HyPL@@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5732   \def\Hy@tempa{#4}%
5733   \def\Hy@tempb{\csname\endcsname\c@page}%
5734   \ifx\Hy@tempa\Hy@tempb
5735     \expandafter\ifx\csname HyPL#3\endcsname\relax
5736     \else
5737       \def\HyPL@Type{#3}%
5738       \def\HyPL@Prefix{#2}%
5739     \fi
5740   \else
5741     \begingroup
5742     \let\Hy@next\endgroup
5743     \let\HyPL@found\@undefined
5744     \def\arabic{\HyPL@Format{arabic}}%
5745     \def\Roman{\HyPL@Format{Roman}}%
5746     \def\roman{\HyPL@Format{roman}}%
5747     \def\Alph{\HyPL@Format{Alph}}%
5748     \def\alph{\HyPL@Format{alph}}%
5749     \protected@edef\Hy@temp{#1}%
5750     \ifx\HyPL@found\relax
5751       \toks@{\expandafter{\Hy@temp}}%
5752       \edef\Hy@next{\endgroup
5753         \noexpand\HyPL@@@CheckThePage\the\toks@
5754         \noexpand\HyPL@found\relax\noexpand\@nil
5755       }%
5756     \fi
5757     \Hy@next
5758   \fi
5759 }%

```

`\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`.

```

5760 \def\HyPL@Format#1#2{%
5761   \ifx\HyPL@found\@undefined
5762     \expandafter\ifx\csname c@#2\endcsname\c@page

```

```

5763     \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5764     \else
5765     \expandafter\noexpand\csname#1\endcsname{#2}%
5766     \fi
5767     \else
5768     \expandafter\noexpand\csname#1\endcsname{#2}%
5769     \fi
5770 }%

```

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

```

5771 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5772 \def\Hy@tempa{#3}%
5773 \def\Hy@tempb{\HyPL@found\relax}%
5774 \ifx\Hy@tempa\Hy@tempb
5775 \def\HyPL@Type{@#2}%
5776 \def\HyPL@Prefix{#1}%
5777 \fi
5778 }%

```

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

```

5779 \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`.

```

5780 \def\HyPL@Useless{0<</S/D>>}%
5781 \@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.

```

5782 \def\HyPL@SetPageLabels{%
5783 \@onelevel@sanitize\HyPL@Labels
5784 \ifx\HyPL@Labels@empty
5785 \else
5786 \ifx\HyPL@Labels\HyPL@Useless
5787 \else
5788 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5789 \fi
5790 \fi
5791 }%

```

```

5792 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5793 \fi

```

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

```

5794 \Hy@DisableOption{pdfpagelabels}
5795 </package>

```

27.1.1 pdfTeX and VTeX

Because of pdfTeX’s `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```

5796 <pdfTeX>\let\Hy@PutCatalog\pdfcatalog

```


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.

```

5797 < *vtex>
5798 \providecommand*{\XR@ext}{pdf}
5799 \edef\Hy@VTeXversion{%
5800   \ifx\VTeXversion\@undefined
5801     \z@
5802   \else
5803     \ifx\VTeXversion\relax
5804       \z@
5805     \else
5806       \VTeXversion
5807     \fi
5808   \fi
5809 }
5810 \begingroup
5811   \ifnum\Hy@VTeXversion<660 %
5812     \gdef\Hy@PutCatalog#1{%
5813       \Hy@WarningNoLine{%
5814         VTeX 6.59g or above required for pdfpagelabels%
5815       }%
5816     }%
5817   \else
5818     \gdef\Hy@PutCatalog#1{%
5819       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5820     }%
5821     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5822       \ifx\#2\%
5823         \else
5824           \immediate\special{!pdfpagelabels #2}%
5825         \fi
5826       }%
5827     \fi
5828 \endgroup
5829 < /vtex>

5830 < *pdftex | vtex>

```

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

```

5831 \ifHy@pagelabels
5832   \def\HyPL@StorePageLabel#1{%
5833     \toks@\expandafter{\HyPL@Labels}%
5834     \xdef\HyPL@Labels{%
5835       \the\toks@
5836       \the\Hy@abspage<<#1>>%
5837     }%
5838   }%

```

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.

```

5839 \RequirePackage{atveryend}[2009/12/07]%
5840 \AtVeryEndDocument{%
5841   \HyPL@SetPageLabels
5842 }%

```

```

5843 \fi
5844 \pdfTeX | vtex)

```

27.1.2 xetex

```

5845 (*xetex)
5846 \HyPsd@LoadUnicode
5847 \Hy@unicodetrue
5848 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5849 \else
5850 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5851 \fi
5852 \HyPsd@LoadStringEncoding
5853 \define@key{Hyp}{unicode}[true]{%
5854 \Hy@boolkey{unicode}{#1}%
5855 \ifHy@unicode
5856 \else
5857 \Hy@Warning{%
5858 XeTeX driver only supports 'unicode=true'.\MessageBreak
5859 Ignoring option setting 'unicode=false'%
5860 }%
5861 \Hy@unicodetrue
5862 \fi
5863 }
5864 \define@key{Hyp}{pdfencoding}{%
5865 \edef\HyPsd@temp{#1}%
5866 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5867 \let\HyPsd@pdfencoding\HyPsd@temp
5868 \else
5869 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5870 \let\HyPsd@pdfencoding\HyPsd@temp
5871 \else
5872 \Hy@Warning{%
5873 XeTeX driver only supports\MessageBreak
5874 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5875 setting 'pdfencoding=\HyPsd@temp'%
5876 }%
5877 \fi
5878 \fi
5879 }
5880 \let\HyXeTeX@CheckUnicode\relax
5881 \xetex)

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5882 (*pdfmarkbase)
5883 \begingroup
5884 \@ifundefined{headerps@out}{%}{%
5885 \toks@\expandafter{\Hy@FirstPageHook}%
5886 \xdef\Hy@FirstPageHook{%
5887 \noexpand\headerps@out{%
5888 systemdict /pdfmark known%
5889 {%
5890 userdict /?pdfmark systemdict /exec get put%
5891 }{%
5892 userdict /?pdfmark systemdict /pop get put %
5893 userdict /pdfmark systemdict /cleartomark get put%
5894 }%

```

```

5895     ifelse%
5896     }%
5897     \the\toks@
5898     }%
5899     }%
5900 \endgroup
5901 \pdfmarkbase>

```

\Hy@PutCatalog

```

5902 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\pdfmark{docview << #1 >>}}
5903 <*pdfmarkbase>
5904 \def\Hy@PutCatalog#1{%
5905   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5906 }
5907 </pdfmarkbase>

5908 <*pdfmarkbase | dvipdfm | xetex>
5909 \ifHy@pagelabels

```

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

```

5910 \def\HyPL@StorePageLabel#1{%
5911   \if@filesw
5912     \begingroup
5913       \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5914       \immediate\write\@mainaux{%
5915         \string\HyPL@Entry{\Hy@tempa}%
5916       }%
5917     \endgroup
5918   \fi
5919 }%

```

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.

```

5920 \Hy@AtBeginDocument{%
5921   \if@filesw
5922     \immediate\write\@mainaux{%
5923       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5924     }%
5925   \fi
5926   \ifx\HyPL@Labels\@empty
5927     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5928   \else
5929     \HyPL@SetPageLabels
5930   \fi
5931   \let\HyPL@Entry\@gobble
5932 }%

```

\HyPL@Entry

```

5933 \def\HyPL@Entry#1{%
5934   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5935     \HyPL@Labels
5936     #1%
5937   }%
5938 }%

5939 \fi
5940 </pdfmarkbase | dvipdfm | xetex>

```

```

5941 <*package>
5942 \MaybeStopEarly

```

28 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

```

5943 \def\Hy@CounterExists#1{%
5944   \begingroup\expandafter\expandafter\expandafter\endgroup
5945   \expandafter\ifx\csname c@#1\endcsname\relax
5946     \expandafter\@gobble
5947   \else
5948     \begingroup\expandafter\expandafter\expandafter\endgroup
5949     \expandafter\ifx\csname the#1\endcsname\relax
5950       \expandafter\expandafter\expandafter\@gobble
5951     \else
5952       \expandafter\expandafter\expandafter\@firstofone
5953     \fi
5954   \fi
5955 }
5956 \Hy@CounterExists{section}{%
5957   \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5958 }
5959 \Hy@CounterExists{part}{%
5960   \newcommand\theHpart{\arabic{part}}}%
5961 }
5962 \ltx@ifundefined{thechapter}{%
5963   \newcommand\theHsection   {\arabic{section}}}%
5964   \newcommand\theHfigure    {\arabic{figure}}}%
5965   \newcommand\theHtable     {\arabic{table}}}%
5966 }{%
5967   \newcommand\theHchapter   {\arabic{chapter}}}%
5968   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}}%
5969   \newcommand\theHtable     {\theHchapter.\arabic{table}}}%
5970   \newcommand\theHsection   {\theHchapter.\arabic{section}}}%
5971 }
5972 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5973 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5974 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5975 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}

```

```

5976 \newcommand\theHtheorem    {\theHsection.\arabic{theorem}}
5977 \newcommand\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.

```

5978 \let\H@item\item
5979 \newcounter{Item}
5980 \def\theHItem{\arabic{Item}}
5981 \def\item{%
5982   \@hyper@itemfalse
5983   \if@nmbrlist\@hyper@itemtrue\fi
5984   \H@item
5985 }

5986 \newcommand\theHenumi    {\theHItem}
5987 \newcommand\theHenumii   {\theHItem}
5988 \newcommand\theHenumiii  {\theHItem}
5989 \newcommand\theHenumiv   {\theHItem}
5990 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5991 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5992 \let\theHHmpfootnote\theHHfootnote

```

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.

```

5993 \let\H@refstepcounter\refstepcounter
5994 \edef\name@of@eq{equation}%
5995 \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.

```

5996 \newif\if@hyper@item
5997 \newif\if@skiphyperref
5998 \@hyper@itemfalse
5999 \@skiphyperreffalse
6000 \def\refstepcounter#1{%
6001   \ifHy@pdfstring
6002   \else
6003     \H@refstepcounter{#1}%
6004     \edef\This@name{#1}%
6005     \ifx\This@name\name@of@slide
6006     \else
6007       \if@skiphyperref
6008       \else
6009         \if@hyper@item
6010           \stepcounter{Item}%
6011           \hyper@refstepcounter{Item}%
6012           \@hyper@itemfalse
6013         \else
6014           \hyper@refstepcounter{#1}%
6015         \fi
6016       \fi
6017     \fi
6018   \fi
6019 }
6020 \let\Hy@saved@refstepcounter\refstepcounter

```

AMST_{EX} 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.

```
6021 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}
```

`\hyper@refstepcounter`

```
6022 \def\hyper@refstepcounter#1{%
6023   \edef\This@name{#1}%
6024   \ifx\This@name\name@of@eq
6025     \ifundefined{theHequation}{%
6026       \make@stripped@name{\theequation}%
6027       \let\theHequation\newname
6028     }{}%
6029   \fi
6030   \ifundefined{theH#1}{%
6031     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6032   }{}%
6033   \hyper@makecurrent{#1}%
6034   \ifmeasuring@
6035   \else
6036     \Hy@raisedlink{%
6037       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6038     }%
6039   \fi
6040 }
```

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`.

```
6041 \begingroup\expandafter\expandafter\expandafter\endgroup
6042 \expandafter\ifx\csname chapter\endcsname\relax
6043   \def\Hy@chapterstring{section}%
6044 \else
6045   \def\Hy@chapterstring{chapter}%
6046 \fi
6047 \def\Hy@appendixstring{appendix}
6048 \def\Hy@chapapp{\Hy@chapterstring}
6049 \let\HyOrg@appendix\appendix
6050 \def\appendix{%
6051   \ltx@ifundefined{chapter}%
6052   {\gdef\theHsection{\Alph{section}}}%
6053   {\gdef\theHchapter{\Alph{chapter}}}%
6054   \xdef\Hy@chapapp{\Hy@appendixstring}%
6055   \HyOrg@appendix
6056 }
```

`\Hy@Test@alph`

```
6057 \def\Hy@Test@alph#1{%
6058   \ifcase#1\or
6059     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6060     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
6061     u\or v\or w\or x\or y\or z%
6062   \else
6063     \@ctrerr
```

```

6064 \fi
6065 }

```

\Hy@Test@Alph

```

6066 \def\Hy@Test@Alph#1{%
6067 \ifcase#1\or
6068   A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6069   K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6070   U\or V\or W\or X\or Y\or Z%
6071 \else
6072 \@ctrerr
6073 \fi
6074 }

```

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

```

6075 \def\hyper@makecurrent#1{%
6076 \begingroup
6077 \edef\Hy@param{#1}%
6078 \ifx\Hy@param\Hy@chapterstring
6079 \let\Hy@param\Hy@chapapp
6080 \fi
6081 \ifHy@hypertextnames
6082 \let\@number\@firstofone
6083 \def\@fnsymbol##1{fnsymbol\number##1}%
6084 \ifx\@alph\Hy@Test@alph
6085 \else
6086 \def\@alph{alph\number}%
6087 \fi
6088 \ifx\@Alph\Hy@Test@Alph
6089 \else
6090 \def\@Alph{Alph\number}%
6091 \fi
6092 \ifHy@naturalnames
6093 \let\textlatin\@firstofone
6094 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6095 \else
6096 \xdef\HyperGlobalCurrentHref{%
6097 \csname
6098 the%
6099 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6100 #1%
6101 \endcsname
6102 }%
6103 \fi
6104 \xdef\HyperGlobalCurrentHref{%
6105 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6106 }%
6107 \else
6108 \Hy@GlobalStepCount\Hy@linkcounter
6109 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6110 \fi
6111 \endgroup
6112 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6113 \ifHy@localanchaname
6114 \let\@currentHref\HyperLocalCurrentHref
6115 \else

```

```

6116 \global\let\@currentHref\HyperGlobalCurrentHref
6117 \fi
6118 }

```

`\Hy@MakeCurrentHref`

```

6119 \def\Hy@MakeCurrentHref#1{%
6120 \edef\HyperLocalCurrentHref{#1}%
6121 \@onelevel@sanitize\HyperLocalCurrentHref
6122 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6123 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6124 \ifHy@localanchorname
6125 \let\@currentHref\HyperLocalCurrentHref
6126 \else
6127 \global\let\@currentHref\HyperGlobalCurrentHref
6128 \fi
6129 }

```

`\Hy@MakeCurrentHrefAuto`

```

6130 \def\Hy@MakeCurrentHrefAuto#1{%
6131 \Hy@GlobalStepCount\Hy@linkcounter
6132 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6133 }

```

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

```

6134 \def\@currentHlabel{\@currentHref}

6135 \@ifpackageloaded{fancyvrb}{%
6136 \ifpackagelater{fancyvrb}{1998/05/20}{}%
6137 \def\FV@StepLineNo{%
6138 \FV@SetLineNo
6139 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6140 \FV@StepLineNo
6141 }%
6142 }%
6143 }{}

```

29 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. 38). The link will not work if option `pageanchor` is set to false.

`\lastpage@putlabel`

```

6144 \Hy@AtBeginDocument{%
6145 \@ifclassloaded{revtex4}{%
6146 \@namedef{ver@lastpage.sty}{1994/06/25}%
6147 }{}%
6148 \@ifpackageloaded{lastpage}{%
6149 \ifHy@pageanchor
6150 \else
6151 \Hy@WarningNoLine{%

```



```

6152     The \string\pageref{LastPage} link doesn't work\MessageBreak
6153     with disabled option 'pageanchor'%
6154 }%
6155 \fi
6156 \def\lastpage@putlabel{%
6157   \addtocounter{page}{-1}%
6158   \if@filesw
6159     \begingroup
6160       \let\@number\@firstofone
6161       \ifHy@pageanchor
6162         \ifHy@hypertextnames
6163           \ifHy@plainpages
6164             \def\Hy@temp{\arabic{page}}%
6165           \else
6166             \Hy@unicodedefalse
6167             \pdfstringdef\Hy@temp{\thepage}%
6168           \fi
6169         \else
6170           \def\Hy@temp{\the\Hy@pagecounter}%
6171         \fi
6172       \fi
6173       \immediate\write\@auxout{%
6174         \string\newlabel
6175         {LastPage}{\the\Hy@temp}{\thepage}{\thepage}%
6176         \ifHy@pageanchor page.\Hy@temp\fi}{\thepage}%
6177     }%
6178   \endgroup
6179 \fi
6180 \addtocounter{page}{1}%
6181 }%
6182 \@ifclassloaded{revtex4}{%
6183   \begingroup
6184     \toks@\expandafter{\lastpage@putlabel}%
6185     \edef\x{\endgroup
6186       \def\noexpand\lastpage@putlabel{%
6187         \noexpand\stepcounter{page}%
6188         \the\toks@
6189         \noexpand\addtocounter{page}\noexpand\m@ne
6190       }%
6191     }%
6192     \x
6193   }{}%
6194 }{}%
6195 }
6196 \end{package}
6197 \check
6198 \checkpackage{lastpage}[1994/06/25]
6199 \checkcommand\def\lastpage@putlabel{%
6200   \addtocounter{page}{-1}%
6201   \immediate\write\@auxout{%
6202     \string\newlabel{LastPage}{\the\Hy@temp}{\thepage}%
6203   }%
6204   \addtocounter{page}{1}%
6205 }
6206 \end{check}
6207 \end{package}

```

30 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.

```
6208 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
6209 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}
```

31 Package titlesec and titletoc support

This code is contributed by Javier Bezos (Email: jbezos@arrakis.es).

Package titlesec support:

```
6210 \@ifpackageloaded{titlesec}{%
6211   \def\ttl@Hy@steplink#1{%
6212     \Hy@MakeCurrentHrefAuto{#1*}%
6213     \edef\ttl@Hy@saveanchor{%
6214       \noexpand\Hy@raisedlink{%
6215         \noexpand\hyper@anchorstart{\@currentHref}%
6216         \noexpand\hyper@anchorend
6217         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6218         \noexpand\ttl@Hy@PatchSaveWrite
6219       }%
6220     }%
6221   }%
6222   \def\ttl@Hy@PatchSaveWrite{%
6223     \begingroup
6224     \toks@\expandafter{\ttl@savewrite}%
6225     \edef\x{\endgroup
6226       \def\noexpand\ttl@savewrite{%
6227         \let\noexpand\@currentHref
6228         \noexpand\ttl@Hy@SavedCurrentHref
6229         \the\toks@
6230       }%
6231     }%
6232     \x
6233   }%
6234   \def\ttl@Hy@refstepcounter#1{%
6235     \let\ttl@b\Hy@raisedlink
6236     \def\Hy@raisedlink##1{%
6237       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6238     }%
6239     \refstepcounter{#1}%
6240     \let\Hy@raisedlink\ttl@b
6241   }%
6242 }
```

Package titletoc support:

```
6243 \@ifpackageloaded{titletoc}{%
6244   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6245 }
```

32 Package varioref support

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

```

6246 \def\Hy@varioref@undefined{{??}{??}}{}{}
6247 \@ifpackageloaded{varioref}{%
6248   \def\vref@pagenum#1#2{%
6249     \@ifundefined{r@#2}{%
6250       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6251     }{}%
6252     \edef#1{\getpagerefnumber{#2}}%
6253   }%
6254 }{}

```

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

```

6255 \def\Hy@varioref@refstepcounter#1{%
6256   \stepcounter{#1}%
6257   \protected@edef\@currentlabel{%
6258     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
6259   }%
6260 }
6261 \AtBeginDocument{%
6262   \ifx\refstepcounter\Hy@varioref@refstepcounter
6263     \let\H@refstepcounter\refstepcounter
6264     \let\refstepcounter\Hy@saved@refstepcounter
6265   \fi
6266 }

```

33 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

```

6267 \@ifpackageloaded{longtable}{%
6268   \begingroup
6269   \def\y{\LT@array}%
6270   \@ifundefined{scr@LT@array}{%
6271     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
6272   }{\def\y{\scr@LT@array}}%
6273   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6274     \expandafter\endgroup
6275     \expandafter\def\y[##1]##2{%
6276       \H@refstepcounter{#1}%
6277       \hyper@makecurrent{table}%
6278       \let\Hy@LT@currentHref\@currentHref
6279       #2\@sharp###3#4%
6280     }%
6281   }%
6282   \expandafter\expandafter\expandafter\x\y{#1}{#2}\@nil

```

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

```

6283   \begingroup
6284   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
6285     \endgroup
6286     \def\LT@start{%
6287       #1%
6288       \ifvoid\LT@foot#2\fi

```

```

6289 \let\@currentHref\Hy@LT@currentHref
6290 \Hy@raisedlink{%
6291 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6292 }%
6293 #3%
6294 }%
6295 }%
6296 \expandafter\x\LT@start\@nil
6297 }{}

```

34 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 41). 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.

```

6298 \let\new@refstepcounter\refstepcounter
6299 \let\H@equation\equation
6300 \let\H@endequation\endequation
6301 \ifpackageloaded{amsmath}{%
6302 \long\def\Hy@temp{%
6303 \incr@eqnum
6304 \mathdisplay@push
6305 \st@rredfalse \global\@eqnswtrue
6306 \mathdisplay{equation}%
6307 }%
6308 \ifx\Hy@temp\equation
6309 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6310 \csname iftrue\endcsname
6311 \else
6312 \long\def\equation{%
6313 \mathdisplay@push
6314 \st@rredfalse \global\@eqnswtrue
6315 \mathdisplay{equation}%
6316 \incr@eqnum
6317 }%
6318 \fi
6319 \fi
6320 }{%
6321 \def\equation{%
6322 \let\refstepcounter\H@refstepcounter
6323 \H@equation
6324 \@ifundefined{theHequation}{%
6325 \make@stripped@name{\theequation}%
6326 \let\theHequation\newname
6327 }{}%
6328 \hyper@makecurrent{equation}%
6329 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6330 \let\refstepcounter\new@refstepcounter
6331 }%
6332 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6333 }

```

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.

```

6334 \newif\if@eqnstar
6335 \@eqnstarfalse
6336 \let\H@eqnarray\eqnarray
6337 \let\H@endeqnarray\endeqnarray
6338 \def\eqnarray{%
6339   \let\Hy@reserved@a\relax
6340   \def\@currentHref{}%
6341   \H@eqnarray
6342   \if@eqnstar
6343   \else
6344     \ifx\\ \@currentHref\\%
6345     \else
6346       \ifundefined{theHequation}{%
6347         \make@stripped@name{\theequation}%
6348         \let\theHequation\newname
6349       }{}%
6350       \hyper@makecurrent{equation}%
6351       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6352     \fi
6353   \fi
6354 }
6355 \def\endeqnarray{%
6356   \H@endeqnarray
6357 }

```

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.

```

6358 \@namedef{eqnarray*}{%
6359   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6360 }
6361 \@namedef{endeqnarray*}{%
6362   \nonumber\endeqnarray\@eqnstarfalse
6363 }

```

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

```

6364 \ltx@ifundefined{subeqnarray}{}{%
6365   \let\H@subeqnarray\subeqnarray
6366   \let\H@endsubeqnarray\endsubeqnarray
6367   \def\subeqnarray{%
6368     \let\Hy@reserved@a\relax
6369     \H@subeqnarray
6370     \ifundefined{theHequation}{%
6371       \make@stripped@name{\theequation}%
6372       \let\theHequation\newname
6373     }{}%
6374     \hyper@makecurrent{equation}%
6375     \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6376   }%
6377   \def\endsubeqnarray{%
6378     \H@endsubeqnarray
6379   }%
6380   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6381 }

```

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

```

6382 \def\make@stripped@name#1{%
6383   \begingroup
6384   \escapechar\m@ne
6385   \global\let\newname\@empty
6386   \protected@edef\Hy@tempa{#1}%
6387   \edef\@tempb{%
6388     \noexpand\@tfor\noexpand\Hy@tempa:=%
6389     \expandafter\strip@prefix\meaning\Hy@tempa
6390   }%
6391   \@tempb\do{%
6392     \if{\Hy@tempa\else
6393     \if}\Hy@tempa\else
6394     \xdef\newname{\newname\Hy@tempa}%
6395     \fi
6396     \fi
6397   }%
6398   \endgroup
6399 }

```

Support for amsmath's subequations:

```

6400 \begingroup\expandafter\expandafter\expandafter\endgroup
6401 \expandafter\ifx\csname subequations\endcsname\relax
6402 \else
6403   \let\HyOrg@subequations\subequations
6404   \def\subequations{%
6405     \stepcounter{equation}%
6406     \protected@edef\theHparentequation{%
6407       \@ifundefined{theHequation}\theequation\theHequation
6408     }%
6409     \addtocounter{equation}{-1}%
6410     \HyOrg@subequations
6411     \def\theHequation{\theHparentequation\alph{equation}}%
6412     \ignorespaces
6413   }%
6414   \fi

```

Support for package amsthm (Daniel Müllner):

```

6415 \@ifpackageloaded{amsthm}{%
6416   \def\@thm#1#2#3{%
6417     \ifhmode
6418       \unskip\unskip\par
6419     \fi
6420     \normalfont
6421     \trivlist
6422     \let\thmheadnl\relax
6423     \let\thm@swap\@gobble
6424     \thm@notefont{\fontseries\mddefault\upshape}%
6425     \thm@headpunct{.}% add period after heading
6426     \thm@headsep 5\p@ plus\p@ minus\p@\relax
6427     \thm@space@setup
6428     #1% style overrides
6429     \@topsep \thm@preskip           % used by thm head
6430     \@topsepadd \thm@postskip       % used by \endparenv
6431     \def\dth@counter{#2}%
6432     \ifx\@empty\dth@counter
6433       \def\@tempa{%

```

```

6434     \@oparg{\@begintheorem{#3}{}}{}%
6435   }%
6436 \else
6437   \H@refstepcounter{#2}%
6438   \hyper@makecurrent{#2}%
6439   \let\Hy@dth@currentHref\@currentHref
6440   \def\@tempa{%
6441     \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
6442   }%
6443   \fi
6444   \@tempa
6445 }%
6446 \dth@everypar={%
6447   \@minipagefalse
6448   \global\@newlistfalse
6449   \@noparitemfalse
6450   \if@inlabel
6451     \global\@inlabelfalse
6452   \begingroup
6453     \setbox\z@\lastbox
6454     \ifvoid\z@
6455       \kern-\itemindent
6456     \fi
6457   \endgroup
6458   \ifx\@empty\dth@counter
6459   \else
6460     \Hy@raisedlink{%
6461       \hyper@anchorstart{%
6462         \ltx@ifundefined{Hy@dth@currentHref}%
6463         \@currentHref\Hy@dth@currentHref
6464       }\hyper@anchorend
6465     }%
6466   \fi
6467   \unhbox\@labels
6468   \fi
6469   \if@nobreak
6470     \@nobreakfalse \clubpenalty\@M
6471   \else
6472     \clubpenalty\@clubpenalty \everypar{}%
6473   \fi
6474 }%
6475 }{}

```

35 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.

Tabularx causes footnote problems, disable the linking if that is loaded.

```

6476 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6477 \ifHy@hyperfootnotes
6478   \newcounter{Hfootnote}%
6479   \let\H@@@footnotetext\@footnotetext
6480   \let\H@@@footnotemark\@footnotemark
6481   \def\@xfootnotenext[#1]{%

```

```

6482 \begingroup
6483 \csname c@\@mpfn\endcsname #1\relax
6484 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6485 \endgroup
6486 \ifx\@footnotetext\@mpfootnotetext
6487 \expandafter\H@\@mpfootnotetext
6488 \else
6489 \expandafter\H@\@footnotetext
6490 \fi
6491 }%
6492 \def\@xfootnotemark[#1]{%
6493 \begingroup
6494 \c@footnote #1\relax
6495 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6496 \endgroup
6497 \H@\@footnotemark
6498 }%
6499 \let\H@\@mpfootnotetext\@mpfootnotetext
6500 \long\def\@mpfootnotetext#1{%
6501 \H@\@mpfootnotetext{%
6502 \ifHy@nesting
6503 \expandafter\hyper@@anchor\expandafter{%
6504 \Hy@footnote@currentHref
6505 }{#1}%
6506 \else
6507 \Hy@raisedlink{%
6508 \expandafter\hyper@@anchor\expandafter{%
6509 \Hy@footnote@currentHref
6510 }{\relax}%
6511 }#1%
6512 \fi
6513 }%
6514 }%
6515 \long\def\@footnotetext#1{%
6516 \H@\@footnotetext{%
6517 \ifHy@nesting
6518 \expandafter\hyper@@anchor\expandafter{%
6519 \Hy@footnote@currentHref
6520 }{#1}%
6521 \else
6522 \Hy@raisedlink{%
6523 \expandafter\hyper@@anchor\expandafter{%
6524 \Hy@footnote@currentHref
6525 }{\relax}%
6526 }%
6527 \let\@currentHref\Hy@footnote@currentHref
6528 \let\@currentlabelname\@empty
6529 #1%
6530 \fi
6531 }%
6532 }%

```

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.

```

6533 \def\@footnotemark{%
6534 \leavevmode

```



```

6535 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
6536 \stepcounter{Hfootnote}%
6537 \global\let\Hy@saved@currentHref\@currentHref
6538 \hyper@makecurrent{Hfootnote}%
6539 \global\let\Hy@footnote@currentHref\@currentHref
6540 \global\let\@currentHref\Hy@saved@currentHref
6541 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6542 \@makefnmark
6543 \hyper@linkend
6544 \ifhmode\spacefactor\x@sf\fi
6545 \relax
6546 }%

```

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

```

6547 \@ifpackageloaded{longtable}{%
6548 \CheckCommand*{\LT@p@ftntext}[1]{%
6549 \edef\@tempa{%
6550 \the\LT@p@ftn
6551 \noexpand\footnotetext[\the\c@footnote]%
6552 }%
6553 \global\LT@p@ftn\expandafter{\@tempa{#1}}}%
6554 }%
6555 \long\def\LT@p@ftntext#1{%
6556 \edef\@tempa{%
6557 \the\LT@p@ftn
6558 \begingroup
6559 \noexpand\c@footnote=\the\c@footnote\relax
6560 \noexpand\protected@xdef
6561 \noexpand\@thefnmark{\noexpand\thempfn}%
6562 \noexpand\protected@xdef\noexpand\@thefnmark{%
6563 \noexpand\thempfn
6564 }%
6565 \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6566 \expandafter{%
6567 \Hy@footnote@currentHref
6568 }%
6569 }%
6570 \global\LT@p@ftn\expandafter{%
6571 \@tempa{#1}%
6572 \endgroup
6573 }%
6574 }%
6575 \long\def\Hy@LT@footnotetext#1#2{%
6576 \H@@@footnotetext{%
6577 \ifHy@nesting
6578 \hyper@@@anchor{#1}{#2}%
6579 \else
6580 \Hy@raisedlink{%
6581 \hyper@@@anchor{#1}{\relax}%
6582 }%
6583 \def\@currentHref{#1}%
6584 \let\@currentlabelname\@empty
6585 #2%
6586 \fi
6587 }%

```

```

6588 }%
6589 }{}%

```

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

```

6590 \@ifpackageloaded{fancyvrb}{%
6591   \def\V@@footnotetext{%
6592     \insert\footins\bgroup
6593     \csname reset@font\endcsname
6594     \footnotesize
6595     \interlinepenalty\interfootnotelinepenalty
6596     \splittopskip\footnotesep
6597     \splitmaxdepth\dp\strutbox
6598     \floatingpenalty \@MM
6599     \hsize\columnwidth
6600     \@parboxrestore
6601     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6602     \@makefnmark{}%
6603     \rule{\z@}{\footnotesep}%
6604     \bgroup
6605     \aftergroup\V@@@footnotetext
6606     \Hy@raisedlink{%
6607       \expandafter\hyper@@anchor\expandafter{%
6608         \Hy@footnote@currentHref
6609       }\relax}%
6610   }%
6611   \let\@currentHref\Hy@footnote@currentHref
6612   \let\@currentlabelname\@empty
6613   \ignorespaces
6614 }%
6615 }{}%

```

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

```

6616 \def\Hy@temp#1{%
6617   \begingroup
6618   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6619   \endgroup
6620   \@footnotemark
6621 }%
6622 \ifx\Hy@temp\footref
6623   \def\footref#1{%
6624     \begingroup
6625     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6626     \endgroup
6627     \H@@@footnotemark
6628   }%
6629 \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.

```

6630 \let\HyOrg@maketitle\maketitle
6631 \def\maketitle{%
6632   \let\Hy@saved@footnotemark\@footnotemark
6633   \let\Hy@saved@footnotetext\@footnotetext
6634   \let\@footnotemark\H@@@footnotemark
6635   \let\@footnotetext\H@@@footnotetext
6636   \@ifnextchar[\Hy@maketitle@optarg{% ]
6637   \HyOrg@maketitle
6638   \Hy@maketitle@end

```

```

6639 }%
6640 }%
6641 \def\Hy@maketitle@optarg[#1]{%
6642   \HyOrg@maketitle[#{#1}]%
6643   \Hy@maketitle@end
6644 }%
6645 \def\Hy@maketitle@end{%
6646   \ifx\@footnotemark\H@@footnotemark
6647     \let\@footnotemark\Hy@saved@footnotemark
6648   \fi
6649   \ifx\@footnotetext\H@@footnotetext
6650     \let\@footnotetext\Hy@saved@footnotetext
6651   \fi
6652 }%

```

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

```

6653 \def\realfootnote{%
6654   \@ifnextchar[\@xfootnote{%
6655     \stepcounter{\@mpfn}%
6656     \protected@xdef\@thefnmark{\thempfn}%
6657     \H@@@footnotemark\H@@@footnotetext
6658   }%
6659 }%

6660 \fi
6661 \Hy@DisableOption{hyperfootnotes}

6662 </package>
6663 <*check>
6664 \checklatex
6665 \checkcommand\def\@xfootnotenext[#1]{%
6666   \begingroup
6667     \csname c@\@mpfn\endcsname #1\relax
6668     \unrestored@protected@xdef\@thefnmark{\thempfn}%
6669   \endgroup
6670   \@footnotetext
6671 }
6672 \checkcommand\def\@xfootnotemark[#1]{%
6673   \begingroup
6674     \c@footnote #1\relax
6675     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6676   \endgroup
6677   \@footnotemark
6678 }
6679 \checkcommand\def\@footnotemark{%
6680   \leavevmode
6681   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6682   \@makefnmark
6683   \ifhmode\spacefactor\@x@sf\fi
6684   \relax
6685 }
6686 </check>
6687 <*package>

```

36 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.

```

6688 \def\caption{%
6689   \ifx\@capttype\@undefined
6690     \@latex@error{\noexpand\caption outside float}\@ehd
6691     \expandafter\@gobble
6692   \else
6693     \H@refstepcounter\@capttype
6694     \let\Hy@tempa\@caption
6695     \ifundefined{float@caption}{%
6696       {%
6697         \expandafter\ifx\csname @float@c@\@capttype\endcsname
6698           \float@caption
6699           \let\Hy@tempa\Hy@float@caption
6700         \fi
6701       }%
6702     \expandafter\@firstofone
6703   \fi
6704   {\@dblarg{\Hy@tempa\@capttype}}%
6705 }
6706 \long\def\@caption#1[#2]#3{%
6707   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6708     \csname iftrue\endcsname
6709     \global\let\@currentHref\hc@currentHref
6710   \else
6711     \hyper@makecurrent{\@capttype}%
6712   \fi
6713   \@ifundefined{NR@gettitle}{%
6714     \def\@currentlabelname{#2}%
6715   }{%
6716     \NR@gettitle{#2}%
6717   }%
6718   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6719     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6720   }%
6721   \begingroup
6722     \@parboxrestore
6723     \if@minipage
6724       \@setminipage
6725     \fi
6726     \normalsize
6727     \expandafter\ifx\csname if@capstart\expandafter\endcsname
6728       \csname iftrue\endcsname
6729       \global\@capstartfalse
6730       \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6731     \else
6732       \@makecaption{\csname fnum@#1\endcsname}{%
6733         \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6734     \ifHy@nesting
6735       \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6736     \else
6737       \Hy@raisedlink{%
6738         \expandafter\hyper@@anchor\expandafter{%
6739           \@currentHref

```

```

6740     }\relax}%
6741   }%
6742   #3%
6743   \fi
6744 }%
6745 \fi
6746 \par
6747 \endgroup
6748 }

```

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.

```

6749 \let\Hy@float@caption\@caption
6750 \ifpackageloaded{float}{%
6751   \def\Hy@float@caption{%
6752     \ifx\Hy@float@currentHref\@undefined
6753       \hyper@makecurrent{\@capttype}%
6754       \global\let\Hy@float@currentHref\@currentHref
6755     \else
6756       \let\@currentHref\Hy@float@currentHref
6757     \fi
6758     \float@caption
6759   }%
6760   \let\HyOrg@float@makebox\float@makebox
6761   \renewcommand{\float@makebox}[1]{%
6762     \HyOrg@float@makebox{%
6763       #1\relax
6764       \ifx\Hy@float@currentHref\@undefined
6765       \else
6766         \expandafter\hyper@@anchor\expandafter{%
6767           \Hy@float@currentHref
6768         }\relax}%
6769       \global\let\Hy@float@currentHref\@undefined
6770     \fi
6771   }%
6772 }%
6773 }{}

6774 \end{package}
6775 \ifcheck
6776 \checklatex[1999/06/01 - 2000/06/01]
6777 \checkcommand\def\caption{%
6778   \ifx\@capttype\@undefined
6779     \@latex@error{\noexpand\caption outside float}\@ehd
6780     \expandafter\@gobble
6781   \else
6782     \refstepcounter{\@capttype
6783     \expandafter\@firstofone
6784     \fi
6785     {\@dblarg{\@caption\@capttype}}}%
6786 }
6787 \checkcommand\long\def\@caption#1[#2]#3{%
6788   \par
6789   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6790     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6791   }%
6792   \begingroup
6793     \@parboxrestore

```

```

6794 \if@minipage
6795 \setminipage
6796 \fi
6797 \normalsize
6798 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6799 \endgroup
6800 }
6801 </check>
6802 <*package>

```

37 Bibliographic references

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

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

```

6803 \def\hyper@natlinkstart#1{%
6804 \Hy@backout{#1}%
6805 \hyper@linkstart{cite}{cite.#1}%
6806 \def\hyper@nat@current{#1}%
6807 }
6808 \def\hyper@natlinkend{%
6809 \hyper@linkend
6810 }
6811 \def\hyper@natlinkbreak#1#2{%
6812 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6813 }
6814 \def\hyper@natanchorstart#1{%
6815 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6816 }
6817 \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.

```

6818 \ltx@ifundefined{NAT@parse}{%
6819 \providecommand*\@extra@binfo{}%
6820 \providecommand*\@extra@b@citeb{}%
6821 \def\bibcite#1#2{%
6822 \@newlabel{b}{#1\@extra@binfo}{%
6823 \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6824 }%
6825 }%
6826 \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.”.

```

6827 \let\Hy@bibcite\bibcite
6828 \begingroup
6829 \@ifundefined{bbl@cite@choice}{}{%
6830 \g@addto@macro\bbl@cite@choice{%

```

```

6831 \let\bibcite\Hy@bibcite
6832 }%
6833 }%
6834 \endgroup
\@BIBLABEL is working around a ‘feature’ of RevTeX.
6835 \providecommand*{\@BIBLABEL}{\@biblabel}%
6836 \def\@bibitem[#1]#2{%
6837 \@skiphyperreftrue
6838 \H@item[%
6839 \ifx\Hy@raisedlink\@empty
6840 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6841 \@BIBLABEL{#1}%
6842 \hyper@anchorend
6843 \else
6844 \Hy@raisedlink{%
6845 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6846 }%
6847 \@BIBLABEL{#1}%
6848 \fi
6849 \hfill
6850 ]%
6851 \@skiphyperreffalse
6852 \if@filesw
6853 \begingroup
6854 \let\protect\noexpand
6855 \immediate\write\@auxout{%
6856 \string\bibcite{#2}{#1}%
6857 }%
6858 \endgroup
6859 \fi
6860 \ignorespaces
6861 }%

```

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

```

6862 \def\@bibitem#1{%
6863 \@skiphyperreftrue\H@item\@skiphyperreffalse
6864 \Hy@raisedlink{%
6865 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6866 }%
6867 \if@filesw
6868 \begingroup
6869 \let\protect\noexpand
6870 \immediate\write\@auxout{%
6871 \string\bibcite{#1}{\the\value{\@listctr}}%
6872 }%
6873 \endgroup
6874 \fi
6875 \ignorespaces
6876 }%
6877 }{}

6878 </package>
6879 <*check>
6880 \checklatex
6881 \checkcommand\def\@bibitem[#1]#2{%
6882 \item[\@biblabel{#1}\hfill}%
6883 \if@filesw

```

```

6884   {%
6885     \let\protect\noexpand
6886     \immediate\write\@auxout{%
6887       \string\bibcite{#2}{#1}%
6888     }%
6889   }%
6890 \fi
6891 \ignorespaces
6892 }
6893 \checkcommand\def\@bibitem#1{%
6894   \item
6895   \if@filesw
6896     \immediate\write\@auxout{%
6897       \string\bibcite{#1}{\the\value{\@listctr}}%
6898     }%
6899   \fi
6900 \ignorespaces
6901 }
6902 \</check>
6903 \<*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.

```

6904 \@ifclassloaded{revtex}{%
6905   \Hy@Info{*** compatibility with revtex **** }%
6906   \def\revtex@checking#1#2{%
6907     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6908     \expandafter\def\csname b@#1\endcsname{#2}%
6909     \@SetMaxRnhefLabel{#1}%
6910     \expandafter\let\csname b@#1\endcsname\T@temp
6911   }%

```

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

```

6912 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
6913 \providecommand*\@extra@b@citeb{}%
6914 \def\CITEX[#1]#2{%
6915   \let\@citea\@empty
6916   \leavevmode
6917   \unskip
6918   $^{}%
6919   \scriptstyle
6920   \@CITE{%
6921     \@for\@citeb:=#2\do{%
6922       \@citea
6923       \def\@citea{,\penalty\@m\ }%
6924       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6925       \if@filesw
6926         \immediate\write\@auxout{\string\citation{\@citeb}}%
6927       \fi
6928       \@ifundefined{b@\@citeb\extra@b@citeb}{}%
6929       \mbox{\reset@font\bfseries ?}%
6930       \G@refundefinedtrue
6931       \@latex@warning{%
6932         Citation ‘\@citeb’ on page \thepage \space undefined%
6933       }%
6934     }%

```



```

6935      {\csname b@\@citeb\@extra@b@citeb\endcsname}%
6936      }%
6937      }%
6938      }{#1}%
6939      }$%
6940      }%

```

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.

```

6941 \def\@citex[#1]#2{%
6942   \let\@citea\@empty
6943   \@cite{%
6944     \@for\@citeb:=#2\do{%
6945       \@citea
6946       \def\@citea{,\penalty\@m\ }%
6947       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6948       \if@filesw
6949         \immediate\write\@auxout{\string\citation{\@citeb}}%
6950       \fi
6951       \ifundefined{b@\@citeb\@extra@b@citeb}{%
6952         \mbox{\reset@font\bfseries ?}%
6953         \G@refundefinedtrue
6954         \@latex@warning{%
6955           Citation '\@citeb' on page \thepage \space undefined%
6956         }%
6957       }{%
6958         \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
6959       }%
6960     }%
6961   }{#1}%
6962 }%
6963 }{}

```

37.1 Package harvard

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

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

```

6964 \ifpackageloaded{harvard}{%
6965   \Hy@AtBeginDocument{%
6966     \Hy@Info{*** compatibility with harvard **** }%
6967     \Hy@raiselinksfalse
6968     \def\harvardcite#1#2#3#4{%
6969       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite.#1}{#2}}%
6970       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite.#1}{#3}}%
6971       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite.#1}{#4}}%
6972       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6973     }%
6974     \def\HAR@citetoaux#1{%
6975       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6976       \ifHy@backref
6977         \ifx\@empty\@currentlabel
6978           \else
6979             \@bspack

```

```

6980     \if@filesw
6981         \protected@write\@auxout{}\{
6982             \string\@writefile{brf}\{
6983                 \string\backcite{#1}\{
6984                     {\thepage}\{\@currentlabel}\{\@currentHref}\}
6985                 }\}
6986             }\}
6987         }\}
6988     \fi
6989     \@esphack
6990 \fi
6991 \fi
6992 }\}
6993 \def\harvarditem{%
6994     \ifnextchar[{\@harvarditem}\@harvarditem[\null]]%
6995 }\}
6996 \def\@harvarditem[#1]#2#3#4#5\par{%
6997     \item[]%
6998     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6999 \if@filesw
7000     \begingroup
7001         \def\protect##1{\string ##1\space}%
7002         \ifthenelse{\equal{#1}\{\null}}%
7003             {\def\next{{#4}{#2}{#2}{#3}}}%
7004             {\def\next{{#4}{#2}{#1}{#3}}}%
7005         \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7006     \endgroup
7007 \fi
7008 \protect\hspace*{-\labelwidth}%
7009 \protect\hspace*{-\labelsep}%
7010 \ignorespaces
7011 #5%
7012 \ifHy@backref
7013     \newblock
7014     \backref{\csname br@#4\endcsname}%
7015 \fi
7016 \par
7017 }\}

```

\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:

```

7018 \long\def\HAR@checkcitations#1#2#3#4{%
7019     \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#2}}%
7020     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7021         \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#3}}%
7022         \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7023             \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#4}}%
7024             \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7025                 \else
7026                     \@tempwattrue
7027                 \fi
7028             \else
7029                 \@tempwattrue
7030             \fi
7031         \else
7032             \@tempwattrue

```

```

7033   \fi
7034   }%
7035 }%

7036 }{}

```

37.2 Package chicago

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

```

7037 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

7038 \def\citeN{%
7039   \def\@citesep{-1000}%
7040   \def\@cite##1##2{##1}%
7041   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7042   \@citedata@opt
7043 }%

```

`\shortciteN`

```

7044 \def\shortciteN{%
7045   \def\@citesep{-1000}%
7046   \def\@cite##1##2{##1}%
7047   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7048   \@citedata@opt
7049 }%

```

`\@citedata@opt`

```

7050 \def\@citedata@opt{%
7051   \let\@cite@opt\@empty
7052   \@ifnextchar [{%
7053     \@tempwattrue
7054     \@citedatax@opt
7055   }{%
7056     \@tempwafalse
7057     \@citedatax[]%
7058   }%
7059 }%

```

`\@citedatax@opt`

```

7060 \def\@citedatax@opt[#1]{%
7061   \def\@cite@opt{, #1}%
7062   \@citedatax[{#1}]%
7063 }%

7064 }{}

```

38 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{pdfpageduration={}}`. 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.

```

7065 \def\Hy@EveryPageAnchor{%
7066   \Hy@DistillerDestFix
7067   \ifHy@pageanchor
7068     \ifHy@hypertextnames
7069       \ifHy@plainpages
7070         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}}%
7071       \else
7072         \begingroup
7073         \let\@number\@firstofone
7074         \Hy@unicodfalse
7075         \pdfstringdef\@the@H@page{\thepage}%
7076       \endgroup
7077       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}}%
7078     \fi
7079   \else
7080     \Hy@GlobalStepCount\Hy@pagecounter
7081     \def\Hy@TempPageAnchor{%
7082       \hyper@@anchor{page.\the\Hy@pagecounter}%
7083     }%
7084   \fi
7085   \vbox to 0pt{%
7086     \kern\voffset
7087     \kern\topmargin
7088     \kern-1bp\relax
7089     \hbox to 0pt{%
7090       \kern\hoffset
7091       \kern\ifodd\value{page}%
7092         \oddsidemargin
7093       \else
7094         \evensidemargin
7095       \fi
7096       \kern-1bp\relax
7097       \Hy@TempPageAnchor\relax
7098       \hss
7099     }%
7100   \vss
7101 }%
7102 \fi
7103 }
7104 \g@addto@macro\Hy@EveryPageBoxHook{%
7105   \Hy@EveryPageAnchor
7106 }

```

39 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.

```

7107 \def\addcontentsline#1#2#3{% toc extension, type, tag
7108   \begingroup
7109   \let\label\@gobble
7110   \ifx\@currentHref\@empty
7111     \Hy@Warning{%
7112       No destination for bookmark of \string\addcontentsline,%
7113       \MessageBreak destination is added%

```

```

7114 }%
7115 \phantomsection
7116 \fi
7117 \expandafter\ifx\csname toplevel@#2\endcsname\relax
7118 \beginingroup
7119 \def\Hy@tempa{#1}%
7120 \ifx\Hy@tempa\Hy@bookmarkstype
7121 \Hy@WarningNoLine{%
7122 bookmark level for unknown #2 defaults to 0%
7123 }%
7124 \else
7125 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7126 \fi
7127 \endgroup
7128 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7129 \fi
7130 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
7131 \Hy@writebookmark{\csname the#2\endcsname}%
7132 {#3}%
7133 {\@currentHref}%
7134 {\Hy@toclevel}%
7135 {#1}%
7136 \ifHy@verbose
7137 \beginingroup
7138 \def\Hy@tempa{#3}%
7139 \@onelevel@sanitize\Hy@tempa
7140 \let\temp@online\on@line
7141 \let\on@line\@empty
7142 \Hy@Info{%
7143 bookmark\temp@online:\MessageBreak
7144 thecounter {\csname the#2\endcsname}\MessageBreak
7145 text {\Hy@tempa}\MessageBreak
7146 reference {\@currentHref}\MessageBreak
7147 toplevel {\Hy@toclevel}\MessageBreak
7148 type {#1}%
7149 }%
7150 \endgroup
7151 \fi
7152 \addtocontents{#1}{%
7153 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7154 }%
7155 \endgroup
7156 }
7157 \def\contentsline#1#2#3#4{%
7158 \ifx\#4\%
7159 \csname l@#1\endcsname{#2}{#3}%
7160 \else
7161 \ifcase\Hy@linktoc % none
7162 \csname l@#1\endcsname{#2}{#3}%
7163 \or % section
7164 \csname l@#1\endcsname{%
7165 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7166 }{#3}%
7167 \or % page
7168 \csname l@#1\endcsname{#2}{#3}%
7169 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7170 }%

```

```

7171 \else % all
7172 \csname l@#1\endcsname{%
7173 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7174 }{%
7175 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7176 }%
7177 \fi
7178 \fi
7179 }

7180 </package>
7181 <*check>
7182 \checklatex
7183 \checkcommand\def\addcontentsline#1#2#3{%
7184 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7185 }
7186 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7187 </check>
7188 <*package>

```

40 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.

```

7189 \let\H@definecounter\@definecounter
7190 \def\@definecounter#1{%
7191 \H@definecounter{#1}%
7192 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7193 }

```

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.

```

7194 \let\H@newctr\@newctr
7195 \def\@newctr#1[#2]{%
7196 \H@newctr#1[{#2}]%
7197 \expandafter\def\csname theH#1\endcsname{%
7198 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}}%
7199 }%
7200 }

```

41 AMS \LaTeX compatibility

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

Version 6.77p uses a patch by Ross Moore.

```

7201 \ifpackageloaded{amsmath}{%
7202 \def\Hy@make@anchor{%
7203 \Hy@MakeCurrentHrefAuto{AMS}%
7204 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7205 }%
7206 \def\Hy@make@df@tag@@#1{%
7207 \gdef\df@tag{%

```

```

7208 \maketag@@@{\Hy@make@anchor#1}%
7209 \def\@currentlabel{#1}%
7210 }%
7211 }%
7212 \def\Hy@make@df@tag@@@#1{%
7213 \gdef\df@tag{%
7214 \tagform@{\Hy@make@anchor#1}%
7215 \toks@\xp{\p@equation{#1}}%
7216 \edef\@currentlabel{\the\toks@}%
7217 }%
7218 }%
7219 \let\HyOrg@make@df@tag@@\make@df@tag@@
7220 \let\HyOrg@make@df@tag@@@@make@df@tag@@@
7221 \let\make@df@tag@@@Hy@make@df@tag@@
7222 \let\make@df@tag@@@Hy@make@df@tag@@@
7223 }{}

```

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

```

7224 \ifpackagewith{hyperref}{pdfTeX}{%
7225 \let\H@seteqlabel\@seteqlabel
7226 \def\@seteqlabel#1{%
7227 \H@seteqlabel{#1}%
7228 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7229 \Hy@raisedlink{%
7230 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7231 }%
7232 }%
7233 }{}

```

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}}}

```

41.1 \@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.

```

7234 \let\HyOrg@addtoreset\@addtoreset
7235 \def\@addtoreset#1#2{%
7236 \HyOrg@addtoreset{#1}{#2}%
7237 \expandafter\xdef\csname theH#1\endcsname{%
7238 \expandafter\noexpand
7239 \csname the\@ifundefined{theH#2}{H#2\endcsname
7240 .\noexpand\the\noexpand\value{#1}}%
7241 }%
7242 }

```

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

```

7243 </package>

```

```

7244 <*check>
7245 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7246 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7247   \ifundefined{c@#2}{\@nocounterr{#2}}{%
7248     \ifundefined{c@#3}{\@nocnterr{#3}}{%
7249       \addtoreset{#2}{#3}%
7250       \exp\xdef\csname the#2\endcsname{%
7251         \exp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7252       }%
7253     }%
7254   }%
7255 }%
7256 </check>
7257 <*package>
7258 \ifpackageloaded{amsmath}{%
7259   \ifpackagelater{amsmath}{1999/12/14}{%
7260     \renewcommand*{\numberwithin}[3][\arabic]{%
7261       \ifundefined{c@#2}{\@nocounterr{#2}}{%
7262         \ifundefined{c@#3}{\@nocnterr{#3}}{%
7263           \HyOrg@addtoreset{#2}{#3}%
7264           \exp\xdef\csname the#2\endcsname{%
7265             \exp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7266           }%
7267           \exp\xdef\csname theH#2\endcsname{%
7268             \exp\xnx
7269             \csname the\ifundefined{theH#3}{H#3}\endcsname
7270             .\@nx#1{#2}%
7271           }%
7272         }%
7273       }%
7274     }%
7275   }%
7276   \Hy@WarningNoLine{%
7277     \string\numberwithin\space of package ‘amsmath’ %
7278     only fixed\MessageBreak
7279     for version 2000/06/06 v2.12 or newer%
7280   }%
7281 }%
7282 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7283 \ifHy@figures
7284 \let\Hy@Gin@setfile\Gin@setfile
7285 \def\Gin@setfile#1#2#3{%
7286   \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7287 }%
7288 \fi
7289 \Hy@DisableOption{hyperfigures}

```

43 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 emboldening 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.

```

7290 \ifHy@hyperindex
7291   \def\HyInd@ParenLeft{()}%
7292   \def\HyInd@ParenRight{)}%
7293   \def\hyperindexformat#1#2{%
7294     \let\HyOrg@hyperpage\hyperpage
7295     \let\hyperpage\@firstofone
7296     #1{\HyOrg@hyperpage{#2}}%
7297     \let\hyperpage\HyOrg@hyperpage
7298   }%
7299   \Hy@nextfalse
7300   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7301   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7302   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7303   \begingroup
7304     \lccode'\|=\expandafter'\HyInd@EncapChar\relax
7305     \lccode'\|/'\|'\relax
7306   \lowercase{\endgroup
7307     \ifHy@next
7308       \let\HyInd@org@wrindex\@wrindex
7309       \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||}%
7310       \def\HyInd@@wrindex#1#2|#3|#4\|{%
7311         \ifx\|#3\|
7312           \HyInd@org@wrindex{#1}{#2|hyperpage}%
7313         \else
7314           \HyInd@@@wrindex{#1}{#2}#3\|
7315         \fi
7316       }%
7317       \def\HyInd@@@wrindex#1#2#3#4\|{%
7318         \def\Hy@temp@A{#3}%
7319         \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7320           \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7321         \relax
7322         \HyInd@org@wrindex{#1}{%
7323           #2|hyperindexformat{/#3#4}%
7324         }%
7325       \else
7326         \ifx\|#4\|
7327           \ifx\Hy@temp@A\HyInd@ParenRight
7328             \HyInd@org@wrindex{#1}{#2|#3}%
7329           \else
7330             \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7331           \fi
7332         \else
7333           \HyInd@org@wrindex{#1}{%
7334             #2|#3hyperindexformat{/#4}%
7335           }%
7336         \fi
7337       \fi
7338     }%

```

```

7339 \else
7340 \def\@wrindex#1{\@@wrindex#1||\}%
7341 \def\@@wrindex#1|#2|#3\{\{%
7342 \if@filesw
7343 \ifx\|#2\}%
7344 \protected@write\@indexfile{}\{%
7345 \string\indexentry{#1|hyperpage}\thepage}%
7346 }\%
7347 \else
7348 \HyInd@@@wrindex{#1}#2\}%
7349 \fi
7350 \fi
7351 \endgroup
7352 \@esphack
7353 }\%
7354 \def\HyInd@@@wrindex#1#2#3\{\{%
7355 \def\Hy@temp@A{#2}%
7356 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7357 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7358 \relax
7359 \protected@write\@indexfile{}\{%
7360 \string\indexentry{%
7361 #1|hyperindexformat{/#2#3}%
7362 }\thepage}%
7363 }\%
7364 \else
7365 \ifx\|#3\}%
7366 \ifx\Hy@temp@A\HyInd@ParenRight
7367 \protected@write\@indexfile{}\{%
7368 \string\indexentry{#1|#2}\thepage}%
7369 }\%
7370 \else
7371 \protected@write\@indexfile{}\{%
7372 \string\indexentry{#1|#2hyperpage}\thepage}%
7373 }\%
7374 \fi
7375 \else
7376 \protected@write\@indexfile{}\{%
7377 \string\indexentry{%
7378 #1|#2hyperindexformat{/#3}%
7379 }\thepage}%
7380 }\%
7381 \fi
7382 \fi
7383 }\%
7384 \fi
7385 }\%
7386 \fi
7387 \Hy@DisableOption{hyperindex}
7388 \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.

```

7389 \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.

```

7390 \def\hyperpage#1{%
7391   \HyInd@hyperpage#1\nohyperpage{}\@nil
7392 }
7393 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7394   \HyInd@@hyperpage{#1}%
7395   #2%
7396   \def\Hy@temp{#3}%
7397   \ifx\Hy@temp\@empty
7398   \else
7399     \Hy@ReturnAfterFi{%
7400       \HyInd@hyperpage#3\@nil
7401     }%
7402   \fi
7403 }
7404 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}
7405 \def\@hyperpage#1--#2--#3\{%
7406   \ifx\#2\%
7407     \@commahyperpage{#1}%
7408   \else
7409     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7410   \fi
7411 }
7412 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7413 \def\@commahyperpage#1, #2,#3\{%
7414   \ifx\#2\%
7415     \HyInd@pagelink{#1}%
7416   \else
7417     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7418   \fi
7419 }

```

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

```

7420 \def\HyInd@pagelink#1{%
7421   \begingroup
7422   \toks@={}%
7423   \HyInd@removespaces#1 \@nil
7424   \endgroup
7425 }
7426 \def\HyInd@removespaces#1 #2\@nil{%
7427   \toks@=\expandafter{\the\toks@#1}%
7428   \ifx\#2\%
7429     \edef\x{\the\toks@}%
7430     \ifx\x\@empty
7431     \else
7432       \hyperlink{page.\the\toks@}{\the\toks@}%
7433     \fi
7434   \else
7435     \Hy@ReturnAfterFi{%
7436       \HyInd@removespaces#2\@nil
7437     }%
7438   \fi
7439 }

```

44 Compatibility with foiltex

```

7440 \@ifclassloaded{foils}{%

```

```

7441 \providecommand*\ext@table{lot}%
7442 \providecommand*\ext@figure{lof}%
7443 }{}

```

45 Compatibility with seminar slide package

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

```

7444 \ifclassloaded{seminar}{%
7445   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7446 }{%
7447   \Hy@seminarslidesfalse
7448 }
7449 \ifpackageloaded{slidesec}{%
7450   \newcommand\theHslidesection {\arabic{slidesection}}%
7451   \newcommand\theHslidesubsection{%
7452     \theHslidesection.\arabic{slidesubsection}%
7453   }%
7454   \def\slide@heading[#1]#2{%
7455     \H@refstepcounter{slidesection}%
7456     \@addtoreset{slidesubsection}{slidesection}%
7457     \addtocontents{los}{%
7458       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7459       {\@SCTR}{slideheading.\theslidesection}%
7460     }%
7461     \def\Hy@tempa{#2}%
7462     \ifx\Hy@tempa\@empty
7463     \else
7464       {%
7465         \edef\@currentlabel{%
7466           \csname p@slidesection\endcsname\theslidesection
7467         }%
7468         \makeslideheading{#2}%
7469       }%
7470     \fi
7471     \gdef\theslideheading{#1}%
7472     \gdef\theslidesubheading{}%
7473     \ifHy@bookmarksnumbered
7474       \def\Hy@slidetitle{\theslidesection\space #1}%
7475     \else
7476       \def\Hy@slidetitle{#1}%
7477     \fi
7478     \ifHy@hypertextnames
7479       \ifHy@naturalnames
7480         \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7481         \Hy@writebookmark
7482           {\theslidesection}%
7483           {\Hy@slidetitle}%
7484           {slideheading.\theslidesection}%
7485           {1}%
7486           {toc}%
7487       \else
7488         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7489         \Hy@writebookmark
7490           {\theslidesection}%
7491           {\Hy@slidetitle}%
7492           {slideheading.\theHslidesection}%

```

```

7493         {1}%
7494         {toc}%
7495     \fi
7496 \else
7497     \Hy@GlobalStepCount\Hy@linkcounter
7498     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7499     \Hy@writebookmark
7500         {\theslidesubsection}%
7501         {\Hy@slidetitle}%
7502         {slideheading.\the\Hy@linkcounter}%
7503         {1}%
7504         {toc}%
7505 \fi
7506 }%
7507 \def\slide@subheading[#1]#2{%
7508     \H@refstepcounter{slidesubsection}%
7509     \addtocontents{los}{%
7510         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7511         {\@SCTR}{slideheading.\theslidesubsection}%
7512     }%
7513     \def\Hy@tempa{#2}%
7514     \ifx\Hy@tempa\@empty
7515     \else
7516         {%
7517             \edef\@currentlabel{%
7518                 \csname p@slidesubsection\endcsname\theslidesubsection
7519             }%
7520             \makeslidesubheading{#2}%
7521         }%
7522     \fi
7523     \gdef\theslidesubheading{#1}%
7524     \ifHy@bookmarksnumbered
7525         \def\Hy@slidetitle{\theslidesubsection\space #1}%
7526     \else
7527         \def\Hy@slidetitle{#1}%
7528     \fi
7529     \ifHy@hypertexnames
7530     \ifHy@naturalnames
7531         \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7532         \Hy@writebookmark
7533             {\theslidesubsection}%
7534             {\Hy@slidetitle}%
7535             {slideheading.\theslidesubsection}%
7536             {2}%
7537             {toc}%
7538     \else
7539         \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7540         \Hy@writebookmark
7541             {\theslidesubsection}%
7542             {\Hy@slidetitle}%
7543             {slideheading.\theHslidesubsection}%
7544             {2}%
7545             {toc}%
7546     \fi
7547 \else
7548     \Hy@GlobalStepCount\Hy@linkcounter
7549     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%

```

```

7550 \Hy@writebookmark
7551 {\theslidesubsection}%
7552 {\Hy@slidetitle}%
7553 {slideheading.\the\Hy@linkcounter}%
7554 {1}%
7555 {toc}%
7556 \fi
7557 }%
7558 \providecommand*{\listslidenam}{List of Slides}%
7559 \def\listofslides{%
7560 \section*{%
7561 \listslidenam
7562 \@mkboth{%
7563 \expandafter\MakeUppercase\listslidenam
7564 }{%
7565 \expandafter\MakeUppercase\listslidenam
7566 }%
7567 }%
7568 \def\l@slide##1##2##3##4{%
7569 \slide@undottedcline{%
7570 \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
7571 }{%
7572 }%
7573 \let\l@subslide\l@slide
7574 \@startlos
7575 }%
7576 \def\slide@contents{%
7577 \def\l@slide##1##2##3##4{%
7578 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7579 }%
7580 \let\l@subslide\@gobblefour
7581 \@startlos
7582 }%
7583 \def\Slide@contents{%
7584 \def\l@slide##1##2##3##4{%
7585 \ifcase\lslide@flag
7586 \message{##1 ** \the\c@slidesection}%
7587 \ifnum##1>\c@slidesection
7588 \def\lslide@flag{1}%
7589 {%
7590 \large
7591 \slide@ccline{%
7592 \slidenumberline{\$ \Rightarrow \bullet}%
7593 {\hyperlink{##4}{##2}}}%
7594 }{##3}%
7595 }%
7596 \else
7597 {%
7598 \large
7599 \slide@ccline{%
7600 \slidenumberline{\$ \surd\; \bullet}%
7601 {\hyperlink{##4}{##2}}}%
7602 }{##3}%
7603 }%
7604 \fi
7605 \or
7606 \def\lslide@flag{2}%

```

```

7607      {%
7608      \large
7609      \slide@cline{%
7610      \slidenumberline{$\bullet$}%
7611      {\hyperlink{##4}{##2}}%
7612      }{##3}%
7613      }%
7614      \or
7615      {%
7616      \large
7617      \slide@cline{%
7618      \slidenumberline{$\bullet$}%
7619      {\hyperlink{##4}{##2}}%
7620      }{##3}%
7621      }%
7622      \fi
7623      }%
7624      \def\l@subslide##1##2##3##4{%
7625      \ifnum\lslide@flag=1 %
7626      \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7627      \fi
7628      }%
7629      \def\lslide@flag{0}%
7630      \@startlos
7631      }%
7632      }{}

```

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). (\endingput have to be on the same line like \fi, or you have to use \expandafter before.)

```

7633 \ifHy@texht
7634 \expandafter\endingput
7635 \fi
7636 \let\real@setref\@setref
7637 \def\@setref#1#2#3{% csname, extract group, refname
7638 \ifx#1\relax
7639 \protect\G@refundefinedtrue
7640 \nfss@text{\reset@font\bfseries ??}%
7641 \@latex@warning{%
7642 Reference ‘#3’ on page \thepage \space undefined%
7643 }%
7644 \else
7645 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7646 \fi
7647 }

```

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

```

7648 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7649 \begingroup
7650 \toks0={\hyper@@link{#5}{#4}}%
7651 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7652 \edef\x{\endgroup
7653 \the\toks0 {\the\toks1 }%
7654 }%
7655 \x
7656 }
7657 \def\@pagesetref#1#2#3{% csname, extract macro, ref

```

```

7658 \ifx#1\relax
7659 \protect\G@refundefinedtrue
7660 \nfss@text{\reset@font\bfseries ??}%
7661 \@latex@warning{%
7662   Reference '#3' on page \thepage \space undefined%
7663 }%
7664 \else
7665 \protect\hyper@@link
7666   {\expandafter\@fifthoffive#1}%
7667   {page.\expandafter\@secondoffive#1}%
7668   {\expandafter\@secondoffive#1}%
7669 \fi
7670 }

7671 </package>
7672 <*check>
7673 \checklatex
7674 \checkcommand\def\@setref#1#2#3{%
7675   \ifx#1\relax
7676     \protect\G@refundefinedtrue
7677     \nfss@text{\reset@font\bfseries ??}%
7678     \@latex@warning{%
7679       Reference '#3' on page \thepage\space undefined%
7680     }%
7681   \else
7682     \expandafter#2#1\null
7683   \fi
7684 }
7685 </check>
7686 <*package>

```

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

```

7687 \def\HyRef@StarSetRef#1{%
7688   \begingroup
7689   \Hy@safe@activetrue
7690   \edef\x{#1}%
7691   \@onelevel@sanitize\x
7692   \edef\x{\endgroup
7693     \noexpand\HyRef@@StarSetRef
7694     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7695   }%
7696   \x
7697 }

7698 \def\HyRef@@StarSetRef#1#2#3{%
7699   \ifx#1\@undefined
7700     \let#1\relax
7701   \fi
7702   \real@setref#1#3{#2}%
7703 }

7704 \def\@refstar#1{%
7705   \HyRef@StarSetRef{#1}\@firstoffive
7706 }

7707 \def\@pagerefstar#1{%
7708   \HyRef@StarSetRef{#1}\@secondoffive
7709 }

7710 \def\@namerefstar#1{%
7711   \HyRef@StarSetRef{#1}\@thirdoffive

```



```

7712 }
7713 \Hy@AtBeginDocument{%
7714   \ifpackageloaded{varioref}{%
7715     \def\@Refstar#1{%
7716       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7717     }%
7718     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7719       \MakeUppercase#1%
7720     }%
7721     \DeclareRobustCommand*\@Ref{%
7722       \ifstar\@Refstar\HyRef@Ref
7723     }%
7724     \def\HyRef@Ref#1{%
7725       \hyperref[{#1}]{\Ref*{#1}}%
7726     }%
7727     \def\Vr@f#1{%
7728       \leavevmode\unskip\vref@space
7729       \hyperref[{#1}]{%
7730         \Ref*{#1}%
7731         \let\vref@space\nobreakspace
7732         \@vpageref[\unskip]{#1}%
7733       }%
7734     }%
7735     \def\vr@f#1{%
7736       \leavevmode\unskip\vref@space
7737       \begingroup
7738       \let\T@pageref\@pagerefstar
7739       \hyperref[{#1}]{%
7740         \ref*{#1}%
7741         \vpageref[\unskip]{#1}%
7742       }%
7743     \endgroup
7744   }%
7745 }{}%
7746 }
7747 \DeclareRobustCommand*\@autopageref{%
7748   \ifstar{%
7749     \HyRef@autopagerefname\pageref*%
7750   }\HyRef@autopageref
7751 }
7752 \def\HyRef@autopageref#1{%
7753   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
7754 }
7755 \def\HyRef@autopagerefname{%
7756   \ltx@ifundefined{pageautorefname}{%
7757     \ltx@ifundefined{pagename}{%
7758       \Hy@Warning{No autoref name for 'page'}%
7759     }{%
7760       \pagename\nobreakspace
7761     }%
7762   }{%
7763     \pageautorefname\nobreakspace
7764   }%
7765 }
7766 \DeclareRobustCommand*\@autoref{%
7767   \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@link}%
7768 }

```

```

7769 \def\HyRef@autoref#1#2{%
7770   \begingroup
7771   \Hy@safe@activetrue
7772   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7773 \endgroup
7774 }
7775 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7776   \HyRef@ShowKeysRef{#2}%
7777   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7778   \edef\HyRef@thisref{%
7779     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7780   }%
7781   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7782   \Hy@safe@activesfalse
7783   #3{%
7784     \expandafter\@fifthoffive#1\@empty\@empty\@empty
7785   }{%
7786     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7787   }{%
7788     \HyRef@currentHtag
7789     \expandafter\@firstoffive#1\@empty\@empty\@empty
7790     \null
7791   }%
7792 \else
7793   \protect\G@refundefinedtrue
7794   \nfss@text{\reset@font\bfseries ??}%
7795   \@latex@warning{%
7796     Reference ‘#2’ on page \thepage\space undefined%
7797   }%
7798 \fi
7799 }
7800 \def\HyRef@testreftype#1.#2\.%
7801 \ltx@ifundefined{#1autorefname}{%
7802   \ltx@ifundefined{#1name}{%
7803     \HyRef@StripStar#1\*\@nil{#1}%
7804     \ltx@ifundefined{\HyRef@name autorefname}{%
7805       \ltx@ifundefined{\HyRef@name name}{%
7806         \def\HyRef@currentHtag{}%
7807         \Hy@Warning{No autoref name for ‘#1’}%
7808       }{%
7809         \edef\HyRef@currentHtag{%
7810           \expandafter\noexpand\csname\HyRef@name name\endcsname
7811           \noexpand~%
7812         }%
7813       }%
7814     }{%
7815       \edef\HyRef@currentHtag{%
7816         \expandafter\noexpand
7817         \csname\HyRef@name autorefname\endcsname
7818         \noexpand~%
7819       }%
7820     }%
7821   }{%
7822     \edef\HyRef@currentHtag{%
7823       \expandafter\noexpand\csname#1name\endcsname
7824       \noexpand~%
7825     }%

```

```

7826 }%
7827 }{%
7828 \edef\HyRef@currentHtag{%
7829 \expandafter\noexpand\csname#1autorefname\endcsname
7830 \noexpand~%
7831 }%
7832 }%
7833 }
7834 \def\HyRef@StripStar#1*\#2\@nil#3{%
7835 \def\HyRef@name{#2}%
7836 \ifx\HyRef@name\HyRef@CaseStar
7837 \def\HyRef@name{#1}%
7838 \else
7839 \def\HyRef@name{#3}%
7840 \fi
7841 }
7842 \def\HyRef@CaseStar{*\\}
7843 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7844 \let\HyRef@ShowKeysRef\@gobble
7845 \def\HyRef@ShowKeysInit{%
7846 \begingroup\expandafter\expandafter\expandafter\endgroup
7847 \expandafter\ifx\csname SK@@label\endcsname\relax
7848 \else
7849 \ifx\SK@ref\@empty
7850 \else
7851 \def\HyRef@ShowKeysRef{%
7852 \SK@\SK@@ref
7853 }%
7854 \fi
7855 \fi
7856 }
7857 \@ifpackageloaded{showkeys}{%
7858 \HyRef@ShowKeysInit
7859 }{%
7860 \Hy@AtBeginDocument{%
7861 \@ifpackageloaded{showkeys}{%
7862 \HyRef@ShowKeysInit
7863 }{}%
7864 }%
7865 }

```

Defaults for the names that \autoref uses.

```

7866 \providecommand*\AMSautorefname{\equationautorefname}
7867 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7868 \providecommand*\Itemautorefname{\itemautorefname}
7869 \providecommand*\itemautorefname{item}
7870 \providecommand*\equationautorefname{Equation}
7871 \providecommand*\footnoteautorefname{footnote}
7872 \providecommand*\itemautorefname{item}
7873 \providecommand*\figureautorefname{Figure}
7874 \providecommand*\tableautorefname{Table}
7875 \providecommand*\partautorefname{Part}
7876 \providecommand*\appendixautorefname{Appendix}
7877 \providecommand*\chapterautorefname{chapter}

```

```

7878 \providecommand*\sectionautorefname{section}
7879 \providecommand*\subsectionautorefname{subsection}
7880 \providecommand*\subsubsectionautorefname{subsubsection}
7881 \providecommand*\paragraphautorefname{paragraph}
7882 \providecommand*\subparagraphautorefname{subparagraph}
7883 \providecommand*\FancyVerbLineautorefname{line}
7884 \providecommand*\theoremautorefname{Theorem}
7885 \providecommand*\pageautorefname{page}
7886 </package>

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

7887 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7888 \RequirePackage{pdfTeXcmds}[2009/04/10]
7889 \begingroup\expandafter\expandafter\expandafter\endgroup
7890 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7891 \begingroup
7892 \catcode'\|=0 %
7893 \@makeother\|%
7894 |@firstofone{|endgroup
7895 |def|Hy@pstringdef#1#2{%
7896 |begingroup
7897 |edef~{|string~}%
7898 |xdef|Hy@gtemp{#2}%
7899 |endgroup
7900 |let#1|Hy@gtemp
7901 |@onelevel@sanitize#1%
7902 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7903 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7904 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7905 }%
7906 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7907 #1%
7908 |ifx|\#2\|%%
7909 |else
7910 \|%
7911 |Hy@ReturnAfterFi{%
7912 |Hy@ExchangeBackslash#2|@nil
7913 }%
7914 |fi
7915 }%
7916 }%
7917 \def|Hy@ExchangeLeftParenthesis#1(#2\|@nil{%
7918 #1%
7919 \ifx\#2\|%%
7920 \else
7921 \@backslashchar(%

```

```

7922 \Hy@ReturnAfterFi{%
7923 \Hy@ExchangeLeftParenthesis#2\@nil
7924 }%
7925 \fi
7926 }%
7927 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7928 #1%
7929 \ifx\#2\%
7930 \else
7931 \@backslashchar)%
7932 \Hy@ReturnAfterFi{%
7933 \Hy@ExchangeRightParenthesis#2\@nil
7934 }%
7935 \fi
7936 }%
7937 \else
7938 \def\Hy@pstringdef#1#2{%
7939 \begingroup
7940 \edef~{\string~}%
7941 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7942 \endgroup
7943 \let#1\Hy@gtemp
7944 }%
7945 \fi
7946 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7947 <*pdfTeX>
7948 \providecommand*{\XR@ext}{pdf}
7949 \Hy@setbreaklinks{true}

```

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`

```

7950 \let\Hy@pdfminorversion\relax
7951 \begingroup\expandafter\expandafter\expandafter\endgroup
7952 \expandafter\ifx\cname pdfminorversion\endcsname\relax
7953 \begingroup\expandafter\expandafter\expandafter\endgroup
7954 \expandafter\ifx\cname pdfoptionpdfminorversion\endcsname\relax
7955 \else
7956 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7957 \fi
7958 \else
7959 \def\Hy@pdfminorversion{\pdfminorversion}%
7960 \fi
7961 \ifundefined{Hy@pdfminorversion}{%
7962 \PackageInfo{hyperref}{%
7963 PDF version is not set, because pdfTeX is too old (<1.10a)%
7964 }%
7965 }{%
7966 \ifHy@ocgcolorlinks
7967 \ifnum\Hy@pdfminorversion<5 %

```

```

7968     \kvsetkeys{Hyp}{pdfversion=1.5}%
7969     \fi
7970 \fi
7971 \ifHy@setpdfversion
7972   \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7973   \else
7974     \Hy@pdfminorversion=\Hy@pdfversion\relax
7975   \fi
7976   \PackageInfo{hyperref}{%
7977     \expandafter\string\Hy@pdfminorversion
7978     :=\number\Hy@pdfversion\space
7979   }%
7980 \fi
7981 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7982 }
7983 \Hy@DisableOption{pdfversion}%

7984 \ifHy@ocgcolorlinks
7985   \immediate\pdfobj{%
7986     <<%
7987     /Type/OCG%
7988     /Name(View)%
7989     /Usage<<%
7990     /Print<<%
7991     /PrintState/OFF%
7992     >>%
7993     /View<<%
7994     /ViewState/ON%
7995     >>%
7996     >>%
7997     >>%
7998   }%
7999   \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
8000   \immediate\pdfobj{%
8001     <<%
8002     /Type/OCG%
8003     /Name(Print)%
8004     /Usage<<%
8005     /Print<<%
8006     /PrintState/ON%
8007     >>%
8008     /View<<%
8009     /ViewState/OFF%
8010     >>%
8011     >>%
8012     >>%
8013   }%
8014   \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
8015   \immediate\pdfobj{%
8016     [%
8017     \OBJ@OCG@view\space\OBJ@OCG@print
8018     ]%
8019   }%
8020   \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
8021   \pdfcatalog{%
8022     /OCProperties<<%
8023     /OCGs \OBJ@OCGs
8024     /D<<%

```

```

8025      /OFF[\OBJ@OCG@print]%
8026      /AS[%
8027      <<%
8028          /Event/View%
8029          /OCGs \OBJ@OCGs
8030          /Category[/View]%
8031      >>%
8032      <<%
8033          /Event/Print%
8034          /OCGs \OBJ@OCGs
8035          /Category[/Print]%
8036      >>%
8037      <<%
8038          /Event/Export%
8039          /OCGs \OBJ@OCGs
8040          /Category[/Print]%
8041      >>%
8042      ]%
8043      >>%
8044      >>%
8045  }%
8046  \begingroup
8047  \edef\x{\endgroup
8048  \pdfpageresources{%
8049  /Properties<<%
8050  /OCView \OBJ@OCG@view
8051  /OCPrint \OBJ@OCG@print
8052  >>%
8053  }%
8054  }%
8055  \x
8056  \Hy@AtBeginDocument{%
8057  \def\Hy@colorlink#1{%
8058  \begingroup
8059  \ifHy@ocgcolorlinks
8060  \def\Hy@ocgcolor{#1}%
8061  \setbox0=\hbox\bgroup\color@begingroup
8062  \else
8063  \HyColor@UseColor#1%
8064  \fi
8065  }%
8066  \def\Hy@endcolorlink{%
8067  \ifHy@ocgcolorlinks
8068  \color@endgroup\egroup
8069  \mbox{%
8070  \pdfliteral page{/OC/OCPrint BDC}%
8071  \rlap{\copy0}%
8072  \pdfliteral page{EMC/OC/OCView BDC}%
8073  \begingroup
8074  \expandafter\HyColor@UseColor\Hy@ocgcolor
8075  \box0 %
8076  \endgroup
8077  \pdfliteral page{EMC}%
8078  }%
8079  \fi
8080  \endgroup
8081  }%

```

```

8082 }%
8083 \else
8084 \Hy@DisableOption{ocgcolorlinks}%
8085 \fi

```

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

```

8086 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8087 \ifx\pdfstartlink\@undefined% less than version 14
8088 \let\pdfstartlink\pdfannotlink
8089 \let\pdfinkmargin\@tempdima
8090 \let\pdfxform\pdfform
8091 \let\pdflastxform\pdfastform
8092 \let\pdfrefxform\pdfrefform
8093 \else
8094 \pdfinkmargin1pt %
8095 \fi

```

First set up the default linking

```

8096 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

8097 \def\new@pdfink#1{%
8098 \ifhmode
8099 \@savs\spacefactor
8100 \fi
8101 \Hy@SaveLastskip
8102 \Hy@VerboseAnchor{#1}%
8103 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8104 \Hy@DestName\Hy@pstringDest\@pdfview
8105 \Hy@RestoreLastskip
8106 \ifhmode
8107 \spacefactor\@savs
8108 \fi
8109 }
8110 \let\pdf@endanchor\@empty

```

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

```

8111 \def\Hy@DestName#1#2{%
8112 \pdfdest name{#1}#2\relax
8113 }

```

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.

```

8114 \providecommand*\@pdfborder{0 0 1}
8115 \providecommand*\@pdfborderstyle{}
8116 \def\Hy@undefinedname{UNDEFINED}
8117 \def\find@pdfink#1#2{%
8118 \leavevmode
8119 \protected@edef\Hy@testname{#2}%
8120 \ifx\Hy@testname\@empty
8121 \Hy@Warning{%
8122 Empty destination name,\MessageBreak
8123 using '\Hy@undefinedname'%
8124 }%
8125 \let\Hy@testname\Hy@undefinedname

```



```

8126 \else
8127   \Hy@pstringdef\Hy@testname{%
8128     \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8129   }%
8130 \fi
8131 \Hy@StartlinkName{%
8132   \ifHy@pdfa /F 4\fi
8133   \Hy@setpdfborder
8134   \ifx\@pdfhighlight\@empty
8135   \else
8136     /H\@pdfhighlight
8137   \fi
8138   \ifx\CurrentBorderColor\relax
8139   \else
8140     /C[\CurrentBorderColor]%
8141   \fi
8142 } \Hy@testname
8143 \expandafter\Hy@colorlink\csname @#1color\endcsname
8144 }
8145 \def\Hy@StartlinkName#1#2{%
8146   \pdfstartlink attr{#1}goto name{#2}\relax
8147 }
8148 \def\close@pdfink{%
8149   \Hy@endcolorlink
8150   \Hy@VerboseLinkStop
8151   \pdfendlink
8152 }
8153 \def\hyper@anchor#1{%
8154   \new@pdfink{#1}\anchor@spot\pdf@endanchor
8155 }
8156 \def\hyper@anchorstart#1{%
8157   \new@pdfink{#1}%
8158   \Hy@activeanchortrue
8159 }
8160 \def\hyper@anchorend{%
8161   \pdf@endanchor
8162   \Hy@activeanchorfalse
8163 }
8164 \def\hyper@linkstart#1#2{%
8165   \Hy@VerboseLinkStart{#1}{#2}%
8166   \ltx@ifundefined{@#1bordercolor}{%
8167     \let\CurrentBorderColor\relax
8168   }{%
8169     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8170   }%
8171   \find@pdfink{#1}{#2}%
8172 }
8173 \def\hyper@linkend{\close@pdfink}
8174 \def\hyper@link#1#2#3{%
8175   \Hy@VerboseLinkStart{#1}{#2}%
8176   \ltx@ifundefined{@#1bordercolor}{%
8177     \let\CurrentBorderColor\relax
8178   }{%
8179     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8180   }%
8181   \find@pdfink{#1}{#2}#3%
8182   \close@pdfink

```

```

8183 }
8184 \let\CurrentBorderColor\@linkbordercolor
8185 \def\hyper@linkurl#1#2{%
8186   \begingroup
8187     \Hy@pstringdef\Hy@pstringURI{#2}%
8188     \hyper@chars
8189     \leavevmode
8190     \pdfstartlink
8191     attr{%
8192       \Hy@setpdfborder
8193       \ifx\@pdfhighlight\@empty
8194       \else
8195         /H\@pdfhighlight
8196       \fi
8197       \ifx\@urlbordercolor\relax
8198       \else
8199         /C[\@urlbordercolor]%
8200       \fi
8201     }%
8202     user{%
8203       /Subtype/Link%
8204       \ifHy@pdfa /F 4\fi
8205       /A<<%
8206       /Type/Action%
8207       /S/URI%
8208       /URI(\Hy@pstringURI)%
8209     >>%
8210   }%
8211   \relax
8212   \Hy@colorlink\@urlcolor#1%
8213   \close@pdflink
8214 \endgroup
8215 }
8216 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8217   \begingroup
8218     \Hy@pstringdef\Hy@pstringF{#2}%
8219     \Hy@pstringdef\Hy@pstringD{#3}%
8220     \leavevmode
8221     \pdfstartlink
8222     attr{%
8223       \Hy@setpdfborder
8224       \ifx\@pdfhighlight\@empty
8225       \else
8226         /H\@pdfhighlight
8227       \fi
8228       \ifx\@filebordercolor\relax
8229       \else
8230         /C[\@filebordercolor]%
8231       \fi
8232     }%
8233     user {%
8234       /Subtype/Link%
8235       \ifHy@pdfa /F 4\fi
8236       /A<<%
8237       /F(\Hy@pstringF)%
8238       /S/GoToR%
8239       \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}
```

```
8240      \ifx\#3\%  
8241      /D[0 \@pdfstartview]%  
8242      \else  
8243      /D(\Hy@pstringD)%  
8244      \fi  
8245      >>%  
8246      }%  
8247      \relax  
8248      \Hy@colorlink\@filecolor#1%  
8249      \close@pdflink  
8250 \endgroup  
8251 }  
8252 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname  
8253 \begingroup  
8254   \Hy@pstringdef\Hy@pstringF{#1}%  
8255   \Hy@pstringdef\Hy@pstringP{#3}%  
8256   \leavevmode  
8257   \pdfstartlink  
8258   attr{%  
8259     \Hy@setpdfborder  
8260     \ifx\@pdfhighlight\@empty  
8261     \else  
8262     /H\@pdfhighlight  
8263     \fi  
8264     \ifx\@runbordercolor\relax  
8265     \else  
8266     /C[\@runbordercolor]%  
8267     \fi  
8268   }%  
8269   user {%  
8270     /Subtype/Link%  
8271     \ifHy@pdfa /F 4\fi  
8272     /A<<%  
8273     /F(\Hy@pstringF)%  
8274     /S/Launch%  
8275     \Hy@SetNewWindow  
8276     \ifx\#3\%  
8277     \else  
8278     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%  
8279     \fi  
8280     >>%  
8281     }%  
8282     \relax  
8283     \Hy@colorlink\@runcolor#2%  
8284     \close@pdflink  
8285 \endgroup  
8286 }
```

\@pdfproducer

```
8287 \ifx\@pdfproducer\relax
8288 \beginingroup\expandafter\expandafter\expandafter\endgroup
8289 \expandafter\ifx\csname luatexversion\endcsname\relax
8290 \def\@pdfproducer{pdfTeX}%
8291 \ifx\eTeXversion\@undefined
8292 \else
8293 \ifx\eTeXversion\relax
8294 \else
8295 \ifnum\eTeXversion>0 %
8296 \def\@pdfproducer{pdfTeX}%
8297 \fi
8298 \fi
8299 \fi
8300 \ifx\pdfTeXversion\@undefined
8301 \else
8302 \ifnum\pdfTeXversion<100 %
8303 \edef\@pdfproducer{%
8304 \@pdfproducer
8305 \the\pdfTeXversion.\pdfTeXrevision
8306 }%
8307 \else
8308 \ifnum\pdfTeXversion<130 %
8309 \edef\@pdfproducer{%
8310 \@pdfproducer-%
8311 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8312 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8313 \pdfTeXrevision
8314 }%
8315 \else
8316 \ifnum\pdfTeXversion<140 %
8317 \else
8318 \def\@pdfproducer{pdfTeX}%
8319 \fi
8320 \edef\@pdfproducer{%
8321 \@pdfproducer-%
8322 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8323 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8324 \pdfTeXrevision
8325 }%
8326 \fi
8327 \fi
8328 \fi
8329 \else
8330 \beginingroup
8331 \count@=\luatexversion
8332 \divide\count@ by 100 %
8333 \edef\x{\the\count@}%
8334 \count@=-\x\relax
8335 \multiply\count@ by 100 %
8336 \advance\count@ by \luatexversion
8337 \edef\x{\endgroup
8338 \def\noexpand\@pdfproducer{%
8339 LuaTeX-\x.\the\count@.\luatexrevision
8340 }%
8341 }%
8342 \x
```

8343 \fi
8344 \fi

\PDF@SetupDox

```
8345 \def\PDF@SetupDoc{%
8346   \ifx\@pdfpagescrop\@empty
8347   \else
8348     \edef\process@me{%
8349       \pdfpagesattr={%
8350         /CropBox[\@pdfpagescrop]%
8351         \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8352         \else
8353           ^^J\the\pdfpagesattr
8354         \fi
8355       }%
8356     }%
8357     \process@me
8358   \fi
8359   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8360   \pdfcatalog{%
8361     /PageMode/\@pdfpagemode
8362     \ifx\@baseurl\@empty
8363     \else
8364       /URI<</Base(\Hy@pstringB)>>%
8365     \fi
8366   }%
8367   \ifx\@pdfstartpage\@empty
8368   \else
8369     \ifx\@pdfstartview\@empty
8370     \else
8371       openaction goto page\@pdfstartpage{\@pdfstartview}%
8372     \fi
8373   \fi
8374   \edef\Hy@temp{%
8375     \ifHy@toolbar\else /HideToolbar true\fi
8376     \ifHy@menubar\else /HideMenubar true\fi
8377     \ifHy>windowui\else /HideWindowUI true\fi
8378     \ifHy@fitwindow /FitWindow true\fi
8379     \ifHy@centerwindow /CenterWindow true\fi
8380     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8381     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8382     \Hy@UseNameKey{Direction}\@pdfdirection
8383     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8384     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8385     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8386     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8387     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8388     \Hy@UseNameKey{Duplex}\@pdfduplex
8389     \ifx\@pdfpicktraybypdfsize\@empty
8390     \else
8391       /PickTrayByPDFSize \@pdfpicktraybypdfsize
8392     \fi
8393     \ifx\@pdfprintpagerange\@empty
8394     \else
8395       /PrintPageRange\@pdfprintpagerange}%
8396   \fi
8397   \ifx\@pdfnumcopies\@empty
```

```

8398 \else
8399 /NumCopies \@pdfnumcopies
8400 \fi
8401 }%
8402 \pdfcatalog{%
8403 \ifx\Hy@temp\@empty
8404 \else
8405 /ViewerPreferences<<\Hy@temp>>%
8406 \fi
8407 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8408 \ifx\@pdflang\@empty
8409 \else
8410 /Lang(\@pdflang)%
8411 \fi
8412 }%
8413 }

```

\PDF@FinishDoc

```

8414 \def\PDF@FinishDoc{%
8415 \Hy@UseMaketitleInfos
8416 \HyInfo@GenerateAddons
8417 \pdfinfo{%
8418 /Author(\@pdfauthor)%
8419 /Title(\@pdftitle)%
8420 /Subject(\@pdfsubject)%
8421 /Creator(\@pdfcreator)%
8422 \ifx\@pdfcreationdate\@empty
8423 \else
8424 /CreationDate(\@pdfcreationdate)%
8425 \fi
8426 \ifx\@pdfmoddate\@empty
8427 \else
8428 /ModDate(\@pdfmoddate)%
8429 \fi
8430 \ifx\@pdfproducer\relax
8431 \else
8432 /Producer(\@pdfproducer)%
8433 \fi
8434 /Keywords(\@pdfkeywords)%
8435 \ifx\@pdftrapped\@empty
8436 \else
8437 /Trapped/\@pdftrapped
8438 \fi
8439 \HyInfo@Addons
8440 }%
8441 \Hy@DisableOption{pdfauthor}%
8442 \Hy@DisableOption{pdftitle}%
8443 \Hy@DisableOption{pdfsubject}%
8444 \Hy@DisableOption{pdfcreator}%
8445 \Hy@DisableOption{pdfcreationdate}%
8446 \Hy@DisableOption{pdfmoddate}%
8447 \Hy@DisableOption{pdfproducer}%
8448 \Hy@DisableOption{pdfkeywords}%
8449 \Hy@DisableOption{pdftrapped}%
8450 \Hy@DisableOption{pdfinfo}%
8451 }

```

\hyper@pagetransition \@pdfpagetransition is initialized with \relax. So it indicates, if option pdfpagetransi-

tion is used. First previous /Trans entries are removed. If a new /Trans key exists, it is appended to \pdfpageattr.

```

8452 \def\hyper@pagetransition{%
8453   \ifx\@pdfpagetransition\relax
8454   \else
8455     \expandafter\Hy@RemoveTransPageAttr
8456     \the\pdfpageattr^^J/Trans{>>\END
8457     \ifx\@pdfpagetransition\@empty
8458     \else
8459       \edef\@processme{%
8460         \global\pdfpageattr{%
8461           \the\pdfpageattr
8462           ^^J/Trans << /S /\@pdfpagetransition\space >>%
8463         }%
8464       }%
8465       \@processme
8466     \fi
8467   \fi
8468 }

```

\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.

```

8469 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8470   \ifx\#2\%
8471     \global\pdfpageattr{#1}%
8472   \else
8473     \Hy@RemoveTransPageAttr#1#4\END
8474   \fi
8475 }

```

\hyper@pageduration \@pdfpageduration is initialized with \relax. So it indicates, if option pdfpageduration is used. First previous /Dur entries are removed. If a new /Dur key exists, it is appended to \pdfpageattr.

```

8476 \def\hyper@pageduration{%
8477   \ifx\@pdfpageduration\relax
8478   \else
8479     \expandafter
8480     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
8481     \ifx\@pdfpageduration\@empty
8482     \else
8483       \edef\@processme{%
8484         \global\pdfpageattr{%
8485           \the\pdfpageattr
8486           ^^J/Dur \@pdfpageduration\space
8487         }%
8488       }%
8489       \@processme
8490     \fi
8491   \fi
8492 }

```

\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.

```

8493 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8494   \ifx\#2\%
8495     \global\pdfpageattr{#1}%
8496   \else
8497     \Hy@RemoveDurPageAttr#1#4\END
8498   \fi
8499 }

```

`\hyper@pagehidden` The boolean value of the key `/Hid` is stored in switch `\ifHy@pdfpagehidden`. First previous `/Hid` entries are removed, then the new one is appended, if the value is true (the PDF default is false).

```

8500 \def\hyper@pagehidden{%
8501   \ifHy@useHidKey
8502     \expandafter
8503     \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
8504   \ifHy@pdfpagehidden
8505     \edef\@processme{%
8506       \global\pdfpageattr{%
8507         \the\pdfpageattr
8508         ^^J/Hid true % SPACE
8509       }%
8510     }%
8511     \@processme
8512   \fi
8513 \fi
8514 }

```

`\Hy@RemoveHidPageAttr` Macro `\Hy@RemoveHidPageAttr` removes a `/Hid` entry from `\pdfpageattr`. It is called with the end marker `^^J/Hid{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Hid` object or the end marker.

```

8515 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8516   \ifx\#2\%
8517     \global\pdfpageattr{#1}%
8518   \else
8519     \Hy@RemoveHidPageAttr#1#4\END
8520   \fi
8521 }

8522 \g@addto@macro\Hy@EveryPageHook{%
8523   \hyper@pagetransition
8524   \hyper@pageduration
8525   \hyper@pagehidden
8526 }

```

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

```

8527 \</pdfTeX>
8528 \<*pdfTeX | xetex>
8529 \Hy@AtBeginDocument{%
8530   \ifHy@setpagesize
8531     \expandafter\@firstofone
8532   \else
8533     \expandafter\@gobble
8534   \fi
8535 }%
8536 \@ifclassloaded{seminar}{%

```



```

8537 < *pdftex>
8538     \setlength{\pdfhorigin}{1truein}%
8539     \setlength{\pdfvorigin}{1truein}%
8540 < /pdftex>
8541     \ifportrait
8542         \ifdim\paperwidth=\z@
8543         \else
8544             \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8545         \fi
8546         \ifdim\paperheight=\z@
8547         \else
8548             \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8549         \fi
8550     \else
8551         \ifdim\paperheight=\z@
8552         \else
8553             \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8554         \fi
8555         \ifdim\paperwidth=\z@
8556         \else
8557             \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8558         \fi
8559     \fi
8560 }{%
8561     \ltx@ifundefined{stockwidth}{%
8562         \ifdim\paperwidth>\z@
8563             \setlength{\pdfpagewidth}{\paperwidth}%
8564         \fi
8565         \ifdim\paperheight>\z@
8566             \setlength{\pdfpageheight}{\paperheight}%
8567         \fi
8568     }{%
8569         \ifdim\stockwidth>\z@
8570             \setlength{\pdfpagewidth}{\stockwidth}%
8571         \fi
8572         \ifdim\stockheight>\z@
8573             \setlength{\pdfpageheight}{\stockheight}%
8574         \fi
8575     }%
8576 }%
8577 }%
8578 \Hy@DisableOption{setpagesize}%
8579 }
8580 < /pdftex | xetex>
8581 < *pdftex>
8582 \def\Acrobatmenu#1#2{%
8583     \Hy@Acrobatmenu{#1}{#2}{%
8584         \pdfstartlink
8585         attr{%
8586             \Hy@setpdfborder
8587             \ifx\@pdfhighlight\@empty
8588             \else
8589                 /H\@pdfhighlight
8590             \fi
8591             \ifx\@menubordercolor\relax
8592             \else
8593                 /C[\@menubordercolor]%

```

```

8594     \fi
8595   }%
8596   user{%
8597     /Subtype/Link%
8598     \ifHy@pdfa /F 4\fi
8599     /A<<%
8600     /S/Named/N/#1%
8601     >>%
8602   }%
8603   \relax
8604   \Hy@colorlink\@menucolor#2%
8605   \close@pdflink
8606 }%
8607 }

```

46.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdf_TE_X'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_TE_X—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`.

```

8608 \def\Hy@FixNotFirstPage{%
8609   \gdef\Hy@FixNotFirstPage{%
8610     \setbox\AtBeginShipoutBox=\hbox{%
8611       \copy\AtBeginShipoutBox
8612     }%
8613   }%
8614 }
8615 \AtBeginShipout{\Hy@FixNotFirstPage}
8616 \</pdfTeX>

```

46.3 hypertex

The Hyper_TE_X 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 _TE_X file — the _TE_X 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.

```

8617 \*hypertext
8618 \providecommand*\XR@ext\{dvi}
8619 \def\PDF@FinishDoc{}
8620 \def\PDF@SetupDoc{%
8621   \ifx\@baseurl\@empty
8622   \else
8623     \special{html:<base href="\@baseurl">}%
8624   \fi
8625 }
8626 \def\hyper@anchor#1{%
8627   \Hy@SaveLastskip
8628   \Hy@VerboseAnchor{#1}%
8629   \begingroup
8630     \let\protect=\string
8631     \hyper@chars
8632     \special{html:<a name=%
8633       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8634   \endgroup
8635   \Hy@Activeanchortrue
8636   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8637   \special{html:</a>}%
8638   \Hy@Activeanchorfalse
8639   \Hy@RestoreLastskip
8640 }
8641 \def\hyper@anchorstart#1{%
8642   \Hy@SaveLastskip
8643   \Hy@VerboseAnchor{#1}%
8644   \begingroup
8645     \hyper@chars
8646     \special{html:<a name=%
8647       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8648   \endgroup
8649   \Hy@Activeanchortrue
8650 }
8651 \def\hyper@anchorend{%
8652   \special{html:</a>}%
8653   \Hy@Activeanchorfalse
8654   \Hy@RestoreLastskip
8655 }
8656 \def\@urltype{url}
8657 \def\hyper@linkstart#1#2{%
8658   \Hy@VerboseLinkStart{#1}{#2}%
8659   \expandafter\Hy@colorlink\csname @#1color\endcsname
8660   \def\Hy@tempa{#1}%
8661   \ifx\Hy@tempa\@urltype
8662     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8663   \else

```

```

8664 \begingroup
8665 \hyper@chars
8666 \special{html:<a href=%
8667 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
8668 \endgroup
8669 \fi
8670 }
8671 \def\hyper@linkend{%
8672 \special{html:</a>}%
8673 \Hy@endcolorlink
8674 }
8675 \def\hyper@linkfile#1#2#3{%
8676 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\###3\fi}%
8677 }
8678 \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.

```

8679 \leavevmode
8680 \ifHy@raiselinks
8681 \Hy@SaveSpaceFactor
8682 \Hy@SaveSavedSpaceFactor
8683 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
8684 \Hy@RestoreSavedSpaceFactor
8685 \@linkdim\dp\@tempboxa
8686 \lower\@linkdim\hbox{%
8687 \hyper@chars
8688 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8689 }%
8690 \Hy@colorlink\@urlcolor
8691 \Hy@RestoreSpaceFactor
8692 #1%
8693 \Hy@SaveSpaceFactor
8694 \@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).

```

8695 \advance\@linkdim by -6.5\p@
8696 \raise\@linkdim\hbox{\special{html:</a>}}%
8697 \Hy@endcolorlink
8698 \Hy@RestoreSpaceFactor
8699 \else
8700 \begingroup
8701 \hyper@chars
8702 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8703 \Hy@colorlink\@urlcolor#1%
8704 \special{html:</a>}%
8705 \Hy@endcolorlink
8706 \endgroup
8707 \fi
8708 }

```

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

```

8709 \def\hyper@link#1#2#3{%
8710 \Hy@VerboseLinkStart{#1}{#2}%
8711 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
8712 }

```

```

8713 \def\hyper@image#1#2{%
8714   \begingroup
8715   \hyper@chars
8716   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8717   \endgroup
8718 }
8719 \</hypertex>
8720 \<*dviwindo>

```

46.4 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, L^AT_EX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

8721 \providecommand*\XR@ext}{dvi}
8722 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8723 \def\hyper@anchor#1{%
8724   \Hy@SaveLastskip
8725   \Hy@VerboseAnchor{#1}%
8726   \begingroup
8727   \let\protect=\string
8728   \special{mark: #1}%
8729   \endgroup
8730   \Hy@activeanchortrue
8731   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8732   \Hy@activeanchorfalse
8733   \Hy@RestoreLastskip
8734 }
8735 \def\hyper@anchorstart#1{%
8736   \Hy@SaveLastskip
8737   \Hy@VerboseAnchor{#1}%
8738   \special{mark: #1}%
8739   \Hy@activeanchortrue
8740 }
8741 \def\hyper@anchorend{%
8742   \Hy@activeanchorfalse
8743   \Hy@RestoreLastskip
8744 }
8745 \def\hyper@linkstart#1#2{%
8746   \Hy@VerboseLinkStart{#1}{#2}%
8747   \expandafter\Hy@colorlink\csname @#1color\endcsname
8748   \special{button: %
8749     10000000 %
8750     \number\baselineskip\space
8751     #2%
8752   }%
8753 }
8754 \def\hyper@linkend{%
8755   \Hy@endcolorlink

```

```

8756 }
8757 \def\hyper@link#1#2#3{%
8758   \Hy@VerboseLinkStart{#1}{#2}%
8759   \leavevmode
8760   \ifHy@raiselinks
8761     \Hy@SaveSpaceFactor
8762     \Hy@SaveSavedSpaceFactor
8763     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
8764     \Hy@RestoreSavedSpaceFactor
8765     \@linkdim\dp\@tempboxa
8766     \lower\@linkdim\hbox{%
8767       \special{button: %
8768         \number\wd\@tempboxa\space
8769         \number\ht\@tempboxa\space
8770         #2%
8771       }%
8772       \expandafter\Hy@colorlink\csname @#1color\endcsname
8773       \Hy@RestoreSpaceFactor
8774       #3%
8775       \Hy@SaveSpaceFactor
8776       \Hy@endcolorlink
8777     }%
8778     \@linkdim\ht\@tempboxa
8779     \advance\@linkdim by -6.5\p@
8780     \raise\@linkdim\hbox{%
8781       \Hy@RestoreSpaceFactor
8782     \else
8783       \special{button: %
8784         \number\wd\@tempboxa\space
8785         \number\ht\@tempboxa\space
8786         #2%
8787       }%
8788       \expandafter\Hy@colorlink\csname @#1color\endcsname
8789       #3%
8790       \Hy@endcolorlink
8791     \fi
8792 }
8793 \def\hyper@linkurl#1#2{%
8794   \begingroup
8795   \hyper@chars
8796   \leavevmode
8797   \ifHy@raiselinks
8798     \Hy@SaveSpaceFactor
8799     \Hy@SaveSavedSpaceFactor
8800     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
8801     \Hy@RestoreSavedSpaceFactor
8802     \@linkdim\dp\@tempboxa
8803     \lower\@linkdim\hbox{%
8804       \special{button: %
8805         \number\wd\@tempboxa\space
8806         \number\ht\@tempboxa\space
8807         launch: \wwwbrowser\space
8808         #2%
8809       }%
8810       \Hy@colorlink\@urlcolor
8811       \Hy@RestoreSpaceFactor
8812       #1%

```

```

8813     \Hy@SaveSpaceFactor
8814     \Hy@endcolorlink
8815 }%
8816 \@linkdim\ht\@tempboxa
8817 \advance\@linkdim by -6.5\p@
8818 \raise\@linkdim\hbox{}%
8819 \Hy@RestoreSpaceFactor
8820 \else
8821 \special{button: %
8822 \number\wd\@tempboxa\space
8823 \number\ht\@tempboxa\space
8824 launch: \wwwbrowser\space
8825 #2%
8826 }%
8827 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8828 \fi
8829 \endgroup
8830 }
8831 \def\hyper@linkfile#1#2#3{%
8832 \begingroup
8833 \hyper@chars
8834 \leavevmode
8835 \ifHy@raiselinks
8836 \Hy@SaveSpaceFactor
8837 \Hy@SaveSavedSpaceFactor
8838 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
8839 \Hy@RestoreSavedSpaceFactor
8840 \@linkdim\dp\@tempboxa
8841 \lower\@linkdim\hbox{%
8842 \special{button: %
8843 \number\wd\@tempboxa\space
8844 \number\ht\@tempboxa\space
8845 #3,%
8846 file: #2%
8847 }%
8848 \Hy@colorlink\@filecolor
8849 \Hy@RestoreSpaceFactor
8850 #1%
8851 \Hy@SaveSpaceFactor
8852 \Hy@endcolorlink
8853 }%
8854 \@linkdim\ht\@tempboxa
8855 \advance\@linkdim by -6.5\p@
8856 \raise\@linkdim\hbox{}%
8857 \Hy@RestoreSpaceFactor
8858 \else
8859 \special{button: %
8860 \number\wd\@tempboxa\space
8861 \number\ht\@tempboxa\space
8862 #3,%
8863 file: #2%
8864 }%
8865 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8866 \fi
8867 \endgroup
8868 }
8869 \ifx\@pdfproducer\relax

```

```

8870 \def\@pdfproducer{dviwindo + Distiller}%
8871 \fi
8872 \HyInfo@AddonUnsupportedtrue
8873 \def\PDF@FinishDoc{%
8874   \Hy@UseMaketitleInfos
8875   \HyInfo@TrappedUnsupported
8876   \special{PDF: Keywords \@pdfkeywords}%
8877   \special{PDF: Title \@pdftitle}%
8878   \special{PDF: Creator \@pdfcreator}%
8879   \ifx\@pdfcreationdate\@empty
8880   \else
8881     \special{PDF: CreationDate \@pdfcreationdate}%
8882   \fi
8883   \ifx\@pdfmoddate\@empty
8884   \else
8885     \special{PDF: ModDate \@pdfmoddate}%
8886   \fi
8887   \special{PDF: Author \@pdfauthor}%
8888   \ifx\@pdfproducer\relax
8889   \else
8890     \special{PDF: Producer \@pdfproducer}%
8891   \fi
8892   \special{PDF: Subject \@pdfsubject}%
8893   \Hy@DisableOption{pdfauthor}%
8894   \Hy@DisableOption{pdftitle}%
8895   \Hy@DisableOption{pdfsubject}%
8896   \Hy@DisableOption{pdfcreator}%
8897   \Hy@DisableOption{pdfcreationdate}%
8898   \Hy@DisableOption{pdfmoddate}%
8899   \Hy@DisableOption{pdfproducer}%
8900   \Hy@DisableOption{pdfkeywords}%
8901   \Hy@DisableOption{pdftrapped}%
8902   \Hy@DisableOption{pdfinfo}%
8903 }
8904 \def\PDF@SetupDoc{%
8905   \ifx\@baseurl\@empty
8906   \else
8907     \special{PDF: Base \@baseurl}%
8908   \fi
8909   \ifx\@pdfpagescrop\@empty\else
8910     \special{PDF: BBox \@pdfpagescrop}%
8911   \fi
8912   \def\Hy@temp{%
8913     \ifx\@pdfstartpage\@empty
8914     \else
8915       \ifx\@pdfstartview\@empty
8916       \else
8917         \edef\Hy@temp{%
8918           ,Page=\@pdfstartpage
8919           ,View=\@pdfstartview
8920         }%
8921       \fi
8922     \fi
8923   \edef\Hy@temp{%
8924     \noexpand\pdfmark{%
8925       pdfmark=/DOCVIEW,%
8926       PageMode=/\@pdfpagemode

```



```

8927   \Hy@temp
8928   }%
8929 }%
8930 \Hy@temp
8931 \ifx\@pdfpagescrop\@empty
8932 \else
8933   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8934 \fi
8935 \edef\Hy@temp{%
8936   \ifHy@toolbar\else /HideToolbar true\fi
8937   \ifHy@menubar\else /HideMenubar true\fi
8938   \ifHy>windowui\else /HideWindowUI true\fi
8939   \ifHy@fitwindow /FitWindow true\fi
8940   \ifHy@centerwindow /CenterWindow true\fi
8941   \ifHy@displaydoctitle /DisplayDocTitle true\fi
8942   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8943   \Hy@UseNameKey{Direction}\@pdfdirection
8944   \Hy@UseNameKey{ViewArea}\@pdfviewarea
8945   \Hy@UseNameKey{ViewClip}\@pdfviewclip
8946   \Hy@UseNameKey{PrintArea}\@pdfprintarea
8947   \Hy@UseNameKey{PrintClip}\@pdfprintclip
8948   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8949   \Hy@UseNameKey{Duplex}\@pdfduplex
8950   \ifx\@pdfpicktraybypdfsize\@empty
8951   \else
8952     /PickTrayByPDFSize \@pdfpicktraybypdfsize
8953   \fi
8954   \ifx\@pdfprintpagerange\@empty
8955   \else
8956     /PrintPageRange[\@pdfprintpagerange]%
8957   \fi
8958   \ifx\@pdfnumcopies\@empty
8959   \else
8960     /NumCopies \@pdfnumcopies
8961   \fi
8962 }%
8963 \pdfmark{pdfmark=/PUT,%
8964   Raw={%
8965     \string{Catalog}\string}<<%
8966     \ifx\Hy@temp\@empty
8967     \else
8968       /ViewerPreferences<<\Hy@temp>>%
8969     \fi
8970     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8971     \ifx\@pdflang\@empty
8972     \else
8973       /Lang(\@pdflang)%
8974     \fi
8975     >>%
8976   }%
8977 }%
8978 }
8979 </dviwindo>
8980 <*dvi pdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```
8981 \providecommand*{\XR@ext}{pdf}
8982 \Hy@setbreaklinks{true}
8983 \newsavebox{\pdfm@box}
8984 \def\@pdfm@mark#1{\special{pdf:#1}}
8985 \def\@pdfm@dest#1{%
8986   \Hy@SaveLastskip
8987   \Hy@VerboseAnchor{#1}%
8988   \begingroup
8989     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8990     \def\x{XYZ}%
8991     \ifx\x\@pdfview
8992       \def\x{XYZ @xpos @ypos null}%
8993     \else
8994       \def\x{FitH}%
8995       \ifx\x\@pdfview
8996         \def\x{FitH @ypos}%
8997       \else
8998         \def\x{FitBH}%
8999         \ifx\x\@pdfview
9000           \def\x{FitBH @ypos}%
9001         \else
9002           \def\x{FitV}%
9003           \ifx\x\@pdfview
9004             \def\x{FitV @xpos}%
9005           \else
9006             \def\x{FitBV}%
9007             \ifx\x\@pdfview
9008               \def\x{FitBV @xpos}%
9009             \else
9010               \def\x{Fit}%
9011               \ifx\x\@pdfview
9012                 \let\x\@pdfview
9013               \else
9014                 \def\x{FitB}%
9015                 \ifx\x\@pdfview
9016                   \let\x\@pdfview
9017                 \else
9018                   \def\x{FitR}%
9019                   \ifx\x\@pdfview
9020                     \Hy@Warning{'pdfview=FitR' is not supported}%
9021                     \def\x{XYZ @xpos @ypos null}%
9022                   \else
9023                     \@onelevel@sanitize\@pdfview
9024                     \Hy@Warning{%
9025                       Unknown value '\@pdfview' for pdfview%
9026                     }%
9027                     \def\x{XYZ @xpos @ypos null}%
9028                   \fi
9029                 \fi
9030               \fi
9031             \fi
9032           \fi
9033         \fi
9034       \fi
```

```

9035 \fi
9036 \pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9037 \endgroup
9038 \Hy@RestoreLastskip
9039 }
9040 \providecommand*\@pdfview{XYZ}
9041 \providecommand*\@pdfborder{0 0 1}
9042 \providecommand*\@pdfborderstyle{}
9043 \def\hyper@anchor#1{%
9044 \@pdfm@dest{#1}%
9045 }
9046 \def\hyper@anchorstart#1{%
9047 \Hy@activeanchortrue
9048 \@pdfm@dest{#1}%
9049 }
9050 \def\hyper@anchorend{%
9051 \Hy@activeanchorfalse
9052 }

9053 \newcounter{Hy@AnnotLevel}

9054 \ifHy@ocgcolorlinks
9055 \def\OBJ@OCG@view{@OCG@view}%
9056 \@pdfm@mark{%
9057 obj \OBJ@OCG@view <<%
9058 /Type/OCG%
9059 /Name(View)%
9060 /Usage<<%
9061 /Print<<%
9062 /PrintState/OFF%
9063 >>%
9064 /View<<%
9065 /ViewState/ON%
9066 >>%
9067 >>%
9068 >>%
9069 }%
9070 \@pdfm@mark{close \OBJ@OCG@view}%
9071 \def\OBJ@OCG@print{@OCG@print}%
9072 \@pdfm@mark{%
9073 obj \OBJ@OCG@print <<%
9074 /Type/OCG%
9075 /Name(Print)%
9076 /Usage<<%
9077 /Print<<%
9078 /PrintState/ON%
9079 >>%
9080 /View<<%
9081 /ViewState/OFF%
9082 >>%
9083 >>%
9084 >>%
9085 }%
9086 \@pdfm@mark{close \OBJ@OCG@print}%
9087 \def\OBJ@OCGs{@OCGs}%
9088 \@pdfm@mark{%
9089 obj \OBJ@OCGs [%
9090 \OBJ@OCG@view\space\OBJ@OCG@print
9091 ]%

```

```

9092 }%
9093 \@pdfm@mark{close \OBJ@OCGs}%
9094 \@pdfm@mark{%
9095   put @catalog <<%
9096     /OCProperties<<%
9097     /OCGs \OBJ@OCGs
9098     /D<<%
9099     /OFF[\OBJ@OCG@print]%
9100     /AS[%
9101       <<%
9102         /Event/View%
9103         /OCGs \OBJ@OCGs
9104         /Category[/View]%
9105       >>%
9106       <<%
9107         /Event/Print%
9108         /OCGs \OBJ@OCGs
9109         /Category[/Print]%
9110       >>%
9111       <<%
9112         /Event/Export%
9113         /OCGs \OBJ@OCGs
9114         /Category[/Print]%
9115       >>%
9116     ]%
9117   >>%
9118 >>%
9119 >>%
9120 }%
9121 \AtBeginShipout{%
9122   \setbox\AtBeginShipoutBox=\hbox{%
9123     \copy\AtBeginShipoutBox
9124     \@pdfm@mark{%
9125       put @resources <<%
9126         /Properties<<%
9127         /OCView \OBJ@OCG@view
9128         /OCPrint \OBJ@OCG@print
9129       >>%
9130     >>%
9131   }%
9132 }%
9133 }%
9134 \Hy@AtBeginDocument{%
9135   \def\Hy@colorlink#1{%
9136     \begingroup
9137       \ifHy@ocgcolorlinks
9138         \def\Hy@ocgcolor{#1}%
9139         \setbox0=\hbox\bgroup\color@begingroup
9140       \else
9141         \HyColor@UseColor#1%
9142       \fi
9143   }%
9144   \def\Hy@endcolorlink{%
9145     \ifHy@ocgcolorlinks
9146       \color@endgroup\egroup
9147     \mbox{%
9148       \@pdfm@mark{content /OC/OCPrint BDC}%

```

```

9149      \rlap{\copy0}%
9150      \@pdfm@mark{content EMC/OC/OCView BDC}%
9151      \begingroup
9152      \expandafter\HyColor@UseColor\Hy@ocgcolor
9153      \box0 %
9154      \endgroup
9155      \@pdfm@mark{content EMC}%
9156      }%
9157      \fi
9158      \endgroup
9159      }%
9160      }%
9161      \else
9162      \Hy@DisableOption{ocgcolorlinks}%
9163      \fi

9164      \def\Hy@BeginAnnot#1{%
9165      \stepcounter{Hy@AnnotLevel}%
9166      \ifnum\value{Hy@AnnotLevel}=\@ne
9167      #1%
9168      \fi
9169      }
9170      \def\Hy@endAnnot{%
9171      \ifnum\value{Hy@AnnotLevel}=\@ne
9172      \Hy@endcolorlink
9173      \@pdfm@mark{eann}%
9174      \fi
9175      \addtocounter{Hy@AnnotLevel}\m@ne
9176      }

9177      \def\Hy@undefinedname{UNDEFINED}
9178      \def\hyper@linkstart#1#2{%
9179      \Hy@VerboseLinkStart{#1}{#2}%
9180      \Hy@BeginAnnot{%
9181      \protected@edef\Hy@testname{#2}%
9182      \ifx\Hy@testname\@empty
9183      \Hy@Warning{%
9184      Empty destination name,\MessageBreak
9185      using '\Hy@undefinedname'%
9186      }%
9187      \let\Hy@testname\Hy@undefinedname
9188      \else
9189      \Hy@pstringdef\Hy@testname{%
9190      \expandafter\HyperDestNameFilter\expandafter{%
9191      \Hy@testname
9192      }%
9193      }%
9194      \fi
9195      \@pdfm@mark{%
9196      bann<<%
9197      /Type/Annot%
9198      /Subtype/Link%
9199      \ifHy@pdfa /F 4\fi
9200      \Hy@setpdfborder
9201      \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9202      \else
9203      /C[\csname @#1bordercolor\endcsname]%
9204      \fi
9205      /A<<%

```

```

9206      /S/GoTo%
9207      /D(\Hy@testname)%
9208      >>%
9209      >>%
9210      }%
9211      \expandafter\Hy@colorlink\csname @#1color\endcsname
9212      }%
9213      }
9214      \def\hyper@linkend{\Hy@EndAnnot}%
9215      \def\hyper@link#1#2#3{%
9216      \hyper@linkstart{#1}{#2}#3\hyper@linkend
9217      }
9218      \def\hyper@linkfile#1#2#3{%
9219      \leavevmode
9220      \Hy@BeginAnnot{%
9221      \Hy@pstringdef\Hy@pstringF{#2}%
9222      \Hy@pstringdef\Hy@pstringD{#3}%
9223      \@pdfm@mark{%
9224      bann<<%
9225      /Type/Annot%
9226      /Subtype/Link%
9227      \ifHy@pdfa /F 4\fi
9228      \Hy@setpdfborder
9229      \ifx\@filebordercolor\relax
9230      \else
9231      /C[\@filebordercolor]%
9232      \fi
9233      /A<<%
9234      /S/GoToR%
9235      /F(\Hy@pstringF)%
9236      /D\ifx\@#3\@0 \@pdfstartview\else(\Hy@pstringD)\fi
9237      \Hy@SetNewWindow
9238      >>%
9239      >>%
9240      }%
9241      \Hy@colorlink\@filecolor
9242      }%
9243      #1%
9244      \Hy@EndAnnot
9245      }
9246      \def\hyper@linkurl#1#2{%
9247      \leavevmode
9248      \Hy@BeginAnnot{%
9249      \Hy@pstringdef\Hy@pstringURI{#2}%
9250      \@pdfm@mark{%
9251      bann<<%
9252      /Type/Annot%
9253      /Subtype/Link%
9254      \ifHy@pdfa /F 4\fi
9255      \Hy@setpdfborder
9256      \ifx\@urlbordercolor\relax
9257      \else
9258      /C[\@urlbordercolor]%
9259      \fi
9260      /A<<%
9261      /S/URI%
9262      /URI(\Hy@pstringURI)%

```

```

9263     >>%
9264     >>%
9265   }%
9266   \Hy@colorlink\@urlcolor
9267 }%
9268 #1%
9269 \Hy@EndAnnot
9270 }
9271 \def\Acrobatmenu#1#2{%
9272   \Hy@Acrobatmenu{#1}{#2}{%
9273     \Hy@BeginAnnot{%
9274       \@pdfm@mark{%
9275         bann<<%
9276         /Type/Annot%
9277         /Subtype/Link%
9278         \ifHy@pdfa /F 4\fi
9279         /A<<%
9280         /S/Named%
9281         /N/#1%
9282       >>%
9283       \Hy@setpdfborder
9284       \ifx\@menubordercolor\relax
9285         \relax
9286         /C[\@menubordercolor]%
9287       \fi
9288     >>%
9289   }%
9290   \Hy@colorlink\@menucolor
9291 }%
9292 #2%
9293 \Hy@EndAnnot
9294 }%
9295 }
9296 \ifx\@pdfproducer\relax
9297 \def\@pdfproducer{dvipdfm}%

```

Detect Xe_{TeX}. However, but xdvipdfmx will overwrite it in the final PDF file.

```

9298 \begingroup\expandafter\expandafter\expandafter\endgroup
9299 \expandafter\ifx\csname XeTeXversion\endcsname\relax
9300 \else
9301   \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9302 \fi
9303 \fi
9304 \def\PDF@FinishDoc{%
9305   \Hy@UseMaketitleInfos
9306   \HyInfo@GenerateAddons
9307   \@pdfm@mark{%
9308     docinfo<<%
9309     /Title(\@pdftitle)%
9310     /Subject(\@pdfsubject)%
9311     /Creator(\@pdfcreator)%
9312     \ifx\@pdfcreationdate\@empty
9313     \else
9314       /CreationDate(\@pdfcreationdate)%
9315     \fi
9316     \ifx\@pdfmoddate\@empty
9317     \else
9318       /ModDate(\@pdfmoddate)%

```

```

9319     \fi
9320     /Author(\@pdfauthor)%
9321     \ifx\@pdfproducer\relax
9322     \else
9323         /Producer(\@pdfproducer)%
9324     \fi
9325     /Keywords(\@pdfkeywords)%
9326     \ifx\@pdftrapped\@empty
9327     \else
9328         /Trapped/\@pdftrapped
9329     \fi
9330     \HyInfo@Addons
9331     >>%
9332 }%
9333 \Hy@DisableOption{pdfauthor}%
9334 \Hy@DisableOption{pdftitle}%
9335 \Hy@DisableOption{pdfsubject}%
9336 \Hy@DisableOption{pdfcreator}%
9337 \Hy@DisableOption{pdfcreationdate}%
9338 \Hy@DisableOption{pdfmoddate}%
9339 \Hy@DisableOption{pdfproducer}%
9340 \Hy@DisableOption{pdfkeywords}%
9341 \Hy@DisableOption{pdftrapped}%
9342 \Hy@DisableOption{pdfinfo}%
9343 }
9344 \def\PDF@SetupDoc{%
9345     \edef\Hy@temp{%
9346         \ifHy@toolbar\else /HideToolbar true\fi
9347         \ifHy@menubar\else /HideMenubar true\fi
9348         \ifHy>windowui\else /HideWindowUI true\fi
9349         \ifHy@fitwindow /FitWindow true\fi
9350         \ifHy@centerwindow /CenterWindow true\fi
9351         \ifHy@displaydoctitle /DisplayDocTitle true\fi
9352         \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
9353         \Hy@UseNameKey{Direction}\@pdfdirection
9354         \Hy@UseNameKey{ViewArea}\@pdfviewarea
9355         \Hy@UseNameKey{ViewClip}\@pdfviewclip
9356         \Hy@UseNameKey{PrintArea}\@pdfprintarea
9357         \Hy@UseNameKey{PrintClip}\@pdfprintclip
9358         \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9359         \Hy@UseNameKey{Duplex}\@pdfduplex
9360         \ifx\@pdfpicktraybypdfsize\@empty
9361         \else
9362             /PickTrayByPDFSize \@pdfpicktraybypdfsize
9363         \fi
9364         \ifx\@pdfprintpagerange\@empty
9365         \else
9366             /PrintPageRange[\@pdfprintpagerange]%
9367         \fi
9368         \ifx\@pdfnumcopies\@empty
9369         \else
9370             /NumCopies \@pdfnumcopies
9371         \fi
9372     }%
9373     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9374     \@pdfm@mark{%
9375         docview<<%

```



```

9376 \ifx\@pdfstartpage\@empty
9377 \else
9378 \ifx\@pdfstartview\@empty
9379 \else
9380 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9381 \fi
9382 \fi
9383 \ifx\@baseurl\@empty
9384 \else
9385 /URI<</Base(\Hy@pstringB)>>%
9386 \fi
9387 /PageMode/\@pdfpagemode
9388 \ifx\Hy@temp\@empty
9389 \else
9390 /ViewerPreferences<<\Hy@temp>>%
9391 \fi
9392 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9393 \ifx\@pdflang\@empty
9394 \else
9395 /Lang(\@pdflang)%
9396 \fi
9397 >>%
9398 }%
9399 \ifx\@pdfpagescrop\@empty
9400 \else
9401 \pdfmark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9402 \fi
9403 }
9404 </dvipdfm | xetex>

```

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

```

9405 <*dvipdfm>
9406 \AtBeginShipoutFirst{%
9407 \ifHy@setpagesize
9408 \begingroup
9409 \@ifundefined{stockwidth}{%
9410 \ifdim\paperwidth>\z@
9411 \ifdim\paperheight>\z@
9412 \special{papersize=\the\paperwidth,\the\paperheight}%
9413 \fi
9414 \fi
9415 }{%
9416 \ifdim\stockwidth>\z@
9417 \ifdim\stockheight>\z@
9418 \special{papersize=\the\stockwidth,\the\stockheight}%
9419 \fi
9420 \fi
9421 }%
9422 \endgroup
9423 \fi
9424 \Hy@DisableOption{setpagesize}%
9425 }
9426 </dvipdfm>

```

46.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```
9427 <*vtexhtml>
9428 \providecommand*{\XR@ext}{htm}
9429 \RequirePackage{vtexhtml}
9430 \newif\if@Localurl
9431 \def\PDF@FinishDoc{}
9432 \def\PDF@SetupDoc{%
9433   \ifx\@baseurl\@empty
9434     \else
9435       \special{!direct <base href="\@baseurl">}%
9436     \fi
9437 }
9438 \def\@urltype{url}
9439 \def\hyper@link#1#2#3{%
9440   \Hy@VerboseLinkStart{#1}{#2}%
9441   \leavevmode
9442   \special{!direct <a href=%
9443     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9444   #3%
9445   \special{!direct </a>}%
9446 }
9447 \def\hyper@linkurl#1#2{%
9448   \begingroup
9449     \hyper@chars
9450     \leavevmode
9451     \MathBSuppress=1\relax
9452     \special{!direct <a href=%
9453       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9454     #1%
9455     \MathBSuppress=0\relax
9456     \special{!direct </a>}%
9457   \endgroup
9458 }
9459 \def\hyper@linkfile#1#2#3{%
9460   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\ \else\##3\fi}%
9461 }
9462 \def\hyper@linkstart#1#2{%
9463   \Hy@VerboseLinkStart{#1}{#2}%
9464   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
9465     \@Localurltrue
9466     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9467   \else
9468     \@Localurlfalse
9469   \begingroup
9470     \hyper@chars
9471     \special{!aref \HyperDestNameFilter{#2}}%
9472   \endgroup
9473 \fi
9474 }
9475 \def\hyper@linkend{%
9476   \if@Localurl
9477     \special{!endaref}%
9478   \else
9479     \special{!direct </a>}%
9480   \fi
9481 }
```

```

9480 \fi
9481 }
9482 \def\hyper@anchorstart#1{%
9483 \Hy@SaveLastskip
9484 \Hy@VerboseAnchor{#1}%
9485 \begingroup
9486 \hyper@chars
9487 \special{!aname #1}%
9488 \special{!direct <a name=%
9489 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9490 \endgroup
9491 \Hy@activeanchortrue
9492 }
9493 \def\hyper@anchorend{%
9494 \special{!direct </a>}%
9495 \Hy@activeanchorfalse
9496 \Hy@RestoreLastskip
9497 }
9498 \def\hyper@anchor#1{%
9499 \Hy@SaveLastskip
9500 \Hy@VerboseAnchor{#1}%
9501 \begingroup
9502 \let\protect=\string
9503 \hyper@chars
9504 \leavevmode
9505 \special{!aname #1}%
9506 \special{!direct <a name=%
9507 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9508 \endgroup
9509 \Hy@activeanchortrue
9510 \bgroup\anchor@spot\egroup
9511 \special{!direct </a>}%
9512 \Hy@activeanchorfalse
9513 \Hy@RestoreLastskip
9514 }
9515 \def\@Form[#1]{%
9516 \typeout{Sorry, TeXpider does not yet support FORMs}%
9517 }
9518 \def\@endForm{}
9519 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9520 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9521 }
9522 \def\@TextField[#1]#2{% parameters, label
9523 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9524 }
9525 \def\@CheckBox[#1]#2{% parameters, label
9526 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9527 }
9528 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
9529 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9530 }
9531 \def\@PushButton[#1]#2{% parameters, label
9532 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9533 }
9534 \def\@Reset[#1]#2{%
9535 \typeout{Sorry, TeXpider does not yet support FORMs}%
9536 }

```

```

9537 \def\@Submit[#1]#2{%
9538   \typeout{Sorry, TeXpider does not yet support FORMs}%
9539 }
9540 \</vtexhtml>
9541 \<*/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.

```

9542 \ifx\mediaheight\@undefined
9543 \else
9544   \ifx\mediaheight\relax
9545   \else
9546     \ifHy@setpagesize
9547       \providecommand*\VTeXInitMediaSize{%
9548         \ltx@ifundefined{stockwidth}{%
9549           \ifdim\paperheight>0pt %
9550             \setlength\mediaheight\paperheight
9551           \fi
9552           \ifdim\paperheight>0pt %
9553             \setlength\mediawidth\paperwidth
9554           \fi
9555         }{%
9556           \ifdim\stockheight>0pt %
9557             \setlength\mediaheight\stockheight
9558           \fi
9559           \ifdim\stockwidth>0pt %
9560             \setlength\mediawidth\stockwidth
9561           \fi
9562         }%
9563       }%
9564     \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9565   \fi
9566   \Hy@DisableOption{setpagesize}%
9567 \fi
9568 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

9569 \providecommand*\@pdfview{xyz}
9570 \providecommand*\@pdfborder{0 0 1}
9571 \providecommand*\@pdfborderstyle{}
9572 \let\CurrentBorderColor\@linkbordercolor
9573 \def\hyper@anchor#1{%
9574   \Hy@SaveLastskip
9575   \Hy@VerboseAnchor{#1}%
9576   \begingroup
9577     \let\protect=\string
9578     \hyper@chars
9579     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9580   \endgroup
9581   \Hy@activeanchortrue
9582   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9583   \Hy@activeanchorfalse
9584   \Hy@RestoreLastskip
9585 }
9586 \def\hyper@anchorstart#1{%
9587   \Hy@SaveLastskip
9588   \Hy@VerboseAnchor{#1}%

```

```

9589 \begingroup
9590 \hyper@chars
9591 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9592 \endgroup
9593 \Hy@activeanchortrue
9594 }
9595 \def\hyper@anchorend{%
9596 \Hy@activeanchorfalse
9597 \Hy@RestoreLastskip
9598 }
9599 \def\@urlltype{url}
9600 \def\Hy@undefinedname{UNDEFINED}
9601 \def\hyper@linkstart#1#2{%
9602 \Hy@VerboseLinkStart{#1}{#2}%
9603 \Hy@pstringdef\Hy@pstringURI{#2}%
9604 \expandafter\Hy@colorlink\csname @#1color\endcsname
9605 \ltx@ifundefined{@#1bordercolor}{%
9606 \let\CurrentBorderColor\relax
9607 }{%
9608 \edef\CurrentBorderColor{%
9609 \csname @#1bordercolor\endcsname
9610 }%
9611 }%
9612 \def\Hy@tempa{#1}%
9613 \ifx\Hy@tempa\@urlltype
9614 \special{!%
9615 \href <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9616 a=<%
9617 \ifHy@pdfa /F 4\fi
9618 \Hy@setpdfborder
9619 \ifx\CurrentBorderColor\relax
9620 \else
9621 /C [\CurrentBorderColor]%
9622 \fi
9623 >%
9624 }%
9625 \else
9626 \protected@edef\Hy@testname{#2}%
9627 \ifx\Hy@testname\@empty
9628 \Hy@Warning{%
9629 Empty destination name,\MessageBreak
9630 using '\Hy@undefinedname'%
9631 }%
9632 \let\Hy@testname\Hy@undefinedname
9633 \fi
9634 \special{!%
9635 \href \expandafter\HyperDestNameFilter
9636 \expandafter{\Hy@testname};%
9637 a=<%
9638 \ifHy@pdfa /F 4\fi
9639 \Hy@setpdfborder
9640 \ifx\CurrentBorderColor\relax
9641 \else
9642 /C [\CurrentBorderColor]%
9643 \fi
9644 >%
9645 }%

```

```

9646 \fi
9647 }
9648 \def\hyper@linkend{%
9649 \special{!endaref}%
9650 \Hy@endcolorlink
9651 }
9652 \def\hyper@linkfile#1#2#3{%
9653 \leavevmode
9654 \special{!%
9655   aref <%
9656   \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi
9657   f=#2>#3;%
9658   a=<%
9659   \ifHy@pdfa /F 4\fi
9660   \Hy@setpdfborder
9661   \ifx\@filebordercolor\relax
9662   \else
9663   /C [\@filebordercolor]%
9664   \fi
9665   >%
9666   }%
9667   \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9668   \special{!endaref}%
9669 }
9670 \def\hyper@linkurl#1#2{%
9671 \begingroup
9672 \Hy@pstringdef\Hy@pstringURI{#2}%
9673 \hyper@chars
9674 \leavevmode
9675 \special{!%
9676   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9677   a=<%
9678   \ifHy@pdfa /F 4\fi
9679   \Hy@setpdfborder
9680   \ifx\@urlbordercolor\relax
9681   \else
9682   /C [\@urlbordercolor]%
9683   \fi
9684   >%
9685   }%
9686   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9687   \special{!endaref}%
9688 \endgroup
9689 }
9690 \def\hyper@link#1#2#3{%
9691 \Hy@VerboseLinkStart{#1}{#2}%
9692 \ltx@ifundefined{@#1bordercolor}{%
9693 \let\CurrentBorderColor\relax
9694 }{%
9695 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9696 }%
9697 \leavevmode
9698 \protected@edef\Hy@testname{#2}%
9699 \ifx\Hy@testname\@empty
9700 \Hy@Warning{%
9701   Empty destination name,\MessageBreak
9702   using '\Hy@undefinedname'%

```

```

9703 }%
9704 \let\Hy@testname\Hy@undefinedname
9705 \fi
9706 \special{!%
9707   aref \expandafter\HyperDestNameFilter
9708     \expandafter{\Hy@testname};%
9709   a=<%
9710     \ifHy@pdfa /F 4\fi
9711     \Hy@setpdfborder
9712     \ifx\CurrentBorderColor\relax
9713       \else
9714         /C [\CurrentBorderColor]%
9715       \fi
9716   >%
9717 }%
9718 \expandafter
9719 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9720 \special{!endaref}%
9721 }
9722 \def\hyper@image#1#2{%
9723   \hyper@linkurl{#2}{#1}%
9724 }
9725 \def\@hyper@launch run:#1\#2#3{%
9726   \Hy@pstringdef\Hy@pstringF{#1}%
9727   \Hy@pstringdef\Hy@pstringP{#3}%
9728   \leavevmode
9729   \special{!aref %
9730     <u=%
9731       /Type/Action%
9732       /S/Launch%
9733       /F(\Hy@pstringF)%
9734       \Hy@SetNewWindow
9735       \ifx\#3\%
9736       \else
9737         /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9738       \fi%
9739     >,%
9740     a=<%
9741       \ifHy@pdfa /F 4\fi
9742       \Hy@setpdfborder
9743       \ifx\@runbordercolor\relax
9744       \else
9745         /C[\@runbordercolor]%
9746       \fi
9747     >%
9748   }%
9749   \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9750   \special{!endaref}%
9751 }
9752 \def\Acrobatmenu#1#2{%
9753   \Hy@Acrobatmenu{#1}{#2}{%
9754     \special{!%
9755       aref <u=/S /Named /N /#1>;%
9756       a=<%
9757         \ifHy@pdfa /F 4\fi
9758         \Hy@setpdfborder
9759         \ifx\@menubordercolor\relax

```

```

9760     \else
9761         /C[\@menubordercolor]%
9762     \fi
9763     >%
9764 }%
9765 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9766 \special{!endaref}%
9767 }%
9768 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for V_T_EX 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{...}{...}` globally.

```

9769 \ifnum\Hy@VTeXversion<702 %
9770 \else
9771 \def\hyper@pagetransition{%
9772 \ifx\@pdfpagetransition\relax
9773 \else
9774 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9775 \else
9776 \hvtex@parse@trans\@pdfpagetransition
9777 \fi
9778 \fi
9779 }%

```

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

Syntax of V_T_EX `\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:

```

9780 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9781 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9782 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9783 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9784 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9785 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9786 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

9787 \def\hvtex@par@dimension{/Dm}%

```



```

9788 \def\hvtex@par@direction{/Di}%
9789 \def\hvtex@par@duration{/D}%
9790 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9791 \def\hvtex@gettoken{%
9792   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9793 }%

```

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

```

9794 \def\hvtex@gettoken@#1 #2\@nil{%
9795   \edef\hvtex@token{#1}%
9796   \edef\hvtex@buffer{#2}%
9797 }%
9798 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9799 \let\hvtex@trans@code\@empty
9800 \let\hvtex@param@dimension\@empty
9801 \let\hvtex@param@direction\@empty
9802 \let\hvtex@param@duration\@empty
9803 \let\hvtex@param@motion\@empty
9804 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9805 \hvtex@gettoken
9806 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9807   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9808   \else
9809     \hvtex@gettoken
9810   \fi
9811 \fi
9812 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9813 \hvtex@trans@params
9814 }%

```

Reentrant macro to parse optional parameters.

```

9815 \def\hvtex@trans@params{%
9816   \ifx\hvtex@buffer\@empty
9817   \else
9818     \hvtex@gettoken
9819     \let\hvtex@trans@par\hvtex@token
9820     \ifx\hvtex@buffer\@empty
9821     \else
9822       \hvtex@gettoken
9823       \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

9824       \let\hvtex@param@duration\hvtex@token
9825     \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

9826       \expandafter\edef\expandafter\hvtex@param@motion
9827       \expandafter{\expandafter\@gobble\hvtex@token}%
9828     \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```
9829      \expandafter\edef\expandafter\hvtex@param@dimension
9830      \expandafter{\expandafter\@gobble\hvtex@token}%
9831      \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).

```
9832      \let\hvtex@param@direction\hvtex@token
9833      \fi\fi\fi
9834      \fi
9835      \fi
9836      \ifx\hvtex@buffer\@empty
9837      \let\next\hvtex@produce@trans
9838      \else
9839      \let\next\hvtex@trans@params
9840      \fi
9841      \next
9842      }%
```

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

```
9843 \def\hvtex@produce@trans{%
9844 \let\vtex@trans@special\@empty
9845 \if S\hvtex@trans@code
9846 \edef\vtex@trans@special{\hvtex@trans@code
9847 \hvtex@param@dimension\hvtex@param@motion}%
9848 \else\if B\hvtex@trans@code
9849 \edef\vtex@trans@special{%
9850 \hvtex@trans@code\hvtex@param@dimension
9851 }%
9852 \else\if X\hvtex@trans@code
9853 \edef\vtex@trans@special{%
9854 \hvtex@trans@code\hvtex@param@motion
9855 }%
9856 \else\if W\hvtex@trans@code
9857 \edef\vtex@trans@special{%
9858 \hvtex@trans@code\hvtex@param@direction
9859 }%
9860 \else\if D\hvtex@trans@code
9861 \let\vtex@trans@special\hvtex@trans@code
9862 \else\if R\hvtex@trans@code
9863 \let\vtex@trans@special\hvtex@trans@code
9864 \else\if G\hvtex@trans@code
9865 \edef\vtex@trans@special{%
9866 \hvtex@trans@code\hvtex@param@direction
9867 }%
9868 \fi\fi\fi\fi\fi\fi
9869 \ifx\vtex@trans@special\@empty
9870 \else
9871 \ifx\hvtex@param@duration\@empty
9872 \else
9873 \setlength{\dimen@}{\hvtex@param@duration\p}%
```

I'm not guilty of possible overflow.

```
9874 \multiply\dimen@\@m
9875 \edef\vtex@trans@special{%
9876 \vtex@trans@special,\strip@pt\dimen@
9877 }%
```

```

9878     \fi
      And all the mess is just for this.
9879     \special{!trans \vtex@trans@special}%
9880     \fi
9881   }%
9882 \def\hyper@pageduration{%
9883   \ifx\@pdfpageduration\relax
9884   \else
9885     \ifx\@pdfpageduration\@empty
9886       \special{!duration-}%
9887     \else
9888       \special{!duration \@pdfpageduration}%
9889     \fi
9890   \fi
9891 }%
9892 \def\hyper@pagehidden{%
9893   \ifHy@useHidKey
9894     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9895   \fi
9896 }%
9897 \g@addto@macro\Hy@EveryPageBoxHook{%
9898   \hyper@pagetransition
9899   \hyper@pageduration
9900   \hyper@pagehidden
9901 }%
9902 \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

```

9903 \ifx\@pdfproducer\relax
9904 \def\@pdfproducer{VTeX}%
9905 \ifnum\Hy@VTeXversion>\z@
9906   \count@\VTeXversion
9907   \divide\count@ 100 %
9908   \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9909   \multiply\count@ -100 %
9910   \advance\count@\VTeXversion
9911   \edef\@pdfproducer{%
9912     \@pdfproducer
9913     .\ifnum\count@<10 0\fi\the\count@
9914   \ifx\VTeXOS\@undefined\else
9915     \ifnum\VTeXOS>0 %
9916       \ifnum\VTeXOS<6 %
9917         \space(
9918         \ifcase\VTeXOS
9919         \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9920       \fi
9921     )%
9922   \fi

```

```

9923     \fi
9924     \fi
9925     ,\space
9926     \ifnum\OpMode=\@ne PDF\else PS\fi
9927     \space backend%
9928     \ifx\gexmode\@undefined\else
9929         \ifnum\gexmode>\z@\space with GeX\fi
9930     \fi
9931 }%
9932 \fi
9933 \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).

```

9934 \def\PDF@SetupDoc{%
9935     \ifx\@pdfpagescrop\@empty
9936     \else
9937         \special{!pdfinfo b=<\@pdfpagescrop>}%
9938     \fi
9939     \ifx\@pdfstartpage\@empty
9940     \else
9941         \ifx\@pdfstartview\@empty
9942         \else
9943             \special{!onopen Page\@pdfstartpage}%
9944         \fi
9945     \fi
9946     \special{!pdfinfo p=</\@pdfpagemode>}%
9947     \ifx\@baseurl\@empty
9948     \else
9949         \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9950     \fi
9951     \special{!pdfinfo v=<<<%
9952         \ifHy@toolbar\else /HideToolbar true\fi
9953         \ifHy@menubar\else /HideMenubar true\fi
9954         \ifHy>windowui\else /HideWindowUI true\fi
9955         \ifHy@fitwindow /FitWindow true\fi
9956         \ifHy@centerwindow /CenterWindow true\fi
9957         \ifHy@displaydoctitle /DisplayDocTitle true\fi
9958         \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9959         \Hy@UseNameKey{Direction}\@pdfdirection
9960         \Hy@UseNameKey{ViewArea}\@pdfviewarea
9961         \Hy@UseNameKey{ViewClip}\@pdfviewclip
9962         \Hy@UseNameKey{PrintArea}\@pdfprintarea
9963         \Hy@UseNameKey{PrintClip}\@pdfprintclip
9964         \Hy@UseNameKey{PrintScaling}\@pdfprintscaling

```

```

9965 \Hy@UseNameKey{Duplex}\@pdfduplex
9966 \ifx\@pdfpicktraybypdfsize\@empty
9967 \else
9968   /PickTrayByPDFSize \@pdfpicktraybypdfsize
9969 \fi
9970 \ifx\@pdfprintpagerange\@empty
9971 \else
9972   /PrintPageRange[\@pdfprintpagerange]%
9973 \fi
9974 \ifx\@pdfnumcopies\@empty
9975 \else
9976   /NumCopies \@pdfnumcopies
9977 \fi
9978 >>>}%
9979 \ifx\@pdfpagelayout\@empty
9980 \else
9981   \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9982 \fi
9983 }%
9984 \HyInfo@AddonUnsupportedtrue
9985 \def\PDF@FinishDoc{%
9986   \Hy@UseMaketitleInfos
9987   \HyInfo@TrappedUnsupported
9988   \special{!pdfinfo a=<\@pdfauthor>}%
9989   \special{!pdfinfo t=<\@pdftitle>}%
9990   \special{!pdfinfo s=<\@pdfsubject>}%
9991   \special{!pdfinfo c=<\@pdfcreator>}%
9992   \ifx\@pdfproducer\relax
9993   \else
9994     \special{!pdfinfo r=<\@pdfproducer>}%
9995   \fi
9996   \special{!pdfinfo k=<\@pdfkeywords>}%
9997   \Hy@DisableOption{pdfauthor}%
9998   \Hy@DisableOption{pdftitle}%
9999   \Hy@DisableOption{pdfsubject}%
10000  \Hy@DisableOption{pdfcreator}%
10001  \Hy@DisableOption{pdfcreationdate}%
10002  \Hy@DisableOption{pdfmoddate}%
10003  \Hy@DisableOption{pdfproducer}%
10004  \Hy@DisableOption{pdfkeywords}%
10005  \Hy@DisableOption{pdftrapped}%
10006  \Hy@DisableOption{pdfinfo}%
10007 }
10008 </vtx>

```

46.7 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.

```

10009 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10010 <package>\providecommand*{\Hy@DistillerDestFix}{%
10011 <*pdfmark | dviwindo>
10012 \def\Hy@DistillerDestFix{%
10013 \begingroup
10014 \let\x\literalps@out

```

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

```

10015 \ifnum \@ifundefined{OpMode}{0}{%
10016 \@ifundefined{gexmode}{0}{%
10017 \ifnum\gexmode>0 \OpMode\else 0\fi
10018 }>1 %
10019 \def\x##1{%
10020 \immediate\special{!=##1}%
10021 }%
10022 \fi
10023 \x{%
10024 /product where{%
10025 pop %
10026 product(Distiller)search{%
10027 pop pop pop %
10028 version(.)search{%
10029 exch pop exch pop%
10030 (3011)eq{%
10031 gsave %
10032 newpath 0 0 moveto closepath clip%
10033 /Courier findfont 10 scalefont setfont %
10034 72 72 moveto(.).show %
10035 grestore%
10036 }if%
10037 }{pop}ifelse%
10038 }{pop}ifelse%
10039 }if%
10040 }%
10041 \endgroup
10042 }
10043 </pdfmark | dviwindo>

```

46.8 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

```

10044 <*pdfmark>
10045 \Hy@breaklinks@unsupported
10046 \def\hyper@anchor#1{%

```

```

10047 \Hy@SaveLastskip
10048 \Hy@VerboseAnchor{#1}%
10049 \begingroup
10050 \pdfmark[\anchor@spot]{%
10051   pdfmark=/DEST,%
10052   linktype=anchor,%
10053   View=/\@pdfview \@pdfviewparams,%
10054   DestAnchor={#1}%
10055 }%
10056 \endgroup
10057 \Hy@RestoreLastskip
10058 }
10059 \ltx@ifundefined{hyper@anchorstart}{\endinput}
10060 \def\hyper@anchorstart#1{%
10061   \Hy@SaveLastskip
10062   \Hy@VerboseAnchor{#1}%
10063   \literalps@out{H.S}%
10064   \Hy@AllowHyphens
10065   \xdef\hyper@currentanchor{#1}%
10066   \Hy@activeanchortrue
10067 }
10068 \def\hyper@anchorend{%
10069   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10070   \pdfmark{%
10071     pdfmark=/DEST,%
10072     linktype=anchor,%
10073     View=/\@pdfview \@pdfviewparams,%
10074     DestAnchor=\hyper@currentanchor,%
10075   }%
10076   \Hy@activeanchorfalse
10077   \Hy@RestoreLastskip
10078 }
10079 \def\hyper@linkstart#1#2{%
10080   \Hy@VerboseLinkStart{#1}{#2}%
10081   \ifHy@breaklinks
10082     \else
10083       \leavevmode
10084       \Hy@SaveSpaceFactor
10085       \hbox\bgroup
10086       \Hy@RestoreSpaceFactor
10087       \fi
10088       \expandafter\Hy@colorlink\csname @#1color\endcsname
10089       \literalps@out{H.S}%
10090       \Hy@AllowHyphens
10091       \xdef\hyper@currentanchor{#2}%
10092       \gdef\hyper@currentlinktype{#1}%
10093 }
10094 \def\hyper@linkend{%
10095   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10096   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
10097     \let\Hy@tempcolor\relax
10098   }{%
10099     \edef\Hy@tempcolor{%
10100       \csname @\hyper@currentlinktype bordercolor\endcsname
10101     }%
10102   }%
10103   \pdfmark{%

```

```

10104 pdfmark=/ANN,%
10105 linktype=link,%
10106 Subtype=/Link,%
10107 PDFAMFlags=4,%
10108 Dest=\hyper@currentanchor,%
10109 AcroHighlight=\@pdfhighlight,%
10110 Border=\@pdfborder,%
10111 BorderStyle=\@pdfborderstyle,%
10112 Color=\Hy@tempcolor,%
10113 Raw=H.B%
10114 }%
10115 \Hy@endcolorlink
10116 \ifHy@breaklinks
10117 \else
10118 \Hy@SaveSpaceFactor
10119 \egroup
10120 \Hy@RestoreSpaceFactor
10121 \fi
10122 }

```

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.

```

10123 \begingroup
10124 \catcode'P=12 %
10125 \catcode'T=12 %
10126 \lowercase{\endgroup
10127 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
10128 }
10129 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

10130 \def\hyper@pagetransition{%
10131 \ifx\@pdfpagetransition\relax
10132 \else
10133 \ifx\@pdfpagetransition\@empty
10134 % 1. Does an old entry have to be deleted?
10135 % 2. If 1=yes, how to delete?
10136 \else
10137 \pdfmark{%
10138 pdfmark=/PUT,%
10139 Raw={%
10140 \string{ThisPage\string}%
10141 <</Trans << /S /\@pdfpagetransition\space >> >>%
10142 }%
10143 }%
10144 \fi
10145 \fi
10146 }

```

\hyper@pageduration

```

10147 \def\hyper@pageduration{%
10148 \ifx\@pdfpageduration\relax
10149 \else
10150 \ifx\@pdfpageduration\@empty
10151 % 1. Does an old entry have to be deleted?
10152 % 2. If 1=yes, how to delete?

```



```

10153 \else
10154 \pdfmark{%
10155 pdfmark=/PUT,%
10156 Raw={%
10157 \string{ThisPage\string}%
10158 <</Dur \@pdfpageduration>>%
10159 }%
10160 }%
10161 \fi
10162 \fi
10163 }

```

\hyper@pagehidden

```

10164 \def\hyper@pagehidden{%
10165 \ifHy@useHidKey
10166 \pdfmark{%
10167 pdfmark=/PUT,%
10168 Raw={%
10169 \string{ThisPage\string}%
10170 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10171 }%
10172 }%
10173 \fi
10174 }

10175 \g@addto@macro\Hy@EveryPageBoxHook{%
10176 \hyper@pagetransition
10177 \hyper@pageduration
10178 \hyper@pagehidden
10179 }

10180 \def\hyper@image#1#2{%
10181 \hyper@linkurl{#2}{#1}%
10182 }

10183 \def\Hy@undefinedname{UNDEFINED}
10184 \def\hyper@link#1#2#3{%
10185 \Hy@VerboseLinkStart{#1}{#2}%
10186 \ltx@ifundefined{@#1bordercolor}{%
10187 \let\Hy@tempcolor\relax
10188 }{%
10189 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10190 }%
10191 \begingroup
10192 \protected@edef\Hy@testname{#2}%
10193 \ifx\Hy@testname\@empty
10194 \Hy@Warning{%
10195 Empty destination name,\MessageBreak
10196 using '\Hy@undefinedname'%
10197 }%
10198 \let\Hy@testname\Hy@undefinedname
10199 \fi
10200 \pdfmark[{#3}]{%
10201 Color=\Hy@tempcolor,%
10202 linktype={#1},%
10203 AcroHighlight=\@pdfhighlight,%
10204 Border=\@pdfborder,%
10205 BorderStyle=\@pdfborderstyle,%
10206 pdfmark=/ANN,%

```

```

10207     Subtype=/Link,%
10208     PDFAFlags=4,%
10209     Dest=\Hy@testname
10210   }%
10211 \endgroup
10212 }
10213 \newtoks\pdf@docset
10214 \def\PDF@FinishDoc{%
10215   \Hy@UseMaketitleInfos
10216   \HyInfo@GenerateAddons
10217   \let\Hy@temp\@empty
10218   \ifx\@pdfcreationdate\@empty
10219   \else
10220     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10221   \fi
10222   \ifx\@pdfmoddate\@empty
10223   \else
10224     \expandafter\def\expandafter\Hy@temp\expandafter{%
10225       \Hy@temp
10226       ModDate=\@pdfmoddate,%
10227     }%
10228   \fi
10229   \ifx\@pdfproducer\relax
10230   \else
10231     \expandafter\def\expandafter\Hy@temp\expandafter{%
10232       \Hy@temp
10233       Producer=\@pdfproducer,%
10234     }%
10235   \fi
10236   \expandafter
10237   \pdfmark\expandafter{%
10238     \Hy@temp
10239     pdfmark=/DOCINFO,%
10240     Title=\@pdftitle,%
10241     Subject=\@pdfsubject,%
10242     Creator=\@pdfcreator,%
10243     Author=\@pdfauthor,%
10244     Keywords=\@pdfkeywords,%
10245     Trapped=\@pdftrapped
10246   }%
10247   \ifx\HyInfo@Addons\@empty
10248   \else
10249     \pdfmark{%
10250       pdfmark=/DOCINFO,%
10251       Raw={\HyInfo@Addons}%
10252     }%
10253   \fi
10254   \Hy@DisableOption{pdfauthor}%
10255   \Hy@DisableOption{pdftitle}%
10256   \Hy@DisableOption{pdfsubject}%
10257   \Hy@DisableOption{pdfcreator}%
10258   \Hy@DisableOption{pdfcreationdate}%
10259   \Hy@DisableOption{pdfmoddate}%
10260   \Hy@DisableOption{pdfproducer}%
10261   \Hy@DisableOption{pdfkeywords}%
10262   \Hy@DisableOption{pdftrapped}%
10263   \Hy@DisableOption{pdfinfo}%

```

```

10264 }
10265 \def\PDF@SetupDoc{%
10266   \def\Hy@temp{}%
10267   \ifx\@pdfstartpage\@empty
10268   \else
10269     \ifx\@pdfstartview\@empty
10270     \else
10271       \edef\Hy@temp{%
10272         ,Page=\@pdfstartpage
10273         ,View=\@pdfstartview
10274       }%
10275     \fi
10276   \fi
10277   \edef\Hy@temp{%
10278     \noexpand\pdfmark{%
10279       pdfmark=/DOCVIEW,%
10280       PageMode=/\@pdfpagemode
10281     }\Hy@temp
10282   }%
10283 }%
10284 \Hy@temp
10285 \ifx\@pdfpagescrop\@empty
10286 \else
10287   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10288 \fi
10289 \edef\Hy@temp{%
10290   \ifHy@toolbar\else /HideToolbar true\fi
10291   \ifHy@menubar\else /HideMenubar true\fi
10292   \ifHy>windowui\else /HideWindowUI true\fi
10293   \ifHy@fitwindow /FitWindow true\fi
10294   \ifHy@centerwindow /CenterWindow true\fi
10295   \ifHy@displaydoctitle /DisplayDocTitle true\fi
10296   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10297   \Hy@UseNameKey{Direction}\@pdfdirection
10298   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10299   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10300   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10301   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10302   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10303   \Hy@UseNameKey{Duplex}\@pdfduplex
10304   \ifx\@pdfpicktraybypdfsize\@empty
10305   \else
10306     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10307   \fi
10308   \ifx\@pdfprintpagerange\@empty
10309   \else
10310     /PrintPageRange[\@pdfprintpagerange]%
10311   \fi
10312   \ifx\@pdfnumcopies\@empty
10313   \else
10314     /NumCopies \@pdfnumcopies
10315   \fi
10316 }%
10317 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10318 \pdfmark{%
10319   pdfmark=/PUT,%
10320   Raw={%

```

```

10321 \string{Catalog\string}<<%
10322 \ifx\Hy@temp\@empty
10323 \else
10324 /ViewerPreferences<<\Hy@temp>>%
10325 \fi
10326 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10327 \ifx\@pdflang\@empty
10328 \else
10329 /Lang(\@pdflang)%
10330 \fi
10331 \ifx\@baseurl\@empty
10332 \else
10333 /URI<</Base(\Hy@pstringB)>>%
10334 \fi
10335 >>%
10336 }%
10337 }%
10338 }
10339 </pdfmark>
10340 <*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.

```

10341 \newif\ifHy@pdfmarkerror
10342 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
10343 \def\pdfmark@[#1]#2{%
10344 \Hy@pdfmarkerrorfalse
10345 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10346 \@processme
10347 \let\pdf@type\relax
10348 \kvsetkeys{PDF}{#2}%
10349 \ifHy@pdfmarkerror
10350 \else
10351 \ifx\pdf@type\relax
10352 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10353 \ifx\#1\%
10354 \else
10355 \pdf@rect{#1}%
10356 \fi
10357 \else
10358 \ifx\#1\%
10359 \literalps@out{%
10360 [\the\pdf@toks\space\pdf@type\space pdfmark%
10361 ]%
10362 \else
10363 \ltx@ifundefined{@pdf@linktype color}{%
10364 \Hy@colorlink\@linkcolor
10365 }{%
10366 \expandafter\Hy@colorlink
10367 \csname @\pdf@linktype color\endcsname
10368 }%
10369 \pdf@rect{#1}%
10370 \literalps@out{%
10371 [\the\pdf@toks\space\pdf@type\space pdfmark%

```

```

10372     }%
10373     \Hy@endcolorlink
10374     \fi
10375     \fi
10376     \fi
10377 }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX text, needed by the `/Rect` key. This solution originates with Toby Thain (tobythain@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}

```

```

10378 \newsavebox{\pdf@box}
10379 \providecommand*{\Hy@setouterhbox}{\sbox}
10380 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10381 \def\Hy@DEST{/DEST}
10382 \def\pdf@rect#1{%
10383   \begingroup
10384     \chardef\x=1 %
10385     \def\Hy@temp{#1}%
10386     \ifx\Hy@temp\ltx@empty
10387       \chardef\x=0 %
10388     \else
10389       \def\y{\anchor@spot}%
10390       \ifx\Hy@temp\y
10391         \def\y{\relax}%
10392         \ifx\anchor@spot\y
10393           \chardef\x=0 %
10394         \fi
10395       \fi
10396     \fi
10397   \expandafter\endgroup
10398   \ifcase\x
10399     \literalps@out{H.S}%
10400     \literalps@out{H.R}%
10401   \else
10402     \leavevmode
10403     \Hy@SaveSpaceFactor
10404     \ifHy@breaklinks
10405       \Hy@setouterhbox\pdf@box{%
10406         \Hy@RestoreSpaceFactor
10407         \Hy@AllowHyphens#1%
10408         \Hy@SaveSpaceFactor
10409       }%
10410     \else
10411       \sbox\pdf@box{%
10412         \Hy@RestoreSpaceFactor
10413         #1%
10414         \Hy@SaveSpaceFactor
10415       }%
10416     \fi
10417   \dimen@\ht\pdf@box

```

```

10418 \ifdim\dp\pdf@box=\z@
10419 \literalps@out{H.S}%
10420 \else
10421 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}}%
10422 \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...).

```

10423 \ifHy@breaklinks
10424 \expandafter\Hy@breaklinksunhbox
10425 \else
10426 \expandafter\box
10427 \fi
10428 \pdf@box

```

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

10429 \ifdim\dimen@=\z@
10430 \literalps@out{H.R}%
10431 \else
10432 \raise\dimen@\hbox{\literalps@out{H.R}}}%
10433 \fi
10434 \Hy@RestoreSpaceFactor
10435 \fi
10436 \ifx\pdf@type\Hy@DEST
10437 \else
10438 \pdf@addtoksx{H.B}%
10439 \fi
10440 }

```

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.

```

10441 \newtoks\pdf@toks
10442 \newtoks\pdf@defaulttoks
10443 \pdf@defaulttoks={}%
10444 \def\pdf@addtoks#1#2{%
10445 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10446 \@processme
10447 }
10448 \def\pdf@addtoksx#1{%
10449 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10450 \@processme
10451 }
10452 \def\PDFdefaults#1{%
10453 \pdf@defaulttoks={#1}%
10454 }

```

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

```

10455 % what is the type of pdfmark?
10456 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10457 % what is the link type?
10458 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10459 \def\pdf@linktype{link}
10460 % parameter is a stream of PDF
10461 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}

```

```

10462 % parameter is a name
10463 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10464 % parameter is a array
10465 \define@key{PDF}{Border}{%
10466   \edef\Hy@temp{#1}%
10467   \ifx\Hy@temp\@empty
10468   \else
10469     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10470   \fi
10471 }
10472 \let\Hy@BorderArrayPatch\@empty
10473 % parameter is a dictionary
10474 \define@key{PDF}{BorderStyle}{%
10475   \edef\Hy@temp{#1}%
10476   \ifx\Hy@temp\@empty
10477   \else
10478     \pdf@addtoks{<<#1>>}{BS}%
10479   \fi
10480 }
10481 % parameter is a array
10482 \define@key{PDF}{Color}{%
10483   \ifx\relax#1\relax
10484   \else
10485     \pdf@addtoks{[#1]}{Color}% hash-ok
10486   \fi
10487 }
10488 % parameter is a string
10489 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10490 % parameter is a integer
10491 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10492 % parameter is a array
10493 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10494 % parameter is a string
10495 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10496 % parameter is a string or file
10497 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10498 % parameter is a destination
10499 \define@key{PDF}{Dest}{%
10500   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10501   \ifx\Hy@pstringDest\@empty
10502     \Hy@pdfmarkerrortrue
10503     \Hy@Warning{Destination with empty name ignored}%
10504   \else
10505     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10506   \fi
10507 }
10508 \define@key{PDF}{DestAnchor}{%
10509   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10510   \ifx\Hy@pstringDest\@empty
10511     \Hy@pdfmarkerrortrue
10512     \Hy@Warning{Destination with empty name ignored}%
10513   \else
10514     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10515   \fi
10516 }
10517 % parameter is a string
10518 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}

```

```

10519 % parameter is a string
10520 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10521 % parameter is a int
10522 \define@key{PDF}{Flags}{\pdf@addtoks{(#1)}{Flags}}
10523 \define@key{PDF}{PDFAFlags}{%
10524   \ifHy@pdfa
10525     \pdf@addtoks{(#1)}{F}%
10526   \fi
10527 }
10528 % parameter is a name
10529 \define@key{PDF}{AcroHighlight}{%
10530   \begin@group
10531     \edef\x{#1}%
10532     \expandafter\endgroup\ifx\x@empty
10533       \else
10534         \pdf@addtoks{(#1)}{H}%
10535       \fi
10536 }
10537 % parameter is a string
10538 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10539 % parameter is a string
10540 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10541 % parameter is a string
10542 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10543 % parameter is a string
10544 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10545 % parameter is a Boolean
10546 \define@key{PDF}{Open}{\pdf@addtoks{(#1)}{Open}}
10547 % parameter is a integer or name
10548 \define@key{PDF}{Page}{\pdf@addtoks{(#1)}{Page}}
10549 % parameter is a name
10550 \define@key{PDF}{PageMode}{\pdf@addtoks{(#1)}{PageMode}}
10551 % parameter is a string
10552 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10553 % parameter is a array
10554 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10555 % parameter is a integer
10556 \define@key{PDF}{SrcPg}{\pdf@addtoks{(#1)}{SrcPg}}
10557 % parameter is a name
10558 \define@key{PDF}{Subtype}{\pdf@addtoks{(#1)}{Subtype}}
10559 % parameter is a string
10560 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10561 % parameter is a string
10562 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10563 % parameter is a string
10564 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10565 % parameter is an array
10566 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10567 % parameter is a string
10568 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10569 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10570 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10571 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10572 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10573 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10574 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}

```



```

10575 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10576 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10577 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10578 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
10579 \define@key{PDF}{Trapped}{%
10580   \edef\Hy@temp{#1}%
10581   \ifx\Hy@temp\@empty
10582   \else
10583     \pdf@addtoks{/#1}{Trapped}%
10584   \fi
10585 }
10586
10587 </pdfmarkbase>
10588 <*pdfmark>
10589 \def\Acrobatmenu#1#2{%
10590   \Hy@Acrobatmenu{#1}{#2}{%
10591     \pdfmark[{#2}]{%
10592       linktype=menu,%
10593       pdfmark=/ANN,%
10594       AcroHighlight=\@pdfhighlight,%
10595       Border=\@pdfborder,%
10596       BorderStyle=\@pdfborderstyle,%
10597       Action={<< /Subtype /Named /N /#1 >>},%
10598       Subtype=/Link,%
10599       PDFAFlags=4%
10600     }%
10601   }%
10602 }

```

And now for some useful examples:

```

10603 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10604 \def\PDFNextPage@[#1]#2{%
10605   \pdfmark[{#2}]{%
10606     #1,%
10607     Border=\@pdfborder,%
10608     BorderStyle=\@pdfborderstyle,%
10609     Color=.2 .1 .5,%
10610     pdfmark=/ANN,%
10611     Subtype=/Link,%
10612     PDFAFlags=4,%
10613     Page=/Next%
10614   }%
10615 }
10616 \def\PDFPreviousPage{%
10617   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10618 }
10619 \def\PDFPreviousPage@[#1]#2{%
10620   \pdfmark[{#2}]{%
10621     #1,%
10622     Border=\@pdfborder,%
10623     BorderStyle=\@pdfborderstyle,%
10624     Color=.4 .4 .1,%
10625     pdfmark=/ANN,%
10626     Subtype=/Link,%
10627     PDFAFlags=4,%
10628     Page=/Prev%
10629   }%
10630 }

```

```

10631 \def\PDFOpen#1{%
10632   \pdfmark{#1,pdfmark=/DOCVIEW}%
10633 }

```

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

```

10634 \def\hyper@linkurl#1#2{%
10635   \begingroup
10636   \Hy@pstringdef\Hy@pstringURI{#2}%
10637   \hyper@chars
10638   \leavevmode
10639   \pdfmark[{#1}]{%
10640     pdfmark=/ANN,%
10641     linktype=url,%
10642     AcroHighlight=\@pdfhighlight,%
10643     Border=\@pdfborder,%
10644     BorderStyle=\@pdfborderstyle,%
10645     Color=\@urlbordercolor,%
10646     Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10647     Subtype=/Link,%
10648     PDFAFlags=4%
10649   }%
10650   \endgroup
10651 }
10652 \def\hyper@linkfile#1#2#3{%
10653   \begingroup
10654   \Hy@pstringdef\Hy@pstringF{#2}%
10655   \Hy@pstringdef\Hy@pstringD{#3}%
10656   \leavevmode
10657   \pdfmark[{#1}]{%
10658     pdfmark=/ANN,%
10659     Subtype=/Link,%
10660     PDFAFlags=4,%
10661     AcroHighlight=\@pdfhighlight,%
10662     Border=\@pdfborder,%
10663     BorderStyle=\@pdfborderstyle,%
10664     linktype=file,%
10665     Color=\@filebordercolor,%
10666     Action={%
10667       <<%
10668         /S/GoToR%
10669         \Hy@SetNewWindow
10670         /F(\Hy@pstringF)%
10671         /D\ifx\#3\[\0 \@pdfstartview\else(\Hy@pstringD)cvn\fi
10672       >>%
10673     }%
10674   }%
10675   \endgroup
10676 }
10677 \def\@hyper@launch run:#1\#2#3{%
10678   \begingroup
10679   \Hy@pstringdef\Hy@pstringF{#1}%
10680   \Hy@pstringdef\Hy@pstringP{#3}%
10681   \leavevmode
10682   \pdfmark[{#2}]{%
10683     pdfmark=/ANN,%
10684     Subtype=/Link,%
10685     PDFAFlags=4,%
10686     AcroHighlight=\@pdfhighlight,%

```

```

10687   Border=\@pdfborder,%
10688   BorderStyle=\@pdfborderstyle,%
10689   linktype=run,%
10690   Color=\@runbordercolor,%
10691   Action={%
10692     <<%
10693       /S/Launch%
10694       \Hy@SetNewWindow
10695       /F(\Hy@pstringF)%
10696       \ifx\#3\%
10697       \else
10698       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10699       \fi
10700     >>%
10701   }%
10702 }%
10703 \endgroup
10704 }
10705 \pdfmark>

```

Unfortunately, some parts of the pdfmark PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

46.9 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.

```

10706 (*dvips)
10707 \providecommand*\XR@ext}{pdf}
10708 \def\Hy@raisedlink{}
10709 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10710 \def\headerps@out#1{\special{! #1}}%
10711 \input{pdfmark.def}%
10712 \ifx\@pdfproducer\relax
10713   \def\@pdfproducer{dvips + Distiller}%
10714 \fi
10715 \providecommand*\@pdfborder{0 0 1}
10716 \providecommand*\@pdfborderstyle{}
10717 \providecommand*\@pdfview{XYZ}
10718 \providecommand*\@pdfviewparams{ H.V}
10719 \def\Hy@BorderArrayPatch{BorderArrayPatch}
10720 \g@addto@macro\Hy@FirstPageHook{%
10721   \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.

```

10722 /DvipsToPDF{72.27 mul Resolution div} def%
10723 /PDFToDvips{72.27 div Resolution mul} def%
10724 /BPToDvips{72 div Resolution mul}def%

```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```

10725 /BorderArrayPatch{%
10726   [exch{%
10727     dup dup type/integertype eq exch type/realtype eq or%
10728     {BPToDvips}if%
10729   }forall]%
10730 }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.

```

10731 /HyperBorder {1 PDFToDvips} def%
10732 /H.V {pdf@hoff pdf@voff null} def%
10733 /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

```

10734 /H.S {%
10735   currentpoint %
10736   HyperBorder add /pdf@lly exch def %
10737   dup DvipsToPDF 72 add /pdf@hoff exch def %
10738   HyperBorder sub /pdf@llx exch def%
10739 } 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

```

10740 /H.L {%
10741   2 sub dup%
10742   /HyperBasePt exch def %
10743   PDFToDvips /HyperBaseDvips exch def %
10744   currentpoint %
10745   HyperBaseDvips sub /pdf@ury exch def%
10746   /pdf@urx exch def%
10747 } def%
10748 /H.A {%
10749   H.L %
10750 % |pdf@voff| = the distance from the top of the page to a point
10751 % |\baselineskip| above the current point in PDF coordinates
10752   currentpoint exch pop %
10753   vsize 72 sub exch DvipsToPDF %
10754   HyperBasePt sub % baseline skip
10755   sub /pdf@voff exch def%
10756 } def%
10757 /H.R {%
10758   currentpoint %
10759   HyperBorder sub /pdf@ury exch def %
10760   HyperBorder add /pdf@urx exch def %
10761 % |pdf@voff| = the distance from the top of the page to the current point, in

```

```

10762 % PDF coordinates
10763     currentpoint exch pop vsize 72 sub %
10764     exch DvipsToPDF sub /pdf@voff exch def%
10765 } def%
10766 }%
10767 }
10768 \AtBeginShipoutFirst{%
10769   \ifHy@setpagesize
10770     \begingroup
10771       \ifundefined{stockwidth}{%
10772         \ifdim\paperwidth>\z@
10773           \ifdim\paperheight>\z@
10774             \special{papersize=\the\paperwidth,\the\paperheight}%
10775           \fi
10776         \fi
10777       }{%
10778         \ifdim\stockwidth>\z@
10779           \ifdim\stockheight>\z@
10780             \special{papersize=\the\stockwidth,\the\stockheight}%
10781           \fi
10782         \fi
10783       }%
10784     \endgroup
10785   \fi
10786   \Hy@DisableOption{setpagesize}%
10787 }
10788 </dvips>

```

46.10 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.

```

10789 <*vtexpdfmark>
10790 \providecommand*{\XR@ext}{pdf}
10791 \def\Hy@raisedlink{}
10792 \def\literalps@out#1{\special{pS:#1}}%
10793 \def\headerps@out#1{\immediate\special{pS:#1}}%
10794 \input{pdfmark.def}%
10795 \ifx\@pdfproducer\relax
10796   \ifnum\OpMode=\@ne
10797     \def\@pdfproducer{VTeX}%
10798   \else
10799     \def\@pdfproducer{VTeX + Distiller}%
10800   \fi
10801 \fi
10802 \providecommand*\@pdfborder{0 0 1}
10803 \providecommand*\@pdfborderstyle{}
10804 \providecommand*\@pdfview{XYZ}
10805 \providecommand*\@pdfviewparams{ H.V}
10806 \g@addto@macro\Hy@FirstPageHook{%
10807   \headerps@out{%
10808     /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.

```
10809 /HyperBorder {1} def%
10810 /H.V {pdf@hoff pdf@voff null} def%
10811 /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```
10812 /H.S {%
10813   currentpoint %
10814   HyperBorder sub%
10815   /pdf@lly exch def %
10816   dup 72 add /pdf@hoff exch def %
10817   HyperBorder sub%
10818   /pdf@llx exch def%
10819 } def%
```

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

```
10820 /H.L {%
10821   2 sub%
10822   /HyperBasePt exch def %
10823   currentpoint %
10824   HyperBasePt add HyperBorder add%
10825   /pdf@ury exch def %
10826   HyperBorder add%
10827   /pdf@urx exch def%
10828 } def%
10829 /H.A {%
10830   H.L %
10831   currentpoint exch pop %
10832   vsize 72 sub exch %
10833   HyperBasePt add add%
10834   /pdf@voff exch def%
10835 } def%
```

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

```
10836 /H.R {%
10837   currentpoint %
10838   HyperBorder add%
10839   /pdf@ury exch def %
10840   HyperBorder add%
10841   /pdf@urx exch def %
10842   currentpoint exch pop vsize 72 sub add%
10843   /pdf@voff exch def%
10844 } def%
10845 }%
10846 }
10847 </vtxpdfmark>
```

46.11 Textures

```
10848 <*textures>
10849 \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.

```
10850 \begingroup
10851 \obeylines %
10852 \gdef\Hy@ps@CR{\noexpand
10853 }%
10854 \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`.

```
10855 \def\literalps@out#1{%
10856 \special{postscript 0 0 transform}%
10857 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10858 }%
10859 %
```

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.

```
10860 \def\headerps@out#1{%
10861 \special{%
10862 prepostscript TeXdict begin\Hy@ps@CR
10863 #1\Hy@ps@CR
10864 end%
10865 }%
10866 }%
10867 %
```

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.

```
10868 \g@addto@macro\Hy@FirstPageHook{%
10869 \headerps@out{%
10870 /betterpdfmark {%
10871 systemdict begin %
10872 dup /BP eq%
10873 {cleartomark gsave nulldevice []}%
10874 {dup /EP eq%
10875 {cleartomark cleartomark grestore}%
10876 {cleartomark}%
10877 ifelse%
10878 }ifelse %
10879 end%
10880 }def\Hy@ps@CR
10881 ____pdfmark__ not{/pdfmark /betterpdfmark load def}if%
```

```

10882 }% end of \headerps@out
10883 }% end of \AtBeginShipoutFirst
10884 %
10885 \input{pdfmark.def}%
10886 %
10887 \ifx\@pdfproducer\relax
10888 \def\@pdfproducer{Textures + Distiller}%
10889 \fi
10890 \providecommand*\@pdfborder{0 0 1}
10891 \providecommand*\@pdfborderstyle{}
10892 \providecommand*\@pdfview{XYZ}
10893 \providecommand*\@pdfviewparams{ H.V}
10894 %

```

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 .

```

10895 \Hy@AtBeginDocument{%
10896 \headerps@out{%

```

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

```

10897 /vsize {\Hy@pageheight} def%
10898 /DvipsToPDF {} def%
10899 /PDFToDvips {} def%
10900 /BPToDvips {} def%
10901 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10902 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10903 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10904 /H.S {%
10905   currentpoint %
10906   HyperBorder add /pdf@lly exch def %
10907   dup DvipsToPDF 72 add /pdf@hoff exch def %
10908   HyperBorder sub /pdf@llx exch def%
10909 } def\Hy@ps@CR
10910 /H.L {%
10911   2 sub %
10912   PDFToDvips /HyperBase exch def %
10913   currentpoint %
10914   HyperBase sub /pdf@ury exch def%
10915   /pdf@urx exch def%
10916 } def\Hy@ps@CR
10917 /H.A {%
10918   H.L %
10919   currentpoint exch pop %
10920   vsize 72 sub exch DvipsToPDF %
10921   HyperBase sub % baseline skip
10922   sub /pdf@voff exch def%
10923 } def\Hy@ps@CR
10924 /H.R {%
10925   currentpoint %
10926   HyperBorder sub /pdf@ury exch def %
10927   HyperBorder add /pdf@urx exch def %
10928   currentpoint exch pop vsize 72 sub %
10929   exch DvipsToPDF sub /pdf@voff exch def%
10930 } def\Hy@ps@CR
10931 }%

```



```

10932 }
10933 \Hy@AtBeginDocument{%
10934   \ifHy@colorlinks
10935     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10936   \fi
10937 }

```

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.

```

10938 \expandafter\let\expandafter\keepPDF@SetupDoc
10939 \csname PDF@SetupDoc\endcsname
10940 \def\PDF@SetupDoc{%
10941   \ifx\@baseurl\@empty
10942   \else
10943     \special{html:<base href="\@baseurl">}%
10944   \fi
10945   \keepPDF@SetupDoc
10946 }
10947 \def\hyper@anchor#1{%
10948   \Hy@SaveLastskip
10949   \Hy@VerboseAnchor{#1}%
10950   \begingroup
10951     \let\protect=\string
10952     \special{html:<a name=%
10953       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10954   \endgroup
10955   \Hy@activeanchortrue
10956   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10957   \special{html:</a>}%
10958   \Hy@activeanchorfalse
10959   \Hy@RestoreLastskip
10960 }
10961 \def\hyper@anchorstart#1{%
10962   \Hy@SaveLastskip
10963   \Hy@VerboseAnchor{#1}%
10964   \begingroup
10965     \hyper@chars
10966     \special{html:<a name=%
10967       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10968   \endgroup
10969   \Hy@activeanchortrue
10970 }
10971 \def\hyper@anchorend{%
10972   \special{html:</a>}%
10973   \Hy@activeanchorfalse
10974   \Hy@RestoreLastskip
10975 }
10976 \def\@urlltype{url}
10977 \def\hyper@linkstart#1#2{%
10978   \Hy@VerboseLinkStart{#1}{#2}%
10979   \expandafter\Hy@colorlink\csname @#1color\endcsname
10980   \def\Hy@tempa{#1}%
10981   \ifx\Hy@tempa\@urlltype
10982     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10983   \else
10984     \begingroup
10985     \hyper@chars

```

```

10986 \special{%
10987 html:<a href=%
10988 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
10989 }%
10990 \endgroup
10991 \fi
10992 }
10993 \def\hyper@linkend{%
10994 \special{html:</a>}%
10995 \Hy@endcolorlink
10996 }
10997 \def\hyper@linkfile#1#2#3{%
10998 \hyper@linkurl{#1}{%
10999 \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
11000 }%
11001 }
11002 \def\hyper@linkurl#1#2{%
11003 \leavevmode
11004 \ifHy@raiselinks
11005 \Hy@SaveSpaceFactor
11006 \Hy@SaveSavedSpaceFactor
11007 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11008 \Hy@RestoreSavedSpaceFactor
11009 \@linkdim\dp\@tempboxa
11010 \lower\@linkdim\hbox{%
11011 \hyper@chars
11012 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11013 }%
11014 \Hy@colorlink\@urlcolor
11015 \Hy@RestoreSpaceFactor
11016 #1%
11017 \Hy@SaveSpaceFactor
11018 \@linkdim\ht\@tempboxa
11019 \advance\@linkdim by -6.5\p@
11020 \raise\@linkdim\hbox{\special{html:</a>}}%
11021 \Hy@endcolorlink
11022 \Hy@RestoreSpaceFactor
11023 \else
11024 \begingroup
11025 \hyper@chars
11026 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11027 \Hy@colorlink\@urlcolor#1%
11028 \special{html:</a>}%
11029 \Hy@endcolorlink
11030 \endgroup
11031 \fi
11032 }

```

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

```

11033 \def\hyper@link#1#2#3{%
11034 \Hy@VerboseLinkStart{#1}{#2}%
11035 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
11036 }
11037 \def\hyper@image#1#2{%
11038 \begingroup
11039 \hyper@chars
11040 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
11041 \endgroup

```

```

11042 }
11043 </textures>

```

46.12 dvipsone

```

11044 % \subsection{dvipsone driver}
11045 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
11046 % |\special| commands.
11047 <*dvipsone>
11048 \providecommand*\XR@ext}{pdf}
11049 \def\Hy@raisedlink{}
11050 \providecommand*\@pdfborder{0 0 1}
11051 \providecommand*\@pdfborderstyle{}
11052 \def\literalps@out#1{\special{ps:#1}}%
11053 \def\headerps@out#1{\special{headertext=#1}}%
11054 \input{pdfmark.def}%
11055 \ifx\@pdfproducer\relax
11056   \def\@pdfproducer{dvipsone + Distiller}%
11057 \fi
11058 \HyInfo@AddonUnsupportedtrue
11059 \def\PDF@FinishDoc{%
11060   \Hy@UseMaketitleInfos
11061   \HyInfo@TrappedUnsupported
11062   \special{PDF: Keywords \@pdfkeywords}%
11063   \special{PDF: Title \@pdftitle}%
11064   \special{PDF: Creator \@pdfcreator}%
11065   \ifx\@pdfcreationdate\@empty
11066     \else
11067     \special{PDF: CreationDate \@pdfcreationdate}%
11068   \fi
11069   \ifx\@pdfmoddate\@empty
11070     \else
11071     \special{PDF: ModDate \@pdfmoddate}%
11072   \fi
11073   \special{PDF: Author \@pdfauthor}%
11074   \ifx\@pdfproducer\relax
11075     \else
11076     \special{PDF: Producer \@pdfproducer}%
11077   \fi
11078   \special{PDF: Subject \@pdfsubject}%
11079   \Hy@DisableOption{pdfauthor}%
11080   \Hy@DisableOption{pdftitle}%
11081   \Hy@DisableOption{pdfsubject}%
11082   \Hy@DisableOption{pdfcreator}%
11083   \Hy@DisableOption{pdfcreationdate}%
11084   \Hy@DisableOption{pdfmoddate}%
11085   \Hy@DisableOption{pdfproducer}%
11086   \Hy@DisableOption{pdfkeywords}%
11087   \Hy@DisableOption{pdftrapped}%
11088   \Hy@DisableOption{pdfinfo}%
11089 }
11090 \def\PDF@SetupDoc{%
11091   \def\Hy@temp{}%
11092   \ifx\@pdfstartpage\@empty
11093     \else
11094     \ifx\@pdfstartview\@empty
11095       \else

```

```

11096     \edef\Hy@tempf{%
11097         ,Page=\@pdfstartpage
11098         ,View=\@pdfstartview
11099     }%
11100 \fi
11101 \fi
11102 \edef\Hy@tempf{%
11103     \noexpand\pdfmark{%
11104         pdfmark=/DOCVIEW,%
11105         PageMode=/\@pdfpagemode
11106     }\Hy@temp
11107 }%
11108 }%
11109 \Hy@temp
11110 \ifx\@pdfpagescrop\@empty
11111 \else
11112     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11113 \fi
11114 \edef\Hy@tempf{%
11115     \ifHy@toolbar\else /HideToolbar true\fi
11116     \ifHy@menubar\else /HideMenubar true\fi
11117     \ifHy>windowui\else /HideWindowUI true\fi
11118     \ifHy@fitwindow /FitWindow true\fi
11119     \ifHy@centerwindow /CenterWindow true\fi
11120     \ifHy@displaydoctitle /DisplayDocTitle true\fi
11121     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11122     \Hy@UseNameKey{Direction}\@pdfdirection
11123     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11124     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11125     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11126     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11127     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11128     \Hy@UseNameKey{Duplex}\@pdfduplex
11129     \ifx\@pdfpicktraybypdfsize\@empty
11130     \else
11131         /PickTrayByPDFSize \@pdfpicktraybypdfsize
11132     \fi
11133     \ifx\@pdfprintpagerange\@empty
11134     \else
11135         /PrintPageRange[\@pdfprintpagerange]%
11136     \fi
11137     \ifx\@pdfnumcopies\@empty
11138     \else
11139         /NumCopies \@pdfnumcopies
11140     \fi
11141 }%
11142 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11143 \pdfmark{%
11144     pdfmark=/PUT,%
11145     Raw={%
11146         \string{Catalog}\string}<<%
11147         \ifx\Hy@temp\@empty
11148         \else
11149             /ViewerPreferences<<\Hy@temp>>%
11150         \fi
11151         \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11152         \ifx\@pdflang\@empty

```

```

11153      \else
11154      /Lang(\@pdflang)%
11155      \fi
11156      \ifx\@baseurl\@empty
11157      \else
11158      /URI<</Base(\Hy@pstringB)>>%
11159      \fi
11160      >>%
11161    }%
11162  }%
11163 }
11164 \providecommand*\@pdfview{XYZ}
11165 \providecommand*\@pdfviewparams{ %
11166   gsave revscl currentpoint grestore %
11167   72 add exch pop null exch null%
11168 }
11169 \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 .

```

11170 \g@addto@macro\Hy@FirstPageHook{%
11171   \headerps@out{%

```

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

```

11172   /DvipsToPDF { 65781 div } def%
11173   /PDFToDvips { 65781 mul } def%
11174   /BPToDvips{65781 mul}def%
11175   /HyperBorder { 1 PDFToDvips } def%
11176   /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.

```

11177   /BorderArrayPatch{%
11178     [exch{%
11179       dup dup type/integertype eq exch type/realtype eq or%
11180       {BPToDvips}if%
11181     }forall]%
11182   }def%
11183   /H.S {%
11184     currentpoint %
11185     HyperBorder add /pdf@lly exch def %
11186     dup DvipsToPDF 72 add /pdf@hoff exch def %
11187     HyperBorder sub /pdf@llx exch def%
11188   } def%
11189   /H.L {%
11190     2 sub %
11191     PDFToDvips /HyperBase exch def %
11192     currentpoint %
11193     HyperBase sub /pdf@ury exch def%
11194     /pdf@urx exch def%
11195   } def%
11196   /H.A {%
11197     H.L %
11198     currentpoint exch pop %
11199     HyperBase sub % baseline skip

```

```

11200   DvipsToPDF /pdf@voff exch def%
11201   } def%
11202   /H.R {%
11203     currentpoint %
11204     HyperBorder sub /pdf@ury exch def %
11205     HyperBorder add /pdf@urx exch def %
11206     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11207   } def%
11208   }%
11209 }
11210 </dvipsone>

```

46.13 TeX4ht

```

11211 <*tex4ht>
11212 \providecommand*{\XR@ext}{html}
11213 \def\Hy@raisedlink{}
11214 \@ifpackageloaded{tex4ht}{%
11215   \typeout{hyperref tex4ht: tex4ht already loaded}%
11216 }{%
11217   \RequirePackage[hx4ht]{tex4ht}%
11218 }
11219 \hyperlinkfileprefix{}
11220 \def\PDF@FinishDoc{}
11221 \def\PDF@SetupDoc{%
11222   \ifx\@baseurl\@empty
11223   \else
11224     \special{t4ht=<base href="\@baseurl">}%
11225   \fi
11226 }
11227 \def\hyper@anchor#1{%
11228   \Hy@SaveLastskip
11229   \Hy@VerboseAnchor{#1}%
11230   \begingroup
11231     \let\protect=\string
11232     \special{t4ht=<a name=%
11233       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11234   \endgroup
11235   \Hy@activeanchortrue
11236   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11237   \special{t4ht=</a>}%
11238   \Hy@activeanchorfalse
11239   \Hy@RestoreLastskip
11240 }
11241 \def\hyper@anchorstart#1{%
11242   \Hy@SaveLastskip
11243   \Hy@VerboseAnchor{#1}%
11244   \begingroup
11245     \hyper@chars\special{t4ht=<a name=%
11246       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11247   \endgroup
11248   \Hy@activeanchortrue
11249 }
11250 \def\hyper@anchorend{%
11251   \special{t4ht=</a>}%
11252   \Hy@activeanchorfalse
11253   \Hy@RestoreLastskip
11254 }

```

```

11255 \def\@urlltype{url}
11256 \def\hyper@linkstart#1#2{%
11257   \Hy@VerboseLinkStart{#1}{#2}%
11258   \expandafter\Hy@colorlink\csname @#1color\endcsname
11259   \def\Hy@tempa{#1}%
11260   \ifx\Hy@tempa\@urlltype
11261     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11262   \else
11263     \begingroup
11264       \hyper@chars
11265       \special{t4ht=<a href=%
11266         \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
11267     \endgroup
11268   \fi
11269 }
11270 \def\hyper@linkend{%
11271   \special{t4ht=</a>}%
11272   \Hy@endcolorlink
11273 }
11274 \def\hyper@linkfile#1#2#3{%
11275   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11276 }
11277 \def\hyper@linkurl#1#2{%
11278   \leavevmode
11279   \ifHy@raiselinks
11280     \Hy@SaveSpaceFactor
11281     \Hy@SaveSavedSpaceFactor
11282     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11283     \Hy@RestoreSavedSpaceFactor
11284     \@linkdim\dp\@tempboxa
11285     \lower\@linkdim\hbox{%
11286       \begingroup
11287         \hyper@chars
11288         \special{%
11289           t4ht=<a href=\hyper@quote#2\hyper@quote>%
11290         }%
11291       \endgroup
11292     }%
11293     \Hy@colorlink\@urlcolor
11294     \Hy@RestoreSpaceFactor
11295     #1%
11296     \Hy@SaveSpaceFactor
11297     \Hy@endcolorlink
11298     \@linkdim\ht\@tempboxa
11299     \advance\@linkdim by -6.5\p@
11300     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11301     \Hy@RestoreSpaceFactor
11302   \else
11303     \begingroup
11304       \hyper@chars
11305       \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11306       \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11307       \special{t4ht=</a>}%
11308     \endgroup
11309   \fi
11310 }

```

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

```

11311 \def\hyper@link#1#2#3{%
11312   \Hy@VerboseLinkStart{#1}{#2}%
11313   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
11314 }
11315 \def\hyper@image#1#2{%
11316   \begingroup
11317   \hyper@chars
11318   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11319   \endgroup
11320 }
11321 \let\autoref\ref
11322 \ifx \rEfLiNK \UnDef
11323   \def\rEfLiNK #1#2{#2}%
11324 \fi
11325 \def\backref#1{}

Fix for tex4ht.
11326 \AtBeginDocument{%
11327   \expandafter\let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
11328   \expandafter\def\csname Make:Label\endcsname#1#2{%
11329     \ifhmode
11330       \Hy@SaveSpaceFactor
11331     \else
11332       \global\Hy@SavedSpaceFactor=1000 %
11333     \fi
11334     \Hy@OrgMakeLabel{#1}{%
11335       \Hy@RestoreSpaceFactor
11336       #2%
11337       \Hy@SaveSpaceFactor
11338     }%
11339     \Hy@RestoreSpaceFactor
11340   }%
11341 }
11342 </tex4ht>
11343 <*tex4htcfg>
11344 \IfFileExists{\jobname.cfg}{\endinput}{}
11345 \Preamble{html}
11346 \begin{document}%
11347 \EndPreamble
11348 \def\TeX{\TeX}
11349 \def\OMEGA{\Omega}
11350 \def\LaTeX{\LaTeX}
11351 \def\LaTeXe{\LaTeX2e}
11352 \def\eTeX{e-TeX}
11353 \def\MF{Metafont}
11354 \def\MP{MetaPost}
11355 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11356 <*pdfmark>
11357 \long\def\@Form[#1]{%
11358 \g@addto@macro\Hy@FirstPageHook{%
11359   \headerps@out{%
11360 [%
11361   /__objdef{pdfDocEncoding}%

```


11362 /type/dict%
11363 /OBJ pdfmark%
11364 [%
11365 {pdfDocEncoding}%
11366 <<%
11367 /Type/Encoding%
11368 /Differences%
11369 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11370 /tilde %
11371 39/quotesingle %
11372 96/grave %
11373 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11374 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11375 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11376 /quoteright/quotesinglbase/trademark/fl/fl/Lslash/OE/Scaron%
11377 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11378 164/currency %
11379 166/brokenbar %
11380 168/dieresis/copyright/ordfeminine %
11381 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11382 /twosuperior/threesuperior/acute/mu %
11383 183/periodcentered/cedilla/onesuperior/ordmasculine %
11384 188/onequarter/onehalf/threequarters %
11385 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11386 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11387 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11388 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11389 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11390 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11391 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11392 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11393 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11394 /ucircumflex/udieresis/yacute/thorn/ydieresis%
11395]%
11396 >>%
11397 /PUT pdfmark%
11398 [%
11399 /__objdef{ZaDb}%
11400 /type/dict%
11401 /OBJ pdfmark%
11402 [%
11403 {ZaDb}%
11404 <<%
11405 /Type/Font%
11406 /Subtype/Type1%
11407 /Name/ZaDb%
11408 /BaseFont/ZapfDingbats%
11409 >>%
11410 /PUT pdfmark%
11411 [%
11412 /__objdef{Helv}%
11413 /type/dict%
11414 /OBJ pdfmark%
11415 [%
11416 {Helv}%
11417 <<%
11418 /Type/Font%

```

11419 /Subtype/Type1%
11420 /Name/Helv%
11421 /BaseFont/Helvetica%
11422 /Encoding{pdfDocEncoding}%
11423 >>%
11424 /PUT pdfmark%
11425 [%
11426 /_objdef{aform}%
11427 /type/dict%
11428 /OBJ pdfmark%
11429 [%
11430 /_objdef{afields}%
11431 /type/array%
11432 /OBJ pdfmark%
11433 {%
11434 [%
11435 /BBox[0 0 100 100]%
11436 /_objdef{Check}%
11437 /BP pdfmark %
11438 1 0 0 setrgbcolor%
11439 /ZapfDingbats 80 selectfont %
11440 20 20 moveto%
11441 (4)show%
11442 [/EP pdfmark%
11443 [%
11444 /BBox[0 0 100 100]%
11445 /_objdef{Cross}%
11446 /BP pdfmark %
11447 1 0 0 setrgbcolor%
11448 /ZapfDingbats 80 selectfont %
11449 20 20 moveto%
11450 (8)show%
11451 [/EP pdfmark%
11452 [%
11453 /BBox[0 0 250 100]%
11454 /_objdef{Submit}%
11455 /BP pdfmark %
11456 0.6 setgray %
11457 0 0 250 100 rectfill %
11458 1 setgray %
11459 2 2 moveto %
11460 2 98 lineto %
11461 248 98 lineto %
11462 246 96 lineto %
11463 4 96 lineto %
11464 4 4 lineto %
11465 fill %
11466 0.34 setgray %
11467 248 98 moveto %
11468 248 2 lineto %
11469 2 2 lineto %
11470 4 4 lineto %
11471 246 4 lineto %
11472 246 96 lineto %
11473 fill%
11474 /Helvetica 76 selectfont %
11475 0 setgray %

```

```

11476 8 22.5 moveto%
11477 (Submit)show%
11478 [/EP pdfmark%
11479 [%
11480 /BBox[0 0 250 100]%
11481 /__objdef{SubmitP}%
11482 /BP pdfmark %
11483 0.6 setgray %
11484 0 0 250 100 rectfill %
11485 0.34 setgray %
11486 2 2 moveto %
11487 2 98 lineto %
11488 248 98 lineto %
11489 246 96 lineto %
11490 4 96 lineto %
11491 4 4 lineto %
11492 fill %
11493 1 setgray %
11494 248 98 moveto %
11495 248 2 lineto %
11496 2 2 lineto %
11497 4 4 lineto %
11498 246 4 lineto %
11499 246 96 lineto %
11500 fill%
11501 /Helvetica 76 selectfont %
11502 0 setgray %
11503 10 20.5 moveto%
11504 (Submit)show%
11505 [/EP pdfmark%
11506 } ?pdfmark%
11507 [%
11508 {aform}%
11509 <<%
11510 /Fields{afields}%
11511 /DR<<%
11512 /Font<<%
11513 /ZaDb{ZaDb}%
11514 /Helv{Helv}%
11515 >>%
11516 >>%
11517 /DA(/Helv 10 Tf 0 g)%
11518 /CO{corder}%
11519 \ifHy@pdfa
11520 \else
11521 /NeedAppearances true%
11522 \fi
11523 >>%
11524 /PUT pdfmark%
11525 [%
11526 {Catalog}%
11527 <<%
11528 /AcroForm{aform}%
11529 >>%
11530 /PUT pdfmark%
11531 [%
11532 /__objdef{corder}%

```

```

11533 /type/array%
11534 /OBJ pdfmark% dps
11535 }}%
11536 \kvsetkeys{Form}{#1}%
11537 }
11538 \def\@endForm{}
11539 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11540 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11541 }
11542 \def\@TextField[#1]#2{% parameters, label
11543 \def\Fld@name{#2}%
11544 \def\Fld@default{}%
11545 \let\Fld@value\@empty
11546 \def\Fld@width{\DefaultWidthofText}%
11547 \def\Fld@height{%
11548 \ifFld@multiline
11549 \DefaultHeightofTextMultiline
11550 \else
11551 \DefaultHeightofText
11552 \fi
11553 }%
11554 \begingroup
11555 \expandafter\HyField@SetKeys\expandafter{%
11556 \DefaultOptionsofText,#1%
11557 }%
11558 \HyField@FlagsText
11559 \ifFld@hidden\def\Fld@width{1sp}\fi
11560 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11561 \LayoutTextField{#2}{%
11562 \Hy@escapeform\PDFForm@Text
11563 \pdfmark[MakeTextField{\Fld@width}{\Fld@height}]{%
11564 pdfmark=/ANN,Raw={\PDFForm@Text}%
11565 }%
11566 }%
11567 \endgroup
11568 }
11569 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11570 \def\Fld@name{#2}%
11571 \let\Fld@default\relax
11572 \let\Fld@value\relax
11573 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11574 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11575 \begingroup
11576 \Fld@menulength=0 %
11577 \@tempdima\z@
11578 \@for\@curropt:=#3\do{%
11579 \expandafter\Fld@checkequals\@curropt==\%
11580 \Hy@StepCount\Fld@menulength
11581 \settowidth{\@tempdimb}{\@currDisplay}%
11582 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11583 }%
11584 \advance\@tempdima by 15\p@
11585 \begingroup
11586 \HyField@SetKeys{#1}%
11587 \edef\x{\endgroup
11588 \noexpand\expandafter
11589 \noexpand\HyField@SetKeys

```

```

11590 \noexpand\expandafter{%
11591 \expandafter\noexpand\csname DefaultOptionsof%
11592 \ifFld@radio
11593 Radio%
11594 \else
11595 \ifFld@combo
11596 \ifFld@popdown
11597 PopdownBox%
11598 \else
11599 ComboBox%
11600 \fi
11601 \else
11602 ListBox%
11603 \fi
11604 \fi
11605 \endcsname
11606 }%
11607 } \x
11608 \HyField@SetKeys{#1}%
11609 \ifFld@hidden\def\Fld@width{1sp}\fi
11610 \ifx\Fld@value\relax
11611 \let\Fld@value\Fld@default
11612 \fi
11613 \LayoutChoiceField{#2}{%
11614 \ifFld@radio
11615 \HyField@FlagsRadioButton
11616 \@Radio{#3}%
11617 \else
11618 \begingroup
11619 \HyField@FlagsChoice
11620 \ifdim\Fld@width<\@tempdima
11621 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11622 \edef\Fld@width{\the\@tempdima}%
11623 \fi
11624 \ifFld@combo
11625 \else
11626 \@tempdima=\the\Fld@menulength\Fld@charsize
11627 \advance\@tempdima by \Fld@borderwidth bp %
11628 \advance\@tempdima by \Fld@borderwidth bp %
11629 \edef\Fld@height{\the\@tempdima}%
11630 \fi
11631 \@ListBox{#3}%
11632 \endgroup
11633 \fi
11634 }%
11635 \endgroup
11636 }
11637 \def\@@Radio#1{%
11638 \Fld@listcount=0 %
11639 \@for\@curropt:=#1\do{%
11640 \expandafter\Fld@checkequals\@curropt==\%
11641 \Hy@StepCount\Fld@listcount
11642 \@currDisplay\space
11643 \Hy@escapeform\PDFForm@Radio
11644 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11645 pdfmark=/ANN,%
11646 Raw={%

```

```

11647      \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11648      }%
11649      } % deliberate space between radio buttons
11650      }%
11651      }
11652      \newcount\Fld@listcount
11653      \def\@@ListBox#1{%
11654      \HyField@PDFChoices{#1}%
11655      \Hy@escapeform\PDFForm@List
11656      \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11657      pdfmark=/ANN,Raw={\PDFForm@List}%
11658      }%
11659      }
11660      \def\@PushButton[#1]#2{% parameters, label
11661      \def\Fld@name{#2}%
11662      \begingroup
11663      \expandafter\HyField@SetKeys\expandafter{%
11664      \DefaultOptionsofPushButton,#1%
11665      }%
11666      \ifHy@pdfa
11667      \PackageError{hyperref}{%
11668      PDF/A: Push button with JavaScript is prohibited%
11669      }\@ehc
11670      \LayoutPushButtonField{%
11671      \leavevmode
11672      \MakeButtonField{#2}%
11673      }%
11674      \else
11675      \HyField@FlagsPushButton
11676      \ifFld@hidden\def\Fld@width{1sp}\fi
11677      \LayoutPushButtonField{%
11678      \leavevmode
11679      \Hy@escapeform\PDFForm@Push
11680      \pdfmark[\MakeButtonField{#2}]{%
11681      pdfmark=/ANN,Raw={\PDFForm@Push}%
11682      }%
11683      }%
11684      \fi
11685      \endgroup
11686      }
11687      \def\@Submit[#1]#2{%
11688      \def\Fld@width{\DefaultWidthofSubmit}%
11689      \def\Fld@height{\DefaultHeightofSubmit}%
11690      \begingroup
11691      \expandafter\HyField@SetKeys\expandafter{%
11692      \DefaultOptionsofSubmit,#1%
11693      }%
11694      \HyField@FlagsPushButton
11695      \HyField@FlagsSubmit
11696      \ifFld@hidden\def\Fld@width{1sp}\fi
11697      \Hy@escapeform\PDFForm@Submit
11698      \pdfmark[\MakeButtonField{#2}]{%
11699      pdfmark=/ANN,%
11700      Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11701      }%
11702      \endgroup
11703      }

```

```

11704 \def\@Reset[#1]#2{%
11705   \def\Fld@width{\DefaultWidthofReset}%
11706   \def\Fld@height{\DefaultHeightofReset}%
11707   \begingroup
11708     \expandafter\HyField@SetKeys\expandafter{%
11709       \DefaultOptionsofReset,#1%
11710     }%
11711   \leavevmode
11712   \ifHy@pdfa
11713     \PackageError{hyperref}{%
11714       PDF/A: Reset action is prohibited%
11715     }\@ehc
11716     \MakeButtonField{#2}%
11717   \else
11718     \HyField@FlagsPushButton
11719     \ifFld@hidden\def\Fld@width{1sp}\fi
11720     \Hy@escapeform\PDFForm@Reset
11721     \pdfmark[\MakeButtonField{#2}]{%
11722       pdfmark=/ANN,Raw={\PDFForm@Reset}%
11723     }%
11724   \fi
11725 \endgroup
11726}%
11727 \def\@CheckBox[#1]#2{% parameters, label
11728   \def\Fld@name{#2}%
11729   \def\Fld@default{0}%
11730   \begingroup
11731     \def\Fld@width{\DefaultWidthofCheckBox}%
11732     \def\Fld@height{\DefaultHeightofCheckBox}%
11733     \expandafter\HyField@SetKeys\expandafter{%
11734       \DefaultOptionsofCheckBox,#1%
11735     }%
11736     \HyField@FlagsCheckBox
11737     \ifFld@hidden\def\Fld@width{1sp}\fi
11738     \LayoutCheckField{#2}{%
11739       \Hy@escapeform\PDFForm@Check
11740       \pdfmark[\MakeCheckField{Fld@width}{Fld@height}]{%
11741         pdfmark=/ANN,Raw={\PDFForm@Check}%
11742       }%
11743     }%
11744   \endgroup
11745 }
11746 \pdfmark

```

47.2 HyperTeX

```

11747 \hypertex
11748 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11749 \def\@endForm{}
11750 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11751   \typeout{Sorry, HyperTeX does not support FORM gauges}%
11752 }
11753 \def\@TextField[#1]#2{% parameters, label
11754   \typeout{Sorry, HyperTeX does not support FORM text fields}%
11755 }
11756 \def\@CheckBox[#1]#2{% parameters, label
11757   \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11758 }

```

```

11759 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11760 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11761 }
11762 \def\@PushButton[#1]#2{% parameters, label
11763 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11764 }
11765 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11766 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11767 \end{hypertex}

```

47.3 TeX4ht

```

11768 \*tex4ht
11769 \def\@Form[#1]{%
11770 \kvsetkeys{Form}{#1}%
11771 \HCode{<form action="\Form@action" method="\Form@method">}%
11772 }
11773 \def\@endForm{\HCode{</form>}}
11774 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11775 \typeout{Sorry, TeX4ht does not support gauges}%
11776 }
11777 \def\@TextField[#1]#2{% parameters, label
11778 \let\Hy@reserved@a\@empty
11779 \def\Fld@name{#2}%
11780 \def\Fld@default{}%
11781 \bgroup
11782 \Field@toks={}%
11783 \kvsetkeys{Field}{#1}%
11784 \HCode{<label for="\Fld@name">#2</label>}%
11785 \ifFld@password
11786 \@@PasswordField
11787 \else
11788 \@@TextField
11789 \fi
11790 \egroup
11791 }
11792 \def\@@PasswordField{%
11793 \HCode{%
11794 <input type="password" %
11795 id="\Fld@name" %
11796 name="\Fld@name" %
11797 \ifFld@hidden type="hidden" \fi
11798 value="\Fld@default" %
11799 \the\Field@toks
11800 >%
11801 }%
11802 }
11803 \def\@@TextField{%
11804 \ifFld@multiline
11805 \HCode{<textarea %
11806 \ifFld@readonly readonly \fi
11807 id="\Fld@name" %
11808 name="\Fld@name" %
11809 \ifFld@hidden type="hidden" \fi
11810 \the\Field@toks>%
11811 }%
11812 \Fld@default
11813 \HCode{</textarea>}%

```



```

11814 \else
11815 \HCode{<input type="textbox" %
11816 \ifFld@readonly readonly \fi
11817 id="\Fld@name" %
11818 name="\Fld@name" %
11819 \ifFld@hidden type="hidden" \fi
11820 value="\Fld@default" %
11821 \the\Field@toks>%
11822 }%
11823 \fi
11824 }
11825 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11826 \def\Fld@name{#2}%
11827 \def\Fld@default{#3}%
11828 \let\Hy@reserved@a\relax
11829 \begingroup
11830 \expandafter\Fld@findlength#3\\%
11831 \Field@toks={ }%
11832 \kvsetkeys{Field}{#1}%
11833 #2%
11834 \ifFld@radio
11835 \expandafter\@@Radio#3\\%
11836 \else
11837 \expandafter\@@Menu#3\\%
11838 \fi
11839 \endgroup
11840 }
11841 \def\Fld@findlength#1\\{%
11842 \Fld@menulength=0 %
11843 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11844 }
11845 \def\@@Menu#1\\{%
11846 \HCode{<select size="\the\Fld@menulength" %
11847 name="\Fld@name" %
11848 \the\Field@toks>%
11849 }%
11850 \@for\@curropt:=#1\do{%
11851 \expandafter\Fld@checkequals\@curropt==\\%
11852 \HCode{<option %
11853 \ifx\@curropt\Fld@default selected \fi
11854 value="\@currValue">\@currDisplay</option>%
11855 }%
11856 }%
11857 \HCode{</select>}%
11858 }
11859 \def\@@Radio#1\\{%
11860 \@for\@curropt:=#1\do{%
11861 \expandafter\Fld@checkequals\@curropt==\\%
11862 \HCode{<input type="radio" %
11863 \ifx\@curropt\Fld@default checked \fi
11864 name="\Fld@name" %
11865 value="\@currValue" %
11866 \the\Field@toks>%
11867 }%
11868 \@currDisplay
11869 }%
11870 }

```

```

11871 \def\@PushButton[#1]#2{% parameters, label
11872   \def\Fld@name{#2}%
11873   \bgroup
11874     \Field@toks={ }%
11875     \kvsetkeys{Field}{#1}%
11876     \HCode{<input type="button" %
11877       name="\Fld@name" %
11878       value="#2" %
11879       \the\Field@toks>%
11880     }%
11881     \HCode{</button>}%
11882   \egroup
11883 }
11884 \def\@Submit[#1]#2{%
11885   \HCode{<button type="submit">#2</button>}%
11886 }
11887 \def\@Reset[#1]#2{%
11888   \HCode{<button type="reset">#2</button>}%
11889 }
11890 \def\@CheckBox[#1]#2{% parameters, label
11891   \let\Hy@reserved@a\@empty
11892   \def\Fld@name{#2}%
11893   \def\Fld@default{0}%
11894   \bgroup
11895     \Field@toks={ }%
11896     \kvsetkeys{Field}{#1}%
11897     \HCode{<input type="checkbox" %
11898       \ifFld@checked checked \fi
11899       \ifFld@disabled disabled \fi
11900       \ifFld@readonly readonly \fi
11901       name="\Fld@name" %
11902       \ifFld@hidden type="hidden" \fi
11903       value="\Fld@default" %
11904       \the\Field@toks>%
11905     #2%
11906   }%
11907   \egroup
11908 }
11909 </tex4ht>

```

47.4 pdfTeX

```

11910 <*pdfTeX>
11911 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11912   \typeout{Sorry, pdfTeX does not support FORM gauges}%
11913 }
11914 \def\MakeFieldObject#1#2{\sbox0{#1}%
11915   \immediate\pdfxform0 %
11916   \expandafter\edef\csname #2Object\endcsname{%
11917     \the\pdflastxform\space 0 R%
11918   }%
11919   % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
11920 }%
11921 \def\HyField@afields{}
11922 \begingroup\expandafter\expandafter\expandafter\endgroup
11923 \expandafter\ifx\csname pdfastlink\endcsname\relax
11924   \let\HyField@AddToFields\relax
11925   \PackageInfo{hyperref}{%

```

```

11926   You need pdfTeX 1.40.0 for setting the /Fields entry.%
11927   \MessageBreak
11928   Adobe Reader/Acrobat accepts an empty /Field array,%
11929   \MessageBreak
11930   but other PDF viewers might complain%
11931 }%
11932 \else
11933 \def\HyField@AuxAddToFields#1{%
11934 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11935 \Hy@AtBeginDocument{%
11936   \if@filesw
11937     \immediate\write\@mainaux{%
11938       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11939     }%
11940   \fi
11941   \let\HyField@AfterAuxOpen\@firstofone
11942   \def\HyField@AuxAddToFields#1{%
11943     \xdef\HyField@afields{%
11944       \ifx\HyField@afields\@empty
11945         \else
11946           \HyField@afields
11947         \space
11948       \fi
11949       #1 0 R%
11950     }%
11951   }%
11952 }%
11953 \def\HyField@AddToFields{%
11954   \expandafter\HyField@@AddToFields\expandafter{%
11955     \the\pdfastlink
11956   }%
11957 }%
11958 \def\HyField@@AddToFields#1{%
11959   \HyField@AfterAuxOpen{%
11960     \if@filesw
11961       \write\@mainaux{%
11962         \string\HyField@AuxAddToFields{#1}%
11963       }%
11964     \fi
11965   }%
11966 }%
11967 \fi
11968 \def\@Form[#1]{%
11969   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11970   \kvsetkeys{Form}{#1}%
11971   \Hy@FormObjects
11972   \ifnum\pdfTeXversion>13 %
11973     \pdfrefobj\OBJ@pdfdocencoding
11974     \pdfrefobj\OBJ@ZaDb
11975     \pdfrefobj\OBJ@Helv
11976   \fi
11977   \AtVeryEndDocument{%
11978     \immediate\pdfobj{%
11979       <<%
11980       /Fields[\HyField@afields]%
11981       /DR<<%
11982       /Font<<%

```

```

11983      /ZaDb \OBJ@ZaDb\space 0 R%
11984      /Helv \OBJ@Helv\space 0 R%
11985      >>%
11986      >>%
11987      /DA(/Helv 10 Tf 0 g)%
11988      \ifHy@pdfa
11989      \else
11990      /NeedAppearances true%
11991      \fi
11992      >>%
11993      }%
11994      \edef\OBJ@acroform{\the\pdfobj}%
11995      \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11996      }%
11997      \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

11998      \begingroup
11999      \fontfamily{pzd}%
12000      \fontencoding{U}%
12001      \fontseries{m}%
12002      \fontshape{n}%
12003      \selectfont
12004      \char123 %
12005      \endgroup
12006      }{Ding}%
12007      \MakeFieldObject{%
12008      \fbox{\textcolor{yellow}{\textsf{Submit}}}%
12009      }{Submit}%
12010      \MakeFieldObject{%
12011      \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
12012      }{SubmitP}%
12013      }
12014      \def\@endForm{}
12015      \def\@TextField[#1]#2{% parameters, label
12016      \def\Fld@name{#2}%
12017      \def\Fld@default{}%
12018      \let\Fld@value\@empty
12019      \def\Fld@width{\DefaultWidthofText}%
12020      \def\Fld@height{%
12021      \ifFld@multiline
12022      \DefaultHeightofTextMultiline
12023      \else
12024      \DefaultHeightofText
12025      \fi
12026      }%
12027      \begingroup
12028      \expandafter\HyField@SetKeys\expandafter{%
12029      \DefaultOptionsofText,#1%
12030      }%
12031      \PDFForm@Name
12032      \HyField@FlagsText
12033      \ifFld@hidden\def\Fld@width{1sp}\fi
12034      \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12035      \LayoutTextField{#2}{%
12036      \Hy@escapeform\PDFForm@Text
12037      \pdfstartlink user {\PDFForm@Text}\relax
12038      \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink

```

```

12039 \HyField@AddToFields
12040 }%
12041 \endgroup
12042 }
12043 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12044 \def\Fld@name{#2}%
12045 \let\Fld@default\relax
12046 \let\Fld@value\relax
12047 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12048 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12049 \begingroup
12050 \Fld@menulength=0 %
12051 \@tempdima\z@
12052 \@for\@curropt:=#3\do{%
12053 \expandafter\Fld@checkequals\@curropt==\%
12054 \Hy@StepCount\Fld@menulength
12055 \settowidth{\@tempdimb}{\@currDisplay}%
12056 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12057 }%
12058 \advance\@tempdima by 15\p@
12059 \begingroup
12060 \HyField@SetKeys{#1}%
12061 \edef\x{\endgroup
12062 \noexpand\expandafter
12063 \noexpand\HyField@SetKeys
12064 \noexpand\expandafter{%
12065 \expandafter\noexpand\csname DefaultOptionsof%
12066 \ifFld@radio
12067 Radio%
12068 \else
12069 \ifFld@combo
12070 \ifFld@popdown
12071 PopdownBox%
12072 \else
12073 ComboBox%
12074 \fi
12075 \else
12076 ListBox%
12077 \fi
12078 \fi
12079 \endcsname
12080 }%
12081 }\x
12082 \HyField@SetKeys{#1}%
12083 \PDFForm@Name
12084 \ifFld@hidden\def\Fld@width{1sp}\fi
12085 \ifx\Fld@value\relax
12086 \let\Fld@value\Fld@default
12087 \fi
12088 \LayoutChoiceField{#2}{%
12089 \ifFld@radio
12090 \HyField@FlagsRadioButton
12091 \@@Radio{#3}%
12092 \else
12093 \begingroup
12094 \HyField@FlagsChoice
12095 \ifdim\Fld@width<\@tempdima

```

```

12096      \ifdim\@tempdima<1cm\@tempdima1cm\fi
12097      \edef\Fld@width{\the\@tempdima}%
12098      \fi
12099      \ifFld@combo
12100      \else
12101      \@tempdima=\the\Fld@menulength\Fld@charsize
12102      \advance\@tempdima by \Fld@borderwidth bp %
12103      \advance\@tempdima by \Fld@borderwidth bp %
12104      \edef\Fld@height{\the\@tempdima}%
12105      \fi
12106      \@@ListBox{#3}%
12107      \endgroup
12108      \fi
12109      }%
12110      \endgroup
12111      }
12112      \def\@@Radio#1{%
12113      \Fld@listcount=0 %
12114      \@for\@curropt:=#1\do{%
12115      \expandafter\Fld@checkequals\@curropt==\%
12116      \Hy@StepCount\Fld@listcount
12117      \@currDisplay\space
12118      \leavevmode
12119      \Hy@escapeform\PDFForm@Radio
12120      \pdfstartlink user {%
12121      \PDFForm@Radio
12122      /AP<<%
12123      /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.

```

12124      /\@currValue\space \DingObject
12125      >>%
12126      >>%
12127      }%
12128      \relax
12129      \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
12130      \ifnum\Fld@listcount=1 %
12131      \HyField@AddToFields
12132      \fi
12133      \space % deliberate space between radio buttons
12134      }%
12135      }
12136      \newcount\Fld@listcount
12137      \def\@@ListBox#1{%
12138      \HyField@PDFChoices{#1}%
12139      \leavevmode
12140      \Hy@escapeform\PDFForm@List
12141      \pdfstartlink user {\PDFForm@List}\relax
12142      \MakeChoiceField{\Fld@width}{\Fld@height}%
12143      \pdfendlink
12144      \HyField@AddToFields
12145      }
12146      \def\@PushButton[#1]#2{% parameters, label
12147      \def\Fld@name{#2}%
12148      \begingroup
12149      \expandafter\HyField@SetKeys\expandafter{%

```

```

12150     \DefaultOptionsofPushButton,#1%
12151 }%
12152 \PDFForm@Name
12153 \ifHy@pdfa
12154     \PackageError{hyperref}{%
12155         PDF/A: Push button with JavaScript is prohibited%
12156     }\@ehc
12157     \LayoutPushButtonField{%
12158         \leavevmode
12159         \MakeButtonField{#2}%
12160     }%
12161 \else
12162     \HyField@FlagsPushButton
12163     \ifFld@hidden\def\Fld@width{1sp}\fi
12164     \LayoutPushButtonField{%
12165         \leavevmode
12166         \Hy@escapeform\PDFForm@Push
12167         \pdfstartlink user {\PDFForm@Push}\relax
12168         \MakeButtonField{#2}%
12169         \pdfendlink
12170         \HyField@AddToFields
12171     }%
12172 \fi
12173 \endgroup
12174 }
12175 \def\@Submit[#1]#2{%
12176     \def\Fld@width{\DefaultWidthofSubmit}%
12177     \def\Fld@height{\DefaultHeightofSubmit}%
12178     \begingroup
12179     \expandafter\HyField@SetKeys\expandafter{%
12180         \DefaultOptionsofSubmit,#1%
12181     }%
12182     \HyField@FlagsPushButton
12183     \HyField@FlagsSubmit
12184     \ifFld@hidden\def\Fld@width{1sp}\fi
12185     \leavevmode
12186     \Hy@escapeform\PDFForm@Submit
12187     \pdfstartlink user {%
12188         \PDFForm@Submit
12189         /AP<</N \SubmitObject/D \SubmitPObject>>%
12190     }%
12191     \relax
12192     \MakeButtonField{#2}%
12193     \pdfendlink
12194     \HyField@AddToFields
12195 \endgroup
12196 }
12197 \def\@Reset[#1]#2{%
12198     \def\Fld@width{\DefaultWidthofReset}%
12199     \def\Fld@height{\DefaultHeightofReset}%
12200     \begingroup
12201     \expandafter\HyField@SetKeys\expandafter{%
12202         \DefaultOptionsofReset,#1%
12203     }%
12204     \leavevmode
12205     \ifHy@pdfa
12206         \PackageError{hyperref}{%

```

```

12207     PDF/A: Reset action is prohibited%
12208   }\@ehc
12209   \MakeButtonField{#2}%
12210 \else
12211   \HyField@FlagsPushButton
12212   \ifFld@hidden\def\Fld@width{1sp}\fi
12213   \Hy@escapeform\PDFForm@Reset
12214   \pdfstartlink user {\PDFForm@Reset}\relax
12215   \MakeButtonField{#2}%
12216   \pdfendlink
12217   \HyField@AddToFields
12218 \fi
12219 \endgroup
12220 }
12221 \def\@CheckBox[#1]#2{% parameters, label
12222 \def\Fld@name{#2}%
12223 \def\Fld@default{0}%
12224 \begingroup
12225   \def\Fld@width{\DefaultWidthofCheckBox}%
12226   \def\Fld@height{\DefaultHeightofCheckBox}%
12227   \expandafter\HyField@SetKeys\expandafter{%
12228     \DefaultOptionsofCheckBox,#1%
12229   }%
12230   \PDFForm@Name
12231   \HyField@FlagsCheckBox
12232   \ifFld@hidden\def\Fld@width{1sp}\fi
12233   \LayoutCheckField{#2}{%
12234     \Hy@escapeform\PDFForm@Check
12235     \pdfstartlink user {\PDFForm@Check}\relax
12236     \MakeCheckField{\Fld@width}{\Fld@height}%
12237     \pdfendlink
12238     \HyField@AddToFields
12239   }%
12240 \endgroup
12241 }
12242 \def\Hy@FormObjects{%
12243 \pdfobj {%
12244   <<%
12245     /Type/Encoding%
12246     /Differences[%
12247       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12248       /ring/tilde %
12249       39/quotesingle %
12250       96/grave %
12251       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12252       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12253       /quotedblbase/quotedblleft/quotedblright/quoteleft%
12254       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12255       /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12256       164/currency %
12257       166/brokenbar %
12258       168/dieresis/copyright/ordfeminine %
12259       172/logicalnot/.notdef/registered/macron/degree/plusminus%
12260       /twosuperior/threesuperior/acute/mu %
12261       183/periodcentered/cedilla/onesuperior/ordmasculine %
12262       188/onequarter/onehalf/threequarters %
12263       192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%

```



```

12264      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12265      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12266      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12267      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12268      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12269      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12270      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12271      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12272      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12273  }%
12274  >>%
12275  }%
12276  \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
12277  \pdfobj{%
12278  <<%
12279    /Type/Font%
12280    /Subtype/Type1%
12281    /Name/ZaDb%
12282    /BaseFont/ZapfDingbats%
12283  >>%
12284  }%
12285  \xdef\OBJ@ZaDb{\the\pdflastobj}%
12286  \pdfobj{%
12287  <<%
12288    /Type/Font%
12289    /Subtype/Type1%
12290    /Name/Helv%
12291    /BaseFont/Helvetica%
12292    /Encoding \OBJ@pdfdocencoding\space 0 R%
12293  >>%
12294  }%
12295  \xdef\OBJ@Helv{\the\pdflastobj}%
12296  \global\let\Hy@FormObjects\relax
12297  }
12298  </pdfTeX>

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdf \TeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

12299 <*dvipdfm | xetex>

```

\@Gauge

```

12300 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12301 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12302 }

```

\@Form

```

12303 \def\@Form[#1]{%
12304 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12305 \kvsetkeys{Form}{#1}%
12306 \Hy@FormObjects
12307 \@pdfm@mark{obj @afields []}%
12308 \@pdfm@mark{obj @corder []}%
12309 \@pdfm@mark{%
12310 obj @aform <<%
12311 /Fields @afields%

```

```

12312 /DR<<%
12313 /Font<<%
12314 /ZaDb @OBJZaDb%
12315 /Helv @OBJHelv%
12316 >>%
12317 >>%
12318 /DA(/Helv 10 Tf 0 g)%
12319 /CO @corder%
12320 \ifHy@pdfa
12321 \else
12322 /NeedAppearances true%
12323 \fi
12324 >>%
12325 }%
12326 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
12327 }

```

\@endForm

```

12328 \def\@endForm{}

```

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

```

12329 \def\dvipdfm@setdim{%
12330 height \the\ht\pdfm@box\space
12331 width \the\wd\pdfm@box\space
12332 depth \the\dp\pdfm@box\space
12333 }

```

\HyField@AnnotCount

```

12334 \newcount\HyField@AnnotCount
12335 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

12336 \def\HyField@AdvanceAnnotCount{%
12337 \global\advance\HyField@AnnotCount\@ne
12338 }

```

\HyField@TheAnnotCount

```

12339 \def\HyField@TheAnnotCount{%
12340 \the\HyField@AnnotCount
12341 }

```

\@TextField

```

12342 \def\@TextField[#1]#2{% parameters, label
12343 \def\Fld@name{#2}%
12344 \def\Fld@default{}%
12345 \let\Fld@value\@empty
12346 \def\Fld@width{\DefaultWidthofText}%
12347 \def\Fld@height{%
12348 \ifFld@multiline
12349 \DefaultHeightofTextMultiline
12350 \else
12351 \DefaultHeightofText
12352 \fi
12353 }%
12354 \begingroup
12355 \expandafter\HyField@SetKeys\expandafter{%

```

```

12356 \DefaultOptionsofText,#1%
12357 }%
12358 \PDFForm@Name
12359 \HyField@FlagsText
12360 \ifFld@hidden\def\Fld@width{1sp}\fi
12361 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12362 \setbox\pdfm@box=\hbox{%
12363 \MakeTextField{\Fld@width}{\Fld@height}%
12364 }%
12365 \HyField@AdvanceAnnotCount
12366 \LayoutTextField{#2}{%
12367 \Hy@escapeform\PDFForm@Text
12368 \@pdfm@mark{%
12369 ann @text\HyField@TheAnnotCount\space
12370 \dvipdfm@setdim << \PDFForm@Text >>%
12371 }%
12372 }%
12373 \unhbox\pdfm@box
12374 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12375 % record in @afields array
12376 \endgroup
12377 }

```

\@ChoiceMenu

```

12378 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12379 \def\Fld@name{#2}%
12380 \let\Fld@default\relax
12381 \let\Fld@value\relax
12382 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12383 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12384 \begingroup
12385 \Fld@menulength=0 %
12386 \@tempdima\z@
12387 \@for\@curropt:=#3\do{%
12388 \expandafter\Fld@checkequals\@curropt==\%
12389 \Hy@StepCount\Fld@menulength
12390 \settowidth{\@tempdimb}{\@currDisplay}%
12391 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12392 }%
12393 \advance\@tempdima by 15\p@
12394 \begingroup
12395 \HyField@SetKeys{#1}%
12396 \edef\x{\endgroup
12397 \noexpand\expandafter
12398 \noexpand\HyField@SetKeys
12399 \noexpand\expandafter{%
12400 \expandafter\noexpand\csname DefaultOptionsof%
12401 \ifFld@radio
12402 Radio%
12403 \else
12404 \ifFld@combo
12405 \ifFld@popdown
12406 PopdownBox%
12407 \else
12408 ComboBox%
12409 \fi
12410 \else

```

```

12411         ListBox%
12412     \fi
12413 \fi
12414 \endcsname
12415 }%
12416 }\x
12417 \HyField@SetKeys{#1}%
12418 \PDFForm@Name
12419 \ifFld@hidden\def\Fld@width{1sp}\fi
12420 \ifx\Fld@value\relax
12421     \let\Fld@value\Fld@default
12422 \fi
12423 \LayoutChoiceField{#2}{%
12424     \ifFld@radio
12425         \HyField@FlagsRadioButton
12426         \@@Radio{#3}%
12427     \else
12428         \begingroup
12429         \HyField@FlagsChoice
12430         \ifdim\Fld@width<\@tempdima
12431             \ifdim\@tempdima<1cm\@tempdima1cm\fi
12432             \edef\Fld@width{\the\@tempdima}%
12433         \fi
12434         \ifFld@combo
12435         \else
12436             \@tempdima=\the\Fld@menulength\Fld@charsize
12437             \advance\@tempdima by \Fld@borderwidth bp %
12438             \advance\@tempdima by \Fld@borderwidth bp %
12439             \edef\Fld@height{\the\@tempdima}%
12440         \fi
12441         \@@ListBox{#3}%
12442     \endgroup
12443 \fi
12444 }%
12445 \endgroup
12446 }

```

\@@Radio

```

12447 \def\@@Radio#1{%
12448     \Fld@listcount=0 %
12449     \setbox\pdfm@box=\hbox{%
12450         \MakeRadioField{\Fld@width}{\Fld@height}%
12451     }%
12452     \@for\@curropt:=#1\do{%
12453         \expandafter\Fld@checkequals\@curropt==\%
12454         \Hy@StepCount\Fld@listcount
12455         \@currDisplay\space
12456         \leavevmode
12457         \Hy@escapeform\PDFForm@Radio
12458         \ifnum\Fld@listcount=1 %
12459             \HyField@AdvanceAnnotCount
12460         \fi
12461         \@pdfm@mark{%
12462             ann %
12463             \ifnum\Fld@listcount=1 %
12464                 @radio\HyField@TheAnnotCount%
12465             \space

```

```

12466 \fi
12467 \dvi pdfm@setdim
12468 <<%
12469 \PDFForm@Radio
12470 /AP<</N<</\@currValue /null>>>>%
12471 >>%
12472 }%
12473 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12474 \ifnum\Fld@listcount=1 %
12475 \@pdfm@mark{%
12476 put @afields @radio\HyField@TheAnnotCount
12477 }%
12478 \fi
12479 }%
12480 }

```

\Fld@listcount

```

12481 \newcount\Fld@listcount

```

\@@Listbox

```

12482 \def\@@Listbox#1{%
12483 \HyField@PDFChoices{#1}%
12484 \setbox\pdfm@box=\hbox{%
12485 \MakeChoiceField{\Fld@width}{\Fld@height}%
12486 }%
12487 \leavevmode
12488 \Hy@escapeform\PDFForm@List
12489 \HyField@AdvanceAnnotCount
12490 \@pdfm@mark{%
12491 ann @list\HyField@TheAnnotCount\space
12492 \dvi pdfm@setdim
12493 <<\PDFForm@List>>%
12494 }%
12495 \unhbox\pdfm@box
12496 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12497 }

```

\@PushButton

```

12498 \def\@PushButton[#1]#2{% parameters, label
12499 \def\Fld@name{#2}%
12500 \begingroup
12501 \expandafter\HyField@SetKeys\expandafter{%
12502 \DefaultOptionsofPushButton,#1%
12503 }%
12504 \PDFForm@Name
12505 \ifHy@pdfa
12506 \PackageError{hyperref}{%
12507 PDF/A: Push button with JavaScript is prohibited%
12508 }{\@ehc
12509 \LayoutPushButtonField{%
12510 \leavevmode
12511 \MakeButtonField{#2}%
12512 }%
12513 \else
12514 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12515 \HyField@FlagsPushButton
12516 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

12517 \HyField@AdvanceAnnotCount
12518 \LayoutPushButtonField{%
12519 \leavevmode
12520 \Hy@escapeform\PDFForm@Push
12521 \@pdfm@mark{%
12522 ann @push\HyField@TheAnnotCount\space
12523 \dvipdfm@setdim
12524 <<\PDFForm@Push>>%
12525 }%
12526 }%
12527 \unhbox\pdfm@box
12528 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12529 \fi
12530 \endgroup
12531 }

```

\@Submit

```

12532 \def\@Submit[#1]#2{%
12533 \def\Fld@width{\DefaultWidthofSubmit}%
12534 \def\Fld@height{\DefaultHeightofSubmit}%
12535 \begingroup
12536 \expandafter\HyField@SetKeys\expandafter{%
12537 \DefaultOptionsofSubmit,#1%
12538 }%
12539 \HyField@FlagsPushButton
12540 \HyField@FlagsSubmit
12541 \ifFld@hidden\def\Fld@width{1sp}\fi
12542 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12543 \leavevmode
12544 \Hy@escapeform\PDFForm@Submit
12545 \HyField@AdvanceAnnotCount
12546 \@pdfm@mark{%
12547 ann @submit\HyField@TheAnnotCount\space
12548 \dvipdfm@setdim
12549 <<\PDFForm@Submit>>%
12550 }%
12551 \unhbox\pdfm@box%
12552 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12553 \endgroup
12554 }

```

\@Reset

```

12555 \def\@Reset[#1]#2{%
12556 \def\Fld@width{\DefaultWidthofReset}%
12557 \def\Fld@height{\DefaultHeightofReset}%
12558 \begingroup
12559 \expandafter\HyField@SetKeys\expandafter{%
12560 \DefaultOptionsofReset,#1%
12561 }%
12562 \leavevmode
12563 \ifHy@pdfa
12564 \PackageError{hyperref}{%
12565 PDF/A: Reset action is prohibited%
12566 }\@ehc
12567 \MakeButtonField{#2}%
12568 \else
12569 \HyField@FlagsPushButton

```

```

12570 \ifFld@hidden\def\Fld@width{1sp}\fi
12571 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}}%
12572 \Hy@escapeform\PDFForm@Reset
12573 \HyField@AdvanceAnnotCount
12574 \@pdfm@mark{%
12575   ann @reset\HyField@TheAnnotCount\space
12576   \dvipdfm@setdim
12577   <<\PDFForm@Reset>>%
12578 }%
12579 \unhbox\pdfm@box
12580 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12581 \fi
12582 \endgroup
12583 }

```

\@CheckBox

```

12584 \def\@CheckBox[#1]#2{% parameters, label
12585 \def\Fld@name{#2}%
12586 \def\Fld@default{0}%
12587 \begingroup
12588 \def\Fld@width{\DefaultWidthofCheckBox}%
12589 \def\Fld@height{\DefaultHeightofCheckBox}%
12590 \expandafter\HyField@SetKeys\expandafter{%
12591   \DefaultOptionsofCheckBox,#1%
12592 }%
12593 \PDFForm@Name
12594 \HyField@FlagsCheckBox
12595 \ifFld@hidden\def\Fld@width{1sp}\fi
12596 \setbox\pdfm@box=\hbox{%
12597   \MakeCheckField{\Fld@width}{\Fld@height}%
12598 }%
12599 \HyField@AdvanceAnnotCount
12600 \LayoutCheckField{#2}{%
12601   \Hy@escapeform\PDFForm@Check
12602   \@pdfm@mark{%
12603     ann @check\HyField@TheAnnotCount\space
12604     \dvipdfm@setdim
12605     <<\PDFForm@Check>>%
12606   }%
12607   \unhbox\pdfm@box
12608   \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12609 }%
12610 \endgroup
12611 }

12612 \def\Hy@FormObjects{%
12613 \@pdfm@mark{obj @OBJpdfdocencoding%
12614 <<%
12615 /Type/Encoding%
12616 /Differences%
12617 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12618 39/quotesingle %
12619 96/grave %
12620 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12621 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12622 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12623 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12624 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %

```

```

12625      164/currency %
12626      166/brokenbar %
12627      168/dieresis/copyright/ordfeminine %
12628      172/logicalnot/.notdef/registered/macron/degree/plusminus%
12629      /twosuperior/threesuperior/acute/mu %
12630      183/periodcentered/cedilla/onesuperior/ordmasculine %
12631      188/onequarter/onehalf/threequarters %
12632      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12633      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12634      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12635      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12636      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12637      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12638      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12639      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
12640      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12641      /thorn/ydieresis%
12642      ]%
12643      >>%
12644      }%
12645      \@pdfm@mark{obj @OBJZaDb%
12646      <<%
12647      /Type/Font%
12648      /Subtype/Type1%
12649      /Name/ZaDb%
12650      /BaseFont/ZapfDingbats%
12651      >>%
12652      }%
12653      \@pdfm@mark{obj @OBJHelv%
12654      <<%
12655      /Type/Font%
12656      /Subtype/Type1%
12657      /Name/Helv%
12658      /BaseFont/Helvetica%
12659      /Encoding @OBJpdfdocencoding%
12660      >>%
12661      }%
12662      \global\let\Hy@FormObjects\relax
12663      }
12664      </dvipdfm | xetex>

```

47.6 Common forms part

```

12665      (*pdfmform)

```

\Hy@escapestring

```

12666      \begingroup\expandafter\expandafter\expandafter\endgroup
12667      \expandafter\ifx\csname pdfescapestring\endcsname\relax
12668      \let\Hy@escapestring\@firstofone
12669      \def\Hy@escapeform#1{%
12670      \ifHy@escapeform
12671      \def\Hy@escapestring##1{%
12672      \noexpand\Hy@escapestring{\noexpand##1}%
12673      }%
12674      \edef\Hy@temp{#1}%
12675      \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
12676      \def\Hy@escapestring##1{%

```



```

12677 \ifundefined{Hy@esc@\string##1}{%
12678   ##1%
12679   \ThisShouldNotHappen
12680 }{%
12681   \csname Hy@esc@\string##1\endcsname
12682 }%
12683 }%
12684 \else
12685   \let\Hy@escapestring\@firstofone
12686 \fi
12687 }%
12688 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
12689   \ifx\#3\%
12690   \else
12691     \expandafter
12692     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12693     \Hy@ReturnAfterFi{%
12694       \Hy@@escapeform#3\@nil
12695     }%
12696   \fi
12697 }%
12698 \else
12699 \def\Hy@escapeform#1{%
12700   \ifHy@escapeform
12701     \let\Hy@escapestring\pdfescapestring
12702   \else
12703     \let\Hy@escapestring\@firstofone
12704   \fi
12705 }%
12706 \Hy@escapeform{}%
12707 \fi

```

\PDFForm@Name

```

12708 \def\PDFForm@Name{%
12709   \begingroup
12710     \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12711       \ifHy@unicode
12712         \Hy@unicodedefalse
12713       \fi
12714     \fi
12715     \HyPsd@XeTeXBigCharstrue
12716     \pdfstringdef\Hy@gtemp\Fld@name
12717   \endgroup
12718   \let\Fld@name\Hy@gtemp
12719 }

```

\Fld@additionalactions

```

12720 \def\Fld@@additionalactions{%
K input (keystroke) format
12721   \ifx\Fld@keystroke@code\@empty
12722   \else
12723     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12724   \fi
F display format
12725   \ifx\Fld@format@code\@empty
12726   \else

```

```

12727   /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12728   \fi

V validation
12729   \ifx\Fld@validate@code\@empty
12730   \else
12731   /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12732   \fi

C calculation
12733   \ifx\Fld@calculate@code\@empty
12734   \else
12735   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12736   \fi

Fo receiving the input focus
12737   \ifx\Fld@onfocus@code\@empty
12738   \else
12739   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12740   \fi

Bl loosing the input focus (blurred)
12741   \ifx\Fld@onblur@code\@empty
12742   \else
12743   /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12744   \fi

D pressing the mouse button (down)
12745   \ifx\Fld@onmousedown@code\@empty
12746   \else
12747   /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12748   \fi

U releasing the mouse button (up)
12749   \ifx\Fld@onmouseup@code\@empty
12750   \else
12751   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12752   \fi

E cursor enters the annotation's active area.
12753   \ifx\Fld@onenter@code\@empty
12754   \else
12755   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12756   \fi

X cursor exits the annotation's active area.
12757   \ifx\Fld@onexit@code\@empty
12758   \else
12759   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12760   \fi
12761 }
12762 \def\Fld@additionalactions{%
12763   \if\Fld@@additionalactions-%
12764   \else
12765     \ifHy@pdfa
12766     \else
12767       /AA<<\Fld@@additionalactions>>%
12768     \fi
12769   \fi
12770 }

```

\PDFForm@Check

```
12771 \def\PDFForm@Check{%
12772   /Subtype/Widget%
12773   \Fld@annotflags
12774   /T(\Fld@name)%
12775   /FT/Btn%
12776   \Fld@flags
12777   /Q \Fld@align
12778   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12779   /MK<<%
12780     \ifnum\Fld@rotation=\z@
12781     \else
12782       /R \Fld@rotation
12783     \fi
12784     \ifx\Fld@bordercolor\relax
12785     \else
12786       /BC[\Fld@bordercolor]%
12787     \fi
12788     \ifx\Fld@bcolor\relax
12789     \else
12790       /BG[\Fld@bcolor]%
12791     \fi
12792     /CA(\Hy@escapestring{\Fld@cbsymbol})%
12793   >>%
12794   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12795     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12796   /H/P%
12797   \ifFld@checked /V/Yes\else /V/Off\fi
12798   \Fld@additionalactions
12799 }
```

\PDFForm@Push

```
12800 \ifHy@pdfa
12801 \else
12802   \def\PDFForm@Push{%
12803     /Subtype/Widget%
12804     \Fld@annotflags
12805     /T(\Fld@name)%
12806     /FT/Btn%
12807     \Fld@flags
12808     /H/P%
12809     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12810     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12811       \ifx\Fld@bordercolor\relax\else 1\fi
12812       \space
12813     \else
12814       /MK<<%
12815         \ifnum\Fld@rotation=\z@
12816         \else
12817           /R \Fld@rotation
12818         \fi
12819         \ifx\Fld@bordercolor\relax
12820         \else
12821           /BC[\Fld@bordercolor]%
12822         \fi
12823       >>%
12824     \fi
```

```

12825   /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12826   \Fld@additionalactions
12827   }%
12828 \fi

```

\PDFForm@List

```

12829 \def\PDFForm@List{%
12830   /Subtype/Widget%
12831   \Fld@annotflags
12832   /T(\Fld@name)%
12833   /FT/Ch%
12834   \Fld@flags
12835   /Q \Fld@align
12836   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12837   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12838     \ifx\Fld@bordercolor\relax\else 1\fi
12839     \ifx\Fld@bcolor\relax \else 1\fi
12840     \space
12841   \else
12842     /MK<<%
12843     \ifnum\Fld@rotation=\z@
12844     \else
12845       /R \Fld@rotation
12846     \fi
12847     \ifx\Fld@bordercolor\relax
12848     \else
12849       /BC[\Fld@bordercolor]%
12850     \fi
12851     \ifx\Fld@bcolor\relax
12852     \else
12853       /BG[\Fld@bcolor]%
12854     \fi
12855     >>%
12856   \fi
12857   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12858     \ifx\Fld@color@empty\else\space\Fld@color\fi)%
12859   \Fld@choices
12860   \Fld@additionalactions
12861 }

```

\PDFForm@Radio

```

12862 \def\PDFForm@Radio{%
12863   /Subtype/Widget%
12864   \Fld@annotflags
12865   /T(\Fld@name)%
12866   /FT/Btn%
12867   \Fld@flags
12868   /H/P%
12869   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12870   /MK<<%
12871     \ifnum\Fld@rotation=\z@
12872     \else
12873       /R \Fld@rotation
12874     \fi
12875     \ifx\Fld@bordercolor\relax
12876     \else
12877       /BC[\Fld@bordercolor]%

```

```

12878 \fi
12879 \ifx\Fld@bcolor\relax
12880 \else
12881 /BG[\Fld@bcolor]%
12882 \fi
12883 /CA(\Fld@radiosymbol)%
12884 >>%
12885 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12886 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12887 \ifx\@currValue\Fld@default
12888 /V/\Fld@default
12889 \else
12890 /V/Off%
12891 \fi
12892 \Fld@additionalactions
12893 }

```

\PDFForm@Text

```

12894 \def\PDFForm@Text{%
12895 /Subtype/Widget%
12896 \Fld@annotflags
12897 /T(\Fld@name)%
12898 /FT/Tx%
12899 \Fld@flags
12900 /Q \Fld@align
12901 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12902 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12903 \ifx\Fld@bordercolor\relax\else 1\fi
12904 \ifx\Fld@bcolor\relax \else 1\fi
12905 \space
12906 \else
12907 /MK<<%
12908 \ifnum\Fld@rotation=\z@
12909 \else
12910 /R \Fld@rotation
12911 \fi
12912 \ifx\Fld@bordercolor\relax
12913 \else
12914 /BC[\Fld@bordercolor]%
12915 \fi
12916 \ifx\Fld@bcolor\relax
12917 \else
12918 /BG[\Fld@bcolor]%
12919 \fi
12920 >>%
12921 \fi
12922 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12923 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12924 /DV(\Hy@escapestring{\Fld@default})%
12925 /V(\Hy@escapestring{\Fld@value})%
12926 \Fld@additionalactions
12927 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12928 }

```

\PDFForm@Submit

```

12929 \def\PDFForm@Submit{%
12930 /Subtype/Widget%

```

```

12931 \Fld@annotflags
12932 /T(\Fld@name)%
12933 /FT/Btn%
12934 \Fld@flags
12935 /H/P%
12936 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12937 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12938     \ifx\Fld@bordercolor\relax\else 1\fi
12939     \space
12940 \else
12941     /MK<<%
12942     \ifnum\Fld@rotation=\z@
12943     \else
12944         /R \Fld@rotation
12945     \fi
12946     \ifx\Fld@bordercolor\relax
12947     \else
12948         /BC[\Fld@bordercolor]%
12949     \fi
12950 >>%
12951 \fi
12952 /A<<%
12953 /S/SubmitForm%
12954 /F<<%
12955     /FS/URL%
12956     /F(\Hy@escapestring{\Form@action})%
12957 >>%
12958 \Fld@submitflags
12959 >>%
12960 \Fld@additionalactions
12961 }

```

\PDFForm@Reset

```

12962 \ifHy@pdfa
12963 \else
12964 \def\PDFForm@Reset{%
12965     /Subtype/Widget%
12966     \Fld@annotflags
12967     /T(\Fld@name)%
12968     /FT/Btn%
12969     \Fld@flags
12970     /H/P%
12971     /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12972     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12973         \ifx\Fld@bordercolor\relax\else 1\fi
12974         \space
12975 \else
12976     /MK<<%
12977     \ifnum\Fld@rotation=\z@
12978     \else
12979         /R \Fld@rotation
12980     \fi
12981     \ifx\Fld@bordercolor\relax
12982     \else
12983         /BC[\Fld@bordercolor]%
12984     \fi
12985 %     /CA (Clear)

```

```

12986 %      /AC (Done)
12987      >>%
12988      \fi
12989      /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12990      /A<</S/ResetForm>>%
12991      \Fld@additionalactions
12992      }%
12993      \fi

12994 </pdfform>
12995 <*package>

```

48 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`

```

12996 \def\phantomsection{%
12997   \Hy@MakeCurrentHrefAuto{section*}%
12998   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12999 }
13000 </package>

```

48.1 Bookmarks

```
13001 <*outlines>
```

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

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

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

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

```

13002 \def\Hy@writebookmark#1#2#3#4#5{%
13003   % section number, text, label, level, file
13004   \ifx\WriteBookmarks\relax%
13005     \else
13006     \ifnum#4>\Hy@bookmarksdepth\relax
13007     \else
13008       \@writetorep{#1}{#2}{#3}{#4}{#5}%
13009     \fi
13010   \fi
13011 }

```

```

13012 \def\Hy@currentbookmarklevel{0}
13013 \def\Hy@numberline#1{#1 }
13014 \def\@writetorep#1#2#3#4#5{%
13015   \begingroup
13016   \edef\Hy@tempa{#5}%
13017   \ifx\Hy@tempa\Hy@bookmarkstype
13018     \edef\Hy@level{#4}%
13019     \ifx\Hy@levelcheck Y%
13020       \@tempcnta\Hy@level\relax
13021       \advance\@tempcnta by -1 %
13022       \ifnum\Hy@currentbookmarklevel<\@tempcnta
13023         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
13024         \advance\@tempcnta by 1 %
13025         \Hy@Warning{%
13026           Difference (\the\@tempcnta) between bookmark levels is %
13027           greater \MessageBreak than one, level fixed%
13028         }%
13029         \@tempcnta\Hy@currentbookmarklevel
13030         \advance\@tempcnta by 1 %
13031         \edef\Hy@level{\the\@tempcnta}%
13032       \fi
13033     \else
13034       \global\let\Hy@levelcheck Y%
13035     \fi
13036     \global\let\Hy@currentbookmarklevel\Hy@level
13037     \@tempcnta\Hy@level\relax
13038     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
13039     \advance\@tempcnta by -1 %
13040     \edef\Hy@tempa{#3}%
13041     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
13042     \ifx\Hy@tempa\Hy@tempb
13043       \Hy@Warning{%
13044         The anchor of a bookmark and its parent's must not%
13045         \MessageBreak be the same. Added a new anchor%
13046       }%
13047     \phantomsection
13048   \fi
13049   \ifHy@bookmarksnumbered
13050     \let\numberline\Hy@numberline
13051     \let\booknumberline\Hy@numberline
13052     \let\partnumberline\Hy@numberline
13053     \let\chapternumberline\Hy@numberline
13054   \else
13055     \let\numberline\@gobble
13056     \let\booknumberline\@gobble
13057     \let\partnumberline\@gobble
13058     \let\chapternumberline\@gobble
13059   \fi
13060   \HyPsd@XeTeXBigCharstrue
13061   \pdfstringdef\Hy@tempa{#2}%
13062   \HyPsd@SanitizeForOutFile\Hy@tempa
13063   \if@filesw
13064     \stepcounter{bookmark@seq@number}%
13065     \ifundefined{@outlinefile}{%
13066       }{%
13067         \protected@write\@outlinefile{}{%
13068           \protect\BOOKMARK

```



```

13069      [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
13070      {\Hy@tempa}{\Hy@tempb}%
13071      \@percentchar\space\thebookmark@seq@number
13072      }%
13073      }%
13074      \fi
13075      \fi
13076      \endgroup
13077 }
13078 \newcounter{bookmark@seq@number}

13079 \begingroup
13080 \lccode'('= '{%
13081 \lccode'('= '}%
13082 \lccode'1=\z@
13083 \lccode'2=\z@
13084 \lccode'3=\z@
13085 \lccode'5=\z@
13086 \lccode'7=\z@
13087 \lccode'\#=\z@
13088 \lccode'\='=\z@
13089 \lccode'\{=\z@
13090 \lccode'\}= \z@
13091 \lowercase{%
13092 \endgroup
13093 \def\HyPsd@SanitizeForOutFile#1{%
13094   \@onelevel@sanitize\Hy@tempa
13095   \escapechar'\%
13096   \edef\Hy@tempa{%
13097     \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
13098   }%
13099   \edef\Hy@tempa{%
13100     \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
13101   }%
13102 }%
13103 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
13104   #1%
13105   \ifx\#2\%
13106     \expandafter\ltx@gobble
13107   \else
13108     \expandafter\ltx@firstofone
13109   \fi
13110   {%
13111     \string\173%
13112     \HyPsd@SanitizeOut@BraceLeft#2\@nil
13113   }%
13114 }%
13115 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
13116   #1%
13117   \ifx\#2\%
13118     \expandafter\ltx@gobble
13119   \else
13120     \expandafter\ltx@firstofone
13121   \fi
13122   {%
13123     \string\175%
13124     \HyPsd@SanitizeOut@BraceRight#2\@nil
13125   }%

```

```

13126 }%
13127 }

```

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

```

13128 \newcommand{\currentpdfbookmark}{%
13129   \pdfbookmark[\Hy@currentbookmarklevel]%
13130 }
13131 \newcommand{\subpdfbookmark}{%
13132   \@tempcnta\Hy@currentbookmarklevel
13133   \Hy@StepCount\@tempcnta
13134   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
13135 }
13136 \newcommand{\belowpdfbookmark}[2]{%
13137   \@tempcnta\Hy@currentbookmarklevel
13138   \Hy@StepCount\@tempcnta
13139   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
13140   \advance\@tempcnta by -1 %
13141   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
13142 }

```

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.

```

13143 \renewcommand\pdfbookmark[3][0]{%
13144   \Hy@writebookmark[{#2}]{#3.#1}{#1}{toc}%
13145   \hyper@anchorstart{#3.#1}\hyper@anchorend
13146 }
13147 \def\BOOKMARK{%
13148   \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
13149 }
13150 \def\@BOOKMARK[#1]{%
13151   \@ifnextchar[{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
13152 }

```

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

48.1.1 Rerun warning

```
\Hy@OutlineRerunCheck
```

```

13153 \RequirePackage{rerunfilecheck}[2009/12/10]
13154 \def\Hy@OutlineRerunCheck{%
13155   \RerunFileCheck{\jobname.out}{%
13156     \immediate\closeout\@outlinefile
13157   }{%
13158     Rerun to get outlines right\MessageBreak
13159     or use package ‘bookmark’%
13160   }%
13161 }

```

48.1.2 Driver stuff

The `VTEX` section was written originally by `VTEX`, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that `VTEX`, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

13162 <*vtex>
13163 \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.

```

13164 \begingroup
13165 \catcode'\'=12 %
13166 \ifnum\Hy@TeXversion<650 %
13167 \catcode'\ "=12 %
13168 \gdef\hv@pdf@char#1#2#3{%
13169 \char
13170 \ifcase'#1#2#3 %
13171 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
13172 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
13173 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
13174 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
13175 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
13176 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
13177 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
13178 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
13179 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
13180 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
13181 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
13182 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
13183 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
13184 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
13185 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
13186 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
13187 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
13188 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
13189 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
13190 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13191 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13192 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13193 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
13194 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13195 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13196 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13197 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13198 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13199 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
13200 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13201 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13202 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13203 \fi
13204 }%
13205 \else
13206 \gdef\hv@pdf@char{\char'}%
13207 \fi
13208 \endgroup

```

\@@BOOKMARK

```

13209 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13210 \expandafter\edef\csname @count@#3\endcsname{%
13211 \the\@serial@counter
13212 }%
13213 \edef\@mycount{\the\@serial@counter}%
13214 \Hy@StepCount\@serial@counter
13215 \edef\@parcount{%

```

```

13216 \expandafter\ifx\csname @count@#5\endcsname\relax
13217 0%
13218 \else
13219 \csname @count@#5\endcsname
13220 \fi
13221 }%
13222 \immediate\special{%
13223 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13224 s=\ifx#2-c\else o\fi,t=#4%
13225 }%
13226 }%

```

\ReadBookmarks

```

13227 \def\ReadBookmarks{%
13228 \begingroup
13229 \def\0{\hv@pdf@char 0}%
13230 \def\1{\hv@pdf@char 1}%
13231 \def\2{\hv@pdf@char 2}%
13232 \def\3{\hv@pdf@char 3}%
13233 \def\{({}%
13234 \def\)}{)%
13235 \def\do##1{%
13236 \ifnum\catcode'##1=\active
13237 \@makeother##1%
13238 \else
13239 \ifnum\catcode'##1=6 %
13240 \@makeother##1%
13241 \fi
13242 \fi
13243 }%
13244 \dospecials
13245 \Hy@safe@activetrue
13246 \InputIfFileExists{\jobname.out}{\}{}%
13247 \endgroup
13248 \ifx\WriteBookmarks\relax
13249 \else
13250 \if@filesw
13251 \newwrite\@outlinefile
13252 \Hy@OutlineRerunCheck
13253 \immediate\openout\@outlinefile=\jobname.out\relax
13254 \ifHy@typexml
13255 \immediate\write\@outlinefile{<relaxxml>\relax}%
13256 \fi
13257 \fi
13258 \fi
13259 }

13260 </vtex>
13261 <!*vtex>
13262 \def\ReadBookmarks{%
13263 \begingroup
13264 \def\do##1{%
13265 \ifnum\catcode'##1=\active
13266 \@makeother##1%
13267 \else
13268 \ifnum\catcode'##1=6 %
13269 \@makeother##1%

```

```

13270 \fi
13271 \fi
13272 }%
13273 \dospecials
13274 \Hy@safe@activetrue
13275 \escapechar='\%
13276 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13277 \calc@bm@number{##5}%
13278 }%
13279 \InputIfFileExists{\jobname.out}{-}{-}%
13280 \ifx\WriteBookmarks\relax
13281 \global\let\WriteBookmarks\relax
13282 \fi
13283 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13284 \def\Hy@temp{##4}%
13285 <*pdftex>
13286 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13287 \Hy@OutlineName{\Hy@pstringName{%
13288 ##2\check@bm@number{##3}}%
13289 }{%
13290 \expandafter\strip@prefix\meaning\Hy@temp
13291 }%
13292 </pdftex>
13293 <*pdfmark>
13294 \pdfmark{%
13295 pdfmark=/OUT,%
13296 Count={##2\check@bm@number{##3}},%
13297 Dest={##3},%
13298 Title=\expandafter\strip@prefix\meaning\Hy@temp
13299 }%
13300 </pdfmark>
13301 <*dvipdfm|xetex>
13302 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13303 \@pdfm@mark{%
13304 outline \ifHy@DvipdfmxOutlineOpen
13305 [%
13306 \ifnum##21>\z@
13307 \else
13308 -%
13309 \fi
13310 ] %
13311 \fi
13312 ##1<<%
13313 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13314 /A<<%
13315 /S/GoTo%
13316 /D(\Hy@pstringName)%
13317 >>%
13318 >>%
13319 }%
13320 </dvipdfm|xetex>
13321 }%
13322 {%
13323 \def\WriteBookmarks{0}%
13324 \InputIfFileExists{\jobname.out}{-}{-}%
13325 }%
13326 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%

```

```

13327 \ifx\WriteBookmarks\relax
13328 \else
13329 \if@filesw
13330 \newwrite\@outlinefile
13331 \Hy@OutlineRerunCheck
13332 \immediate\openout\@outlinefile=\jobname.out\relax
13333 \ifHy@typexml
13334 \immediate\write\@outlinefile{<relaxxml>\relax}%
13335 \fi
13336 \fi
13337 \fi
13338 \endgroup
13339 }
13340 <*pdfTex>
13341 \def\Hy@OutlineName#1#2#3#4{%
13342 \pdfoutline goto name{#2}count#3{#4}%
13343 }
13344 </pdfTex>
13345 \def\check@bm@number#1{%
13346 \expandafter\ifx\csname B_#1\endcsname\relax
13347 0%
13348 \else
13349 \csname B_#1\endcsname
13350 \fi
13351 }
13352 \def\calc@bm@number#1{%
13353 \@tempcnta=\check@bm@number{#1}\relax
13354 \advance\@tempcnta by 1 %
13355 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13356 }
13357 </!vtex>

13358 \ifHy@implicit
13359 \else
13360 \expandafter\endinput
13361 \fi

13362 </outlines>
13363 <*outlines | hypertex>

13364 \newlength\Hy@SectionHShift
13365 \def\Hy@SectionAnchorHref#1{%
13366 \ifx\protect\@typeset@protect
13367 \Hy@@SectionAnchor{#1}%
13368 \fi
13369 }
13370 \DeclareRobustCommand*\Hy@@SectionAnchor{1}{%
13371 \leavevmode
13372 \hbox to 0pt{%
13373 \kern-\Hy@SectionHShift
13374 \Hy@raisedlink{%
13375 \hyper@anchorstart{#1}\hyper@anchorend
13376 }%
13377 \hss
13378 }%
13379 }
13380 \let\H@old@ssect\@ssect
13381 \def\@ssect#1#2#3#4#5{%
13382 \Hy@MakeCurrentHrefAuto{section*}%

```

```

13383 \setlength{\Hy@SectionHShift}{#1}%
13384 \begingroup
13385 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13386 \toks\tw@\expandafter{%
13387   \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13388   #5%
13389 }%
13390 \edef\x{\endgroup
13391   \the\toks@{\the\toks\tw@}}%
13392 }\x
13393 }
13394 \let\H@old@schapter\@schapter
13395 \def\@schapter#1{%
13396   \begingroup
13397   \let\@mkboth\@gobbletwo
13398   \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13399   \Hy@raisedlink{%
13400     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13401   }%
13402   \endgroup
13403   \H@old@schapter{#1}%
13404 }

```

If there is no chapter number (`\frontmatter` or `\backmatter`) then `\refstepcounter{chapter}` is not executed, so there will be no destination for `\ddcontentsline`. So `\@chapter` is overloaded to avoid this:

```

13405 \ltx@ifundefined{@chapter}{}{%
13406   \let\Hy@org@chapter\@chapter
13407   \def\@chapter{%
13408     \def\Hy@next{%
13409       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13410       \Hy@raisedlink{%
13411         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13412       }%
13413     }%
13414     \ifnum\c@secnumdepth>\m@ne
13415       \ltx@ifundefined{if@mainmatter}%
13416       \iftrue{\csname if@mainmatter\endcsname}%
13417       \let\Hy@next\relax
13418     \fi
13419     \fi
13420     \Hy@next
13421     \Hy@org@chapter
13422   }%
13423 }

13424 \let\H@old@part\@part
13425 \begingroup\expandafter\expandafter\expandafter\endgroup
13426 \expandafter\ifx\csname chapter\endcsname\relax
13427   \let\Hy@secnum@part\z@
13428 \else
13429   \let\Hy@secnum@part\m@ne
13430 \fi
13431 \def\@part{%
13432   \ifnum\Hy@secnum@part>\c@secnumdepth
13433     \phantomsection
13434   \fi
13435   \H@old@part

```

```

13436 }
13437 \let\H@old@spart\@spart
13438 \def\@spart#1{%
13439   \Hy@MakeCurrentHrefAuto{part*}%
13440   \Hy@raisedlink{%
13441     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13442   }%
13443   \H@old@spart{#1}%
13444 }
13445 \let\H@old@sect\@sect
13446 \def\@sect#1#2#3#4#5#6[#7]#8{%
13447   \ifnum #2>\c@secnumdepth
13448     \expandafter\@firstoftwo
13449   \else
13450     \expandafter\@secondoftwo
13451   \fi
13452   {%
13453     \Hy@MakeCurrentHrefAuto{section*}%
13454     \setlength{\Hy@SectionHShift}{#3}%
13455     \begingroup
13456       \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13457       \toks\tw@\expandafter{%
13458         \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13459         #8%
13460       }%
13461       \edef\x{\endgroup
13462         \the\toks@\the\toks\tw@}%
13463       }\x
13464     }{%
13465       \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13466     }%
13467 }
13468 </outlines | hypertex>
13469 <*outlines>
13470 \expandafter\def\csname Parent-4\endcsname{}
13471 \expandafter\def\csname Parent-3\endcsname{}
13472 \expandafter\def\csname Parent-2\endcsname{}
13473 \expandafter\def\csname Parent-1\endcsname{}
13474 \expandafter\def\csname Parent0\endcsname{}
13475 \expandafter\def\csname Parent1\endcsname{}
13476 \expandafter\def\csname Parent2\endcsname{}
13477 \expandafter\def\csname Parent3\endcsname{}
13478 \expandafter\def\csname Parent4\endcsname{}
13479 </outlines>

```

49 Compatibility with koma-script classes

```
13480 <*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.

```

13481 \def\Hy@tempa{%
13482   \def\@addchap[##1]##2{%

```



```

13483 \typeout{##2}%
13484 \if@twoside
13485 \mkboth{##1}{}%
13486 \else
13487 \mkboth{}{##1}%
13488 \fi
13489 \addtocontents{lof}{\protect\addvspace{10\p@}}%
13490 \addtocontents{lot}{\protect\addvspace{10\p@}}%
13491 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13492 \Hy@raisedlink{%
13493 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13494 }%
13495 \if@twocolumn
13496 \topnewpage[\@makeschapterhead{##2}]%
13497 \else
13498 \makeschapterhead{##2}%
13499 \afterheading
13500 \fi
13501 \addcontentsline{toc}{chapter}{##1}%
13502 }%
13503 }
13504 \ifclassloaded{scrbook}{%
13505 \ifclasslater{scrbook}{2001/01/01}{%
13506 \let\Hy@tempa\@empty
13507 }{}%
13508 }{%
13509 \ifclassloaded{scrreprt}{%
13510 \ifclasslater{scrreprt}{2001/01/01}{%
13511 \let\Hy@tempa\@empty
13512 }{}%
13513 }{%
13514 \let\Hy@tempa\@empty
13515 }%
13516 }%
13517 \Hy@tempa
13518 </outlines | hypertext>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

13519 <*pd1enc>
13520 \DeclareFontEncoding{PD1}{}{}

```

Accents

```

13521 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
13522 \DeclareTextAccent{\'}{PD1}{\textacute}
13523 \DeclareTextAccent{\^}{PD1}{\textasciicircum}
13524 \DeclareTextAccent{\~}{PD1}{\texttilde}
13525 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
13526 \DeclareTextAccent{\r}{PD1}{\textring}
13527 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
13528 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
13529 \DeclareTextAccent{\c}{PD1}{\textcedilla}
13530 \DeclareTextAccent{\=}{PD1}{\textasciimacron}

```

```

13531 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
13532 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
13533 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
13534 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
13535 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
13536 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
13537 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
13538 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
13539 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
13540 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
13541 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
13542 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
13543 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
13544 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
13545 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
13546 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
13547 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
13548 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
13549 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
13550 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13551 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13552 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13553 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13554 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13555 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13556 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
13557 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
13558 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
13559 \DeclareTextCommand{\newtie}{PD1}[1]{%
13560 \TextSymbolUnavailable{\newtie{#1}}#1%
13561 }

```

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

```

13562 % U+0009 (CHARACTER TABULATION)
13563 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
13564 % U+000A (LINE FEED)
13565 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
13566 % U+000D (CARRIAGE RETURN)
13567 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

13568 % U+02D8 BREVE; breve
13569 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
13570 % U+02C7 CARON; caron
13571 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13572 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13573 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
13574 % U+02D9 DOT ABOVE; dotaccent
13575 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13576 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13577 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13578 % U+02DB OGONEK; ogonek
13579 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13580 % U+02DA RING ABOVE; ring
13581 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13582 % U+02DC SMALL TILDE; ilde, *tilde
13583 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 13584 % U+0022 QUOTATION MARK; quotedbl
 13585 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 13586 % U+0023 NUMBER SIGN; numbersign
 13587 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 13588 % U+0024 DOLLAR SIGN; dollar
 13589 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 13590 % U+0025 PERCENT SIGN; percent
 13591 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 13592 % U+0026 AMPERSAND; ampersand
 13593 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 13594 % U+0028 LEFT PARENTHESIS; parenleft
 13595 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 13596 % U+0029 RIGHT PARENTHESIS; parenright
 13597 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 13598 % U+002E FULL STOP; period
 13599 \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
 13600 % U+003C LESS-THAN SIGN; less
 13601 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13602 % U+003E GREATER-THAN SIGN; greater
 13603 \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
 13604 % U+005C REVERSE SOLIDUS; backslash
 13605 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13606 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13607 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13608 % U+005F LOW LINE; underscore
 13609 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13610 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13611 % U+0060 GRAVE ACCENT; grave
 13612 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...

\150: U+0068 LATIN SMALL LETTER H; h
 13613 % U+0069 LATIN SMALL LETTER I; i
 13614 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13615 % U+007B LEFT CURLY BRACKET; braceleft
 13616 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13617 % U+007C VERTICAL LINE; *bar, verticalbar
 13618 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13619 % U+007D RIGHT CURLY BRACKET; braceright
 13620 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13621 % U+007E TILDE; asciitilde
 13622 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13623 % U+2022 BULLET; bullet
 13624 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13625 % U+2020 DAGGER; dagger
 13626 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13627 % U+2021 DOUBLE DAGGER; daggerdbl
 13628 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13629 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13630 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13631 % U+2014 EM DASH; emdash
 13632 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 13633 % U+2013 EN DASH; endash
 13634 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 13635 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13636 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 13637 % U+2044 FRACTION SLASH; fraction
 13638 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 13639 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 -ingleft
 13640 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 13641 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 -ingright
 13642 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
 13643 % U+2212 MINUS SIGN; minus
 13644 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 13645 % U+2030 PER MILLE SIGN; perthousand
 13646 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 13647 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 13648 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 13649 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13650 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 13651 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13652 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 13653 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13654 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 13655 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13656 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 13657 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13658 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 13659 % U+2122 TRADE MARK SIGN; trademark
 13660 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 13661 % U+FB01 LATIN SMALL LIGATURE FI; fi
 13662 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01

13663 % U+FB02 LATIN SMALL LIGATURE FL; fl
13664 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13665 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13666 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13667 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13668 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13669 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13670 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13671 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13672 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
13673 \DeclareTextCommand{\IJ}{PD1}{\230}
13674 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13675 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13676 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13677 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13678 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13679 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13680 % U+0153 LATIN SMALL LIGATURE OE; oe
13681 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13682 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13683 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
13684 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
13685 \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.

13686 % U+20AC EURO SIGN; *Euro, euro
13687 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
13688 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
13689 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
13690 % U+00A2 CENT SIGN; cent
13691 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
13692 % U+00A3 POUND SIGN; sterling
13693 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
13694 % U+00A4 CURRENCY SIGN; currency
13695 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
13696 % U+00A5 YEN SIGN; yen
13697 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
13698 % U+00A6 BROKEN BAR; brokenbar
13699 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
13700 % U+00A7 SECTION SIGN; section
13701 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
13702 % U+00A8 DIAERESIS; dieresis
13703 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
13704 % U+00A9 COPYRIGHT SIGN; copyright
13705 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
13706 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
13707 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
13708 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
13709 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
13710 % U+00AC NOT SIGN; logicalnot
13711 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
13712 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

13713 % U+00AE REGISTERED SIGN; registered
13714 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
13715 % U+00AF MACRON; *macron, overscore

13716 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
13717 % U+00B0 DEGREE SIGN; degree
13718 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
13719 % U+00B1 PLUS-MINUS SIGN; plusminus
13720 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
13721 % U+00B2 SUPERSCRIP T TWO; twosuperior
13722 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
13723 % U+00B3 SUPERSCRIP T THREE; threesuperior
13724 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
13725 % U+00B4 ACUTE ACCENT; acute
13726 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
13727 % U+00B5 MICRO SIGN; mu, mul
13728 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
13729 % U+00B6 PILCROW SIGN; paragraph
13730 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
13731 % U+00B7 MIDDLE DOT; middot, *periodcentered
13732 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
13733 % U+00B8 CEDILLA; cedilla
13734 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
13735 % U+00B9 SUPERSCRIP T ONE; onesuperior
13736 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
13737 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13738 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
13739 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13740 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13741 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13742 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13743 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13744 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13745 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13746 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13747 % U+00BF INVERTED QUESTION MARK; questiondown
13748 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13749 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13750 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13751 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13752 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13753 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13754 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13755 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13756 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
13757 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13758 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
13759 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13760 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13761 % U+00C6 LATIN CAPITAL LETTER AE; AE
13762 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13763 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13764 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13765 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13766 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13767 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13768 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13769 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13770 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13771 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis

13772 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
13773 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13774 \DeclareTextCompositeCommand{'}{PD1}{I}{\314}% U+00CC
13775 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13776 \DeclareTextCompositeCommand{'}{PD1}{I}{\315}% U+00CD
13777 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13778 \DeclareTextCompositeCommand{"}{PD1}{I}{\316}% U+00CE
13779 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13780 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
13781 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13782 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13783 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13784 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13785 \DeclareTextCompositeCommand{"}{PD1}{N}{\321}% U+00D1
13786 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13787 \DeclareTextCompositeCommand{'}{PD1}{O}{\322}% U+00D2
13788 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13789 \DeclareTextCompositeCommand{'}{PD1}{O}{\323}% U+00D3
13790 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13791 \DeclareTextCompositeCommand{"}{PD1}{O}{\324}% U+00D4
13792 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13793 \DeclareTextCompositeCommand{"}{PD1}{O}{\325}% U+00D5
13794 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13795 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
13796 % U+00D7 MULTIPLICATION SIGN; multiply
13797 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13798 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13799 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13800 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13801 \DeclareTextCompositeCommand{'}{PD1}{U}{\331}% U+00D9
13802 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13803 \DeclareTextCompositeCommand{'}{PD1}{U}{\332}% U+00DA
13804 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13805 \DeclareTextCompositeCommand{"}{PD1}{U}{\333}% U+00DB
13806 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13807 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
13808 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13809 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
13810 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13811 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13812 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13813 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13814 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13815 \DeclareTextCompositeCommand{'}{PD1}{a}{\340}% U+00E0
13816 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13817 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
13818 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13819 \DeclareTextCompositeCommand{"}{PD1}{a}{\342}% U+00E2
13820 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13821 \DeclareTextCompositeCommand{"}{PD1}{a}{\343}% U+00E3
13822 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13823 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
13824 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13825 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13826 % U+00E6 LATIN SMALL LETTER AE; ae
13827 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13828 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla

13829 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13830 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13831 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13832 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13833 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13834 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13835 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13836 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13837 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13838 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13839 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13840 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13841 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13842 \DeclareTextCompositeCommand{\^}{PD1}{i}{\355}% U+00ED
13843 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13844 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13845 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13846 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13847 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13848 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13849 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13850 % U+00F0 LATIN SMALL LETTER ETH; eth
13851 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13852 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13853 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
13854 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13855 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
13856 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13857 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
13858 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13859 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
13860 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13861 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
13862 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13863 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
13864 % U+00F7 DIVISION SIGN; divide
13865 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
13866 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13867 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
13868 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13869 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
13870 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
13871 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
13872 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13873 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
13874 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13875 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
13876 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13877 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
13878 % U+00FE LATIN SMALL LETTER THORN; thorn
13879 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
13880 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13881 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
13882 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13883 \DeclareTextCommand{\SS}{PD1}{SS}
13884 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

```

13885 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
13886 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
13887 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
13888 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
13889 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
13890 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
13891 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
13892 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

13893 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
13894 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
13895 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
13896 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
13897 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
13898 \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).

```

13899 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13900 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13901 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13902 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13903 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13904 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13905 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13906 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13907 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13908 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13909 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13910 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13911 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13912 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
13913 </pdlenc>

```

50.2 PU encoding

```

13914 <*puenc>
13915 \DeclareFontEncoding{PU}{-}{}

```

50.2.1 NFSS2 accents

```

13916 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
13917 \DeclareTextCommand{\'}{PU}[1]{\#1\83\000}% U+0300
13918 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
13919 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
13920 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
13921 \DeclareTextCommand{\`}{PU}[1]{\#1\83\002}% U+0302
13922 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
13923 \DeclareTextCommand{\~}{PU}[1]{\#1\83\003}% U+0303
13924 % U+0304 COMBINING MACRON; macroncmb
13925 \DeclareTextCommand{\=}{PU}[1]{\#1\83\004}% U+0304
13926 % U+0306 COMBINING BREVE; brevecmb
13927 \DeclareTextCommand{\u}{PU}[1]{\#1\83\006}% U+0306
13928 \DeclareTextCommand{\U}{PU}[1]{\#1\83\006}% U+0306
13929 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
13930 \DeclareTextCommand{\.}{PU}[1]{\#1\83\007}% U+0307
13931 % U+0308 COMBINING DIAERESIS; dieresiscmb

```

13932 \DeclareTextCommand{"}{PU}[1]{#1\83\010}% U+0308
13933 % U+030A COMBINING RING ABOVE; ringcmb
13934 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
13935 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
13936 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
13937 % U+030C COMBINING CARON; caroncmb
13938 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
13939 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13940 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
13941 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
13942 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13943 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
13944 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
13945 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
13946 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13947 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
13948 % U+0327 COMBINING CEDILLA; cedillacmb
13949 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
13950 % U+0328 COMBINING OGONEK; ogonekcmb
13951 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
13952 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
13953 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
13954 % U+20DD COMBINING ENCLOSING CIRCLE
13955 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

\@empty is an artefact of the NFSS2 machinery, it gets inserted for empty arguments and spaces.

13956 \DeclareTextCompositeCommand{'}{PU}{\@empty}{\textasciigrave}
13957 \DeclareTextCompositeCommand{'}{PU}{\@empty}{\textacute}
13958 \DeclareTextCompositeCommand{`}{PU}{\@empty}{\textasciicircum}
13959 \DeclareTextCompositeCommand{~}{PU}{\@empty}{\texttilde}
13960 \DeclareTextCompositeCommand{"}{PU}{\@empty}{\textasciidieresis}
13961 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
13962 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13963 \DeclareTextCompositeCommand{.}{PU}{\@empty}{\textdotaccent}
13964 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
13965 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13966 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13967 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
13968 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13969 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13970 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13971 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13972 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13973 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13974 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
13975 \DeclareTextCompositeCommand{'}{PU}{\ }{\textasciigrave}
13976 \DeclareTextCompositeCommand{'}{PU}{\ }{\textacute}
13977 \DeclareTextCompositeCommand{`}{PU}{\ }{\textasciicircum}
13978 \DeclareTextCompositeCommand{~}{PU}{\ }{\texttilde}
13979 \DeclareTextCompositeCommand{"}{PU}{\ }{\textasciidieresis}
13980 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13981 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13982 \DeclareTextCompositeCommand{.}{PU}{\ }{\textdotaccent}
13983 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13984 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13985 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13986 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}

```

13987 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13988 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13989 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13990 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13991 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13992 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13993 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13994 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13995 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13996 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
13997 \DeclareTextCommand{\capitalacute}{PU}[1]{\`{#1}}
13998 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13999 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
14000 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}
14001 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
14002 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
14003 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
14004 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
14005 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
14006 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
14007 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
14008 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

14009 % U+0009 (CHARACTER TABULATION)
14010 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
14011 % U+000A (LINE FEED)
14012 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
14013 % U+000D (CARRIAGE RETURN)
14014 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

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

14015 % U+0022 QUOTATION MARK; quotedbl
14016 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
14017 % U+0023 NUMBER SIGN; numbersign
14018 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
14019 % U+0024 DOLLAR SIGN; dollar
14020 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
14021 % U+0025 PERCENT SIGN; percent
14022 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
14023 % U+0026 AMPERSAND; ampersand
14024 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
14025 % U+0027 APOSTROPHE; quotesingle
14026 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
14027 % U+0028 LEFT PARENTHESIS; parenleft
14028 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
14029 % U+0029 RIGHT PARENTHESIS; parenright
14030 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
14031 % U+002A ASTERISK; asterisk
14032 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A (?)

\80\053: U+002B PLUS SIGN; plus
\80\054: U+002C COMMA; comma
\80\055: U+002D HYPHEN-MINUS; hyphen

```

\80\056: U+002E FULL STOP; period
 \80\057: U+002F SOLIDUS; slash
 \80\060: U+0030 DIGIT ZERO; zero
 ...
 \80\071: U+0039 DIGIT NINE; nine
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 14033 % U+003C LESS-THAN SIGN; less
 14034 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 14035 % U+003E GREATER-THAN SIGN; greater
 14036 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 \80\100: U+0040 COMMERCIAL AT; at
 \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
 14037 % U+005C REVERSE SOLIDUS; backslash
 14038 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 14039 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14040 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 14041 % U+005F LOW LINE; underscore
 14042 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 14043 % U+0060 GRAVE ACCENT; grave
 14044 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
 \80\141: U+0061 LATIN SMALL LETTER A; a
 ...
 \80\150: U+0068 LATIN SMALL LETTER H; h
 14045 % U+0069 LATIN SMALL LETTER I; i
 14046 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 14047 \DeclareTextCompositeCommand{\.}{PU}{\i}{i}% \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 14048 % U+007B LEFT CURLY BRACKET; braceleft
 14049 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 14050 % U+007C VERTICAL LINE; *bar, verticalbar
 14051 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 14052 % U+007D RIGHT CURLY BRACKET; braceright
 14053 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 14054 % U+007E TILDE; asciitilde
 14055 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

50.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 14056 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 14057 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 14058 % U+00A2 CENT SIGN; cent
 14059 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2

14060 % U+00A3 POUND SIGN; sterling
 14061 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 14062 % U+00A4 CURRENCY SIGN; currency
 14063 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 14064 % U+00A5 YEN SIGN; yen
 14065 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 14066 % U+00A6 BROKEN BAR; brokenbar
 14067 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 14068 % U+00A7 SECTION SIGN; section
 14069 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 14070 % U+00A8 DIAERESIS; dieresis
 14071 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 14072 % U+00A9 COPYRIGHT SIGN; copyright
 14073 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 14074 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 14075 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 14076 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 14077 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 14078 % U+00AC NOT SIGN; logicalnot
 14079 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 14080 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 14081 % U+00AE REGISTERED SIGN; registered
 14082 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 14083 % U+00AF MACRON; *macron, overscore
 14084 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 14085 % U+00B0 DEGREE SIGN; degree
 14086 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 14087 % U+00B1 PLUS-MINUS SIGN; plusminus
 14088 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 14089 % U+00B2 SUPERSCRIPT TWO; twosuperior
 14090 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 14091 % U+00B3 SUPERSCRIPT THREE; threesuperior
 14092 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 14093 % U+00B4 ACUTE ACCENT; acute
 14094 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 14095 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 14096 % U+00B5 MICRO SIGN; mu, mu1
 14097 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 14098 % U+00B6 PILCROW SIGN; paragraph
 14099 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 14100 % U+00B7 MIDDLE DOT; middot, *periodcentered
 14101 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 14102 % U+00B8 CEDILLA; cedilla
 14103 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 14104 % U+00B9 SUPERSCRIPT ONE; onesuperior
 14105 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 14106 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 14107 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 14108 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 14109 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 14110 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 14111 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 14112 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 14113 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD

14114 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14115 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
14116 % U+00BF INVERTED QUESTION MARK; questiondown
14117 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
14118 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14119 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
14120 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14121 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
14122 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14123 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
14124 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14125 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
14126 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14127 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
14128 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14129 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
14130 % U+00C6 LATIN CAPITAL LETTER AE; AE
14131 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
14132 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14133 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
14134 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14135 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
14136 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14137 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
14138 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14139 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
14140 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14141 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
14142 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14143 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
14144 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14145 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
14146 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14147 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
14148 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14149 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
14150 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14151 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
14152 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14153 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
14154 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14155 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
14156 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14157 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
14158 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14159 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
14160 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14161 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
14162 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14163 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
14164 % U+00D7 MULTIPLICATION SIGN; multiply
14165 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
14166 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14167 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
14168 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14169 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
14170 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute

14171 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
14172 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14173 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
14174 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14175 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
14176 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14177 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
14178 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14179 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
14180 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14181 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
14182 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14183 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
14184 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14185 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
14186 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14187 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
14188 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14189 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
14190 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14191 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
14192 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14193 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14194 % U+00E6 LATIN SMALL LETTER AE; ae
14195 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
14196 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14197 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14198 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14199 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
14200 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14201 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14202 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14203 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
14204 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14205 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
14206 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14207 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
14208 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14209 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14210 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\355}% U+00ED
14211 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14212 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14213 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14214 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
14215 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14216 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
14217 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\357}% U+00EF
14218 % U+00F0 LATIN SMALL LETTER ETH; eth
14219 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
14220 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14221 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
14222 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14223 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
14224 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14225 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
14226 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14227 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4

14228 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 14229 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 14230 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 14231 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 14232 % U+00F7 DIVISION SIGN; divide
 14233 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 14234 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 14235 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 14236 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 14237 \DeclareTextCompositeCommand{\' }{PU}{u}{\80\371}% U+00F9
 14238 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 14239 \DeclareTextCompositeCommand{\' }{PU}{u}{\80\372}% U+00FA
 14240 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 14241 \DeclareTextCompositeCommand{\^ }{PU}{u}{\80\373}% U+00FB
 14242 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 14243 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 14244 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 14245 \DeclareTextCompositeCommand{\' }{PU}{y}{\80\375}% U+00FD
 14246 % U+00FE LATIN SMALL LETTER THORN; thorn
 14247 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 14248 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14249 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

14250 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 14251 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 14252 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 14253 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 14254 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 14255 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 14256 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 14257 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 14258 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 14259 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 14260 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 14261 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 14262 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 14263 \DeclareTextCompositeCommand{\' }{PU}{C}{\81\006}% U+0106
 14264 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 14265 \DeclareTextCompositeCommand{\' }{PU}{c}{\81\007}% U+0107
 14266 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 14267 \DeclareTextCompositeCommand{\^ }{PU}{C}{\81\010}% U+0108
 14268 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 14269 \DeclareTextCompositeCommand{\^ }{PU}{c}{\81\011}% U+0109
 14270 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 14271 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 14272 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 14273 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 14274 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 14275 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 14276 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 14277 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 14278 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 14279 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 14280 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 14281 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F

14282 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
14283 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
14284 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
14285 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
14286 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
14287 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
14288 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
14289 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
14290 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
14291 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
14292 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
14293 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
14294 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
14295 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
14296 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
14297 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
14298 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14299 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14300 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14301 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14302 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14303 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14304 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14305 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14306 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14307 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14308 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14309 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14310 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14311 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14312 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14313 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14314 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14315 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14316 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14317 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14318 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
14319 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14320 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14321 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14322 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
14323 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
14324 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14325 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14326 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14327 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14328 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14329 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
14330 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14331 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14332 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14333 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14334 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14335 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14336 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14337 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron

14338 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 14339 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 14340 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
 14341 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
 14342 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
 14343 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 14344 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 14345 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
 14346 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
 14347 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
 14348 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 14349 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 14350 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 14351 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 14352 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 14353 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 14354 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 14355 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 14356 % U+0133 LATIN SMALL LIGATURE IJ; ij
 14357 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 14358 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 14359 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 14360 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 14361 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 14362 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 14363 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
 cent
 14364 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 14365 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 14366 \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`.

14367 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 14368 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 14369 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 14370 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 14371 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 14372 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 14373 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
 cent
 14374 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 14375 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 14376 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 14377 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 14378 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 14379 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 14380 \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`.

14381 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 14382 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 14383 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 14384 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 14385 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14386 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141

14387 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14388 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 14389 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 14390 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 14391 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 14392 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 14393 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 14394 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 14395 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 14396 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 14397 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 14398 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 14399 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 14400 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 14401 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 14402 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 14403 % U+014A LATIN CAPITAL LETTER ENG; Eng
 14404 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 14405 % U+014B LATIN SMALL LETTER ENG; eng
 14406 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 14407 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 14408 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 14409 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 14410 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 14411 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 14412 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 14413 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 14414 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 14415 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 14416 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 14417 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 14418 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 14419 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14420 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 14421 % U+0153 LATIN SMALL LIGATURE OE; oe
 14422 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 14423 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 14424 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 14425 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 14426 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 14427 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 14428 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 14429 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 14430 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 14431 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 14432 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 14433 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 14434 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 14435 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 14436 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 14437 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 14438 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B

14439 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14440 \DeclareTextCompositeCommand{\~}{PU}{S}{\81\134}% U+015C
14441 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14442 \DeclareTextCompositeCommand{\~}{PU}{s}{\81\135}% U+015D
14443 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14444 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14445 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14446 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14447 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14448 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14449 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14450 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14451 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
cent
14452 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14453 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14454 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14455 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14456 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14457 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14458 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14459 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14460 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14461 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14462 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14463 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14464 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14465 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14466 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14467 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14468 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14469 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14470 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14471 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14472 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14473 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14474 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14475 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14476 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14477 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14478 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14479 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblac-
cute, Uhungarumlaut
14480 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
14481 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblac-
cute, uhun-
garumlaut
14482 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
14483 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
14484 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
14485 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
14486 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
14487 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
14488 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
14489 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
14490 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
14491 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
14492 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176

14493 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14494 \DeclareTextCompositeCommand{\~}{PU}{y}{\81\167}% U+0177
 14495 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14496 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14497 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14498 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14499 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14500 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14501 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14502 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14503 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14504 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14505 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14506 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14507 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14508 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14509 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14510 \DeclareTextCommand{\textlong}{PU}{\81\177}% U+017F

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

14511 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14512 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 14513 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 14514 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 14515 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 14516 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 14517 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 14518 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 14519 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 14520 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14521 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14522 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 14523 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 14524 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 14525 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 14526 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 14527 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 14528 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 14529 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 14530 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 14531 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 14532 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 14533 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 14534 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 14535 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 14536 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 14537 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 14538 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 14539 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 14540 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 14541 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 14542 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 14543 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 14544 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 14545 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 14546 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 14547 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0

14548 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14549 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14550 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14551 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14552 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14553 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14554 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
14555 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14556 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
14557 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14558 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
14559 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14560 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
14561 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14562 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
14563 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14564 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
14565 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14566 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14567 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14568 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14569 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
14570 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
14571 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
14572 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
14573 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
14574 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
14575 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
14576 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14577 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14578 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
14579 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
14580 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
14581 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
14582 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
14583 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
14584 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
14585 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
14586 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
14587 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
14588 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
14589 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
14590 % U+021E LATIN CAPITAL LETTER H WITH CARON
14591 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
14592 % U+021F LATIN SMALL LETTER H WITH CARON
14593 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
14594 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
14595 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
14596 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
14597 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
14598 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
14599 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
14600 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
14601 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
14602 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE

14603 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14604 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14605 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14606 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14607 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14608 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14609 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14610 % U+0237 LATIN SMALL LETTER DOTLESS J
 14611 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

14612 % U+02C7 CARON; caron
 14613 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14614 % U+02D8 BREVE; breve
 14615 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14616 % U+02D9 DOT ABOVE; dotaccent
 14617 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14618 % U+02DA RING ABOVE; ring
 14619 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14620 % U+02DB OGONEK; ogonek
 14621 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14622 % U+02DC SMALL TILDE; ilde, *tilde
 14623 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14624 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14625 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14626 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14627 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14628 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14629 % U+02F7 MODIFIER LETTER LOW TILDE
 14630 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

14631 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14632 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14633 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14634 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14635 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14636 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14637 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14638 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14639 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14640 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

14641 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 14642 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 14643 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 14644 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 14645 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 14646 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 14647 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 14648 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 14649 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 14650 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 14651 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 14652 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A

14653 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 14654 \DeclareTextCompositeCommand{'}{PU}{\textOmicron}{\83\214}% U+038C
 14655 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 14656 \DeclareTextCompositeCommand{'}{PU}{\textUpsilon}{\83\216}% U+038E
 14657 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 14658 \DeclareTextCompositeCommand{'}{PU}{\textOmega}{\83\217}% U+038F
 14659 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadieresis
 14660 \DeclareTextCompositeCommand{'}{PU}{\textIotadieresis}{\83\220}% U+0390
 14661 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 14662 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 14663 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 14664 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 14665 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 14666 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 14667 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 14668 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 14669 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 14670 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 14671 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 14672 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 14673 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 14674 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 14675 % U+0398 GREEK CAPITAL LETTER THETA; Theta
 14676 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 14677 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 14678 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 14679 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 14680 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 14681 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
 14682 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
 14683 % U+039C GREEK CAPITAL LETTER MU; Mu
 14684 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 14685 % U+039D GREEK CAPITAL LETTER NU; Nu
 14686 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
 14687 % U+039E GREEK CAPITAL LETTER XI; Xi
 14688 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
 14689 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
 14690 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
 14691 % U+03A0 GREEK CAPITAL LETTER PI; Pi
 14692 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
 14693 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
 14694 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
 14695 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
 14696 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
 14697 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 14698 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 14699 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
 14700 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
 14701 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
 14702 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
 14703 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
 14704 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 14705 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
 14706 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
 14707 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega

14708 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14709 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14710 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14711 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14712 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silondieresis
14713 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14714 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
14715 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14716 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
14717 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14718 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
14719 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14720 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
14721 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
14722 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
silondieresis
14723 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
14724 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
14725 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
14726 % U+03B2 GREEK SMALL LETTER BETA; beta
14727 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
14728 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
14729 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
14730 % U+03B4 GREEK SMALL LETTER DELTA; delta
14731 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
14732 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
14733 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
14734 % U+03B6 GREEK SMALL LETTER ZETA; zeta
14735 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
14736 % U+03B7 GREEK SMALL LETTER ETA; eta
14737 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
14738 % U+03B8 GREEK SMALL LETTER THETA; theta
14739 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
14740 % U+03B9 GREEK SMALL LETTER IOTA; iota
14741 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
14742 % U+03BA GREEK SMALL LETTER KAPPA; kappa
14743 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
14744 % U+03BB GREEK SMALL LETTER LAMDA; lambda
14745 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
14746 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
14747 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
14748 % U+03BD GREEK SMALL LETTER NU; nu
14749 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
14750 % U+03BE GREEK SMALL LETTER XI; xi
14751 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
14752 % U+03BF GREEK SMALL LETTER OMICRON; omicron
14753 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
14754 % U+03C0 GREEK SMALL LETTER PI; pi
14755 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
14756 % U+03C1 GREEK SMALL LETTER RHO; rho
14757 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
14758 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
14759 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
14760 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
14761 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
14762 % U+03C4 GREEK SMALL LETTER TAU; tau

14763 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
 14764 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
 14765 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
 14766 % U+03C6 GREEK SMALL LETTER PHI; phi
 14767 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
 14768 % U+03C7 GREEK SMALL LETTER CHI; chi
 14769 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
 14770 % U+03C8 GREEK SMALL LETTER PSI; psi
 14771 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
 14772 % U+03C9 GREEK SMALL LETTER OMEGA; omega
 14773 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
 14774 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
 14775 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 14776 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 14777 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 14778 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 14779 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 14780 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 14781 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
 14782 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
 14783 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 14784 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
 14785 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 14786 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 14787 % U+03DB GREEK SMALL LETTER STIGMA
 14788 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 14789 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14790 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14791 % U+03DD GREEK SMALL LETTER DIGAMMA
 14792 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14793 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14794 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14795 % U+03DF GREEK SMALL LETTER KOPPA
 14796 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14797 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 14798 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 14799 % U+03E1 GREEK SMALL LETTER SAMPI
 14800 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

14801 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 14802 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
 14803 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
 14804 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 14805 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
 14806 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 14807 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 14808 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 14809 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
 14810 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
 14811 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 14812 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 14813 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405

14814 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrillic, *afii10055
14815 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14816 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
14817 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14818 \DeclareTextCompositeCommand{\'}{PU}{\CYRII}{\84\007}% U+0407
14819 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14820 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14821 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14822 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14823 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14824 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14825 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14826 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14827 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14828 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14829 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14830 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
14831 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
14832 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14833 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14834 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
14835 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14836 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14837 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14838 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14839 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14840 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14841 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14842 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14843 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14844 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14845 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14846 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14847 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14848 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14849 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14850 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14851 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14852 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
14853 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14854 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
14855 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14856 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14857 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
14858 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14859 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14860 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14861 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14862 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14863 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14864 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14865 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14866 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14867 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14868 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14869 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034

14870 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14871 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14872 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14873 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14874 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14875 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14876 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14877 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14878 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14879 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14880 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14881 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14882 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14883 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14884 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14885 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14886 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14887 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14888 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14889 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14890 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14891 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14892 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14893 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14894 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14895 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14896 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14897 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14898 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14899 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14900 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14901 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14902 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14903 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14904 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14905 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14906 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14907 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14908 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14909 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14910 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14911 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14912 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14913 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14914 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
14915 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14916 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
14917 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14918 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
14919 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14920 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14921 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
14922 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14923 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
14924 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14925 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
14926 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic

14927 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
14928 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14929 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
14930 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14931 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
14932 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14933 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
14934 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14935 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
14936 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14937 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
14938 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14939 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
14940 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14941 \DeclareTextCommand{\cyr u}{PU}{\84\103}% U+0443
14942 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14943 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
14944 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14945 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
14946 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14947 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
14948 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14949 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
14950 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14951 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14952 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14953 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14954 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14955 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14956 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14957 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14958 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14959 \DeclareTextCommand{\cyr sftsn}{PU}{\84\114}% U+044C
14960 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14961 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
14962 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14963 \DeclareTextCommand{\cyr yu}{PU}{\84\116}% U+044E
14964 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14965 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
14966 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14967 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
14968 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14969 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
14970 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
14971 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14972 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14973 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14974 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14975 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14976 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14977 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14978 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14979 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyril-
lic
14980 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14981 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14982 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457

14983 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
14984 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14985 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14986 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14987 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14988 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14989 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14990 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14991 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14992 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14993 \DeclareTextCompositeCommand{'}{PU}{\cyrk}{\84\134}% U+045C
14994 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14995 \DeclareTextCompositeCommand{'}{PU}{\cyri}{\84\135}% U+045D
14996 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14997 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14998 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14999 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
15000 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
15001 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
15002 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
15003 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
15004 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
15005 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
15006 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
15007 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
15008 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
15009 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
15010 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
15011 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
15012 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
15013 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
15014 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
15015 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
15016 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
15017 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
15018 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
15019 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
fiedcyrillic
15020 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
15021 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
15022 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
15023 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
15024 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
15025 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
15026 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
15027 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
lic
15028 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
15029 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
15030 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
15031 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
15032 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
15033 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
15034 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
15035 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic

15036 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 15037 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 15038 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 15039 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 15040 \DeclareTextCommand{\cyrfta}{PU}{\84\163}% U+0473
 15041 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 15042 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 15043 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 15044 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 15045 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; Izhitsadblgravecyrillic
 15046 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 15047 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; izhitsadblgravecyrillic
 15048 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 15049 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 15050 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 15051 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 15052 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 15053 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 15054 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 15055 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 15056 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 15057 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-
 cyrillic
 15058 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 15059 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
 cyrillic
 15060 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 15061 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 15062 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 15063 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 15064 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 15065 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 15066 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 15067 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 15068 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 15069 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 15070 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyril-
 liccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumata-
 cyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyril-
 liccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 15071 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 15072 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 15073 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 15074 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 15075 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 15076 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C

15077 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 15078 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 15079 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 15080 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 15081 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 15082 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 15083 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 15084 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 15085 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 15086 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 15087 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 15088 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 15089 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 15090 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 15091 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemid-
 dlehookcyrillic
 15092 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 15093 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemid-
 dlehookcyrillic
 15094 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 15095 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescen-
 dercyrillic
 15096 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 15097 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescen-
 dercyrillic
 15098 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 15099 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 15100 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 15101 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 15102 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 15103 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 15104 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 15105 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 15106 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 15107 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescender-
 cyrillic
 15108 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 15109 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-
 ticalstrokecyrillic
 15110 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 15111 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
 ticalstrokecyrillic
 15112 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 15113 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 15114 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 15115 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 15116 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 15117 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 15118 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 15119 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 15120 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1

15121 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 15122 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 15123 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 15124 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 15125 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 15126 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 15127 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 15128 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 15129 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 15130 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 15131 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 15132 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 15133 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 15134 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 15135 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 15136 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 15137 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 15138 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 15139 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 15140 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 15141 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 15142 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 15143 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 15144 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 15145 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 15146 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 15147 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 15148 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 15149 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 15150 \DeclareTextCommand{\cyr}{PU}{\84\257}% U+04AF
 15151 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 15152 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 15153 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
 15154 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 15155 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic
 15156 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 15157 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 15158 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 15159 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 15160 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 15161 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 15162 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 15163 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic

15164 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
15165 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
15166 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
15167 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
erticalstrokecyrillic
15168 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
15169 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
erticalstrokecyrillic
15170 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
15171 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
15172 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
15173 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
15174 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
15175 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
cyrillic
15176 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
15177 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
lic
15178 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
15179 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
DER; Chedescenderabkhasiancyrillic
15180 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
15181 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
15182 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
DER; chedescenderabkhasiancyrillic
15183 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
15184 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
15185 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
15186 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
15187 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
15188 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
15189 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
15190 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
15191 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
15192 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
15193 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
15194 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
15195 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
15196 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
15197 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
15198 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
15199 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
15200 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
15201 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
15202 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
15203 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-
cyrillic
15204 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
15205 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
cyrillic
15206 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
15207 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
15208 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
15209 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
15210 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA

15211 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevacyrillic
15212 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
15213 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevacyrillic
15214 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
15215 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
15216 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
15217 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
15218 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
15219 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
15220 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
15221 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
15222 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
15223 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
15224 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
15225 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
15226 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
15227 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
15228 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
15229 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
15230 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
15231 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-
siscyrillic
15232 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
15233 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
siscyrillic
15234 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
15235 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
siscyrillic
15236 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
15237 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
cyrillic
15238 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
15239 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
cyrillic
15240 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
15241 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
15242 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
15243 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
cyrillic
15244 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
15245 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
15246 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
15247 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
15248 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
15249 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
15250 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
15251 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
15252 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
15253 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
15254 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
15255 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
15256 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
15257 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
15258 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
15259 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic

15260 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 15261 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 15262 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 15263 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERE-
 SIS; Obarreddieresiscyrillic
 15264 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 15265 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarred-
 dieresiscyrillic
 15266 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 15267 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 15268 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 15269 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 15270 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 15271 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 15272 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
 15273 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 15274 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
 15275 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 15276 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 15277 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 15278 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 15279 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 15280 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 15281 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 15282 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 15283 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 15284 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 15285 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresis-
 cyrillic
 15286 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 15287 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 15288 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 15289 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 15290 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 15291 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 15292 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 15293 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 15294 \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
 15295 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15296 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15297 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15298 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

15299 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15300 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

15301 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
15302 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
15303 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
15304 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
15305 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
15306 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
15307 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
15308 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
15309 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
15310 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
15311 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
15312 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
15313 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
15314 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
15315 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
15316 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
15317 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
15318 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
15319 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
15320 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
15321 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
15322 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
15323 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
15324 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
15325 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
15326 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
15327 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
15328 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
15329 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
15330 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
15331 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
15332 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
15333 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
15334 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
15335 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
15336 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
15337 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
15338 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
15339 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
15340 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
15341 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
15342 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
15343 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
15344 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
15345 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15346 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15347 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15348 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15349 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15350 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15351 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15352 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15353 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15354 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15355 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15356 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F

15357 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
 15358 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
 15359 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
 15360 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
 15361 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
 15362 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
 15363 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 15364 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
 15365 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 15366 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
 15367 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
 15368 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
 15369 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 15370 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 15371 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 15372 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 15373 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 15374 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 15375 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 15376 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 15377 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 15378 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 15379 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 15380 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 15381 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 15382 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 15383 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 15384 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 15385 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 15386 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 15387 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 15388 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 15389 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 15390 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 15391 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 15392 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 15393 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 15394 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 15395 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 15396 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 15397 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
 15398 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
 15399 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
 15400 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
 15401 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
 15402 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 15403 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 15404 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 15405 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 15406 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
 15407 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 15408 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
 15409 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 15410 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
 15411 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 15412 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
 15413 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent

15414 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 15415 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 15416 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 15417 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 15418 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 15419 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 15420 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 15421 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 15422 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
 15423 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 15424 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
 15425 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 15426 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
 15427 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 15428 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
 15429 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 15430 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 15431 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 15432 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 15433 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15434 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 15435 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15436 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 15437 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15438 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15439 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15440 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15441 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15442 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15443 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15444 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15445 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15446 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15447 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15448 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 15449 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15450 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 15451 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15452 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15453 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15454 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15455 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 15456 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15457 % U+2013 EN DASH; endash
 15458 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15459 % U+2014 EM DASH; emdash
 15460 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15461 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15462 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15463 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15464 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15465 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15466 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15467 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase

15468 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15469 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15470 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 15471 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15472 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 15473 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15474 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15475 % U+2020 DAGGER; dagger
 15476 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15477 % U+2021 DOUBLE DAGGER; daggerdbl
 15478 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15479 % U+2022 BULLET; bullet
 15480 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15481 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15482 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15483 % U+2030 PER MILLE SIGN; perthousand
 15484 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15485 % U+2031 PER TEN THOUSAND SIGN
 15486 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15487 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15488 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 15489 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 singright
 15490 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 15491 % U+203B REFERENCE MARK; referencemark
 15492 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15493 % U+203D INTERROBANG
 15494 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15495 % U+2044 FRACTION SLASH; fraction
 15496 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15497 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15498 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15499 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15500 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15501 % U+2052 COMMERCIAL MINUS SIGN
 15502 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

15503 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 15504 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 15505 % U+2074 SUPERSCRIPT FOUR; foursuperior
 15506 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 15507 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 15508 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 15509 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15510 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15511 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15512 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15513 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15514 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15515 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15516 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15517 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15518 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15519 % U+207B SUPERSCRIPT MINUS
 15520 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}

15521 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15522 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
 15523 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15524 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15525 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15526 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15527 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15528 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 15529 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15530 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15531 % U+2081 SUBSCRIPT ONE; oneinferior
 15532 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15533 % U+2082 SUBSCRIPT TWO; twoinferior
 15534 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15535 % U+2083 SUBSCRIPT THREE; threeinferior
 15536 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}% U+2083
 15537 % U+2084 SUBSCRIPT FOUR; fourinferior
 15538 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15539 % U+2085 SUBSCRIPT FIVE; fiveinferior
 15540 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15541 % U+2086 SUBSCRIPT SIX; sixinferior
 15542 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15543 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15544 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15545 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15546 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15547 % U+2089 SUBSCRIPT NINE; nineinferior
 15548 \DeclareTextCommand{\textnininferior}{PU}{\9040\211}% U+2089
 15549 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15550 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15551 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15552 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

15553 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15554 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15555 % U+20A4 LIRA SIGN; afii08941, *lira
 15556 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15557 % U+20A6 NAIRA SIGN
 15558 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15559 % U+20A7 PESETA SIGN; peseta
 15560 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15561 % U+20A9 WON SIGN; won
 15562 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15563 % U+20AB DONG SIGN; dong
 15564 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15565 % U+20AC EURO SIGN; *Euro, euro
 15566 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15567 % U+20B1 PESO SIGN
 15568 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15569 % U+20B2 GUARANI SIGN
 15570 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

15571 % U+2103 DEGREE CELSIUS; centigrade
 15572 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15573 % U+2116 NUMERO SIGN; *afii61352, numero

15574 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15575 % U+2117 SOUND RECORDING COPYRIGHT
 15576 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15577 % U+211E PRESCRIPTION TAKE; prescription
 15578 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15579 % U+2120 SERVICE MARK
 15580 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15581 % U+2122 TRADE MARK SIGN; trademark
 15582 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15583 % U+2126 OHM SIGN; Ohm, Omega
 15584 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15585 % U+2127 INVERTED OHM SIGN
 15586 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15587 % U+212B ANGSTROM SIGN; angstrom
 15588 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15589 % U+212E ESTIMATED SYMBOL; estimated
 15590 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15591 % U+2135 ALEF SYMBOL; aleph
 15592 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15593 % U+2190 LEFTWARDS ARROW; arrowleft
 15594 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15595 % U+2191 UPWARDS ARROW; arrowup
 15596 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15597 % U+2192 RIGHTWARDS ARROW; arrowright
 15598 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15599 % U+2193 DOWNWARDS ARROW; arrowdown
 15600 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

15601 % U+2212 MINUS SIGN; minus
 15602 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15603 % U+221A SQUARE ROOT; radical
 15604 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

15605 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 15606 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 15607 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 15608 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

15609 % U+2422 BLANK SYMBOL
 15610 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 15611 % U+2423 OPEN BOX; blank
 15612 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

15613 % U+2460 CIRCLED DIGIT ONE; onecircle
 15614 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 15615 % U+2461 CIRCLED DIGIT TWO; twocircle
 15616 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 15617 % U+2462 CIRCLED DIGIT THREE; threecircle
 15618 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 15619 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 15620 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463

15621 % U+2464 CIRCLED DIGIT FIVE; fivecircle
15622 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
15623 % U+2465 CIRCLED DIGIT SIX; sixcircle
15624 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
15625 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
15626 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
15627 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
15628 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
15629 % U+2468 CIRCLED DIGIT NINE; ninecircle
15630 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
15631 % U+2469 CIRCLED NUMBER TEN; tencircle
15632 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
15633 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
15634 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
15635 % U+246B CIRCLED NUMBER TWELVE; twelvencircle
15636 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
15637 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
15638 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
15639 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
15640 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
15641 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
15642 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
15643 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
15644 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
15645 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
15646 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
15647 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
15648 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
15649 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
15650 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
15651 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
15652 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
15653 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
15654 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
15655 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
15656 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
15657 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
15658 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
15659 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
15660 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
15661 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
15662 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
15663 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
15664 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
15665 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
15666 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
15667 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
15668 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
15669 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
15670 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
15671 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
15672 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
15673 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
15674 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
15675 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
15676 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
15677 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle

15678 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
15679 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
15680 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
15681 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
15682 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
15683 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
15684 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
15685 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
15686 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
15687 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
15688 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
15689 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
15690 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
15691 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
15692 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
15693 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
15694 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
15695 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
15696 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
15697 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
15698 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
15699 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
15700 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15701 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15702 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15703 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15704 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15705 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15706 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15707 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15708 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15709 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15710 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15711 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15712 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15713 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15714 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15715 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15716 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15717 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15718 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15719 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15720 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15721 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15722 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
15723 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
15724 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
15725 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
15726 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
15727 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
15728 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
15729 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
15730 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
15731 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
15732 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
15733 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
15734 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE

15735 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 15736 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 15737 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 15738 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 15739 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 15740 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 15741 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 15742 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 15743 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 15744 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 15745 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 15746 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 15747 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 15748 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 15749 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 15750 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15751 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15752 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15753 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 15754 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15755 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15756 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15757 % U+24EA CIRCLED DIGIT ZERO
 15758 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15759 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15760 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15761 % U+25EF LARGE CIRCLE; largecircle
 15762 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15763 % U+266A EIGHTH NOTE; musicalnote
 15764 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15765 % U+26AD MARRIAGE SYMBOL
 15766 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15767 % U+26AE DIVORCE SYMBOL
 15768 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15769 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15770 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15771 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15772 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

15773 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15774 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 15775 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15776 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

15777 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

```

15778 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
15779 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
15780 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
15781 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
15782 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
15783 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
15784 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
15785 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

```

Aliases (math names)

```

15786 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
15787 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
15788 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
15789 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
15790 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
15791 </puenc>

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50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

15792 <*puvnenc>

15793 \DeclareTextCommand{\abreve}{PU}{\81\003}
15794 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15795 \DeclareTextCommand{\dj}{PU}{\81\021}
15796 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15797 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15798 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15799 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15800 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15801 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15802 \DeclareTextCommand{\DJ}{PU}{\81\020}
15803 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15804 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15805 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15806 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15807 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15808 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15809 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15810 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15811 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15812 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15813 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15814 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15815 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
15816 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15817 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15818 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15819 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15820 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15821 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
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15823 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15824 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15825 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15826 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15827 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}

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15828 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15829 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15830 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15831 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15832 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15833 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15834 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15835 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15836 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
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15840 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15841 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15842 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
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15854 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
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15871 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15872 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
15873 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15874 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15875 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
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15885 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
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15925 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15926 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15927 </puvnenc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

15928 <*puarenc>
15929 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
TER HAMZA
15930 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15931 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15932 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE

```


15933 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LETTER ALEF WITH HAMZA BELOW

15934 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LETTER YEH WITH HAMZA ABOVE

15935 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF

15936 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH

15937 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA

15938 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH

15939 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LETTER THEH

15940 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LETTER JEEM

15941 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH

15942 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH

15943 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL

15944 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL

15945 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH

15946 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN

15947 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN

15948 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LETTER SHEEN

15949 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD

15950 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD

15951 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH

15952 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH

15953 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN

15954 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LETTER GHAIN

15955 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL

15956 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH

15957 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF

15958 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF

15959 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM

15960 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LETTER MEEM

15961 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON

15962 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH

15963 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW

15964 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LETTER ALEF MAKSURA

15965 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH

15966 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN

15967 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN

15968 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN

15969 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA

15970 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA

15971 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA

15972 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA

15973 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

Farsi

15974 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH

15975 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LETTER TCHEH

15976 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH

15977 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LETTER KAF

```

15978 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15979 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
      TER YEH

15980 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15981 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

15982 \</puarenc>

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51 End of file hyccheck.tex

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15983 \< *check>
15984 \< typeout{>
15985 \< begin{document}>
15986 \< end{document}>
15987 \< /check>

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