

Hypertext marks in \LaTeX

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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 Euro \TeX 1999.

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

nameref.dtx “Section name references in \LaTeX ”

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3 File hyccheck.tex

Many commands of \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 }\typeout{\%
36 \space\space Loaded: '\HyC@package' \%
37 \csname ver@\HyC@package.sty\endcsname
38 }\%
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 `\cmd_` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```

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

```

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

```

\HyC@edef
125 \def\HyC@def#1#{%
126   \HyC@Toks={#1}%

```

```

127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

`\HyC@checkOk` The result, if the check succeeds.

```

154 \def\HyC@checkOk#1{%
155 \typeout{\space\space'\HyC@string#1' ok.}%
156 }

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

205 \begingroup
206 \def\x#1{\catcode'\noexpand#1=\the\catcode'#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%
210   \x\&%
211   \x\^%
212   \x\_%
213   \x\| %
214   \x\: %
215   \x\(%

```

```

216 \x\)%
217 \x\[%
218 \x\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{keyval}[1997/11/10]
233 \RequirePackage{kvsetkeys}[2007/09/29]
234 \RequirePackage{pdfescape}[2007/11/11]
235 \RequirePackage{ifpdf}[2006/02/20]
236 \RequirePackage{ifvtex}
237 \RequirePackage{ifxetex}[2006/08/21]
238 \RequirePackage{hycolor}
239 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
240 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
241 \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`.

```

242 \ifundefined{AfterBeginDocument}{%
243   \def\AfterBeginDocument{\AtBeginDocument}%
244 }{%

```

4.3 Switches

```

245 \newif\ifHy@typexml
246 \newif\ifHy@activeanchor
247 \newif\ifHy@backref
248 \newif\ifHy@bookmarks
249 \newif\ifHy@bookmarksnumbered
250 \newif\ifHy@bookmarksopen
251 \newif\ifHy@breaklinks
252 \newif\ifHy@centerwindow
253 \newif\ifHy@CJKbookmarks
254 \newif\ifHy@colorlinks
255 \newif\ifHy@draft

```

```

256 \let\Hy@finaltrue\Hy@draftfalse
257 \let\Hy@finalfalse\Hy@drafttrue
258 \newif\ifHy@escapeform
259 \newif\ifHy@figures
260 \newif\ifHy@fitwindow
261 \newif\ifHy@frenchlinks
262 \newif\ifHy@hyperfootnotes
263 \newif\ifHy@hyperindex
264 \newif\ifHy@hypertextnames
265 \newif\ifHy@implicit
266 \newif\ifHy@linktocpage
267 \newif\ifHy@menubar
268 \newif\ifHy@naturalnames
269 \newif\ifHy@nesting
270 \newif\ifHy@newwindowset
271 \newif\ifHy@newwindow
272 \newif\ifHy@ocgcolorlinks
273 \newif\ifHy@pageanchor
274 \newif\ifHy@pagelabels
275 \newif\ifHy@pdfpagehidden
276 \newif\ifHy@pdfstring
277 \newif\ifHy@plainpages
278 \newif\ifHy@psize
279 \newif\ifHy@raiselinks
280 \newif\ifHy@seminarslides
281 \newif\ifHy@setpagesize
282 \newif\ifHy@texht
283 \newif\ifHy@toolbar
284 \newif\ifHy@unicode
285 \newif\ifHy@usetitle
286 \newif\ifHy@verbose
287 \newif\ifHy@windowui
288 \newif\ifHy@displaydoctitle
289 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

290 \Hy@backreffalse
291 \Hy@bookmarksnumberedfalse
292 \Hy@bookmarksopenfalse
293 \Hy@bookmarkstrue
294 \Hy@breaklinksfalse
295 \Hy@centerwindowfalse
296 \Hy@CJKbookmarksfalse
297 \Hy@escapeformfalse
298 \Hy@figuresfalse
299 \Hy@fitwindowfalse
300 \Hy@hyperfootnotesttrue
301 \Hy@hyperindextrue
302 \Hy@hypertextnamestrue
303 \Hy@implicittrue
304 \Hy@linktocpagefalse
305 \Hy@menubartrue
306 \Hy@naturalnamesfalse
307 \Hy@nestingfalse
308 \Hy@newwindowsetfalse
309 \Hy@newwindowfalse
310 \Hy@pageanchortrue
311 \Hy@pagelabelstrue

```

```

312 \Hy@pdfpagehiddenfalse
313 \Hy@pdfstringfalse
314 \Hy@plainpagesfalse
315 \Hy@raiselinksfalse
316 \Hy@setpagesizetrue
317 \Hy@texhtfalse
318 \Hy@toolbartrue
319 \Hy@typexmlfalse
320 \Hy@unicodedefalse
321 \Hy@usetitlefalse
322 \Hy@verbosefalse
323 \Hy>windowuitrue
324 \Hy@displaydoctitlefalse
325 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

328 \newdimen\@linkdim
329 \let\Hy@driver\@empty
330 \let\MaybeStopEarly\relax
331 \newcount\Hy@linkcounter
332 \newcount\Hy@pagecounter
333 \Hy@linkcounter0
334 \Hy@pagecounter0

```

5.1 Macros for recursions

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

```

335 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
336 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

337 \let\Hy@ReturnEnd\@empty
338 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
339 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

```

340 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
341 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

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

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

```

pdfstartview={FitBH \hypercalscbp{\paperheight-\topmargin-1in}}

```

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

Example (T_EX):

```

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

\hypercaltcbp
342 \begingroup\expandafter\expandafter\expandafter\endgroup
343 \expandafter\ifx\csname dimexpr\endcsname\relax
344   \def\hypercaltcbpdef#1#2{%
345     \begingroup
346       \toks@{}%
347       \HyCal@scan#2\hypercaltcbp\@nil
348       \expandafter\endgroup
349       \expandafter\def\expandafter#1\expandafter{\the\toks@}%
350   }%
351   \def\HyCal@scan#1\hypercaltcbp#2\@nil{%
352     \toks@\expandafter{\the\toks@ #1}%
353     \ifx\#2\%
354       \else
355         \Hy@ReturnAfterFi{%
356           \HyCal@do#2\@nil
357         }%
358       \fi
359     }%
360   \def\HyCal@do#1#2\@nil{%
361     \@ifpackageloaded{calc}{\}%
362     \Hy@Warning{%
363       For calculations \string\hypercaltcbp\space needs\MessageBreak
364       package calc or e-TeX%
365     }%
366   }%
367   \setlength{\dimen@}{#1}%
368   \setlength{\dimen@}{0.99626401\dimen@}%
369   \edef\x{%
370     \toks@{%
371       \the\toks@
372       \strip@pt\dimen@
373     }%
374   }\x
375   \HyCal@scan#2\@nil

```

```

376 }%
377 \else
378 \def\hypercalcbp#1{%
379 \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
380 }%
381 \def\hypercalcbpdef{\def}%
382 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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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 processed by \TeX , because the tokens have only catcodes 10 until 12.

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

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

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

```
384 \begingroup
```

6.2.1 Preprocessing

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

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

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

```
385 \escapechar'\%
```

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

```
386 \edef\0{\string\0}%
```

```
387 \edef\1{\string\1}%
```

```
388 \edef\2{\string\2}%
```

```
389 \edef\3{\string\3}%
```

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

The encoding is set by \enc@update for optimizing reasons.

```
390 \ifHy@unicode
```

```
391 \edef\8{\string\8}%
```

```
392 \edef\9{\string\9}%
```

```
393 \fontencoding{PU}%
```

```
394 \HyPsd@UTFviii
```

```
395 \def\ifpdfstringunicode##1##2{##1}%
```

```
396 \else
```

```
397 \fontencoding{PD1}%
```

```
398 \def\ifpdfstringunicode##1##2{##2}%
```

```
399 \fi
```

```
400 \enc@update
```

Internal encoding commands. \pdfstringdef interpretes text strings which are not allowed to contain mathematical stuff. The text glyph commands will produce a warning, if called in math mode. But this warning disturbs while expanding. Therefore we check for math mode here, before \@inmathwarn will be disabled (see below).

```
401 \@inmathwarn\pdfstringdef
```

If a glyph is used, that isn't in the PD1/PU encoding there will be an infinite error loop, because the NFSS encoding stuff have to be expanded unprotected (`\edef`), so that the assignments of `\@changed@cmd` don't take place. To patch this behaviour I only found `\@inmathwarn` as a usable hook. While an `\edef` a warning message by `\@inmathwarn` or `\TextSymbolUnavailable` cannot be give out, so `\@inmathwarn` should be disabled. And with the help of it the assignments in `\@changed@cmd` can easily be caught (see below).

```
402 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
403 \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.

```
404 \let\{\textbraceleft
405 \let\}\textbraceright
406 \let\\\textbackslash
407 \let\#\textnumbersign
408 \let\$\textdollar
409 \let\%\textpercent
410 \let\&\textampersand
411 % \let\~\textasciitilde
412 \let\_ \textunderscore
413 \let\textP\textparagraph
414 \let\ldots\textellipsis
415 \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.

```
416 \def\{\pdfstringdefWarn\}%
417 \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.

```
418 \def\TeX{\TeX}%
419 \def\LaTeX{\LaTeX}%
420 \def\LaTeXe{\LaTeX2e}%
421 \def\eTeX{e-TeX}%
422 \def\SliTeX{SliTeX}%
423 \def\MF{Metafont}%
424 \def\MP{Metapost}%
```

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

```

425 \let\emph\@firstofone
426 \let\textnormal\@firstofone
427 \let\textrm\@firstofone
428 \let\textsf\@firstofone
429 \let\texttt\@firstofone
430 \let\textbf\@firstofone
431 \let\textmd\@firstofone
432 \let\textit\@firstofone
433 \let\textsc\@firstofone
434 \let\textsl\@firstofone
435 \let\textup\@firstofone
436 \let\normalfont\@empty
437 \let\rmfamily\@empty
438 \let\sfamily\@empty
439 \let\ttfamily\@empty
440 \let\bfseries\@empty
441 \let\mdseries\@empty
442 \let\itshape\@empty
443 \let\scshape\@empty
444 \let\slshape\@empty
445 \let\upshape\@empty
446 \let\em\@empty
447 \let\rm\@empty
448 \let\Huge\@empty
449 \let\LARGE\@empty
450 \let\Large\@empty
451 \let\footnotesize\@empty
452 \let\huge\@empty
453 \let\large\@empty
454 \let\normalsize\@empty
455 \let\scriptsize\@empty
456 \let\small\@empty
457 \let\tiny\@empty
458 \let\mathversion\@gobble
459 \let\phantom\@gobble
460 \let\vphantom\@gobble
461 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

463 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
464 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

465 \let\textlatin\@firstofone
466 \@ifundefined{language@group}{-}{%
467   \csname HyPsd@babel@\language@group\endcsname
468 }%
469 \HyPsd@GreekPatch
470 \HyPsd@SpanishPatch

```

```

471 \HyPsd@BabelPatch
472 \let\@safe@activestrue\relax
473 \let\@safe@activesfalse\relax

  Disable \cyr, used in russian.ldf.
474 \let\cyr\relax

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

```

Package german.

```

476 \let\glqq\textglqq
477 \let\grqq\textgrqq
478 \let\glq\textglq
479 \let\grq\textgrq
480 \let\flqq\textflqq
481 \let\frqq\textfrqq
482 \let\flq\textflq
483 \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}

484 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

485 \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.

```

486 \let\hspace\HyPsd@hspace

```

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

```

487 \let\label\@gobble
488 \let\index\@gobble
489 \let\glossary\@gobble
490 \let\href\@secondoftwo
491 \let\@mkboth\@gobbletwo

```

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

```

492 \let\ref\HyPsd@ref
493 \let\pageref\HyPsd@pageref
494 \let\nameref\HyPsd@nameref
495 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```
496 \let\leavevmode\@empty
497 \let\mbox\@empty
```

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

```
498 \def\halign{\pdfstringdefWarn\halign\@gobble}%
499 \let\ignorespaces\HyPsd@ignorespaces
500 \let\Hy@SectionAnchorHref\@gobble
```

Patch for cjk bookmarks.

```
501 \ifHy@CJKbookmarks
502   \HyPsd@CJKhook
503 \fi
```

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`).

```
504 \Hy@pdfstringtrue
505 \pdfstringdefPreHook
```

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

```
506 \HyPsd@LetUnexpandableSpace\space
507 \HyPsd@LetUnexpandableSpace\ %
508 \HyPsd@LetUnexpandableSpace~%
509 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
510 \@ifundefined{@xspace}{%
511   \let\xspace\HyPsd@ITALCORR
512 }{%
513   \let\xspace\HyPsd@XSPACE
514 }%
515 \let\/\HyPsd@ITALCORR
516 \let\bgroup\/%
517 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
518 \let\discretionary\@gobbletwo
```

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

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

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

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

```
519 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
520 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
521 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
522 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package ‘xargs’:

```
523 \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).

```
524 \begingroup
525 \let\GenericError\@gobblefour
526 \let\GenericWarning\@gobbletwo
527 \let\GenericInfo\@gobbletwo
```

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

```
528 \ifx\nofrenchguillemets\@undefined
529 \else
530 \nofrenchguillemets
531 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.10). The original meaning of `\xdef` is saved in `\Hy@temp`.

```
532 \let\Hy@temp\xdef
533 \let\def\HyPsd@DefCommand
534 \let\gdef\HyPsd@DefCommand
535 \let\edef\HyPsd@DefCommand
536 \let\xdef\HyPsd@DefCommand
537 \let\futurelet\HyPsd@LetCommand
538 \let\let\HyPsd@LetCommand
539 \Hy@temp#1{#2}%
540 \endgroup
```

6.2.3 Postprocessing

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

```
541 \ifx#1\@empty
542 \else
```

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

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

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

```
543 \HyPsd@ProtectSpaces#1%
544 \let\HyPsd@String\@empty
545 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
546 \global\let#1\HyPsd@String
```

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

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

After `\HyPsd@CheckCatcodes` the command `\HyPsd@RemoveMask` is reused to remove the group protection character `|`. This character is needed to ensure that the string at least consists of one token if `\HyPsd@CheckCatcodes` is called.

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

```

547 \let\HyPsd@SPACEOPTI\relax
548 {%
549 \let\HyPsd@String\@empty
550 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@end
551 \global\let#1\HyPsd@String
552 }%
553 \expandafter\HyPsd@RemoveMask\expandafter
554 |\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.

```

555 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
556 \let\HyPsd@String\@empty
557 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
558 \global\let#1\HyPsd@String
```

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

```
559 \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.

```

560 \ifHy@unicode
561 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
562 \HyPsd@SPACEOPTI#1%
563 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
```



```

564 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
565 {\HyPsd@SPACEOPTI\80\273}#1%
566 \else
567 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
568 \expandafter\HyPsd@Subst\expandafter{%
569 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
570 \string\273}{\HyPsd@SPACEOPTI\273}#1%
571 \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.

```

572 \ifHy@unicode
573 \HyPsd@StringSubst{\)}{\80\051}#1%
574 \HyPsd@Subst){\80\051}#1%
575 \let\HyPsd@empty\relax
576 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
577 {\HyPsd@empty\80\051}#1%
578 \else
579 \HyPsd@StringSubst{\)}{\051}#1%
580 \HyPsd@Subst){\051}#1%
581 \let\HyPsd@empty\relax
582 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
583 \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`.

```

584 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
585 \@ifundefined{@xspace}{%
586 }{%
587 \let\HyPsd@xspace\relax
588 \expandafter\HyPsd@Subst\expandafter
589 {\HyPsd@XSPACE}\HyPsd@xspace#1%
590 \let\HyPsd@xspace\HyPsd@doxspace
591 }%
592 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The `PDFDocEncoding` contains some ligatures, but the current version 3 of the `AcrobatReader` lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the `AcrobatReader` is better. To break the ligatures the user can use

an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

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

```
593 \HyPsd@Subst{---}\textemdash#1%
594 \HyPsd@Subst{--}\textendash#1%
595 % \HyPsd@Subst{fi}\textfi#1%
596 % \HyPsd@Subst{fl}\textfl#1%
597 \HyPsd@Subst{!'}\textexclamdown#1%
598 \HyPsd@Subst{?'}\textquestiondown#1%
```

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

```
599 \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.

```
600 \ifHy@unicode
601 \HyPsd@StringSubst{\textparenleft#1%
602 \HyPsd@Subst{\textparenleft#1%
603 \else
604 \HyPsd@StringSubst\({\050}#1%
605 \HyPsd@Subst({\050}#1%
606 \HyPsd@StringSubst{\050}{\string\{ }#1%
607 \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.

```
608 \ifHy@unicode
609 \edef\HyPsd@SPACEOPTI{\80\040}%
610 \else
611 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
612 \fi
613 \xdef#1{#1\@empty}%
614 \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.

```
615 \endgroup
616 \begingroup
617 \ifHy@unicode
618 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```
619 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
620 \@ifundefined{StringEncodingConvertTest}{%
621 }{%
622 \EdefUnescapeString\HyPsd@temp#1%
```

```

623 \ifxetex
624 \let\HyPsd@UnescapedString\HyPsd@temp
625 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
626 {utf16be}{ascii-print}{-%
627 \EdefEscapeString\HyPsd@temp\HyPsd@temp
628 \global\let#1\HyPsd@temp
629 \Hy@unicodfalse
630 }{-%
631 \HyPsd@ToBigChars#1%
632 }%
633 \else
634 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
635 {utf16be}{pdfdoc}{-%
636 \EdefEscapeString\HyPsd@temp\HyPsd@temp
637 \global\let#1\HyPsd@temp
638 \Hy@unicodfalse
639 }{ }%
640 \fi
641 }%
642 \fi
643 \fi
644 \HyPsd@XeTeXBigCharsfalse

```

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

```

645 \pdfstringdefPostHook#1%
646 \endgroup
647 }

```

`\Hy@pdfstringdef`

```

648 \def\Hy@pdfstringdef#1#2{%
649 \pdfstringdef\Hy@gtemp{#2}%
650 \let#1\Hy@gtemp
651 }

```

6.3 Encodings

6.3.1 XeTeX

```

652 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
653 \catcode\z@=12 %
654 \ifxetex
655 \expandafter\@firstofone
656 \else
657 \let\HyPsd@XeTeXBigCharstrue\@empty
658 \let\HyPsd@XeTeXBigCharsfalse\@empty
659 \expandafter\@gobble
660 \fi
661 {%
662 \newif\ifHyPsd@XeTeXBigChars
663 \def\HyPsd@XeTeXBigCharsfalse{%
664 \global\let\ifHyPsd@XeTeXBigChars\iffalse
665 }%
666 \def\HyPsd@XeTeXBigCharstrue{%
667 \global\let\ifHyPsd@XeTeXBigChars\iftrue
668 }%
669 \def\HyPsd@ToBigChars#1{%

```

```

670 \ifHyPsd@XeTeXBigChars
671 \edefEscapeHex\HyPsd@UnescapedString{%
672 \expandafter\@gobbletwo\HyPsd@UnescapedString
673 }%
674 \begingroup
675 \toks@{}%
676 \escapechar=92\relax
677 \let\x\HyPsd@ToBigChar
678 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
679 \relax\relax\relax\relax\relax\relax\relax
680 \edef\x{%
681 \endgroup
682 \gdef\noexpand#1{\the\toks@}%
683 }%
684 \x
685 \fi
686 }%
687 \def\HyPsd@ToBigChar#1#2#3#4{%
688 \ifx\relax#1\relax
689 \let\x\relax
690 \else
691 \count@=#1#2#3#4\relax
692 \let\y\@empty
693 \lccode\z@=\count@
694 \ifnum\count@=40 % (
695 \let\y\@backslashchar
696 \else
697 \ifnum\count@=41 % )
698 \let\y\@backslashchar
699 \else
700 \ifnum\count@=92 % backslash
701 \let\y\@backslashchar
702 \else
703 \ifnum\count@=10 % newline
704 \edef\y##1{\string\n}%
705 \else
706 \ifnum\count@=13 % carriage return
707 \edef\y##1{\string\r}%
708 \fi
709 \fi
710 \fi
711 \fi
712 \fi
713 \lowercase{%
714 \toks@\expandafter{%
715 \the\expandafter\toks@
716 \y
717 ^^@%
718 }%
719 }%
720 \fi
721 \x
722 }%
723 }
724 \Hy@temp

```

6.3.2 Workaround for package linguex

```

725 \@ifpackageloaded{linguex}{%
726   \let\HyLinguex@OrgB\b
727   \let\HyLinguex@OrgC\c
728   \let\HyLinguex@OrgD\d
729   \def\HyLinguex@Restore{%
730     \let\b\HyLinguex@OrgB
731     \let\c\HyLinguex@OrgC
732     \let\d\HyLinguex@OrgD
733   }%
734   \AtEndOfPackage{%
735     \pdfstringdefDisableCommands{%
736       \@ifundefined{oldb}{\let\b\oldb}%
737       \@ifundefined{oldc}{\let\c\oldc}%
738       \@ifundefined{oldd}{\let\d\oldd}%
739     }%
740   }%
741 }{%
742   \let\HyLinguex@Restore\relax
743 }%

```

6.3.3 PD1 encoding

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

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

```

744 \@ifundefined{T@PD1}{%
745   \input{pdlenc.def}%
746   \HyLinguex@Restore
747 }{}
748 \DeclareFontFamily{PD1}{pdf}{}
749 \DeclareFontShape{PD1}{pdf}{m}{n}{<-> cmr10 }{}
750 \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`.

```

751 \def\HyPsd@InitUnicode{%
752   \@ifundefined{T@PU}{%
753     \input{puenc.def}%
754     \HyLinguex@Restore
755   }{}%
756   \DeclareFontFamily{PU}{pdf}{}%
757   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
758   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
759   \let\HyPsd@InitUnicode\relax
760 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full expandible macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```

761 \def\texorpdfstring{%
762   \ifHy@pdfstring
763     \expandafter\@secondoftwo
764   \else
765     \expandafter\@firstoftwo
766   \fi
767 }
```

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`.

```

768 \@ifundefined{pdfstringdefPreHook}{%
769   \let\pdfstringdefPreHook\@empty
770 }{}
771 \@ifundefined{pdfstringdefPostHook}{%
772   \let\pdfstringdefPostHook\@gobble
773 }{}
```

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

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

```

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

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

```

774 \def\pdfstringdefDisableCommands{%
775   \begingroup
776     \makeatletter
777     \HyPsd@DisableCommands
778 }
```

`\HyPsd@DisableCommands`

```

779 \long\def\HyPsd@DisableCommands#1{%
780   \toks0=\expandafter{\pdfstringdefPreHook}%
781   \toks1={#1}%
782   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
783 \endgroup
784 }
```

`\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`.

```
785 \def\pdfstringdefWarn#1{%
786   \expandafter\noexpand\csname<>-\string#1\endcsname
787 }
```

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.

```
788 \begingroup
789   \catcode0=12 %
790   \def\x{\endgroup
791     \def\HyPsd@ignorespaces{%
792       \romannumeral\expandafter'\expandafter^^@%
793       \romannumeral'^^@%
794     }%
795   }%
796 \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`.

```
797 \def\HyPsd@BabelPatch{%
798   \let\HyOrg@languageshorthands\languageshorthands
799   \let\languageshorthands\HyPsd@LanguageShorthands
800 }
801 \RequirePackage{pdftexcmds}[2009/04/10]
802 \begingroup\expandafter\expandafter\expandafter\endgroup
803 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
804   \let\HyPsd@langshort@system\@empty
805   \def\HyPsd@LanguageShorthands#1{%
806     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
807       \HyPsd@langshort@system
808     \expandafter\@gobble
809   \else
```

```

810 \expandafter\@firstofone
811 \fi
812 {%
813 \HyOrg@languageshorthands{#1}%
814 }%
815 }%
816 \else
817 \def\HyPsd@LanguageShorthands#1{%
818 \ifnum\pdf@strcmp{#1}{system}=\z@
819 \expandafter\@gobble
820 \else
821 \expandafter\@firstofone
822 \fi
823 {%
824 \HyOrg@languageshorthands{#1}%
825 }%
826 }%
827 \fi
828 \def\Hy@temp{%
829 \@ifpackageloaded{babel}{%
830 \@ifpackagelater{babel}{2008/03/16}{%
831 \let\Hy@temp\@empty
832 }{%
833 \def\HyPsd@BabelPatch{%
834 \let\HyOrg@languageshorthands\languageshorthands
835 }%
836 }%
837 }{}%
838 }
839 \Hy@temp
840 \expandafter\AtBeginDocument\expandafter{\Hy@temp}
841 \newif\ifHy@next

Nothing to do for english.
842 \@ifundefined{danish@sh@"@sel}{-}{%
843 \def\HyPsd@babel@danish{%
844 \declare@shorthand{danish}{-}{-}%
845 \declare@shorthand{danish}{-}{-}%
846 }%
847 }
848 \@ifundefined{dutch@sh@"@sel}{-}{%
849 \def\HyPsd@babel@dutch{%
850 \declare@shorthand{dutch}{-}{-}%
851 \declare@shorthand{dutch}{-}{-}%
852 }%
853 }
854 \@ifundefined{finnish@sh@"@sel}{-}{%
855 \def\HyPsd@babel@finnish{%
856 \declare@shorthand{finnish}{-}{-}%
857 }%
858 }
859 \@ifundefined{french@sh@:@sel}{-}{%
860 \def\HyPsd@babel@frenchb{%
861 \def\guill@spacing{ }%
862 }%
863 }
864 \@ifundefined{german@sh@"@sel}{-}{%

```



```

865 \def\HyPsd@babel@german{%
866   \declare@shorthand{german}{f}{f}%
867   \declare@shorthand{german}{"}{|}%
868   \declare@shorthand{german}{"}{~}{-}%
869 }%
870 }
871 \@ifundefined{macedonian@sh@"@sel}{}{%
872 \def\HyPsd@babel@macedonian{%
873   \declare@shorthand{macedonian}{"}{|}%
874   \declare@shorthand{macedonian}{"}{~}{-}%
875 }%
876 }{}
877 \@ifundefined{ngerman@sh@"@sel}{}{%
878 \def\HyPsd@babel@ngerman{%
879   \declare@shorthand{ngerman}{"}{|}%
880   \declare@shorthand{ngerman}{"}{~}{-}%
881 }%
882 }
883 \@ifundefined{portuges@sh@"@sel}{}{%
884 \def\HyPsd@babel@portuges{%
885   \declare@shorthand{portuges}{"}{|}%
886 }%
887 }
888 \@ifundefined{russian@sh@"@sel}{}{%
889 \def\HyPsd@babel@russian{%
890   \declare@shorthand{russian}{"}{|}%
891   \declare@shorthand{russian}{"}{~}{-}%
892 }%
893 }
894 \@ifundefined{slovene@sh@"@sel}{}{%
895 \def\HyPsd@babel@slovene{%
896   \declare@shorthand{slovene}{"}{|}%
897 }%
898 }

```

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

```

899 \@ifundefined{spanish@sh@>@sel}{}{%
900 \def\HyPsd@babel@spanish{%
901   \declare@shorthand{spanish}{<<}{\guillemotleft}%
902   \declare@shorthand{spanish}{>>}{\guillemotright}%
903   \declare@shorthand{spanish}{=}{-}%
904   \declare@shorthand{spanish}{"}{~}{-}%
905   \declare@shorthand{spanish}{!}{\textexclamdown}%
906   \declare@shorthand{spanish}{?}{\textquestiondown}%
907 }%
908 }
909 \@ifundefined{swedish@sh@"@sel}{}{%
910 \def\HyPsd@babel@swedish{%
911   \declare@shorthand{swedish}{"}{|}%
912   \declare@shorthand{swedish}{"}{~}{-}%
913 }%
914 }
915 \@ifundefined{ukrainian@sh@"@sel}{}{%
916 \def\HyPsd@babel@ukrainian{%
917   \declare@shorthand{ukrainian}{"}{|}%
918   \declare@shorthand{ukrainian}{"}{~}{-}%
919 }%
920 }

```

```

921 \@ifundefined{usorbian@sh@{sel}}{}{}%
922 \def\HyPsd@babel@usorbian{%
923 \declare@shorthand{usorbian}{f}{f}%
924 \declare@shorthand{usorbian}{|}{|}%
925 }%
926 }

927 \@ifundefined{greek@sh@\string~@sel}{}{}%
928 \let\HyPsd@GreekPatch\@empty
929 {}{}%
930 \def\HyPsd@GreekPatch{%
931 \let\greeknumeral\HyPsd@greeknumeral
932 \let\Greeknnumeral\HyPsd@Greeknnumeral
933 }%
934 }

935 \def\HyPsd@greeknumeral#1{%
936 \HyPsd@GreekNum\@firstoftwo{#1}%
937 }

938 \def\HyPsd@Greeknnumeral#1{%
939 \HyPsd@GreekNum\@secondoftwo{#1}%
940 }

941 \def\HyPsd@GreekNum#1#2{%
942 \ifHy@unicode
943 \ifnum#2<\@ne
944 \@arabic{#2}%
945 \else
946 \ifnum#2<1000000 %
947 \HyPsd@@GreekNum#1{#2}%
948 \else
949 \@arabic{#2}%
950 \fi
951 \fi
952 \else
953 \@arabic{#2}%
954 \fi
955 }

956 \def\HyPsd@@GreekNum#1#2{%
957 \ifnum#2<\@m
958 \ifnum#2<10 %
959 \expandafter\HyPsd@GreekNumI
960 \expandafter\@gobble\expandafter#1\number#2%
961 \else
962 \ifnum#2<100 %
963 \expandafter\HyPsd@GreekNumII
964 \expandafter\@gobble\expandafter#1\number#2%
965 \else
966 \expandafter\HyPsd@GreekNumIII
967 \expandafter\@gobble\expandafter#1\number#2%
968 \fi
969 \fi
970 \ifnum#2>\z@
971 \textnumeralsigngreek
972 \fi
973 \else
974 \ifnum#2<\@M
975 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
976 \else
977 \ifnum#2<100000 %

```

```

978     \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
979     \else
980     \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
981     \fi
982     \fi
983     \fi
984 }
985 \def\HyPsd@GreekNumI#1#2#3{%
986   #1{%
987     \ifnum#3>\z@
988       \textnumeralsignlowergreek
989       \fi
990     }%
991     \expandafter#2%
992     \ifcase#3 %
993       {}{}%
994       \or\textalpha\textAlpha
995       \or\textbeta\textBeta
996       \or\textgamma\textGamma
997       \or\textdelta\textDelta
998       \or\textepsilon\textEpsilon
999       \or\textstigmagreek\textStigmagreek
1000      \or\textzeta\textZeta
1001      \or\texteta\textEta
1002      \or\texttheta\textTheta
1003      \else
1004        {}{}%
1005      \fi
1006 }
1007 \def\HyPsd@GreekNumII#1#2#3#4{%
1008   #1{%
1009     \ifnum#3>\z@
1010       \textnumeralsignlowergreek
1011       \fi
1012     }%
1013     \expandafter#2%
1014     \ifcase#3 %
1015       {}{}%
1016       \or\textiota\textIota
1017       \or\textkappa\textKappa
1018       \or\textlambda\textLambda
1019       \or\textmu\textMu
1020       \or\textnu\textNu
1021       \or\textxi\textXi
1022       \or\textomicron\textOmicron
1023       \or\textpi\textPi
1024       \or\textkoppagreek\textKoppagreek
1025       \else
1026         {}{}%
1027       \fi
1028     \HyPsd@GreekNumI#1#2#4%
1029 }
1030 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1031   #1{%
1032     \ifnum#3>\z@
1033       \textnumeralsignlowergreek
1034       \fi

```

```

1035 }%
1036 \expandafter#2%
1037 \ifcase#3 %
1038   {}{}%
1039 \or\textrho\textRho
1040 \or\textsigma\textSigma
1041 \or\texttau\textTau
1042 \or\textupsilon\textUpsilon
1043 \or\textphi\textPhi
1044 \or\textchi\textChi
1045 \or\textpsi\textPsi
1046 \or\textomega\textOmega
1047 \or\textsampigreek\textSampigreek
1048 \else
1049   {}{}%
1050 \fi
1051 \HyPsd@GreekNumII#1#2#4#5%
1052 }
1053 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1054   \HyPsd@GreekNumI\@firstofone#1#2%
1055   \HyPsd@@GreekNum#1{#3#4#5}%
1056 }
1057 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1058   \HyPsd@GreekNumII\@firstofone#1#2#3%
1059   \HyPsd@@GreekNum#1{#4#5#6}%
1060 }
1061 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1062   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1063   \HyPsd@@GreekNum#1{#5#6#7}%
1064 }
1065 \def\HyPsd@SpanishPatch{%
1066   \begingroup\expandafter\expandafter\expandafter\endgroup
1067   \expandafter\ifx\csname es@save@dot\endcsname\relax
1068   \else
1069     \let\.\es@save@dot
1070   \fi
1071 }

```

6.5.3 CJK bookmarks

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

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

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

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

```

1072 \begingroup
1073   \catcode"7F=\active
1074   \toks@{}%
1075   \let\CJK@ignorespaces\empty
1076   \def\CJK@char#1{\@gobbletwo}%
1077   \let\CJK@charx\@gobblefour
1078   \let\CJK@punctchar\@gobblefour

```

```

1079 \def\CJK@punctcharx#1{\@gobblefour}%
1080 \catcode"7F=\active
1081 \def^^7f#1^^7f#2^^7f{%
1082   \string #1\HyPsd@DecimalToOctal{#2}%
1083 }%
1084 % ... ?
1085 \ifHy@unicode
1086   \def\Hy@cjkpu{\80}%
1087 \else
1088   \let\Hy@cjkpu\@empty
1089 \fi
1090 \HyPsd@CJKActiveChars
1091 }%
1092 \count@=127 %
1093 \@whilenum\count@<255 \do{%
1094   \advance\count@ by 1 %
1095   \lccode'\~=\count@
1096   \lowercase{%
1097     \toks@\expandafter{\the\toks@ ~}%
1098   }%
1099 }%
1100 \toks@\expandafter{\the\toks@ !}%
1101 \xdef\HyPsd@CJKhook{\the\toks@}%
1102 \endgroup

```

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

```

1103 \def\HyPsd@CJKActiveChars#1{%
1104   \ifx#1!%
1105     \let\HyPsd@CJKActiveChars\relax
1106   \else
1107     \edef#1{\noexpand\Hy@cjkpu\string#1}%
1108   \fi
1109   \HyPsd@CJKActiveChars
1110 }

```

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

```

1111 \def\HyPsd@DecimalToOctal#1{%
1112   \ifcase #1 %
1113     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1114     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1115     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1116     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1117     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1118     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1119     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1120     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1121     \or @\or A\or B\or C\or D\or E\or F\or G%
1122     \or H\or I\or J\or K\or L\or M\or N\or O%
1123     \or P\or Q\or R\or S\or T\or U\or V\or W%
1124     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1125     \or \140\or a\or b\or c\or d\or e\or f\or g%
1126     \or h\or i\or j\or k\or l\or m\or n\or o%
1127     \or p\or q\or r\or s\or t\or u\or v\or w%
1128     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1129     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1130     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%

```

```

1131 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1132 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1133 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1134 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1135 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1136 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1137 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1138 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1139 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1140 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1141 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1142 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1143 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1144 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1145 \fi
1146 }

```

6.5.4 \@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 \TeX 2_ε versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

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

```

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

1147 \def\HyPsd@inmathwarn#1#2{%
1148   \ifx#2\expandafter
1149     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1150       \HyPsd@GLYPHERR
1151     \expandafter\@gobble\string#1%
1152     >%
1153     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1154   \else
1155     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1156   \fi
1157 \else
1158   \expandafter#2%
1159 \fi
1160 }
1161 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1162 \def\HyPsd@EndWithElse#1\else{\else}

```

\HyPsd@add@accent

```

1163 \def\HyPsd@add@accent#1#2{%
1164   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1165   #2%
1166 }%

```

6.5.5 Unexpandable spaces

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

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

These properties are used in \HyPsd@CheckCatcodes.

```

1167 \def\HyPsd@LetUnexpandableSpace#1{%
1168   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1169 }

```

\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.

```

1170 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.6 Marker for commands

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

```

1171 \edef\HyPsd@XSPACE{\string#\string X}
1172 \edef\HyPsd@ITALCORR{\string#\string I}
1173 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.7 \hspace fix

\HyPsd@hspace

```
1174 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1175 \def\HyPsd@@hspace#1*#2\END{%
1176   \ifx\#2\%
1177     \HyPsd@hspacetest{#1}%
1178   \else
1179     \expandafter\HyPsd@hspacetest
1180   \fi
1181 }
```

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

```
1182 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.8 Fix for AMS classes

```
1183 \@ifundefined{tocsection}{%
1184   \let\HyPsd@AMSclassfix\relax
1185 }{%
1186   \def\HyPsd@AMSclassfix{%
1187     \let\tocpart\HyPsd@tocsection
1188     \let\tocchapter\HyPsd@tocsection
1189     \let\tocappendix\HyPsd@tocsection
1190     \let\tocsection\HyPsd@tocsection
1191     \let\tocsubsection\HyPsd@tocsection
1192     \let\tocsubsubsection\HyPsd@tocsection
1193     \let\tocparagraph\HyPsd@tocsection
1194   }%
1195   \def\HyPsd@tocsection#1#2#3{%
1196     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1197     #3%
1198   }%
1199 }
```

6.5.9 Reference commands

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

```
1200 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1201 \def\HyPsd@@ref#1*#2\END{%
1202   \ifx\#2\%
1203     \HyPsd@@@ref{#1}%
1204   \else
1205     \expandafter\HyPsd@@@ref
1206   \fi
1207 }
```

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

```
1208 \def\HyPsd@@@ref#1{%
1209   \expandafter\ifx\csname r@#1\endcsname\relax
1210     ??%
```



```

1211 \else
1212 \expandafter\expandafter\expandafter
1213 \@car\csname r@#1\endcsname\@nil
1214 \fi
1215 }

```

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

```

1216 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1217 \def\HyPsd@@pageref#1*#2\END{%
1218 \ifx\#2\%
1219 \HyPsd@@@pageref{#1}%
1220 \else
1221 \expandafter\HyPsd@@@pageref
1222 \fi
1223 }

```

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

```

1224 \def\HyPsd@@@pageref#1{%
1225 \expandafter\ifx\csname r@#1\endcsname\relax
1226 ??%
1227 \else
1228 \expandafter\expandafter\expandafter\expandafter
1229 \expandafter\expandafter\expandafter\@car
1230 \expandafter\expandafter\expandafter\@gobble
1231 \csname r@#1\endcsname{}\@nil
1232 \fi
1233 }

```

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

```

1234 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1235 \def\HyPsd@@nameref#1*#2\END{%
1236 \ifx\#2\%
1237 \HyPsd@@@nameref{#1}%
1238 \else
1239 \expandafter\HyPsd@@@nameref
1240 \fi
1241 }

```

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

```

1242 \def\HyPsd@@@nameref#1{%
1243 \expandafter\ifx\csname r@#1\endcsname\relax
1244 ??%
1245 \else
1246 \expandafter\expandafter\expandafter\expandafter
1247 \expandafter\expandafter\expandafter\@car
1248 \expandafter\expandafter\expandafter\@gobbletwo
1249 \csname r@#1\endcsname{}\@nil
1250 \fi
1251 }

```

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

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

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

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

\HyPsd@@autorefname

and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

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

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

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

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand
1286 \begingroup
1287   \def\x#1#2{%
1288     \endgroup
1289     \let#1\def
1290     \def\HyPsd@DefCommand##1##2##{%
1291       #1%
1292       \expandafter\noexpand
1293       \csname\expandafter\@gobble\string##1\@empty\endcsname
1294       \@gobble
1295     }%
1296     \let#2\let
1297     \def\HyPsd@@LetCommand##1{%
1298       \expandafter\ifx\csname##1\expandafter\endcsname
1299         \csname iftrue\endcsname
1300         \pdfstringdefWarn\let
1301         \expandafter\@gobble
1302       \else
1303         \expandafter\ifx\csname##1\expandafter\endcsname
1304           \csname iffalse\endcsname
1305           \pdfstringdefWarn\let
1306           \expandafter\expandafter\expandafter\@gobble
1307         \else
1308           #2%
1309           \expandafter\noexpand
1310           \csname##1\expandafter\expandafter\expandafter\endcsname
1311         \fi
1312       \fi
1313     }%
1314   }%
1315   \expandafter\x\csname <def>-command\expandafter\endcsname
1316     \csname <let>-command\endcsname
1317   \def\HyPsd@LetCommand#1{%
1318     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1319     \expandafter\expandafter\expandafter{%
1320       \expandafter\@gobble\string#1\@empty
1321     }%

```

1322 }

6.5.11 \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).

```
1323 \def\HyPsd@ifnextchar#1{%
1324   \pdfstringdefWarn#1%
1325   \expandafter\@gobbletwo\@gobble
1326 }
```

6.5.12 \@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.

```
1327 \def\HyPsd@protected@testopt#1{%
1328   \pdfstringdefWarn#1%
1329   \@gobbletwo
1330 }
```

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:

```
1331 \def\HyPsd@Warning#1{%
1332   \begingroup
1333   \def\space{ }%
1334   \Hy@Warning{#1}%
1335   \endgroup
1336 }
```

6.6.2 Protecting spaces

```
1337 \RequirePackage{etexcmds}[2007/09/09]
1338 \ifetex@unexpanded
1339   \expandafter\@secondoftwo
1340 \else
1341   \expandafter\@firstoftwo
1342 \fi
1343 {%
```

\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`.

```

1344 \def\HyPsd@ProtectSpaces#1{%
1345   \iftrue
1346     \expandafter\HyPsd@@ProtectSpacesFi
1347     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1348   \fi
1349 }%
```

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

```

1350 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1351   \fi
1352   \ifx\scrollmode#2\scrollmode
1353     \HyPsd@RemoveMask#1\HyPsd@End#3%
1354   \else
1355     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1356     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1357   \fi
1358 }%
```

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.

```

1359 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1360   \toks@{\expandafter{#1}}%
1361   \xdef#2{\the\toks@}%
1362 }%

1363 }{%
1364   \let\HyPsd@fi\fi
1365   \def\HyPsd@ProtectSpaces#1{%
1366     \xdef#1{%
1367       \iftrue
1368         \expandafter\HyPsd@@ProtectSpacesFi
1369         \expandafter|\expandafter\@empty#1| %
1370       \HyPsd@fi
1371     }%
1372     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1373   }%
1374   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1375     \fi
1376     \etex@unexpanded{#1}%
1377     \ifx\scrollmode#2\scrollmode
1378     \else
1379       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1380     \HyPsd@fi
1381   }%
1382   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1383     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1384   }%
1385 }
```

6.6.3 Remove grouping braces

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

```

1386 \def\HyPsd@RemoveBraces#1{%
1387   \ifx\scrollmode#1\scrollmode
1388   \else
1389     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1390   \fi
1391 }

```

`\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`.

```

1392 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1393   \fi
1394   \def\Hy@temp@A{#1#2}%
1395   \def\Hy@temp@B{#3}%
1396   \ifx\Hy@temp@A\Hy@temp@B
1397     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1398       \HyPsd@String#1%
1399     }%
1400     \ifx\scrollmode#2\scrollmode
1401     \else
1402       \Hy@ReturnAfterFiFiEnd{%
1403         \HyPsd@RemoveBraces{#2}%
1404       }%
1405     \fi
1406   \else
1407     \def\Hy@temp@A{#1}%
1408     \HyPsd@AppendItalcorr\HyPsd@String
1409     \ifx\Hy@temp@A\@empty
1410       \Hy@ReturnAfterElseFiFiEnd{%
1411         \HyPsd@RemoveBraces{#2}%
1412       }%
1413     \else
1414       \HyPsd@ProtectSpaces\Hy@temp@A
1415       \HyPsd@AppendItalcorr\Hy@temp@A
1416       \Hy@ReturnAfterFiFiEnd{%
1417         \expandafter\HyPsd@RemoveBraces\expandafter
1418           {\Hy@temp@A#2}%
1419       }%
1420     \fi
1421   \fi
1422   \Hy@ReturnEnd
1423 }

```

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

```

1424 \def\HyPsd@AppendItalcorr#1{%
1425   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1426 }
1427 \def\HyPsd@@AppendItalcorr#1#2{%
1428   \expandafter\def\expandafter#2\expandafter{#2#1}%
1429 }

```

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`).

```
1430 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1431   \global\let\HyPsd@Rest\relax
1432   \ifcat\relax\noexpand#1\relax
1433     \ifx#1\protect
1434       \else
1435         \ifx#1\penalty
1436           \setbox\z@=\hbox{%
1437             \afterassignment\HyPsd@AfterCountRemove
1438             \count@=#2\HyPsd@end
1439           }%
1440         \else
1441           \ifx#1\kern
1442             \setbox\z@=\hbox{%
1443               \afterassignment\HyPsd@AfterDimenRemove
1444               \dimen@=#2\HyPsd@end
1445             }%
1446           \else
1447             \ifx#1\hskip
1448               \setbox\z@=\hbox{%
1449                 \afterassignment\HyPsd@AfterSkipRemove
1450                 \skip@=#2\HyPsd@end
1451               }%
1452             \else
1453               \HyPsd@CatcodeWarning{#1}%
1454             \fi
1455           \fi
1456         \fi
1457       \fi
1458     \else
1459       \ifcat#1A% letter
1460         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1461           \HyPsd@String#1%
1462         }%
1463       \else
1464         \ifcat#1 % SPACE
1465           \expandafter\def\expandafter\HyPsd@String\expandafter{%
1466             \HyPsd@String\HyPsd@SPACEOPTI
1467           }%
1468         \else
1469           \ifcat$#1%
1470             \HyPsd@CatcodeWarning{math shift}%
1471           \else
1472             \ifcat&#1%
1473               \HyPsd@CatcodeWarning{alignment tab}%
```

```

1474     \else
1475     \ifcat^#1%
1476     \HyPsd@CatcodeWarning{superscript}%
1477     \else
1478     \ifcat_#1%
1479     \HyPsd@CatcodeWarning{subscript}%
1480     \else
1481     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1482     \HyPsd@String#1%
1483     }%
1484     \fi
1485     \fi
1486     \fi
1487     \fi
1488     \fi
1489     \fi
1490 \fi
1491 \ifx\HyPsd@Rest\relax
1492 \ifx\scrollmode#2\scrollmode
1493 \else
1494 \Hy@ReturnAfterFiFiEnd{%
1495 \HyPsd@CheckCatcodes#2\HyPsd@End
1496 }%
1497 \fi
1498 \else
1499 \ifx\HyPsd@Rest\@empty
1500 \else
1501 \Hy@ReturnAfterFiFiEnd{%
1502 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1503 }%
1504 \fi
1505 \fi
1506 \Hy@ReturnEnd
1507 }

```

Remove counts, dimens, skips.

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

```

1508 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1509 \gdef\HyPsd@Rest{#1}%
1510 }

```

\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.

```

1511 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1512 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1513 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1514 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1515 \else
1516 \ifdim\dimen@=\z@
1517 \else
1518 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1519 \fi
1520 \gdef\HyPsd@Rest{#1}%
1521 \fi

```


1522 }

`\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).

```
1523 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1524   \ifdim\ifx\HyPsd@String\@empty\z@else\skip@<fi>1ex %
1525   \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1526   \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1527   \else
1528   \ifdim\skip@=\z@
1529   \else
1530   \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1531   \fi
1532   \gdef\HyPsd@Rest{#1}%
1533   \fi
1534 }
```

Catcode warnings.

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

```
1535 \def\HyPsd@CatcodeWarning#1{%
1536   \HyPsd@Warning{%
1537     Token not allowed in a PDF string (%
1538     \ifHy@unicode
1539       Unicode%
1540     \else
1541       PDFDocEncoding%
1542     \fi
1543   ):%
1544   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1545   }%
1546 }
1547 \begingroup
1548 \catcode'\|=0 %
1549 \catcode'\|=12 %
1550 \gdef\HyPsd@RemoveCmdPrefix#1{%
1551   \expandafter\HyPsd@@RemoveCmdPrefix
1552   \string#1\@empty\<>-|\@empty|\@empty
1553   }%
1554 \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
1555 \endgroup
```

`\HyPsd@RemoveSpaceWarning`

```
1556 \def\HyPsd@RemoveSpaceWarning#1{%
1557   \HyPsd@Warning{%
1558     Token not allowed in a PDF string (%
1559     \ifHy@unicode
1560       Unicode%
1561     \else
1562       PDFDocEncoding%
1563     \fi
1564   ):%
1565   \MessageBreak #1\MessageBreak
1566   removed%
1567   }%
1568 }
```

\HyPsd@ReplaceSpaceWarning

```
1569 \def\HyPsd@ReplaceSpaceWarning#1{%
1570 \HyPsd@Warning{%
1571   Token not allowed in a PDF string (%
1572   \ifHy@unicode
1573     Unicode%
1574   \else
1575     PDFDocEncoding%
1576   \fi
1577   ):%
1578   \MessageBreak #1\MessageBreak
1579   replaced by space%
1580 }%
1581 }
```

6.6.5 Check for wrong glyphs

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

```
1582 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1583 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1584 \HyPsd@String#1%
1585 }%
1586 \ifx\#2\%
1587 \else
1588 \Hy@ReturnAfterFi{%
1589 \HyPsd@GlyphProcessWarning#2\@empty
1590 }%
1591 \fi
1592 }
1593 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1594 \HyPsd@@@GlyphProcessWarning#1++>%
1595 \HyPsd@GlyphProcess#2\@empty
1596 }
1597 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
1598 \ifx\#2\%
1599 \HyPsd@Warning{%
1600   Glyph not defined in %
1601   P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1602   removing '@backslashchar#1'%
1603 }%
1604 \else
1605 \HyPsd@Warning{%
1606   Composite letter '@backslashchar#1+#2'\MessageBreak
1607   not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1608   \MessageBreak
1609   removing '@backslashchar#1'%
1610 }%
1611 \fi
1612 }
```

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.

```

1613 \def\HyPsd@spaceopti#1{ % first space
1614   \ifx\HyPsd@spaceopti#1%
1615     \040%
1616   \else
1617     #1%
1618   \fi
1619 }%

```

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.

```

1620 \def\HyPsd@Subst#1#2#3{%
1621   \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1622     \fi
1623     ##1%
1624     \ifx\scrollmode##2\scrollmode
1625     \else
1626       #2%
1627     \HyPsd@@ReplaceFi##2\END
1628   \fi
1629 }%
1630 \xdef#3{%
1631   \iftrue
1632     \expandafter\HyPsd@@ReplaceFi#3#1\END
1633   \fi
1634 }%
1635 }

```

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

```

1636 \def\HyPsd@StringSubst#1{%
1637   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1638 }

```

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.

```

1639 \def\HyPsd@doxspace#1{%
1640   \ifx#1\relax\else
1641     \ifx#1.\else
1642       \ifx#1:\else
1643         \ifx#1,\else
1644           \ifx#1;\else
1645             \ifx#1!\else
1646               \ifx#1?\else
1647                 \ifx#1/\else
1648                   \ifx#1-\else
1649                     \ifx#1'\else
1650                       \HyPsd@SPACEOPTI

```

```

1651      \fi
1652      \fi
1653      \fi
1654      \fi
1655      \fi
1656      \fi
1657      \fi
1658      \fi
1659      \fi
1660      \fi
1661      #1%
1662 }%

```

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.

```

1663 \begingroup
1664 \catcode'\|=0 %
1665 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1666 |gdef|HyPsd@ConvertToUnicode#1{%
1667 |xdef#1{%
1668 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1669 }%
1670 |ifx#1|@empty
1671 |else
1672 |xdef#1{%
1673 \376\377%
1674 #1%
1675 }%
1676 |fi
1677 }%

```

\HyPsd@DoConvert

```

1678 |gdef|HyPsd@DoConvert#1{%
1679 |ifx#1|@empty
1680 |else
1681 |Hy@ReturnAfterFi{%
1682 |ifx#1\%%
1683 \%%
1684 |expandafter|HyPsd@DoEscape
1685 |else
1686 |HyPsd@Char{#1}%
1687 |expandafter|HyPsd@DoConvert
1688 |fi
1689 }%
1690 |fi
1691 }%

```

\HyPsd@DoEscape

```

1692 |gdef|HyPsd@DoEscape#1{%
1693 |ifx#19%
1694 |expandafter|HyPsd@GetTwoBytes

```

```

1695 | else
1696 | Hy@ReturnAfterFi{%
1697 | ifx#18%
1698 | 00%
1699 | expandafter HyPsd@GetTwoBytes
1700 | else
1701 | #1%
1702 | expandafter HyPsd@GetOneByte
1703 | fi
1704 }%
1705 | fi
1706 }%

```

\HyPsd@GetTwoBytes

```

1707 | gdef HyPsd@GetTwoBytes#1\#2#3#4{%
1708 | #1\#2#3#4%
1709 | HyPsd@DoConvert
1710 }%

```

\HyPsd@GetOneByte

```

1711 | gdef HyPsd@GetOneByte#1#2{%
1712 | #1#2%
1713 | HyPsd@DoConvert
1714 }%
1715 | endgroup

```

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

```

1716 \def HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1717 \xdef#4{#4#1#2}%
1718 \HyPsd@@ConvertToUnicode#3\END#4%
1719 }

```

\HyPsd@Char

```

1720 \RequirePackage{intcalc}[2007/09/27]
1721 \begingroup
1722 \catcode0=9 %
1723 \catcode'\^=7 %
1724 \catcode'\^^=12 %
1725 \def\x{^^^^0000}%
1726 \expandafter\endgroup
1727 \ifx\x\@empty
1728 \def HyPsd@Char#1{%
1729 \ifnum'#1<128 %
1730 \backslashchar 000#1%
1731 \else
1732 \ifnum'#1<65536 %
1733 \expandafter HyPsd@CharTwoByte\number'#1!%
1734 \else
1735 \expandafter\expandafter\expandafter HyPsd@CharSurrogate
1736 \intcalcSub{'#1}{65536}!%
1737 \fi
1738 \fi
1739 }%
1740 \def HyPsd@CharTwoByte#1!{%
1741 \expandafter\expandafter\expandafter HyPsd@CharOctByte
1742 \IntCalcDiv#1!256!!%
1743 \expandafter\expandafter\expandafter HyPsd@CharOctByte

```

```

1744 \IntCalcMod#1!256!!%
1745 }%
1746 \def\HyPsd@CharOctByte#1!{%
1747 \@backslashchar
1748 \IntCalcDiv#1!64!%
1749 \intcalcDiv{\IntCalcMod#1!64!}{8}%
1750 \IntCalcMod#1!8!%
1751 }%
1752 \def\HyPsd@CharSurrogate#1!{%
1753 \@backslashchar 33%
1754 \IntCalcDiv#1!262144!%
1755 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1756 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1757 \@backslashchar 33%
1758 \expandafter\expandafter\expandafter\IntCalcAdd
1759 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1760 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1761 \IntCalcMod#1!256!!%
1762 }%
1763 \else
1764 \def\HyPsd@Char#1{%
1765 \@backslashchar 000#1%
1766 }%
1767 \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`

```

1768 \begingroup\expandafter\expandafter\expandafter\endgroup
1769 \expandafter\ifx\csname numexpr\endcsname\relax
1770 \let\HyPsd@UTFviii\relax
1771 \else
1772 \begingroup
1773 \lccode'\~='^^f4\relax
1774 \lowercase{\endgroup
1775 \def\HyPsd@UTFviii{%
1776 \let\UTFviii@two@octets\HyPsd@UTFviii@two
1777 \let\UTFviii@three@octets\HyPsd@UTFviii@three
1778 \let\UTFviii@four@octets\HyPsd@UTFviii@four
1779 \ifx~\HyPsd@UTFviii@ccxliv@undef
1780 \let~\HyPsd@UTFviii@ccxliv@def
1781 \fi
1782 \let\unichar\HyPsd@unichar
1783 }%
1784 }%
1785 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1786 \edef\HyPsd@UTFviii@ccxliv@def{%

```

```

1787 \noexpand\UTFviii@four@octets\string ^~f4%
1788 }%

```

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

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

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

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

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

$$(5)$$

```

1789 \def\HyPsd@UTFviii@two#1#2{%
1790 \expandafter\HyPsd@UTFviii@@two
1791 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
1792 \number'#1\expandafter| %
1793 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
1794 \number'#2 \@nil
1795 }%
1796 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1797 \expandafter\8%
1798 \number\numexpr #1-48\expandafter\relax
1799 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1800 \number\numexpr #3-8*%
1801 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1802 \number\numexpr #4-8*#3\relax
1803 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

1804 \def\HyPsd@UTFviii@three#1#2#3{%
1805 \expandafter\HyPsd@UTFviii@@three
1806 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
1807 \number'#1\expandafter| %
1808 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
1809 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
1810 \number'#2\expandafter| %
1811 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
1812 \number'#3 \@nil
1813 }%
1814 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1815 \expandafter\9%
1816 \number\numexpr #1-56\expandafter\relax
1817 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1818 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax

```

```

1819 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1820 \number\numexpr #6-16\expandafter\relax
1821 \number\numexpr #7-8*#6\relax
1822 }%

```

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

```

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

```

```

1823 \def\HyPsd@UTFviii@four#1#2{%
1824 \expandafter\HyPsd@@UTFviii@four\number
1825 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1826 \expandafter|\number
1827 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
1828 }%
1829 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1830 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1831 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1832 \ifodd#2 %
1833 \number\numexpr(#2-1)/2\relax
1834 \else
1835 \number\numexpr#2/2\relax
1836 \fi
1837 \number\numexpr\ifodd#2 4+\fi
1838 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1839 \933%
1840 \expandafter\HyPsd@@@UTFviii@four\number
1841 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
1842 }%
1843 \def\HyPsd@@@UTFviii@four#1|#2{%
1844 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1845 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1846 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1847 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1848 }%

```

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

```

1849 \def\HyPsd@unichar#1{%
1850 \ifHy@unicode
1851 \ifnum#1>"10FFFF %
1852 \HyPsd@UnicodeReplacementCharacter % illegal
1853 \else
1854 \ifnum#1>"FFFF %

```

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

```

1855 \expandafter\HyPsd@unichar\expandafter{%
1856 \number\numexpr 55296+%
1857 \dimexpr.0009765625\dimexpr\number#1sp-\p@
1858 \relax\relax\relax
1859 }%

```

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

```

1860 \expandafter\HyPsd@unichar\expandafter{%
1861 \number\numexpr#1-9216%

```



```

1862         -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1863         \relax\relax\relax
1864     }%
1865     \else
1866         \ifnum#1>"7FF %
1867             \9%
1868             \expandafter\HyPsd@unichar@first@byte\expandafter{%
1869             \number
1870             \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1871             }%
1872         \else
1873             \8%
1874             \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1875         \fi
1876         \expandafter\HyPsd@unichar@second@byte\expandafter{%
1877         \number
1878         \numexpr#1-256*\number
1879         \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1880     }%
1881     \fi
1882     \fi
1883     \else
1884         .% unsupported (Unicode -> PDF Doc Encoding)
1885     \fi
1886 }%
1887 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1888 \def\HyPsd@unichar@first@byte#1{%
1889     \number\dimexpr.015625\dimexpr#1sp\relax\relax
1890     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1891     \number
1892     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1893     \relax\relax\relax
1894     }%
1895 }%
1896 \def\HyPsd@unichar@second@byte#1{%
1897     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1898     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1899     \number
1900     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1901     \relax\relax\relax
1902     }%
1903 }%
1904 \def\HyPsd@unichar@octtwo#1{%
1905     \number\dimexpr.125\dimexpr#1sp\relax\relax
1906     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1907     \relax\relax\relax
1908     }%
1909 \fi

```

7 Support of other packages

7.1 Class memoir

```

1910 \@ifclassloaded{memoir}{%
1911     \AtEndOfPackage{\RequirePackage{memhfixc}}}%
1912 }{}

```

7.2 Package subfigure

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

```

1913 \@ifpackageloaded{subfigure}{%
1914   \@ifundefined{sub@label}{%
1915     \Hy@hypertexnamesfalse
1916   }{%
1917     \renewcommand*{\sub@label}[1]{%
1918       \@bsphack
1919       \subfig@oldlabel{#1}%
1920       \if@filesw
1921         \begingroup
1922           \edef\@currentlabstr{%
1923             \expandafter\strip@prefix\meaning\@currentlabelname
1924           }%
1925           \protected@write\@auxout{}{%
1926             \string\newlabel{sub@#1}{%
1927               {\@nameuse{\@thesub\@capttype}}%
1928               {\thepage}%
1929             }%
1930             \expandafter\strip@period\@currentlabstr
1931             \relax.\relax\@@@%
1932           }%
1933           {\@currentHref}%
1934           {}%
1935         }%
1936       }%
1937     \endgroup
1938   \fi
1939   \@esphack
1940 }%
1941 \@ifpackagelater{subfigure}{2002/03/26}{%
1942   \providecommand*\@toclevel@subfigure{1}%
1943   \providecommand*\@toclevel@subtable{1}%
1944 }%
1945 }%
1946 }{}

```

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:

```

1947 \@ifundefined{XR@addURL}{%
1948 }{%

```

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.

```

1949   \def\XR@addURL#1{\XR@dURL#1{}{}{}\\}%
1950   \def\XR@dURL#1#2#3#4#5\\{%
1951     {#1}{#2}%
1952     \if!#4!%
1953       \else
1954         {#3}{#4}{\XR@URL}%
1955       \fi
1956     }%
1957 }
1958 \def\Hy@true{true}

```

```
1959 \def\Hy@false{false}
```

Providing dummy definitions.

```
1960 \let\literalps@out\@gobble
1961 \newcommand\pdfbookmark[3][]{ }
1962 \def\Acrobatmenu#1#2{\leavevmode#2}
1963 \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

```
1964 \let\HyperRaiseLinkHook\@empty
1965 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
1966 \def\Hy@raisedlink#1{%
1967   \ifvmode
1968     #1%
1969   \else
1970     \penalty\@M
1971     \smash{%
1972       \begingroup
1973         \let\HyperRaiseLinkLength\@tempdima
1974         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
1975         \HyperRaiseLinkHook
1976       \expandafter\endgroup
1977       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
1978     }%
1979   \fi
1980 }
```

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

```
1981 \def\Hy@SaveLastskip{%
1982   \let\Hy@RestoreLastskip\relax
1983   \ifvmode
1984     \ifdim\lastskip=\z@
1985       \let\Hy@RestoreLastskip\nobreak
1986     \else
1987       \begingroup
1988         \skip@=-\lastskip
1989       \edef\x{%
1990         \endgroup
1991       \def\noexpand\Hy@RestoreLastskip{%
1992         \noexpand\ifvmode
1993         \noexpand\nobreak
1994         \vskip\the\skip@
```

```

1995         \vskip\the\lastskip\relax
1996         \noexpand\fi
1997     }%
1998 }%
1999 \x
2000 \fi
2001 \else
2002 \ifhmode
2003     \ifdim\lastskip=\z@
2004         \let\Hy@RestoreLastskip\nobreak
2005     \else
2006         \begingroup
2007             \skip@=-\lastskip
2008             \edef\x{%
2009                 \endgroup
2010                 \def\noexpand\Hy@RestoreLastskip{%
2011                     \noexpand\ifhmode
2012                     \noexpand\nobreak
2013                     \hskip\the\skip@
2014                     \hskip\the\lastskip\relax
2015                     \noexpand\fi
2016                 }%
2017             }%
2018         \x
2019     \fi
2020 \fi
2021 \fi
2022 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2023 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2024 \def\Hy@@boolkey[#1]#2#3{%
2025     \edef\Hy@tempa{#3}%
2026     \lowercase\expandafter{%
2027         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2028     }%
2029     \ifx\Hy@tempa\@empty
2030         \let\Hy@tempa\Hy@true
2031     \fi
2032     \ifx\Hy@tempa\Hy@true
2033     \else
2034         \ifx\Hy@tempa\Hy@false
2035         \else
2036             \let\Hy@tempa\relax
2037         \fi
2038     \fi
2039     \ifx\Hy@tempa\relax
2040         \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2041     \else
2042         \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2043         \csname Hy@#2\Hy@tempa\endcsname
2044     \fi

```

2045 }

\Hy@WarnOptionValue

```
2046 \def\Hy@WarnOptionValue#1#2#3{%
2047   \Hy@Warning{%
2048     Unexpected value '#1'\MessageBreak
2049     of option '#2' instead of\MessageBreak
2050     #3%
2051   }%
2052 }
```

\Hy@DisableOption

```
2053 \def\Hy@DisableOption#1{%
2054   \@ifundefined{KV@Hyp@#1@default}{%
2055     \define@key{Hyp}{#1}%
2056   }{%
2057     \define@key{Hyp}{#1}[]%
2058   }%
2059   {\Hy@WarnOptionDisabled{#1}}%
2060 }
```

\Hy@WarnOptionDisabled

```
2061 \def\Hy@WarnOptionDisabled#1{%
2062   \Hy@Warning{%
2063     Option '#1' has already been used,\MessageBreak
2064     setting the option has no effect%
2065   }%
2066 }
```

\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.

```
2067 \def\Hy@CheckOptionValue#1#2#3{%
2068   \begingroup
2069   \edef\x{#1}%
2070   \@onelevel@sanitize\x
2071   \let\y=y%
2072   \def\do##1##2{%
2073     \def\z{##1}%
2074     \@onelevel@sanitize\z
2075     \ifx\x\z
2076       \let\y=n%
2077     \let\do\@gobbletwo
2078   }%
2079   \y%
2080   #3%
2081   \ifx\y y%
2082     \def\do##1##2{%
2083       * '##1'%
2084       \ifx\##2\\\else\space(##2)\fi
2085     }%
2086   }%
2087   \Hy@Warning{%
2088     Values of option '#2':\MessageBreak
2089     #3%
2090     * An empty value disables the option.\MessageBreak
2091     Unknown value '\x'%
2092   }%
```

```

2093   \fi
2094   \endgroup
2095 }

```

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

```

2096 \def\Hy@DefNameKey#1{%
2097   \expandafter\Hy@@@DefNameKey\csname @#1\endcsname{#1}%
2098 }

```

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

```

2099 \def\Hy@@@DefNameKey#1#2#3{%
2100   \define@key{Hyp}{#2}{%
2101     \edef#1{##1}%
2102     \ifx#1\@empty
2103     \else
2104       \Hy@CheckOptionValue{##1}{#2}{#3}%
2105     \fi
2106   }%
2107   \let#1\@empty
2108 }

```

`\Hy@UseNameKey`

```

2109 \def\Hy@UseNameKey#1#2{%
2110   \ifx#2\@empty
2111   \else
2112     /#1/#2%
2113   \fi
2114 }

```

9.2 Defining the options

```

2115 \define@key{Hyp}{implicit}[true]{%
2116   \Hy@boolkey{implicit}{#1}%
2117 }
2118 \define@key{Hyp}{draft}[true]{%
2119   \Hy@boolkey{draft}{#1}%
2120 }
2121 \define@key{Hyp}{final}[true]{%
2122   \Hy@boolkey{final}{#1}%
2123 }
2124 \let\KV@Hyp@nolinks\KV@Hyp@draft
2125 \def\Hy@ObsoletePaperOption#1{%
2126   \Hy@WarningNoLine{%
2127     Option ‘#1’ is no longer used%
2128   }%
2129   \define@key{Hyp}{#1}[true]{}%
2130 }
2131 \def\Hy@temp#1{%
2132   \define@key{Hyp}{#1}[true]{%
2133     \Hy@ObsoletePaperOption{#1}%
2134   }%
2135 }

```

```

2136 \Hy@temp{a4paper}
2137 \Hy@temp{a5paper}
2138 \Hy@temp{b5paper}
2139 \Hy@temp{letterpaper}
2140 \Hy@temp{legalpaper}
2141 \Hy@temp{executivepaper}

2142 \define@key{Hyp}{setpagesize}[true]{%
2143   \Hy@boolkey{setpagesize}{#1}%
2144 }
2145 \define@key{Hyp}{debug}[true]{%
2146   \Hy@boolkey[debug]{verbose}{#1}%
2147 }
2148 \define@key{Hyp}{linktocpage}[true]{%
2149   \Hy@boolkey{linktocpage}{#1}%
2150   \ifHy@linktocpage
2151     \let\Hy@linktoc\Hy@linktoc@page
2152   \else
2153     \let\Hy@linktoc\Hy@linktoc@section
2154   \fi
2155 }
2156 \chardef\Hy@linktoc@none=0 %
2157 \chardef\Hy@linktoc@section=1 %
2158 \chardef\Hy@linktoc@page=2 %
2159 \chardef\Hy@linktoc@all=3 %
2160 \ifHy@linktocpage
2161   \let\Hy@linktoc\Hy@linktoc@page
2162 \else
2163   \let\Hy@linktoc\Hy@linktoc@section
2164 \fi
2165 \define@key{Hyp}{linktoc}{%
2166   \@ifundefined{Hy@linktoc@#1}{%
2167     \Hy@Warning{%
2168       Unexpected value '#1' of\MessageBreak
2169       option 'linktoc' instead of 'none',\MessageBreak
2170       'section', 'page' or 'all'%
2171     }%
2172   }{%
2173     \expandafter\let\expandafter\Hy@linktoc
2174     \csname Hy@linktoc@#1\endcsname
2175   }%
2176 }
2177 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2178 \let\XR@ext\relax
2179 \define@key{Hyp}{verbose}[true]{%
2180   \Hy@boolkey{verbose}{#1}%
2181 }
2182 \define@key{Hyp}{typexml}[true]{%
2183   \Hy@boolkey{typexml}{#1}%
2184 }

```

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.

```

2185 \define@key{Hyp}{raiselinks}[true]{%
2186   \Hy@boolkey{raiselinks}{#1}%
2187 }

```

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

```
2188 \def\Hy@setbreaklinks#1{%
2189   \csname breaklinks#1\endcsname
2190 }
2191 \def\Hy@breaklinks@unsupported{%
2192   \ifx\Hy@setbreaklinks\@gobble
2193     \ifHy@breaklinks
2194       \Hy@WarningNoLine{%
2195         You have enabled option 'breaklinks'.\MessageBreak
2196         But driver '\Hy@driver.def' does not support this.\MessageBreak
2197         Expect trouble with the link areas of broken links%
2198       }%
2199     \fi
2200   \fi
2201 }
2202 \define@key{Hyp}{breaklinks}[true]{%
2203   \Hy@boolkey{breaklinks}{#1}%
2204   \let\Hy@setbreaklinks\@gobble
2205 }
```

Determines whether an automatic anchor is put on each page

```
2206 \define@key{Hyp}{pageanchor}[true]{%
2207   \Hy@boolkey{pageanchor}{#1}%
2208 }
```

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.

```
2209 \define@key{Hyp}{plainpages}[true]{%
2210   \Hy@boolkey{plainpages}{#1}%
2211 }
```

Are the names for anchors made as per the HyperTeX system, or do they simply use what \LaTeX provides?

```
2212 \define@key{Hyp}{naturalnames}[true]{%
2213   \Hy@boolkey{naturalnames}{#1}%
2214 }
```

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

```
2215 \define@key{Hyp}{hypertexnames}[true]{%
2216   \Hy@boolkey{hypertexnames}{#1}%
2217 }
```

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

```
2218 \define@key{Hyp}{nesting}[true]{%
2219   \Hy@boolkey{nesting}{#1}%
2220 }
2221 \define@key{Hyp}{unicode}[true]{%
2222   \Hy@boolkey{unicode}{#1}%
2223   \ifHy@unicode
2224     \def\HyPsd@pdfencoding{unicode}%
2225   \else
2226     \def\HyPsd@pdfencoding{pdfdoc}%
2227   \fi
2228   \HyPsd@LoadUnicode
2229 }
2230 \def\HyPsd@LoadUnicode{%
2231   \@ifundefined{T@PU}{%
2232     \input{puenc.def}%
2233   }
```



```

2233 \HyLinguex@Restore
2234 }{}%
2235 \DeclareFontFamily{PU}{pdf}{}%
2236 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2237 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2238 \global\let\HyPsd@LoadUnicode\relax
2239 }
2240 \AtBeginDocument{%
2241 \ifx\HyPsd@LoadUnicode\relax
2242 \else
2243 \def\HyPsd@LoadUnicode{%
2244 \PackageError{hyperref}{}%
2245 Unicode support for bookmarks is not available.\MessageBreak
2246 Activate unicode support by using one of the options\MessageBreak
2247 'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2248 in the preamble%
2249 }\@ehc
2250 \global\let\HyPsd@LoadUnicode\relax
2251 \global\Hy@unicodedefalse
2252 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2253 }%
2254 \fi
2255 }

2256 \define@key{Hyp}{pdfencoding}{%
2257 \edef\HyPsd@temp{#1}%
2258 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2259 \let\HyPsd@pdfencoding\HyPsd@temp
2260 \Hy@unicodedefalse
2261 \else
2262 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2263 \z@
2264 \else
2265 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2266 \z@
2267 \else
2268 \@ne
2269 \fi
2270 \fi
2271 \let\HyPsd@pdfencoding\HyPsd@temp
2272 \hypersetup{unicode}%
2273 \ifHy@unicode
2274 \def\HyPsd@pdfencoding{#1}%
2275 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2276 \HyPsd@LoadStringEncoding
2277 \fi
2278 \else
2279 \Hy@Warning{Cannot switch to unicode bookmarks}%
2280 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2281 \fi
2282 \else
2283 \@onelevel@sanitize\HyPsd@temp
2284 \Hy@Warning{%
2285 Values of option 'pdfencoding':\MessageBreak
2286 'pdfdoc', 'unicode', 'auto'.\MessageBreak
2287 Ignoring unknown value '\HyPsd@temp'%
2288 }%
2289 \fi

```

```

2290 \fi
2291 }
2292 \def\HyPsd@pdfencoding@auto{auto}
2293 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2294 \def\HyPsd@pdfencoding@unicode{unicode}
2295 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2296 \def\HyPsd@LoadStringEnc{%
2297   \RequirePackage{stringenc}[2009/12/15]%
2298   \let\HyPsd@LoadStringEnc\relax
2299 }
2300 \AtBeginDocument{%
2301   \ifpackageloaded{stringenc}{%
2302     \let\HyPsd@LoadStringEnc\relax
2303   }{%
2304     \def\HyPsd@LoadStringEnc{%
2305       \Hy@WarningNoLine{%
2306         Missing package ‘stringenc’. Use ‘pdfencoding=auto’\MessageBreak
2307         in the preamble or load the package there%
2308       }%
2309     }%
2310   }%
2311 }
2312 \newif\ifHy@setpdfversion
2313 \define@key{Hyp}{pdfversion}{%
2314   \ifundefined{Hy@pdfversion@#1}{%
2315     \PackageWarning{hyperref}{%
2316       Unsupported PDF version ‘#1’\MessageBreak
2317       Valid values: 1.2 until 1.9%
2318     }%
2319   }{%
2320     \Hy@setpdfversiontrue
2321     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2322   }%
2323 }
2324 \@namedef{Hy@pdfversion@1.2}{2}%
2325 \@namedef{Hy@pdfversion@1.3}{3}%
2326 \@namedef{Hy@pdfversion@1.4}{4}%
2327 \@namedef{Hy@pdfversion@1.5}{5}%
2328 \@namedef{Hy@pdfversion@1.6}{6}%
2329 \@namedef{Hy@pdfversion@1.7}{7}%
2330 \@namedef{Hy@pdfversion@1.8}{8}%
2331 \@namedef{Hy@pdfversion@1.9}{9}%
2332 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2333 \define@key{Hyp}{hyperref}[true]{}
2334 \define@key{Hyp}{tex4ht}[true]{%
2335   \Hy@texhttrue
2336   \setkeys{Hyp}{colorlinks=true}%
2337   \def\BeforeTeXIVht{\usepackage{color}}}%
2338 \def\Hy@driver{htex4ht}%
2339 \def\MaybeStopEarly{%
2340   \typeout{Hyperref stopped early}%
2341   \AfterBeginDocument{%
2342     \PDF@FinishDoc
2343     \gdef\PDF@FinishDoc{}%

```

```

2344 }%
2345 \endinput
2346 }%
2347 }
2348 \define@key{Hyp}{pdftex}[true]{%
2349 \def\Hy@driver{hpdftex}%
2350 }
2351 \define@key{Hyp}{nativepdf}[true]{%
2352 \def\Hy@driver{hdvips}%
2353 }
2354 \define@key{Hyp}{dvipdfm}[true]{%
2355 \def\Hy@driver{hdvipdfm}%
2356 }
2357 \define@key{Hyp}{dvipdfmx}[true]{%
2358 \def\Hy@driver{hdvipdfm}%
2359 }
2360 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2361 \expandafter\ifx\csname if#1\expandafter\endcsname
2362 \csname iftrue\endcsname
2363 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2364 \else
2365 \chardef\SpecialDvipdfmxOutlineOpen\z@
2366 \fi
2367 }
2368 \define@key{Hyp}{xetex}[true]{%
2369 \def\Hy@driver{hxetex}%
2370 }
2371 \define@key{Hyp}{pdfmark}[true]{%
2372 \def\Hy@driver{hdvips}%
2373 }
2374 \define@key{Hyp}{dvips}[true]{%
2375 \def\Hy@driver{hdvips}%
2376 }
2377 \define@key{Hyp}{hypertex}[true]{%
2378 \def\Hy@driver{hypertex}%
2379 }
2380 \let\Hy@MaybeStopNow\relax
2381 \define@key{Hyp}{vtex}[true]{%
2382 \begingroup\expandafter\expandafter\expandafter\endgroup
2383 \expandafter\ifx\csname OpMode\endcsname\relax
2384 \@latex@error{Non-VTeX processor}{}%
2385 \global\let\Hy@MaybeStopNow\endinput
2386 \endinput
2387 \else
2388 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2389 \def\Hy@driver{hvtex}%
2390 \else
2391 \ifnum\OpMode=10\relax
2392 \def\Hy@driver{hvtexhtm}%
2393 \def\MaybeStopEarly{%
2394 \typeout{Hyperref stopped early}%
2395 \AfterBeginDocument{%
2396 \PDF@FinishDoc
2397 \gdef\PDF@FinishDoc{}}%
2398 }%
2399 \endinput
2400 }%

```

```

2401 \else
2402 \latexerror{Mode (\the\OpMode) has no hyperref driver}{}%
2403 \global\let\Hy@MaybeStopNow\endinput
2404 \endinput
2405 \fi
2406 \fi
2407 \fi
2408 }
2409 \define@key{Hyp}{vtexpdfmark}[true]{%
2410 \begingroup\expandafter\expandafter\expandafter\endgroup
2411 \expandafter\ifx\csname OpMode\endcsname\relax
2412 \latexerror{Non-VTeX processor}{}%
2413 \let\Hy@MaybeStopNow\endinput
2414 \endinput
2415 \else
2416 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2417 \def\Hy@driver{hvtexmrk}%
2418 \else
2419 \latexerror{Mode (\the\OpMode) has no hyperref driver}{}%
2420 \let\Hy@MaybeStopNow\endinput
2421 \endinput
2422 \fi
2423 \fi
2424 }
2425 \define@key{Hyp}{dviwindo}[true]{%
2426 \def\Hy@driver{hdviwind}%
2427 \setkeys{Hyp}{colorlinks}%
2428 \ifpdf
2429 \else
2430 \ifxetex
2431 \else
2432 \PassOptionsToPackage{dviwindo}{color}%
2433 \fi
2434 \fi
2435 }
2436 \define@key{Hyp}{dvipsone}[true]{%
2437 \def\Hy@driver{hdvipson}%
2438 }
2439 \define@key{Hyp}{textures}[true]{%
2440 \def\Hy@driver{htexture}%
2441 }
2442 \define@key{Hyp}{latex2html}[true]{%
2443 \AtBeginDocument{\@@latextohtmlX}%
2444 }

```

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

```

2445 \define@key{Hyp}{ps2pdf}[true]{%
2446 \def\Hy@driver{hdvips}%
2447 \providecommand*\@pdfborder{0 0 1}%
2448 }

```

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.

```

2449 \define@key{Hyp}{hyperfigures}[true]{%
2450 \Hy@boolkey[hyperfigures]{figures}{#1}%
2451 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2452 \define@key{Hyp}{hyperfootnotes}[true]{%
2453   \Hy@boolkey{hyperfootnotes}{#1}%
2454 }
```

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

```
2455 \def\back@none{none}
2456 \def\back@section{section}
2457 \def\back@page{page}
2458 \def\back@slide{slide}
2459 \define@key{Hyp}{backref}[section]{%
2460   \lowercase{\def\Hy@tempa{#1}}%
2461   \ifx\Hy@tempa\@empty
2462     \let\Hy@tempa\back@section
2463   \fi
2464   \ifx\Hy@tempa\Hy@false
2465     \let\Hy@tempa\back@none
2466   \fi
2467   \ifx\Hy@tempa\back@slide
2468     \let\Hy@tempa\back@section
2469   \fi
2470   \ifx\Hy@tempa\back@page
2471     \PassOptionsToPackage{hyperpageref}{backref}%
2472     \Hy@backreftrue
2473   \else
2474     \ifx\Hy@tempa\back@section
2475       \PassOptionsToPackage{hyperref}{backref}%
2476       \Hy@backreftrue
2477     \else
2478       \ifx\Hy@tempa\back@none
2479         \Hy@backreffalse
2480       \else
2481         \Hy@WarnOptionValue{#1}{backref}{%
2482           'section', 'slide', 'page', 'none',\MessageBreak
2483           or 'false'}%
2484       \fi
2485     \fi
2486   \fi
2487 }
2488 \define@key{Hyp}{pagebackref}[true]{%
2489   \edef\Hy@tempa{#1}%
2490   \lowercase\expandafter{%
2491     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2492   }%
2493   \ifx\Hy@tempa\@empty
2494     \let\Hy@tempa\Hy@true
2495   \fi
2496   \ifx\Hy@tempa\Hy@true
2497     \PassOptionsToPackage{hyperpageref}{backref}%
2498     \Hy@backreftrue
2499   \else
2500     \ifx\Hy@tempa\Hy@false
2501       \Hy@backreffalse
2502     \else
2503       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2504     \fi
2505   \fi
2506 }
```

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

```
2507 \define@key{Hyp}{hyperindex}[true]{%
2508   \Hy@boolkey{hyperindex}{#1}%
2509 }
```

Configuration of encap char.

```
2510 \define@key{Hyp}{encap}[|]{%
2511   \def\HyInd@EncapChar{#1}%
2512 }
```

12 Language options

The `\autoref` feature depends on the language.

```
2513 \def\HyLang@afrikaans{%
2514   \def\equationautorefname{Vergelyking}%
2515   \def\footnoteautorefname{Voetnota}%
2516   \def\itemautorefname{Item}%
2517   \def\figureautorefname{Figuur}%
2518   \def\tableautorefname{Tabel}%
2519   \def\partautorefname{Deel}%
2520   \def\appendixautorefname{Bylae}%
2521   \def\chapterautorefname{Hoofstuk}%
2522   \def\sectionautorefname{Afdeling}%
2523   \def\subsectionautorefname{Subafdeling}%
2524   \def\subsubsectionautorefname{Subsubafdeling}%
2525   \def\paragraphautorefname{Paragraaf}%
2526   \def\subparagraphautorefname{Subparagraaf}%
2527   \def\FancyVerbLineautorefname{Lyn}%
2528   \def\theoremautorefname{Teorema}%
2529   \def\pageautorefname{Bladsy}%
2530 }
2531 \def\HyLang@english{%
2532   \def\equationautorefname{Equation}%
2533   \def\footnoteautorefname{footnote}%
2534   \def\itemautorefname{item}%
2535   \def\figureautorefname{Figure}%
2536   \def\tableautorefname{Table}%
2537   \def\partautorefname{Part}%
2538   \def\appendixautorefname{Appendix}%
2539   \def\chapterautorefname{chapter}%
2540   \def\sectionautorefname{section}%
2541   \def\subsectionautorefname{subsection}%
2542   \def\subsubsectionautorefname{subsubsection}%
2543   \def\paragraphautorefname{paragraph}%
2544   \def\subparagraphautorefname{subparagraph}%
2545   \def\FancyVerbLineautorefname{line}%
2546   \def\theoremautorefname{Theorem}%
2547   \def\pageautorefname{page}%
2548 }
2549 \def\HyLang@french{%
2550   \def\equationautorefname{'Equation}%
2551   \def\footnoteautorefname{note}%
2552   \def\itemautorefname{item}%
2553   \def\figureautorefname{Figure}%
2554   \def\tableautorefname{Tableau}%

```

```

2555 \def\partautorefname{Partie}%
2556 \def\appendixautorefname{Appendice}%
2557 \def\chapterautorefname{chapitre}%
2558 \def\sectionautorefname{section}%
2559 \def\subsectionautorefname{sous-section}%
2560 \def\subsubsectionautorefname{sous-sous-section}%
2561 \def\paragraphautorefname{paragraphe}%
2562 \def\subparagraphautorefname{sous-paragraphe}%
2563 \def\FancyVerbLineautorefname{ligne}%
2564 \def\theoremautorefname{Th\'eor\'eme}%
2565 \def\pageautorefname{page}%
2566 }
2567 \def\HyLang@german{%
2568 \def\equationautorefname{Gleichung}%
2569 \def\footnoteautorefname{Fu\ss note}%
2570 \def\itemautorefname{Punkt}%
2571 \def\figureautorefname{Abbildung}%
2572 \def\tableautorefname{Tabelle}%
2573 \def\partautorefname{Teil}%
2574 \def\appendixautorefname{Anhang}%
2575 \def\chapterautorefname{Kapitel}%
2576 \def\sectionautorefname{Abschnitt}%
2577 \def\subsectionautorefname{Unterabschnitt}%
2578 \def\subsubsectionautorefname{Unterunterabschnitt}%
2579 \def\paragraphautorefname{Absatz}%
2580 \def\subparagraphautorefname{Unterabsatz}%
2581 \def\FancyVerbLineautorefname{Zeile}%
2582 \def\theoremautorefname{Theorem}%
2583 \def\pageautorefname{Seite}%
2584 }
2585 \def\HyLang@italian{%
2586 \def\equationautorefname{Equazione}%
2587 \def\footnoteautorefname{nota}%
2588 \def\itemautorefname{punto}%
2589 \def\figureautorefname{Figura}%
2590 \def\tableautorefname{Tabella}%
2591 \def\partautorefname{Parte}%
2592 \def\appendixautorefname{Appendice}%
2593 \def\chapterautorefname{Capitolo}%
2594 \def\sectionautorefname{sezione}%
2595 \def\subsectionautorefname{sottosezione}%
2596 \def\subsubsectionautorefname{sottosottosezione}%
2597 \def\paragraphautorefname{paragrafo}%
2598 \def\subparagraphautorefname{sottoparagrafo}%
2599 \def\FancyVerbLineautorefname{linea}%
2600 \def\theoremautorefname{Teorema}%
2601 \def\pageautorefname{Pag.\@}%
2602 }
2603 \def\HyLang@magyar{%
2604 \def\equationautorefname{Egyenlet}%
2605 \def\footnoteautorefname{l\'abjegyzet}%
2606 \def\itemautorefname{Elem}%
2607 \def\figureautorefname{\`A bra}%
2608 \def\tableautorefname{T\'abl\'azat}%
2609 \def\partautorefname{R\'esz}%
2610 \def\appendixautorefname{F\'uggel\'ek}%
2611 \def\chapterautorefname{fejezet}%

```

```

2612 \def\sectionautorefname{szakasz}%
2613 \def\subsectionautorefname{alszakasz}%
2614 \def\subsubsectionautorefname{alalszakasz}%
2615 \def\paragraphautorefname{bekezd'es}%
2616 \def\subparagraphautorefname{albekezd'es}%
2617 \def\FancyVerbLineautorefname{sor}%
2618 \def\theoremautorefname{T'etel}%
2619 \def\pageautorefname{oldal}%
2620 }
2621 \def\HyLang@portuges{%
2622 \def\equationautorefname{Equa\c c~ao}%
2623 \def\footnoteautorefname{Nota de rodap'e}%
2624 \def\itemautorefname{Item}%
2625 \def\figureautorefname{Figura}%
2626 \def\tableautorefname{Tabela}%
2627 \def\partautorefname{Parte}%
2628 \def\appendixautorefname{Ap~endice}%
2629 \def\chapterautorefname{Cap~itulo}%
2630 \def\sectionautorefname{Se\c c~ao}%
2631 \def\subsectionautorefname{Subse\c c~ao}%
2632 \def\subsubsectionautorefname{Subsubse\c c~ao}%
2633 \def\paragraphautorefname{par'agrafo}%
2634 \def\subparagraphautorefname{subpar'agrafo}%
2635 \def\FancyVerbLineautorefname{linha}%
2636 \def\theoremautorefname{Teorema}%
2637 \def\pageautorefname{P'agina}%
2638 }

```

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`.

```

2639 \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`?

```

2640 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

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

```

2641 % \def\equationautorefname{%
2642 %   \cyr\cyrv\cyrery\cyr\cyra\cyrzh\cyre\cyrn\cyri\cyre
2643 % }%

```

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

```

2644 \def\footnoteautorefname{%
2645   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr.\ \cyrp\cyr\cyri\cyr.m.%
2646 }%

```

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}`”

```

2647 % \def\footnoteautorefname{%

```


2648 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
 2649 % \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
 2650 % }%

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

2651 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
 2652 % \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.

2653 \def\itemautorefname{\cyr\cyrp.}%
 2654 % \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.

2655 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
 2656 \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.

2657 \def\partautorefname{\cyr\cyrch.}%
 2658 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
 2659 \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.

2660 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
 2661 % \def\appendixautorefname{%
 2662 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
 2663 % }%

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.

2664 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
 2665 \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.

2666 \def\paragraphautorefname{\cyr\cyrp.}%
 2667 \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.

2668 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
 2669 % \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.

2670 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

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

```
2671 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2672 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2673 % \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 ...

```
2674 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2675 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
2676 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2677 \def\pageautorefname{\cyr\cyrs.}%
2678 }
```

```
2679 \def\HyLang@spanish{%
2680 \def\equationautorefname{Ecuaci\'on}%
2681 \def\footnoteautorefname{Nota a pie de p\'agina}%
2682 \def\itemautorefname{Elemento}%
2683 \def\figureautorefname{Figura}%
2684 \def\tableautorefname{Tabla}%
2685 \def\partautorefname{Parte}%
2686 \def\appendixautorefname{Ap\'endice}%
2687 \def\chapterautorefname{Cap\'itulo}%
2688 \def\sectionautorefname{Secci\'on}%
2689 \def\subsectionautorefname{Subsecci\'on}%
2690 \def\subsubsectionautorefname{Subsubsecci\'on}%
2691 \def\paragraphautorefname{P\'arrafo}%
2692 \def\subparagraphautorefname{Subp\'arrafo}%
2693 \def\FancyVerbLineautorefname{L\'inea}%
2694 \def\theoremautorefname{Teorema}%
2695 \def\pageautorefname{P\'agina}%
2696 }
2697 \def\HyLang@vietnamese{%
2698 \def\equationautorefname{Ph\uhorn{}\ohorn{}}ng tr\inh}%
2699 \def\footnoteautorefname{Ch\'u th\'ich}%
2700 \def\itemautorefname{m\du{c}}%
2701 \def\figureautorefname{H\inh}%
2702 \def\tableautorefname{B\ha{ng}}%
2703 \def\partautorefname{Ph\'acircumflex{n}}%
2704 \def\appendixautorefname{Ph\du{l}\du{c}}%
2705 \def\chapterautorefname{ch\uhorn{}\ohorn{ng}}%
2706 \def\sectionautorefname{m\du{c}}%
2707 \def\subsectionautorefname{m\du{c}}%
2708 \def\subsubsectionautorefname{m\du{c}}%
2709 \def\paragraphautorefname{\dj{ }o\da{n}}%
2710 \def\subparagraphautorefname{\dj{ }o\da{n}}%
2711 \def\FancyVerbLineautorefname{d\'ong}%
2712 \def\theoremautorefname{DJ{\di{nh l\'y}}%
2713 \def\pageautorefname{Trang}%
2714 }
```

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

```

2715 \def\HyLang@addto#1#2{%
2716   #2%
2717   \@temptokena{#2}%
2718   \ifx#1\relax
2719     \let#1\@empty
2720   \fi
2721   \ifx#1\undefined
2722     \edef#1{\the\@temptokena}%
2723   \else
2724     \toks@\expandafter{#1}%
2725     \edef#1{\the\toks@\the\@temptokena}%
2726   \fi
2727   \@temptokena{}\toks@\@temptokena
2728 }

2729 \def\HyLang@DeclareLang#1#2#3{%
2730   \begingroup
2731   \edef\x##1##2{%
2732     \noexpand\ifx##2\relax
2733       \errmessage{No definitions for language #2' found!}%
2734     \noexpand\fi
2735   \endgroup
2736   \noexpand\define@key{Hyp}{#1}[]{%
2737     \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2738     #3%
2739   }%
2740   }%
2741   \expandafter\x\csname extras#1\expandafter\endcsname
2742     \csname HyLang@#2\endcsname
2743 }

2744 \HyLang@DeclareLang{english}{english}{}
2745 \HyLang@DeclareLang{UKenglish}{english}{}
2746 \HyLang@DeclareLang{british}{english}{}
2747 \HyLang@DeclareLang{USenglish}{english}{}
2748 \HyLang@DeclareLang{american}{english}{}
2749 \HyLang@DeclareLang{german}{german}{}
2750 \HyLang@DeclareLang{austrian}{german}{}
2751 \HyLang@DeclareLang{ngerman}{german}{}
2752 \HyLang@DeclareLang{naustrian}{german}{}
2753 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2754 \HyLang@DeclareLang{brazil}{portuges}{}
2755 \HyLang@DeclareLang{brazilian}{portuges}{}
2756 \HyLang@DeclareLang{portuguese}{portuges}{}
2757 \HyLang@DeclareLang{spanish}{spanish}{}
2758 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2759 \HyLang@DeclareLang{french}{french}{}
2760 \HyLang@DeclareLang{frenchb}{french}{}
2761 \HyLang@DeclareLang{français}{french}{}
2762 \HyLang@DeclareLang{acadian}{french}{}
2763 \HyLang@DeclareLang{canadien}{french}{}
2764 \HyLang@DeclareLang{italian}{italian}{}
2765 \HyLang@DeclareLang{magyar}{magyar}{}
2766 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

2767 \define@key{Hyp}{vietnamese}[]{}%

```

```

2768 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
2769 \AtEndOfPackage{%
2770 \ifundefined{T@PU}{-}{%
2771 \input{puvnenc.def}%
2772 }%
2773 }%
2774 }
2775 \define@key{Hyp}{vietnam}[]{}%
2776 \HyLang@addto\extrasvietnam\HyLang@vietnamese
2777 \AtEndOfPackage{%
2778 \ifundefined{T@PU}{-}{%
2779 \input{puvnenc.def}%
2780 }%
2781 }%
2782 }

```

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

```

2783 \define@key{Hyp}{arabic}[]{}%
2784 \AtEndOfPackage{%
2785 \ifundefined{T@PU}{-}{%
2786 \input{puarenc.def}%
2787 }%
2788 }%
2789 }

```

13 Options to change appearance of links

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

```

2790 \define@key{Hyp}{colorlinks}[true]{}%
2791 \Hy@boolkey{colorlinks}{#1}%
2792 }
2793 \define@key{Hyp}{ocgcolorlinks}[true]{}%
2794 \Hy@boolkey{ocgcolorlinks}{#1}%
2795 }
2796 \AtBeginDocument{%
2797 \begingroup
2798 \ifundefined{OBJ@OCG@view}{%
2799 \ifHy@ocgcolorlinks
2800 \Hy@Warning{%
2801 Driver does not support ‘ocgcolorlinks’,\MessageBreak
2802 using ‘colorlinks’ instead%
2803 }%
2804 \fi
2805 }{}%
2806 \endgroup
2807 }
2808 \define@key{Hyp}{frenchlinks}[true]{}%
2809 \Hy@boolkey{frenchlinks}{#1}%
2810 }

```

14 Bookmarking

```

2811 \begingroup\expandafter\expandafter\expandafter\endgroup
2812 \expandafter\ifx\csname chapter\endcsname\relax
2813 \def\toclevel@part{0}%

```

```

2814 \else
2815   \def\toclevel@part{-1}%
2816 \fi
2817 \def\toclevel@chapter{0}
2818 \def\toclevel@section{1}
2819 \def\toclevel@subsection{2}
2820 \def\toclevel@subsubsection{3}
2821 \def\toclevel@paragraph{4}
2822 \def\toclevel@subparagraph{5}
2823 \def\toclevel@figure{0}
2824 \def\toclevel@table{0}
2825 \ifpackageloaded{listings}{%
2826   \providecommand*\theHlstlisting{\thelstlisting}%
2827   \providecommand*\toclevel@lstlisting{0}%
2828 }{}
2829 \ifpackageloaded{listing}{%
2830   \providecommand*\theHlisting{\thelisting}%
2831   \providecommand*\toclevel@listing{0}%
2832 }{}

2833 \define@key{Hyp}{bookmarks}[true]{%
2834   \Hy@boolkey{bookmarks}{#1}%
2835 }

2836 \define@key{Hyp}{bookmarksopen}[true]{%
2837   \Hy@boolkey{bookmarksopen}{#1}%
2838 }

```

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.

```

2839 \let\Hy@bookmarksdepth\c@tocdepth
2840 \define@key{Hyp}{bookmarksdepth}[]{}%
2841 \begingroup
2842   \edef\x{#1}%
2843   \ifx\x\empty
2844     \global\let\Hy@bookmarksdepth\c@tocdepth
2845   \else
2846     \ifundefined{toclevel@\x}{%
2847       \@onelevel@sanitize\x
2848       \edef\y{\expandafter\@car\x\@nil}%
2849       \ifcase 0\expandafter\ifx\y-1\fi
2850         \expandafter\ifnum\expandafter\y>47 %
2851           \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
2852       \Hy@Warning{Unknown document division name (\x)}%
2853     \else
2854       \setbox\z@=\hbox{%
2855         \count@=\x
2856         \xdef\Hy@bookmarksdepth{\the\count@}%
2857       }%
2858     \fi

```

```

2859   }{%
2860     \setbox\z@=\hbox{%
2861       \count@=\csname toplevel@\x\endcsname
2862       \xdef\Hy@bookmarksdepth{\the\count@}%
2863     }%
2864   }%
2865   \fi
2866 \endgroup
2867 }

```

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

```

2868 \define@key{Hyp}{bookmarksopenlevel}{%
2869   \def\@bookmarksopenlevel{#1}%
2870 }
2871 \def\@bookmarksopenlevel{\maxdimen}
2872 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2873 \define@key{Hyp}{bookmarkstype}{%
2874   \def\Hy@bookmarkstype{#1}%
2875 }
2876 \def\Hy@bookmarkstype{toc}

```

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

```

2877 \define@key{Hyp}{bookmarksnumbered}[true]{%
2878   \Hy@boolkey{bookmarksnumbered}{#1}%
2879 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2880 \define@key{Hyp}{CJKbookmarks}[true]{%
2881   \Hy@boolkey{CJKbookmarks}{#1}%
2882 }
2883 \def\Hy@temp#1{%
2884   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2885 }
2886 \def\Hy@@temp#1#2#3{%
2887   \define@key{Hyp}{#2color}{%
2888     \HyColor@HyperrefColor{##1}#1%
2889   }%
2890   \def#1{#3}%
2891 }
2892 \Hy@temp{link}{red}
2893 \Hy@temp{anchor}{black}
2894 \Hy@temp{cite}{green}
2895 \Hy@temp{file}{cyan}
2896 \Hy@temp{url}{magenta}
2897 \Hy@temp{menu}{red}
2898 \Hy@temp{run}{\@filecolor}
2899 \define@key{Hyp}{pagecolor}{%
2900   \Hy@WarningPageColor
2901 }
2902 \def\Hy@WarningPageColor{%
2903   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
2904   \global\let\Hy@WarningPageColor\relax
2905 }
2906 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2907 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2908 \let\@baseurl\@empty
2909 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}

```

```

2910 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2911 \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.

```

2912 \let\@pdfpagetransition\relax
2913 \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.

```

2914 \let\@pdfpageduration\relax
2915 \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.

```

2916 \newif\ifHy@useHidKey
2917 \Hy@useHidKeyfalse
2918 \define@key{Hyp}{pdfpagehidden}[true]{%
2919   \Hy@boolkey{pdfpagehidden}{#1}%
2920   \ifHy@pdfpagehidden
2921     \global\Hy@useHidKeytrue
2922   \fi
2923 }

```

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).

```

2924 \def\Hy@ColorList{cite,file,link,menu,run,url}
2925 \@for\Hy@temp:=\Hy@ColorList\do{%
2926   \edef\Hy@temp{%
2927     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2928       \noexpand\HyColor@HyperrefBorderColor
2929       {##1}%
2930       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2931       {hyperref}%
2932       {\Hy@temp bordercolor}%
2933     }%
2934   }%
2935   \Hy@temp
2936 }
2937 \define@key{Hyp}{pagebordercolor}{%
2938   \Hy@WarningPageBorderColor
2939 }
2940 \def\Hy@WarningPageBorderColor{%
2941   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2942   \global\let\Hy@WarningPageBorderColor\relax
2943 }

```

```

2944 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2945 \Hy@DefNameKey{pdfhighlight}{%
2946   \do{/I}{Invert}%
2947   \do{/N}{None}%
2948   \do{/O}{Outline}%
2949   \do{/P}{Push}%
2950 }
2951 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2952 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2953 \def\Hy@setpdfborder{%
2954   \ifx\@pdfborder\@empty
2955     \else
2956       /Border[\@pdfborder]%
2957     \fi
2958     \ifx\@pdfborderstyle\@empty
2959       \else
2960         /BS<<\@pdfborderstyle>>%
2961       \fi
2962 }
2963 \Hy@DefNameKey{pdfpagemode}{%
2964   \do{UseNone}{}%
2965   \do{UseOutlines}{}%
2966   \do{UseThumbs}{}%
2967   \do{FullScreen}{}%
2968   \do{UseOC}{PDF 1.5}%
2969   \do{UseAttachments}{PDF 1.6}%
2970 }
2971 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2972   \do{UseNone}{}%
2973   \do{UseOutlines}{}%
2974   \do{UseThumbs}{}%
2975   \do{FullScreen}{}%
2976   \do{UseOC}{PDF 1.5}%
2977   \do{UseAttachments}{PDF 1.6}%
2978 }
2979 \Hy@DefNameKey{pdfdirection}{%
2980   \do{L2R}{Left to right}%
2981   \do{R2L}{Right to left}%
2982 }
2983 \Hy@DefNameKey{pdfviewarea}{%
2984   \do{MediaBox}{}%
2985   \do{CropBox}{}%
2986   \do{BleedBox}{}%
2987   \do{TrimBox}{}%
2988   \do{ArtBox}{}%
2989 }
2990 \Hy@DefNameKey{pdfviewclip}{%
2991   \do{MediaBox}{}%
2992   \do{CropBox}{}%
2993   \do{BleedBox}{}%
2994   \do{TrimBox}{}%
2995   \do{ArtBox}{}%
2996 }
2997 \Hy@DefNameKey{pdfprintarea}{%
2998   \do{MediaBox}{}%
2999   \do{CropBox}{}%
3000   \do{BleedBox}{}%

```



```

3001 \do{TrimBox}{}%
3002 \do{ArtBox}{}%
3003 }
3004 \Hy@DefNameKey{pdfprintclip}{%
3005 \do{MediaBox}{}%
3006 \do{CropBox}{}%
3007 \do{BleedBox}{}%
3008 \do{TrimBox}{}%
3009 \do{ArtBox}{}%
3010 }
3011 \Hy@DefNameKey{pdfprintscaling}{%
3012 \do{AppDefault}{}%
3013 \do{None}{}%
3014 }
3015 \Hy@DefNameKey{pdfduplex}{%
3016 \do{Simplex}{}%
3017 \do{DuplexFlipShortEdge}{}%
3018 \do{DuplexFlipLongEdge}{}%
3019 }
3020 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3021 \do{true}{}%
3022 \do{false}{}%
3023 }
3024 \define@key{Hyp}{pdfprintpagerange}{%
3025 \def\@pdfprintpagerange{#1}%
3026 }
3027 \Hy@DefNameKey{pdfnumcopies}{%
3028 \do{2}{two copies}%
3029 \do{3}{three copies}%
3030 \do{4}{four copies}%
3031 \do{5}{five copies}%
3032 }
3033 \define@key{Hyp}{pdfusetitle}[true]{%
3034 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3035 }
3036 \def\HyXeTeX@CheckUnicode{%
3037 \ifxetex
3038 \ifHy@unicode
3039 \else
3040 \Hy@WarningNoLine{%
3041 XeTeX driver only supports unicode.\MessageBreak
3042 Enabling option 'unicode'%
3043 }%
3044 \setkeys{Hyp}{unicode}%
3045 \fi
3046 \else
3047 \let\HyXeTeX@CheckUnicode\relax
3048 \fi
3049 }
3050 \define@key{Hyp}{pdftitle}{%
3051 \HyXeTeX@CheckUnicode
3052 \HyPsd@XeTeXBigCharstrue
3053 \pdfstringdef\@pdftitle{#1}%
3054 }
3055 \define@key{Hyp}{pdfauthor}{%
3056 \HyXeTeX@CheckUnicode
3057 \HyPsd@XeTeXBigCharstrue

```

```

3058 \pdfstringdef\@pdfauthor{#1}%
3059 }
3060 \define@key{Hyp}{pdfproducer}{%
3061 \HyXeTeX@CheckUnicode
3062 \HyPsd@XeTeXBigCharstrue
3063 \pdfstringdef\@pdfproducer{#1}%
3064 }
3065 \define@key{Hyp}{pdfcreator}{%
3066 \HyXeTeX@CheckUnicode
3067 \HyPsd@XeTeXBigCharstrue
3068 \pdfstringdef\@pdfcreator{#1}%
3069 }
3070 \define@key{Hyp}{pdfcreationdate}{%
3071 \begingroup
3072 \Hy@unicodedefalse
3073 \pdfstringdef\@pdfcreationdate{#1}%
3074 \endgroup
3075 }
3076 \define@key{Hyp}{pdfmoddate}{%
3077 \begingroup
3078 \Hy@unicodedefalse
3079 \pdfstringdef\@pdfmoddate{#1}%
3080 \endgroup
3081 }
3082 \define@key{Hyp}{pdfsubject}{%
3083 \HyXeTeX@CheckUnicode
3084 \HyPsd@XeTeXBigCharstrue
3085 \pdfstringdef\@pdfsubject{#1}%
3086 }
3087 \define@key{Hyp}{pdfkeywords}{%
3088 \HyXeTeX@CheckUnicode
3089 \HyPsd@XeTeXBigCharstrue
3090 \pdfstringdef\@pdfkeywords{#1}%
3091 }
3092 \define@key{Hyp}{pdftrapped}{%
3093 \lowercase{\edef\Hy@temp{#1}}%
3094 \ifx\Hy@temp\HyInfo@trapped@true
3095 \def\@pdftrapped{True}%
3096 \else
3097 \ifx\Hy@temp\HyInfo@trapped@false
3098 \def\@pdftrapped{False}%
3099 \else
3100 \ifx\Hy@temp\HyInfo@trapped@unknown
3101 \def\@pdftrapped{Unknown}%
3102 \else
3103 \ifx\Hy@temp\@empty
3104 \else
3105 \Hy@Warning{%
3106     Unsupported value '#1'\MessageBreak
3107     for option 'pdftrapped'%
3108 }%
3109 \fi
3110 \def\@pdftrapped{}%
3111 \fi
3112 \fi
3113 \fi
3114 }

```

```

3115 \def\HyInfo@trapped@true{true}
3116 \def\HyInfo@trapped@false{false}
3117 \def\HyInfo@trapped@unknown{unknown}
3118 \def\HyInfo@TrappedUnsupported{%
3119   \ifx\@pdftrapped\@empty
3120   \else
3121     \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3122     \gdef\HyInfo@TrappedUnsupported{}%
3123   \fi
3124 }
3125 \define@key{Hyp}{pdfinfo}{%
3126   \kvsetkeys{pdfinfo}{#1}%
3127 }
3128 \def\Hy@temp#1{%
3129   \lowercase{\Hy@temp@A{#1}}{#1}%
3130 }
3131 \def\Hy@temp@A#1#2{%
3132   \define@key{pdfinfo}{#2}{%
3133     \hypersetup{pdf#1={##1}}%
3134   }%
3135 }
3136 \Hy@temp{Title}
3137 \Hy@temp{Author}
3138 \Hy@temp{Keywords}
3139 \Hy@temp{Subject}
3140 \Hy@temp{Creator}
3141 \Hy@temp{Producer}
3142 \Hy@temp{CreationDate}
3143 \Hy@temp{ModDate}
3144 \Hy@temp{Trapped}
3145 \newif\ifHyInfo@AddonUnsupported
3146 \kv@set@family@handler{pdfinfo}{%
3147   \HyInfo@AddonHandler{#1}{#2}%
3148 }
3149 \let\HyInfo@do\relax
3150 \def\HyInfo@AddonHandler#1#2{%
3151   \ifx\kv@value\relax
3152     \Hy@Warning{%
3153       Option 'pdfinfo': ignoring key '\kv@key' without value%
3154     }%
3155   \else
3156     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3157     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3158     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3159       \ifHyInfo@AddonUnsupported
3160         \Hy@Warning{%
3161           This driver does not support additional\MessageBreak
3162           information entries, therefore\MessageBreak
3163           '\kv@key' is ignored%
3164         }%
3165       \else
3166         \define@key{pdfinfo}{\HyInfo@Key}{%
3167           \HyXeTeX@CheckUnicode
3168           \HyPsd@XeTeXBigChartrue
3169           \pdfstringdef\HyInfo@Value{##1}%
3170           \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3171             \HyInfo@Value

```

```

3172 }%
3173 \edef\HyInfo@AddonList{%
3174   \HyInfo@AddonList
3175   \HyInfo@do{\HyInfo@Key}%
3176 }%
3177 \kv@parse@normalized{%
3178   \HyInfo@Key={#2}%
3179 }{%
3180   \kv@processor@default{pdfinfo}%
3181 }%
3182 \fi
3183 \else
3184   \kv@parse@normalized{%
3185     \HyInfo@Key={#2}%
3186   }{%
3187     \kv@processor@default{pdfinfo}%
3188   }%
3189 \fi
3190 \fi
3191 }
3192 \def\HyInfo@GenerateAddons{%
3193   \ifHyInfo@AddonUnsupported
3194     \def\HyInfo@Addons{}%
3195   \else
3196     \begingroup
3197     \toks@{}%
3198     \def\HyInfo@do##1{%
3199       \EdefEscapeName\HyInfo@Key{##1}%
3200       \edef\x{%
3201         \toks@{%
3202           \the\toks@
3203           /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3204         }%
3205       }%
3206       \x
3207     }%
3208     \HyInfo@AddonList
3209     \edef\x{\endgroup
3210       \def\noexpand\HyInfo@Addons{\the\toks@}%
3211     }%
3212     \x
3213   \fi
3214 }
3215 \def\HyInfo@AddonList{}
3216 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3217 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3218 \let\setpdfinkmargin\@gobble
3219 \def\calculate@pdfview#1 #2\{%
3220   \def\@pdfview{#1}%
3221   \ifx\#2\%
3222     \def\@pdfviewparams{-32768}%
3223   \else
3224     \def\@pdfviewparams{#2}%
3225   \fi
3226 }
3227 \begingroup\expandafter\expandafter\expandafter\endgroup
3228 \expandafter\ifx\csname numexpr\endcsname\relax

```

```

3229 \def\Hy@number#1{%
3230 \expandafter\@firstofone\expandafter{\number#1}%
3231 }%
3232 \else
3233 \def\Hy@number#1{%
3234 \the\numexpr#1\relax
3235 }%
3236 \fi
3237 \define@key{Hyp}{pdfstartpage}{%
3238 \ifx\#1\%
3239 \def\@pdfstartpage{%
3240 \else
3241 \edef\@pdfstartpage{\Hy@number{#1}}%
3242 \fi
3243 }%
3244 \define@key{Hyp}{pdfstartview}{%
3245 \ifx\#1\%
3246 \def\@pdfstartview{%
3247 \else
3248 \hypercalcbpdef\@pdfstartview{ /#1 }%
3249 \fi
3250 }
3251 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3252 \define@key{Hyp}{pdftoolbar}[true]{%
3253 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3254 }
3255 \define@key{Hyp}{pdfmenubar}[true]{%
3256 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3257 }
3258 \define@key{Hyp}{pdfwindowui}[true]{%
3259 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3260 }
3261 \define@key{Hyp}{pdffitwindow}[true]{%
3262 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3263 }
3264 \define@key{Hyp}{pdfcenterwindow}[true]{%
3265 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3266 }
3267 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3268 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3269 }
3270 \define@key{Hyp}{pdfa}[true]{%
3271 \Hy@boolkey[pdfa]{#1}%
3272 }
3273 \define@key{Hyp}{pdfnewwindow}[true]{%
3274 \def\Hy@temp{#1}%
3275 \ifx\Hy@temp\@empty
3276 \Hy@newwindowsetfalse
3277 \else
3278 \Hy@newwindowsettrue
3279 \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3280 \fi
3281 }
3282 \def\Hy@SetNewWindow{%
3283 \ifHy@newwindowset
3284 /NewWindow %
3285 \ifHy@newwindow true\else false\fi

```

```

3286 \fi
3287 }
3288 \Hy@DefNameKey{pdfpagelayout}{}%
3289 \do{SinglePage}{}%
3290 \do{OneColumn}{}%
3291 \do{TwoColumnLeft}{}%
3292 \do{TwoColumnRight}{}%
3293 \do{TwoPageLeft}{PDF 1.5}%
3294 \do{TwoPageRight}{PDF 1.5}%
3295 }
3296 \define@key{Hyp}{pdflang}{}%
3297 \def\@pdflang{#1}%
3298 }
3299 \define@key{Hyp}{pdfpagelabels}[true]{}%
3300 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3301 }
3302 \define@key{Hyp}{pdfescapeform}[true]{}%
3303 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3304 }

```

Default values:

```

3305 \def\@linkbordercolor{1 0 0}
3306 \def\@urlbordercolor{0 1 1}
3307 \def\@menubordercolor{1 0 0}
3308 \def\@filebordercolor{0 .5 .5}
3309 \def\@runbordercolor{0 .7 .7}
3310 \def\@citebordercolor{0 1 0}
3311 \def\@pdfhighlight{/I}
3312 \def\@pdftitle{}
3313 \def\@pdfauthor{}
3314 \let\@pdfproducer\relax
3315 \def\@pdfcreator{LaTeX with hyperref package}
3316 \def\@pdfcreationdate{}
3317 \def\@pdfmoddate{}
3318 \def\@pdfsubject{}
3319 \def\@pdfkeywords{}
3320 \def\@pdftrapped{}
3321 \def\@pdfpagescrop{}
3322 \def\@pdfstartview{/Fit }
3323 \def\@pdfstartpage{1}
3324 \def\@pdfprintpagerange{}
3325 \def\@pdflang{}
3326 \let\PDF@SetupDoc\@empty
3327 \let\PDF@FinishDoc\@empty
3328 \let\phantomsection\@empty
3329 \let\special@paper\@empty
3330 \def\HyperDestNameFilter#1{#1}
3331 \AtBeginDocument{%
3332   \begingroup
3333     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3334     \dimen@=\x\relax
3335     \ifdim\dimen@>\z@
3336     \else
3337       \dimen@=11in\relax
3338       \Hy@WarningNoLine{%
3339         Height of page (\expandafter\string\x) %
3340         is invalid (\the\x),\MessageBreak
3341         using 11in%

```

```

3342 }%
3343 \fi
3344 \dimen@=0.99626401\dimen@
3345 \xdef\Hy@pageheight{\strip@pt\dimen@}%
3346 \endgroup
3347 }
3348 \def\HyInd@EncapChar{\|}
3349 \def\hypersetup{\setkeys{Hyp}}

```

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.

```

3350 \let\hyper@normalise\ExecuteOptions
3351 \let\ExecuteOptions\hypersetup
3352 \Hy@RestoreCatcodes
3353 \InputIfFileExists{hyperref.cfg}{\{}}{}
3354 \Hy@SetCatcodes
3355 \let\ExecuteOptions\hyper@normalise
3356 \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`.

```

3357 \RequirePackage{kvoptions}[2009/07/21]
3358 \SetupKeyvalOptions{family=Hyp}
3359 \DeclareLocalOptions{%
3360   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3361 }

```

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

```

3362 \@ifpackageloaded{tex4ht}{\%
3363   \ifpackagewith{hyperref}{tex4ht}{\{}}{\%
3364     \PassOptionsToPackage{tex4ht}{hyperref}%
3365   }%
3366 }{}

3367 \let\ReadBookmarks\relax
3368 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3369 \AtBeginDocument{%
3370   \ifHy@draft
3371     \let\hyper@@anchor\@gobble
3372     \gdef\hyper@link#1#2#3{#3}%
3373     \let\hyper@anchorstart\@gobble
3374     \let\hyper@anchorend\@empty
3375     \let\hyper@linkstart\@gobbletwo
3376     \let\hyper@linkend\@empty
3377     \def\hyper@linkurl#1#2{#1}%
3378     \def\hyper@linkfile#1#2#3{#1}%
3379     \def\hyper@link@{#1}#2#3{}%
3380     \def\Acrobatmenu#1#2{\leavevmode#2}%
3381     \let\PDF@SetupDoc\@empty
3382     \let\PDF@FinishDoc\@empty
3383     \let\@fifthoffive\@secondoftwo
3384     \let\@secondoffive\@secondoftwo
3385     \let\ReadBookmarks\relax

```

```

3386 \let\WriteBookmarks\relax
3387 \Hy@WarningNoLine{ draft mode on}%
3388 \fi
3389 \Hy@DisableOption{draft}%
3390 \Hy@DisableOption{nolinks}%
3391 \Hy@DisableOption{final}%
3392 }

```

15.1 PDF/A

```

3393 \Hy@DisableOption{pdfa}
3394 \ifHy@pdfa
3395 \setkeys{Hyp}{pdfversion=1.4}%
3396 \def\Hy@Acrobatmenu#1#2{%
3397 \leavevmode
3398 \begingroup
3399 \edef\x{#1}%
3400 \@onelevel@sanitize\x
3401 \ifx\x\Hy@NextPage
3402 \let\y=Y%
3403 \else
3404 \ifx\x\Hy@PrevPage
3405 \let\y=Y%
3406 \else
3407 \ifx\x\Hy@FirstPage
3408 \let\y=Y%
3409 \else
3410 \ifx\x\Hy@LastPage
3411 \let\y=Y%
3412 \else
3413 \let\y=N%
3414 \fi
3415 \fi
3416 \fi
3417 \fi
3418 \expandafter\endgroup
3419 \ifx\y Y%
3420 \else
3421 \PackageError{hyperref}{%
3422 PDF/A: Named action ‘#1’ is not permitted%
3423 }\@ehc
3424 {#2}%
3425 \expandafter\@gobble
3426 \fi
3427 }%
3428 \def\Hy@temp#1{%
3429 \expandafter\def\csname Hy@#1\endcsname{#1}%
3430 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3431 }%
3432 \Hy@temp{NextPage}%
3433 \Hy@temp{PrevPage}%
3434 \Hy@temp{FirstPage}%
3435 \Hy@temp{LastPage}%
3436 \else
3437 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3438 \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.

```
3439 \Hy@nextfalse
3440 \ifundefined{spanish@sh@}{"@sel}{\Hy@nexttrue}
3441 \ifundefined{galician@sh@}{"@sel}{\Hy@nexttrue}
3442 \ifundefined{estonian@sh@}{"@sel}{\Hy@nexttrue}
3443 \ifHy@next
3444   \let\texttilde\~%
3445 \fi

3446 \ifHy@figures
3447   \Hy@Info{Hyper figures ON}%
3448 \else
3449   \Hy@Info{Hyper figures OFF}%
3450 \fi

3451 \ifHy@nesting
3452   \Hy@Info{Link nesting ON}%
3453 \else
3454   \Hy@Info{Link nesting OFF}%
3455 \fi

3456 \ifHy@hyperindex
3457   \Hy@Info{Hyper index ON}%
3458 \else
3459   \Hy@Info{Hyper index OFF}%
3460 \fi

3461 \ifHy@plainpages
3462   \Hy@Info{Plain pages ON}%
3463 \else
3464   \Hy@Info{Plain pages OFF}%
3465 \fi

3466 \ifHy@backref
3467   \Hy@Info{Backreferencing ON}%
3468 \else
3469   \Hy@Info{Backreferencing OFF}%
3470 \fi

3471 \ifHy@typexml
3472   \AtEndOfPackage{%
3473     \RequirePackage{color}%
3474     \RequirePackage{nameref}%
3475   }%
3476 \fi

3477 \Hy@DisableOption{typexml}
3478 \ifHy@implicit
3479   \typeout{Implicit mode ON; LaTeX internals redefined}%
3480 \else
3481   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3482   \def\MaybeStopEarly{%
3483     \typeout{Hyperref stopped early}%
3484     \AfterBeginDocument{%
3485       \PDF@FinishDoc
3486       \gdef\PDF@FinishDoc{}%
3487     }%
3488     \endinput
3489   }%
3490   \AtBeginDocument{%
3491     \let\autoref\ref
```

```

3492 \let\autopageref\pageref
3493 \ifx\@pdfpagemode\@empty
3494   \gdef\@pdfpagemode{UseNone}%
3495 \fi
3496 \global\Hy@backreffalse
3497 }%
3498 \AtEndOfPackage{%
3499   \global\let\ReadBookmarks\relax
3500   \global\let\WriteBookmarks\relax
3501 }%
3502 \fi
3503 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3504 \AtEndOfPackage{%
3505   \ifpackageloaded{tex4ht}{%
3506     \def\Hy@driver{htex4ht}%
3507     \Hy@texhttrue
3508   }{}%

```

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.

```

3509 \ifx\Hy@driver\@empty
3510 \else
3511   \def\Hy@temp{hpdfTeX}%
3512   \ifpdf
3513     \ifx\Hy@driver\Hy@temp
3514     \else
3515       \Hy@WarningNoLine{%
3516         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3517         pdfTeX is running in PDF mode.\MessageBreak
3518         Forcing driver ‘\Hy@temp.def’%
3519       }%
3520     \let\Hy@driver\Hy@temp
3521   \fi
3522 \else
3523   \ifx\Hy@driver\Hy@temp
3524     \Hy@WarningNoLine{%
3525       Wrong driver ‘\Hy@driver.def’;\MessageBreak
3526       pdfTeX is not running in PDF mode.\MessageBreak
3527       Using default driver%
3528     }%
3529     \let\Hy@driver\@empty
3530   \fi
3531 \fi
3532 \fi
3533 \ifx\Hy@driver\@empty
3534 \else
3535   \def\Hy@temp{hXetex}%
3536   \ifxetex
3537     \ifx\Hy@driver\Hy@temp
3538     \else
3539       \Hy@WarningNoLine{%
3540         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3541         XeTeX is running.\MessageBreak
3542         Forcing driver ‘\Hy@temp.def’ for XeTeX%
3543       }%

```

```

3544     \let\Hy@driver\Hy@temp
3545     \fi
3546   \fi
3547 \fi
3548 \ifx\Hy@driver\@empty
3549 \else
3550   \def\Hy@temp{hvtexhtm}%
3551   \ifvtexhtml
3552     \ifx\Hy@driver\Hy@temp
3553     \else
3554       \Hy@WarningNoLine{%
3555         Wrong driver '\Hy@driver.def';\MessageBreak
3556         VTeX is running in HTML mode.\MessageBreak
3557         Forcing driver '\Hy@temp.def'%
3558       }%
3559     \let\Hy@driver\Hy@temp
3560     \fi
3561   \else
3562     \ifx\Hy@driver\Hy@temp
3563     \Hy@WarningNoLine{%
3564       Wrong driver '\Hy@driver.def';\MessageBreak
3565       VTeX is not running in HTML mode.\MessageBreak
3566       Using default driver%
3567     }%
3568     \let\Hy@driver\@empty
3569   \fi
3570 \fi
3571 \fi

```

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

```

3572 \ifx\Hy@driver\@empty
3573   \providecommand*{\Hy@defaultdriver}{hypertex}%
3574   \ifpdf
3575     \def\Hy@driver{hpdfTeX}%
3576   \else
3577     \ifxetex
3578       \def\Hy@driver{hxetex}%
3579     \else
3580       \ifvtexhtml
3581         \def\Hy@driver{hvtexhtm}%
3582         \def\MaybeStopEarly{%
3583           \typeout{Hyperref stopped early}%
3584           \AfterBeginDocument{%
3585             \PDF@FinishDoc
3586             \gdef\PDF@FinishDoc{}%
3587           }%
3588           \endinput
3589         }%
3590       \else
3591         \ifvtexpdf
3592           \def\Hy@driver{hvtex}%
3593         \else
3594           \ifvtexps
3595             \def\Hy@driver{hvtex}%
3596           \else
3597             \let\Hy@driver\Hy@defaultdriver
3598           \fi
3599         \fi

```

```

3600     \fi
3601   \fi
3602 \fi
3603 \ifx\Hy@driver\Hy@defaultdriver
3604   \def\Hy@temp{hdvwind}%
3605   \ifx\Hy@temp\Hy@driver
3606     \setkeys{Hyp}{colorlinks}%
3607     \PassOptionsToPackage{dviwindo}{color}%
3608   \fi
3609 \fi
3610 \typeout{*hyperref using default driver \Hy@driver*}%
3611 \else
3612   \typeout{*hyperref using driver \Hy@driver*}%
3613 \fi
3614 \input{\Hy@driver.def}%
3615 \let\@unprocessedoptions\relax
3616 \Hy@RestoreCatcodes
3617 }

```

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.

```

3618 \newif\ifHy@DvipdfmxOutlineOpen
3619 \ifxetex
3620   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3621   \else
3622     \Hy@DvipdfmxOutlineOpenttrue
3623   \fi
3624 \fi
3625 \begingroup\expandafter\expandafter\expandafter\endgroup
3626 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3627 \else
3628   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3629     \Hy@DvipdfmxOutlineOpenttrue
3630   \fi
3631 \fi
3632 \Hy@DisableOption{tex4ht}
3633 \Hy@DisableOption{pdftex}
3634 \Hy@DisableOption{nativepdf}
3635 \Hy@DisableOption{dvipdfm}
3636 \Hy@DisableOption{dvipdfmx}
3637 \Hy@DisableOption{dvipdfmx-outline-open}
3638 \Hy@DisableOption{pdfmark}
3639 \Hy@DisableOption{dvips}
3640 \Hy@DisableOption{hypertex}
3641 \Hy@DisableOption{vtex}
3642 \Hy@DisableOption{vtxpdfmark}
3643 \Hy@DisableOption{dviwindo}
3644 \Hy@DisableOption{dvipsone}
3645 \Hy@DisableOption{textures}
3646 \Hy@DisableOption{latex2html}
3647 \Hy@DisableOption{ps2pdf}
3648 \Hy@DisableOption{xetex}
3649 \AtEndOfPackage{%
3650   \Hy@DisableOption{pdfversion}%
3651 }

```

15.2.2 Bookmarks

```

3652 \def\WriteBookmarks{0}
3653 \def\@bookmarkopenstatus#1{%
3654   \ifHy@bookmarksopen

```

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

```

3655   \ifnum#1<\expandafter\@firstofone\expandafter
3656     {\number\@bookmarkopenlevel} % explicit space
3657   \else
3658     -%
3659   \fi
3660 \else
3661   -%
3662 \fi
3663 }
3664 \ifHy@bookmarks
3665   \Hy@Info{Bookmarks ON}%
3666   \ifx\@pdfpagemode\@empty
3667     \def\@pdfpagemode{UseOutlines}%
3668   \fi
3669 \else
3670   \def\@bookmarkopenstatus#1{%
3671     \Hy@Info{Bookmarks OFF}%
3672     \AtEndOfPackage{%
3673       \global\let\ReadBookmarks\relax
3674       \global\let\WriteBookmarks\relax
3675     }%
3676     \ifx\@pdfpagemode\@empty
3677       \def\@pdfpagemode{UseNone}%
3678     \fi
3679   \fi
3680 \Hy@DisableOption{bookmarks}

```

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

```

3681 \def\Hy@CatcodeWrapper#1{%
3682   \def\Hy@EndWrap{%
3683     \def\TMP@EnsureCode##1##2{%
3684       \edef\Hy@EndWrap{%
3685         \Hy@EndWrap
3686         \catcode##1 \the\catcode##1\relax
3687       }%
3688       \catcode##1 ##2\relax
3689     }%
3690     \TMP@EnsureCode{10}{12}% ^^J
3691     \TMP@EnsureCode{33}{12}% !
3692     \TMP@EnsureCode{34}{12}% "
3693     \TMP@EnsureCode{36}{3}% $ (math)
3694     \TMP@EnsureCode{38}{4}% & (alignment)
3695     \TMP@EnsureCode{39}{12}% '
3696     \TMP@EnsureCode{40}{12}% (
3697     \TMP@EnsureCode{41}{12}% )
3698     \TMP@EnsureCode{42}{12}% *
3699     \TMP@EnsureCode{43}{12}% +
3700     \TMP@EnsureCode{44}{12}% ,
3701     \TMP@EnsureCode{45}{12}% -
3702     \TMP@EnsureCode{46}{12}% .
3703     \TMP@EnsureCode{47}{12}% /
3704     \TMP@EnsureCode{58}{12}% :
3705     \TMP@EnsureCode{59}{12}% ;

```

```

3706 \TMP@EnsureCode{60}{12}% <
3707 \TMP@EnsureCode{61}{12}% =
3708 \TMP@EnsureCode{62}{12}% >
3709 \TMP@EnsureCode{63}{12}% ?
3710 \TMP@EnsureCode{91}{12}% [
3711 \TMP@EnsureCode{93}{12}% ]
3712 \TMP@EnsureCode{94}{7}% ^ (superscript)
3713 \TMP@EnsureCode{95}{8}% _ (subscript)
3714 \TMP@EnsureCode{96}{12}% '
3715 \TMP@EnsureCode{124}{12}% |
3716 \TMP@EnsureCode{126}{13}% ~ (active)
3717 #1\relax
3718 \Hy@endWrap
3719 }

```

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

```

3720 \AtBeginDocument{%
3721   \ifHy@ocgcolorlinks
3722     \setkeys{Hyp}{colorlinks}%
3723   \ifHy@pdfa
3724     \Hy@Warning{%
3725       PDF/A: Optional Content Groups are prohibited,\MessageBreak
3726       using 'colorlinks' instead of 'ocgcolorlinks'%
3727     }%
3728     \Hy@ocgcolorlinksfalse
3729   \fi
3730 \fi
3731 \ifHy@ocgcolorlinks
3732 \else
3733   \Hy@DisableOption{ocgcolorlinks}%
3734 \fi
3735 \ifHy@colorlinks
3736   \def\@pdfborder{0 0 0}%
3737   \let\@pdfborderstyle\@empty
3738   \ifHy@typexml
3739   \else
3740     \Hy@CatcodeWrapper{%
3741       \RequirePackage{color}%
3742     }%
3743   \fi
3744   \def\Hy@colorlink#1{%
3745     \begingroup
3746     \HyColor@UseColor#1%
3747   }%
3748   \def\Hy@endcolorlink{\endgroup}%
3749   \Hy@Info{Link coloring ON}%
3750 \else
3751   \ifHy@frenchlinks
3752     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3753     \def\Hy@endcolorlink{\endgroup}%
3754     \Hy@Info{French linking ON}%
3755   \else

```

for grouping consistency:

```

3756   \def\Hy@colorlink#1{\begingroup}%
3757   \def\Hy@endcolorlink{\endgroup}%
3758   \Hy@Info{Link coloring OFF}%
3759 \fi

```

```

3760 \fi
3761 \Hy@DisableOption{colorlinks}%
3762 \Hy@DisableOption{frenchlinks}%
3763 \ifHy@texht
3764 \long\def\@firstoffive#1#2#3#4#5{#1}%
3765 \long\def\@secondoffive#1#2#3#4#5{#2}%
3766 \long\def\@thirdoffive#1#2#3#4#5{#3}%
3767 \long\def\@fourthoffive#1#2#3#4#5{#4}%
3768 \long\def\@fifthoffive#1#2#3#4#5{#5}%
3769 \providecommand*\@safe@activestruet{}%
3770 \providecommand*\@safe@activesfalse{}%
3771 \def\T@ref#1{%
3772 \Hy@safe@activestruet
3773 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3774 \Hy@safe@activesfalse
3775 }%
3776 \def\T@pageref#1{%
3777 \Hy@safe@activestruet
3778 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3779 \Hy@safe@activesfalse
3780 }%
3781 \else
3782 \ifHy@typexml
3783 \else
3784 \Hy@CatcodeWrapper{%
3785 \RequirePackage{nameref}%
3786 }%
3787 \fi
3788 \fi
3789 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3790 \DeclareRobustCommand\pageref{%
3791 \@ifstar\@pagerefstar\T@pageref
3792 }%
3793 }
3794 \AfterBeginDocument{%
3795 \ifHy@texht
3796 \else
3797 \Hy@CatcodeWrapper{%
3798 \ReadBookmarks
3799 }%
3800 \fi
3801 }
3802 \ifHy@backref
3803 \RequirePackage{backref}%
3804 \else
3805 \let\Hy@backout\@gobble
3806 \fi
3807 \Hy@DisableOption{backref}
3808 \Hy@DisableOption{pagebackref}
3809 \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`.

```

3810 \begingroup
3811 \endlinechar=-1 %
3812 \catcode'\^^A=14 %
3813 \catcode'\^^M\active
3814 \catcode'\%\active
3815 \catcode'\#\active
3816 \catcode'\_\active
3817 \catcode'\$\active
3818 \catcode'\&\active
3819 \gdef\hyper@normalise{^^A
3820 \begingroup
3821 \catcode'\^^M\active
3822 \def^^M{ }^^A
3823 \catcode'\%\active
3824 \let%\@percentchar
3825 \let%\@percentchar
3826 \catcode'\#\active
3827 \def#{\hyper@hash}^^A
3828 \def\#{\hyper@hash}^^A
3829 \@makeother\&^^A
3830 \edef&{\string&}^^A
3831 \edef&{\string&}^^A
3832 \edef\textunderscore{\string_}^^A
3833 \let\_ \textunderscore
3834 \catcode'\_\active
3835 \let\_ \textunderscore
3836 \let~\hyper@tilde
3837 \let~\hyper@tilde
3838 \let\textasciitilde\hyper@tilde
3839 \let\\ \@backslashchar
3840 \edef${\string$}^^A
3841 \Hy@safe@activetrue
3842 \hyper@n@rmalise
3843 }^^A
3844 \catcode'\#=6 ^^A
3845 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
3846 \gdef\hyper@n@rmalise#1#2{^^A
3847 \def\Hy@tempa{#2}^^A
3848 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3849 \Hy@ReturnAfterElseFi{^^A
3850 \hyper@@normalise{#1}^^A
3851 }^^A
3852 \else
3853 \Hy@ReturnAfterFi{^^A
3854 \hyper@@normalise{#1}{#2}^^A
3855 }^^A
3856 \fi
3857 }^^A
3858 \gdef\hyper@@normalise#1#2{^^A
3859 \edef\Hy@tempa{^^A
3860 \endgroup
3861 \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
3862 }^^A
3863 \Hy@tempa
3864 }^^A

```



```

3865 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
3866   #1^^A
3867   \ifx\limits#2\limits
3868   \else
3869     \Hy@ReturnAfterFi{^^A
3870     \Hy@RemovePercentCr #2\@nil
3871   }^^A
3872   \fi
3873 }^^A
3874 \endgroup
3875 \providecommand*{\hyper@chars{%
3876   \let\#\hyper@hash
3877   \let\%\@percentchar
3878   \Hy@safe@activetrue
3879 }

3880 \def\hyperlink#1#2{%
3881   \hyper@@link{}{#1}{#2}%
3882 }

3883 \DeclareRobustCommand*{\href}{%
3884   \@ifnextchar\bgrouph\Hy@href{\hyper@normalise\href@}%
3885 }
3886 \def\Hy@href#{%
3887   \hyper@normalise\href@
3888 }
3889 \begingroup
3890   \catcode'\$=6 %
3891   \catcode'\#=12 %
3892   \gdef\href$1{\expandafter\href@split$1##\}%
3893   \gdef\href@split$1#$2#$3\{%
3894     \hyper@@link{$1}{$2}%
3895   }%
3896 \endgroup

```

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

```

3897 \RequirePackage{url}
3898 \let\HyOrg@url\url
3899 \def\Hurl{\begingroup \Url}
3900 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
3901 \def\nolinkurl@#1{\Hurl{#1}}
3902 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
3903 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
3904 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
3905 \providecommand\hyper@image[2]{#2}

3906 \def\hypertarget#1#2{%
3907   \ifHy@nesting
3908     \hyper@@anchor{#1}{#2}%
3909   \else
3910     \hyper@@anchor{#1}{\relax}#2%
3911   \fi
3912 }

```

\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.

```

3913 \DeclareRobustCommand*{\hyperref}{%
3914   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
3915 }
3916 \def\Hy@babelnormalise#1[#2]{%
3917   \begingroup
3918     \Hy@safe@activetrue
3919     \edef\Hy@tempa{%
3920       \endgroup
3921       \noexpand#1[#2]}%
3922   }%
3923   \Hy@tempa
3924 }
3925 \def\@hyperref{\hyper@normalise\@hyperref}
3926 \def\@hyperref#1#2#3{%
3927   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
3928   \expandafter\tryhyper@link\ref@one\{#1}%
3929 }
3930 \def\tryhyper@link#1\#2{%
3931   \hyper@@link{#2}{#1}%
3932 }
3933 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}}
3934 \def\@hyperdef#1#2#3{%, category, name, text
3935   \ifx\#1\%
3936     \def\Hy@AnchorName{#2}%
3937   \else
3938     \def\Hy@AnchorName{#1.#2}%
3939   \fi
3940   \ifHy@nesting
3941     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
3942   \else
3943     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
3944   \fi
3945 }

```

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

```

3946 \def\label@hyperref[#1]{%
3947   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
3948 }%
3949 \def\label@@hyperref#1#2#3{%
3950   \ifx#1\relax
3951     \protect\G@refundefinedtrue
3952     \@latex@warning{%
3953       Hyper reference ‘#2’ on page \thepage \space undefined%
3954     }%
3955     \hyper@@link{}{??}{#3}%
3956   \else
3957     \hyper@@link{\expandafter\@fifthoffive#1}%
3958     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3959   \fi
3960 }
3961 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3962                               % anchor text
3963   \@bsphack
3964   \ifx\#2\%

```

```

3965 \def\Hy@AnchorName{#3}%
3966 \else
3967 \def\Hy@AnchorName{#2.#3}%
3968 \fi
3969 \if@filesw
3970 \protected@write\@auxout{}\{
3971 \string\newlabel{#1}\{ \} \} \{ \Hy@AnchorName \} \} %
3972 \}%
3973 \fi
3974 \@esphack
3975 \ifHy@nesting
3976 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
3977 \else
3978 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
3979 \fi
3980 }

```

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.

```

3981 \def\hyper@@link{\let\Hy@reserved@a\relax
3982 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
3983 }
3984 \def\hyper@link@[#1]#2#3#4{%
3985 \begingroup
3986 \protected@edef\Hy@tempa{#2}%
3987 \Hy@safe@activetrue
3988 \edef\x{#3}%
3989 \ifx\Hy@tempa\@empty
3990 \toks0{\hyper@link{#1}}%
3991 \else
3992 \toks0{\expandafter\hyper@readexternallink#2\{ \{#1\}}%
3993 \fi
3994 \toks2{%
3995 \Hy@safe@activesfalse
3996 #4%
3997 }%
3998 \edef\Hy@tempa{\the\toks2}%
3999 \edef\x{\endgroup
4000 \ifx\Hy@tempa\@empty
4001 \noexpand\Hy@Warning{Suppressing empty link}%
4002 \else
4003 \the\toks0 {\x}{\the\toks2}%
4004 \fi
4005 }%
4006 \x
4007 }

```

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.

```

4008 \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.

```
4009 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%  
4010 }
```

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

```
4011 \def\@pdftempwordfile{file}%  
4012 \def\@pdftempwordrun{run}%  
4013 \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:

```
4014 \ifx\{#6\}%  
4015 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%  
4016 \else  
4017 \ifx\{#4\}%  
4018 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%  
4019 \else
```

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

```
4020 \def\@pdftempa{#4}%  
4021 \ifx\@pdftempa\@pdftempwordfile  
4022 \expandafter\@hyper@linkfile#7\{#3}{#2}%  
4023 \else
```

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

```
4024 \ifx\@pdftempa\@pdftempwordrun  
4025 \ifHy@pdfa  
4026 \PackageError{hyperref}{%  
4027 PDF/A: Launch action is prohibited%  
4028 }\@ehc  
4029 \begingroup  
4030 \leavevmode  
4031 #2%  
4032 \endgroup  
4033 \else  
4034 \expandafter\@hyper@launch#7\{#3}{#2}%  
4035 \fi  
4036 \else
```

otherwise its a URL

```
4037 \hyper@linkurl{#3}{#7\ifx\{#2\}\else\hyper@hash#2\fi}%  
4038 \fi  
4039 \fi  
4040 \fi  
4041 \fi  
4042 }
```

By default, turn run: into file:

```

4043 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text, linkname
4044 \hyper@linkurl{#2}{%
4045 \Hy@linkfileprefix
4046 #1%
4047 \ifx\|#3\|%
4048 \else
4049 \hyper@hash
4050 #3%
4051 \fi
4052 }%
4053 }

```

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

```

4054 \def\@hyper@linkfile file:#1\|#2#3{%
4055 %file url,link string, name
4056 \filename@parse{#1}%
4057 \ifx\filename@ext\relax
4058 \edef\filename@ext{\XR@ext}%
4059 \fi
4060 \def\use@file{\filename@area\filename@base.\filename@ext}%
4061 \ifx\filename@ext\XR@ext
4062 \hyper@linkfile{#2}{\use@file}{#3}%
4063 \else
4064 \ifx\@baseurl\@empty
4065 \hyper@linkurl{#2}{%
4066 \Hy@linkfileprefix\use@file\ifx\|#3\| \else\hyper@hash#3\fi
4067 }%
4068 \else
4069 \hyper@linkurl{#2}{\use@file\ifx\|#3\| \else\hyper@hash#3\fi}%
4070 \fi
4071 \fi
4072 }

```

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.

```

4073 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4074 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4075 \ifx\|#1\|%
4076 #2\Hy@WarningNoLine{empty link? #1: #2#3}%
4077 \else
4078 \def\anchor@spot{#2#3}%
4079 \let\put@me@back\@empty
4080 \ifx\relax#2\relax
4081 \else
4082 \ifHy@nesting
4083 \else
4084 \ifcat a\noexpand#2\relax
4085 \else
4086 \ifcat 0\noexpand#2 \relax
4087 \else

```

```

4088 %      \typeout{Anchor start is not alphanumeric %
4089 %      on input line\the\inputlineno%
4090 %      }%
4091      \let\anchor@spot\@empty
4092      \def\put@me@back{#2#3}%
4093      \fi
4094      \fi
4095      \fi
4096      \fi
4097      \ifHy@activeanchor
4098      \anchor@spot
4099      \else
4100      \hyper@anchor{#1}%
4101      \fi
4102      \expandafter\put@me@back
4103      \fi
4104      \let\anchor@spot\@empty
4105 }

```

18 Compatibility with the *L^AT_EX2html* package

Map our macro names on to Nikos', so that documents prepared for that system will work without change.

Note, however, that the whole complicated structure for segmenting documents is not supported; it is assumed that the user will load `html.sty` first, and then `hyperref.sty`, so that the definitions in `html.sty` take effect, and are then overridden in a few circumstances by this package.

```

4106 \let\htmladdimg\hyperimage
4107 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4108 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4109 \def\htmlref#1#2{% anchor text, label
4110   \label@hyperref[{#2}]{#1}%
4111 }

```

This is really too much. The *L^AT_EX2html* package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the 'printed' way, since we are about fidelity to the page.

```

4112 \def\@@latextohtmlX{%
4113   \let\hyperref\hyperref
4114   \def\hyperref##1##2##3##4{% anchor text for HTML
4115     % text to print before label in print
4116     % label
4117     % post-label text in print
4118     ##2\ref{##4}##3%
4119   }%
4120 }

```

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.

```
4121 \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

```
4122 \def\HyField@NewFlag#1#2{%
4123   \lowercase{\HyField@NewOption{#2}}%
4124   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4125 }
```

`\HyField@NewFlagOnly`

```
4126 \def\HyField@NewFlagOnly#1#2{%
4127   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4128 }
```

`\HyField@NewOption` #1: option name

```
4129 \def\HyField@NewOption#1{%
4130   \expandafter\newif\csname ifFld@#1\endcsname
4131   \define@key{Field}{#1}[true]{%
4132     \lowercase{\Field@boolkey{##1}}{#1}%
4133   }%
4134 }
```

`\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

```
4135 \def\HyField@NewBitsetFlag#1#2#3#4{%
4136   \begingroup
4137     \count@=#4\relax
4138     \advance\count@\m@ne
4139     \def\x##1{%
4140       \endgroup
4141       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4142       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4143         \expandafter\edef\csname HyField@#3@##1\endcsname{%
4144           (\number#4) #2%
4145         }%
4146       \else
4147         \expandafter\edef\csname HyField@#3@##1\endcsname{%
4148           \csname HyField@#3@##1\endcsname
4149           /#2%
4150         }%
4151       \fi
4152     }%
4153   \expandafter\x\expandafter{\the\count@}%
4154 }
```

```

\HyField@UseFlag The bit set is HyField@#1
4155 \def\HyField@UseFlag#1#2{%
4156 \lowercase{\HyField@@UseFlag{#2}}{#1}%
4157 }

\HyField@@UseFlag
4158 \def\HyField@@UseFlag#1#2{%
4159 \bitsetSetValue{HyField@#2}{%
4160 \csname HyField@#2@#1\endcsname
4161 }{%
4162 \csname ifFld@#1\endcsname 1\else 0\fi
4163 }%
4164 }

\HyField@SetFlag The bit set is HyField@#1
4165 \def\HyField@SetFlag#1#2{%
4166 \lowercase{\HyField@@SetFlag{#2}}{#1}%
4167 }

\HyField@@SetFlag
4168 \def\HyField@@SetFlag#1#2{%
4169 \bitsetSetValue{HyField@#2}{%
4170 \csname HyField@#2@#1\endcsname
4171 }{1}%
4172 }

\HyField@PrintFlags
4173 \def\HyField@PrintFlags#1#2{%
4174 \ifHy@verbose
4175 \begingroup
4176 \let\Hy@temp\@empty
4177 \let\MessageBreak\relax
4178 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4179 \bitsetGetSetBitList{HyField@#1}\do{%
4180 \edef\Hy@temp{%
4181 \Hy@temp
4182 \csname HyField@#1@\x\endcsname\MessageBreak
4183 }%
4184 }%
4185 \edef\x{\endgroup
4186 \noexpand\Hy@Info{%
4187 Field flags: %
4188 \expandafter\ifx\@car#1\@nil S\else/\fi
4189 #1 %
4190 \bitsetGetDec{HyField@#1} %
4191 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4192 \Hy@temp
4193 for #2%
4194 }%
4195 }\x
4196 \fi
4197 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”


```

4198 \HyField@NewFlag{Ff}{ReadOnly}{1}
4199 \HyField@NewFlag{Ff}{Required}{2}
4200 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4201 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4202 \HyField@NewFlag{Ff}{Radio}{16}
4203 \HyField@NewFlag{Ff}{Pushbutton}{17}
4204 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4205 \HyField@NewFlag{Ff}{Multiline}{13}
4206 \HyField@NewFlag{Ff}{Password}{14}
4207 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4208 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4209 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4210 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4211 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4212 \HyField@NewFlag{Ff}{Combo}{18}
4213 \HyField@NewFlag{Ff}{Edit}{19}
4214 \HyField@NewFlag{Ff}{Sort}{20}
4215 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4216 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4217 \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.

```

4218 \newif\iffld@popdown
4219 \define@key{Field}{popdown}[true]{%
4220   \lowercase{\Field@boolkey{#1}}{popdown}%
4221 }

```

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.

```

4222 \HyField@NewFlag{F}{Invisible}{1}
4223 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4224 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4225 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4226 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4227 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4228 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4229 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4230 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4231 \ifHy@pdfa
4232   \def\HyField@PDFAFlagWarning#1#2{%
4233     \Hy@Warning{%
4234       PDF/A: Annotation flag ‘#1’ must\MessageBreak
4235       be set to ‘#2’%
4236     }%
4237   }%
4238   \Fld@invisiblefalse
4239   \def\Fld@invisibletrue{%

```

```

4240 \HyField@PDFAFIagWarning{invisible}{false}%
4241 }%
4242 \Fld@hiddenfalse
4243 \def\Fld@hiddenttrue{%
4244 \HyField@PDFAFIagWarning{hidden}{false}%
4245 }%
4246 \Fld@printrtrue
4247 \def\Fld@printfalse{%
4248 \HyField@PDFAFIagWarning{print}{true}%
4249 }%
4250 \Fld@nozoomtrue
4251 \def\Fld@nozoomfalse{%
4252 \HyField@PDFAFIagWarning{nozoom}{true}%
4253 }%
4254 \Fld@norotatetrue
4255 \def\Fld@norotatefalse{%
4256 \HyField@PDFAFIagWarning{norotate}{true}%
4257 }%
4258 \Fld@noviewfalse
4259 \def\Fld@noviewtrue{%
4260 \HyField@PDFAFIagWarning{noview}{false}%
4261 }%
4262 \fi

```

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

```

4263 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4264 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4265 \HyField@NewFlag{Submit}{GetMethod}{4}
4266 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4267 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4268 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4269 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4270 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4271 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4272 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4273 \HyField@NewFlag{Submit}{ExclFKey}{12}
4274 \HyField@NewFlag{Submit}{EmbedForm}{14}

4275 \define@key{Field}{export}{%
4276 \lowercase{\def\Hy@temp{#1}}%
4277 \@ifundefined{Fld@export@\Hy@temp}{%
4278 \@onelevel@sanitize\Hy@temp
4279 \PackageError{hyperref}{%
4280 Unknown export format '\Hy@temp'.\MessageBreak
4281 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4282 }\@ehc
4283 }{%
4284 \let\Fld@export\Hy@temp
4285 }%
4286 }
4287 \def\Fld@export{fdf}
4288 \@namedef{Fld@export@fdf}{0}%
4289 \@namedef{Fld@export@html}{1}%
4290 \@namedef{Fld@export@xdf}{2}%
4291 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```
4292 \def\HyField@FlagsSubmit{%
4293   \bitsetReset{HyField@Submit}%
4294   \ifcase\@nameuse{Fld@export@\Fld@export} %
4295     % FDF
4296     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4297     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4298     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4299     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4300     \HyField@UseFlag{Submit}{CanonicalFormat}%
4301     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4302     \HyField@UseFlag{Submit}{ExclFKey}%
4303     \HyField@UseFlag{Submit}{EmbedForm}%
4304   \or % HTML
4305     \HyField@SetFlag{Submit}{ExportFormat}%
4306     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4307     \HyField@UseFlag{Submit}{GetMethod}%
4308     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4309     \HyField@UseFlag{Submit}{CanonicalFormat}%
4310   \or % XFDF
4311     \HyField@SetFlag{Submit}{XFDF}%
4312     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4313     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4314     \HyField@UseFlag{Submit}{CanonicalFormat}%
4315   \or % PDF
4316     \HyField@SetFlag{Submit}{SubmitPDF}%
4317     \HyField@UseFlag{Submit}{GetMethod}%
4318   \fi
4319   \HyField@PrintFlags{Submit}{submit button field}%
4320   \bitsetIsEmpty{HyField@Submit}{%
4321     \def\Fld@submitflags{%
4322     }{%
4323     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
4324     }%
4325 }
```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```
4326 \def\HyField@FlagsAnnot#1{%
4327   \bitsetReset{HyField@F}%
4328   \HyField@UseFlag{F}{Invisible}%
4329   \HyField@UseFlag{F}{Hidden}%
4330   \HyField@UseFlag{F}{Print}%
4331   \HyField@UseFlag{F}{NoZoom}%
4332   \HyField@UseFlag{F}{NoRotate}%
4333   \HyField@UseFlag{F}{NoView}%
4334   \HyField@UseFlag{F}{Locked}%
4335   \HyField@UseFlag{F}{ToggleNoView}%
4336   \HyField@UseFlag{F}{LockedContents}%
4337   \HyField@PrintFlags{F}{#1}%
4338   \bitsetIsEmpty{HyField@F}{%
4339     \def\Fld@annotflags{%
4340     }{%
4341     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%

```

```

4342 }%
4343 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4344 \def\HyField@FlagsPushButton{%
4345 \HyField@FlagsAnnot{push button field}%
4346 \bitsetReset{HyField@Ff}%
4347 \HyField@UseFlag{Ff}{ReadOnly}%
4348 \HyField@UseFlag{Ff}{Required}%
4349 \HyField@UseFlag{Ff}{NoExport}%
4350 \HyField@SetFlag{Ff}{Pushbutton}%
4351 \HyField@PrintFlags{Ff}{push button field}%
4352 \bitsetIsEmpty{HyField@Ff}{%
4353 \def\Fld@flags{%
4354 }{%
4355 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4356 }%
4357 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4358 \def\HyField@FlagsCheckBox{%
4359 \HyField@FlagsAnnot{check box field}%
4360 \bitsetReset{HyField@Ff}%
4361 \HyField@UseFlag{Ff}{ReadOnly}%
4362 \HyField@UseFlag{Ff}{Required}%
4363 \HyField@UseFlag{Ff}{NoExport}%
4364 \HyField@PrintFlags{Ff}{check box field}%
4365 \bitsetIsEmpty{HyField@Ff}{%
4366 \def\Fld@flags{%
4367 }{%
4368 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4369 }%
4370 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4371 \def\HyField@FlagsRadioButton{%
4372 \HyField@FlagsAnnot{radio button field}%
4373 \bitsetReset{HyField@Ff}%
4374 \HyField@UseFlag{Ff}{ReadOnly}%
4375 \HyField@UseFlag{Ff}{Required}%
4376 \HyField@UseFlag{Ff}{NoExport}%
4377 \HyField@UseFlag{Ff}{NoToggleToOff}%
4378 \HyField@SetFlag{Ff}{Radio}%
4379 \HyField@UseFlag{Ff}{RadiosInUnison}%
4380 \HyField@PrintFlags{Ff}{radio button field}%
4381 \bitsetIsEmpty{HyField@Ff}{%
4382 \def\Fld@flags{%
4383 }{%
4384 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4385 }%

```

4386 }

19.1.7 Text fields

\HyField@FlagsText

```
4387 \def\HyField@FlagsText{%
4388   \HyField@FlagsAnnot{text field}%
4389   \bitsetReset{HyField@Ff}%
4390   \HyField@UseFlag{Ff}{ReadOnly}%
4391   \HyField@UseFlag{Ff}{Required}%
4392   \HyField@UseFlag{Ff}{NoExport}%
4393   \HyField@UseFlag{Ff}{Multiline}%
4394   \HyField@UseFlag{Ff}{Password}%
4395   \HyField@UseFlag{Ff}{FileSelect}%
4396   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4397   \HyField@UseFlag{Ff}{DoNotScroll}%
4398   \ifFld@comb
4399     \ifcase0\ifFld@multiline
4400       \else\ifFld@password
4401       \else\ifFld@fileselect
4402       \else 1\fi\fi\fi\relax
4403     \PackageError{hyperref}{%
4404       Field option ‘comb’ cannot used together with\MessageBreak
4405       ‘multiline’, ‘password’, or ‘fileselect’%
4406     }\@ehc
4407   \else
4408     \HyField@UseFlag{Ff}{Comb}%
4409   \fi
4410 \fi
4411 \HyField@UseFlag{Ff}{RichText}%
4412 \HyField@PrintFlags{Ff}{text field}%
4413 \bitsetIsEmpty{HyField@Ff}{%
4414   \def\Fld@flags{%
4415   }{%
4416     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4417   }%
4418 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```
4419 \def\HyField@FlagsChoice{%
4420   \HyField@FlagsAnnot{choice field}%
4421   \bitsetReset{HyField@Ff}%
4422   \HyField@UseFlag{Ff}{ReadOnly}%
4423   \HyField@UseFlag{Ff}{Required}%
4424   \HyField@UseFlag{Ff}{NoExport}%
4425   \HyField@UseFlag{Ff}{Combo}%
4426   \ifFld@combo
4427     \HyField@UseFlag{Ff}{Edit}%
4428   \fi
4429   \HyField@UseFlag{Ff}{Sort}%
4430   \HyField@UseFlag{Ff}{MultiSelect}%
4431   \ifFld@combo
4432     \ifFld@edit
4433       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4434     \fi
4435   \fi
4436 }
```

```

4434 \fi
4435 \fi
4436 \HyField@UseFlag{Ff}{CommitOnSelChange}%
4437 \HyField@PrintFlags{Ff}{choice field}%
4438 \bitsetIsEmpty{HyField@Ff}{%
4439 \def\Fld@flags{%
4440 }{%
4441 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4442 }%
4443 }

```

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`.

```

4444 \def\HyField@PDFChoices#1{%
4445 \begingroup
4446 \gdef\Fld@choices{%
4447 \def\HyTmp@optlist{%
4448 \let\HyTmp@optitem\relax
4449 \count@=0 %
4450 \kv@parse{#1}{%
4451 \Hy@pdfstringdef\kv@key\kv@key
4452 \ifx\kv@value\relax
4453 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4454 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4455 \else
4456 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4457 \fi
4458 \else
4459 \Hy@pdfstringdef\kv@value\kv@value
4460 \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4461 \fi
4462 \edef\HyTmp@optlist{%
4463 \HyTmp@optlist
4464 \HyTmp@optitem{\the\count@}{\kv@key}0%
4465 }%
4466 \advance\count@ by 1 %
4467 \@gobbletwo
4468 }%
4469 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4470 \ifFld@multiselect
4471 \HyField@@PDFChoices{DV}\Fld@default
4472 \HyField@@PDFChoices{V}\Fld@value
4473 \else
4474 \ifx\Fld@default\relax
4475 \else
4476 \pdfstringdef\Hy@gtemp\Fld@default
4477 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4478 \fi
4479 \ifx\Fld@value\relax
4480 \else
4481 \pdfstringdef\Hy@gtemp\Fld@value
4482 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4483 \fi
4484 \fi

```

```

4485 \endgroup
4486 }

```

\HyField@@PDFChoices

```

4487 \def\HyField@@PDFChoices#1#2{%
4488   \ifx#2\relax
4489   \else
4490     \count@=0 %
4491     \def\HyTmp@optitem##1##2##3{%
4492       \def\HyTmp@key{##2}%
4493       \ifx\HyTmp@key\Hy@gtemp
4494         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4495           \HyTmp@optlist
4496           \HyTmp@optitem{##1}{##2}1%
4497         }%
4498         \let\HyTmp@found=Y%
4499       \else
4500         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4501           \HyTmp@optlist
4502           \HyTmp@optitem{##1}{##2}##3%
4503         }%
4504       \fi
4505     }%
4506     \expandafter\comma@parse\expandafter{#2}{%
4507       \pdfstringdef\Hy@gtemp\comma@entry
4508       \let\HyTmp@found=N %
4509       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4510       \HyTmp@optlist
4511       \ifx\HyTmp@found Y%
4512         \advance\count@ by 1 %
4513       \else
4514         \@onelevel@sanitize\comma@entry
4515         \PackageWarning{hyperref}{%
4516           \string\ChoiceBox: Ignoring value '\comma@entry',%
4517           \MessageBreak
4518           it cannot be found in the choices%
4519         }%
4520       \fi
4521       \@gobble
4522     }%
4523     \def\HyTmp@optitem##1##2##3{%
4524       \ifnum##3=1 %
4525         (##2)%
4526       \fi
4527     }%
4528     \ifcase\count@
4529     \or
4530       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4531     \else
4532       \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4533       \ifx#1V%
4534         \def\HyTmp@optitem##1##2##3{%
4535           \ifnum##3=1 %
4536             \@firstofone{ ##1}%
4537           \fi
4538         }%
4539       \edef\HyTmp@optlist{\HyTmp@optlist}%

```

```

4540      \xdef\Fld@choices{%
4541          \Fld@choices
4542          /I[\expandafter\@firstofone\HyTmp@optlist]%
4543      }%
4544      \fi
4545      \fi
4546      \fi
4547 }

```

19.3 Forms

\HyField@SetKeys

```

4548 \def\HyField@SetKeys{%
4549     \setkeys{Field}%
4550 }

4551 \newif\ifFld@checked
4552 \newif\ifFld@disabled
4553 \Fld@checkedfalse
4554 \Fld@disabledfalse
4555 \newcount\Fld@menulength
4556 \newdimen\Fld@Width
4557 \newdimen\Fld@charsize
4558 \Fld@charsize=10\p@
4559 \def\Fld@maxlen{0}
4560 \def\Fld@align{0}
4561 \def\Fld@color{0 0 0 rg}
4562 \def\Fld@bcolor{1 1 1}
4563 \def\Fld@bordercolor{1 0 0}
4564 \def\Fld@bordersep{1\p@}
4565 \def\Fld@borderwidth{1}
4566 \def\Fld@borderstyle{S}
4567 \def\Fld@cbsymbol{4}
4568 \def\Fld@radiosymbol{H}
4569 \def\Fld@rotation{0}
4570 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4571 \def\endForm{\@endForm}
4572 \newif\ifForm@html
4573 \Form@htmlfalse
4574 \def\Form@boolkey#1#2{%
4575     \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4576 }
4577 \define@key{Form}{action}{%
4578     \hyper@normalise\Hy@DefFormAction{#1}%
4579 }
4580 \def\Hy@DefFormAction{\def\Form@action}
4581 \def\enc@html{html}
4582 \define@key{Form}{encoding}{%
4583     \def\Hy@tempa{#1}%
4584     \ifx\Hy@tempa\enc@html
4585         \Form@htmltrue
4586         \def\Fld@export{html}%
4587     \else
4588         \typeout{hyperref: form 'encoding' key set to #1 %
4589             -- unknown type%
4590     }%
4591     \Form@htmlfalse

```



```

4592 \fi
4593 }
4594 \define@key{Form}{method}{%
4595 \lowercase{\def\Hy@temp{#1}}%
4596 \@ifundefined{Form@method@Hy@temp}{%
4597 \onelevel@sanitize\Hy@temp
4598 \PackageError{hyperref}{%
4599   Unknown method '\Hy@temp'.\MessageBreak
4600   Known values are 'post' and 'get'%
4601 }\@ehc
4602 }{%
4603 \let\Form@method\Hy@temp
4604 \ifcase\@nameuse{Form@method@Hy@temp} %
4605 \Fld@getmethodfalse
4606 \else
4607 \Fld@getmethodtrue
4608 \fi
4609 }%
4610 }
4611 \def\Form@method{}
4612 \@namedef{Form@method@post}{0}
4613 \@namedef{Form@method@get}{1}
4614 \def\Fld@boolkey#1#2{%
4615 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4616 }
4617 \newtoks\Fld@toks
4618 \Fld@toks={ }%
4619 \def\Fld@addtoks#1#2{%
4620 \edef\@processme{\Fld@toks{the\Fld@toks\space #1="#2"}}%
4621 \@processme
4622 }
4623 \def\Fld@checkequals#1=#2=#3\\{%
4624 \def\@currDisplay{#1}%
4625 \ifx\\#2\\%
4626 \def\@currValue{#1}%
4627 \else
4628 \def\@currValue{#2}%
4629 \fi
4630 }
4631 \define@key{Field}{loc}{%
4632 \def\Fld@loc{#1}%
4633 }
4634 \define@key{Field}{checked}[true]{%
4635 \lowercase{\Field@boolkey{#1}}{checked}%
4636 }
4637 \define@key{Field}{disabled}[true]{%
4638 \lowercase{\Field@boolkey{#1}}{disabled}%
4639 }
4640 \define@key{Field}{accesskey}{%
4641 \Field@addtoks{accesskey}{#1}%
4642 }
4643 \define@key{Field}{tabkey}{%
4644 \Field@addtoks{tabkey}{#1}%
4645 }
4646 \define@key{Field}{name}{%
4647 \def\Fld@name{#1}%
4648 }

```

```

4649 \define@key{Field}{width}{%
4650   \def\Fld@width{#1}%
4651   \Field@Width#1\setbox0=\hbox{m}%
4652 }
4653 \define@key{Field}{maxlen}{%
4654   \def\Fld@maxlen{#1}%
4655 }
4656 \define@key{Field}{menulength}{%
4657   \Fld@menulength=#1\relax
4658 }
4659 \define@key{Field}{height}{%
4660   \def\Fld@height{#1}%
4661 }
4662 \define@key{Field}{charsize}{%
4663   \Fld@charsize#1%
4664 }
4665 \define@key{Field}{borderwidth}{%
4666   \def\Fld@borderwidth{#1}%
4667 }
4668 \define@key{Field}{borderstyle}{%
4669   \def\Fld@borderstyle{#1}%
4670 }
4671 \define@key{Field}{bordersep}{%
4672   \def\Fld@bordersep{#1}%
4673 }
4674 \define@key{Field}{default}{%
4675   \def\Fld@default{#1}%
4676 }
4677 \define@key{Field}{align}{%
4678   \def\Fld@align{#1}%
4679 }
4680 \define@key{Field}{value}{%
4681   \def\Fld@value{#1}%
4682 }
4683 \define@key{Field}{checkboxsymbol}{%
4684   \Fld@DingDef\Fld@cbsymbol{#1}%
4685 }
4686 \define@key{Field}{radiosymbol}{%
4687   \Fld@DingDef\Fld@radiosymbol{#1}%
4688 }
4689 \def\Fld@DingDef#1#2{%
4690   \def\Fld@temp{}%
4691   \Fld@@DingDef#2\ding{}\@nil
4692   \let#1\Fld@temp
4693 }
4694 \def\Fld@@DingDef#1\ding#2#3\@nil{%
4695   \expandafter\def\expandafter\Fld@temp\expandafter{%
4696     \Fld@temp
4697     #1%
4698   }%
4699   \ifx\#3\%
4700     \expandafter\@gobble
4701   \else
4702     \begingroup
4703       \lccode'0=#2\relax
4704       \lowercase{\endgroup
4705       \expandafter\def\expandafter\Fld@temp\expandafter{%

```

```

4706     \Fld@temp
4707     0%
4708   }%
4709 }%
4710 \expandafter\@firstofone
4711 \fi
4712 {%
4713   \Fld@@DingDef#3\@nil
4714 }%
4715 }

4716 \define@key{Field}{rotation}{%
4717   \def\Fld@rotation{#1}%
4718 }

4719 \define@key{Field}{backgroundcolor}{%
4720   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4721 }
4722 \define@key{Field}{bordercolor}{%
4723   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4724 }
4725 \define@key{Field}{color}{%
4726   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4727 }

4728 \def\Fld@onclick@code{}
4729 \def\Fld@format@code{}
4730 \def\Fld@validate@code{}
4731 \def\Fld@calculate@code{}
4732 \def\Fld@keystroke@code{}
4733 \def\Fld@onfocus@code{}
4734 \def\Fld@onblur@code{}
4735 \def\Fld@onmousedown@code{}
4736 \def\Fld@onmouseup@code{}
4737 \def\Fld@onenter@code{}
4738 \def\Fld@onexit@code{}
4739 \def\Hy@temp#1{%
4740   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4741 }
4742 \def\Hy@@temp#1#2{%
4743   \ifHy@pdfa
4744     \define@key{Field}{#2}{%
4745       \PackageError{hyperref}{%
4746         PDF/A: Additional action ‘#2’ is prohibited%
4747       }\@ehc
4748     }%
4749   \else
4750     \define@key{Field}{#2}{%
4751       \def#1{##1}%
4752     }%
4753   \fi
4754 }
4755 \Hy@temp{keystroke}
4756 \Hy@temp{format}
4757 \Hy@temp{validate}
4758 \Hy@temp{calculate}
4759 \Hy@temp{onfocus}
4760 \Hy@temp{onblur}
4761 \Hy@temp{onenter}

```

```

4762 \Hy@temp{onexit}
4763 \def\Hy@temp#1{%
4764   \define@key{Field}{#1}{%
4765     \Field@addtoks{#1}{##1}%
4766   }%
4767 }
4768 \Hy@temp{onselect}
4769 \Hy@temp{onchange}
4770 \Hy@temp{ondblclick}
4771 \Hy@temp{onmousedown}
4772 \Hy@temp{onmouseup}
4773 \Hy@temp{onmouseover}
4774 \Hy@temp{onmousemove}
4775 \Hy@temp{onmouseout}
4776 \Hy@temp{onkeypress}
4777 \Hy@temp{onkeydown}
4778 \Hy@temp{onkeyup}
4779 \ifHy@pdfa
4780   \define@key{Field}{onclick}{%
4781     \PackageError{hyperref}{%
4782       PDF/A: Action 'onclick' is prohibited%
4783     }\@ehc
4784   }%
4785 \else
4786   \define@key{Field}{onclick}{%
4787     \def\Fld@onclick@code{#1}%
4788     \Field@addtoks{onclick}{#1}%
4789   }%
4790 \fi

4791 \DeclareRobustCommand\TextField{%
4792   \@ifnextchar[{\@TextField}{\@TextField[]}%
4793 }
4794 \DeclareRobustCommand\ChoiceMenu{%
4795   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4796 }
4797 \DeclareRobustCommand\CheckBox{%
4798   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4799 }
4800 \DeclareRobustCommand\PushButton{%
4801   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4802 }
4803 \DeclareRobustCommand\Gauge{%
4804   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4805 }
4806 \DeclareRobustCommand\Submit{%
4807   \@ifnextchar[{\@Submit}{\@Submit[]}%
4808 }
4809 \DeclareRobustCommand\Reset{%
4810   \@ifnextchar[{\@Reset}{\@Reset[]}%
4811 }
4812 \def\LayoutTextField#1#2{% label, field
4813   #1 #2%
4814 }
4815 \def\LayoutChoiceField#1#2{% label, field
4816   #1 #2%
4817 }
4818 \def\LayoutCheckField#1#2{% label, field

```

```

4819 #1 #2%
4820 }
4821 \def\LayoutPushButtonField#1{% button
4822 #1%
4823 }
4824 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4825 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4826 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4827 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4828 \def\MakeButtonField#1{%
4829 \sbox0{%
4830 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4831 }%
4832 \@tempdima\ht0 %
4833 \advance\@tempdima by \Fld@borderwidth bp %
4834 \advance\@tempdima by \Fld@borderwidth bp %
4835 \ht0\@tempdima
4836 \@tempdima\dp0 %
4837 \advance\@tempdima by \Fld@borderwidth bp %
4838 \advance\@tempdima by \Fld@borderwidth bp %
4839 \dp0\@tempdima
4840 \box0\relax
4841 }
4842 \def\DefaultHeightofSubmit{14pt}
4843 \def\DefaultWidthofSubmit{2cm}
4844 \def\DefaultHeightofReset{14pt}
4845 \def\DefaultWidthofReset{2cm}
4846 \def\DefaultHeightofCheckBox{\baselineskip}
4847 \def\DefaultWidthofCheckBox{\baselineskip}
4848 \def\DefaultHeightofChoiceMenu{\baselineskip}
4849 \def\DefaultWidthofChoiceMenu{\baselineskip}
4850 \def\DefaultHeightofText{\baselineskip}
4851 \def\DefaultHeightofTextMultiline{4\baselineskip}
4852 \def\DefaultWidthofText{3cm}
4853 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4854 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4855 \def\DefaultOptionsofPushButton{print}
4856 \def\DefaultOptionsofCheckBox{print}
4857 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4858 \def\DefaultOptionsofListBox{print}
4859 \def\DefaultOptionsofComboBox{print,edit,sort}
4860 \def\DefaultOptionsofPopdownBox{print}
4861 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

4862 \ifHy@figures
4863 \Hy@Info{Hyper figures ON}%
4864 \else
4865 \Hy@Info{Hyper figures OFF}%
4866 \fi
4867 \ifHy@nesting
4868 \Hy@Info{Link nesting ON}%
4869 \else
4870 \Hy@Info{Link nesting OFF}%

```

```

4871 \fi
4872 \ifHy@hyperindex
4873   \Hy@Info{Hyper index ON}%
4874 \else
4875   \Hy@Info{Hyper index OFF}%
4876 \fi
4877 \ifHy@backref
4878   \Hy@Info{backreferencing ON}%
4879 \else
4880   \Hy@Info{backreferencing OFF}%
4881 \fi
4882 \ifHy@colorlinks
4883   \Hy@Info{Link coloring ON}%
4884 \else
4885   \Hy@Info{Link coloring OFF}%
4886 \fi
4887 \ifHy@ocgcolorlinks
4888   \Hy@Info{Link coloring with OCG ON}%
4889 \else
4890   \Hy@Info{Link coloring with OCG OFF}%
4891 \fi
4892 \ifHy@pdfa
4893   \Hy@Info{PDF/A mode ON}%
4894 \else
4895   \Hy@Info{PDF/A mode OFF}%
4896 \fi

```

21 Low-level utility macros

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

```

4897 \edef\hyper@hash{\string#}
4898 \edef\hyper@tilde{\string~}
4899 \edef\hyper@quote{\string"}
4900 \let\@currentHref\@empty
4901 \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.

```

4902 \AfterBeginDocument{%
4903   \Hy@pdfstringtrue
4904   \PDF@SetupDoc
4905   \let\PDF@SetupDoc\@empty
4906   \Hy@DisableOption{pdfpagescrop}%
4907   \Hy@DisableOption{pdfpagemode}%
4908   \Hy@DisableOption{pdfnonfullscreenpagemode}%
4909   \Hy@DisableOption{pdfdirection}%
4910   \Hy@DisableOption{pdfviewarea}%
4911   \Hy@DisableOption{pdfviewclip}%
4912   \Hy@DisableOption{pdfprintarea}%
4913   \Hy@DisableOption{pdfprintclip}%
4914   \Hy@DisableOption{pdfprintscaling}%
4915   \Hy@DisableOption{pdfduplex}%
4916   \Hy@DisableOption{pdfpicktraybypdfsize}%
4917   \Hy@DisableOption{pdfprintpagerange}%
4918   \Hy@DisableOption{pdfnumcopies}%
4919   \Hy@DisableOption{pdfstartview}%
4920   \Hy@DisableOption{pdfstartpage}%

```

```

4921 \Hy@DisableOption{pdftoolbar}%
4922 \Hy@DisableOption{pdfmenubar}%
4923 \Hy@DisableOption{pdfwindowui}%
4924 \Hy@DisableOption{pdffitwindow}%
4925 \Hy@DisableOption{pdfcenterwindow}%
4926 \Hy@DisableOption{pdfdisplaydoctitle}%
4927 \Hy@DisableOption{pdfpagelayout}%
4928 \Hy@DisableOption{pdflang}%
4929 \Hy@DisableOption{baseurl}%
4930 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4931 \Hy@pdfstringfalse
4932 }

```

Ignore star from referencing macros:

```

4933 \let\NoHy@OrgRef\ref
4934 \def\ref{%
4935   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
4936 }
4937 \let\NoHy@OrgPageRef\pageref
4938 \def\pageref{%
4939   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
4940 }

```

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.

```

4941 \def\NoHyper{%
4942   \def\hyper@link@{##1}##2##3##4{##4}%
4943   \def\hyper@@anchor##1{}%
4944   \global\let\hyper@livelink\hyper@link
4945   \gdef\hyper@link##1##2##3{##3}%
4946   \def\hyper@anchorstart##1{}%
4947   \let\hyper@anchorend\@empty
4948   \def\hyper@linkstart##1##2{}%
4949   \let\hyper@linkend\@empty
4950   \def\hyper@linkurl##1##2{##1}%
4951   \def\hyper@linkfile##1##2##3{##1}%
4952   \def\hyper@link@{##1}##2##3{}%
4953   \let\Hy@backout\@gobble
4954 }
4955 \def@stop@hyper{%
4956   \def\hyper@link@{##1}##2##3##4{##4}%
4957   \let\Hy@backout\@gobble
4958   \def\hyper@@anchor##1{}%
4959   \def\hyper@link##1##2##3{##3}%
4960   \def\hyper@anchorstart##1{}%
4961   \let\hyper@anchorend\@empty
4962   \def\hyper@linkstart##1##2{}%
4963   \let\hyper@linkend\@empty
4964   \def\hyper@linkurl##1##2{##1}%
4965   \def\hyper@linkfile##1##2##3{##1}%
4966   \def\hyper@link@{##1}##2##3{}%
4967 }

```

```

4968 \def\endNoHyper{%
4969   \global\let\hyper@link\hyper@livelink
4970 }
4971 \</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:

```

4972 \*nohyperref
4973 \let\hyper@@anchor\@gobble
4974 \def\hyper@link#1#2#3{#3}%
4975 \let\hyper@anchorstart\@gobble
4976 \let\hyper@anchorend\@empty
4977 \let\hyper@linkstart\@gobbletwo
4978 \let\hyper@linkend\@empty
4979 \def\hyper@linkurl#1#2{#1}%
4980 \def\hyper@linkfile#1#2#3{#1}%
4981 \def\hyper@link@{#1}#2#3{#1}%
4982 \let\PDF@SetupDoc\@empty
4983 \let\PDF@FinishDoc\@empty
4984 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

4985 \def\Acrobatmenu#1#2{\leavevmode#2}
4986 \let\pdfstringdefDisableCommands\@gobbletwo
4987 \let\texorpdfstring\@firstoftwo
4988 \let\pdfbookmark\@undefined
4989 \newcommand\pdfbookmark[3]{}
4990 \let\phantomsection\@empty
4991 \let\hypersetup\@gobble
4992 \let\hyperbaseurl\@gobble
4993 \let\href\@gobble
4994 \let\hyperdef\@gobbletwo
4995 \let\hyperlink\@gobble
4996 \let\hypertarget\@gobble
4997 \def\hyperref{%
4998   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
4999 }
5000 \long\def\@gobbleopt[#1]{}
5001 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5002 \let\NoHy@OrgRef\ref
5003 \def\ref{%
5004   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5005 }
5006 \let\NoHy@OrgPageRef\pageref
5007 \def\pageref{%
5008   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5009 }
5010 \</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}`

```
5011 \langle *package\rangle
5012 \AfterBeginDocument{%
```

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.

```
5013 \if@filesw
5014 \ifHy@typexml
5015 \immediate\closeout\@mainaux
5016 \immediate\openout\@mainaux\jobname.aux\relax
5017 \immediate\write\@auxout{\relaxxml>\relax}%
5018 \fi
5019 \immediate\write\@auxout{%

5020 \string\ifx\string\hyper@anchor\string\@undefined^^J%

5021 \global\let\string\oldcontentsline\string\contentsline^^J%
5022 \gdef\string\contentsline%
5023 \string#1\string#2\string#3\string#4{%
5024 \string\oldcontentsline%
5025 {\string#1}{\string#2}{\string#3}}^^J%
5026 \global\let\string\oldnewlabel\string\newlabel^^J%
5027 \gdef\string\newlabel\string#1\string#2{%
5028 \string\newlabelxx{\string#1}\string#2}^^J%
5029 \gdef\string\newlabelxx%
5030 \string#1\string#2\string#3\string#4\string#5\string#6{%
5031 \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.

```
5032 \string\AtEndDocument{%
5033 \let\string\contentsline\string\oldcontentsline^^J%
5034 \let\string\newlabel\string\oldnewlabel}^^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.

```
5035 \string\else^^J%
5036 \global\let\string\hyper@last\relax^^J%
5037 \string\fi^^J%
5038 }%
5039 \fi
```

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.

```
5040 \ifx\hyper@last\@undefined
5041 \def\@starttoc#1{%
5042 \begingroup
5043 \makeatletter
5044 \IfFileExists{\jobname.#1}{%
5045 \Hy@WarningNoLine{%
5046 old #1 file detected, not used; run LaTeX again%
```

```

5047     }%
5048   }{}%
5049   \if@filesw
5050     \expandafter\newwrite\csname tf@#1\endcsname
5051     \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5052   \fi
5053   \@nobreakfalse
5054 \endgroup
5055 }%
5056 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5057 \fi
5058 }

```

25 Title strings

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

```

5059 \ifHy@usetitle
5060 \let\HyOrg@title\title
5061 \let\HyOrg@author\author
5062 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5063 \def\Hy@scanopttitle[#1]{%
5064   \gdef\Hy@title{#1}%
5065   \HyOrg@title{#1}%
5066 }%
5067 \def\Hy@scantitle#1{%
5068   \gdef\Hy@title{#1}%
5069   \HyOrg@title{#1}%
5070 }%
5071 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5072 \def\Hy@scanoptauthor[#1]{%
5073   \gdef\Hy@author{#1}%
5074   \HyOrg@author{#1}%
5075 }%
5076 \def\Hy@scanauthor#1{%
5077   \gdef\Hy@author{#1}%
5078   \HyOrg@author{#1}%
5079 }%

```

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.

```

5080 \begingroup
5081 \def\process@me#1\@nil#2{%
5082   \expandafter\let\expandafter\x\csname @#2\endcsname
5083   \edef\y{\expandafter\strip@prefix\meaning\x}%
5084   \def\c##1#1##2\@nil{%
5085     \ifx\\##1\\%
5086       \else
5087         \expandafter\gdef\csname Hy@#2\endcsname
5088         \expandafter{\x}%
5089       \fi
5090     }%
5091   \expandafter\c\y\relax#1\@nil
5092 }%
5093 \expandafter\process@me\string\@latex@\@nil{title}%
5094 \expandafter\process@me\string\@latex@\@nil{author}%

```

```

5095 \endgroup
5096 \fi
5097 \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.

```

5098 \def\Hy@UseMaketitleString#1{%
5099 \ifundefined{Hy@#1}{}%
5100 \begingroup
5101 \let\Hy@saved@hook\pdfstringdefPreHook
5102 \pdfstringdefDisableCommands{%
5103 \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
5104 \let\newline\\%
5105 }%
5106 \expandafter\ifx\csname @pdf#1\endcsname \@empty
5107 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5108 \csname Hy@#1\endcsname \@empty
5109 }%
5110 \fi
5111 \global\let\pdfstringdefPreHook\Hy@saved@hook
5112 \endgroup
5113 }%
5114 }
5115 \def\Hy@newline@title#1{ #1}
5116 \def\Hy@newline@author#1{, #1}
5117 \def\Hy@UseMaketitleInfos{%
5118 \Hy@UseMaketitleString{title}%
5119 \Hy@UseMaketitleString{author}%
5120 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5121 \RequirePackage{atbegshi}[2007/09/09]
5122 \def\Hy@EveryPageHook{}
5123 \def\Hy@EveryPageBoxHook{}
5124 \def\Hy@FirstPageHook{}
5125 \AtBeginShipout{%
5126 \Hy@EveryPageHook
5127 \ifx\Hy@EveryPageBoxHook \@empty
5128 \else
5129 \setbox\AtBeginShipoutBox=\vbox{%
5130 \offinterlineskip
5131 \Hy@EveryPageBoxHook
5132 \box\AtBeginShipoutBox

```

```

5133 }%
5134 \fi
5135 }
5136 \AtBeginShipoutFirst{%
5137 \Hy@FirstPageHook
5138 }
5139 \g@addto@macro\Hy@FirstPageHook{%
5140 \PDF@FinishDoc
5141 \gdef\PDF@FinishDoc{}}%
5142 }

```

27.1 PDF /PageLabels

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

```

5143 \ifHy@pagelabels
5144 \begingroup\expandafter\expandafter\expandafter\endgroup
5145 \expandafter\ifx\csname thepage\endcsname\relax
5146 \Hy@pagelabelsfalse
5147 \Hy@WarningNoLine{%
5148 Option 'pdfpagelabels' is turned off\MessageBreak
5149 because \string\thepage\space is undefined%
5150 }%
5151 \csname fi\endcsname
5152 \csname iffalse\expandafter\endcsname
5153 \fi

```

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

```

5154 \def\thispdfpagelabel#1{%
5155 \gdef\HyPL@thisLabel{#1}%
5156 }%
5157 \global\let\HyPL@thisLabel\relax

```

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

```

5158 \def\HyPL@Labels{}%

```

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

```

5159 \newcount\Hy@abspage
5160 \Hy@abspage=0 %

```

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

```

5161 \def\HyPL@LastType{init}%
5162 \def\HyPL@LastNumber{0}%
5163 \def\HyPL@LastPrefix{}%

```

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

```

5164 \def\HyPL@arabic{D}%
5165 \def\HyPL@Roman{R}%
5166 \def\HyPL@roman{r}%
5167 \def\HyPL@Alph{A}%
5168 \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.

```

5169 \def\HyPL@EveryPage{%
5170 \begingroup
5171 \ifx\HyPL@thisLabel\relax

```

```

5172     \let\HyPL@page\thepage
5173   \else
5174     \let\HyPL@page\HyPL@thisLabel
5175     \global\let\HyPL@thisLabel\relax
5176   \fi
5177   \let\HyPL@Type\relax
5178   \ifnum\the\c@page>0 %
5179     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5180   \fi
5181   \let\Hy@temp Y%
5182   \ifx\HyPL@Type\HyPL@LastType
5183   \else
5184     \let\Hy@temp N%
5185   \fi
5186   \ifx\HyPL@Type\relax
5187     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5188   \else
5189     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5190   \fi
5191   \ifx\HyPL@Prefix\HyPL@LastPrefix
5192   \else
5193     \let\Hy@temp N%
5194   \fi
5195   \if Y\Hy@temp
5196     \advance\c@page by -1 %
5197     \ifnum\HyPL@LastNumber=\the\c@page\relax
5198   \else
5199     \let\Hy@temp N%
5200   \fi
5201   \Hy@StepCount\c@page
5202 \fi
5203 \if N\Hy@temp
5204   \ifx\HyPL@Type\relax
5205     \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5206   \else
5207     \HyPL@StorePageLabel{%
5208       \ifx\HyPL@Prefix\@empty
5209       \else
5210         /P(\HyPL@Prefix)%
5211       \fi
5212       /S/\csname HyPL\HyPL@Type\endcsname
5213       \ifnum\the\c@page=1 %
5214       \else
5215         \space/St \the\c@page
5216       \fi
5217     }%
5218   \fi
5219 \fi
5220 \xdef\HyPL@LastNumber{\the\c@page}%
5221 \global\let\HyPL@LastType\HyPL@Type
5222 \global\let\HyPL@LastPrefix\HyPL@Prefix
5223 \endgroup
5224 \Hy@GlobalStepCount\Hy@abspage
5225 }%

```

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

```

5226 \def\HyPL@CheckThePage#1\@nil{%

```

```

5227 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5228 }%

```

`\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`.

```

5229 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5230 \def\Hy@tempa{#4}%
5231 \def\Hy@tempb{\csname\endcsname\c@page}%
5232 \ifx\Hy@tempa\Hy@tempb
5233 \expandafter\ifx\csname HyPL#3\endcsname\relax
5234 \else
5235 \def\HyPL@Type{#3}%
5236 \def\HyPL@Prefix{#2}%
5237 \fi
5238 \else
5239 \begingroup
5240 \let\Hy@next\endgroup
5241 \let\HyPL@found\@undefined
5242 \def\arabic{\HyPL@Format{arabic}}%
5243 \def\Roman{\HyPL@Format{Roman}}%
5244 \def\roman{\HyPL@Format{roman}}%
5245 \def\Alph{\HyPL@Format{Alph}}%
5246 \def\alph{\HyPL@Format{alph}}%
5247 \protected@edef\Hy@temp{#1}%
5248 \ifx\HyPL@found\relax
5249 \toks@{\expandafter{\Hy@temp}}%
5250 \edef\Hy@next{\endgroup
5251 \noexpand\HyPL@@@CheckThePage\the\toks@
5252 \noexpand\HyPL@found\relax\noexpand\@nil
5253 }%
5254 \fi
5255 \Hy@next
5256 \fi
5257 }%

```

`\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`.

```

5258 \def\HyPL@Format#1#2{%
5259 \ifx\HyPL@found\@undefined
5260 \expandafter\ifx\csname c@#2\endcsname\c@page
5261 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5262 \else
5263 \expandafter\noexpand\csname#1\endcsname{#2}%
5264 \fi
5265 \else
5266 \expandafter\noexpand\csname#1\endcsname{#2}%
5267 \fi
5268 }%

```

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

```

5269 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5270 \def\Hy@tempa{#3}%

```

```

5271 \def\Hy@tempb{\HyPL@found\relax}%
5272 \ifx\Hy@tempa\Hy@tempb
5273 \def\HyPL@Type{@#2}%
5274 \def\HyPL@Prefix{#1}%
5275 \fi
5276 }%

```

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

```

5277 \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`.

```

5278 \def\HyPL@Useless{0<</S/D>>}%
5279 \@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.

```

5280 \def\HyPL@SetPageLabels{%
5281 \@onelevel@sanitize\HyPL@Labels
5282 \ifx\HyPL@Labels\@empty
5283 \else
5284 \ifx\HyPL@Labels\HyPL@Useless
5285 \else
5286 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5287 \fi
5288 \fi
5289 }%

```

```

5290 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5291 \fi

```

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

```

5292 \Hy@DisableOption{pdfpagelabels}
5293 </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`

```

5294 <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.

```

5295 <*vTeX>
5296 \providecommand*{\XR@ext}{pdf}
5297 \edef\Hy@VTeXversion{%
5298 \ifx\VTeXversion\@undefined
5299 \z@
5300 \else
5301 \ifx\VTeXversion\relax
5302 \z@
5303 \else

```

```

5304 \VTeXversion
5305 \fi
5306 \fi
5307 }
5308 \begingroup
5309 \ifnum\VTeXversion<660 %
5310 \gdef\Hy@PutCatalog#1{%
5311 \Hy@WarningNoLine{%
5312 VTeX 6.59g or above required for pdfpagelabels%
5313 }%
5314 }%
5315 \else
5316 \gdef\Hy@PutCatalog#1{%
5317 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5318 }%
5319 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5320 \ifx\#2\%
5321 \else
5322 \immediate\special{!pdfpagelabels #2}%
5323 \fi
5324 }%
5325 \fi
5326 \endgroup
5327 </vtex>

5328 <*pdfTeX | vtex>

```

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

```

5329 \ifHy@pagelabels
5330 \def\HyPL@StorePageLabel#1{%
5331 \toks@ \expandafter{\HyPL@Labels}%
5332 \xdef\HyPL@Labels{%
5333 \the\toks@
5334 \the\Hy@abspage<<#1>>%
5335 }%
5336 }%

```

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.

```

5337 \RequirePackage{atveryend}[2009/12/07]%
5338 \AtVeryEndDocument{%
5339 \HyPL@SetPageLabels
5340 }%

5341 \fi
5342 </pdfTeX | vtex>

```

27.1.2 xetex

```

5343 <*xetex>
5344 \HyPsd@LoadUnicode
5345 \Hy@unicodetrue
5346 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5347 \else
5348 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5349 \fi
5350 \HyPsd@LoadStringEncoding

```



```

5351 \define@key{Hyp}{unicode}[true]{%
5352   \Hy@boolkey{unicode}{#1}%
5353   \ifHy@unicode
5354   \else
5355     \Hy@Warning{%
5356       XeTeX driver only supports 'unicode=true'.\MessageBreak
5357       Ignoring option setting 'unicode=false'%
5358     }%
5359     \Hy@unicodetrue
5360   \fi
5361 }
5362 \define@key{Hyp}{pdfencoding}{%
5363   \edef\HyPsd@temp{#1}%
5364   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5365     \let\HyPsd@pdfencoding\HyPsd@temp
5366   \else
5367     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5368       \let\HyPsd@pdfencoding\HyPsd@temp
5369     \else
5370       \Hy@Warning{%
5371         XeTeX driver only supports 'pdfencoding=unicode|auto.%
5372         \MessageBreak
5373         Ignoring option setting 'pdfencoding=\HyPsd@temp'%
5374       }%
5375     \fi
5376   \fi
5377 }
5378 \let\HyXeTeX@CheckUnicode\relax
5379 \xetex

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5380 \pdfmarkbase
5381 \begingroup
5382 \ifundefined{headerps@out}{%
5383   \toks@{\expandafter{\Hy@FirstPageHook}%
5384   \xdef\Hy@FirstPageHook{%
5385     \noexpand\headerps@out{%
5386       systemdict /pdfmark known%
5387       {%
5388         userdict /?pdfmark systemdict /exec get put%
5389       }{%
5390         userdict /?pdfmark systemdict /pop get put %
5391         userdict /pdfmark systemdict /cleartomark get put%
5392       }%
5393       ifelse%
5394     }%
5395     \the\toks@
5396   }%
5397 }%
5398 \endgroup
5399 \pdfmarkbase

```

\Hy@PutCatalog

```

5400 \dvipdfm | xetex\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5401 \pdfmarkbase
5402 \def\Hy@PutCatalog#1{%
5403   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5404 }

```

```
5405 </pdfmarkbase>
```

```
5406 <*pdfmarkbase | dvipdfm | xetex>
```

```
5407 \ifHy@pagelabels
```

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

```
5408 \def\HyPL@StorePageLabel#1{%
5409   \if@filesw
5410     \begingroup
5411       \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5412       \immediate\write\@mainaux{%
5413         \string\HyPL@Entry{\Hy@tempa}%
5414       }%
5415     \endgroup
5416   \fi
5417 }%
```

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.

```
5418 \AfterBeginDocument{%
5419   \if@filesw
5420     \immediate\write\@mainaux{%
5421       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5422     }%
5423   \fi
5424   \ifx\HyPL@Labels\@empty
5425     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5426   \else
5427     \HyPL@SetPageLabels
5428   \fi
5429   \let\HyPL@Entry\@gobble
5430 }%
```

`\HyPL@Entry`

```
5431 \def\HyPL@Entry#1{%
5432   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5433     \HyPL@Labels
5434     #1%
5435   }%
5436 }%

5437 \fi
5438 </pdfmarkbase | dvipdfm | xetex>

5439 <*package>

5440 \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

```

5441 \def\Hy@CounterExists#1{%
5442   \begingroup\expandafter\expandafter\expandafter\endgroup
5443   \expandafter\ifx\csname c@#1\endcsname\relax
5444     \expandafter\@gobble
5445   \else
5446     \begingroup\expandafter\expandafter\expandafter\endgroup
5447     \expandafter\ifx\csname the#1\endcsname\relax
5448       \expandafter\expandafter\expandafter\@gobble
5449     \else
5450       \expandafter\expandafter\expandafter\@firstofone
5451     \fi
5452   \fi
5453 }
5454 \Hy@CounterExists{section}{%
5455   \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5456 }
5457 \Hy@CounterExists{part}{%
5458   \newcommand\theHpart{\arabic{part}}}%
5459 }
5460 \@ifundefined{thechapter}{%
5461   \newcommand\theHsection   {\arabic{section}}}%
5462   \newcommand\theHfigure    {\arabic{figure}}}%
5463   \newcommand\theHtable     {\arabic{table}}}%
5464 }{%
5465   \newcommand\theHchapter   {\arabic{chapter}}}%
5466   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}}%
5467   \newcommand\theHtable     {\theHchapter.\arabic{table}}}%
5468   \newcommand\theHsection   {\theHchapter.\arabic{section}}}%
5469 }
5470 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5471 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5472 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5473 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
5474 \newcommand\theHtheorem     {\theHsection.\arabic{theorem}}
5475 \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.

```

5476 \let\H@item\item
5477 \newcounter{Item}
5478 \def\theHItem{\arabic{Item}}
5479 \def\item{%
5480   \@hyper@itemfalse
5481   \if@nmbrlist\@hyper@itemtrue\fi
5482   \H@item
5483 }

```

```

5484 \newcommand\theHenumi    {\theHItem}
5485 \newcommand\theHenumii   {\theHItem}
5486 \newcommand\theHenumiii  {\theHItem}
5487 \newcommand\theHenumiv   {\theHItem}
5488 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5489 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5490 \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.

```

5491 \let\H@refstepcounter\refstepcounter
5492 \edef\name@of@eq{equation}%
5493 \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.

```

5494 \newif\if@hyper@item
5495 \newif\if@skiphyperref
5496 \@hyper@itemfalse
5497 \@skiphyperreffalse
5498 \def\refstepcounter#1{%
5499   \ifHy@pdfstring
5500   \else
5501     \H@refstepcounter{#1}%
5502     \edef\This@name{#1}%
5503     \ifx\This@name\name@of@slide
5504     \else
5505       \if@skiphyperref
5506       \else
5507         \if@hyper@item
5508           \stepcounter{Item}%
5509           \hyper@refstepcounter{Item}%
5510           \@hyper@itemfalse
5511         \else
5512           \hyper@refstepcounter{#1}%
5513         \fi
5514       \fi
5515     \fi
5516   \fi
5517 }

```

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

```

5518 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5519 \def\hyper@refstepcounter#1{%
5520   \edef\This@name{#1}%
5521   \ifx\This@name\name@of@eq
5522     \@ifundefined{theHequation}{%
5523       \make@stripped@name{\theequation}%
5524       \let\theHequation\newname
5525     }{}%
5526   \fi
5527   \@ifundefined{theH#1}{%
5528     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%

```

```

5529 }{}%
5530 \hyper@makecurrent{#1}%
5531 \ifmeasuring@
5532 \else
5533 \Hy@raisedlink{%
5534   \hyper@anchorstart{\@currentHref}\hyper@anchorend
5535 }%
5536 \fi
5537 }

```

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`.

```

5538 \begingroup\expandafter\expandafter\expandafter\endgroup
5539 \expandafter\ifx\csname chapter\endcsname\relax
5540 \def\Hy@chapterstring{section}%
5541 \else
5542 \def\Hy@chapterstring{chapter}%
5543 \fi
5544 \def\Hy@appendixstring{appendix}
5545 \def\Hy@chapapp{\Hy@chapterstring}
5546 \let\HyOrg@appendix\appendix
5547 \def\appendix{%
5548   \@ifundefined{chapter}%
5549   {\gdef\theHsection{\Alph{section}}}%
5550   {\gdef\theHchapter{\Alph{chapter}}}%
5551   \xdef\Hy@chapapp{\Hy@appendixstring}%
5552   \HyOrg@appendix
5553 }

```

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

```

5554 \def\hyper@makecurrent#1{%
5555   \begingroup
5556   \edef\Hy@param{#1}%
5557   \ifx\Hy@param\Hy@chapterstring
5558     \let\Hy@param\Hy@chapapp
5559   \fi
5560   \ifHy@hypertexnames
5561     \let\@number\@firstofone
5562     \@ifundefined{latin@Alph}{}{%
5563       \ifx\@Alph\greek@Alph
5564         \def\@Alph{Alph\@arabic}%
5565       \fi
5566     }%
5567     \ifx\@Alph\@Alph@bul
5568       \def\@Alph{Alph\@arabic}%
5569     \fi
5570     \ifx\@alph\@alph@bul
5571       \def\@alph{alph\@arabic}%
5572     \fi
5573     \ifHy@naturalnames
5574       \let\textlatin\@firstofone
5575       \xdef\@currentHlabel{\csname the#1\endcsname}%

```

```

5576 \else
5577 \xdef\@currentHlabel{%
5578 \csname
5579 the%
5580 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5581 #1%
5582 \endcsname
5583 }%
5584 \fi
5585 \xdef\@currentHref{%
5586 \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5587 }%
5588 \else
5589 \Hy@GlobalStepCount\Hy@linkcounter
5590 \xdef\@currentHref{\Hy@param.\the\Hy@linkcounter}%
5591 \fi
5592 \endgroup
5593 }

5594 \@ifpackageloaded{fancyvrb}{%
5595 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{-}%
5596 \def\FV@StepLineNo{%
5597 \FV@SetLineNo
5598 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5599 \FV@StepLineNo
5600 }%
5601 }%
5602 }{-}

```

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 `hypertextnames` 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`

```

5603 \AtBeginDocument{%
5604 \ifclassloaded{revtex4}{%
5605 \@namedef{ver@lastpage.sty}{1994/06/25}%
5606 }{-}%
5607 \@ifpackageloaded{lastpage}{%
5608 \ifHy@pageanchor
5609 \else
5610 \Hy@WarningNoLine{%
5611 The \string\pageref{LastPage} link doesn't work\MessageBreak
5612 with disabled option 'pageanchor'%
5613 }%
5614 \fi
5615 \def\lastpage@putlabel{%
5616 \addtocounter{page}{-1}%
5617 \if@files@w
5618 \begingroup

```

```

5619 \let\@number\@firstofone
5620 \ifHy@pageanchor
5621 \ifHy@hypertexnames
5622 \ifHy@plainpages
5623 \def\Hy@temp{\arabic{page}}}%
5624 \else
5625 \Hy@unicodedefalse
5626 \pdfstringdef\Hy@temp{\thepage}%
5627 \fi
5628 \else
5629 \def\Hy@temp{\the\Hy@pagecounter}%
5630 \fi
5631 \fi
5632 \immediate\write\@auxout{%
5633 \string\newlabel
5634 {LastPage}{\thepage}{\thepage}%
5635 \ifHy@pageanchor page.\Hy@temp\fi}{}}%
5636 }%
5637 \endgroup
5638 \fi
5639 \addtocounter{page}{1}%
5640 }%
5641 \@ifclassloaded{revtex4}{%
5642 \begingroup
5643 \toks@{\expandafter{\lastpage@putlabel}%
5644 \edef\x{\endgroup
5645 \def\noexpand\lastpage@putlabel{%
5646 \noexpand\stepcounter{page}%
5647 \the\toks@
5648 \noexpand\addtocounter{page}\noexpand\m@ne
5649 }%
5650 }%
5651 \x
5652 }{}%
5653 }{}%
5654 }
5655 \</package>
5656 \<*check>
5657 \checkpackage{lastpage}[1994/06/25]
5658 \checkcommand\def\lastpage@putlabel{%
5659 \addtocounter{page}{-1}%
5660 \immediate\write\@auxout{%
5661 \string\newlabel{LastPage}{\thepage}{\thepage}%
5662 }%
5663 \addtocounter{page}{1}%
5664 }
5665 \</check>
5666 \<*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.

```

5667 \def\hypergetref#1{\getrefbykeydefault{#1}{\{??\}}
5668 \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:

```
5669 \@ifpackageloaded{titlesec}{%
5670   \def\ttl@Hy@steplink#1{%
5671     \Hy@GlobalStepCount\Hy@linkcounter
5672     \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5673     \edef\ttl@Hy@saveanchor{%
5674       \noexpand\Hy@raisedlink{%
5675         \noexpand\hyper@anchorstart{\@currentHref}%
5676         \noexpand\hyper@anchorend
5677         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
5678         \noexpand\ttl@Hy@PatchSaveWrite
5679       }%
5680     }%
5681   }%
5682   \def\ttl@Hy@PatchSaveWrite{%
5683     \begingroup
5684     \toks@\expandafter{\ttl@savewrite}%
5685     \edef\x{\endgroup
5686       \def\noexpand\ttl@savewrite{%
5687         \let\noexpand\@currentHref
5688           \noexpand\ttl@Hy@SavedCurrentHref
5689         \the\toks@
5690       }%
5691     }%
5692     \x
5693   }%
5694   \def\ttl@Hy@refstepcounter#1{%
5695     \let\ttl@b\Hy@raisedlink
5696     \def\Hy@raisedlink##1{%
5697       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5698     }%
5699     \refstepcounter{#1}%
5700     \let\Hy@raisedlink\ttl@b
5701   }%
5702 }{}
```

Package titletoc support:

```
5703 \@ifpackageloaded{titletoc}{%
5704   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5705 }{}
```

32 Package varioref support

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

```
5706 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
5707 \@ifpackageloaded{varioref}{%
5708   \def\vref@pagenum#1#2{%
5709     \@ifundefined{r@#2}{%
5710       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5711     }{}%
5712     \edef#1{\getpagerefnumber{#2}}%
5713   }%
```


5714 }{}

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

```

5715 \ifpackageloaded{longtable}{%
5716   \begingroup
5717   \def\y{\LT@array}%
5718   \ifundefined{scr@LT@array}{\def\y{scr@LT@array}}%
5719   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5720     \expandafter\endgroup
5721     \expandafter\def\y[#1]##2{%
5722       \H@refstepcounter{#1}%
5723       \hyper@makecurrent{table}%
5724       \let\Hy@LT@currentHlabel\@currentHlabel
5725       \let\Hy@LT@currentHref\@currentHref
5726       #2\@sharp###4%
5727     }%
5728   }%
5729   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

5730 \begingroup
5731 \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5732   \endgroup
5733   \def\LT@start{%
5734     #1%
5735     \let\@currentHlabel\Hy@LT@currentHlabel
5736     \let\@currentHref\Hy@LT@currentHref
5737     \Hy@raisedlink{%
5738       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5739     }%
5740     \ifvoid\LT@firsthead\copy
5741       #2%
5742     }%
5743   }%
5744   \expandafter\x\LT@start\@nil
5745 }{}

```

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.

```

5746 \let\new@refstepcounter\refstepcounter
5747 \let\H@equation\equation
5748 \let\H@endequation\endequation

```

```

5749 \@ifpackageloaded{amsmath}{%
5750   \long\def\Hy@temp{%
5751     \incr@eqnum
5752     \mathdisplay@push
5753     \st@rredfalse \global\@eqnswtrue
5754     \mathdisplay{equation}%
5755   }%
5756   \ifx\Hy@temp\equation
5757     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5758       \csname iftrue\endcsname
5759   \else
5760     \long\def\equation{%
5761       \mathdisplay@push
5762       \st@rredfalse \global\@eqnswtrue
5763       \mathdisplay{equation}%
5764       \incr@eqnum
5765     }%
5766   \fi
5767 \fi
5768 }{%
5769 \def\equation{%
5770   \let\refstepcounter\H@refstepcounter
5771   \H@equation
5772   \@ifundefined{theHequation}{%
5773     \make@stripped@name{\theequation}%
5774     \let\theHequation\newname
5775   }{%
5776     \hyper@makecurrent{equation}%
5777     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5778     \let\refstepcounter\new@refstepcounter
5779   }%
5780 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5781 }

```

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.

```

5782 \newif\if@eqnstar
5783 \@eqnstarfalse
5784 \let\H@eqnarray\eqnarray
5785 \let\H@endeqnarray\endeqnarray
5786 \def\eqnarray{%
5787   \let\Hy@reserved@a\relax
5788   \def\@currentHref{}%
5789   \H@eqnarray
5790   \if@eqnstar
5791   \else
5792     \ifx\\\@currentHref\\%
5793     \else
5794       \@ifundefined{theHequation}{%
5795         \make@stripped@name{\theequation}%
5796         \let\theHequation\newname
5797       }{%
5798         \hyper@makecurrent{equation}%
5799         \hyper@anchorstart{\@currentHref}{\hyper@anchorend

```

```

5800   \fi
5801   \fi
5802 }
5803 \def\endeqnarray{%
5804   \H@endeqnarray
5805 }

```

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.

```

5806 \@namedef{eqnarray*}{%
5807   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
5808 }
5809 \@namedef{endeqnarray*}{%
5810   \nonumber\endeqnarray\@eqnstarfalse
5811 }

```

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

```

5812 \@ifundefined{subeqnarray}{%
5813   \let\H@subeqnarray\subeqnarray
5814   \let\H@endsubeqnarray\endsubeqnarray
5815   \def\subeqnarray{%
5816     \let\Hy@reserved@a\relax
5817     \H@subeqnarray
5818     \@ifundefined{theHequation}{%
5819       \make@stripped@name{\theequation}%
5820       \let\theHequation\newname
5821     }{}%
5822     \hyper@makecurrent{equation}%
5823     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5824   }%
5825   \def\endsubeqnarray{%
5826     \H@endsubeqnarray
5827   }%
5828   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5829 }

```

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

```

5830 \def\make@stripped@name#1{%
5831   \begingroup
5832     \escapechar\m@ne
5833     \global\let\newname\@empty
5834     \protected@edef\Hy@tempa{#1}%
5835     \edef\@tempb{%
5836       \noexpand\@tfor\noexpand\Hy@tempa:=%
5837       \expandafter\strip@prefix\meaning\Hy@tempa
5838     }%
5839     \@tempb\do{%
5840       \if\Hy@tempa\else
5841         \if\Hy@tempa\else
5842           \xdef\newname{\newname\Hy@tempa}%
5843         \fi
5844       \fi
5845     }%
5846   \endgroup
5847 }

```

Support for amsmath's subequations:

```

5848 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

5849 \expandafter\ifx\csname subequations\endcsname\relax
5850 \else
5851 \let\HyOrg@subequations\subequations
5852 \def\subequations{%
5853 \stepcounter{equation}%
5854 \protected@edef\theHparentequation{%
5855 \ifundefined{theHequation}\theequation\theHequation
5856 }%
5857 \addtocounter{equation}{-1}%
5858 \HyOrg@subequations
5859 \def\theHequation{\theHparentequation\alph{equation}}%
5860 \ignorespaces
5861 }%
5862 \fi

Support for package amsthm (Daniel Müllner):
5863 \ifpackageloaded{amsthm}{%
5864 \def\@thm#1#2#3{%
5865 \ifhmode
5866 \unskip\unskip\par
5867 \fi
5868 \normalfont
5869 \trivlist
5870 \let\thmheadnl\relax
5871 \let\thm@swap\@gobble
5872 \thm@notefont{\fontseries\mddefault\upshape}%
5873 \thm@headpunct{.}% add period after heading
5874 \thm@headsep 5\p@ plus\p@ minus\p@\relax
5875 \thm@space@setup
5876 #1% style overrides
5877 \@topsep \thm@preskip % used by thm head
5878 \@topsepadd \thm@postskip % used by \@endparenv
5879 \def\dth@counter{#2}%
5880 \ifx\@empty\dth@counter
5881 \def\@tempa{%
5882 \oparg{\@begintheorem{#3}{}}[]%
5883 }%
5884 \else
5885 \H@refstepcounter{#2}%
5886 \hyper@makecurrent{#2}%
5887 \def\@tempa{%
5888 \oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
5889 }%
5890 \fi
5891 \@tempa
5892 }%
5893 \dth@everypar={%
5894 \@minipagefalse
5895 \global\@newlistfalse
5896 \@noparitemfalse
5897 \if@inlabel
5898 \global\@inlabelfalse
5899 \begingroup
5900 \setbox\z@\lastbox
5901 \ifvoid\z@
5902 \kern-\itemindent
5903 \fi
5904 \endgroup

```

```

5905 \ifx\@empty\dth@counter
5906 \else
5907 \Hy@raisedlink{%
5908 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5909 }%
5910 \fi
5911 \unhbox\@labels
5912 \fi
5913 \if@nobreak
5914 \@nobreakfalse \clubpenalty\@M
5915 \else
5916 \clubpenalty\@clubpenalty \everypar{}%
5917 \fi
5918 }%
5919 }{}

```

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.

```

5920 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5921 \ifHy@hyperfootnotes
5922 \newcounter{Hfootnote}%
5923 \let\H@@footnotetext\@footnotetext
5924 \let\H@@footnotemark\@footnotemark
5925 \def\xfootnotenext[#1]{%
5926 \begingroup
5927 \csname c@\@mpfn\endcsname #1\relax
5928 \unrestored@protected@xdef\@thefnmark{\thempfn}%
5929 \endgroup
5930 \ifx\@footnotetext\@mpfootnotetext
5931 \expandafter\H@@mpfootnotetext
5932 \else
5933 \expandafter\H@@footnotetext
5934 \fi
5935 }%
5936 \def\xfootnotemark[#1]{%
5937 \begingroup
5938 \c@footnote #1\relax
5939 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5940 \endgroup
5941 \H@@footnotemark
5942 }%
5943 \let\H@@mpfootnotetext\@mpfootnotetext
5944 \long\def\@mpfootnotetext#1{%
5945 \H@@mpfootnotetext{%
5946 \ifHy@nesting
5947 \expandafter\hyper@@anchor\expandafter{%
5948 \Hy@footnote@currentHref
5949 }{#1}%
5950 \else
5951 \Hy@raisedlink{%
5952 \expandafter\hyper@@anchor\expandafter{%

```

```

5953     \Hy@footnote@currentHref
5954     }{\relax}%
5955     }#1%
5956   \fi
5957 }%
5958 }%
5959 \long\def\@footnotetext#1{%
5960   \H@@footnotetext{%
5961     \ifHy@nesting
5962       \expandafter\hyper@@@anchor\expandafter{%
5963         \Hy@footnote@currentHref
5964       }{#1}%
5965     \else
5966       \Hy@raisedlink{%
5967         \expandafter\hyper@@@anchor\expandafter{%
5968           \Hy@footnote@currentHref
5969         }{\relax}%
5970       }%
5971       \let\@currentHlabel\Hy@footnote@currentHlabel
5972       \let\@currentHref\Hy@footnote@currentHref
5973       \let\@currentlabelname\@empty
5974       #1%
5975     \fi
5976   }%
5977 }%

```

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.

```

5978 \def\@footnotemark{%
5979   \leavevmode
5980   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
5981   \stepcounter{Hfootnote}%
5982   \global\let\Hy@saved@currentHlabel\@currentHlabel
5983   \global\let\Hy@saved@currentHref\@currentHref
5984   \hyper@makecurrent{Hfootnote}%
5985   \global\let\Hy@footnote@currentHlabel\@currentHlabel
5986   \global\let\Hy@footnote@currentHref\@currentHref
5987   \global\let\@currentHlabel\Hy@saved@currentHlabel
5988   \global\let\@currentHref\Hy@saved@currentHref
5989   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5990   \@makefnmark
5991   \hyper@linkend
5992   \ifhmode\spacefactor\@x@sf\fi
5993   \relax
5994 }%

```

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

```

5995 \ifpackageloaded{longtable}{%
5996   \CheckCommand*\LT@p@ftntext}[1]{%
5997     \edef\@tempa{%
5998       \the\LT@p@ftn
5999       \noexpand\footnotetext[\the\c@footnote]%
6000     }%

```

```

6001 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6002 }%
6003 \long\def\LT@p@ftntext#1{%
6004 \edef\@tempa{%
6005 \the\LT@p@ftn
6006 \begingroup
6007 \noexpand\c@footnote=\the\c@footnote\relax
6008 \noexpand\protected@xdef
6009 \noexpand\@thefnmark{\noexpand\thempfn}%
6010 \noexpand\protected@xdef\noexpand\@thefnmark{%
6011 \noexpand\thempfn
6012 }%
6013 \expandafter\expandafter\expandafter\noexpand
6014 \expandafter\expandafter\expandafter\Hy@LT@footnotetext
6015 \expandafter\expandafter\expandafter{%
6016 \expandafter\Hy@footnote@currentHref\expandafter
6017 }\expandafter{\Hy@footnote@currentHlabel}%
6018 }%
6019 \global\LT@p@ftn\expandafter{%
6020 \@tempa{#1}%
6021 \endgroup
6022 }%
6023 }%
6024 \long\def\Hy@LT@footnotetext#1#2#3{%
6025 \H@@@footnotetext{%
6026 \ifHy@nesting
6027 \hyper@@anchor{#1}{#3}%
6028 \else
6029 \Hy@raisedlink{%
6030 \hyper@@anchor{#1}{\relax}%
6031 }%
6032 \def\@currentHlabel{#2}%
6033 \def\@currentHref{#1}%
6034 \let\@currentlabelname\@empty
6035 #3%
6036 \fi
6037 }%
6038 }%
6039 }{}%

```

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

```

6040 \@ifpackageloaded{fancyvrb}{%
6041 \def\V@@@footnotetext{%
6042 \insert\footins\bgroup
6043 \csname reset@font\endcsname
6044 \footnotesize
6045 \interlinepenalty\interfootnotelinepenalty
6046 \splittopskip\footnotesep
6047 \splitmaxdepth\dp\strutbox
6048 \floatingpenalty \@MM
6049 \hsize\columnwidth
6050 \@parboxrestore
6051 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6052 \@makefnmark{}%
6053 \rule{\z@}{\footnotesep}%
6054 \bgroup
6055 \aftergroup\V@@@footnotetext
6056 \Hy@raisedlink{%

```

```

6057 \expandafter\hyper@@anchor\expandafter{%
6058 \Hy@footnote@currentHref
6059 }{\relax}%
6060 }%
6061 \let\@currentHlabel\Hy@footnote@currentHlabel
6062 \let\@currentHref\Hy@footnote@currentHref
6063 \let\@currentlabelname\@empty
6064 \ignorespaces
6065 }%
6066 }{}%

```

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.

```

6067 \let\HyOrg@maketitle\maketitle
6068 \def\maketitle{%
6069 \let\Hy@saved@footnotemark\@footnotemark
6070 \let\Hy@saved@footnotetext\@footnotetext
6071 \let\@footnotemark\H@@footnotemark
6072 \let\@footnotetext\H@@footnotetext
6073 \@ifnextchar[\Hy@maketitle@optarg{% ]
6074 \HyOrg@maketitle
6075 \Hy@maketitle@end
6076 }%
6077 }%
6078 \def\Hy@maketitle@optarg[#1]{%
6079 \HyOrg@maketitle[{#1}]%
6080 \Hy@maketitle@end
6081 }%
6082 \def\Hy@maketitle@end{%
6083 \ifx\@footnotemark\H@@footnotemark
6084 \let\@footnotemark\Hy@saved@footnotemark
6085 \fi
6086 \ifx\@footnotetext\H@@footnotetext
6087 \let\@footnotetext\Hy@saved@footnotetext
6088 \fi
6089 }%

```

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

```

6090 \def\realfootnote{%
6091 \@ifnextchar[\@xfootnote{%
6092 \stepcounter{\@mpfn}%
6093 \protected@xdef\@thefnmark{\thempfn}%
6094 \H@@footnotemark\H@@footnotetext
6095 }%
6096 }%
6097 \fi
6098 \Hy@DisableOption{hyperfootnotes}
6099 </package>
6100 <*check>
6101 \checklatex
6102 \checkcommand\def\@xfootnotenext[#1]{%
6103 \begingroup
6104 \csname c@\@mpfn\endcsname #1\relax
6105 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6106 \endgroup
6107 \@footnotetext

```



```

6108 }
6109 \checkcommand\def\@xfootnotemark[#1]{%
6110   \begingroup
6111     \c@footnote #1\relax
6112     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6113   \endgroup
6114   \@footnotemark
6115 }
6116 \checkcommand\def\@footnotemark{%
6117   \leavevmode
6118   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6119   \@makefnmark
6120   \ifhmode\spacefactor\@x@sf\fi
6121   \relax
6122 }
6123 \end{check}
6124 \end{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.

```

6125 \def\caption{%
6126   \ifx\@captive\@undefined
6127     \@latex@error{\noexpand\caption outside float}\@ehd
6128     \expandafter\@gobble
6129   \else
6130     \H@refstepcounter\@captive
6131     \let\Hy@tempa\@caption
6132     \ifundefined{float@caption}{%
6133       {%
6134         \expandafter\ifx\csname @float@c@\@captive\endcsname
6135           \float@caption
6136         \let\Hy@tempa\Hy@float@caption
6137       \fi
6138       }%
6139     \expandafter\@firstofone
6140   \fi
6141   {\@dblarg{\Hy@tempa\@captive}}%
6142 }
6143 \long\def\@caption#1[#2]#3{%
6144   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6145     \csname iftrue\endcsname
6146     \global\let\@currentHref\hc@currentHref
6147   \else
6148     \hyper@makecurrent{\@captive}%
6149   \fi
6150   \ifundefined{NR@gettitle}{%
6151     \def\@currentlabelname{#2}%
6152   }{%
6153     \NR@gettitle{#2}%
6154   }%
6155   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6156     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6157   }%
6158   \begingroup

```

```

6159 \parboxrestore
6160 \if@minipage
6161 \setminipage
6162 \fi
6163 \normalsize
6164 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6165 \csname iftrue\endcsname
6166 \global\@capstartfalse
6167 \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6168 \else
6169 \makecaption{\csname fnum@#1\endcsname}{%
6170 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6171 \ifHy@nesting
6172 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6173 \else
6174 \Hy@raisedlink{%
6175 \expandafter\hyper@@anchor\expandafter{%
6176 \@currentHref
6177 }{\relax}%
6178 }%
6179 #3%
6180 \fi
6181 }%
6182 \fi
6183 \par
6184 \endgroup
6185 }

```

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.

```

6186 \let\Hy@float@caption\@caption
6187 \ifpackageloaded{float}{%
6188 \def\Hy@float@caption{%
6189 \ifx\Hy@float@currentHref\@undefined
6190 \hyper@makecurrent{\@cuptype}%
6191 \global\let\Hy@float@currentHref\@currentHref
6192 \else
6193 \let\@currentHref\Hy@float@currentHref
6194 \fi
6195 \float@caption
6196 }%
6197 \let\HyOrg@float@makebox\float@makebox
6198 \renewcommand{\float@makebox}[1]{%
6199 \HyOrg@float@makebox{%
6200 #1\relax
6201 \ifx\Hy@float@currentHref\@undefined
6202 \else
6203 \expandafter\hyper@@anchor\expandafter{%
6204 \Hy@float@currentHref
6205 }{\relax}%
6206 \global\let\Hy@float@currentHref\@undefined
6207 \fi
6208 }%
6209 }%
6210 }{}
6211 </package>

```

```

6212 <*check>
6213 \checklatex[1999/06/01 - 2000/06/01]
6214 \checkcommand\def\caption{%
6215   \ifx\@capttype\@undefined
6216     \@latex@error{\noexpand\caption outside float}\@ehd
6217     \expandafter\@gobble
6218   \else
6219     \refstepcounter\@capttype
6220     \expandafter\@firstofone
6221   \fi
6222   {\@dblarg{\@caption\@capttype}}}%
6223 }
6224 \checkcommand\long\def\@caption#1[#2]#3{%
6225   \par
6226   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6227     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6228   }%
6229   \begingroup
6230     \@parboxrestore
6231     \if@minipage
6232       \setminipage
6233     \fi
6234     \normalsize
6235     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6236   \endgroup
6237 }
6238 </check>
6239 <*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, lets make an attempt to get *natbib* right, because thats a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

6240 \def\hyper@natlinkstart#1{%
6241   \Hy@backout{#1}%
6242   \hyper@linkstart{cite}{cite.#1}%
6243   \def\hyper@nat@current{#1}%
6244 }
6245 \def\hyper@natlinkend{%
6246   \hyper@linkend
6247 }
6248 \def\hyper@natlinkbreak#1#2{%
6249   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6250 }
6251 \def\hyper@natanchorstart#1{%
6252   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6253 }
6254 \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.

```

6255 \ifundefined{NAT@parse}{%
6256   \providecommand*\@extra@binfo{}%
6257   \providecommand*\@extra@b@citeb{}%
6258   \def\bibcite#1#2{%
6259     \@newl@bel{b}{#1\@extra@binfo}{%
6260       \hyper@link[cite]{#1\@extra@b@citeb}{#2}%
6261     }%
6262   }%
6263   \gdef\@extra@binfo{}%

```

Package babel redefines \bibcite with macro \bbl@cite@choice. It needs to be over-written to avoid the warning “Label(s) may have changed.”.

```

6264 \let\Hy@bibcite\bibcite
6265 \begingroup
6266   \ifundefined{bbl@cite@choice}{%
6267     \g@addto@macro\bbl@cite@choice{%
6268       \let\bibcite\Hy@bibcite
6269     }%
6270   }%
6271 \endgroup

```

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

```

6272 \providecommand*\@BIBLABEL{\@biblabel}%
6273 \def\@bibitem[#1]#2{%
6274   \@skiphyperreftrue
6275   \H@item[%
6276     \ifx\Hy@raisedlink\@empty
6277       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6278       \@BIBLABEL{#1}%
6279       \hyper@anchorend
6280     \else
6281       \Hy@raisedlink{%
6282         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6283       }%
6284       \@BIBLABEL{#1}%
6285     \fi
6286     \hfill
6287   ]%
6288   \@skiphyperreffalse
6289   \if@filesw
6290     \begingroup
6291       \let\protect\noexpand
6292       \immediate\write\@auxout{%
6293         \string\bibcite{#2}{#1}%
6294       }%
6295     \endgroup
6296   \fi
6297   \ignorespaces
6298 }%

```

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

```

6299 \def\@bibitem#1{%
6300   \@skiphyperreftrue\H@item\@skiphyperreffalse
6301   \Hy@raisedlink{%

```

```

6302   \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6303   }%
6304   \if@filesw
6305     \begingroup
6306     \let\protect\noexpand
6307     \immediate\write\@auxout{%
6308       \string\bibcite{#1}{\the\value{\@listctr}}}%
6309     }%
6310   \endgroup
6311   \fi
6312   \ignorespaces
6313 }%
6314 }{}

6315 </package>
6316 <*check>
6317 \checklatex
6318 \checkcommand\def\@lbibitem[#1]#2{%
6319   \item[\@biblabel{#1}\hfill]%
6320   \if@filesw
6321     {%
6322       \let\protect\noexpand
6323       \immediate\write\@auxout{%
6324         \string\bibcite{#2}{#1}%
6325       }%
6326     }%
6327   \fi
6328   \ignorespaces
6329 }
6330 \checkcommand\def\@bibitem#1{%
6331   \item
6332   \if@filesw
6333     \immediate\write\@auxout{%
6334       \string\bibcite{#1}{\the\value{\@listctr}}}%
6335     }%
6336   \fi
6337   \ignorespaces
6338 }
6339 </check>
6340 <*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.

```

6341 \ifclassloaded{revtex}{%
6342   \Hy@Info{*** compatibility with revtex **** }%
6343   \def\revtex@checking#1#2{%
6344     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6345     \expandafter\def\csname b@#1\endcsname{#2}%
6346     \@SetMaxRnhefLabel{#1}%
6347     \expandafter\let\csname b@#1\endcsname\T@temp
6348   }%

```

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

```

6349 \ifundefined{@CITE}{\def\@CITE{\@cite}}{}%
6350 \providecommand*{\@extra@b@citeb}{}%
6351 \def\@CITEX[#1]#2{%

```

```

6352 \let\@citea\@empty
6353 \leavevmode
6354 \unskip
6355 $\sim$
6356 \scriptstyle
6357 \@CITE{
6358   \@for\@citeb:=#2\do{
6359     \citea
6360     \def\@citea{,\penalty\@m\ }
6361     \edef\@citeb{\expandafter\@firstofone\@citeb}%
6362     \if@filesw
6363       \immediate\write\@auxout{\string\citation{\@citeb}}%
6364     \fi
6365     \ifundefined{b@\@citeb\extra@b@citeb}{
6366       \mbox{\reset@font\bfseries ?}%
6367       \G@refundefinedtrue
6368       \latex@warning{
6369         Citation '\@citeb' on page \thepage \space undefined%
6370       }
6371     }{
6372       {\csname b@\@citeb\extra@b@citeb\endcsname}%
6373     }
6374   }
6375 }{#1}%
6376 }$%
6377 }%

```

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.

```

6378 \def\@citex[#1]#2{
6379   \let\@citea\@empty
6380   \@cite{
6381     \@for\@citeb:=#2\do{
6382       \citea
6383       \def\@citea{,\penalty\@m\ }
6384       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6385       \if@filesw
6386         \immediate\write\@auxout{\string\citation{\@citeb}}%
6387       \fi
6388       \ifundefined{b@\@citeb\extra@b@citeb}{
6389         \mbox{\reset@font\bfseries ?}%
6390         \G@refundefinedtrue
6391         \latex@warning{
6392           Citation '\@citeb' on page \thepage \space undefined%
6393         }
6394       }{
6395         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
6396       }
6397     }
6398   }{#1}%
6399 }%
6400 }{}

```

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.

```

6401 \ifpackageloaded{harvard}{%
6402   \AtBeginDocument{%
6403     \Hy@Info{*** compatibility with harvard **** }%
6404     \Hy@raiselinksfalse
6405     \def\harvardcite#1#2#3#4{%
6406       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{cite.#1}{#2}}%
6407       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{cite.#1}{#3}}%
6408       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{cite.#1}{#4}}%
6409       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6410     }%
6411     \def\HAR@citetoaux#1{%
6412       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6413       \ifHy@backref
6414         \ifx\@empty\@currentlabel
6415           \else
6416             \@bsphack
6417             \if@filesw
6418               \protected@write\@auxout{}{%
6419                 \string\@writefile{brf}{%
6420                   \string\backcite{#1}{%
6421                     {\thepage}{\@currentlabel}{\@currentHref}%
6422                   }%
6423                 }%
6424               }%
6425             \fi
6426             \@esphack
6427           \fi
6428         \fi
6429       }%
6430     \def\harvarditem{%
6431       \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6432     }%
6433     \def\@harvarditem[#1]#2#3#4#5\par{%
6434       \item[]%
6435       \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6436       \if@filesw
6437         \begingroup
6438           \def\protect##1{\string ##1\space}%
6439           \ifthenelse{\equal{#1}{\null}}{%
6440             {\def\next{{#4}{#2}{#3}}}%
6441             {\def\next{{#4}{#2}{#1}{#3}}}%
6442             \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6443           \endgroup
6444           \fi
6445           \protect\hspace*{-\labelwidth}%
6446           \protect\hspace*{-\labelsep}%
6447           \ignorespaces
6448           #5%
6449           \ifHy@backref
6450             \newblock
6451             \backref{\csname br@#4\endcsname}%
6452           \fi
6453         \par

```

```
6454 }%
```

`\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`:

```
6455 \long\def\HAR@checkcitations#1#2#3#4{%
6456   \def\HAR@tempa{\hyper@@link[cite]{#1}{#2}}%
6457   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6458   \def\HAR@tempa{\hyper@@link[cite]{#1}{#3}}%
6459   \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6460   \def\HAR@tempa{\hyper@@link[cite]{#1}{#4}}%
6461   \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6462   \else
6463     \@tempswatrue
6464   \fi
6465   \else
6466     \@tempswatrue
6467   \fi
6468   \else
6469     \@tempswatrue
6470   \fi
6471 }%
6472 }%

6473 }{}
```

37.2 Package chicago

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

```
6474 \@ifpackageloaded{chicago}{%
```

`\citeN`

```
6475 \def\citeN{%
6476   \def\@citesep{-1000}%
6477   \def\@cite##1##2{##1}%
6478   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6479   \@citedata@opt
6480 }%
```

`\shortciteN`

```
6481 \def\shortciteN{%
6482   \def\@citesep{-1000}%
6483   \def\@cite##1##2{##1}%
6484   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6485   \@citedata@opt
6486 }%
```

`\@citedata@opt`

```
6487 \def\@citedata@opt{%
6488   \let\@cite@opt\@empty
6489   \@ifnextchar [{%
6490     \@tempswatrue
6491     \@citedatax@opt
6492   }{%
6493     \@tempswafalse
6494     \@citedatax[]%
```



```

6495 }%
6496 }%

```

\@citedatax@opt

```

6497 \def\@citedatax@opt[#1]{%
6498   \def\@cite@opt{, #1}%
6499   \@citedatax[{#1}]%
6500 }%

6501 }{}

```

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.

```

6502 \def\Hy@EveryPageAnchor{%
6503   \Hy@DistillerDestFix
6504   \ifHy@pageanchor
6505     \ifHy@hypertextnames
6506       \ifHy@plainpages
6507         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6508       \else
6509         \begingroup
6510         \let\@number\@firstofone
6511         \Hy@unicodedefalse
6512         \pdfstringdef\@the@H@page{\thepage}%
6513       \endgroup
6514       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6515     \fi
6516   \else
6517     \Hy@GlobalStepCount\Hy@pagecounter
6518     \def\Hy@TempPageAnchor{%
6519       \hyper@@anchor{page.\the\Hy@pagecounter}%
6520     }%
6521   \fi
6522   \vbox to 0pt{%
6523     \kern\voffset
6524     \kern\topmargin
6525     \kern-1bp\relax
6526     \hbox to 0pt{%
6527       \kern\hoffset
6528       \kern\ifodd\value{page}%
6529         \oddsidemargin
6530       \else
6531         \evensidemargin
6532       \fi
6533       \kern-1bp\relax
6534       \Hy@TempPageAnchor
6535     \hss
6536   }%
6537   \vss
6538 }%

```

```

6539 \fi
6540 }
6541 \g@addto@macro\Hy@EveryPageBoxHook{%
6542 \Hy@EveryPageAnchor
6543 }

```

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.

```

6544 \def\addcontentsline#1#2#3{% toc extension, type, tag
6545 \begingroup
6546 \let\label\@gobble
6547 \ifx\@currentHref\@empty
6548 \Hy@Warning{%
6549 No destination for bookmark of \string\addcontentsline,%
6550 \MessageBreak destination is added%
6551 }%
6552 \phantomsection
6553 \fi
6554 \expandafter\ifx\csname toplevel@#2\endcsname\relax
6555 \begingroup
6556 \def\Hy@tempa{#1}%
6557 \ifx\Hy@tempa\Hy@bookmarkstype
6558 \Hy@WarningNoLine{%
6559 bookmark level for unknown #2 defaults to 0%
6560 }%
6561 \else
6562 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6563 \fi
6564 \endgroup
6565 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6566 \fi
6567 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
6568 \Hy@writebookmark{\csname the#2\endcsname}%
6569 {#3}%
6570 {\@currentHref}%
6571 {\Hy@toplevel}%
6572 {#1}%
6573 \ifHy@verbose
6574 \def\Hy@tempa{#3}%
6575 \@onelevel@sanitize\Hy@tempa
6576 \typeout{pdfTeX: bookmark at \the\inputlineno: %
6577 {\csname the#2\endcsname}%
6578 {\Hy@tempa}%
6579 {\@currentHref}%
6580 {\Hy@toplevel}%
6581 {#1}%
6582 }%
6583 \fi
6584 \addtocontents{#1}{%
6585 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6586 }%
6587 \endgroup
6588 }

```

```

6589 \def\contentsline#1#2#3#4{%
6590   \ifx\#4\%
6591     \csname l@#1\endcsname{#2}{#3}%
6592   \else
6593     \ifcase\Hy@linktoc % none
6594       \csname l@#1\endcsname{#2}{#3}%
6595     \or % section
6596       \csname l@#1\endcsname{%
6597         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6598       }{#3}%
6599     \or % page
6600       \csname l@#1\endcsname{#{#2}}{#3}%
6601       \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6602     }%
6603   \else % all
6604     \csname l@#1\endcsname{%
6605       \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6606     }{#3}%
6607     \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6608   }%
6609   \fi
6610 \fi
6611 }

6612 \</package>
6613 \<*check>
6614 \checklatex
6615 \checkcommand\def\addcontentsline#1#2#3{%
6616   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6617 }
6618 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6619 \</check>
6620 \<*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.

```

6621 \let\H@definecounter\@definecounter
6622 \def\@definecounter#1{%
6623   \H@definecounter{#1}%
6624   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6625 }

```

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.

```

6626 \let\H@newctr\@newctr
6627 \def\@newctr#1[#2]{%
6628   \H@newctr#1[#2]%
6629   \expandafter\def\csname theH#1\endcsname{%
6630     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
6631   }%
6632 }

```

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.

```

6633 \ifpackageloaded{amsmath}{%
6634   \def\Hy@make@anchor{%
6635     \Hy@GlobalStepCount\Hy@linkcounter
6636     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6637     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6638   }%
6639   \def\Hy@make@df@tag@@#1{%
6640     \gdef\df@tag{%
6641       \maketag@@@{\Hy@make@anchor#1}%
6642       \def\@currentlabel{#1}%
6643     }%
6644   }%
6645   \def\Hy@make@df@tag@@@#1{%
6646     \gdef\df@tag{%
6647       \tagform@{\Hy@make@anchor#1}%
6648       \toks@{\xp{p@equation{#1}}}%
6649       \edef\@currentlabel{\the\toks@}%
6650     }%
6651   }%
6652   \let\HyOrg@make@df@tag@@\make@df@tag@@
6653   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
6654   \let\make@df@tag@@\Hy@make@df@tag@@
6655   \let\make@df@tag@@@\Hy@make@df@tag@@@
6656 }{}

```

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

```

6657 \ifpackagewith{hyperref}{pdf $\text{\LaTeX}$ }{%
6658   \let\H@seteqlabel\@seteqlabel
6659   \def\@seteqlabel#1{%
6660     \H@seteqlabel{#1}%
6661     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6662     \Hy@raisedlink{%
6663       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6664     }%
6665   }%
6666 }{}

```

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.

```

6667 \let\HyOrg@addtoreset\@addtoreset
6668 \def\@addtoreset#1#2{%
6669   \HyOrg@addtoreset{#1}{#2}%
6670   \expandafter\xdef\csname theH#1\endcsname{%
6671     \expandafter\noexpand
6672       \csname the\@ifundefined{theH#2}{H#2}\endcsname
6673     .\noexpand\the\noexpand\value{#1}%
6674   }%
6675 }
```

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

```

6676 \</package>
6677 \<*check>
6678 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6679 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6680   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6681     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6682       \@addtoreset{#2}{#3}%
6683       \@xp\xdef\csname the#2\endcsname{%
6684         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6685       }%
6686     }%
6687   }%
6688 }%
6689 \</check>
6690 \<*package>
6691 \@ifpackageloaded{amsmath}{%
6692   \@ifpackagelater{amsmath}{1999/12/14}{%
6693     \renewcommand*{\numberwithin}[3][\arabic]{%
6694       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6695         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6696           \HyOrg@addtoreset{#2}{#3}%
6697           \@xp\xdef\csname the#2\endcsname{%
6698             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6699           }%
6700           \@xp\xdef\csname theH#2\endcsname{%
6701             \@xp\@nx
6702             \csname the\@ifundefined{theH#3}{H#3}\endcsname
6703             .\@nx#1{#2}%
6704           }%
6705         }%
6706       }%
6707     }%
6708   }{%
6709     \Hy@WarningNoLine{%
6710       \string\numberwithin\space of package 'amsmath' %
6711       only fixed\MessageBreak
6712       for version 2000/06/06 v2.12 or newer%
6713     }%
6714   }%
6715 }
```

42 Included figures

Simply intercept the low level graphics package macro.

```
6716 \ifHy@figures
6717 \let\Hy@Gin@setfile\Gin@setfile
6718 \def\Gin@setfile#1#2#3{%
6719 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6720 }%
6721 \fi
6722 \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 boldening entries. That would make Makeindex fail (cannot have two | specifiers). The solution is for the author to use generic coding, and put in the requisite \hyperpage in his/her own macros along with the boldness.

This section is poor stuff; it's open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```
6723 \ifHy@hyperindex
6724 \def\HyInd@ParenLeft{ }%
6725 \def\HyInd@ParenRight{ }%
6726 \def\hyperindexformat#1#2{%
6727 \let\HyOrg@hyperpage\hyperpage
6728 \let\hyperpage\@firstofone
6729 #1{\HyOrg@hyperpage{#2}}%
6730 \let\hyperpage\HyOrg@hyperpage
6731 }%
6732 \Hy@nextfalse
6733 \@ifpackageloaded{multind}{\Hy@nexttrue}{ }%
6734 \@ifpackageloaded{index}{\Hy@nexttrue}{ }%
6735 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{ }%
6736 \begingroup
6737 \lccode'\|=\expandafter'\HyInd@EncapChar\relax
6738 \lccode'\|/'\|'\relax
6739 \lowercase{\endgroup
6740 \ifHy@next
6741 \let\HyInd@org@wrindex\@wrindex
6742 \def\@wrindex#1#2{\HyInd@\@wrindex{#1}{#2}||\}%
6743 \def\HyInd@\@wrindex#1#2|#3|#4\|{\%
6744 \ifx\|#3\|
6745 \HyInd@org@wrindex{#1}{#2|hyperpage}%
6746 \else
6747 \HyInd@@@@wrindex{#1}{#2}{#3}\|
6748 \fi
6749 }%
6750 \def\HyInd@@@@wrindex#1#2#3#4\|{\%
6751 \def\Hy@temp@A{#3}%
6752 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6753 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6754 \relax
6755 \HyInd@org@wrindex{#1}{%

```

```

6756         #2|hyperindexformat{/#3#4}%
6757     }%
6758 \else
6759     \ifx\\#4\\%
6760         \ifx\Hy@temp@A\HyInd@ParenRight
6761             \HyInd@org@wrindex{#1}{#2|#3}%
6762         \else
6763             \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
6764         \fi
6765     \else
6766         \HyInd@org@wrindex{#1}{%
6767             #2|#3hyperindexformat{/#4}%
6768         }%
6769     \fi
6770 \fi
6771 }%
6772 \else
6773 \def\@wrindex#1{\@@wrindex#1||\}%
6774 \def\@@wrindex#1|#2|#3\{\%
6775 \if@filesw
6776     \ifx\\#2\\%
6777         \protected@write\@indexfile{}\{%
6778             \string\indexentry{#1|hyperpage}\{thepage}%
6779         }%
6780     \else
6781         \HyInd@@@wrindex{#1}#2\%
6782     \fi
6783 \fi
6784 \endgroup
6785 \@esphack
6786 }%
6787 \def\HyInd@@@wrindex#1#2#3\{\%
6788 \def\Hy@temp@A{#2}%
6789 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6790     \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6791     \relax
6792 \protected@write\@indexfile{}\{%
6793     \string\indexentry{%
6794         #1|hyperindexformat{/#2#3}%
6795     }\{thepage}%
6796 }%
6797 \else
6798     \ifx\\#3\\%
6799         \ifx\Hy@temp@A\HyInd@ParenRight
6800             \protected@write\@indexfile{}\{%
6801                 \string\indexentry{#1|#2}\{thepage}%
6802             }%
6803         \else
6804             \protected@write\@indexfile{}\{%
6805                 \string\indexentry{#1|#2hyperpage}\{thepage}%
6806             }%
6807         \fi
6808     \else
6809         \protected@write\@indexfile{}\{%
6810             \string\indexentry{%
6811                 #1|#2hyperindexformat{/#3}%
6812             }\{thepage}%

```

```

6813     }%
6814     \fi
6815     \fi
6816   }%
6817   \fi
6818 }%
6819 \fi
6820 \Hy@DisableOption{hyperindex}
6821 \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.

```

6822 \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.

```

6823 \def\hyperpage#1{%
6824   \HyInd@hyperpage#1\nohyperpage{}\@nil
6825 }
6826 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
6827   \HyInd@@hyperpage{#1}%
6828   #2%
6829   \def\Hy@temp{#3}%
6830   \ifx\Hy@temp\@empty
6831     \else
6832       \Hy@ReturnAfterFi{%
6833         \HyInd@hyperpage#3\@nil
6834       }%
6835     \fi
6836 }
6837 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
6838 \def\@hyperpage#1--#2--#3\{\{%
6839   \ifx\#2\}%
6840     \@commahyperpage{#1}%
6841   \else
6842     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6843   \fi
6844 }
6845 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6846 \def\@commahyperpage#1, #2,#3\{\{%
6847   \ifx\#2\}%
6848     \HyInd@pagelink{#1}%
6849   \else
6850     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6851   \fi
6852 }

```

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

```

6853 \def\HyInd@pagelink#1{%
6854   \begingroup
6855   \toks@={}%
6856   \HyInd@removespaces#1 \@nil
6857   \endgroup
6858 }
6859 \def\HyInd@removespaces#1 #2\@nil{%
6860   \toks@=\expandafter{\the\toks@#1}%

```



```

6861 \ifx\#2\%
6862 \edef\x{\the\toks@}%
6863 \ifx\x\@empty
6864 \else
6865 \hyperlink{page.\the\toks@}{\the\toks@}%
6866 \fi
6867 \else
6868 \Hy@ReturnAfterFi{%
6869 \HyInd@removespaces#2\@nil
6870 }%
6871 \fi
6872 }

```

44 Compatibility with foiltex

```

6873 \@ifclassloaded{foils}{%
6874 \providecommand*\ext@table{lot}%
6875 \providecommand*\ext@figure{lof}%
6876 }{}

```

45 Compatibility with seminar slide package

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

```

6877 \@ifclassloaded{seminar}{%
6878 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
6879 }{%
6880 \Hy@seminarslidesfalse
6881 }
6882 \@ifpackageloaded{slidesec}{%
6883 \newcommand\theHslidesection {\arabic{slidesection}}}%
6884 \newcommand\theHslidesubsection{%
6885 \theHslidesection.\arabic{slidesubsection}}%
6886 }%
6887 \def\slide@heading[#1]#2{%
6888 \H@refstepcounter{slidesection}%
6889 \@addtoreset{slidesubsection}{slidesection}%
6890 \addtocontents{los}{%
6891 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}}%
6892 {\@SCTR}{slideheading.\theslidesection}%
6893 }%
6894 \def\Hy@tempa{#2}%
6895 \ifx\Hy@tempa\@empty
6896 \else
6897 {%
6898 \edef\@currentlabel{%
6899 \csname p@slidesection\endcsname\theslidesection
6900 }%
6901 \makeslideheading{#2}%
6902 }%
6903 \fi
6904 \gdef\theslideheading{#1}%
6905 \gdef\theslidesubheading{}%
6906 \ifHy@bookmarksnumbered
6907 \def\Hy@slidetitle{\theslidesection\space #1}%
6908 \else

```

```

6909 \def\Hy@slidetitle{#1}%
6910 \fi
6911 \ifHy@hypertextnames
6912 \ifHy@naturalnames
6913 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6914 \Hy@writebookmark
6915 {\theslidesection}%
6916 {\Hy@slidetitle}%
6917 {slideheading.\theslidesection}%
6918 {1}%
6919 {toc}%
6920 \else
6921 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6922 \Hy@writebookmark
6923 {\theslidesection}%
6924 {\Hy@slidetitle}%
6925 {slideheading.\theHslidesection}%
6926 {1}%
6927 {toc}%
6928 \fi
6929 \else
6930 \Hy@GlobalStepCount\Hy@linkcounter
6931 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6932 \Hy@writebookmark
6933 {\theslidesection}%
6934 {\Hy@slidetitle}%
6935 {slideheading.\the\Hy@linkcounter}%
6936 {1}%
6937 {toc}%
6938 \fi
6939 }%
6940 \def\slide@subheading[#1]#2{%
6941 \H@refstepcounter{slidesubsection}%
6942 \addtocontents{los}{%
6943 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6944 {\@SCTR}{slideheading.\theslidesubsection}%
6945 }%
6946 \def\Hy@tempa{#2}%
6947 \ifx\Hy@tempa\@empty
6948 \else
6949 {%
6950 \edef\@currentlabel{%
6951 \csname p@slidesubsection\endcsname\theslidesubsection
6952 }%
6953 \makeslidesubheading{#2}%
6954 }%
6955 \fi
6956 \gdef\theslidesubheading{#1}%
6957 \ifHy@bookmarksnumbered
6958 \def\Hy@slidetitle{\theslidesubsection\space #1}%
6959 \else
6960 \def\Hy@slidetitle{#1}%
6961 \fi
6962 \ifHy@hypertextnames
6963 \ifHy@naturalnames
6964 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
6965 \Hy@writebookmark

```

```

6966     {\theslidesubsection}%
6967     {\Hy@slidetitle}%
6968     {slideheading.\theslidesubsection}%
6969     {2}%
6970     {toc}%
6971   \else
6972     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
6973     \Hy@writebookmark
6974       {\theslidesubsection}%
6975       {\Hy@slidetitle}%
6976       {slideheading.\theHslidesubsection}%
6977       {2}%
6978       {toc}%
6979   \fi
6980 \else
6981   \Hy@GlobalStepCount\Hy@linkcounter
6982   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6983   \Hy@writebookmark
6984     {\theslidesubsection}%
6985     {\Hy@slidetitle}%
6986     {slideheading.\the\Hy@linkcounter}%
6987     {1}%
6988     {toc}%
6989 \fi
6990 }%
6991 \providecommand*{\listslidenam}{List of Slides}%
6992 \def\listofslides{%
6993   \section*{%
6994     \listslidenam
6995     \@mkboth{%
6996       \expandafter\MakeUppercase\listslidenam
6997     }{%
6998       \expandafter\MakeUppercase\listslidenam
6999     }%
7000   }%
7001   \def\l@slide##1##2##3##4{%
7002     \slide@undottedcline{%
7003       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
7004     }{%
7005     }%
7006     \let\l@subslide\l@slide
7007     \@startlos
7008   }%
7009   \def\slide@contents{%
7010     \def\l@slide##1##2##3##4{%
7011       \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7012     }%
7013     \let\l@subslide\@gobblefour
7014     \@startlos
7015   }%
7016   \def\Slide@contents{%
7017     \def\l@slide##1##2##3##4{%
7018       \ifcase\lslide@flag
7019         \message{##1 ** \the\c@slidesection}%
7020         \ifnum##1>\c@slidesection
7021           \def\lslide@flag{1}%
7022         {%

```

```

7023     \large
7024     \slide@cline{%
7025         \slidenumberline{$\rightarrow\bullet$}%
7026         {\hyperlink{##4}{##2}}%
7027     }{##3}%
7028 }%
7029 \else
7030 {%
7031     \large
7032     \slide@cline{%
7033         \slidenumberline{$\surd\;\bullet$}%
7034         {\hyperlink{##4}{##2}}%
7035     }{##3}%
7036 }%
7037 \fi
7038 \or
7039 \def\lslide@flag{2}%
7040 {%
7041     \large
7042     \slide@cline{%
7043         \slidenumberline{$\bullet$}%
7044         {\hyperlink{##4}{##2}}%
7045     }{##3}%
7046 }%
7047 \or
7048 {%
7049     \large
7050     \slide@cline{%
7051         \slidenumberline{$\bullet$}%
7052         {\hyperlink{##4}{##2}}%
7053     }{##3}%
7054 }%
7055 \fi
7056 }%
7057 \def\l@subslide##1##2##3##4{%
7058     \ifnum\lslide@flag=1 %
7059         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7060     \fi
7061 }%
7062 \def\lslide@flag{0}%
7063 \@startlos
7064 }%
7065 }{}

```

This breaks TeX4ht, so leave it to last. Emend \@setref to put out a hypertext link as well as its normal text (which is used as an anchor). (\endinput have to be on the same line like \fi, or you have to use \expandafter before.)

```

7066 \ifHy@texht
7067   \expandafter\endinput
7068 \fi
7069 \let\real@setref\@setref
7070 \def\@setref#1#2#3{% csname, extract group, refname
7071   \ifx#1\relax
7072     \protect\G@refundefinedtrue
7073     \nfss@text{\reset@font\bfseries ??}%
7074     \@latex@warning{%
7075       Reference ‘#3’ on page \thepage \space undefined%
7076     }%

```

```

7077 \else
7078   \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7079 \fi
7080 }

```

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

```

7081 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7082   \begingroup
7083   \toks0={\hyper@@link{#5}{#4}}%
7084   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7085   \edef\x{\endgroup
7086     \the\toks0 {\the\toks1 }%
7087   }%
7088   \x
7089 }
7090 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7091   \ifx#1\relax
7092     \protect\G@refundefinedtrue
7093     \nfss@text{\reset@font\bfseries ??}%
7094     \@latex@warning{%
7095       Reference ‘#3’ on page \thepage \space undefined%
7096     }%
7097   \else
7098     \protect\hyper@@link
7099     {\expandafter\@fifthoffive#1}%
7100     {page.\expandafter\@secondoffive#1}%
7101     {\expandafter\@secondoffive#1}%
7102   \fi
7103 }
7104 \</package>
7105 \<*check>
7106 \checklatex
7107 \checkcommand\def\@setref#1#2#3{%
7108   \ifx#1\relax
7109     \protect\G@refundefinedtrue
7110     \nfss@text{\reset@font\bfseries ??}%
7111     \@latex@warning{%
7112       Reference ‘#3’ on page \thepage\space undefined%
7113     }%
7114   \else
7115     \expandafter#2#1\null
7116   \fi
7117 }
7118 \</check>
7119 \<*package>

```

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

```

7120 \def\HyRef@StarSetRef#1{%
7121   \begingroup
7122   \Hy@safe@activetrue
7123   \edef\x{#1}%
7124   \@onelevel@sanitize\x
7125   \edef\x{\endgroup
7126     \noexpand\HyRef@@StarSetRef
7127     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7128   }%

```

```

7129 \x
7130 }
7131 \def\HyRef@@StarSetRef#1#2#3{%
7132 \ifx#1\@undefined
7133 \let#1\relax
7134 \fi
7135 \real@setref#1#3{#2}%
7136 }
7137 \def\@refstar#1{%
7138 \HyRef@StarSetRef{#1}\@firstoffive
7139 }
7140 \def\@pagerefstar#1{%
7141 \HyRef@StarSetRef{#1}\@secondoffive
7142 }
7143 \AtBeginDocument{%
7144 \ifpackageloaded{varioref}{%
7145 \def\@Refstar#1{%
7146 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7147 }%
7148 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7149 \MakeUppercase#1%
7150 }%
7151 \DeclareRobustCommand*\Ref}{%
7152 \ifstar\@Refstar\HyRef@Ref
7153 }%
7154 \def\HyRef@Ref#1{%
7155 \hyperref[{#1}]{\Ref*{#1}}%
7156 }%
7157 \def\Vr@f#1{%
7158 \leavevmode\unskip\vref@space
7159 \hyperref[{#1}]{%
7160 \Ref*{#1}%
7161 \let\vref@space\nobreakspace
7162 \@vpageref\unskip}{#1}%
7163 }%
7164 }%
7165 \def\vr@f#1{%
7166 \leavevmode\unskip\vref@space
7167 \begingroup
7168 \let\T@pageref\@pagerefstar
7169 \hyperref[{#1}]{%
7170 \ref*{#1}%
7171 \vpageref\unskip}{#1}%
7172 }%
7173 \endgroup
7174 }%
7175 }{}%
7176 }
7177 \DeclareRobustCommand*\autopageref}{%
7178 \ifstar{%
7179 \HyRef@autopagerefname\pageref*%
7180 }\HyRef@autopageref
7181 }
7182 \def\HyRef@autopageref#1{%
7183 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
7184 }
7185 \def\HyRef@autopagerefname{%

```

```

7186 \ifundefined{pageautorefname}{%
7187 \ifundefined{pagename}{%
7188 \Hy@Warning{No autoref name for 'page'}%
7189 }{%
7190 \pagename\nobreakspace
7191 }%
7192 }{%
7193 \pageautorefname\nobreakspace
7194 }%
7195 }
7196 \DeclareRobustCommand*{\autoref}{%
7197 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7198 }
7199 \def\HyRef@autoref#1#2{%
7200 \begingroup
7201 \Hy@safe@activetrue
7202 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7203 \endgroup
7204 }
7205 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7206 \HyRef@ShowKeysRef{#2}%
7207 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7208 \edef\HyRef@thisref{%
7209 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7210 }%
7211 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7212 \Hy@safe@activetrue
7213 #3{%
7214 \expandafter\@fifthoffive#1\@empty\@empty\@empty
7215 }{%
7216 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7217 }{%
7218 \HyRef@currentHtag
7219 \expandafter\@firstoffive#1\@empty\@empty\@empty
7220 \null
7221 }%
7222 \else
7223 \protect\G@refundefinedtrue
7224 \nfss@text{\reset@font\bfseries ??}%
7225 \@latex@warning{%
7226 Reference '#2' on page \thepage\space undefined%
7227 }%
7228 \fi
7229 }
7230 \def\HyRef@testreftype#1.#2\.{%
7231 \ifundefined{#1autorefname}{%
7232 \ifundefined{#1name}{%
7233 \HyRef@StripStar#1\*\@nil{#1}%
7234 \ifundefined{\HyRef@name autorefname}{%
7235 \ifundefined{\HyRef@name name}{%
7236 \def\HyRef@currentHtag{%
7237 \Hy@Warning{No autoref name for '#1'}%
7238 }{%
7239 \edef\HyRef@currentHtag{%
7240 \expandafter\noexpand\csname\HyRef@name name\endcsname
7241 \noexpand~%
7242 }%

```

```

7243     }%
7244   }{%
7245     \edef\HyRef@currentHtag{%
7246       \expandafter\noexpand
7247       \csname\HyRef@name autorefname\endcsname
7248       \noexpand~%
7249     }%
7250   }%
7251 }{%
7252   \edef\HyRef@currentHtag{%
7253     \expandafter\noexpand\csname#1name\endcsname
7254     \noexpand~%
7255   }%
7256 }%
7257 }{%
7258   \edef\HyRef@currentHtag{%
7259     \expandafter\noexpand\csname#1autorefname\endcsname
7260     \noexpand~%
7261   }%
7262 }%
7263 }
7264 \def\HyRef@StripStar#1*\#2\@nil#3{%
7265   \def\HyRef@name{#2}%
7266   \ifx\HyRef@name\HyRef@CaseStar
7267     \def\HyRef@name{#1}%
7268   \else
7269     \def\HyRef@name{#3}%
7270   \fi
7271 }
7272 \def\HyRef@CaseStar{*\\}
7273 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7274 \let\HyRef@ShowKeysRef\@gobble
7275 \def\HyRef@ShowKeysInit{%
7276   \begingroup\expandafter\expandafter\expandafter\endgroup
7277   \expandafter\ifx\csname SK@@label\endcsname\relax
7278   \else
7279     \ifx\SK@ref\@empty
7280     \else
7281       \def\HyRef@ShowKeysRef{%
7282         \SK@\SK@@ref
7283       }%
7284     \fi
7285   \fi
7286 }
7287 \@ifpackageloaded{showkeys}{%
7288   \HyRef@ShowKeysInit
7289 }{%
7290   \AtBeginDocument{%
7291     \@ifpackageloaded{showkeys}{%
7292       \HyRef@ShowKeysInit
7293     }{}%
7294   }%
7295 }

```


Defaults for the names that `\autoref` uses.

```

7296 \providecommand* \AMSautorefname { \equationautorefname }
7297 \providecommand* \Hfootnoteautorefname { \footnoteautorefname }
7298 \providecommand* \Itemautorefname { \itemautorefname }
7299 \providecommand* \itemautorefname { item }
7300 \providecommand* \equationautorefname { Equation }
7301 \providecommand* \footnoteautorefname { footnote }
7302 \providecommand* \itemautorefname { item }
7303 \providecommand* \figureautorefname { Figure }
7304 \providecommand* \tableautorefname { Table }
7305 \providecommand* \partautorefname { Part }
7306 \providecommand* \appendixautorefname { Appendix }
7307 \providecommand* \chapterautorefname { chapter }
7308 \providecommand* \sectionautorefname { section }
7309 \providecommand* \subsectionautorefname { subsection }
7310 \providecommand* \subsubsectionautorefname { subsubsection }
7311 \providecommand* \paragraphautorefname { paragraph }
7312 \providecommand* \subparagraphautorefname { subparagraph }
7313 \providecommand* \FancyVerbLineautorefname { line }
7314 \providecommand* \theoremautorefname { Theorem }
7315 \providecommand* \pageautorefname { page }
7316 \endpackage

```

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`.

```

7317 < *pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo >
7318 \RequirePackage { pdfTeXcmds } [ 2009 / 04 / 10 ]
7319 \begingroup \expandafter \expandafter \expandafter \endgroup
7320 \expandafter \ifx \curname pdf@escapestring \endcurname \relax
7321 \begingroup
7322 \catcode ` \ = 0 %
7323 \makeother \ %
7324 | @firstofone { | \endgroup
7325 | def | Hy@pstringdef #1 #2 { %
7326 | \begingroup
7327 | \edef ~ { | string ~ } %
7328 | \xdef | Hy@gtemp { #2 } %
7329 | \endgroup
7330 | let #1 | Hy@gtemp
7331 | @onelevel @sanitize #1 %
7332 | \edef #1 { | \expandafter | Hy@ExchangeBackslash #1 \ | @nil } %
7333 | \edef #1 { | \expandafter | Hy@ExchangeLeftParenthesis #1 ( | @nil } %
7334 | \edef #1 { | \expandafter | Hy@ExchangeRightParenthesis #1 ) | @nil } %
7335 } %
7336 | def | Hy@ExchangeBackslash #1 \ #2 | @nil { %
7337 #1 %

```

```

7338 |ifx|\#2|\%%
7339 |else
7340   \\\%
7341   |Hy@ReturnAfterFi{%
7342   |Hy@ExchangeBackslash#2|@nil
7343   }%
7344 |fi
7345 }%
7346 }%
7347 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7348   #1%
7349   \ifx\#2\\%
7350   \else
7351     \@backslashchar(%
7352     \Hy@ReturnAfterFi{%
7353     \Hy@ExchangeLeftParenthesis#2\@nil
7354     }%
7355     \fi
7356   }%
7357 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7358   #1%
7359   \ifx\#2\\%
7360   \else
7361     \@backslashchar)%
7362     \Hy@ReturnAfterFi{%
7363     \Hy@ExchangeRightParenthesis#2\@nil
7364     }%
7365     \fi
7366   }%
7367 \else
7368 \def\Hy@pstringdef#1#2{%
7369   \begingroup
7370   \edef~{\string~}%
7371   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7372   \endgroup
7373   \let#1\Hy@gtemp
7374 }%
7375 \fi
7376 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7377 <*pdfTeX>
7378 \providecommand*{\XR@ext}{pdf}
7379 \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, 2005-08-08: `\pdfminorversion`

```

7380 \let\Hy@pdfminorversion\relax
7381 \begingroup\expandafter\expandafter\expandafter\endgroup
7382 \expandafter\ifx\cname pdfminorversion\endcname\relax
7383 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

7384 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7385 \else
7386 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7387 \fi
7388 \else
7389 \def\Hy@pdfminorversion{\pdfminorversion}%
7390 \fi
7391 \@ifundefined{Hy@pdfminorversion}{%
7392 \PackageInfo{hyperref}{%
7393 PDF version is not set, because pdfTeX is too old (<1.10a)%
7394 }%
7395 }{%
7396 \ifHy@ocgcolorlinks
7397 \ifnum\Hy@pdfminorversion<5 %
7398 \setkeys{Hyp}{pdfversion=1.5}%
7399 \fi
7400 \fi
7401 \ifHy@setpdfversion
7402 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7403 \else
7404 \Hy@pdfminorversion=\Hy@pdfversion\relax
7405 \fi
7406 \PackageInfo{hyperref}{%
7407 \expandafter\string\Hy@pdfminorversion
7408 :=\number\Hy@pdfversion\space
7409 }%
7410 \fi
7411 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7412 }
7413 \Hy@DisableOption{pdfversion}%

7414 \ifHy@ocgcolorlinks
7415 \immediate\pdfobj{%
7416 <<%
7417 /Type/OCG%
7418 /Name(View)%
7419 /Usage<<%
7420 /Print<<%
7421 /PrintState/OFF%
7422 >>%
7423 /View<<%
7424 /ViewState/ON%
7425 >>%
7426 >>%
7427 >>%
7428 }%
7429 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7430 \immediate\pdfobj{%
7431 <<%
7432 /Type/OCG%
7433 /Name(Print)%
7434 /Usage<<%
7435 /Print<<%
7436 /PrintState/ON%
7437 >>%
7438 /View<<%
7439 /ViewState/OFF%
7440 >>%

```

```

7441     >>%
7442     >>%
7443 }%
7444 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
7445 \immediate\pdfobj{%
7446 [%
7447   \OBJ@OCG@view\space\OBJ@OCG@print
7448 ]%
7449 }%
7450 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
7451 \pdfcatalog{%
7452   /OCProperties<<%
7453     /OCGs \OBJ@OCGs
7454     /D<<%
7455       /OFF[\OBJ@OCG@print]%
7456       /AS[%
7457         <<%
7458           /Event/View%
7459           /OCGs \OBJ@OCGs
7460           /Category[/View]%
7461         >>%
7462         <<%
7463           /Event/Print%
7464           /OCGs \OBJ@OCGs
7465           /Category[/Print]%
7466         >>%
7467         <<%
7468           /Event/Export%
7469           /OCGs \OBJ@OCGs
7470           /Category[/Print]%
7471         >>%
7472       ]%
7473     >>%
7474   >>%
7475 }%
7476 \begingroup
7477 \edef\x{\endgroup
7478   \pdfpageresources{%
7479     /Properties<<%
7480       /OCView \OBJ@OCG@view
7481       /OCPrint \OBJ@OCG@print
7482     >>%
7483   }%
7484 }%
7485 \x
7486 \AtBeginDocument{%
7487   \def\Hy@colorlink#1{%
7488     \begingroup
7489       \ifHy@ocgcolorlinks
7490         \def\Hy@ocgcolor{#1}%
7491         \setbox0=\color@hbox
7492       \else
7493         \HyColor@UseColor#1%
7494       \fi
7495     }%
7496   \def\Hy@endcolorlink{%
7497     \ifHy@ocgcolorlinks

```

```

7498 \color@endbox
7499 \mbox{%
7500 \pdfliteral page{/OC/OCPrint BDC}%
7501 \rlap{\copy0}%
7502 \pdfliteral page{EMC/OC/OCView BDC}%
7503 \begingroup
7504 \expandafter\HyColor@UseColor\Hy@ocgcolor
7505 \box0 %
7506 \endgroup
7507 \pdfliteral page{EMC}%
7508 }%
7509 \fi
7510 \endgroup
7511 }%
7512 }%
7513 \else
7514 \Hy@DisableOption{ocgcolorlinks}%
7515 \fi

```

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

```

7516 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7517 \ifx\pdfstartlink\@undefined% less than version 14
7518 \let\pdfstartlink\pdfannotlink
7519 \let\pdfinkmargin\@tempdima
7520 \let\pdfxform\pdfform
7521 \let\pdfastxform\pdfastform
7522 \let\pdfrefxform\pdfrefform
7523 \else
7524 \pdfinkmargin1pt %
7525 \fi

```

First set up the default linking

```
7526 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7527 \def\new@pdfink#1{%
7528 \ifHy@verbose
7529 \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
7530 \fi
7531 \Hy@SaveLastskip
7532 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7533 \Hy@DestName\Hy@pstringDest\@pdfview
7534 \Hy@RestoreLastskip
7535 }
7536 \let\pdf@endanchor\@empty

```

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

```

7537 \def\Hy@DestName#1#2{%
7538 \pdfdest name{#1}#2\relax
7539 }

```

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.

```

7540 \providecommand*\@pdfborder{0 0 1}
7541 \providecommand*\@pdfborderstyle{}

```

```

7542 \def\Hy@undefinedname{UNDEFINED}
7543 \def\find@pdfink#1#2{%
7544   \leavevmode
7545   \protected@edef\Hy@testname{#2}%
7546   \ifx\Hy@testname\@empty
7547     \Hy@Warning{%
7548       Empty destination name,\MessageBreak
7549       using '\Hy@undefinedname'%
7550     }%
7551     \let\Hy@testname\Hy@undefinedname
7552   \else
7553     \Hy@pstringdef\Hy@testname{%
7554       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7555     }%
7556   \fi
7557   \Hy@StartlinkName{%
7558     \ifHy@pdfa /F 4\fi
7559     \Hy@setpdfborder
7560     \ifx\@pdfhighlight\@empty
7561       \else
7562         /H\@pdfhighlight
7563       \fi
7564       \ifx\CurrentBorderColor\relax
7565       \else
7566         /C[\CurrentBorderColor]%
7567       \fi
7568     }\Hy@testname
7569     \expandafter\Hy@colorlink\csname @#1color\endcsname
7570   }
7571 \def\Hy@StartlinkName#1#2{%
7572   \pdfstartlink attr{#1}goto name{#2}\relax
7573 }
7574 \def\close@pdfink{\Hy@endcolorlink\pdfendlink}
7575 \def\hyper@anchor#1{\new@pdfink{#1}\anchor@spot\pdf@endanchor}
7576 \def\hyper@anchorstart#1{\new@pdfink{#1}\Hy@activeanchortrue}
7577 \def\hyper@anchorend{\pdf@endanchor\Hy@activeanchorfalse}
7578 \def\hyper@linkstart#1#2{%
7579   \@ifundefined{@#1bordercolor}{%
7580     \let\CurrentBorderColor\relax
7581   }{%
7582     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7583   }%
7584   \find@pdfink{#1}{#2}%
7585 }
7586 \def\hyper@linkend{\close@pdfink}
7587 \def\hyper@link#1#2#3{%
7588   \@ifundefined{@#1bordercolor}{%
7589     \let\CurrentBorderColor\relax
7590   }{%
7591     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7592   }%
7593   \find@pdfink{#1}{#2}#3%
7594   \close@pdfink
7595 }
7596 \let\CurrentBorderColor\@linkbordercolor
7597 \def\hyper@linkurl#1#2{%
7598   \begingroup

```

```

7599 \Hy@pstringdef\Hy@pstringURI{#2}%
7600 \hyper@chars
7601 \leavevmode
7602 \pdfstartlink
7603   attr{%
7604     \Hy@setpdfborder
7605     \ifx\@pdfhighlight\@empty
7606     \else
7607       /H\@pdfhighlight
7608     \fi
7609     \ifx\@urlbordercolor\relax
7610     \else
7611       /C[\@urlbordercolor]%
7612     \fi
7613   }%
7614   user{%
7615     /Subtype/Link%
7616     \ifHy@pdfa /F 4\fi
7617     /A<<%
7618     /Type/Action%
7619     /S/URI%
7620     /URI(\Hy@pstringURI)%
7621     >>%
7622   }%
7623   \relax
7624 \Hy@colorlink\@urlcolor#1%
7625 \close@pdfink
7626 \endgroup
7627 }
7628 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7629 \begingroup
7630 \Hy@pstringdef\Hy@pstringF{#2}%
7631 \Hy@pstringdef\Hy@pstringD{#3}%
7632 \leavevmode
7633 \pdfstartlink
7634   attr{%
7635     \Hy@setpdfborder
7636     \ifx\@pdfhighlight\@empty
7637     \else
7638       /H\@pdfhighlight
7639     \fi
7640     \ifx\@filebordercolor\relax
7641     \else
7642       /C[\@filebordercolor]%
7643     \fi
7644   }%
7645   user {%
7646     /Subtype/Link%
7647     \ifHy@pdfa /F 4\fi
7648     /A<<%
7649     /F(\Hy@pstringF)%
7650     /S/GoToR%
7651     \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}

```

```

7652      \ifx\|#3\|%
7653      /D[0 \@pdfstartview]%
7654      \else
7655      /D(\Hy@pstringD)%
7656      \fi
7657      >>%
7658      }%
7659      \relax
7660      \Hy@colorlink\@filecolor#1%
7661      \close@pdflink
7662      \endgroup
7663      }
7664      \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
7665      \begingroup
7666      \Hy@pstringdef\Hy@pstringF{#1}%
7667      \Hy@pstringdef\Hy@pstringP{#3}%
7668      \leavevmode
7669      \pdfstartlink
7670      attr{%
7671      \Hy@setpdfborder
7672      \ifx\@pdfhighlight\@empty
7673      \else
7674      /H\@pdfhighlight
7675      \fi
7676      \ifx\@runbordercolor\relax
7677      \else
7678      /C[\@runbordercolor]%
7679      \fi
7680      }%
7681      user {%
7682      /Subtype/Link%
7683      \ifHy@pdfa /F 4\fi
7684      /A<<%
7685      /F(\Hy@pstringF)%
7686      /S/Launch%
7687      \Hy@SetNewWindow
7688      \ifx\|#3\|%
7689      \else
7690      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7691      \fi
7692      >>%
7693      }%
7694      \relax
7695      \Hy@colorlink\@runcolor#2%
7696      \close@pdflink
7697      \endgroup
7698      }

```

\@pdfproducer

```

7699 \ifx\@pdfproducer\relax
7700 \begingroup\expandafter\expandafter\expandafter\endgroup

```



```

7701 \expandafter\ifx\csname luatexversion\endcsname\relax
7702 \def\@pdfproducer{pdfTeX}%
7703 \ifx\TeXversion\@undefined
7704 \else
7705 \ifx\TeXversion\relax
7706 \else
7707 \ifnum\TeXversion>0 %
7708 \def\@pdfproducer{pdfTeX}%
7709 \fi
7710 \fi
7711 \fi
7712 \ifx\pdfTeXversion\@undefined
7713 \else
7714 \ifnum\pdfTeXversion<100 %
7715 \edef\@pdfproducer{%
7716 \@pdfproducer
7717 \the\pdfTeXversion.\pdfTeXrevision
7718 }%
7719 \else
7720 \ifnum\pdfTeXversion<130 %
7721 \edef\@pdfproducer{%
7722 \@pdfproducer-
7723 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7724 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
7725 \pdfTeXrevision
7726 }%
7727 \else
7728 \ifnum\pdfTeXversion<140 %
7729 \else
7730 \def\@pdfproducer{pdfTeX}%
7731 \fi
7732 \edef\@pdfproducer{%
7733 \@pdfproducer-
7734 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7735 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7736 \pdfTeXrevision
7737 }%
7738 \fi
7739 \fi
7740 \fi
7741 \else
7742 \begingroup
7743 \count@=\luatexversion
7744 \divide\count@ by 100 %
7745 \edef\x{\the\count@}%
7746 \count@=-\x\relax
7747 \multiply\count@ by 100 %
7748 \advance\count@ by \luatexversion
7749 \edef\x{\endgroup
7750 \def\noexpand\@pdfproducer{%
7751 LuaTeX-\x.\the\count@.\luatexrevision
7752 }%
7753 }%
7754 \x
7755 \fi
7756 \fi

```

\PDF@SetupDox

```
7757 \def\PDF@SetupDoc{%
7758   \ifx\@pdfpagescrop\@empty
7759   \else
7760     \edef\process@me{%
7761       \pdfpagesattr={%
7762         /CropBox[\@pdfpagescrop]%
7763         \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
7764         \else
7765           ^^Jthe\pdfpagesattr
7766         \fi
7767       }%
7768     }%
7769     \process@me
7770   \fi
7771   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7772   \pdfcatalog{%
7773     /PageMode/\@pdfpagemode
7774     \ifx\@baseurl\@empty
7775     \else
7776       /URI<</Base(\Hy@pstringB)>>%
7777     \fi
7778   }%
7779   \ifx\@pdfstartpage\@empty
7780   \else
7781     \ifx\@pdfstartview\@empty
7782     \else
7783       openaction goto page\@pdfstartpage{\@pdfstartview}%
7784     \fi
7785   \fi
7786   \edef\Hy@temp{%
7787     \ifHy@toolbar\else /HideToolbar true\fi
7788     \ifHy@menubar\else /HideMenubar true\fi
7789     \ifHy@windowui\else /HideWindowUI true\fi
7790     \ifHy@fitwindow /FitWindow true\fi
7791     \ifHy@centerwindow /CenterWindow true\fi
7792     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7793     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7794     \Hy@UseNameKey{Direction}\@pdfdirection
7795     \Hy@UseNameKey{ViewArea}\@pdfviewarea
7796     \Hy@UseNameKey{ViewClip}\@pdfviewclip
7797     \Hy@UseNameKey{PrintArea}\@pdfprintarea
7798     \Hy@UseNameKey{PrintClip}\@pdfprintclip
7799     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7800     \Hy@UseNameKey{Duplex}\@pdfduplex
7801     \ifx\@pdfpicktraybypdfsize\@empty
7802     \else
7803       /PickTrayByPDFSize \@pdfpicktraybypdfsize
7804     \fi
7805     \ifx\@pdfprintpagerange\@empty
7806     \else
7807       /PrintPageRange[\@pdfprintpagerange]%
7808     \fi
7809     \ifx\@pdfnumcopies\@empty
7810     \else
7811       /NumCopies \@pdfnumcopies
7812     \fi
```

```

7813 }%
7814 \pdfcatalog{%
7815   \ifx\Hy@temp\@empty
7816   \else
7817     /ViewerPreferences<<\Hy@temp>>%
7818   \fi
7819   \Hy@UseNameKey{PageLayout}\pdfpagelayout
7820   \ifx\@pdflang\@empty
7821   \else
7822     /Lang(\@pdflang)%
7823   \fi
7824 }%
7825 }

```

\PDF@FinishDoc

```

7826 \def\PDF@FinishDoc{%
7827   \Hy@UseMaketitleInfos
7828   \HyInfo@GenerateAddons
7829   \pdfinfo{%
7830     /Author(\@pdfauthor)%
7831     /Title(\@pdftitle)%
7832     /Subject(\@pdfsubject)%
7833     /Creator(\@pdfcreator)%
7834     \ifx\@pdfcreationdate\@empty
7835     \else
7836       /CreationDate(\@pdfcreationdate)%
7837     \fi
7838     \ifx\@pdfmoddate\@empty
7839     \else
7840       /ModDate(\@pdfmoddate)%
7841     \fi
7842     \ifx\@pdfproducer\relax
7843     \else
7844       /Producer(\@pdfproducer)%
7845     \fi
7846     /Keywords(\@pdfkeywords)%
7847     \ifx\@pdftrapped\@empty
7848     \else
7849       /Trapped/\@pdftrapped
7850     \fi
7851     \HyInfo@Addons
7852   }%
7853   \Hy@DisableOption{pdfauthor}%
7854   \Hy@DisableOption{pdftitle}%
7855   \Hy@DisableOption{pdfsubject}%
7856   \Hy@DisableOption{pdfcreator}%
7857   \Hy@DisableOption{pdfcreationdate}%
7858   \Hy@DisableOption{pdfmoddate}%
7859   \Hy@DisableOption{pdfproducer}%
7860   \Hy@DisableOption{pdfkeywords}%
7861   \Hy@DisableOption{pdftrapped}%
7862   \Hy@DisableOption{pdfinfo}%
7863 }

```

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

```

7864 \def\hyper@pagetransition{%
7865   \ifx\@pdfpagetransition\relax
7866   \else
7867     \expandafter\Hy@RemoveTransPageAttr
7868     \the\pdfpageattr^^J/Trans{}}>>\END
7869   \ifx\@pdfpagetransition\@empty
7870   \else
7871     \edef\@processme{%
7872       \global\pdfpageattr{%
7873         \the\pdfpageattr
7874         ^^J/Trans << /S /\@pdfpagetransition\space >>%
7875       }%
7876     }%
7877     \@processme
7878   \fi
7879 \fi
7880 }

```

\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.

```

7881 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7882   \ifx\#2\%
7883     \global\pdfpageattr{#1}%
7884   \else
7885     \Hy@RemoveTransPageAttr#1#4\END
7886   \fi
7887 }

```

\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`.

```

7888 \def\hyper@pageduration{%
7889   \ifx\@pdfpageduration\relax
7890   \else
7891     \expandafter
7892     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{}} \END
7893   \ifx\@pdfpageduration\@empty
7894   \else
7895     \edef\@processme{%
7896       \global\pdfpageattr{%
7897         \the\pdfpageattr
7898         ^^J/Dur \@pdfpageduration\space
7899       }%
7900     }%
7901     \@processme
7902   \fi
7903 \fi
7904 }

```

\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.

```

7905 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%

```

```

7906 \ifx\#2\%
7907 \global\pdfpageattr{#1}%
7908 \else
7909 \Hy@RemoveDurPageAttr#1#4\END
7910 \fi
7911 }

```

`\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).

```

7912 \def\hyper@pagehidden{%
7913 \ifHy@useHidKey
7914 \expandafter
7915 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7916 \ifHy@pdfpagehidden
7917 \edef\@processme{%
7918 \global\pdfpageattr{%
7919 \the\pdfpageattr
7920 ^^J/Hid true % SPACE
7921 }%
7922 }%
7923 \@processme
7924 \fi
7925 \fi
7926 }

```

`\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.

```

7927 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7928 \ifx\#2\%
7929 \global\pdfpageattr{#1}%
7930 \else
7931 \Hy@RemoveHidPageAttr#1#4\END
7932 \fi
7933 }

7934 \g@addto@macro\Hy@EveryPageHook{%
7935 \hyper@pagetransition
7936 \hyper@pageduration
7937 \hyper@pagehidden
7938 }

```

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

```

7939 </pdfTeX>
7940 <*pdfTeX | xetex>
7941 \AtBeginDocument{%
7942 \ifHy@setpagesize
7943 \expandafter\@firstofone
7944 \else
7945 \expandafter\@gobble
7946 \fi
7947 {%
7948 \ifclassloaded{seminar}{%
7949 <*pdfTeX>

```

```

7950 \setlength{\pdfhorigin}{1truein}%
7951 \setlength{\pdfvorigin}{1truein}%
7952 </pdftex>
7953 \ifportrait
7954 \ifdim\paperwidth=\z@
7955 \else
7956 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7957 \fi
7958 \ifdim\paperheight=\z@
7959 \else
7960 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7961 \fi
7962 \else
7963 \ifdim\paperheight=\z@
7964 \else
7965 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7966 \fi
7967 \ifdim\paperwidth=\z@
7968 \else
7969 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7970 \fi
7971 \fi
7972 }{%
7973 \@ifundefined{stockwidth}{%
7974 \ifdim\paperwidth>\z@
7975 \setlength{\pdfpagewidth}{\paperwidth}%
7976 \fi
7977 \ifdim\paperheight>\z@
7978 \setlength{\pdfpageheight}{\paperheight}%
7979 \fi
7980 }{%
7981 \ifdim\stockwidth>\z@
7982 \setlength{\pdfpagewidth}{\stockwidth}%
7983 \fi
7984 \ifdim\stockheight>\z@
7985 \setlength{\pdfpageheight}{\stockheight}%
7986 \fi
7987 }%
7988 }%
7989 }%
7990 \Hy@DisableOption{setpagesize}%
7991 }
7992 </pdftex | xetex>
7993 <*pdftex>
7994 \def\Acrobatmenu#1#2{%
7995 \Hy@Acrobatmenu{#1}{#2}{%
7996 \pdfstartlink
7997 attr{%
7998 \Hy@setpdfborder
7999 \ifx\@pdfhighlight\@empty
8000 \else
8001 /H\@pdfhighlight
8002 \fi
8003 \ifx\@menubordercolor\relax
8004 \else
8005 /C[\@menubordercolor]%
8006 \fi

```

```

8007   }%
8008   user{%
8009       /Subtype/Link%
8010       \ifHy@pdfa /F 4\fi
8011       /A<<%
8012       /S/Named/N/#1%
8013       >>%
8014   }%
8015   \relax
8016   \Hy@colorlink\@menucolor#2%
8017   \close@pdfink
8018 }%
8019 }

```

46.2.1 Fix for problem with different nesting levels

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

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

```

8020 \def\Hy@FixNotFirstPage{%
8021   \gdef\Hy@FixNotFirstPage{%
8022     \setbox\AtBeginShipoutBox=\hbox{%
8023       \copy\AtBeginShipoutBox
8024     }%
8025   }%
8026 }
8027 \AtBeginShipout{\Hy@FixNotFirstPage}
8028 </pdfTeX>

```

46.3 hypertex

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

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

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the

document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form *href="#name_string*" with the *name_string* identical to the one in the name command) or as part of a URL (of the form *URL#name_string*). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

8029 \providecommand*{\XR@ext}{dvi}
8030 \def\PDF@FinishDoc{}
8031 \def\PDF@SetupDoc{%
8032   \ifx\@baseurl\@empty
8033   \else
8034     \special{html:<base href="\@baseurl">}%
8035   \fi
8036 }
8037 }
8038 \def\hyper@anchor#1{%
8039   \Hy@SaveLastskip
8040   \begingroup
8041     \let\protect=\string
8042     \hyper@chars
8043     \special{html:<a name=%
8044       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8045   \endgroup
8046   \Hy@Activeanchortrue
8047   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8048   \special{html:</a>}%
8049   \Hy@Activeanchorfalse
8050   \Hy@RestoreLastskip
8051 }
8052 \def\hyper@anchorstart#1{%
8053   \Hy@SaveLastskip
8054   \begingroup
8055     \hyper@chars
8056     \special{html:<a name=%
8057       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8058   \endgroup
8059   \Hy@Activeanchortrue
8060 }
8061 \def\hyper@anchorend{%
8062   \special{html:</a>}%
8063   \Hy@Activeanchorfalse
8064   \Hy@RestoreLastskip
8065 }
8066 \def\@urltype{url}
8067 \def\hyper@linkstart#1#2{%
8068   \expandafter\Hy@colorlink\csname @#1color\endcsname
8069   \def\Hy@tempa{#1}%
8070   \ifx\Hy@tempa\@urltype
8071     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8072   \else
8073     \begingroup
8074       \hyper@chars
8075       \special{html:<a href=%

```



```

8076      \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
8077      \endgroup
8078      \fi
8079  }
8080  \def\hyper@linkend{%
8081    \special{html:</a>}%
8082    \Hy@endcolorlink
8083  }
8084  \def\hyper@linkfile#1#2#3{%
8085    \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\#3\fi}%
8086  }
8087  \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why \LaTeX constructs make this totally foul up, and make us revert to basic \TeX . I do not know.

```

8088  \leavevmode
8089  \ifHy@raiselinks
8090    \setbox\@tempboxa=\color@hbox #1\color@endbox
8091    \@linkdim\dp\@tempboxa
8092    \lower\@linkdim\hbox{%
8093      \hyper@chars
8094      \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8095    }%
8096    \Hy@colorlink\@urlcolor#1%
8097    \@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).

```

8098    \advance\@linkdim by -6.5\p@
8099    \raise\@linkdim\hbox{\special{html:</a>}}%
8100    \Hy@endcolorlink
8101  \else
8102    \begingroup
8103      \hyper@chars
8104      \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8105      \Hy@colorlink\@urlcolor#1%
8106      \special{html:</a>}%
8107      \Hy@endcolorlink
8108    \endgroup
8109  \fi
8110 }

```

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

```

8111 \def\hyper@link#1#2#3{%
8112   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
8113 }
8114 \def\hyper@image#1#2{%
8115   \begingroup
8116     \hyper@chars
8117     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8118   \endgroup
8119 }
8120 </hypertex>
8121 <*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, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```
8122 \providecommand*\XR@ext}{dvi}
8123 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8124 \def\hyper@anchor#1{%
8125   \Hy@SaveLastskip
8126   \begingroup
8127     \let\protect=\string
8128     \special{mark: #1}%
8129   \endgroup
8130   \Hy@activeanchortrue
8131   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8132   \Hy@activeanchorfalse
8133   \Hy@RestoreLastskip
8134 }
8135 \def\hyper@anchorstart#1{%
8136   \Hy@SaveLastskip
8137   \special{mark: #1}%
8138   \Hy@activeanchortrue
8139 }
8140 \def\hyper@anchorend{%
8141   \Hy@activeanchorfalse
8142   \Hy@RestoreLastskip
8143 }
8144 \def\hyper@linkstart#1#2{%
8145   \expandafter\Hy@colorlink\csname @#1color\endcsname
8146   \special{button: %
8147     10000000 %
8148     \number\baselineskip\space
8149     #2%
8150   }%
8151 }
8152 \def\hyper@linkend{%
8153   \Hy@endcolorlink
8154 }
8155 \def\hyper@link#1#2#3{%
8156   \setbox\@tempboxa=\color@hbox #3\color@endbox
8157   \leavevmode
8158   \ifHy@raiselinks
8159     \@linkdim\dp\@tempboxa
8160     \lower\@linkdim\hbox{%
8161       \special{button: %
8162         \number\wd\@tempboxa\space
8163         \number\ht\@tempboxa\space
8164         #2%
8165       }%
8166       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
```

```

8167 \Hy@endcolorlink
8168 }%
8169 \@linkdim\ht\@tempboxa
8170 \advance\@linkdim by -6.5\p@
8171 \raise\@linkdim\hbox{}%
8172 \else
8173 \special{button: %
8174 \number\wd\@tempboxa\space
8175 \number\ht\@tempboxa\space
8176 #2%
8177 }%
8178 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8179 \Hy@endcolorlink
8180 \fi
8181 }
8182 \def\hyper@linkurl#1#2{%
8183 \begingroup
8184 \hyper@chars
8185 \leavevmode
8186 \setbox\@tempboxa=\color@hbox #1\color@endbox
8187 \ifHy@raiselinks
8188 \@linkdim\dp\@tempboxa
8189 \lower\@linkdim\hbox{%
8190 \special{button: %
8191 \number\wd\@tempboxa\space
8192 \number\ht\@tempboxa\space
8193 launch: \wwwbrowser\space
8194 #2%
8195 }%
8196 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8197 }%
8198 \@linkdim\ht\@tempboxa
8199 \advance\@linkdim by -6.5\p@
8200 \raise\@linkdim\hbox{}%
8201 \else
8202 \special{button: %
8203 \number\wd\@tempboxa\space
8204 \number\ht\@tempboxa\space
8205 launch: \wwwbrowser\space
8206 #2%
8207 }%
8208 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8209 \fi
8210 \endgroup
8211 }
8212 \def\hyper@linkfile#1#2#3{%
8213 \begingroup
8214 \hyper@chars
8215 \leavevmode
8216 \setbox\@tempboxa=\color@hbox #1\color@endbox
8217 \ifHy@raiselinks
8218 \@linkdim\dp\@tempboxa
8219 \lower\@linkdim\hbox{%
8220 \special{button: %
8221 \number\wd\@tempboxa\space
8222 \number\ht\@tempboxa\space
8223 #3,%

```

```

8224         file: #2%
8225     }%
8226     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8227 }%
8228 \@linkdim\ht\@tempboxa
8229 \advance\@linkdim by -6.5\p@
8230 \raise\@linkdim\hbox{}%
8231 \else
8232 \special{button: %
8233 \number\wd\@tempboxa\space
8234 \number\ht\@tempboxa\space
8235 #3,%
8236 file: #2%
8237 }%
8238 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8239 \fi
8240 \endgroup
8241 }
8242 \ifx\@pdfproducer\relax
8243 \def\@pdfproducer{dviwindo + Distiller}%
8244 \fi
8245 \HyInfo@AddonUnsupportedtrue
8246 \def\PDF@FinishDoc{%
8247 \Hy@UseMaketitleInfos
8248 \HyInfo@TrappedUnsupported
8249 \special{PDF: Keywords \@pdfkeywords}%
8250 \special{PDF: Title \@pdftitle}%
8251 \special{PDF: Creator \@pdfcreator}%
8252 \ifx\@pdfcreationdate\@empty
8253 \else
8254 \special{PDF: CreationDate \@pdfcreationdate}%
8255 \fi
8256 \ifx\@pdfmoddate\@empty
8257 \else
8258 \special{PDF: ModDate \@pdfmoddate}%
8259 \fi
8260 \special{PDF: Author \@pdfauthor}%
8261 \ifx\@pdfproducer\relax
8262 \else
8263 \special{PDF: Producer \@pdfproducer}%
8264 \fi
8265 \special{PDF: Subject \@pdfsubject}%
8266 \Hy@DisableOption{pdfauthor}%
8267 \Hy@DisableOption{pdftitle}%
8268 \Hy@DisableOption{pdfsubject}%
8269 \Hy@DisableOption{pdfcreator}%
8270 \Hy@DisableOption{pdfcreationdate}%
8271 \Hy@DisableOption{pdfmoddate}%
8272 \Hy@DisableOption{pdfproducer}%
8273 \Hy@DisableOption{pdfkeywords}%
8274 \Hy@DisableOption{pdftrapped}%
8275 \Hy@DisableOption{pdfinfo}%
8276 }
8277 \def\PDF@SetupDoc{%
8278 \ifx\@baseurl\@empty
8279 \else
8280 \special{PDF: Base \@baseurl}%

```

```

8281 \fi
8282 \ifx\@pdfpagescrop\@empty\else
8283 \special{PDF: BBox \@pdfpagescrop}%
8284 \fi
8285 \def\Hy@temp{}%
8286 \ifx\@pdfstartpage\@empty
8287 \else
8288 \ifx\@pdfstartview\@empty
8289 \else
8290 \edef\Hy@temp{%
8291     ,Page=\@pdfstartpage
8292     ,View=\@pdfstartview
8293 }%
8294 \fi
8295 \fi
8296 \edef\Hy@temp{%
8297     \noexpand\pdfmark{%
8298         pdfmark=/DOCVIEW,%
8299         PageMode=/\@pdfpagemode
8300     }\Hy@temp
8301 }%
8302 }%
8303 \Hy@temp
8304 \ifx\@pdfpagescrop\@empty
8305 \else
8306 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8307 \fi
8308 \edef\Hy@temp{%
8309     \ifHy@toolbar\else /HideToolbar true\fi
8310     \ifHy@menubar\else /HideMenubar true\fi
8311     \ifHy>windowui\else /HideWindowUI true\fi
8312     \ifHy@fitwindow /FitWindow true\fi
8313     \ifHy@centerwindow /CenterWindow true\fi
8314     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8315     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8316     \Hy@UseNameKey{Direction}\@pdfdirection
8317     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8318     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8319     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8320     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8321     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8322     \Hy@UseNameKey{Duplex}\@pdfduplex
8323     \ifx\@pdfpicktraybypdfsize\@empty
8324     \else
8325         /PickTrayByPDFSize \@pdfpicktraybypdfsize
8326     \fi
8327     \ifx\@pdfprintpagerange\@empty
8328     \else
8329         /PrintPageRange[\@pdfprintpagerange]%
8330     \fi
8331     \ifx\@pdfnumcopies\@empty
8332     \else
8333         /NumCopies \@pdfnumcopies
8334     \fi
8335 }%
8336 \pdfmark{pdfmark=/PUT,%
8337     Raw={%

```

```

8338 \string{Catalog\string}<<%
8339 \ifx\Hy@temp\@empty
8340 \else
8341 /ViewerPreferences<<\Hy@temp>>%
8342 \fi
8343 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8344 \ifx\@pdflang\@empty
8345 \else
8346 /Lang(\@pdflang)%
8347 \fi
8348 >>%
8349 }%
8350 }%
8351 }
8352 </dviwindo>
8353 <*dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8354 \providecommand*{\XR@ext}{pdf}
8355 \Hy@setbreaklinks{true}
8356 \newsavebox{\pdfm@box}
8357 \def\@pdfm@mark#1{\special{pdf:#1}}
8358 \def\@pdfm@dest#1{%
8359 \Hy@SaveLastskip
8360 \begingroup
8361 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8362 \def\x{XYZ}%
8363 \ifx\x\@pdfview
8364 \def\x{XYZ @xpos @ypos null}%
8365 \else
8366 \def\x{FitH}%
8367 \ifx\x\@pdfview
8368 \def\x{FitH @ypos}%
8369 \else
8370 \def\x{FitBH}%
8371 \ifx\x\@pdfview
8372 \def\x{FitBH @ypos}%
8373 \else
8374 \def\x{FitV}%
8375 \ifx\x\@pdfview
8376 \def\x{FitV @xpos}%
8377 \else
8378 \def\x{FitBV}%
8379 \ifx\x\@pdfview
8380 \def\x{FitBV @xpos}%
8381 \else
8382 \def\x{Fit}%
8383 \ifx\x\@pdfview
8384 \let\x\@pdfview
8385 \else
8386 \def\x{FitB}%
8387 \ifx\x\@pdfview
8388 \let\x\@pdfview
8389 \else
8390 \def\x{FitR}%

```

```

8391         \ifx\x\@pdfview
8392         \Hy@Warning{'pdfview=FitR' is not supported}%
8393         \def\x{XYZ @xpos @ypos null}%
8394     \else
8395         \@onelevel@sanitize\@pdfview
8396         \Hy@Warning{%
8397             Unknown value '\@pdfview' for pdfview%
8398         }%
8399         \def\x{XYZ @xpos @ypos null}%
8400     \fi
8401 \fi
8402 \fi
8403 \fi
8404 \fi
8405 \fi
8406 \fi
8407 \fi
8408 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8409 \endgroup
8410 \Hy@RestoreLastskip
8411 }
8412 \providecommand*\@pdfview{XYZ}
8413 \providecommand*\@pdfborder{0 0 1}
8414 \providecommand*\@pdfborderstyle{}
8415 \def\hyper@anchor#1{%
8416     \@pdfm@dest{#1}%
8417 }
8418 \def\hyper@anchorstart#1{%
8419     \Hy@activeanchortrue
8420     \@pdfm@dest{#1}%
8421 }
8422 \def\hyper@anchorend{%
8423     \Hy@activeanchorfalse
8424 }
8425 \newcounter{Hy@AnnotLevel}
8426 \ifHy@ocgcolorlinks
8427     \def\OBJ@OCG@view{@OCG@view}%
8428     \@pdfm@mark{%
8429         obj \OBJ@OCG@view <<%
8430         /Type/OCG%
8431         /Name(View)%
8432         /Usage<<%
8433         /Print<<%
8434         /PrintState/OFF%
8435         >>%
8436         /View<<%
8437         /ViewState/ON%
8438         >>%
8439         >>%
8440     }%
8441     \@pdfm@mark{close \OBJ@OCG@view}%
8442     \def\OBJ@OCG@print{@OCG@print}%
8443     \@pdfm@mark{%
8444         obj \OBJ@OCG@print <<%
8445         /Type/OCG%
8446         /Name(Print)%

```

```

8448     /Usage<<%
8449     /Print<<%
8450     /PrintState/ON%
8451     >>%
8452     /View<<%
8453     /ViewState/OFF%
8454     >>%
8455     >>%
8456     >>%
8457 }%
8458 \@pdfm@mark{close \OBJ@OCG@print}%
8459 \def\OBJ@OCGs{@OCGs}%
8460 \@pdfm@mark{%
8461     obj \OBJ@OCGs [%
8462         \OBJ@OCG@view\space\OBJ@OCG@print
8463     ]%
8464 }%
8465 \@pdfm@mark{close \OBJ@OCGs}%
8466 \@pdfm@mark{%
8467     put @catalog <<%
8468         /OCProperties<<%
8469         /OCGs \OBJ@OCGs
8470         /D<<%
8471         /OFF[\OBJ@OCG@print]%
8472         /AS[%
8473             <<%
8474             /Event/View%
8475             /OCGs \OBJ@OCGs
8476             /Category[/View]%
8477             >>%
8478             <<%
8479             /Event/Print%
8480             /OCGs \OBJ@OCGs
8481             /Category[/Print]%
8482             >>%
8483             <<%
8484             /Event/Export%
8485             /OCGs \OBJ@OCGs
8486             /Category[/Print]%
8487             >>%
8488             ]%
8489             >>%
8490             >>%
8491             >>%
8492         }%
8493     \AtBeginShipout{%
8494         \setbox\AtBeginShipoutBox=\hbox{%
8495             \copy\AtBeginShipoutBox
8496             \@pdfm@mark{%
8497                 put @resources <<%
8498                     /Properties<<%
8499                     /OCView \OBJ@OCG@view
8500                     /OCPrint \OBJ@OCG@print
8501                     >>%
8502                     >>%
8503                 }%
8504             }%

```



```

8505 }%
8506 \AtBeginDocument{%
8507   \def\Hy@colorlink#1{%
8508     \begingroup
8509     \ifHy@ocgcolorlinks
8510       \def\Hy@ocgcolor{#1}%
8511       \setbox0=\color@hbox
8512     \else
8513       \HyColor@UseColor#1%
8514     \fi
8515   }%
8516   \def\Hy@endcolorlink{%
8517     \ifHy@ocgcolorlinks
8518       \color@endbox
8519     \mbox{%
8520       \@pdfm@mark{content /OC/OCPrint BDC}%
8521       \rlap{\copy0}%
8522       \@pdfm@mark{content EMC/OC/OCView BDC}%
8523     \begingroup
8524       \expandafter\HyColor@UseColor\Hy@ocgcolor
8525     \box0 %
8526     \endgroup
8527     \@pdfm@mark{content EMC}%
8528   }%
8529   \fi
8530 \endgroup
8531 }%
8532 }%
8533 \else
8534 \Hy@DisableOption{ocgcolorlinks}%
8535 \fi

8536 \def\Hy@BeginAnnot#1{%
8537   \stepcounter{Hy@AnnotLevel}%
8538   \ifnum\value{Hy@AnnotLevel}=\@ne
8539     #1%
8540   \fi
8541 }
8542 \def\Hy@EndAnnot{%
8543   \ifnum\value{Hy@AnnotLevel}=\@ne
8544     \Hy@endcolorlink
8545     \@pdfm@mark{eann}%
8546   \fi
8547   \addtocounter{Hy@AnnotLevel}\m@ne
8548 }

8549 \def\Hy@undefinedname{UNDEFINED}
8550 \def\hyper@linkstart#1#2{%
8551   \Hy@BeginAnnot{%
8552     \protected@edef\Hy@testname{#2}%
8553     \ifx\Hy@testname\@empty
8554       \Hy@Warning{%
8555         Empty destination name,\MessageBreak
8556         using '\Hy@undefinedname'%
8557       }%
8558     \let\Hy@testname\Hy@undefinedname
8559   \else
8560     \Hy@pstringdef\Hy@testname{%
8561       \expandafter\HyperDestNameFilter\expandafter{%

```

```

8562     \Hy@testname
8563     }%
8564     }%
8565     \fi
8566     \@pdfm@mark{%
8567     bann<<%
8568     /Type/Annot%
8569     /Subtype/Link%
8570     \ifHy@pdfa /F 4\fi
8571     \Hy@setpdfborder
8572     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8573     \else
8574     /C[\csname @#1bordercolor\endcsname]%
8575     \fi
8576     /A<<%
8577     /S/GoTo%
8578     /D(\Hy@testname)%
8579     >>%
8580     >>%
8581     }%
8582     \expandafter\Hy@colorlink\csname @#1color\endcsname
8583     }%
8584 }
8585 \def\hyper@linkend{\Hy@EndAnnot}%
8586 \def\hyper@link#1#2#3{%
8587   \hyper@linkstart{#1}{#2}#3\hyper@linkend
8588 }
8589 \def\hyper@linkfile#1#2#3{%
8590   \leavevmode
8591   \Hy@BeginAnnot{%
8592     \Hy@pstringdef\Hy@pstringF{#2}%
8593     \Hy@pstringdef\Hy@pstringD{#3}%
8594     \@pdfm@mark{%
8595     bann<<%
8596     /Type/Annot%
8597     /Subtype/Link%
8598     \ifHy@pdfa /F 4\fi
8599     \Hy@setpdfborder
8600     \ifx\@filebordercolor\relax
8601     \else
8602     /C[\@filebordercolor]%
8603     \fi
8604     /A<<%
8605     /S/GoToR%
8606     /F(\Hy@pstringF)%
8607     /D\ifx\#3\[\0 \@pdfstartview\else(\Hy@pstringD)\fi
8608     \Hy@SetNewWindow
8609     >>%
8610     >>%
8611     }%
8612     \Hy@colorlink\@filecolor
8613     }%
8614     #1%
8615     \Hy@EndAnnot
8616 }
8617 \def\hyper@linkurl#1#2{%
8618   \leavevmode

```

```

8619 \Hy@BeginAnnot{%
8620 \Hy@pstringdef\Hy@pstringURI{#2}%
8621 \@pdfm@mark{%
8622   bann<<%
8623   /Type/Annot%
8624   /Subtype/Link%
8625   \ifHy@pdfa /F 4\fi
8626   \Hy@setpdfborder
8627   \ifx\@urlbordercolor\relax
8628   \else
8629   /C[\@urlbordercolor]%
8630   \fi
8631   /A<<%
8632   /S/URI%
8633   /URI(\Hy@pstringURI)%
8634   >>%
8635   >>%
8636   }%
8637   \Hy@colorlink\@urlcolor
8638 }%
8639 #1%
8640 \Hy@endAnnot
8641 }
8642 \def\Acrobatmenu#1#2{%
8643 \Hy@Acrobatmenu{#1}{#2}{%
8644 \Hy@BeginAnnot{%
8645 \Atpdfm@mark{%
8646   bann<<%
8647   /Type/Annot%
8648   /Subtype/Link%
8649   \ifHy@pdfa /F 4\fi
8650   /A<<%
8651   /S/Named%
8652   /N/#1%
8653   >>%
8654   \Hy@setpdfborder
8655   \ifx\@menubordercolor\relax
8656   \relax
8657   /C[\@menubordercolor]%
8658   \fi
8659   >>%
8660   }%
8661   \Hy@colorlink\@menucolor
8662 }%
8663 #2%
8664 \Hy@endAnnot
8665 }%
8666 }
8667 \ifx\@pdfproducer\relax
8668 \def\@pdfproducer{dvipdfm}%

```

Detect XeTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

8669 \begingroup\expandafter\expandafter\expandafter\endgroup
8670 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8671 \else
8672 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8673 \fi
8674 \fi

```

```

8675 \def\PDF@FinishDoc{%
8676   \Hy@UseMaketitleInfos
8677   \HyInfo@GenerateAddons
8678   \@pdfm@mark{%
8679     docinfo<<%
8680     /Title(\@pdftitle)%
8681     /Subject(\@pdfsubject)%
8682     /Creator(\@pdfcreator)%
8683     \ifx\@pdfcreationdate\@empty
8684     \else
8685       /CreationDate(\@pdfcreationdate)%
8686     \fi
8687     \ifx\@pdfmoddate\@empty
8688     \else
8689       /ModDate(\@pdfmoddate)%
8690     \fi
8691     /Author(\@pdfauthor)%
8692     \ifx\@pdfproducer\relax
8693     \else
8694       /Producer(\@pdfproducer)%
8695     \fi
8696     /Keywords(\@pdfkeywords)%
8697     \ifx\@pdftrapped\@empty
8698     \else
8699       /Trapped/\@pdftrapped
8700     \fi
8701     \HyInfo@Addons
8702     >>%
8703   }%
8704   \Hy@DisableOption{pdfauthor}%
8705   \Hy@DisableOption{pdftitle}%
8706   \Hy@DisableOption{pdfsubject}%
8707   \Hy@DisableOption{pdfcreator}%
8708   \Hy@DisableOption{pdfcreationdate}%
8709   \Hy@DisableOption{pdfmoddate}%
8710   \Hy@DisableOption{pdfproducer}%
8711   \Hy@DisableOption{pdfkeywords}%
8712   \Hy@DisableOption{pdftrapped}%
8713   \Hy@DisableOption{pdfinfo}%
8714 }

8715 \def\PDF@SetupDoc{%
8716   \edef\Hy@temp{%
8717     \ifHy@toolbar\else /HideToolbar true\fi
8718     \ifHy@menubar\else /HideMenubar true\fi
8719     \ifHy>windowui\else /HideWindowUI true\fi
8720     \ifHy@fitwindow /FitWindow true\fi
8721     \ifHy@centerwindow /CenterWindow true\fi
8722     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8723     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8724     \Hy@UseNameKey{Direction}\@pdfdirection
8725     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8726     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8727     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8728     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8729     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8730     \Hy@UseNameKey{Duplex}\@pdfduplex
8731     \ifx\@pdfpicktraybypdfsize\@empty

```

```

8732 \else
8733 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8734 \fi
8735 \ifx\@pdfprintpagerange\@empty
8736 \else
8737 /PrintPageRange[\@pdfprintpagerange]%
8738 \fi
8739 \ifx\@pdfnumcopies\@empty
8740 \else
8741 /NumCopies \@pdfnumcopies
8742 \fi
8743 }%
8744 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8745 \@pdfm@mark{%
8746 docview<<%
8747 \ifx\@pdfstartpage\@empty
8748 \else
8749 \ifx\@pdfstartview\@empty
8750 \else
8751 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8752 \fi
8753 \fi
8754 \ifx\@baseurl\@empty
8755 \else
8756 /URI<</Base(\Hy@pstringB)>>%
8757 \fi
8758 /PageMode/\@pdfpagemode
8759 \ifx\Hy@temp\@empty
8760 \else
8761 /ViewerPreferences<<\Hy@temp>>%
8762 \fi
8763 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8764 \ifx\@pdflang\@empty
8765 \else
8766 /Lang(\@pdflang)%
8767 \fi
8768 >>%
8769 }%
8770 \ifx\@pdfpagescrop\@empty
8771 \else
8772 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8773 \fi
8774 }
8775 </dvipdfm | xetex>

```

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

```

8776 <*dvipdfm>
8777 \AtBeginShipoutFirst{%
8778 \ifHy@setpagesize
8779 \begingroup
8780 \@ifundefined{stockwidth}{%
8781 \ifdim\paperwidth>\z@
8782 \ifdim\paperheight>\z@
8783 \special{papersize=\the\paperwidth,\the\paperheight}%
8784 \fi
8785 \fi
8786 }{%

```

```

8787 \ifdim\stockwidth>\z@
8788 \ifdim\stockheight>\z@
8789 \special{papersize=\the\stockwidth,\the\stockheight}%
8790 \fi
8791 \fi
8792 }%
8793 \endgroup
8794 \fi
8795 \Hy@DisableOption{setpagesize}%
8796 }
8797 \</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.

```

8798 \< *vtexhtml>
8799 \providecommand*{\XR@ext}{htm}
8800 \RequirePackage{vtexhtml}
8801 \newif\if@Localurl
8802 \def\PDF@FinishDoc{}
8803 \def\PDF@SetupDoc{%
8804 \ifx\@baseurl\@empty
8805 \else
8806 \special{!direct <base href="\@baseurl">}%
8807 \fi
8808 }
8809 \def\@urltype{url}
8810 \def\hyper@link#1#2#3{%
8811 \leavevmode
8812 \special{!direct <a href=%
8813 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8814 #3%
8815 \special{!direct </a>}}%
8816 }
8817 \def\hyper@linkurl#1#2{%
8818 \begingroup
8819 \hyper@chars
8820 \leavevmode
8821 \MathBSuppress=1\relax
8822 \special{!direct <a href=%
8823 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8824 #1%
8825 \MathBSuppress=0\relax
8826 \special{!direct </a>}}%
8827 \endgroup
8828 }
8829 \def\hyper@linkfile#1#2#3{%
8830 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8831 }
8832 \def\hyper@linkstart#1#2{%
8833 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8834 \@Localurltrue
8835 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8836 \else
8837 \@Localurlfalse
8838 \begingroup

```

```

8839 \hyper@chars
8840 \special{!lref \HyperDestNameFilter{#2}}%
8841 \endgroup
8842 \fi
8843 }
8844 \def\hyper@linkend{%
8845 \if@Localurl
8846 \special{!endaref}%
8847 \else
8848 \special{!direct </a>}%
8849 \fi
8850 }
8851 \def\hyper@anchorstart#1{%
8852 \Hy@SaveLastskip
8853 \begingroup
8854 \hyper@chars
8855 \special{!aname #1}%
8856 \special{!direct <a name=%
8857 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8858 \endgroup
8859 \Hy@activeanchortrue
8860 }
8861 \def\hyper@anchorend{%
8862 \special{!direct </a>}%
8863 \Hy@activeanchorfalse
8864 \Hy@RestoreLastskip
8865 }
8866 \def\hyper@anchor#1{%
8867 \Hy@SaveLastskip
8868 \begingroup
8869 \let\protect=\string
8870 \hyper@chars
8871 \leavevmode
8872 \special{!aname #1}%
8873 \special{!direct <a name=%
8874 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8875 \endgroup
8876 \Hy@activeanchortrue
8877 \bgroup\anchor@spot\egroup
8878 \special{!direct </a>}%
8879 \Hy@activeanchorfalse
8880 \Hy@RestoreLastskip
8881 }
8882 \def\@Form[#1]{%
8883 \typeout{Sorry, TeXpider does not yet support FORMs}%
8884 }
8885 \def\@endForm{}
8886 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8887 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8888 }
8889 \def\@TextField[#1]#2{% parameters, label
8890 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
8891 }
8892 \def\@CheckBox[#1]#2{% parameters, label
8893 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8894 }
8895 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

8896 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8897 }
8898 \def\@PushButton[#1]#2{% parameters, label
8899 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8900 }
8901 \def\@Reset[#1]#2{%
8902 \typeout{Sorry, TeXpider does not yet support FORMs}%
8903 }
8904 \def\@Submit[#1]#2{%
8905 \typeout{Sorry, TeXpider does not yet support FORMs}%
8906 }
8907 </vtexhtml>
8908 <*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.

```

8909 \ifx\mediaheight\@undefined
8910 \else
8911 \ifx\mediaheight\relax
8912 \else
8913 \ifHy@setpagesize
8914 \providecommand*\VTeXInitMediaSize{%
8915 \ifundefined{stockwidth}{%
8916 \ifdim\paperheight>0pt %
8917 \setlength\mediaheight\paperheight
8918 \fi
8919 \ifdim\paperheight>0pt %
8920 \setlength\mediawidth\paperwidth
8921 \fi
8922 }{%
8923 \ifdim\stockheight>0pt %
8924 \setlength\mediaheight\stockheight
8925 \fi
8926 \ifdim\stockwidth>0pt %
8927 \setlength\mediawidth\stockwidth
8928 \fi
8929 }%
8930 }%
8931 \AtBeginDocument{\VTeXInitMediaSize}%
8932 \fi
8933 \Hy@DisableOption{setpagesize}%
8934 \fi
8935 \fi

```

Older versions of VTeX require xyz in lower case.

```

8936 \providecommand*\@pdfview{xyz}
8937 \providecommand*\@pdfborder{0 0 1}
8938 \providecommand*\@pdfborderstyle{}
8939 \let\CurrentBorderColor\@linkbordercolor
8940 \def\hyper@anchor#1{%
8941 \Hy@SaveLastskip
8942 \begingroup
8943 \let\protect=\string
8944 \hyper@chars
8945 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8946 \endgroup
8947 \Hy@activeanchortrue

```



```

8948 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8949 \Hy@activeanchorfalse
8950 \Hy@RestoreLastskip
8951 }
8952 \def\hyper@anchorstart#1{%
8953 \Hy@SaveLastskip
8954 \begingroup
8955 \hyper@chars
8956 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8957 \endgroup
8958 \Hy@activeanchortrue
8959 }
8960 \def\hyper@anchorend{%
8961 \Hy@activeanchorfalse
8962 \Hy@RestoreLastskip
8963 }
8964 \def\@urltype{url}
8965 \def\Hy@undefinedname{UNDEFINED}
8966 \def\hyper@linkstart#1#2{%
8967 \Hy@pstringdef\Hy@pstringURI{#2}%
8968 \expandafter\Hy@colorlink\csname @#1color\endcsname
8969 \@ifundefined{@#1bordercolor}{%
8970 \let\CurrentBorderColor\relax
8971 }{%
8972 \edef\CurrentBorderColor{%
8973 \csname @#1bordercolor\endcsname
8974 }%
8975 }%
8976 \def\Hy@tempa{#1}%
8977 \ifx\Hy@tempa\@urltype
8978 \special{!%
8979 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8980 a=<%
8981 \ifHy@pdfa /F 4\fi
8982 \Hy@setpdfborder
8983 \ifx\CurrentBorderColor\relax
8984 \else
8985 /C [\CurrentBorderColor]%
8986 \fi
8987 >%
8988 }%
8989 \else
8990 \protected@edef\Hy@testname{#2}%
8991 \ifx\Hy@testname\@empty
8992 \Hy@Warning{%
8993 Empty destination name,\MessageBreak
8994 using '\Hy@undefinedname'%
8995 }%
8996 \let\Hy@testname\Hy@undefinedname
8997 \fi
8998 \special{!%
8999 aref \expandafter\HyperDestNameFilter
9000 \expandafter{\Hy@testname};%
9001 a=<%
9002 \ifHy@pdfa /F 4\fi
9003 \Hy@setpdfborder
9004 \ifx\CurrentBorderColor\relax

```

```

9005     \else
9006         /C [\CurrentBorderColor]%
9007     \fi
9008     >%
9009     }%
9010 \fi
9011 }
9012 \def\hyper@linkend{%
9013     \special{!endaref}%
9014     \Hy@endcolorlink
9015 }
9016 \def\hyper@linkfile#1#2#3{%
9017     \leavevmode
9018     \special{!%
9019         aref <%
9020         \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi
9021         f=#2>#3;%
9022         a=<%
9023         \ifHy@pdfa /F 4\fi
9024         \Hy@setpdfborder
9025         \ifx\@filebordercolor\relax
9026         \else
9027             /C [\@filebordercolor]%
9028         \fi
9029         >%
9030     }%
9031     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9032     \special{!endaref}%
9033 }
9034 \def\hyper@linkurl#1#2{%
9035     \begingroup
9036     \Hy@pstringdef\Hy@pstringURI{#2}%
9037     \hyper@chars
9038     \leavevmode
9039     \special{!%
9040         aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9041         a=<%
9042         \ifHy@pdfa /F 4\fi
9043         \Hy@setpdfborder
9044         \ifx\@urlbordercolor\relax
9045         \else
9046             /C [\@urlbordercolor]%
9047         \fi
9048         >%
9049     }%
9050     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9051     \special{!endaref}%
9052 \endgroup
9053 }
9054 \def\hyper@link#1#2#3{%
9055     \@ifundefined{@#1bordercolor}{%
9056         \let\CurrentBorderColor\relax
9057     }{%
9058         \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9059     }%
9060     \leavevmode
9061     \protected@edef\Hy@testname{#2}%

```

```

9062 \ifx\Hy@testname\@empty
9063   \Hy@Warning{%
9064     Empty destination name,\MessageBreak
9065     using '\Hy@undefinedname'%
9066   }%
9067   \let\Hy@testname\Hy@undefinedname
9068 \fi
9069 \special{!%
9070   aref \expandafter\HyperDestNameFilter
9071   \expandafter{\Hy@testname};%
9072   a=<%
9073   \ifHy@pdfa /F 4\fi
9074   \Hy@setpdfborder
9075   \ifx\CurrentBorderColor\relax
9076   \else
9077     /C [\CurrentBorderColor]%
9078   \fi
9079   >%
9080 }%
9081 \expandafter
9082 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9083 \special{!endaref}%
9084 }
9085 \def\hyper@image#1#2{%
9086   \hyper@linkurl{#2}{#1}%
9087 }
9088 \def\@hyper@launch run:#1\#2#3{%
9089   \Hy@pstringdef\Hy@pstringF{#1}%
9090   \Hy@pstringdef\Hy@pstringP{#3}%
9091   \leavevmode
9092   \special{!aref %
9093     <u=%
9094     /Type/Action%
9095     /S/Launch%
9096     /F(\Hy@pstringF)%
9097     \Hy@SetNewWindow
9098     \ifx\#3\%
9099     \else
9100       /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9101     \fi%
9102     >;%
9103     a=<%
9104     \ifHy@pdfa /F 4\fi
9105     \Hy@setpdfborder
9106     \ifx\@runbordercolor\relax
9107     \else
9108       /C[\@runbordercolor]%
9109     \fi
9110     >%
9111   }%
9112   \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9113   \special{!endaref}%
9114 }
9115 \def\Acrobatmenu#1#2{%
9116   \Hy@Acrobatmenu{#1}{#2}{%
9117     \special{!%
9118       aref <u=/S /Named /N /#1>;%

```

```

9119      a=<%
9120        \ifHy@pdfa /F 4\fi
9121        \Hy@setpdfborder
9122        \ifx\@menubordercolor\relax
9123        \else
9124        /C[\@menubordercolor]%
9125        \fi
9126      >%
9127    }%
9128    \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9129    \special{!endaref}%
9130  }%
9131 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for VT_EX 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{...}{...}` *globally*.

```

9132 \ifnum\Hy@VTeXversion<702 %
9133 \else
9134   \def\hyper@pagetransition{%
9135     \ifx\@pdfpagetransition\relax
9136     \else
9137     \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9138     \else
9139     \hvtex@parse@trans\@pdfpagetransition
9140     \fi
9141   \fi
9142 }%

```

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

Syntax of VT_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:

```

9143 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9144 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9145 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9146 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9147 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9148 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%

```

```
9149 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}}%
```

Optional parameters:

```
9150 \def\hvtex@par@dimension{/Dm}%
9151 \def\hvtex@par@direction{/Di}%
9152 \def\hvtex@par@duration{/D}%
9153 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
9154 \def\hvtex@gettoken{%
9155   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9156 }%
```

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

```
9157 \def\hvtex@gettoken@#1 #2\@nil{%
9158   \edef\hvtex@token{#1}%
9159   \edef\hvtex@buffer{#2}%
9160 }%
9161 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
9162 \let\hvtex@trans@code\@empty
9163 \let\hvtex@param@dimension\@empty
9164 \let\hvtex@param@direction\@empty
9165 \let\hvtex@param@duration\@empty
9166 \let\hvtex@param@motion\@empty
9167 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
9168 \hvtex@gettoken
9169 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
9170   \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
9171   \else
9172     \hvtex@gettoken
9173   \fi
9174 \fi
9175 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
9176 \hvtex@trans@params
9177 }%
```

Reentrant macro to parse optional parameters.

```
9178 \def\hvtex@trans@params{%
9179   \ifx\hvtex@buffer\@empty
9180   \else
9181     \hvtex@gettoken
9182     \let\hvtex@trans@par\hvtex@token
9183     \ifx\hvtex@buffer\@empty
9184     \else
9185       \hvtex@gettoken
9186       \ifx\hvtex@trans@par\hvtex@par@duration
```

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

```
9187       \let\hvtex@param@duration\hvtex@token
9188     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```

9189      \expandafter\edef\expandafter\hvtex@param@motion
9190      \expandafter{\expandafter\@gobble\hvtex@token}%
9191      \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

9192      \expandafter\edef\expandafter\hvtex@param@dimension
9193      \expandafter{\expandafter\@gobble\hvtex@token}%
9194      \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).

```

9195      \let\hvtex@param@direction\hvtex@token
9196      \fi\fi\fi\fi
9197      \fi
9198      \fi
9199      \ifx\hvtex@buffer\@empty
9200      \let\next\hvtex@produce@trans
9201      \else
9202      \let\next\hvtex@trans@params
9203      \fi
9204      \next
9205      }%

```

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

```

9206 \def\hvtex@produce@trans{%
9207 \let\vtex@trans@special\@empty
9208 \if S\hvtex@trans@code
9209 \edef\vtex@trans@special{\hvtex@trans@code
9210 \hvtex@param@dimension\hvtex@param@motion}%
9211 \else\if B\hvtex@trans@code
9212 \edef\vtex@trans@special{%
9213 \hvtex@trans@code\hvtex@param@dimension
9214 }%
9215 \else\if X\hvtex@trans@code
9216 \edef\vtex@trans@special{%
9217 \hvtex@trans@code\hvtex@param@motion
9218 }%
9219 \else\if W\hvtex@trans@code
9220 \edef\vtex@trans@special{%
9221 \hvtex@trans@code\hvtex@param@direction
9222 }%
9223 \else\if D\hvtex@trans@code
9224 \let\vtex@trans@special\hvtex@trans@code
9225 \else\if R\hvtex@trans@code
9226 \let\vtex@trans@special\hvtex@trans@code
9227 \else\if G\hvtex@trans@code
9228 \edef\vtex@trans@special{%
9229 \hvtex@trans@code\hvtex@param@direction
9230 }%
9231 \fi\fi\fi\fi\fi\fi
9232 \ifx\vtex@trans@special\@empty
9233 \else
9234 \ifx\hvtex@param@duration\@empty
9235 \else
9236 \setlength{\dimen@}{\hvtex@param@duration\p}%

```

I'm not guilty of possible overflow.

```

9237      \multiply\dimen@ \@m
9238      \edef\vtex@trans@special{%
9239        \vtex@trans@special,\strip@pt\dimen@
9240      }%
9241      \fi

      And all the mess is just for this.

9242      \special{!trans \vtex@trans@special}%
9243      \fi
9244    }%

9245    \def\hyper@pageduration{%
9246      \ifx \@pdfpageduration\relax
9247      \else
9248      \ifx \@pdfpageduration\@empty
9249        \special{!duration-}%
9250      \else
9251        \special{!duration \@pdfpageduration}%
9252      \fi
9253    \fi
9254  }%

9255  \def\hyper@pagehidden{%
9256    \ifHy@useHidKey
9257      \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9258    \fi
9259  }%

9260  \g@addto@macro\Hy@EveryPageBoxHook{%
9261    \hyper@pagetransition
9262    \hyper@pageduration
9263    \hyper@pagehidden
9264  }%
9265  \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

```

9266 \ifx \@pdfproducer\relax
9267   \def \@pdfproducer{VTeX}%
9268   \ifnum \Hy@VTeXversion > \z@
9269     \count@ \VTeXversion
9270     \divide \count@ 100 %
9271     \edef \@pdfproducer{\@pdfproducer\space v\the\count@}%
9272     \multiply \count@ -100 %
9273     \advance \count@ \VTeXversion
9274     \edef \@pdfproducer{%
9275       \@pdfproducer
9276       .\ifnum \count@ < 10 0\fi\the\count@
9277     \ifx \VTeXOS \@undefined\else
9278       \ifnum \VTeXOS > 0 %
9279         \ifnum \VTeXOS < 6 %
9280           \space(
9281           \ifcase \VTeXOS

```

```

9282      \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9283      \fi
9284      )%
9285      \fi
9286      \fi
9287      \fi
9288      ,\space
9289      \ifnum\OpMode=\@ne PDF\else PS\fi
9290      \space backend%
9291      \ifx\gexmode\@undefined\else
9292      \ifnum\gexmode>z@\space with GeX\fi
9293      \fi
9294      }%
9295      \fi
9296      \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).

```

9297 \def\PDF@SetupDoc{%
9298 \ifx\@pdfpagescrop\@empty
9299 \else
9300 \special{!pdfinfo b=<\@pdfpagescrop>}%
9301 \fi
9302 \ifx\@pdfstartpage\@empty
9303 \else
9304 \ifx\@pdfstartview\@empty
9305 \else
9306 \special{!onopen Page\@pdfstartpage}%
9307 \fi
9308 \fi
9309 \special{!pdfinfo p=</\@pdfpagemode>}%
9310 \ifx\@baseurl\@empty
9311 \else
9312 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9313 \fi
9314 \special{!pdfinfo v=<<<%
9315 \ifHy@toolbar\else /HideToolbar true\fi
9316 \ifHy@menubar\else /HideMenubar true\fi
9317 \ifHy>windowui\else /HideWindowUI true\fi
9318 \ifHy@fitwindow /FitWindow true\fi
9319 \ifHy@centerwindow /CenterWindow true\fi
9320 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9321 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9322 \Hy@UseNameKey{Direction}\@pdfdirection
9323 \Hy@UseNameKey{ViewArea}\@pdfviewarea

```



```

9324 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9325 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9326 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9327 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9328 \Hy@UseNameKey{Duplex}\@pdfduplex
9329 \ifx\@pdfpicktraybypdfsize\@empty
9330 \else
9331 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9332 \fi
9333 \ifx\@pdfprintpagerange\@empty
9334 \else
9335 /PrintPageRange\@pdfprintpagerange]%
9336 \fi
9337 \ifx\@pdfnumcopies\@empty
9338 \else
9339 /NumCopies \@pdfnumcopies
9340 \fi
9341 >>>}%
9342 \ifx\@pdfpagelayout\@empty
9343 \else
9344 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9345 \fi
9346 }%
9347 \HyInfo@AddonUnsupportedtrue
9348 \def\PDF@FinishDoc{%
9349 \Hy@UseMaketitleInfos
9350 \HyInfo@TrappedUnsupported
9351 \special{!pdfinfo a=<\@pdfauthor>}%
9352 \special{!pdfinfo t=<\@pdftitle>}%
9353 \special{!pdfinfo s=<\@pdfsubject>}%
9354 \special{!pdfinfo c=<\@pdfcreator>}%
9355 \ifx\@pdfproducer\relax
9356 \else
9357 \special{!pdfinfo r=<\@pdfproducer>}%
9358 \fi
9359 \special{!pdfinfo k=<\@pdfkeywords>}%
9360 \Hy@DisableOption{pdfauthor}%
9361 \Hy@DisableOption{pdftitle}%
9362 \Hy@DisableOption{pdfsubject}%
9363 \Hy@DisableOption{pdfcreator}%
9364 \Hy@DisableOption{pdfcreationdate}%
9365 \Hy@DisableOption{pdfmoddate}%
9366 \Hy@DisableOption{pdfproducer}%
9367 \Hy@DisableOption{pdfkeywords}%
9368 \Hy@DisableOption{pdftrapped}%
9369 \Hy@DisableOption{pdfinfo}%
9370 }
9371 \</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.

```

9372 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
9373 <package>\providecommand*\Hy@DistillerDestFix{}%
9374 <*pdfmark | dviwindo>
9375 \def\Hy@DistillerDestFix{%
9376   \begingroup
9377   \let\x\literalps@out

```

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

```

9378   \ifnum \@ifundefined{OpMode}{0}{%
9379     \@ifundefined{gexmode}{0}{%
9380       \ifnum\gexmode>0 \OpMode\else 0\fi
9381     }>1 %
9382   \def\x##1{%
9383     \immediate\special{!=##1}%
9384   }%
9385   \fi
9386   \x{%
9387     /product where{%
9388       pop %
9389       product(Distiller)search{%
9390         pop pop pop %
9391         version(.)search{%
9392           exch pop exch pop%
9393           (3011)eq{%
9394             gsave %
9395             newpath 0 0 moveto closepath clip%
9396             /Courier findfont 10 scalefont setfont %
9397             72 72 moveto(.)show %
9398             grestore%
9399           }if%
9400         }{pop}ifelse%
9401       }{pop}ifelse%
9402     }if%
9403   }%
9404   \endgroup
9405 }
9406 </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

```

9407 <*pdfmark>
9408 \Hy@breaklinks@unsupported
9409 \def\hyper@anchor#1{%
9410   \Hy@SaveLastskip
9411   \begingroup
9412     \pdfmark[\anchor@spot]{%
9413       pdfmark=/DEST,%
9414       linktype=anchor,%
9415       View=/\@pdfview \@pdfviewparams,%
9416       DestAnchor={#1}%
9417     }%
9418   \endgroup
9419   \Hy@RestoreLastskip
9420 }
9421 \@ifundefined{hyper@anchorstart}{\endinput}{}
9422 \def\hyper@anchorstart#1{%
9423   \Hy@SaveLastskip
9424   \literalps@out{H.S}%
9425   \xdef\hyper@currentanchor{#1}%
9426   \Hy@activeanchortrue
9427 }
9428 \def\hyper@anchorend{%
9429   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9430   \pdfmark{%
9431     pdfmark=/DEST,%
9432     linktype=anchor,%
9433     View=/\@pdfview \@pdfviewparams,%
9434     DestAnchor=\hyper@currentanchor,%
9435   }%
9436   \Hy@activeanchorfalse
9437   \Hy@RestoreLastskip
9438 }
9439 \def\hyper@linkstart#1#2{%
9440   \ifHy@breaklinks
9441   \else
9442     \leavevmode\hbox\bgroup
9443     \fi
9444     \expandafter\Hy@colorlink\csname @#1color\endcsname
9445     \literalps@out{H.S}%
9446     \xdef\hyper@currentanchor{#2}%
9447     \gdef\hyper@currentlinktype{#1}%
9448 }
9449 \def\hyper@linkend{%
9450   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9451   \@ifundefined{@\hyper@currentlinktype bordercolor}{%
9452     \let\Hy@tempcolor\relax
9453   }{%
9454     \edef\Hy@tempcolor{%
9455       \csname @\hyper@currentlinktype bordercolor\endcsname
9456     }%
9457   }%
9458   \pdfmark{%
9459     pdfmark=/ANN,%
9460     linktype=link,%
9461     Subtype=/Link,%
9462     PDFAFlags=4,%
9463     Dest=\hyper@currentanchor,%

```

```

9464   AcroHighlight=\@pdfhighlight,%
9465   Border=\@pdfborder,%
9466   BorderStyle=\@pdfborderstyle,%
9467   Color=\Hy@tempcolor,%
9468   Raw=H.B%
9469 }%
9470 \Hy@endcolorlink
9471 \ifHy@breaklinks
9472 \else
9473   \egroup
9474 \fi
9475 }

```

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.

```

9476 \begingroup
9477 \catcode'P=12 %
9478 \catcode'T=12 %
9479 \lowercase{\endgroup
9480 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
9481 }
9482 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

9483 \def\hyper@pagetransition{%
9484   \ifx\@pdfpagetransition\relax
9485   \else
9486     \ifx\@pdfpagetransition\@empty
9487       % 1. Does an old entry have to be deleted?
9488       % 2. If 1=yes, how to delete?
9489     \else
9490       \pdfmark{%
9491         pdfmark=/PUT,%
9492         Raw={%
9493           \string{ThisPage\string}%
9494           <</Trans << /S /\@pdfpagetransition\space >> >>%
9495         }%
9496       }%
9497     \fi
9498   \fi
9499 }

```

`\hyper@pageduration`

```

9500 \def\hyper@pageduration{%
9501   \ifx\@pdfpageduration\relax
9502   \else
9503     \ifx\@pdfpageduration\@empty
9504       % 1. Does an old entry have to be deleted?
9505       % 2. If 1=yes, how to delete?
9506     \else
9507       \pdfmark{%
9508         pdfmark=/PUT,%
9509         Raw={%
9510           \string{ThisPage\string}%
9511           <</Dur \@pdfpageduration>>%
9512         }%

```

```

9513     }%
9514     \fi
9515 \fi
9516 }

```

\hyper@pagehidden

```

9517 \def\hyper@pagehidden{%
9518   \ifHy@useHidKey
9519     \pdfmark{%
9520       pdfmark=/PUT,%
9521       Raw={%
9522         \string{ThisPage\string}%
9523         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9524       }%
9525     }%
9526   \fi
9527 }

9528 \g@addto@macro\Hy@EveryPageBoxHook{%
9529   \hyper@pagetransition
9530   \hyper@pageduration
9531   \hyper@pagehidden
9532 }

9533 \def\hyper@image#1#2{%
9534   \hyper@linkurl{#2}{#1}%
9535 }
9536 \def\Hy@undefinedname{UNDEFINED}
9537 \def\hyper@link#1#2#3{%
9538   \@ifundefined{@#1bordercolor}{%
9539     \let\Hy@tempcolor\relax
9540   }{%
9541     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
9542   }%
9543   \begingroup
9544     \protected@edef\Hy@testname{#2}%
9545     \ifx\Hy@testname\@empty
9546       \Hy@Warning{%
9547         Empty destination name,\MessageBreak
9548         using '\Hy@undefinedname'%
9549       }%
9550     \let\Hy@testname\Hy@undefinedname
9551   \fi
9552   \pdfmark[{#3}]{%
9553     Color=\Hy@tempcolor,%
9554     linktype={#1},%
9555     AcroHighlight=\@pdfhighlight,%
9556     Border=\@pdfborder,%
9557     BorderStyle=\@pdfborderstyle,%
9558     pdfmark=/ANN,%
9559     Subtype=/Link,%
9560     PDFAMlags=4,%
9561     Dest=\Hy@testname
9562   }%
9563   \endgroup
9564 }
9565 \newtoks\pdf@docset
9566 \def\PDF@FinishDoc{%

```

```

9567 \Hy@UseMaketitleInfos
9568 \HyInfo@GenerateAddons
9569 \let\Hy@temp\@empty
9570 \ifx\@pdfcreationdate\@empty
9571 \else
9572 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9573 \fi
9574 \ifx\@pdfmoddate\@empty
9575 \else
9576 \expandafter\def\expandafter\Hy@temp\expandafter{%
9577 \Hy@temp
9578 ModDate=\@pdfmoddate,%
9579 }%
9580 \fi
9581 \ifx\@pdfproducer\relax
9582 \else
9583 \expandafter\def\expandafter\Hy@temp\expandafter{%
9584 \Hy@temp
9585 Producer=\@pdfproducer,%
9586 }%
9587 \fi
9588 \expandafter
9589 \pdfmark\expandafter{%
9590 \Hy@temp
9591 pdfmark=/DOCINFO,%
9592 Title=\@pdftitle,%
9593 Subject=\@pdfsubject,%
9594 Creator=\@pdfcreator,%
9595 Author=\@pdfauthor,%
9596 Keywords=\@pdfkeywords,%
9597 Trapped=\@pdftrapped
9598 }%
9599 \ifx\HyInfo@Addons\@empty
9600 \else
9601 \pdfmark{%
9602 pdfmark=/DOCINFO,%
9603 Raw={\HyInfo@Addons}%
9604 }%
9605 \fi
9606 \Hy@DisableOption{pdfauthor}%
9607 \Hy@DisableOption{pdftitle}%
9608 \Hy@DisableOption{pdfsubject}%
9609 \Hy@DisableOption{pdfcreator}%
9610 \Hy@DisableOption{pdfcreationdate}%
9611 \Hy@DisableOption{pdfmoddate}%
9612 \Hy@DisableOption{pdfproducer}%
9613 \Hy@DisableOption{pdfkeywords}%
9614 \Hy@DisableOption{pdftrapped}%
9615 \Hy@DisableOption{pdfinfo}%
9616 }
9617 \def\PDF@SetupDoc{%
9618 \def\Hy@temp{}%
9619 \ifx\@pdfstartpage\@empty
9620 \else
9621 \ifx\@pdfstartview\@empty
9622 \else
9623 \edef\Hy@temp{%

```

```

9624     ,Page=\@pdfstartpage
9625     ,View=\@pdfstartview
9626   }%
9627 \fi
9628 \fi
9629 \edef\Hy@temp{%
9630   \noexpand\pdfmark{%
9631     pdfmark=/DOCVIEW,%
9632     PageMode=/\@pdfpagemode
9633   \Hy@temp
9634   }%
9635 }%
9636 \Hy@temp
9637 \ifx\@pdfpagescrop\@empty
9638 \else
9639   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9640 \fi
9641 \edef\Hy@temp{%
9642   \ifHy@toolbar\else /HideToolbar true\fi
9643   \ifHy@menubar\else /HideMenubar true\fi
9644   \ifHy>windowui\else /HideWindowUI true\fi
9645   \ifHy@fitwindow /FitWindow true\fi
9646   \ifHy@centerwindow /CenterWindow true\fi
9647   \ifHy@displaydoctitle /DisplayDocTitle true\fi
9648   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9649   \Hy@UseNameKey{Direction}\@pdfdirection
9650   \Hy@UseNameKey{ViewArea}\@pdfviewarea
9651   \Hy@UseNameKey{ViewClip}\@pdfviewclip
9652   \Hy@UseNameKey{PrintArea}\@pdfprintarea
9653   \Hy@UseNameKey{PrintClip}\@pdfprintclip
9654   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9655   \Hy@UseNameKey{Duplex}\@pdfduplex
9656   \ifx\@pdfpicktraybypdfsize\@empty
9657   \else
9658     /PickTrayByPDFSize \@pdfpicktraybypdfsize
9659   \fi
9660   \ifx\@pdfprintpagerange\@empty
9661   \else
9662     /PrintPageRange[\@pdfprintpagerange]%
9663   \fi
9664   \ifx\@pdfnumcopies\@empty
9665   \else
9666     /NumCopies \@pdfnumcopies
9667   \fi
9668 }%
9669 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9670 \pdfmark{%
9671   pdfmark=/PUT,%
9672   Raw={%
9673     \string{Catalog\string}<<%
9674     \ifx\Hy@temp\@empty
9675     \else
9676       /ViewerPreferences<<\Hy@temp>>%
9677     \fi
9678     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9679     \ifx\@pdflang\@empty
9680     \else

```

```

9681      /Lang(\@pdflang)%
9682      \fi
9683      \ifx\@baseurl\@empty
9684      \else
9685      /URI<</Base(\Hy@pstringB)>>%
9686      \fi
9687      >>%
9688      }%
9689      }%
9690  }
9691  \pdfmark
9692  \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.

```

9693 \newif\ifHy@pdfmarkerror
9694 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
9695 \def\pdfmark@[#1]#2{%
9696   \Hy@pdfmarkerrorfalse
9697   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9698   \@processme
9699   \let\pdf@type\relax
9700   \setkeys{PDF}{#2}%
9701   \ifHy@pdfmarkerror
9702   \else
9703     \ifx\pdf@type\relax
9704       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9705       \ifx\#1\%
9706       \else
9707         \pdf@rect{#1}%
9708         \fi
9709       \else
9710         \ifx\#1\%
9711         \literalps@out{%
9712           [\the\pdf@toks\space\pdf@type\space pdfmark%
9713           ]%
9714         \else
9715           \@ifundefined{@\pdf@linktype color}{%
9716             \Hy@colorlink\@linkcolor
9717           }{%
9718             \expandafter\Hy@colorlink
9719             \csname @\pdf@linktype color\endcsname
9720           }%
9721           \pdf@rect{#1}%
9722           \literalps@out{%
9723             [\the\pdf@toks\space\pdf@type\space pdfmark%
9724             ]%
9725             \Hy@endcolorlink
9726           \fi
9727         \fi
9728         \fi
9729 }

```

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 (tobyth@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}
```

```
9730 \newsavebox{\pdf@box}
9731 \providecommand*{\Hy@setouterhbox}{\sbox}
9732 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9733 \def\Hy@DEST{/DEST}
9734 \def\pdf@rect#1{%
9735   \leavevmode
9736   \ifHy@breaklinks
9737     \Hy@setouterhbox\pdf@box{#1}%
9738   \else
9739     \sbox\pdf@box{#1}%
9740   \fi
9741   \dimen@ht\pdf@box
9742   \ifdim\dp\pdf@box=\z@
9743     \literalps@out{H.S}%
9744   \else
9745     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9746   \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...).

```
9747 \ifHy@breaklinks
9748   \expandafter\Hy@breaklinksunhbox
9749 \else
9750   \expandafter\box
9751 \fi
9752 \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
```

```
9753 \ifdim\dimen@=\z@
9754   \literalps@out{H.R}%
9755 \else
9756   \raise\dimen@\hbox{\literalps@out{H.R}}%
9757 \fi
9758 \ifx\pdf@type\Hy@DEST
9759 \else
9760   \pdf@addtoksx{H.B}%
9761 \fi
9762 }
```

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.

```
9763 \newtoks\pdf@toks
9764 \newtoks\pdf@defaulttoks
9765 \pdf@defaulttoks={}
9766 \def\pdf@addtoks#1#2{%
```

```

9767 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9768 \@processme
9769 }
9770 \def\pdf@addtoksx#1{%
9771 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9772 \@processme
9773 }
9774 \def\PDFdefaults#1{%
9775 \pdf@defaulttoks={#1}%
9776 }

```

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

```

9777 % what is the type of pdfmark?
9778 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9779 % what is the link type?
9780 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9781 \def\pdf@linktype{link}
9782 % parameter is a stream of PDF
9783 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
9784 % parameter is a name
9785 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9786 % parameter is a array
9787 \define@key{PDF}{Border}{%
9788 \edef\Hy@temp{#1}%
9789 \ifx\Hy@temp\@empty
9790 \else
9791 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9792 \fi
9793 }
9794 \let\Hy@BorderArrayPatch\@empty
9795 % parameter is a dictionary
9796 \define@key{PDF}{BorderStyle}{%
9797 \edef\Hy@temp{#1}%
9798 \ifx\Hy@temp\@empty
9799 \else
9800 \pdf@addtoks{<<#1>>}{BS}%
9801 \fi
9802 }
9803 % parameter is a array
9804 \define@key{PDF}{Color}{%
9805 \ifx\relax#1\relax
9806 \else
9807 \pdf@addtoks{[#1]}{Color}% hash-ok
9808 \fi
9809 }
9810 % parameter is a string
9811 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
9812 % parameter is a integer
9813 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9814 % parameter is a array
9815 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9816 % parameter is a string
9817 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9818 % parameter is a string or file
9819 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9820 % parameter is a destination
9821 \define@key{PDF}{Dest}{%
9822 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%

```

```

9823 \ifx\Hy@pstringDest\@empty
9824 \Hy@pdfmarkerrortrue
9825 \Hy@Warning{Destination with empty name ignored}%
9826 \else
9827 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9828 \fi
9829 }
9830 \define@key{PDF}{DestAnchor}{%
9831 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9832 \ifx\Hy@pstringDest\@empty
9833 \Hy@pdfmarkerrortrue
9834 \Hy@Warning{Destination with empty name ignored}%
9835 \else
9836 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9837 \fi
9838 }
9839 % parameter is a string
9840 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9841 % parameter is a string
9842 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9843 % parameter is a int
9844 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9845 \define@key{PDF}{PDFAFlags}{%
9846 \ifHy@pdfa
9847 \pdf@addtoks{#1}{F}%
9848 \fi
9849 }
9850 % parameter is a name
9851 \define@key{PDF}{AcroHighlight}{%
9852 \begingroup
9853 \edef\x{#1}%
9854 \expandafter\endgroup\ifx\x\@empty
9855 \else
9856 \pdf@addtoks{#1}{H}%
9857 \fi
9858 }
9859 % parameter is a string
9860 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9861 % parameter is a string
9862 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9863 % parameter is a string
9864 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9865 % parameter is a string
9866 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9867 % parameter is a Boolean
9868 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
9869 % parameter is a integer or name
9870 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9871 % parameter is a name
9872 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9873 % parameter is a string
9874 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
9875 % parameter is a array
9876 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
9877 % parameter is a integer
9878 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9879 % parameter is a name

```

```

9880 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9881 % parameter is a string
9882 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
9883 % parameter is a string
9884 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
9885 % parameter is a string
9886 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
9887 % parameter is an array
9888 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
9889 % parameter is a string
9890 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9891 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
9892 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
9893 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
9894 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9895 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
9896 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
9897 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
9898 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9899 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
9900 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
9901 \define@key{PDF}{Trapped}{%
9902   \edef\Hy@temp{#1}%
9903   \ifx\Hy@temp\@empty
9904     \else
9905       \pdf@addtoks{/#1}{Trapped}%
9906     \fi
9907 }
9908
9909 </pdfmarkbase>
9910 <*pdfmark>
9911 \def\Acrobatmenu#1#2{%
9912   \Hy@Acrobatmenu{#1}{#2}{%
9913     \pdfmark[{#2}]{%
9914       linktype=menu,%
9915       pdfmark=/ANN,%
9916       AcroHighlight=\@pdfhighlight,%
9917       Border=\@pdfborder,%
9918       BorderStyle=\@pdfborderstyle,%
9919       Action={<< /Subtype /Named /N /#1 >>},%
9920       Subtype=/Link,%
9921       PDFAFlags=4%
9922     }%
9923   }%
9924 }

```

And now for some useful examples:

```

9925 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9926 \def\PDFNextPage@[#1]#2{%
9927   \pdfmark[{#2}]{%
9928     #1,%
9929     Border=\@pdfborder,%
9930     BorderStyle=\@pdfborderstyle,%
9931     Color=.2 .1 .5,%
9932     pdfmark=/ANN,%
9933     Subtype=/Link,%

```

```

9934   PDFAFlags=4,%
9935   Page=/Next%
9936 }%
9937 }
9938 \def\PDFPreviousPage{%
9939   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
9940 }
9941 \def\PDFPreviousPage@[#1]#2{%
9942   \pdfmark[#{#2}]{%
9943     #1,%
9944     Border=\@pdfborder,%
9945     BorderStyle=\@pdfborderstyle,%
9946     Color=.4 .4 .1,%
9947     pdfmark=/ANN,%
9948     Subtype=/Link,%
9949     PDFAFlags=4,%
9950     Page=/Prev%
9951   }%
9952 }
9953 \def\PDFOpen#1{%
9954   \pdfmark{#1,pdfmark=/DOCVIEW}%
9955 }

```

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

```

9956 \def\hyper@linkurl#1#2{%
9957   \begingroup
9958   \Hy@pstringdef\Hy@pstringURI{#2}%
9959   \hyper@chars
9960   \leavevmode
9961   \pdfmark[#{#1}]{%
9962     pdfmark=/ANN,%
9963     linktype=url,%
9964     AcroHighlight=\@pdfhighlight,%
9965     Border=\@pdfborder,%
9966     BorderStyle=\@pdfborderstyle,%
9967     Color=\@urlbordercolor,%
9968     Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9969     Subtype=/Link,%
9970     PDFAFlags=4%
9971   }%
9972   \endgroup
9973 }
9974 \def\hyper@linkfile#1#2#3{%
9975   \begingroup
9976   \Hy@pstringdef\Hy@pstringF{#2}%
9977   \Hy@pstringdef\Hy@pstringD{#3}%
9978   \leavevmode
9979   \pdfmark[#{#1}]{%
9980     pdfmark=/ANN,%
9981     Subtype=/Link,%
9982     PDFAFlags=4,%
9983     AcroHighlight=\@pdfhighlight,%
9984     Border=\@pdfborder,%
9985     BorderStyle=\@pdfborderstyle,%
9986     linktype=file,%
9987     Color=\@filebordercolor,%
9988     Action={%
9989       <<%

```

```

9990      /S/GoToR%
9991      \Hy@SetNewWindow
9992      /F(\Hy@pstringF)%
9993      /D\ifx\#3\0 \@pdfstartview\else(\Hy@pstringD)cvn\fi
9994      >>%
9995      }%
9996      }%
9997      \endgroup
9998 }
9999 \def\@hyper@launch run:#1\#2#3{%
10000 \begingroup
10001   \Hy@pstringdef\Hy@pstringF{#1}%
10002   \Hy@pstringdef\Hy@pstringP{#3}%
10003   \leavevmode
10004   \pdfmark[{#2}]{%
10005     pdfmark=/ANN,%
10006     Subtype=/Link,%
10007     PDFAFlags=4,%
10008     AcroHighlight=\@pdfhighlight,%
10009     Border=\@pdfborder,%
10010     BorderStyle=\@pdfborderstyle,%
10011     linktype=run,%
10012     Color=\@runbordercolor,%
10013     Action={%
10014       <<%
10015       /S/Launch%
10016       \Hy@SetNewWindow
10017       /F(\Hy@pstringF)%
10018       \ifx\#3\%
10019       \else
10020       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10021       \fi
10022       >>%
10023       }%
10024       }%
10025     \endgroup
10026   }
10027 }</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.

```

10028 < *dvips>
10029 \providecommand*{\XR@ext}{pdf}
10030 \def\Hy@raisedlink{}
10031 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10032 \def\headerps@out#1{\special{! #1}}%
10033 \input{pdfmark.def}%
10034 \ifx\@pdfproducer\relax
10035   \def\@pdfproducer{dvips + Distiller}%
10036 \fi
10037 \providecommand*\@pdfborder{0 0 1}

```

```

10038 \providecommand*\@pdfborderstyle{}
10039 \providecommand*\@pdfview{XYZ}
10040 \providecommand*\@pdfviewparams{ H.V}
10041 \def\Hy@BorderArrayPatch{BorderArrayPatch}

10042 \g@addto@macro\Hy@FirstPageHook{%
10043   \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.

```

10044   /DvipsToPDF{72.27 mul Resolution div} def%
10045   /PDFToDvips{72.27 div Resolution mul} def%
10046   /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.

```

10047   /BorderArrayPatch{%
10048     [exch{%
10049       dup dup type/integertype eq exch type/realtype eq or%
10050       {BPToDvips}if%
10051     }forall]%
10052   }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.

```

10053   /HyperBorder {1 PDFToDvips} def%
10054   /H.V {pdf@hoff pdf@voff null} def%
10055   /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

```

10056   /H.S {%
10057     currentpoint %
10058     HyperBorder add /pdf@lly exch def %
10059     dup DvipsToPDF 72 add /pdf@hoff exch def %
10060     HyperBorder sub /pdf@llx exch def%
10061   } def%

```

The calculation of upper left y is done without raising the point in T_EX, 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

```

10062   /H.L {%
10063     2 sub dup%

```

```

10064 /HyperBasePt exch def %
10065 PDFToDvips /HyperBaseDvips exch def %
10066 currentpoint %
10067 HyperBaseDvips sub /pdf@ury exch def%
10068 /pdf@urx exch def%
10069 } def%
10070 /H.A {%
10071 H.L %
10072 % | /pdf@voff| = the distance from the top of the page to a point
10073 % | \baselineskip| above the current point in PDF coordinates
10074 currentpoint exch pop %
10075 vsize 72 sub exch DvipsToPDF %
10076 HyperBasePt sub % baseline skip
10077 sub /pdf@voff exch def%
10078 } def%
10079 /H.R {%
10080 currentpoint %
10081 HyperBorder sub /pdf@ury exch def %
10082 HyperBorder add /pdf@urx exch def %
10083 % | /pdf@voff| = the distance from the top of the page to the current point, in
10084 % PDF coordinates
10085 currentpoint exch pop vsize 72 sub %
10086 exch DvipsToPDF sub /pdf@voff exch def%
10087 } def%
10088 }%
10089 }
10090 \AtBeginShipoutFirst{%
10091 \ifHy@setpagesize
10092 \begingroup
10093 \@ifundefined{stockwidth}{%
10094 \ifdim\paperwidth>\z@
10095 \ifdim\paperheight>\z@
10096 \special{papersize=\the\paperwidth,\the\paperheight}%
10097 \fi
10098 \fi
10099 }{%
10100 \ifdim\stockwidth>\z@
10101 \ifdim\stockheight>\z@
10102 \special{papersize=\the\stockwidth,\the\stockheight}%
10103 \fi
10104 \fi
10105 }%
10106 \endgroup
10107 \fi
10108 \Hy@DisableOption{setpagesize}%
10109 }
10110 </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.

```

10111 <*vtexpdfmark>
10112 \providecommand*{\XR@ext}{pdf}

```



```

10113 \def\Hy@raisedlink{}
10114 \def\literalps@out#1{\special{pS:#1}}%
10115 \def\headerps@out#1{\immediate\special{pS:#1}}%
10116 \input{pdfmark.def}%
10117 \ifx\@pdfproducer\relax
10118   \ifnum\OpMode=\@ne
10119     \def\@pdfproducer{VTeX}%
10120   \else
10121     \def\@pdfproducer{VTeX + Distiller}%
10122   \fi
10123 \fi
10124 \providecommand*\@pdfborder{0 0 1}
10125 \providecommand*\@pdfborderstyle{}
10126 \providecommand*\@pdfview{XYZ}
10127 \providecommand*\@pdfviewparams{ H.V}

10128 \g@addto@macro\Hy@FirstPageHook{%
10129   \headerps@out{%
10130     /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.

```

10131   /HyperBorder {1} def%
10132   /H.V {pdf@hoff pdf@voff null} def%
10133   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10134   /H.S {%
10135     currentpoint %
10136     HyperBorder sub%
10137     /pdf@lly exch def %
10138     dup 72 add /pdf@hoff exch def %
10139     HyperBorder sub%
10140     /pdf@llx exch def%
10141   } def%

```

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

```

10142   /H.L {%
10143     2 sub%
10144     /HyperBasePt exch def %
10145     currentpoint %
10146     HyperBasePt add HyperBorder add%
10147     /pdf@ury exch def %
10148     HyperBorder add%
10149     /pdf@urx exch def%
10150   } def%
10151   /H.A {%
10152     H.L %
10153     currentpoint exch pop %
10154     vsize 72 sub exch %
10155     HyperBasePt add add%
10156     /pdf@voff exch def%
10157   } def%

```

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

```

10158   /H.R {%

```

```

10159     currentpoint %
10160     HyperBorder add%
10161     /pdf@ury exch def %
10162     HyperBorder add%
10163     /pdf@urx exch def %
10164     currentpoint exch pop vsize 72 sub add%
10165     /pdf@voff exch def%
10166   } def%
10167 }%
10168 }
10169 </vtexpdfmark>

```

46.11 Textures

```

10170 <*textures>
10171 \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.

```

10172 \begingroup
10173   \obeylines %
10174   \gdef\Hy@ps@CR{\noexpand
10175   }%
10176 \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`.

```

10177 \def\literalps@out#1{%
10178   \special{postscript 0 0 transform}%
10179   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10180 }%
10181 %

```

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.

```

10182 \def\headerps@out#1{%
10183   \special{%
10184     prepostscript TeXdict begin\Hy@ps@CR
10185     #1\Hy@ps@CR
10186     end%
10187   }%
10188 }%
10189 %

```

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.

```

10190 \g@addto@macro\Hy@FirstPageHook{%
10191   \headerps@out{%
10192     /betterpdfmark {%
10193       systemdict begin %
10194         dup /BP eq%
10195         {cleartomark gsave nulldevice []}%
10196         {dup /EP eq%
10197           {cleartomark cleartomark grestore}%
10198           {cleartomark}%
10199         ifelse%
10200       }ifelse %
10201     end%
10202   }def\Hy@ps@CR
10203   ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10204 }% end of \headerps@out
10205 }% end of \AtBeginShipoutFirst
10206 %
10207 \input{pdfmark.def}%
10208 %
10209 \ifx\@pdfproducer\relax
10210   \def\@pdfproducer{Textures + Distiller}%
10211 \fi
10212 \providecommand*\@pdfborder{0 0 1}
10213 \providecommand*\@pdfborderstyle{}
10214 \providecommand*\@pdfview{XYZ}
10215 \providecommand*\@pdfviewparams{ H.V}
10216 %

```

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 .

```

10217 \AfterBeginDocument{%
10218   \headerps@out{%

```

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

```

10219   /vsize {\Hy@pageheight} def%
10220   /DvipsToPDF {} def%
10221   /PDFToDvips {} def%
10222   /BPToDvips {} def%
10223   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10224   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10225   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10226   /H.S {%
10227     currentpoint %
10228     HyperBorder add /pdf@lly exch def %
10229     dup DvipsToPDF 72 add /pdf@hoff exch def %
10230     HyperBorder sub /pdf@llx exch def%
10231   } def\Hy@ps@CR
10232   /H.L {%
10233     2 sub %
10234     PDFToDvips /HyperBase exch def %
10235     currentpoint %

```

```

10236   HyperBase sub /pdf@ury exch def%
10237   /pdf@urx exch def%
10238 } def\Hy@ps@CR
10239 /H.A {%
10240   H.L %
10241   currentpoint exch pop %
10242   vsize 72 sub exch DvipsToPDF %
10243   HyperBase sub % baseline skip
10244   sub /pdf@voff exch def%
10245 } def\Hy@ps@CR
10246 /H.R {%
10247   currentpoint %
10248   HyperBorder sub /pdf@ury exch def %
10249   HyperBorder add /pdf@urx exch def %
10250   currentpoint exch pop vsize 72 sub %
10251   exch DvipsToPDF sub /pdf@voff exch def%
10252 } def\Hy@ps@CR
10253 }%
10254 }

10255 \AfterBeginDocument{%
10256   \ifHy@colorlinks
10257     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10258   \fi
10259 }

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertext.def` with what is established by loading `pdfmark.def`, or any other driver.

```

10260 \expandafter\let\expandafter\keepPDF@SetupDoc
10261   \csname PDF@SetupDoc\endcsname
10262 \def\PDF@SetupDoc{%
10263   \ifx\@baseurl\@empty
10264   \else
10265     \special{html:<base href="\@baseurl">}%
10266   \fi
10267   \keepPDF@SetupDoc
10268 }

10269 \def\hyper@anchor#1{%
10270   \Hy@SaveLastskip
10271   \begingroup
10272     \let\protect=\string
10273     \special{html:<a name=%
10274       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10275   \endgroup
10276   \Hy@activeanchortrue
10277   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10278   \special{html:</a>}%
10279   \Hy@activeanchorfalse
10280   \Hy@RestoreLastskip
10281 }

10282 \def\hyper@anchorstart#1{%
10283   \Hy@SaveLastskip
10284   \begingroup
10285     \hyper@chars
10286     \special{html:<a name=%
10287       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10288   \endgroup
10289   \Hy@activeanchortrue

```

```

10290 }
10291 \def\hyper@anchorend{%
10292   \special{html:</a>}%
10293   \Hy@activeanchorfalse
10294   \Hy@RestoreLastskip
10295 }
10296 \def\@urlltype{url}
10297 \def\hyper@linkstart#1#2{%
10298   \expandafter\Hy@colorlink\csname @#1color\endcsname
10299   \def\Hy@tempa{#1}%
10300   \ifx\Hy@tempa\@urlltype
10301     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10302   \else
10303     \begingroup
10304       \hyper@chars
10305       \special{%
10306         html:<a href=%
10307         \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>%
10308       }%
10309     \endgroup
10310   \fi
10311 }
10312 \def\hyper@linkend{%
10313   \special{html:</a>}%
10314   \Hy@endcolorlink
10315 }
10316 \def\hyper@linkfile#1#2#3{%
10317   \hyper@linkurl{#1}{%
10318     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10319   }%
10320 }
10321 \def\hyper@linkurl#1#2{%
10322   \leavevmode
10323   \ifHy@raiselinks
10324     \setbox\@tempboxa=\color@hbox #1\color@endbox
10325     \@linkdim\dp\@tempboxa
10326     \lower\@linkdim\hbox{%
10327       \hyper@chars
10328       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10329     }%
10330     \Hy@colorlink\@urlcolor#1%
10331     \@linkdim\ht\@tempboxa
10332     \advance\@linkdim by -6.5\p@
10333     \raise\@linkdim\hbox{\special{html:</a>}}%
10334     \Hy@endcolorlink
10335   \else
10336     \begingroup
10337       \hyper@chars
10338       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10339       \Hy@colorlink\@urlcolor#1%
10340       \special{html:</a>}%
10341       \Hy@endcolorlink
10342     \endgroup
10343   \fi
10344 }

```

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

```

10345 \def\hyper@link#1#2#3{%

```

```

10346 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
10347 }
10348 \def\hyper@image#1#2{%
10349 \begingroup
10350 \hyper@chars
10351 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10352 \endgroup
10353 }
10354 </textures>

```

46.12 dvipsone

```

10355 % \subsection{dvipsone driver}
10356 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10357 % |\special| commands.
10358 (*dvipsone)
10359 \providecommand*\XR@ext}{pdf}
10360 \def\Hy@raisedlink{}
10361 \providecommand*\@pdfborder{0 0 1}
10362 \providecommand*\@pdfborderstyle{}
10363 \def\literalps@out#1{\special{ps:#1}}%
10364 \def\headerps@out#1{\special{headertext=#1}}%
10365 \input{pdfmark.def}%
10366 \ifx\@pdfproducer\relax
10367 \def\@pdfproducer{dvipsone + Distiller}%
10368 \fi
10369 \HyInfo@AddonUnsupportedtrue
10370 \def\PDF@FinishDoc{%
10371 \Hy@UseMaketitleInfos
10372 \HyInfo@TrappedUnsupported
10373 \special{PDF: Keywords \@pdfkeywords}%
10374 \special{PDF: Title \@pdftitle}%
10375 \special{PDF: Creator \@pdfcreator}%
10376 \ifx\@pdfcreationdate\@empty
10377 \else
10378 \special{PDF: CreationDate \@pdfcreationdate}%
10379 \fi
10380 \ifx\@pdfmoddate\@empty
10381 \else
10382 \special{PDF: ModDate \@pdfmoddate}%
10383 \fi
10384 \special{PDF: Author \@pdfauthor}%
10385 \ifx\@pdfproducer\relax
10386 \else
10387 \special{PDF: Producer \@pdfproducer}%
10388 \fi
10389 \special{PDF: Subject \@pdfsubject}%
10390 \Hy@DisableOption{pdfauthor}%
10391 \Hy@DisableOption{pdftitle}%
10392 \Hy@DisableOption{pdfsubject}%
10393 \Hy@DisableOption{pdfcreator}%
10394 \Hy@DisableOption{pdfcreationdate}%
10395 \Hy@DisableOption{pdfmoddate}%
10396 \Hy@DisableOption{pdfproducer}%
10397 \Hy@DisableOption{pdfkeywords}%
10398 \Hy@DisableOption{pdftrapped}%
10399 \Hy@DisableOption{pdfinfo}%

```

```

10400 }
10401 \def\PDF@SetupDoc{%
10402   \def\Hy@temp{}%
10403   \ifx\@pdfstartpage\@empty
10404   \else
10405     \ifx\@pdfstartview\@empty
10406     \else
10407       \edef\Hy@temp{%
10408         ,Page=\@pdfstartpage
10409         ,View=\@pdfstartview
10410       }%
10411     \fi
10412   \fi
10413   \edef\Hy@temp{%
10414     \noexpand\pdfmark{%
10415       pdfmark=/DOCVIEW,%
10416       PageMode=/\@pdfpagemode
10417     }\Hy@temp
10418   }%
10419 }%
10420 \Hy@temp
10421 \ifx\@pdfpagescrop\@empty
10422 \else
10423   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10424 \fi
10425 \edef\Hy@temp{%
10426   \ifHy@toolbar\else /HideToolbar true\fi
10427   \ifHy@menubar\else /HideMenubar true\fi
10428   \ifHy>windowui\else /HideWindowUI true\fi
10429   \ifHy@fitwindow /FitWindow true\fi
10430   \ifHy@centerwindow /CenterWindow true\fi
10431   \ifHy@displaydoctitle /DisplayDocTitle true\fi
10432   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10433   \Hy@UseNameKey{Direction}\@pdfdirection
10434   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10435   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10436   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10437   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10438   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10439   \Hy@UseNameKey{Duplex}\@pdfduplex
10440   \ifx\@pdfpicktraybypdfsize\@empty
10441   \else
10442     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10443   \fi
10444   \ifx\@pdfprintpagerange\@empty
10445   \else
10446     /PrintPageRange[\@pdfprintpagerange]%
10447   \fi
10448   \ifx\@pdfnumcopies\@empty
10449   \else
10450     /NumCopies \@pdfnumcopies
10451   \fi
10452 }%
10453 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10454 \pdfmark{%
10455   pdfmark=/PUT,%
10456   Raw={%

```

```

10457 \string{Catalog\string}<<%
10458 \ifx\Hy@temp\@empty
10459 \else
10460 /ViewerPreferences<<\Hy@temp>>%
10461 \fi
10462 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10463 \ifx\@pdflang\@empty
10464 \else
10465 /Lang(\@pdflang)%
10466 \fi
10467 \ifx\@baseurl\@empty
10468 \else
10469 /URI<</Base(\Hy@pstringB)>>%
10470 \fi
10471 >>%
10472 }%
10473 }%
10474 }
10475 \providecommand*\@pdfview{XYZ}
10476 \providecommand*\@pdfviewparams{ %
10477 gsave revscl currentpoint grestore %
10478 72 add exch pop null exch null%
10479 }
10480 \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 .

```

10481 \g@addto@macro\Hy@FirstPageHook{%
10482 \headerps@out{%

```

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

```

10483 /DvipsToPDF { 65781 div } def%
10484 /PDFToDvips { 65781 mul } def%
10485 /BPToDvips{65781 mul}def%
10486 /HyperBorder { 1 PDFToDvips } def%
10487 /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.

```

10488 /BorderArrayPatch{%
10489 [exch{%
10490 dup dup type/integertype eq exch type/realtype eq or%
10491 {BPToDvips}if%
10492 }forall]%
10493 }def%
10494 /H.S {%
10495 currentpoint %
10496 HyperBorder add /pdf@lly exch def %
10497 dup DvipsToPDF 72 add /pdf@hoff exch def %
10498 HyperBorder sub /pdf@llx exch def%
10499 } def%
10500 /H.L {%
10501 2 sub %
10502 PDFToDvips /HyperBase exch def %
10503 currentpoint %

```



```

10504   HyperBase sub /pdf@ury exch def%
10505   /pdf@urx exch def%
10506   } def%
10507   /H.A {%
10508     H.L %
10509     currentpoint exch pop %
10510     HyperBase sub % baseline skip
10511     DvipsToPDF /pdf@voff exch def%
10512   } def%
10513   /H.R {%
10514     currentpoint %
10515     HyperBorder sub /pdf@ury exch def %
10516     HyperBorder add /pdf@urx exch def %
10517     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
10518   } def%
10519   }%
10520 }
10521 </dvipsone>

```

46.13 TeX4ht

```

10522 <*tex4ht>
10523 \providecommand*{\XR@ext}{html}
10524 \def\Hy@raisedlink{}
10525 \ifpackageloaded{tex4ht}{%
10526   \typeout{hyperref tex4ht: tex4ht already loaded}%
10527 }{%
10528   \RequirePackage[hTeX4ht]{tex4ht}%
10529 }
10530 \hyperlinkfileprefix{}
10531 \def\PDF@FinishDoc{}
10532 \def\PDF@SetupDoc{%
10533   \ifx\@baseurl\@empty
10534     \else
10535       \special{t4ht=<base href="\@baseurl">}%
10536     \fi
10537 }
10538 \def\hyper@anchor#1{%
10539   \Hy@SaveLastskip
10540   \begingroup
10541     \let\protect=\string
10542     \special{t4ht=<a name=%
10543       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10544   \endgroup
10545   \Hy@activeanchortrue
10546   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10547   \special{t4ht=</a>}%
10548   \Hy@activeanchorfalse
10549   \Hy@RestoreLastskip
10550 }
10551 \def\hyper@anchorstart#1{%
10552   \Hy@SaveLastskip
10553   \begingroup
10554     \hyper@chars\special{t4ht=<a name=%
10555       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10556   \endgroup
10557   \Hy@activeanchortrue
10558 }

```

```

10559 \def\hyper@anchorend{%
10560   \special{t4ht=</a>}%
10561   \Hy@activeanchorfalse
10562   \Hy@RestoreLastskip
10563 }
10564 \def\@urltype{url}
10565 \def\hyper@linkstart#1#2{%
10566   \expandafter\Hy@colorlink\csname @#1color\endcsname
10567   \def\Hy@tempa{#1}%
10568   \ifx\Hy@tempa\@urltype
10569     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10570   \else
10571     \begingroup
10572       \hyper@chars
10573       \special{t4ht=<a href=
10574         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10575     \endgroup
10576   \fi
10577 }
10578 \def\hyper@linkend{%
10579   \special{t4ht=</a>}%
10580   \Hy@endcolorlink
10581 }
10582 \def\hyper@linkfile#1#2#3{%
10583   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\ \else\##3\fi}%
10584 }
10585 \def\hyper@linkurl#1#2{%
10586   \leavevmode
10587   \ifHy@raiselinks
10588     \setbox\@tempboxa=\color@hbox #1\color@endbox
10589     \@linkdim\dp\@tempboxa
10590     \lower\@linkdim\hbox{%
10591       \begingroup
10592         \hyper@chars
10593         \special{%
10594           t4ht=<a href=\hyper@quote#2\hyper@quote>%
10595         }%
10596       \endgroup
10597     }%
10598     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10599     \@linkdim\ht\@tempboxa
10600     \advance\@linkdim by -6.5\p@
10601     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
10602   \else
10603     \begingroup
10604       \hyper@chars
10605       \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10606       \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10607       \special{t4ht=</a>}%
10608     \endgroup
10609   \fi
10610 }

Poor implementation of \hyper@link without considering #1.
10611 \def\hyper@link#1#2#3{%
10612   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
10613 }
10614 \def\hyper@image#1#2{%

```

```

10615 \begingroup
10616   \hyper@chars
10617   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
10618 \endgroup
10619 }
10620 \let\autoref\ref
10621 \ifx \rEfLiNK \UnDef
10622   \def\rEfLiNK #1#2{#2}%
10623 \fi
10624 \def\backref#1{}
10625 </tex4ht>
10626 <*tex4htcfg>
10627 \IfFileExists{\jobname.cfg}{\endinput}{}
10628 \Preamble{html}
10629   \begin{document}%
10630 \EndPreamble
10631 \def\TeX{\TeX}
10632 \def\OMEGA{\Omega}
10633 \def\LaTeX{\LaTeX}
10634 \def\LaTeXe{\LaTeX2e}
10635 \def\eTeX{e-TeX}
10636 \def\MF{Metafont}
10637 \def\MP{MetaPost}
10638 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

10639 <*pdfmark>
10640 \long\def\@Form[#1]{%
10641   \g@addto@macro\Hy@FirstPageHook{%
10642     \headerps@out{%
10643 [%
10644   /_objdef{pdfDocEncoding}%
10645   /type/dict%
10646 /OBJ pdfmark%
10647 [%
10648   {pdfDocEncoding}%
10649   <<%
10650   /Type/Encoding%
10651   /Differences[%
10652     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10653     /tilde %
10654     39/quotesingle %
10655     96/grave %
10656     128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10657     /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10658     /quotedblbase/quotedblleft/quotedblright/quoteleft%
10659     /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
10660     /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10661     164/currency %
10662     166/brokenbar %
10663     168/dieresis/copyright/ordfeminine %
10664     172/logicalnot/.notdef/registered/macron/degree/plusminus%
10665     /twosuperior/threesuperior/acute/mu %
10666     183/periodcentered/cedilla/onesuperior/ordmasculine %
10667     188/onequarter/onehalf/threequarters %

```

```

10668 192/Agave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10669 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10670 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10671 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10672 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10673 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10674 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10675 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10676 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10677 /ucircumflex/udieresis/yacute/thorn/ydieresis%
10678 ]%
10679 >>%
10680 /PUT pdfmark%
10681 [%
10682 /__objdef{ZaDb}%
10683 /type/dict%
10684 /OBJ pdfmark%
10685 [%
10686 {ZaDb}%
10687 <<%
10688 /Type/Font%
10689 /Subtype/Type1%
10690 /Name/ZaDb%
10691 /BaseFont/ZapfDingbats%
10692 >>%
10693 /PUT pdfmark%
10694 [%
10695 /__objdef{Helv}%
10696 /type/dict%
10697 /OBJ pdfmark%
10698 [%
10699 {Helv}%
10700 <<%
10701 /Type/Font%
10702 /Subtype/Type1%
10703 /Name/Helv%
10704 /BaseFont/Helvetica%
10705 /Encoding{pdfDocEncoding}%
10706 >>%
10707 /PUT pdfmark%
10708 [%
10709 /__objdef{aform}%
10710 /type/dict%
10711 /OBJ pdfmark%
10712 [%
10713 /__objdef{afields}%
10714 /type/array%
10715 /OBJ pdfmark%
10716 {%
10717 [%
10718 /BBox[0 0 100 100]%
10719 /__objdef{Check}%
10720 /BP pdfmark %
10721 1 0 0 setrgbcolor%
10722 /ZapfDingbats 80 selectfont %
10723 20 20 moveto%
10724 (4)show%

```

```

10725 [/EP pdfmark%
10726 [%
10727   /BBox[0 0 100 100]%
10728   /_objdef{Cross}%
10729 /BP pdfmark %
10730 1 0 0 setrgbcolor%
10731 /ZapfDingbats 80 selectfont %
10732 20 20 moveto%
10733 (8)show%
10734 [/EP pdfmark%
10735 [%
10736   /BBox[0 0 250 100]%
10737   /_objdef{Submit}%
10738 /BP pdfmark %
10739 0.6 setgray %
10740 0 0 250 100 rectfill %
10741 1 setgray %
10742 2 2 moveto %
10743 2 98 lineto %
10744 248 98 lineto %
10745 246 96 lineto %
10746 4 96 lineto %
10747 4 4 lineto %
10748 fill %
10749 0.34 setgray %
10750 248 98 moveto %
10751 248 2 lineto %
10752 2 2 lineto %
10753 4 4 lineto %
10754 246 4 lineto %
10755 246 96 lineto %
10756 fill%
10757 /Helvetica 76 selectfont %
10758 0 setgray %
10759 8 22.5 moveto%
10760 (Submit)show%
10761 [/EP pdfmark%
10762 [%
10763   /BBox[0 0 250 100]%
10764   /_objdef{SubmitP}%
10765 /BP pdfmark %
10766 0.6 setgray %
10767 0 0 250 100 rectfill %
10768 0.34 setgray %
10769 2 2 moveto %
10770 2 98 lineto %
10771 248 98 lineto %
10772 246 96 lineto %
10773 4 96 lineto %
10774 4 4 lineto %
10775 fill %
10776 1 setgray %
10777 248 98 moveto %
10778 248 2 lineto %
10779 2 2 lineto %
10780 4 4 lineto %
10781 246 4 lineto %

```

```

10782 246 96 lineto %
10783 fill%
10784 /Helvetica 76 selectfont %
10785 0 setgray %
10786 10 20.5 moveto%
10787 (Submit)show%
10788 [/EP pdfmark%
10789 } ?pdfmark%
10790 [%
10791 {aform}%
10792 <<%
10793 /Fields{afields}%
10794 /DR<<%
10795 /Font<<%
10796 /ZaDb{ZaDb}%
10797 /Helv{Helv}%
10798 >>%
10799 >>%
10800 /DA(/Helv 10 Tf 0 g)%
10801 /CO{corder}%
10802 \ifHy@pdfa
10803 \else
10804 /NeedAppearances true%
10805 \fi
10806 >>%
10807 /PUT pdfmark%
10808 [%
10809 {Catalog}%
10810 <<%
10811 /AcroForm{aform}%
10812 >>%
10813 /PUT pdfmark%
10814 [%
10815 /__objdef{corder}%
10816 /type/array%
10817 /OBJ pdfmark% dps
10818 }}%
10819 \setkeys{Form}{#1}%
10820 }
10821 \def\@endForm{}
10822 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10823 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10824 }
10825 \def\@TextField[#1]#2{% parameters, label
10826 \def\Fld@name{#2}%
10827 \def\Fld@default{}%
10828 \let\Fld@value\@empty
10829 \def\Fld@width{\DefaultWidthofText}%
10830 \def\Fld@height{%
10831 \ifFld@multiline
10832 \DefaultHeightofTextMultiline
10833 \else
10834 \DefaultHeightofText
10835 \fi
10836 }%
10837 \begingroup
10838 \Field@toks={ }%

```

```

10839 \expandafter\HyField@SetKeys\expandafter{%
10840 \DefaultOptionsOfText,#1%
10841 }%
10842 \HyField@FlagsText
10843 \ifFld@hidden\def\Fld@width{1sp}\fi
10844 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
10845 \LayoutTextField{#2}{%
10846 \Hy@escapeform\PDFForm@Text
10847 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10848 pdfmark=/ANN,Raw={\PDFForm@Text}%
10849 }%
10850 }%
10851 \endgroup
10852 }
10853 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10854 \def\Fld@name{#2}%
10855 \let\Fld@default\relax
10856 \let\Fld@value\relax
10857 \def\Fld@width{\DefaultWidthOfChoiceMenu}%
10858 \def\Fld@height{\DefaultHeightOfChoiceMenu}%
10859 \begingroup
10860 \Fld@menulength=0 %
10861 \@tempdima\z@
10862 \@for\@curropt:=#3\do{%
10863 \expandafter\Fld@checkequals\@curropt==\%
10864 \Hy@StepCount\Fld@menulength
10865 \settowidth{\@tempdimb}{\@currDisplay}%
10866 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10867 }%
10868 \advance\@tempdima by 15\p@
10869 \Field@toks={ }%
10870 \begingroup
10871 \HyField@SetKeys{#1}%
10872 \edef\x{\endgroup
10873 \noexpand\expandafter
10874 \noexpand\HyField@SetKeys
10875 \noexpand\expandafter{%
10876 \expandafter\noexpand\csname DefaultOptionsOf%
10877 \ifFld@radio
10878 Radio%
10879 \else
10880 \ifFld@combo
10881 \ifFld@popdown
10882 PopdownBox%
10883 \else
10884 ComboBox%
10885 \fi
10886 \else
10887 ListBox%
10888 \fi
10889 \fi
10890 \endcsname
10891 }%
10892 }\x
10893 \HyField@SetKeys{#1}%
10894 \ifFld@hidden\def\Fld@width{1sp}\fi
10895 \ifx\Fld@value\relax

```

```

10896 \let\Fld@value\Fld@default
10897 \fi
10898 \LayoutChoiceField{#2}{%
10899 \ifFld@radio
10900 \HyField@FlagsRadioButton
10901 \@@Radio{#3}%
10902 \else
10903 \beginngroup
10904 \HyField@FlagsChoice
10905 \ifdim\Fld@width<\@tempdima
10906 \ifdim\@tempdima<1cm\@tempdima1cm\fi
10907 \edef\Fld@width{\the\@tempdima}%
10908 \fi
10909 \ifFld@combo
10910 \else
10911 \@tempdima=\the\Fld@menulength\Fld@charsize
10912 \advance\@tempdima by \Fld@borderwidth bp %
10913 \advance\@tempdima by \Fld@borderwidth bp %
10914 \edef\Fld@height{\the\@tempdima}%
10915 \fi
10916 \@@ListBox{#3}%
10917 \endgroup
10918 \fi
10919 }%
10920 \endgroup
10921 }
10922 \def\@@Radio#1{%
10923 \Fld@listcount=0 %
10924 \@for\@curropt:=#1\do{%
10925 \expandafter\Fld@checkequals\@curropt==\%
10926 \Hy@StepCount\Fld@listcount
10927 \@currDisplay\space
10928 \Hy@escapeform\PDFForm@Radio
10929 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
10930 pdfmark=/ANN,%
10931 Raw={%
10932 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
10933 }%
10934 } % deliberate space between radio buttons
10935 }%
10936 }
10937 \newcount\Fld@listcount
10938 \def\@@ListBox#1{%
10939 \HyField@PDFChoices{#1}%
10940 \Hy@escapeform\PDFForm@List
10941 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10942 pdfmark=/ANN,Raw={\PDFForm@List}%
10943 }%
10944 }
10945 \def\@PushButton[#1]#2{% parameters, label
10946 \def\Fld@name{#2}%
10947 \beginngroup
10948 \Fld@toks={ }%
10949 \expandafter\HyField@SetKeys\expandafter{%
10950 \DefaultOptionsofPushButton,#1%
10951 }%
10952 \ifHy@pdfa

```



```

10953 \PackageError{hyperref}{%
10954   PDF/A: Push button with JavaScript is prohibited%
10955 } \@ehc
10956 \LayoutPushButtonField{%
10957   \leavevmode
10958   \MakeButtonField{#2}%
10959 }%
10960 \else
10961   \HyField@FlagsPushButton
10962   \ifFld@hidden\def\Fld@width{1sp}\fi
10963   \LayoutPushButtonField{%
10964     \leavevmode
10965     \Hy@escapeform\PDFForm@Push
10966     \pdfmark[\MakeButtonField{#2}]{%
10967       pdfmark=/ANN,Raw={\PDFForm@Push}%
10968     }%
10969   }%
10970 \fi
10971 \endgroup
10972 }
10973 \def\@Submit[#1]#2{%
10974   \Field@toks={ }%
10975   \def\Fld@width{\DefaultWidthofSubmit}%
10976   \def\Fld@height{\DefaultHeightofSubmit}%
10977   \begingroup
10978     \expandafter\HyField@SetKeys\expandafter{%
10979       \DefaultOptionsofSubmit,#1%
10980     }%
10981     \HyField@FlagsPushButton
10982     \HyField@FlagsSubmit
10983     \ifFld@hidden\def\Fld@width{1sp}\fi
10984     \Hy@escapeform\PDFForm@Submit
10985     \pdfmark[\MakeButtonField{#2}]{%
10986       pdfmark=/ANN,%
10987       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10988     }%
10989   \endgroup
10990 }
10991 \def\@Reset[#1]#2{%
10992   \Field@toks={ }%
10993   \def\Fld@width{\DefaultWidthofReset}%
10994   \def\Fld@height{\DefaultHeightofReset}%
10995   \begingroup
10996     \expandafter\HyField@SetKeys\expandafter{%
10997       \DefaultOptionsofReset,#1%
10998     }%
10999     \leavevmode
11000     \ifHy@pdfa
11001       \PackageError{hyperref}{%
11002         PDF/A: Reset action is prohibited%
11003       } \@ehc
11004       \MakeButtonField{#2}%
11005     \else
11006       \HyField@FlagsPushButton
11007       \ifFld@hidden\def\Fld@width{1sp}\fi
11008       \Hy@escapeform\PDFForm@Reset
11009       \pdfmark[\MakeButtonField{#2}]{%

```

```

11010 pdfmark=/ANN,Raw={\PDFForm@Reset}%
11011 }%
11012 \fi
11013 \endgroup
11014 }%
11015 \def\@CheckBox[#1]#2{% parameters, label
11016 \def\Fld@name{#2}%
11017 \def\Fld@default{0}%
11018 \begingroup
11019 \def\Fld@width{\DefaultWidthofCheckBox}%
11020 \def\Fld@height{\DefaultHeightofCheckBox}%
11021 \Field@toks={ }%
11022 \expandafter\HyField@SetKeys\expandafter{%
11023 \DefaultOptionsofCheckBox,#1%
11024 }%
11025 \HyField@FlagsCheckBox
11026 \ifFld@hidden\def\Fld@width{1sp}\fi
11027 \LayoutCheckField{#2}{%
11028 \Hy@escapeform\PDFForm@Check
11029 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11030 pdfmark=/ANN,Raw={\PDFForm@Check}%
11031 }%
11032 }%
11033 \endgroup
11034 }
11035 \pdfmark>

```

47.2 HyperTeX

```

11036 \hypertex
11037 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11038 \def\@endForm{}
11039 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11040 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11041 }
11042 \def\@TextField[#1]#2{% parameters, label
11043 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11044 }
11045 \def\@CheckBox[#1]#2{% parameters, label
11046 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11047 }
11048 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11049 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11050 }
11051 \def\@PushButton[#1]#2{% parameters, label
11052 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11053 }
11054 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11055 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11056 \hypertex>

```

47.3 TeX4ht

```

11057 \tex4ht
11058 \def\@Form[#1]{%
11059 \setkeys{Form}{#1}%
11060 \HCode{<form action="\Form@action" method="\Form@method">}%
11061 }
11062 \def\@endForm{\HCode{</form>}}

```

```

11063 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11064 \typeout{Sorry, TeX4ht does not support gauges}%
11065 }
11066 \def\@TextField[#1]#2{% parameters, label
11067 \let\Hy@reserved@a\@empty
11068 \def\Fld@name{#2}%
11069 \def\Fld@default{}%
11070 \bgroup
11071 \Field@toks={ }%
11072 \setkeys{Field}{#1}%
11073 \HCode{<label for="\Fld@name">#2</label>}%
11074 \ifFld@password
11075 \@@PasswordField
11076 \else
11077 \@@TextField
11078 \fi
11079 \egroup
11080 }
11081 \def\@@PasswordField{%
11082 \HCode{%
11083 <input type="password" %
11084 id="\Fld@name" %
11085 name="\Fld@name" %
11086 \ifFld@hidden type="hidden" \fi
11087 value="\Fld@default" %
11088 \the\Field@toks
11089 >%
11090 }%
11091 }
11092 \def\@@TextField{%
11093 \ifFld@multiline
11094 \HCode{<textarea %
11095 \ifFld@readonly readonly \fi
11096 id="\Fld@name" %
11097 name="\Fld@name" %
11098 \ifFld@hidden type="hidden" \fi
11099 \the\Field@toks>%
11100 }%
11101 \Fld@default
11102 \HCode{</textarea>}%
11103 \else
11104 \HCode{<input type="text" %
11105 \ifFld@readonly readonly \fi
11106 id="\Fld@name" %
11107 name="\Fld@name" %
11108 \ifFld@hidden type="hidden" \fi
11109 value="\Fld@default" %
11110 \the\Field@toks>%
11111 }%
11112 \fi
11113 }
11114 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11115 \def\Fld@name{#2}%
11116 \def\Fld@default{}%
11117 \let\Hy@reserved@a\relax
11118 \begingroup
11119 \expandafter\Fld@findlength#3\\%

```

```

11120 \Field@toks={ }%
11121 \setkeys{Field}{#1}%
11122 #2%
11123 \ifFld@radio
11124 \expandafter\@@Radio#3\\%
11125 \else
11126 \expandafter\@@Menu#3\\%
11127 \fi
11128 \endgroup
11129 }
11130 \def\Fld@findlength#1\\{%
11131 \Fld@menulength=0 %
11132 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11133 }
11134 \def\@@Menu#1\\{%
11135 \HCode{<select size="\the\Fld@menulength" %
11136 name="\Fld@name" %
11137 \the\Field@toks>%
11138 }%
11139 \@for\@curropt:=#1\do{%
11140 \expandafter\Fld@checkequals\@curropt==\\%
11141 \HCode{<option %
11142 \ifx\@curropt\Fld@default selected \fi
11143 value="\@currValue">\@currDisplay</option>%
11144 }%
11145 }%
11146 \HCode{</select>}%
11147 }
11148 \def\@@Radio#1\\{%
11149 \@for\@curropt:=#1\do{%
11150 \expandafter\Fld@checkequals\@curropt==\\%
11151 \HCode{<input type="radio" %
11152 \ifx\@curropt\Fld@default checked \fi
11153 name="\Fld@name" %
11154 value="\@currValue" %
11155 \the\Field@toks>%
11156 }%
11157 \@currDisplay
11158 }%
11159 }
11160 \def\@PushButton[#1]#2{% parameters, label
11161 \def\Fld@name{#2}%
11162 \bgroup
11163 \Field@toks={ }%
11164 \setkeys{Field}{#1}%
11165 \HCode{<input type="button" %
11166 name="\Fld@name" %
11167 value="#2" %
11168 \the\Field@toks>%
11169 }%
11170 \HCode{</button>}%
11171 \egroup
11172 }
11173 \def\@Submit[#1]#2{%
11174 \HCode{<button type="submit">#2</button>}%
11175 }
11176 \def\@Reset[#1]#2{%

```

```

11177 \HCode{<button type="reset">#2</button>}%
11178 }
11179 \def\@CheckBox[#1]#2{% parameters, label
11180 \let\Hy@reserved@a\@empty
11181 \def\Fld@name{#2}%
11182 \def\Fld@default{0}%
11183 \bgroup
11184 \Field@toks={ }%
11185 \setkeys{Field}{#1}%
11186 \HCode{<input type="checkbox" %
11187 \ifFld@checked checked \fi
11188 \ifFld@disabled disabled \fi
11189 \ifFld@readonly readonly \fi
11190 name="\Fld@name" %
11191 \ifFld@hidden type="hidden" \fi
11192 value="\Fld@default" %
11193 \the\Field@toks>%
11194 #2%
11195 }%
11196 \egroup
11197 }
11198 </tex4ht>

```

47.4 pdfTeX

```

11199 <*pdfTeX>
11200 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11201 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11202 }
11203 \def\MakeFieldObject#1#2{\sbox0{#1}%
11204 \immediate\pdfxform0 %
11205 \expandafter\edef\csname #2Object\endcsname{%
11206 \the\pdflastxform\space 0 R%
11207 }%
11208 \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
11209 }%
11210 \def\HyField@afields{}
11211 \begingroup\expandafter\expandafter\expandafter\endgroup
11212 \expandafter\ifx\csname pdfastlink\endcsname\relax
11213 \let\HyField@AddToFields\relax
11214 \PackageInfo{hyperref}{%
11215 You need pdfTeX 1.40.0 for setting the /Fields entry.%
11216 \MessageBreak
11217 Adobe Reader/Acrobat accepts an empty /Field array,%
11218 \MessageBreak
11219 but other PDF viewers might complain%
11220 }%
11221 \else
11222 \def\HyField@AddToFields{%
11223 \xdef\HyField@afields{%
11224 \ifx\HyField@afields\@empty
11225 \else
11226 \HyField@afields
11227 \space
11228 \fi
11229 \the\pdflastlink\space 0 R%
11230 }%
11231 }%

```

```

11232 \fi
11233 \def\@Form[#1]{%
11234   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11235   \setkeys{Form}{#1}%
11236   \Hy@FormObjects
11237   \ifnum\pdfTeXversion>13 %
11238     \pdfrefobj\OBJ@pdfdocencoding
11239     \pdfrefobj\OBJ@ZaDb
11240     \pdfrefobj\OBJ@Helv
11241   \fi
11242   \AtEndDocument{%
11243     \immediate\pdfobj{%
11244       <<%
11245         /Fields\HyField@afields}%
11246       /DR<<%
11247         /Font<<%
11248           /ZaDb \OBJ@ZaDb\space 0 R%
11249           /Helv \OBJ@Helv\space 0 R%
11250         >>%
11251       >>%
11252       /DA(/Helv 10 Tf 0 g)%
11253       \ifHy@pdfa
11254       \else
11255         /NeedAppearances true%
11256       \fi
11257     >>%
11258   }%
11259   \edef\OBJ@acroform{\the\pdfastobj}%
11260   \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11261 }%
11262 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

11263   \begingroup
11264     \fontfamily{pzd}%
11265     \fontencoding{U}%
11266     \fontseries{m}%
11267     \fontshape{n}%
11268     \selectfont
11269     \char123 %
11270   \endgroup
11271 }{Ding}%
11272 \MakeFieldObject{%
11273   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11274 }{Submit}%
11275 \MakeFieldObject{%
11276   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11277 }{SubmitP}%
11278 }
11279 \def\@endForm{}
11280 \def\@TextField[#1]#2{% parameters, label
11281   \def\Fld@name{#2}%
11282   \def\Fld@default{}%
11283   \let\Fld@value\@empty
11284   \def\Fld@width{\DefaultWidthofText}%
11285   \def\Fld@height{%
11286     \ifFld@multiline
11287       \DefaultHeightofTextMultiline

```

```

11288 \else
11289 \DefaultHeightofText
11290 \fi
11291 }%
11292 \begingroup
11293 \Field@toks={ }%
11294 \expandafter\HyField@SetKeys\expandafter{%
11295 \DefaultOptionsofText,#1%
11296 }%
11297 \PDFForm@Name
11298 \HyField@FlagsText
11299 \ifFld@hidden\def\Fld@width{1sp}\fi
11300 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11301 \LayoutTextField{#2}{%
11302 \Hy@escapeform\PDFForm@Text
11303 \pdfstartlink user {\PDFForm@Text}\relax
11304 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11305 \HyField@AddToFields
11306 }%
11307 \endgroup
11308 }
11309 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11310 \def\Fld@name{#2}%
11311 \let\Fld@default\relax
11312 \let\Fld@value\relax
11313 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11314 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11315 \begingroup
11316 \Fld@menulength=0 %
11317 \@tempdima\z@
11318 \@for\@curropt:=#3\do{%
11319 \expandafter\Fld@checkequals\@curropt==\%
11320 \Hy@StepCount\Fld@menulength
11321 \settowidth{\@tempdimb}{\@currDisplay}%
11322 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11323 }%
11324 \advance\@tempdima by 15\p@
11325 \Field@toks={ }%
11326 \begingroup
11327 \HyField@SetKeys{#1}%
11328 \edef\x{\endgroup
11329 \noexpand\expandafter
11330 \noexpand\HyField@SetKeys
11331 \noexpand\expandafter{%
11332 \expandafter\noexpand\csname DefaultOptionsof%
11333 \ifFld@radio
11334 Radio%
11335 \else
11336 \ifFld@combo
11337 \ifFld@popdown
11338 PopdownBox%
11339 \else
11340 ComboBox%
11341 \fi
11342 \else
11343 ListBox%
11344 \fi

```

```

11345     \fi
11346     \endcsname
11347   }%
11348 } \x
11349 \HyField@SetKeys{#1}%
11350 \PDFForm@Name
11351 \ifFld@hidden\def\Fld@width{1sp}\fi
11352 \ifx\Fld@value\relax
11353   \let\Fld@value\Fld@default
11354 \fi
11355 \LayoutChoiceField{#2}{%
11356   \ifFld@radio
11357     \HyField@FlagsRadioButton
11358     \@@Radio{#3}%
11359   \else
11360     \begingroup
11361     \HyField@FlagsChoice
11362     \ifdim\Fld@width<\@tempdima
11363       \ifdim\@tempdima<1cm\@tempdima1cm\fi
11364       \edef\Fld@width{\the\@tempdima}%
11365     \fi
11366     \ifFld@combo
11367     \else
11368       \@tempdima=\the\Fld@menulength\Fld@charsize
11369       \advance\@tempdima by \Fld@borderwidth bp %
11370       \advance\@tempdima by \Fld@borderwidth bp %
11371       \edef\Fld@height{\the\@tempdima}%
11372     \fi
11373     \@@ListBox{#3}%
11374   \endgroup
11375 \fi
11376 }%
11377 \endgroup
11378 }
11379 \def\@@Radio#1{%
11380   \Fld@listcount=0 %
11381   \@for\@curropt=#1\do{%
11382     \expandafter\Fld@checkequals\@curropt==\%
11383     \Hy@StepCount\Fld@listcount
11384     \@currDisplay\space
11385     \leavevmode
11386     \Hy@escapeform\PDFForm@Radio
11387     \pdfstartlink user {%
11388       \PDFForm@Radio
11389       /AP<<%
11390       /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.

```

11391     /\@currValue\space \DingObject
11392     >>%
11393     >>%
11394   }%
11395   \relax
11396   \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11397   \ifnum\Fld@listcount=1 %
11398     \HyField@AddToFields

```



```

11399 \fi
11400 \space % deliberate space between radio buttons
11401 }%
11402 }
11403 \newcount\Fld@listcount
11404 \def\@@ListBox#1{%
11405 \HyField@PDFChoices{#1}%
11406 \leavevmode
11407 \Hy@escapeform\PDFForm@List
11408 \pdfstartlink user {\PDFForm@List}\relax
11409 \MakeChoiceField{\Fld@width}{\Fld@height}%
11410 \pdfendlink
11411 \HyField@AddToFields
11412 }
11413 \def\@PushButton[#1]#2{% parameters, label
11414 \def\Fld@name{#2}%
11415 \begingroup
11416 \Field@toks={ }%
11417 \expandafter\HyField@SetKeys\expandafter{%
11418 \DefaultOptionsofPushButton,#1%
11419 }%
11420 \PDFForm@Name
11421 \ifHy@pdfa
11422 \PackageError{hyperref}{%
11423 PDF/A: Push button with JavaScript is prohibited%
11424 }{\@ehc
11425 \LayoutPushButtonField{%
11426 \leavevmode
11427 \MakeButtonField{#2}%
11428 }%
11429 \else
11430 \HyField@FlagsPushButton
11431 \ifFld@hidden\def\Fld@width{1sp}\fi
11432 \LayoutPushButtonField{%
11433 \leavevmode
11434 \Hy@escapeform\PDFForm@Push
11435 \pdfstartlink user {\PDFForm@Push}\relax
11436 \MakeButtonField{#2}%
11437 \pdfendlink
11438 \HyField@AddToFields
11439 }%
11440 \fi
11441 \endgroup
11442 }
11443 \def\@Submit[#1]#2{%
11444 \Field@toks={ }%
11445 \def\Fld@width{\DefaultWidthofSubmit}%
11446 \def\Fld@height{\DefaultHeightofSubmit}%
11447 \begingroup
11448 \expandafter\HyField@SetKeys\expandafter{%
11449 \DefaultOptionsofSubmit,#1%
11450 }%
11451 \HyField@FlagsPushButton
11452 \HyField@FlagsSubmit
11453 \ifFld@hidden\def\Fld@width{1sp}\fi
11454 \leavevmode
11455 \Hy@escapeform\PDFForm@Submit

```

```

11456 \pdfstartlink user {%
11457 \PDFForm@Submit
11458 /AP<</N \SubmitObject/D \SubmitPObject>>%
11459 }%
11460 \relax
11461 \MakeButtonField{#2}%
11462 \pdfendlink
11463 \HyField@AddToFields
11464 \endgroup
11465 }
11466 \def\@Reset[#1]#2{%
11467 \Field@toks={ }%
11468 \def\Fld@width{\DefaultWidthofReset}%
11469 \def\Fld@height{\DefaultHeightofReset}%
11470 \begingroup
11471 \expandafter\HyField@SetKeys\expandafter{%
11472 \DefaultOptionsofReset,#1%
11473 }%
11474 \leavevmode
11475 \ifHy@pdfa
11476 \PackageError{hyperref}{%
11477 PDF/A: Reset action is prohibited%
11478 }{\@ehc
11479 \MakeButtonField{#2}%
11480 \else
11481 \HyField@FlagsPushButton
11482 \ifFld@hidden\def\Fld@width{1sp}\fi
11483 \Hy@escapeform\PDFForm@Reset
11484 \pdfstartlink user {\PDFForm@Reset}\relax
11485 \MakeButtonField{#2}%
11486 \pdfendlink
11487 \HyField@AddToFields
11488 \fi
11489 \endgroup
11490 }
11491 \def\@CheckBox[#1]#2{% parameters, label
11492 \def\Fld@name{#2}%
11493 \def\Fld@default{0}%
11494 \begingroup
11495 \def\Fld@width{\DefaultWidthofCheckBox}%
11496 \def\Fld@height{\DefaultHeightofCheckBox}%
11497 \Field@toks={ }%
11498 \expandafter\HyField@SetKeys\expandafter{%
11499 \DefaultOptionsofCheckBox,#1%
11500 }%
11501 \PDFForm@Name
11502 \HyField@FlagsCheckBox
11503 \ifFld@hidden\def\Fld@width{1sp}\fi
11504 \LayoutCheckField{#2}{%
11505 \Hy@escapeform\PDFForm@Check
11506 \pdfstartlink user {\PDFForm@Check}\relax
11507 \MakeCheckField{\Fld@width}{\Fld@height}%
11508 \pdfendlink
11509 \HyField@AddToFields
11510 }%
11511 \endgroup
11512 }

```

```

11513 \def\Hy@FormObjects{%
11514   \pdfobj {%
11515     <<%
11516       /Type/Encoding%
11517       /Differences[%
11518         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
11519         /ring/tilde %
11520         39/quotesingle %
11521         96/grave %
11522         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11523         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11524         /quotedblbase/quotedblleft/quotedblright/quoteleft%
11525         /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
11526         /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11527         164/currency %
11528         166/brokenbar %
11529         168/dieresis/copyright/ordfeminine %
11530         172/logicalnot/.notdef/registered/macron/degree/plusminus%
11531         /twosuperior/threesuperior/acute/mu %
11532         183/periodcentered/cedilla/onesuperior/ordmasculine %
11533         188/onequarter/onehalf/threequarters %
11534         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11535         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11536         /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11537         /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11538         /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11539         /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11540         /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11541         /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11542         /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
11543         /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
11544       ]%
11545     >>%
11546   }%
11547   \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
11548   \pdfobj{%
11549     <<%
11550       /Type/Font%
11551       /Subtype/Type1%
11552       /Name/ZaDb%
11553       /BaseFont/ZapfDingbats%
11554     >>%
11555   }%
11556   \xdef\OBJ@ZaDb{\the\pdflastobj}%
11557   \pdfobj{%
11558     <<%
11559       /Type/Font%
11560       /Subtype/Type1%
11561       /Name/Helv%
11562       /BaseFont/Helvetica%
11563       /Encoding \OBJ@pdfdocencoding\space 0 R%
11564     >>%
11565   }%
11566   \xdef\OBJ@Helv{\the\pdflastobj}%
11567   \global\let\Hy@FormObjects\relax
11568 }
11569 </pdftex>

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdfTeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
11570 <*dvipdfm | xetex>
```

\@Gauge

```
11571 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11572 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
11573 }
```

\@Form

```
11574 \def\@Form[#1]{%
11575 \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
11576 \setkeys{Form}{#1}%
11577 \Hy@FormObjects
11578 \@pdfm@mark{obj @afields []}%
11579 \@pdfm@mark{obj @corder []}%
11580 \@pdfm@mark{%
11581   obj @aform <<%
11582     /Fields @afields%
11583     /DR<<%
11584     /Font<<%
11585     /ZaDb @OBJZaDb%
11586     /Helv @OBJHelv%
11587     >>%
11588     >>%
11589     /DA(/Helv 10 Tf 0 g)%
11590     /CO @corder%
11591     \ifHy@pdfa
11592     \else
11593     /NeedAppearances true%
11594     \fi
11595     >>%
11596   }%
11597 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
11598 }
```

\@endForm

```
11599 \def\@endForm{}
```

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

```
11600 \def\dvipdfm@setdim{%
11601   height \the\ht\pdfm@box\space
11602   width \the\wd\pdfm@box\space
11603   depth \the\dp\pdfm@box\space
11604 }
```

\HyField@AnnotCount

```
11605 \newcount\HyField@AnnotCount
11606 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
11607 \def\HyField@AdvanceAnnotCount{%
11608   \global\advance\HyField@AnnotCount\@ne
11609 }
```

\HyField@TheAnnotCount

```
11610 \def\HyField@TheAnnotCount{%
11611   \the\HyField@AnnotCount
11612 }
```

\@TextField

```
11613 \def\@TextField[#1]#2{% parameters, label
11614   \def\Fld@name{#2}%
11615   \def\Fld@default{}%
11616   \let\Fld@value\@empty
11617   \def\Fld@width{\DefaultWidthofText}%
11618   \def\Fld@height{%
11619     \ifFld@multiline
11620       \DefaultHeightofTextMultiline
11621     \else
11622       \DefaultHeightofText
11623     \fi
11624   }%
11625   \begingroup
11626     \Field@toks={ }%
11627     \expandafter\HyField@SetKeys\expandafter{%
11628       \DefaultOptionsofText,#1%
11629     }%
11630     \PDFForm@Name
11631     \HyField@FlagsText
11632     \ifFld@hidden\def\Fld@width{1sp}\fi
11633     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11634     \setbox\pdfm@box=\hbox{%
11635       \MakeTextField{\Fld@width}{\Fld@height}%
11636     }%
11637     \HyField@AdvanceAnnotCount
11638     \LayoutTextField{#2}{%
11639       \Hy@escapeform\PDFForm@Text
11640       \@pdfm@mark{%
11641         ann @text\HyField@TheAnnotCount\space
11642         \dvipdfm@setdim << \PDFForm@Text >>%
11643       }%
11644     }%
11645     \unhbox\pdfm@box
11646     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
11647     % record in @afields array
11648   \endgroup
11649 }
```

\@ChoiceMenu

```
11650 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11651   \def\Fld@name{#2}%
11652   \let\Fld@default\relax
11653   \let\Fld@value\relax
11654   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11655   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11656   \begingroup
11657     \Fld@menulength=0 %
11658     \@tempdima\z@
11659     \@for\@curropt:=#3\do{%
11660       \expandafter\Fld@checkequals\@curropt==\%
11661       \Hy@StepCount\Fld@menulength
```

```

11662 \settowidth{\@tempdimb}{\@currDisplay}%
11663 \ifdim \@tempdimb > \@tempdima \@tempdima \@tempdimb \fi
11664 }%
11665 \advance \@tempdima by 15\p@
11666 \Field@toks={ }%
11667 \begingroup
11668 \HyField@SetKeys{#1}%
11669 \edef\x{\endgroup
11670 \noexpand\expandafter
11671 \noexpand\HyField@SetKeys
11672 \noexpand\expandafter{%
11673 \expandafter\noexpand\csname DefaultOptionsof%
11674 \ifFld@radio
11675 Radio%
11676 \else
11677 \ifFld@combo
11678 \ifFld@popdown
11679 PopdownBox%
11680 \else
11681 ComboBox%
11682 \fi
11683 \else
11684 ListBox%
11685 \fi
11686 \fi
11687 \endcsname
11688 }%
11689 }\x
11690 \HyField@SetKeys{#1}%
11691 \PDFForm@Name
11692 \ifFld@hidden\def\Fld@width{1sp}\fi
11693 \ifx\Fld@value\relax
11694 \let\Fld@value\Fld@default
11695 \fi
11696 \LayoutChoiceField{#2}{%
11697 \ifFld@radio
11698 \HyField@FlagsRadioButton
11699 \@@Radio{#3}%
11700 \else
11701 \begingroup
11702 \HyField@FlagsChoice
11703 \ifdim\Fld@width < \@tempdima
11704 \ifdim \@tempdima < 1cm\@tempdima 1cm\fi
11705 \edef\Fld@width{\the\@tempdima}%
11706 \fi
11707 \ifFld@combo
11708 \else
11709 \@tempdima=\the\Fld@menulength\Fld@charsize
11710 \advance \@tempdima by \Fld@borderwidth bp %
11711 \advance \@tempdima by \Fld@borderwidth bp %
11712 \edef\Fld@height{\the\@tempdima}%
11713 \fi
11714 \@@ListBox{#3}%
11715 \endgroup
11716 \fi
11717 }%
11718 \endgroup

```

```

11719 }

\@@Radio
11720 \def\@@Radio#1{%
11721   \Fld@listcount=0 %
11722   \setbox\pdfm@box=\hbox{%
11723     \MakeRadioField{\Fld@width}{\Fld@height}%
11724   }%
11725   \@for\@curropt:=#1\do{%
11726     \expandafter\Fld@checkequals\@curropt==\%
11727     \Hy@StepCount\Fld@listcount
11728     \@currDisplay\space
11729     \leavevmode
11730     \Hy@escapeform\PDFForm@Radio
11731     \ifnum\Fld@listcount=1 %
11732       \HyField@AdvanceAnnotCount
11733     \fi
11734     \@pdfm@mark{%
11735       ann %
11736       \ifnum\Fld@listcount=1 %
11737         @radio\HyField@TheAnnotCount%
11738       \space
11739     \fi
11740     \dvipdfm@setdim
11741     <<%
11742     \PDFForm@Radio
11743     /AP<</N<</\@currValue /null>>>>%
11744     >>%
11745   }%
11746   \unhcopy\pdfm@box\space% deliberate space between radio buttons
11747   \ifnum\Fld@listcount=1 %
11748     \@pdfm@mark{%
11749       put @afields @radio\HyField@TheAnnotCount
11750     }%
11751   \fi
11752 }%
11753 }

\Fld@listcount
11754 \newcount\Fld@listcount

\@@Listbox
11755 \def\@@Listbox#1{%
11756   \HyField@PDFChoices{#1}%
11757   \setbox\pdfm@box=\hbox{%
11758     \MakeChoiceField{\Fld@width}{\Fld@height}%
11759   }%
11760   \leavevmode
11761   \Hy@escapeform\PDFForm@List
11762   \HyField@AdvanceAnnotCount
11763   \@pdfm@mark{%
11764     ann @list\HyField@TheAnnotCount\space
11765     \dvipdfm@setdim
11766     <<\PDFForm@List>>%
11767   }%
11768   \unhbox\pdfm@box
11769   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%

```

11770 }

\@PushButton

```
11771 \def\@PushButton[#1]#2{% parameters, label
11772   \def\Fld@name{#2}%
11773   \begingroup
11774     \Field@toks={ }%
11775     \expandafter\HyField@SetKeys\expandafter{%
11776       \DefaultOptionsofPushButton,#1%
11777     }%
11778     \PDFForm@Name
11779     \ifHy@pdfa
11780       \PackageError{hyperref}{%
11781         PDF/A: Push button with JavaScript is prohibited%
11782       }\@ehc
11783       \LayoutPushButtonField{%
11784         \leavevmode
11785         \MakeButtonField{#2}%
11786       }%
11787     \else
11788       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11789       \HyField@FlagsPushButton
11790       \ifFld@hidden\def\Fld@width{1sp}\fi
11791       \HyField@AdvanceAnnotCount
11792       \LayoutPushButtonField{%
11793         \leavevmode
11794         \Hy@escapeform\PDFForm@Push
11795         \@pdfm@mark{%
11796           ann @push\HyField@TheAnnotCount\space
11797           \dvipdfm@setdim
11798           <<\PDFForm@Push>>%
11799         }%
11800       }%
11801       \unhbox\pdfm@box
11802       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11803     \fi
11804   \endgroup
11805 }
```

\@Submit

```
11806 \def\@Submit[#1]#2{%
11807   \Field@toks={ }%
11808   \def\Fld@width{\DefaultWidthofSubmit}%
11809   \def\Fld@height{\DefaultHeightofSubmit}%
11810   \begingroup
11811     \expandafter\HyField@SetKeys\expandafter{%
11812       \DefaultOptionsofSubmit,#1%
11813     }%
11814     \HyField@FlagsPushButton
11815     \HyField@FlagsSubmit
11816     \ifFld@hidden\def\Fld@width{1sp}\fi
11817     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11818     \leavevmode
11819     \Hy@escapeform\PDFForm@Submit
11820     \HyField@AdvanceAnnotCount
11821     \@pdfm@mark{%
11822       ann @submit\HyField@TheAnnotCount\space
```



```

11823 \dvi pdfm@setdim
11824 <<\PDFForm@Submit>>%
11825 }%
11826 \unhbox\pdfm@box%
11827 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11828 \endgroup
11829 }

\@Reset

11830 \def\@Reset[#1]#2{%
11831 \Field@toks={ }%
11832 \def\Fld@width{\DefaultWidthofReset}%
11833 \def\Fld@height{\DefaultHeightofReset}%
11834 \begingroup
11835 \expandafter\HyField@SetKeys\expandafter{%
11836 \DefaultOptionsofReset,#1%
11837 }%
11838 \leavevmode
11839 \ifHy@pdfa
11840 \PackageError{hyperref}{%
11841 PDF/A: Reset action is prohibited%
11842 }\@ehc
11843 \MakeButtonField{#2}%
11844 \else
11845 \HyField@FlagsPushButton
11846 \ifFld@hidden\def\Fld@width{1sp}\fi
11847 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11848 \Hy@escapeform\PDFForm@Reset
11849 \HyField@AdvanceAnnotCount
11850 \@pdfm@mark{%
11851 ann @reset\HyField@TheAnnotCount\space
11852 \dvi pdfm@setdim
11853 <<\PDFForm@Reset>>%
11854 }%
11855 \unhbox\pdfm@box
11856 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11857 \fi
11858 \endgroup
11859 }

\@CheckBox

11860 \def\@CheckBox[#1]#2{% parameters, label
11861 \def\Fld@name{#2}%
11862 \def\Fld@default{0}%
11863 \begingroup
11864 \def\Fld@width{\DefaultWidthofCheckBox}%
11865 \def\Fld@height{\DefaultHeightofCheckBox}%
11866 \Field@toks={ }%
11867 \expandafter\HyField@SetKeys\expandafter{%
11868 \DefaultOptionsofCheckBox,#1%
11869 }%
11870 \PDFForm@Name
11871 \HyField@FlagsCheckBox
11872 \ifFld@hidden\def\Fld@width{1sp}\fi
11873 \setbox\pdfm@box=\hbox{%
11874 \MakeCheckField{\Fld@width}{\Fld@height}%
11875 }%

```

```

11876 \HyField@AdvanceAnnotCount
11877 \LayoutCheckField{#2}{%
11878 \Hy@escapeform\PDFForm@Check
11879 \@pdfm@mark{%
11880 ann @check\HyField@TheAnnotCount\space
11881 \dvipdfm@setdim
11882 <<\PDFForm@Check>>%
11883 }%
11884 \unhbox\pdfm@box
11885 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11886 }%
11887 \endgroup
11888 }

11889 \def\Hy@FormObjects{%
11890 \@pdfm@mark{obj @OBJpdfdocencoding%
11891 <<%
11892 /Type/Encoding%
11893 /Differences[%
11894 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11895 39/quotesingle %
11896 96/grave %
11897 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11898 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11899 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11900 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11901 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11902 164/currency %
11903 166/brokenbar %
11904 168/dieresis/copyright/ordfeminine %
11905 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11906 /twosuperior/threesuperior/acute/mu %
11907 183/periodcentered/cedilla/onesuperior/ordmasculine %
11908 188/onequarter/onehalf/threequarters %
11909 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11910 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11911 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11912 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11913 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11914 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11915 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11916 /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
11917 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
11918 /thorn/ydieresis%
11919 ]%
11920 >>%
11921 }%
11922 \@pdfm@mark{obj @OBJZaDb%
11923 <<%
11924 /Type/Font%
11925 /Subtype/Type1%
11926 /Name/ZaDb%
11927 /BaseFont/ZapfDingbats%
11928 >>%
11929 }%
11930 \@pdfm@mark{obj @OBJHelv%
11931 <<%
11932 /Type/Font%

```

```

11933 /Subtype/Type1%
11934 /Name/Helv%
11935 /BaseFont/Helvetica%
11936 /Encoding @OBJpdfdocencoding%
11937 >>%
11938 }%
11939 \global\let\Hy@FormObjects\relax
11940 }
11941 \</dvipdfm | xetex>

```

47.6 Common forms part

```

11942 \<*pdfform>

```

\Hy@escapestring

```

11943 \begingroup\expandafter\expandafter\expandafter\endgroup
11944 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11945 \let\Hy@escapestring\@firstofone
11946 \def\Hy@escapeform#1{%
11947 \ifHy@escapeform
11948 \def\Hy@escapestring##1{%
11949 \noexpand\Hy@escapestring{\noexpand##1}%
11950 }%
11951 \edef\Hy@temp{#1}%
11952 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
11953 \def\Hy@escapestring##1{%
11954 \@ifundefined{Hy@esc@\string##1}{%
11955 ##1%
11956 \ThisShouldNotHappen
11957 }{%
11958 \csname Hy@esc@\string##1\endcsname
11959 }%
11960 }%
11961 \else
11962 \let\Hy@escapestring\@firstofone
11963 \fi
11964 }%
11965 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
11966 \ifx\#3\%
11967 \else
11968 \expandafter
11969 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11970 \Hy@ReturnAfterFi{%
11971 \Hy@@@escapeform#3\@nil
11972 }%
11973 \fi
11974 }%
11975 \else
11976 \def\Hy@escapeform#1{%
11977 \ifHy@escapeform
11978 \let\Hy@escapestring\pdfescapestring
11979 \else
11980 \let\Hy@escapestring\@firstofone
11981 \fi
11982 }%
11983 \Hy@escapeform{}%
11984 \fi

```

\PDFForm@Name

```
11985 \def\PDFForm@Name{%
11986   \begingroup
11987   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11988     \ifHy@unicode
11989       \Hy@unicodedefalse
11990     \fi
11991   \fi
11992   \HyPsd@XeTeXBigCharstrue
11993   \pdfstringdef\Hy@gtemp\Fld@name
11994 \endgroup
11995 \let\Fld@name\Hy@gtemp
11996 }
```

\PDFForm@Check

```
11997 \def\PDFForm@Check{%
11998   /Subtype/Widget%
11999   \Fld@annotflags
12000   /T(\Fld@name)%
12001   /FT/Btn%
12002   \Fld@flags
12003   /Q \Fld@align
12004   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12005   /MK<<%
12006     \ifnum\Fld@rotation=\z@
12007     \else
12008       /R \Fld@rotation
12009     \fi
12010     \ifx\Fld@bordercolor\relax
12011     \else
12012       /BC[\Fld@bordercolor]%
12013     \fi
12014     \ifx\Fld@bcolor\relax
12015     \else
12016       /BG[\Fld@bcolor]%
12017     \fi
12018     /CA(\Hy@escapestring{\Fld@cbsymbol})%
12019   >>%
12020   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12021     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12022   /H/P%
12023   \ifFld@checked /V/Yes\else /V/Off\fi
12024 }
```

\PDFForm@Push

```
12025 \ifHy@pdfa
12026 \else
12027   \def\PDFForm@Push{%
12028     /Subtype/Widget%
12029     \Fld@annotflags
12030     /T(\Fld@name)%
12031     /FT/Btn%
12032     \Fld@flags
12033     /H/P%
12034     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12035     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12036       \ifx\Fld@bordercolor\relax\else 1\fi
```

```

12037         \space
12038     \else
12039         /MK<<%
12040         \ifnum\Fld@rotation=\z@
12041         \else
12042             /R \Fld@rotation
12043         \fi
12044         \ifx\Fld@bordercolor\relax
12045         \else
12046             /BC[\Fld@bordercolor]%
12047         \fi
12048         >>%
12049     \fi
12050     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12051 }%
12052 \fi

```

\Fld@additionalactions

```

12053 \def\Fld@@additionalactions{%
K input (keystroke) format
12054 \ifx\Fld@keystroke@code\@empty
12055 \else
12056     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12057 \fi
F display format
12058 \ifx\Fld@format@code\@empty
12059 \else
12060     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12061 \fi
V validation
12062 \ifx\Fld@validate@code\@empty
12063 \else
12064     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12065 \fi
C calculation
12066 \ifx\Fld@calculate@code\@empty
12067 \else
12068     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12069 \fi
Fo receiving the input focus
12070 \ifx\Fld@onfocus@code\@empty
12071 \else
12072     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12073 \fi
Bl loosing the input focus (blurred)
12074 \ifx\Fld@onblur@code\@empty
12075 \else
12076     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12077 \fi
D pressing the mouse button (down)
12078 \ifx\Fld@onmousedown@code\@empty
12079 \else
12080     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12081 \fi

```

U releasing the mouse button (up)

```
12082 \ifx\Fld@onmouseup@code\@empty
12083 \else
12084 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12085 \fi
```

E cursor enters the annotation's active area.

```
12086 \ifx\Fld@onenter@code\@empty
12087 \else
12088 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12089 \fi
```

X cursor exits the annotation's active area.

```
12090 \ifx\Fld@onexit@code\@empty
12091 \else
12092 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12093 \fi
12094 }
12095 \def\Fld@additionalactions{%
12096 \if\Fld@@additionalactions-%
12097 \else
12098 \ifHy@pdfa
12099 \else
12100 /AA<<\Fld@@additionalactions>>%
12101 \fi
12102 \fi
12103 }
```

\PDFForm@List

```
12104 \def\PDFForm@List{%
12105 /Subtype/Widget%
12106 \Fld@annotflags
12107 /T(\Fld@name)%
12108 /FT/Ch%
12109 \Fld@flags
12110 /Q \Fld@align
12111 /BS<</W \Fld@borderwidth/S\Fld@borderstyle>>%
12112 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12113 \ifx\Fld@bordercolor\relax\else 1\fi
12114 \ifx\Fld@bcolor\relax \else 1\fi
12115 \space
12116 \else
12117 /MK<<%
12118 \ifnum\Fld@rotation=\z@
12119 \else
12120 /R \Fld@rotation
12121 \fi
12122 \ifx\Fld@bordercolor\relax
12123 \else
12124 /BC[\Fld@bordercolor]%
12125 \fi
12126 \ifx\Fld@bcolor\relax
12127 \else
12128 /BG[\Fld@bcolor]%
12129 \fi
12130 >>%
12131 \fi
12132 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
```

```

12133     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12134   \Fld@choices
12135   \Fld@additionalactions
12136 }

```

\PDFForm@Radio

```

12137 \def\PDFForm@Radio{%
12138   /Subtype/Widget%
12139   \Fld@annotflags
12140   /T(\Fld@name)%
12141   /FT/Btn%
12142   \Fld@flags
12143   /H/P%
12144   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12145   /MK<<%
12146     \ifnum\Fld@rotation=\z@
12147       \else
12148         /R \Fld@rotation
12149     \fi
12150     \ifx\Fld@bordercolor\relax
12151       \else
12152         /BC[\Fld@bordercolor]%
12153     \fi
12154     \ifx\Fld@bcolor\relax
12155       \else
12156         /BG[\Fld@bcolor]%
12157     \fi
12158     /CA(\Fld@radiosymbol)%
12159   >>%
12160   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12161     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12162   \ifx\@currValue\Fld@default
12163     /V/\Fld@default
12164   \else
12165     /V/Off%
12166   \fi
12167   \Fld@additionalactions
12168 }

```

\PDFForm@Text

```

12169 \def\PDFForm@Text{%
12170   /Subtype/Widget%
12171   \Fld@annotflags
12172   /T(\Fld@name)%
12173   /FT/Tx%
12174   \Fld@flags
12175   /Q \Fld@align
12176   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12177   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12178     \ifx\Fld@bordercolor\relax\else 1\fi
12179     \ifx\Fld@bcolor\relax \else 1\fi
12180     \space
12181   \else
12182     /MK<<%
12183     \ifnum\Fld@rotation=\z@
12184     \else
12185       /R \Fld@rotation

```

```

12186 \fi
12187 \ifx\Fld@bordercolor\relax
12188 \else
12189 /BC[\Fld@bordercolor]%
12190 \fi
12191 \ifx\Fld@bcolor\relax
12192 \else
12193 /BG[\Fld@bcolor]%
12194 \fi
12195 >>%
12196 \fi
12197 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12198 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12199 /DV(\Hy@escapestring{\Fld@default})%
12200 /V(\Hy@escapestring{\Fld@value})%
12201 \Fld@additionalactions
12202 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12203 }

```

\PDFForm@Submit

```

12204 \def\PDFForm@Submit{%
12205 /Subtype/Widget%
12206 \Fld@annotflags
12207 /T(\Fld@name)%
12208 /FT/Btn%
12209 \Fld@flags
12210 /H/P%
12211 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12212 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12213 \ifx\Fld@bordercolor\relax\else 1\fi
12214 \space
12215 \else
12216 /MK<<%
12217 \ifnum\Fld@rotation=\z@
12218 \else
12219 /R \Fld@rotation
12220 \fi
12221 \ifx\Fld@bordercolor\relax
12222 \else
12223 /BC[\Fld@bordercolor]%
12224 \fi
12225 >>%
12226 \fi
12227 /A<<%
12228 /S/SubmitForm%
12229 /F<<%
12230 /FS/URL%
12231 /F(\Hy@escapestring{\Form@action})%
12232 >>%
12233 \Fld@submitflags
12234 >>%
12235 }

```

\PDFForm@Reset

```

12236 \ifHy@pdfa
12237 \else
12238 \def\PDFForm@Reset{%

```



```

12239 /Subtype/Widget%
12240 \Fld@annotflags
12241 /T(\Fld@name)%
12242 /FT/Btn%
12243 \Fld@flags
12244 /H/P%
12245 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12246 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12247 \ifx\Fld@bordercolor\relax\else 1\fi
12248 \space
12249 \else
12250 /MK<<%
12251 \ifnum\Fld@rotation=\z@
12252 \else
12253 /R \Fld@rotation
12254 \fi
12255 \ifx\Fld@bordercolor\relax
12256 \else
12257 /BC[\Fld@bordercolor]%
12258 \fi
12259 % /CA (Clear)
12260 % /AC (Done)
12261 >>%
12262 \fi
12263 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12264 /A<</S/ResetForm>>%
12265 }%
12266 \fi

12267 </pdfform>
12268 <*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 L^AT_EX macros.

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

```

12269 \def\phantomsection{%
12270 \Hy@GlobalStepCount\Hy@linkcounter
12271 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12272 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12273 }
12274 </package>

```

48.1 Bookmarks

```
12275 <*outlines>
```

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

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

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

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

```

12276 \def\Hy@writebookmark#1#2#3#4#5{%
12277   % section number, text, label, level, file
12278   \ifx\WriteBookmarks\relax%
12279   \else
12280     \ifnum#4>\Hy@bookmarksdepth\relax
12281     \else
12282       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12283     \fi
12284   \fi
12285 }
12286 \def\Hy@currentbookmarklevel{0}
12287 \def\Hy@numberline#1{#1 }
12288 \def\@@@writetorep#1#2#3#4#5{%
12289   \begingroup
12290   \edef\Hy@tempa{#5}%
12291   \ifx\Hy@tempa\Hy@bookmarkstype
12292     \edef\Hy@level{#4}%
12293     \ifx\Hy@levelcheck Y%
12294       \@tempcnta\Hy@level\relax
12295       \advance\@tempcnta by -1 %
12296       \ifnum\Hy@currentbookmarklevel<\@tempcnta
12297         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12298         \advance\@tempcnta by 1 %
12299       \Hy@Warning{%
12300         Difference (\the\@tempcnta) between bookmark levels is %
12301         greater \MessageBreak than one, level fixed%
12302       }%
12303       \@tempcnta\Hy@currentbookmarklevel
12304       \advance\@tempcnta by 1 %
12305       \edef\Hy@level{\the\@tempcnta}%
12306     \fi
12307   \else
12308     \global\let\Hy@levelcheck Y%
12309   \fi
12310   \global\let\Hy@currentbookmarklevel\Hy@level
12311   \@tempcnta\Hy@level\relax
12312   \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12313   \advance\@tempcnta by -1 %
12314   \edef\Hy@tempa{#3}%
12315   \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12316   \ifx\Hy@tempa\Hy@tempb
12317     \Hy@Warning{%
12318       The anchor of a bookmark and its parent's must not%
12319       \MessageBreak be the same. Added a new anchor%

```

```

12320 }%
12321 \phantomsection
12322 \fi
12323 \ifHy@bookmarksnumbered
12324 \let\numberline\Hy@numberline
12325 \let\partnumberline\Hy@numberline
12326 \let\chapternumberline\Hy@numberline
12327 \else
12328 \let\numberline\@gobble
12329 \let\partnumberline\@gobble
12330 \let\chapternumberline\@gobble
12331 \fi
12332 \HyPsd@XeTeXBigCharstrue
12333 \pdfstringdef\Hy@tempa{#2}%
12334 \if@filesw
12335 \stepcounter{bookmark@seq@number}%
12336 \ifundefined{@outlinefile}{%
12337 }{%
12338 \protected@write\@outlinefile{}{%
12339 \protect\BOOKMARK
12340 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12341 {\Hy@tempa}\Hy@tempb}%
12342 \@percentchar\space\thebookmark@seq@number
12343 }%
12344 }%
12345 \fi
12346 \fi
12347 \endgroup
12348 }
12349 \newcounter{bookmark@seq@number}

```

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

```

12350 \newcommand{\currentpdfbookmark}{%
12351 \pdfbookmark[\Hy@currentbookmarklevel]%
12352 }
12353 \newcommand{\subpdfbookmark}{%
12354 \@tempcnta\Hy@currentbookmarklevel
12355 \Hy@StepCount\@tempcnta
12356 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12357 }
12358 \newcommand{\belowpdfbookmark}[2]{%
12359 \@tempcnta\Hy@currentbookmarklevel
12360 \Hy@StepCount\@tempcnta
12361 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12362 \advance\@tempcnta by -1 %
12363 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12364 }

```

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.

```

12365 \renewcommand\pdfbookmark[3][0]{%
12366 \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%
12367 \hyper@anchorstart{#3.#1}\hyper@anchorend
12368 }
12369 \def\BOOKMARK{%
12370 \ifnextchar[\@BOOKMARK]{\@@BOOKMARK[1][-]}%

```

```

12371 }
12372 \def\@BOOKMARK[#1]{%
12373   \ifnextchar[{\@BOOKMARK[{#1}]}{\@BOOKMARK[{#1}][-]}%
12374 }

```

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

48.1.1 Rerun warning

\Hy@OutlineRerunCheck

```

12375 \RequirePackage{rerunfilecheck}[2009/12/10]
12376 \def\Hy@OutlineRerunCheck{%
12377   \RerunFileCheck{\jobname.out}{%
12378     \immediate\closeout\@outlinefile
12379   }{%
12380     Rerun to get outlines right\MessageBreak
12381     or use package 'bookmark'%
12382   }%
12383 }

```

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.

```

12384 <*vtex>
12385 \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.

```

12386 \begingroup
12387   \catcode'\'=12 %
12388   \ifnum\Hy@VTeXversion<650 %
12389     \catcode'\ "=12 %
12390     \gdef\hv@pdf@char#1#2#3{%
12391       \char
12392       \ifcase'#1#2#3 %
12393         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
12394         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12395         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12396         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12397         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12398         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12399         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12400         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12401         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
12402         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
12403         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12404         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12405         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12406         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12407         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12408         \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12409         \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%

```

```

12410 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12411 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12412 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
12413 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
12414 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
12415 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
12416 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
12417 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
12418 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
12419 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
12420 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
12421 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
12422 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
12423 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
12424 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
12425 \fi
12426 }%
12427 \else
12428 \gdef\hv@pdf@char{\char'}%
12429 \fi
12430 \endgroup

```

\@@BOOKMARK

```

12431 \def\@@BOOKMARK[#1][#2]#3#4#5{%
12432 \expandafter\edef\csname @count@#3\endcsname{%
12433 \the\@serial@counter
12434 }%
12435 \edef\@mycount{\the\@serial@counter}%
12436 \Hy@StepCount\@serial@counter
12437 \edef\@parcount{%
12438 \expandafter\ifx\csname @count@#5\endcsname\relax
12439 0%
12440 \else
12441 \csname @count@#5\endcsname
12442 \fi
12443 }%
12444 \immediate\special{%
12445 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
12446 s=\ifx#2-c\else o\fi,t=#4%
12447 }%
12448 }%

```

\ReadBookmarks

```

12449 \def\ReadBookmarks{%
12450 \begingroup
12451 \def\0{\hv@pdf@char 0}%
12452 \def\1{\hv@pdf@char 1}%
12453 \def\2{\hv@pdf@char 2}%
12454 \def\3{\hv@pdf@char 3}%
12455 \def\{({}%
12456 \def\)}{)%
12457 \def\do##1{%
12458 \ifnum\the\catcode'##1=\active
12459 \@makeother##1%
12460 \fi
12461 }%
12462 \dospecials

```

```

12463 \InputIfFileExists{\jobname.out}{-}{-}%
12464 \endgroup
12465 \ifx\WriteBookmarks\relax
12466 \else
12467 \if@files
12468 \newwrite\@outlinefile
12469 \Hy@OutlineRerunCheck
12470 \immediate\openout\@outlinefile=\jobname.out\relax
12471 \ifHy@typexml
12472 \immediate\write\@outlinefile{<relaxxml>\relax}%
12473 \fi
12474 \fi
12475 \fi
12476 }

12477 </vtex>
12478 <!*vtex>
12479 \def\ReadBookmarks{%
12480 \begingroup
12481 \escapechar='\'%
12482 \let\escapechar\@gobble %
12483 \def\@@BOOKMARK[##1][##2]##3##4##5{%
12484 \calc@bm@number{##5}%
12485 }%
12486 \InputIfFileExists{\jobname.out}{-}{-}%
12487 \ifx\WriteBookmarks\relax
12488 \global\let\WriteBookmarks\relax
12489 \fi
12490 \def\@@BOOKMARK[##1][##2]##3##4##5{%
12491 \def\Hy@temp{##4}%
12492 <*pdftex>
12493 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12494 \Hy@OutlineName{\Hy@pstringName{%
12495 ##2\check@bm@number{##3}}%
12496 }{%
12497 \expandafter\strip@prefix\meaning\Hy@temp
12498 }%
12499 </pdftex>
12500 <*pdfmark>
12501 \pdfmark{%
12502 pdfmark=/OUT,%
12503 Count={##2\check@bm@number{##3}},%
12504 Dest={##3},%
12505 Title=\expandafter\strip@prefix\meaning\Hy@temp
12506 }%
12507 </pdfmark>
12508 <*dvipdfm | xetex>
12509 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12510 \@pdfm@mark{%
12511 outline \ifHy@DvipdfmxOutlineOpen
12512 [%
12513 \ifnum##21>\z@
12514 \else
12515 -%
12516 \fi
12517 ] %
12518 \fi
12519 ##1<<%

```

```

12520      /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
12521      /A<<%
12522      /S/GoTo%
12523      /D(\Hy@pstringName)%
12524      >>%
12525      >>%
12526      }%
12527 </dvipdfm | xetex>
12528 }%
12529 {%
12530   \def\WriteBookmarks{0}%
12531   \InputIfFileExists{\jobname.out}{-}{-}%
12532 }%
12533 {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
12534 \ifx\WriteBookmarks\relax
12535 \else
12536   \if@filesw
12537     \newwrite\@outlinefile
12538     \Hy@OutlineRerunCheck
12539     \immediate\openout\@outlinefile=\jobname.out\relax
12540     \ifHy@typexml
12541       \immediate\write\@outlinefile{<relaxxml>\relax}%
12542     \fi
12543   \fi
12544 \fi
12545 \endgroup
12546 }
12547 <*pdftex>
12548 \def\Hy@OutlineName#1#2#3#4{%
12549   \pdfoutline goto name{#2}count#3{#4}%
12550 }
12551 </pdftex>
12552 \def\check@bm@number#1{%
12553   \expandafter\ifx\csname B_#1\endcsname\relax
12554     0%
12555   \else
12556     \csname B_#1\endcsname
12557   \fi
12558 }
12559 \def\calc@bm@number#1{%
12560   \@tempcnta=\check@bm@number{#1}\relax
12561   \advance\@tempcnta by 1 %
12562   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
12563 }
12564 </!vtex>

12565 \ifHy@implicit
12566 \else
12567   \expandafter\endinput
12568 \fi

12569 </outlines>
12570 <*outlines | hypertex>

12571 \newlength\Hy@SectionHShift
12572 \def\Hy@SectionAnchorHref#1{%
12573   \ifx\protect\@typeset@protect
12574     \Hy@@@SectionAnchor{#1}%
12575   \fi

```

```

12576 }
12577 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
12578   \leavevmode
12579   \hbox to 0pt{%
12580     \kern-\Hy@SectionHShift
12581     \Hy@raisedlink{%
12582       \hyper@anchorstart{#1}\hyper@anchorend
12583     }%
12584     \hss
12585   }%
12586 }
12587 \let\H@old@ssect\@ssect
12588 \def\@ssect#1#2#3#4#5{%
12589   \Hy@GlobalStepCount\Hy@linkcounter
12590   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12591   \setlength{\Hy@SectionHShift}{#1}%
12592   \begingroup
12593     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
12594     \toks\tw@\expandafter{%
12595       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
12596       #5%
12597     }%
12598   \edef\x{\endgroup
12599     \the\toks@{\the\toks\tw@}}%
12600   }\x
12601 }
12602 \let\H@old@schapter\@schapter
12603 \def\@schapter#1{%
12604   \begingroup
12605     \let\@mkboth\@gobbletwo
12606     \Hy@GlobalStepCount\Hy@linkcounter
12607     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12608     \Hy@raisedlink{%
12609       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12610     }%
12611   \endgroup
12612   \H@old@schapter{#1}%
12613 }

```

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:

```

12614 \ifundefined{@chapter}{\}{%
12615   \let\Hy@org@chapter\@chapter
12616   \def\@chapter{%
12617     \def\Hy@next{%
12618       \Hy@GlobalStepCount\Hy@linkcounter
12619       \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12620       \Hy@raisedlink{%
12621         \hyper@anchorstart{\@currentHref}\hyper@anchorend
12622       }%
12623     }%
12624     \ifnum\c@secnumdepth>\m@ne
12625       \ifundefined{if@mainmatter}%
12626         \iftrue{\csname if@mainmatter\endcsname}%
12627         \let\Hy@next\relax
12628       \fi
12629     \fi

```



```

12630 \Hy@next
12631 \Hy@org@chapter
12632 }%
12633 }

12634 \let\H@old@part\@part
12635 \begingroup\expandafter\expandafter\expandafter\endgroup
12636 \expandafter\ifx\csname chapter\endcsname\relax
12637 \let\Hy@secnum@part\z@
12638 \else
12639 \let\Hy@secnum@part\m@ne
12640 \fi
12641 \def\@part{%
12642 \ifnum\Hy@secnum@part>\c@secnumdepth
12643 \phantomsection
12644 \fi
12645 \H@old@part
12646 }

12647 \let\H@old@spart\@spart
12648 \def\@spart#1{%
12649 \Hy@GlobalStepCount\Hy@linkcounter
12650 \xdef\@currentHref{part*.\the\Hy@linkcounter}%
12651 \Hy@raisedlink{%
12652 \hyper@anchorstart{\@currentHref}\hyper@anchorend
12653 }%
12654 \H@old@spart{#1}%
12655 }

12656 \let\H@old@sect\@sect
12657 \def\@sect#1#2#3#4#5#6[#7]#8{%
12658 \ifnum #2>\c@secnumdepth
12659 \expandafter\@firstoftwo
12660 \else
12661 \expandafter\@secondoftwo
12662 \fi
12663 {%
12664 \Hy@GlobalStepCount\Hy@linkcounter
12665 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12666 \setlength{\Hy@SectionHShift}{#3}%
12667 \begingroup
12668 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
12669 \toks\tw@\expandafter{%
12670 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
12671 #8%
12672 }%
12673 \edef\x{\endgroup
12674 \the\toks@\the\toks\tw@}%
12675 }\x
12676 }{%
12677 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
12678 }%
12679 }

12680 </outlines | hypertext>
12681 <*outlines>

12682 \expandafter\def\csname Parent-4\endcsname{}
12683 \expandafter\def\csname Parent-3\endcsname{}
12684 \expandafter\def\csname Parent-2\endcsname{}
12685 \expandafter\def\csname Parent-1\endcsname{}

```

```

12686 \expandafter\def\csname Parent0\endcsname{}
12687 \expandafter\def\csname Parent1\endcsname{}
12688 \expandafter\def\csname Parent2\endcsname{}
12689 \expandafter\def\csname Parent3\endcsname{}
12690 \expandafter\def\csname Parent4\endcsname{}
12691 </outlines>

```

49 Compatibility with koma-script classes

```
12692 < *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.

```

12693 \def\Hy@tempa{%
12694   \def\@addchap{##1}##2{%
12695     \typeout{##2}%
12696     \if@twoside
12697       \mkboth{##1}{}%
12698     \else
12699       \mkboth{}{##1}%
12700     \fi
12701     \addtocontents{lof}{\protect\addvspace{10\p@}}%
12702     \addtocontents{lot}{\protect\addvspace{10\p@}}%
12703     \Hy@GlobalStepCount\Hy@linkcounter
12704     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12705     \Hy@raisedlink{%
12706       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12707     }%
12708     \if@twocolumn
12709       \@topnewpage[\@makeschapterhead{##2}]%
12710     \else
12711       \@makeschapterhead{##2}%
12712       \@afterheading
12713     \fi
12714     \addcontentsline{toc}{chapter}{##1}%
12715   }%
12716 }
12717 \ifclassloaded{scrbook}{%
12718   \ifclasslater{scrbook}{2001/01/01}{%
12719     \let\Hy@tempa\@empty
12720   }{}%
12721 }{%
12722   \ifclassloaded{scrreprt}{%
12723     \ifclasslater{scrreprt}{2001/01/01}{%
12724       \let\Hy@tempa\@empty
12725     }{}%
12726   }{%
12727     \let\Hy@tempa\@empty
12728   }%
12729 }%
12730 \Hy@tempa
12731 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

12732 `<*pd1enc>`

12733 `\DeclareFontEncoding{PD1}{-}{-}`

Accents

12734 `\DeclareTextAccent{\`}{PD1}{\textasciigrave}`

12735 `\DeclareTextAccent{\'}{PD1}{\textacute}`

12736 `\DeclareTextAccent{\~}{PD1}{\textasciicircum}`

12737 `\DeclareTextAccent{\~}{PD1}{\texttilde}`

12738 `\DeclareTextAccent{\"}{PD1}{\textasciidieresis}`

12739 `\DeclareTextAccent{\r}{PD1}{\textring}`

12740 `\DeclareTextAccent{\v}{PD1}{\textasciicaron}`

12741 `\DeclareTextAccent{\.}{PD1}{\textdotaccent}`

12742 `\DeclareTextAccent{\c}{PD1}{\textcedilla}`

12743 `\DeclareTextAccent{\=}{PD1}{\textasciimacron}`

12744 `\DeclareTextAccent{\b}{PD1}{\textmacronbelow}`

12745 `\DeclareTextAccent{\d}{PD1}{\textdotbelow}`

12746 `\DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}`

12747 `\DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}`

12748 `\DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}`

12749 `\DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}`

12750 `\DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}`

12751 `\DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}`

12752 `\DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}`

12753 `\DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}`

12754 `\DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}`

12755 `\DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}`

12756 `\DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}`

12757 `\DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}`

12758 `\DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}`

12759 `\DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}`

12760 `\DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}`

12761 `\DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}`

12762 `\DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}`

12763 `\DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}`

12764 `\DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}`

12765 `\DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}`

12766 `\DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}`

12767 `\DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}`

12768 `\DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}`

12769 `\DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}`

12770 `\DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}`

12771 `\DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}`

12772 `\DeclareTextCommand{\newtie}{PD1}[1]{%`

12773 `\TextSymbolUnavailable{\newtie{#1}}#1%`

12774 `}`

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

12775 `% U+0009 (CHARACTER TABULATION)`

12776 `\DeclareTextCommand{\textHT}{PD1}{\011}% U+0009`

12777 `% U+000A (LINE FEED)`

12778 `\DeclareTextCommand{\textLF}{PD1}{\012}% U+000A`

12779 `% U+000D (CARRIAGE RETURN)`

12780 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

Accent glyph names

12781 % U+02D8 BREVE; breve

12782 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8

12783 % U+02C7 CARON; caron

12784 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7

12785 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex

12786 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6

12787 % U+02D9 DOT ABOVE; dotaccent

12788 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9

12789 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut

12790 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD

12791 % U+02DB OGONEK; ogonek

12792 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB

12793 % U+02DA RING ABOVE; ring

12794 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA

12795 % U+02DC SMALL TILDE; ilde, *tilde

12796 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

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

\041: U+0021 EXCLAMATION MARK; exclam

12797 % U+0022 QUOTATION MARK; quotedbl

12798 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022

12799 % U+0023 NUMBER SIGN; numbersign

12800 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

12801 % U+0024 DOLLAR SIGN; dollar

12802 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024

12803 % U+0025 PERCENT SIGN; percent

12804 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025

12805 % U+0026 AMPERSAND; ampersand

12806 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

\047: U+0027 APOSTROPHE; quotesingle

12807 % U+0028 LEFT PARENTHESIS; parenleft

12808 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028

12809 % U+0029 RIGHT PARENTHESIS; parenright

12810 \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

12811 % U+002E FULL STOP; period

12812 \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

12813 % U+003C LESS-THAN SIGN; less

12814 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

\075: U+003D EQUALS SIGN; equal

12815 % U+003E GREATER-THAN SIGN; greater

12816 \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
 12817 % U+005C REVERSE SOLIDUS; backslash
 12818 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 12819 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12820 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 12821 % U+005F LOW LINE; underscore
 12822 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 12823 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 12824 % U+0060 GRAVE ACCENT; grave
 12825 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 12826 % U+0069 LATIN SMALL LETTER I; i
 12827 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 12828 % U+007B LEFT CURLY BRACKET; braceleft
 12829 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 12830 % U+007C VERTICAL LINE; *bar, verticalbar
 12831 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 12832 % U+007D RIGHT CURLY BRACKET; braceright
 12833 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 12834 % U+007E TILDE; asciitilde
 12835 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 12836 % U+2022 BULLET; bullet
 12837 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 12838 % U+2020 DAGGER; dagger
 12839 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 12840 % U+2021 DOUBLE DAGGER; daggerdbl
 12841 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 12842 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 12843 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 12844 % U+2014 EM DASH; emdash
 12845 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 12846 % U+2013 EN DASH; endash
 12847 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 12848 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 12849 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 12850 % U+2044 FRACTION SLASH; fraction
 12851 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 12852 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 12853 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 12854 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 12855 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A

12856 % U+2212 MINUS SIGN; minus
 12857 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 12858 % U+2030 PER MILLE SIGN; perthousand
 12859 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 12860 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 12861 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 12862 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 12863 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 12864 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 12865 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 12866 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 12867 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 12868 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 12869 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 12870 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 12871 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 12872 % U+2122 TRADE MARK SIGN; trademark
 12873 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 12874 % U+FB01 LATIN SMALL LIGATURE FI; fi
 12875 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 12876 % U+FB02 LATIN SMALL LIGATURE FL; fl
 12877 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 12878 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 12879 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 12880 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 12881 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 12882 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 12883 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 12884 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 12885 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
 12886 \DeclareTextCommand{\IJ}{PD1}{\230}
 12887 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 12888 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 12889 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 12890 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 12891 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 12892 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 12893 % U+0153 LATIN SMALL LIGATURE OE; oe
 12894 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 12895 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 12896 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 12897 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 12898 \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.

12899 % U+20AC EURO SIGN; *Euro, euro
 12900 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 12901 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12902 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 12903 % U+00A2 CENT SIGN; cent
 12904 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 12905 % U+00A3 POUND SIGN; sterling
 12906 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 12907 % U+00A4 CURRENCY SIGN; currency
 12908 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 12909 % U+00A5 YEN SIGN; yen
 12910 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5

12911 % U+00A6 BROKEN BAR; brokenbar
 12912 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 12913 % U+00A7 SECTION SIGN; section
 12914 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 12915 % U+00A8 DIAERESIS; dieresis
 12916 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 12917 % U+00A9 COPYRIGHT SIGN; copyright
 12918 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 12919 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12920 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 12921 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12922 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 12923 % U+00AC NOT SIGN; logicalnot
 12924 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 12925 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 12926 % U+00AE REGISTERED SIGN; registered
 12927 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 12928 % U+00AF MACRON; *macron, overscore
 12929 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 12930 % U+00B0 DEGREE SIGN; degree
 12931 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 12932 % U+00B1 PLUS-MINUS SIGN; plusminus
 12933 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 12934 % U+00B2 SUPERScript TWO; twosuperior
 12935 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 12936 % U+00B3 SUPERScript THREE; threesuperior
 12937 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 12938 % U+00B4 ACUTE ACCENT; acute
 12939 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 12940 % U+00B5 MICRO SIGN; mu, mul
 12941 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 12942 % U+00B6 PILCROW SIGN; paragraph
 12943 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 12944 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12945 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 12946 % U+00B8 CEDILLA; cedilla
 12947 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 12948 % U+00B9 SUPERScript ONE; onesuperior
 12949 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 12950 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12951 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 12952 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12953 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 12954 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12955 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 12956 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12957 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 12958 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 12959 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 12960 % U+00BF INVERTED QUESTION MARK; questiondown
 12961 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 12962 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 12963 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 12964 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute

12965 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
12966 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12967 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
12968 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12969 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
12970 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12971 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
12972 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12973 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
12974 % U+00C6 LATIN CAPITAL LETTER AE; AE
12975 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
12976 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12977 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
12978 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12979 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
12980 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12981 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
12982 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12983 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
12984 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12985 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
12986 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12987 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
12988 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12989 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
12990 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12991 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
12992 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12993 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
12994 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12995 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
12996 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
12997 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12998 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
12999 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13000 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13001 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13002 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13003 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13004 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13005 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13006 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13007 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13008 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
13009 % U+00D7 MULTIPLICATION SIGN; multiply
13010 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13011 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13012 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13013 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13014 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13015 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13016 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13017 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13018 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13019 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13020 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
13021 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute

13022 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
13023 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13024 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13025 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13026 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13027 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13028 \DeclareTextCompositeCommand{'}{PD1}{a}{\340}% U+00E0
13029 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; acute
13030 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
13031 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13032 \DeclareTextCompositeCommand{'}{PD1}{a}{\342}% U+00E2
13033 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13034 \DeclareTextCompositeCommand{'}{PD1}{a}{\343}% U+00E3
13035 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13036 \DeclareTextCompositeCommand{'}{PD1}{a}{\344}% U+00E4
13037 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13038 \DeclareTextCompositeCommand{'}{PD1}{a}{\345}% U+00E5
13039 % U+00E6 LATIN SMALL LETTER AE; ae
13040 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13041 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13042 \DeclareTextCompositeCommand{'}{PD1}{c}{\347}% U+00E7
13043 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13044 \DeclareTextCompositeCommand{'}{PD1}{e}{\350}% U+00E8
13045 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13046 \DeclareTextCompositeCommand{'}{PD1}{e}{\351}% U+00E9
13047 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13048 \DeclareTextCompositeCommand{'}{PD1}{e}{\352}% U+00EA
13049 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13050 \DeclareTextCompositeCommand{'}{PD1}{e}{\353}% U+00EB
13051 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13052 \DeclareTextCompositeCommand{'}{PD1}{i}{\354}% U+00EC
13053 \DeclareTextCompositeCommand{'}{PD1}{i}{\354}% U+00EC
13054 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13055 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
13056 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
13057 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13058 \DeclareTextCompositeCommand{'}{PD1}{i}{\356}% U+00EE
13059 \DeclareTextCompositeCommand{'}{PD1}{i}{\356}% U+00EE
13060 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13061 \DeclareTextCompositeCommand{'}{PD1}{i}{\357}% U+00EF
13062 \DeclareTextCompositeCommand{'}{PD1}{i}{\357}% U+00EF
13063 % U+00F0 LATIN SMALL LETTER ETH; eth
13064 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13065 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13066 \DeclareTextCompositeCommand{'}{PD1}{n}{\361}% U+00F1
13067 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13068 \DeclareTextCompositeCommand{'}{PD1}{o}{\362}% U+00F2
13069 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13070 \DeclareTextCompositeCommand{'}{PD1}{o}{\363}% U+00F3
13071 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13072 \DeclareTextCompositeCommand{'}{PD1}{o}{\364}% U+00F4
13073 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13074 \DeclareTextCompositeCommand{'}{PD1}{o}{\365}% U+00F5
13075 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13076 \DeclareTextCompositeCommand{'}{PD1}{o}{\366}% U+00F6
13077 % U+00F7 DIVISION SIGN; divide
13078 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7

13079 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 13080 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 13081 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 13082 \DeclareTextCompositeCommand{\'}{PD1}{u}{\371}% U+00F9
 13083 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 13084 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
 13085 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 13086 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
 13087 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 13088 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
 13089 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 13090 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
 13091 % U+00FE LATIN SMALL LETTER THORN; thorn
 13092 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 13093 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 13094 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
 13095 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13096 \DeclareTextCommand{\SS}{PD1}{SS}
 13097 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13098 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 13099 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 13100 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 13101 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 13102 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 13103 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 13104 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 13105 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13106 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 13107 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 13108 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 13109 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 13110 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 13111 \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).

13112 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
 13113 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
 13114 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
 13115 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
 13116 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
 13117 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
 13118 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
 13119 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
 13120 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
 13121 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
 13122 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
 13123 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
 13124 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
 13125 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

13126 \end{pdlenc}

50.2 PU encoding

```
13127 <*puenc>
13128 \DeclareFontEncoding{PU}{-}{-}
```

50.2.1 NFSS2 accents

```
13129 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
13130 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
13131 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
13132 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
13133 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
13134 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
13135 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
13136 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
13137 % U+0304 COMBINING MACRON; macroncmb
13138 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
13139 % U+0306 COMBINING BREVE; brevecmb
13140 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
13141 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
13142 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
13143 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
13144 % U+0308 COMBINING DIAERESIS; dieresiscmb
13145 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
13146 % U+030A COMBINING RING ABOVE; ringcmb
13147 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
13148 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
13149 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
13150 % U+030C COMBINING CARON; caroncmb
13151 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
13152 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13153 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
13154 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
13155 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13156 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
13157 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
13158 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
13159 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13160 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
13161 % U+0327 COMBINING CEDILLA; cedillacmb
13162 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
13163 % U+0328 COMBINING OGONEK; ogonekcmb
13164 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
13165 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
13166 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
13167 % U+20DD COMBINING ENCLOSING CIRCLE
13168 \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.

```
13169 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
13170 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
13171 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
13172 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\texttilde}
13173 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
13174 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
13175 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13176 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
13177 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
```

```

13178 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13179 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13180 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
13181 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13182 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13183 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13184 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13185 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13186 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13187 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

13188 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13189 \DeclareTextCompositeCommand{\' }{PU}{\ }{\textacute}
13190 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
13191 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13192 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13193 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13194 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13195 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13196 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13197 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13198 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13199 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13200 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13201 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13202 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13203 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13204 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13205 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13206 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13207 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13208 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13209 \DeclareTextCommand{\capitalgrave}{PU}[1]{\{'{#1}}
13210 \DeclareTextCommand{\capitalacute}{PU}[1]{\'\{#1}}
13211 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13212 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13213 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\{"{#1}}
13214 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13215 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13216 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13217 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13218 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13219 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}
13220 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13221 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

13222 % U+0009 (CHARACTER TABULATION)
13223 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13224 % U+000A (LINE FEED)
13225 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13226 % U+000D (CARRIAGE RETURN)
13227 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

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

```

13228 % U+0022 QUOTATION MARK; quotedbl
13229 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13230 % U+0023 NUMBER SIGN; numbersign
13231 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13232 % U+0024 DOLLAR SIGN; dollar
13233 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
13234 % U+0025 PERCENT SIGN; percent
13235 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
13236 % U+0026 AMPERSAND; ampersand
13237 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
13238 % U+0027 APOSTROPHE; quotesingle
13239 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
13240 % U+0028 LEFT PARENTHESIS; parenleft
13241 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
13242 % U+0029 RIGHT PARENTHESIS; parenright
13243 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
13244 % U+002A ASTERISK; asterisk
13245 \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

13246 % U+003C LESS-THAN SIGN; less
13247 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

13248 % U+003E GREATER-THAN SIGN; greater
13249 \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

13250 % U+005C REVERSE SOLIDUS; backslash
13251 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C

\80\135: U+005D RIGHT SQUARE BRACKET; bracketright

13252 % U+005E CIRCUMFLEX ACCENT; asciicircum
13253 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
13254 % U+005F LOW LINE; underscore
13255 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
13256 % U+0060 GRAVE ACCENT; grave
13257 \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

13258 % U+0069 LATIN SMALL LETTER I; i
13259 \DeclareTextCompositeCommand{\.}{PU}{i}% \80\151 U+0069

13260 \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
 13261 % U+007B LEFT CURLY BRACKET; braceleft
 13262 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13263 % U+007C VERTICAL LINE; *bar, verticalbar
 13264 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13265 % U+007D RIGHT CURLY BRACKET; braceright
 13266 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13267 % U+007E TILDE; asciitilde
 13268 \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
 13269 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13270 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13271 % U+00A2 CENT SIGN; cent
 13272 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13273 % U+00A3 POUND SIGN; sterling
 13274 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13275 % U+00A4 CURRENCY SIGN; currency
 13276 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13277 % U+00A5 YEN SIGN; yen
 13278 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13279 % U+00A6 BROKEN BAR; brokenbar
 13280 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13281 % U+00A7 SECTION SIGN; section
 13282 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13283 % U+00A8 DIAERESIS; diaeresis
 13284 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13285 % U+00A9 COPYRIGHT SIGN; copyright
 13286 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13287 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13288 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13289 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13290 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 13291 % U+00AC NOT SIGN; logicalnot
 13292 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13293 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13294 % U+00AE REGISTERED SIGN; registered
 13295 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13296 % U+00AF MACRON; *macron, overscore
 13297 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13298 % U+00B0 DEGREE SIGN; degree
 13299 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13300 % U+00B1 PLUS-MINUS SIGN; plusminus
 13301 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13302 % U+00B2 SUPERScript TWO; twosuperior
 13303 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13304 % U+00B3 SUPERScript THREE; threesuperior
 13305 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 13306 % U+00B4 ACUTE ACCENT; acute

13307 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
13308 \DeclareTextCommand{\textasciicute}{PU}{\80\264}% U+00B4
13309 % U+00B5 MICRO SIGN; mu, mu1
13310 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
13311 % U+00B6 PILCROW SIGN; paragraph
13312 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
13313 % U+00B7 MIDDLE DOT; middot, *periodcentered
13314 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
13315 % U+00B8 CEDILLA; cedilla
13316 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
13317 % U+00B9 SUPERSCRIPT ONE; onesuperior
13318 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
13319 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13320 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
13321 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13322 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
13323 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13324 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
13325 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13326 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
13327 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13328 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
13329 % U+00BF INVERTED QUESTION MARK; questiondown
13330 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
13331 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13332 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
13333 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13334 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
13335 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13336 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
13337 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13338 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
13339 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13340 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
13341 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13342 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
13343 % U+00C6 LATIN CAPITAL LETTER AE; AE
13344 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
13345 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13346 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
13347 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13348 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
13349 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13350 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
13351 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13352 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
13353 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13354 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
13355 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13356 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
13357 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13358 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
13359 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13360 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
13361 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13362 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF

13363 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13364 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
13365 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13366 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
13367 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13368 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
13369 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13370 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
13371 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13372 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
13373 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13374 \DeclareTextCompositeCommand{\-}{PU}{O}{\80\325}% U+00D5
13375 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13376 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
13377 % U+00D7 MULTIPLICATION SIGN; multiply
13378 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
13379 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13380 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
13381 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13382 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
13383 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13384 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
13385 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13386 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
13387 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13388 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
13389 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13390 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
13391 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13392 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
13393 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13394 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
13395 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13396 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
13397 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13398 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
13399 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13400 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
13401 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13402 \DeclareTextCompositeCommand{\-}{PU}{a}{\80\343}% U+00E3
13403 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13404 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
13405 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13406 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
13407 % U+00E6 LATIN SMALL LETTER AE; ae
13408 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
13409 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13410 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
13411 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13412 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
13413 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13414 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
13415 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13416 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
13417 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13418 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
13419 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave

13420 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
13421 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
13422 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13423 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
13424 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
13425 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13426 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\356}% U+00EE
13427 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\356}% U+00EE
13428 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13429 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\357}% U+00EF
13430 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\357}% U+00EF
13431 % U+00F0 LATIN SMALL LETTER ETH; eth
13432 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
13433 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13434 \DeclareTextCompositeCommand{\'}{PU}{n}{\80\361}% U+00F1
13435 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13436 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}% U+00F2
13437 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13438 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
13439 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13440 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\364}% U+00F4
13441 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13442 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\365}% U+00F5
13443 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13444 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\366}% U+00F6
13445 % U+00F7 DIVISION SIGN; divide
13446 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
13447 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13448 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
13449 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13450 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
13451 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
13452 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
13453 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13454 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\373}% U+00FB
13455 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13456 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\374}% U+00FC
13457 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13458 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
13459 % U+00FE LATIN SMALL LETTER THORN; thorn
13460 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
13461 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13462 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\377}% U+00FF

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

13463 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
13464 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
13465 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
13466 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
13467 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
13468 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
13469 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
13470 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
13471 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
13472 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
13473 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek

13474 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
13475 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
13476 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
13477 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
13478 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
13479 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
13480 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
13481 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
13482 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
13483 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
13484 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
13485 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
13486 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
13487 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
13488 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
13489 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
13490 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
13491 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
13492 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
13493 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
13494 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
13495 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
13496 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
13497 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
13498 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
13499 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
13500 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
13501 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
13502 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
13503 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
13504 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
13505 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
13506 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
13507 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
13508 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
13509 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
13510 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
13511 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
13512 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
13513 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
13514 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
13515 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
13516 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
13517 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
13518 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
13519 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
13520 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
13521 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
13522 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
13523 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
13524 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
13525 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
13526 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
13527 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
13528 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
13529 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
13530 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121

13531 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
 13532 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
 13533 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
 13534 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
 13535 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
 13536 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
 13537 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
 13538 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
 13539 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
 13540 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
 13541 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
 13542 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
 13543 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
 13544 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 13545 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
 13546 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 13547 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 13548 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
 13549 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
 13550 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
 13551 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 13552 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 13553 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
 13554 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
 13555 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
 13556 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 13557 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 13558 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
 13559 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
 13560 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
 13561 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 13562 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 13563 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 13564 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 13565 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 13566 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 13567 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 13568 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 13569 % U+0133 LATIN SMALL LIGATURE IJ; ij
 13570 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 13571 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 13572 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 13573 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 13574 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 13575 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 13576 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 13577 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 13578 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 13579 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has chosen `\textkra`.

13580 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 13581 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 13582 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute

13583 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
13584 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
13585 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
13586 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
13587 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
13588 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
13589 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
13590 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
13591 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
13592 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
13593 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E
There seems to be no variants of letters ‘L’ and ‘l’ with a dot above (reasonable). There-
fore the \. accent is reused instead of making a separate accent macro \textmiddledot.
13594 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
13595 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
13596 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
13597 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
13598 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13599 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
13600 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13601 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
13602 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
13603 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
13604 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
13605 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
13606 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
13607 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
13608 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
13609 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
13610 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
13611 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
13612 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
13613 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
13614 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
trophe, quoterightn
13615 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
13616 % U+014A LATIN CAPITAL LETTER ENG; Eng
13617 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
13618 % U+014B LATIN SMALL LETTER ENG; eng
13619 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
13620 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
13621 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
13622 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
13623 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
13624 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
13625 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
13626 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
13627 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
13628 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
cute, Ohungarumlaut
13629 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
13630 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohun-
garumlaut
13631 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
13632 % U+0152 LATIN CAPITAL LIGATURE OE; OE

13633 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
13634 % U+0153 LATIN SMALL LIGATURE OE; oe
13635 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
13636 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
13637 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
13638 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
13639 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
13640 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
cent
13641 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
13642 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
13643 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
13644 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
13645 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
13646 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
13647 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
13648 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
13649 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
13650 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
13651 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
13652 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
13653 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
13654 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
13655 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
13656 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
13657 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
13658 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
13659 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
13660 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13661 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
13662 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13663 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
13664 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
cent
13665 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
13666 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
13667 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
13668 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
13669 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
13670 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
13671 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
13672 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
13673 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
13674 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
13675 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
13676 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
13677 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
13678 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
13679 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
13680 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
13681 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
13682 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
13683 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
13684 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
13685 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
13686 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
13687 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D

13688 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 13689 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 13690 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 13691 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 13692 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 13693 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 13694 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 13695 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 13696 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 13697 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 13698 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 13699 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 13700 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 13701 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 13702 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 13703 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 13704 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 13705 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 13706 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 13707 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 13708 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 13709 \DeclareTextCompositeCommand{"}{PU}{Y}{\81\170}% U+0178
 13710 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 13711 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 13712 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 13713 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 13714 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 13715 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 13716 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 13717 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 13718 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13719 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 13720 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13721 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 13722 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 13723 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

13724 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13725 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 13726 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 13727 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 13728 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 13729 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 13730 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 13731 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 13732 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 13733 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13734 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13735 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 13736 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 13737 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 13738 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 13739 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 13740 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3

13741 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
13742 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
13743 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
13744 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
13745 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
13746 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
13747 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
13748 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
13749 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
13750 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
13751 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
13752 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
13753 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
13754 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
13755 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
13756 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
13757 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
13758 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
13759 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
13760 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13761 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13762 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
13763 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
13764 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
13765 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
13766 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
13767 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
13768 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
13769 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
13770 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
13771 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
13772 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
13773 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
13774 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslasha-
acute, Ostrokeacute
13775 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
13776 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslasha-
acute, ostrokeacute
13777 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
13778 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
13779 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
13780 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
13781 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
13782 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
13783 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
13784 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
13785 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
13786 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
13787 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
13788 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
13789 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13790 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13791 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
13792 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
13793 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
13794 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
13795 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave

13796 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 13797 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 13798 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 13799 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 13800 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 13801 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 13802 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 13803 % U+021E LATIN CAPITAL LETTER H WITH CARON
 13804 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 13805 % U+021F LATIN SMALL LETTER H WITH CARON
 13806 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 13807 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 13808 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 13809 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 13810 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 13811 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 13812 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 13813 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 13814 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 13815 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 13816 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 13817 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 13818 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 13819 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 13820 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 13821 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 13822 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 13823 % U+0237 LATIN SMALL LETTER DOTLESS J
 13824 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13825 % U+02C7 CARON; caron
 13826 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 13827 % U+02D8 BREVE; breve
 13828 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 13829 % U+02D9 DOT ABOVE; dotaccent
 13830 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 13831 % U+02DA RING ABOVE; ring
 13832 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 13833 % U+02DB OGONEK; ogonek
 13834 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 13835 % U+02DC SMALL TILDE; ilde, *tilde
 13836 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 13837 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13838 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 13839 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 13840 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 13841 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 13842 % U+02F7 MODIFIER LETTER LOW TILDE
 13843 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13844 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13845 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 13846 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13847 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 13848 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb

13849 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 13850 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13851 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 13852 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13853 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13854 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 13855 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 13856 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 13857 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 13858 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 13859 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 13860 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 13861 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 13862 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 13863 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 13864 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 13865 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 13866 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 cronos
 13867 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 13868 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
 13869 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 13870 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 13871 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 13872 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; io-
 tadiesistonos
 13873 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesesis}{\83\220}% U+0390
 13874 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 13875 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 13876 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 13877 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 13878 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 13879 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 13880 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 13881 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 13882 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 13883 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 13884 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 13885 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 13886 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 13887 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 13888 % U+0398 GREEK CAPITAL LETTER THETA; Theta
 13889 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 13890 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 13891 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 13892 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 13893 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 13894 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
 13895 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
 13896 % U+039C GREEK CAPITAL LETTER MU; Mu
 13897 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 13898 % U+039D GREEK CAPITAL LETTER NU; Nu
 13899 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
 13900 % U+039E GREEK CAPITAL LETTER XI; Xi
 13901 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E

13902 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13903 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13904 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13905 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13906 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13907 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13908 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13909 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13910 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13911 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13912 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13913 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13914 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13915 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13916 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
13917 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13918 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13919 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13920 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13921 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13922 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13923 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13924 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
13925 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silonadieresis
13926 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13927 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13928 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13929 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
13930 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13931 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
13932 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13933 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
13934 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13935 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
silonadieresis
13936 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
13937 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
13938 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13939 % U+03B2 GREEK SMALL LETTER BETA; beta
13940 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13941 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13942 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13943 % U+03B4 GREEK SMALL LETTER DELTA; delta
13944 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13945 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13946 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13947 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13948 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13949 % U+03B7 GREEK SMALL LETTER ETA; eta
13950 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13951 % U+03B8 GREEK SMALL LETTER THETA; theta
13952 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13953 % U+03B9 GREEK SMALL LETTER IOTA; iota
13954 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13955 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13956 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA

13957 % U+03BB GREEK SMALL LETTER LAMDA; lambda
 13958 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
 13959 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
 13960 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
 13961 % U+03BD GREEK SMALL LETTER NU; nu
 13962 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
 13963 % U+03BE GREEK SMALL LETTER XI; xi
 13964 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
 13965 % U+03BF GREEK SMALL LETTER OMICRON; omicron
 13966 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
 13967 % U+03C0 GREEK SMALL LETTER PI; pi
 13968 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
 13969 % U+03C1 GREEK SMALL LETTER RHO; rho
 13970 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
 13971 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
 13972 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
 13973 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
 13974 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
 13975 % U+03C4 GREEK SMALL LETTER TAU; tau
 13976 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
 13977 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
 13978 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
 13979 % U+03C6 GREEK SMALL LETTER PHI; phi
 13980 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
 13981 % U+03C7 GREEK SMALL LETTER CHI; chi
 13982 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
 13983 % U+03C8 GREEK SMALL LETTER PSI; psi
 13984 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
 13985 % U+03C9 GREEK SMALL LETTER OMEGA; omega
 13986 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
 13987 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
 13988 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 13989 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 13990 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 13991 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 13992 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 13993 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 13994 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
 13995 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
 13996 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 13997 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
 13998 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 13999 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 14000 % U+03DB GREEK SMALL LETTER STIGMA
 14001 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 14002 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14003 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14004 % U+03DD GREEK SMALL LETTER DIGAMMA
 14005 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14006 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14007 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14008 % U+03DF GREEK SMALL LETTER KOPPA
 14009 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14010 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 14011 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 14012 % U+03E1 GREEK SMALL LETTER SAMPI

14013 \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.

14014 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
14015 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
14016 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
14017 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
14018 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
14019 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
14020 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
14021 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
14022 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
14023 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
14024 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
14025 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
14026 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
14027 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrillic, *afii10055
14028 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14029 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
14030 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14031 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
14032 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14033 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14034 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14035 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14036 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14037 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14038 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14039 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14040 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14041 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14042 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14043 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
14044 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
14045 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14046 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14047 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
14048 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14049 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14050 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14051 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14052 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14053 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14054 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14055 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14056 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14057 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14058 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14059 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14060 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14061 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14062 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14063 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14064 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417

14065 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
14066 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14067 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
14068 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14069 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14070 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
14071 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14072 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14073 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14074 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14075 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14076 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14077 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14078 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14079 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14080 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14081 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14082 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14083 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14084 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14085 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14086 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14087 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14088 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14089 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14090 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14091 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14092 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14093 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14094 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14095 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14096 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14097 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14098 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14099 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14100 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14101 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14102 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14103 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14104 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14105 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14106 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14107 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14108 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14109 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14110 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14111 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14112 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14113 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14114 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14115 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14116 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14117 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14118 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14119 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14120 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14121 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433

14122 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14123 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14124 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14125 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14126 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhcyrillic
14127 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
14128 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14129 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
14130 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14131 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
14132 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14133 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14134 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
14135 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14136 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
14137 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14138 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
14139 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14140 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
14141 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14142 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
14143 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14144 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
14145 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14146 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
14147 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14148 \DeclareTextCommand{\cyr}{PU}{\84\100}% U+0440
14149 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14150 \DeclareTextCommand{\cyr}{PU}{\84\101}% U+0441
14151 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14152 \DeclareTextCommand{\cyr}{PU}{\84\102}% U+0442
14153 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14154 \DeclareTextCommand{\cyr}{PU}{\84\103}% U+0443
14155 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14156 \DeclareTextCommand{\cyr}{PU}{\84\104}% U+0444
14157 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14158 \DeclareTextCommand{\cyr}{PU}{\84\105}% U+0445
14159 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14160 \DeclareTextCommand{\cyr}{PU}{\84\106}% U+0446
14161 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14162 \DeclareTextCommand{\cyr}{PU}{\84\107}% U+0447
14163 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14164 \DeclareTextCommand{\cyr}{PU}{\84\110}% U+0448
14165 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14166 \DeclareTextCommand{\cyr}{PU}{\84\111}% U+0449
14167 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14168 \DeclareTextCommand{\cyr}{PU}{\84\112}% U+044A
14169 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14170 \DeclareTextCommand{\cyr}{PU}{\84\113}% U+044B
14171 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14172 \DeclareTextCommand{\cyr}{PU}{\84\114}% U+044C
14173 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14174 \DeclareTextCommand{\cyr}{PU}{\84\115}% U+044D
14175 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14176 \DeclareTextCommand{\cyr}{PU}{\84\116}% U+044E
14177 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14178 \DeclareTextCommand{\cyr}{PU}{\84\117}% U+044F

14179 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14180 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
14181 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrrillic
14182 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
14183 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
14184 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14185 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14186 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14187 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14188 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrrillic
14189 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14190 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14191 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14192 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
14193 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14194 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrrillic
14195 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14196 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
14197 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14198 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14199 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14200 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14201 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14202 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14203 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrrillic
14204 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14205 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14206 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14207 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14208 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
14209 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrrillic
14210 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14211 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14212 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrrillic
14213 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14214 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrrillic
14215 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14216 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrrillic
14217 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14218 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrrillic, *afii10146
14219 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14220 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrrillic
14221 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14222 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrrillic
14223 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14224 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrrillic
14225 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14226 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrrillic
14227 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14228 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrrillic
14229 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14230 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleiotifiedcyrrillic
14231 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14232 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotifiedcyrrillic

14233 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14234 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14235 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14236 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14237 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
14238 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
14239 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
14240 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
lic
14241 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
14242 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
14243 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
14244 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
14245 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
14246 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
14247 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
14248 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
14249 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
14250 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
14251 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
14252 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
14253 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
14254 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
14255 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
14256 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
14257 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
14258 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; Izhitsadblgravecyrillic
14259 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
14260 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; izhitsadblgravecyrillic
14261 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
14262 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
14263 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
14264 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
14265 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
14266 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic
14267 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
14268 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
14269 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
14270 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-
cyrillic
14271 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
14272 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
cyrillic
14273 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
14274 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
14275 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
14276 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
14277 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
14278 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
14279 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
14280 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
14281 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
14282 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic

14283 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrillicmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 14284 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14285 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14286 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14287 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14288 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14289 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14290 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14291 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14292 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14293 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14294 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14295 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14296 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 14297 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14298 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 14299 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14300 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 14301 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14302 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14303 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 14304 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14305 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 14306 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 14307 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14308 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 14309 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14310 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 14311 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14312 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 14313 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14314 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14315 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 14316 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
 14317 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14318 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic

14319 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
14320 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadesender-cyrillic
14321 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
14322 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic
14323 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
14324 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-ticalstrokecyrillic
14325 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
14326 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
14327 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
14328 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
14329 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
14330 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
14331 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
14332 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
14333 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
14334 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-dercyrillic
14335 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
14336 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-cyrillic
14337 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
14338 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
14339 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
14340 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
14341 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
14342 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-dlehookcyrillic
14343 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
14344 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-hookcyrillic
14345 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
14346 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-lic
14347 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
14348 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
14349 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
14350 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-dercyrillic
14351 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
14352 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
14353 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-cyrillic
14354 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
14355 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
14356 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-dercyrillic
14357 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
14358 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-cyrillic
14359 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
14360 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
14361 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
14362 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
14363 \DeclareTextCommand{\cyr}{PU}{\84\257}% U+04AF

14364 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
 traightstrokecyrillic
 14365 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 14366 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
 traightstrokecyrillic
 14367 \DeclareTextCommand{\cyrhcrs}{PU}{\84\261}% U+04B1
 14368 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
 dercyrillic
 14369 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 14370 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
 dercyrillic
 14371 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 14372 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 14373 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 14374 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 14375 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 14376 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescen-
 dercyrillic
 14377 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 14378 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 14379 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 14380 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 erticalstrokecyrillic
 14381 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 14382 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 erticalstrokecyrillic
 14383 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 14384 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 14385 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 14386 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 14387 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 14388 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 14389 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 14390 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 14391 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 14392 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 14393 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 14394 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 14395 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 14396 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 14397 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 14398 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 14399 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 14400 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 14401 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 14402 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 14403 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 14404 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 14405 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 14406 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 14407 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 14408 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL

14409 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
14410 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
14411 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
14412 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
14413 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
14414 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
14415 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
14416 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-
cyrillic
14417 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
14418 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
cyrillic
14419 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
14420 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
14421 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
14422 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
14423 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
14424 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevcyrillic
14425 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
14426 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevcyrillic
14427 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
14428 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
lic
14429 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
14430 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
14431 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
14432 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
14433 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
14434 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
14435 \DeclareTextCommand{\cyrcae}{PU}{\84\325}% U+04D5
14436 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
14437 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
14438 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
14439 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
14440 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
14441 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
14442 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afi10846, schwacyrillic
14443 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
14444 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-
siscyrillic
14445 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
14446 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
siscyrillic
14447 \DeclareTextCompositeCommand{\U}{PU}{\cyrswa}{\84\333}% U+04DB
14448 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
siscyrillic
14449 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
14450 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
cyrillic
14451 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
14452 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
cyrillic
14453 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
14454 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
14455 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF

14456 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 14457 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 14458 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 14459 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 14460 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 14461 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
 14462 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 14463 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
 14464 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 14465 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 14466 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 14467 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 14468 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 14469 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 14470 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 14471 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 14472 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 14473 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 14474 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 14475 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 14476 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
 14477 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 14478 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
 14479 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 14480 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 14481 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 14482 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 14483 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 14484 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 14485 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
 14486 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 14487 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
 14488 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 14489 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 14490 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 14491 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 14492 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 14493 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 14494 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 14495 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 14496 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 14497 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 14498 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 14499 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 14500 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 14501 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 14502 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 14503 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7

14504 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
14505 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
14506 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
14507 \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
14508 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
14509 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
14510 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
14511 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

14512 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
14513 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

14514 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
14515 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
14516 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
14517 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
14518 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
14519 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
14520 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
14521 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
14522 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
14523 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
14524 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
14525 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
14526 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
14527 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
14528 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
14529 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
14530 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
14531 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
14532 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
14533 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
14534 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
14535 \DeclareTextCompositeCommand{.}{PU}{F}{\9036\036}% U+1E1E
14536 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
14537 \DeclareTextCompositeCommand{.}{PU}{f}{\9036\037}% U+1E1F
14538 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
14539 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
14540 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
14541 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
14542 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
14543 \DeclareTextCompositeCommand{.}{PU}{H}{\9036\042}% U+1E22
14544 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
14545 \DeclareTextCompositeCommand{.}{PU}{h}{\9036\043}% U+1E23
14546 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
14547 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
14548 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis

14549 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
14550 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
14551 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
14552 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
14553 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
14554 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
14555 \DeclareTextCompositeCommand{'}{PU}{K}{\9036\060}% U+1E30
14556 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
14557 \DeclareTextCompositeCommand{'}{PU}{k}{\9036\061}% U+1E31
14558 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
14559 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
14560 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
14561 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
14562 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
14563 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
14564 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
14565 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
14566 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
14567 \DeclareTextCompositeCommand{'}{PU}{M}{\9036\076}% U+1E3E
14568 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
14569 \DeclareTextCompositeCommand{'}{PU}{m}{\9036\077}% U+1E3F
14570 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
14571 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
14572 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
14573 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
14574 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
14575 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
14576 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
14577 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
14578 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
14579 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
14580 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
14581 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
14582 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
14583 \DeclareTextCompositeCommand{'}{PU}{P}{\9036\124}% U+1E54
14584 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
14585 \DeclareTextCompositeCommand{'}{PU}{p}{\9036\125}% U+1E55
14586 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
14587 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
14588 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
14589 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
14590 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
14591 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
14592 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
14593 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
14594 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
14595 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
14596 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
14597 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
14598 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
14599 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
14600 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
14601 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
14602 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
14603 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
14604 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
14605 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F

14606 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
14607 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
14608 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
14609 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
14610 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
14611 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
14612 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
14613 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
14614 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
14615 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\202}% U+1E82
14616 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
14617 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\203}% U+1E83
14618 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
14619 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
14620 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
14621 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
14622 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
14623 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
14624 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
14625 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
14626 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
14627 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
14628 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
14629 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
14630 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
14631 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
14632 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
14633 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
14634 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
14635 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
14636 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
14637 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
14638 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
14639 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
14640 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
14641 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
14642 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
14643 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
14644 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
14645 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
14646 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
14647 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
14648 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
14649 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
14650 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
14651 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
14652 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
14653 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
14654 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
cent
14655 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
14656 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
14657 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
14658 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
14659 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
14660 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
14661 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2

14662 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 14663 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 14664 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 14665 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 14666 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 14667 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

14668 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 14669 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 14670 % U+2013 EN DASH; endash
 14671 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 14672 % U+2014 EM DASH; emdash
 14673 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 14674 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 14675 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 14676 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 14677 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 14678 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 14679 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 14680 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 14681 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 14682 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 14683 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 14684 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 14685 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 14686 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 14687 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 14688 % U+2020 DAGGER; dagger
 14689 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 14690 % U+2021 DOUBLE DAGGER; daggerdbl
 14691 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 14692 % U+2022 BULLET; bullet
 14693 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 14694 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14695 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 14696 % U+2030 PER MILLE SIGN; perthousand
 14697 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 14698 % U+2031 PER TEN THOUSAND SIGN
 14699 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 14700 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 inglleft
 14701 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 14702 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 inglright
 14703 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 14704 % U+203B REFERENCE MARK; referencemark
 14705 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 14706 % U+203D INTERROBANG
 14707 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 14708 % U+2044 FRACTION SLASH; fraction
 14709 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 14710 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 14711 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 14712 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 14713 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 14714 % U+2052 COMMERCIAL MINUS SIGN

14715 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

14716 % U+2070 SUPERSCRIPT ZERO; zerosuperior
14717 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
14718 % U+2074 SUPERSCRIPT FOUR; foursuperior
14719 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
14720 % U+2075 SUPERSCRIPT FIVE; fivesuperior
14721 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
14722 % U+2076 SUPERSCRIPT SIX; sixsuperior
14723 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
14724 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
14725 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
14726 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
14727 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
14728 % U+2079 SUPERSCRIPT NINE; ninesuperior
14729 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
14730 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
14731 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
14732 % U+207B SUPERSCRIPT MINUS
14733 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
14734 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
14735 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
14736 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
14737 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
14738 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
14739 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
14740 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
14741 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
14742 % U+2080 SUBSCRIPT ZERO; zeroinferior
14743 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
14744 % U+2081 SUBSCRIPT ONE; oneinferior
14745 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
14746 % U+2082 SUBSCRIPT TWO; twoinferior
14747 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
14748 % U+2083 SUBSCRIPT THREE; threeinferior
14749 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
14750 % U+2084 SUBSCRIPT FOUR; fourinferior
14751 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
14752 % U+2085 SUBSCRIPT FIVE; fiveinferior
14753 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
14754 % U+2086 SUBSCRIPT SIX; sixinferior
14755 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
14756 % U+2087 SUBSCRIPT SEVEN; seveninferior
14757 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
14758 % U+2088 SUBSCRIPT EIGHT; eightinferior
14759 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
14760 % U+2089 SUBSCRIPT NINE; nineinferior
14761 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
14762 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
14763 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
14764 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
14765 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14766 % U+20A1 COLON SIGN; *colonmonetary, colonsign
14767 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1

14768 % U+20A4 LIRA SIGN; afii08941, *lira
 14769 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 14770 % U+20A6 NAIRA SIGN
 14771 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 14772 % U+20A7 PESETA SIGN; peseta
 14773 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 14774 % U+20A9 WON SIGN; won
 14775 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 14776 % U+20AB DONG SIGN; dong
 14777 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 14778 % U+20AC EURO SIGN; *Euro, euro
 14779 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 14780 % U+20B1 PESO SIGN
 14781 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 14782 % U+20B2 GUARANI SIGN
 14783 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14784 % U+2103 DEGREE CELSIUS; centigrade
 14785 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 14786 % U+2116 NUMERO SIGN; *afii61352, numero
 14787 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 14788 % U+2117 SOUND RECORDING COPYRIGHT
 14789 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 14790 % U+211E PRESCRIPTION TAKE; prescription
 14791 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 14792 % U+2120 SERVICE MARK
 14793 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 14794 % U+2122 TRADE MARK SIGN; trademark
 14795 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 14796 % U+2126 OHM SIGN; Ohm, Omega
 14797 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 14798 % U+2127 INVERTED OHM SIGN
 14799 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 14800 % U+212B ANGSTROM SIGN; angstrom
 14801 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 14802 % U+212E ESTIMATED SYMBOL; estimated
 14803 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 14804 % U+2135 ALEF SYMBOL; aleph
 14805 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14806 % U+2190 LEFTWARDS ARROW; arrowleft
 14807 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 14808 % U+2191 UPWARDS ARROW; arrowup
 14809 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 14810 % U+2192 RIGHTWARDS ARROW; arrowright
 14811 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 14812 % U+2193 DOWNWARDS ARROW; arrowdown
 14813 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14814 % U+2212 MINUS SIGN; minus
 14815 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 14816 % U+221A SQUARE ROOT; radical
 14817 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14818 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
14819 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
14820 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
14821 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14822 % U+2422 BLANK SYMBOL
14823 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
14824 % U+2423 OPEN BOX; blank
14825 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14826 % U+2460 CIRCLED DIGIT ONE; onecircle
14827 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
14828 % U+2461 CIRCLED DIGIT TWO; twocircle
14829 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
14830 % U+2462 CIRCLED DIGIT THREE; threecircle
14831 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
14832 % U+2463 CIRCLED DIGIT FOUR; fourcircle
14833 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
14834 % U+2464 CIRCLED DIGIT FIVE; fivecircle
14835 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
14836 % U+2465 CIRCLED DIGIT SIX; sixcircle
14837 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
14838 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
14839 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
14840 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
14841 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
14842 % U+2468 CIRCLED DIGIT NINE; ninecircle
14843 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
14844 % U+2469 CIRCLED NUMBER TEN; tencircle
14845 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
14846 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
14847 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
14848 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
14849 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
14850 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
14851 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
14852 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
14853 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
14854 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
14855 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
14856 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
14857 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
14858 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
14859 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
14860 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
14861 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
14862 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
14863 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
14864 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
14865 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
14866 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
14867 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
14868 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
14869 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7

14870 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 14871 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 14872 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 14873 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 14874 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 14875 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 14876 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 14877 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 14878 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 14879 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 14880 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 14881 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 14882 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 14883 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 14884 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 14885 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 14886 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 14887 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 14888 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 14889 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 14890 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 14891 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 14892 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 14893 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 14894 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 14895 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 14896 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 14897 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 14898 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 14899 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 14900 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 14901 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 14902 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 14903 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 14904 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 14905 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 14906 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 14907 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 14908 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 14909 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 14910 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 14911 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 14912 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 14913 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 14914 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 14915 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 14916 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 14917 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 14918 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 14919 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 14920 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 14921 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 14922 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 14923 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 14924 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 14925 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 14926 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle

14927 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 14928 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 14929 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 14930 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 14931 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 14932 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 14933 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 14934 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 14935 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 14936 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 14937 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 14938 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 14939 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 14940 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 14941 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 14942 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 14943 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 14944 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 14945 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 14946 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 14947 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 14948 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 14949 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 14950 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 14951 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 14952 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 14953 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 14954 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 14955 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 14956 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 14957 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 14958 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 14959 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 14960 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 14961 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 14962 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 14963 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 14964 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 14965 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14966 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 14967 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14968 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 14969 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14970 % U+24EA CIRCLED DIGIT ZERO
 14971 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14972 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14973 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14974 % U+25EF LARGE CIRCLE; largecircle
 14975 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

14976 % U+266A EIGHTH NOTE; musicalnote
 14977 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 14978 % U+26AD MARRIAGE SYMBOL
 14979 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD

14980 % U+26AE DIVORCE SYMBOL
 14981 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

14982 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 14983 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 14984 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 14985 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

14986 % U+FB01 LATIN SMALL LIGATURE FI; fi
 14987 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 14988 % U+FB02 LATIN SMALL LIGATURE FL; fl
 14989 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

14990 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

14991 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 14992 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 14993 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 14994 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 14995 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 14996 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 14997 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 14998 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

14999 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 15000 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 15001 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 15002 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 15003 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 15004 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

15005 <*puvnenc>
 15006 \DeclareTextCommand{\abreve}{PU}{\81\003}
 15007 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
 15008 \DeclareTextCommand{\dj}{PU}{\81\021}
 15009 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
 15010 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
 15011 \DeclareTextCommand{\ohorn}{PU}{\81\241}
 15012 \DeclareTextCommand{\uhorn}{PU}{\81\260}
 15013 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
 15014 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
 15015 \DeclareTextCommand{\DJ}{PU}{\81\020}
 15016 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
 15017 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
 15018 \DeclareTextCommand{\OHORN}{PU}{\81\240}
 15019 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15020 \DeclareTextCompositeCommand{'}{PU}{a}{\80\341}
15021 \DeclareTextCompositeCommand{d}{PU}{a}{\9036\241}
15022 \DeclareTextCompositeCommand{'}{PU}{a}{\80\340}
15023 \DeclareTextCompositeCommand{h}{PU}{a}{\9036\243}
15024 \DeclareTextCompositeCommand{~}{PU}{a}{\80\343}
15025 \DeclareTextCompositeCommand{'}{PU}{\abreve}{\9036\257}
15026 \DeclareTextCompositeCommand{d}{PU}{\abreve}{\9036\267}
15027 \DeclareTextCompositeCommand{'}{PU}{\abreve}{\9036\261}
15028 \DeclareTextCompositeCommand{h}{PU}{\abreve}{\9036\263}
15029 \DeclareTextCompositeCommand{~}{PU}{\abreve}{\9036\265}
15030 \DeclareTextCompositeCommand{'}{PU}{\acircumflex}{\9036\245}
15031 \DeclareTextCompositeCommand{d}{PU}{\acircumflex}{\9036\255}
15032 \DeclareTextCompositeCommand{'}{PU}{\acircumflex}{\9036\247}
15033 \DeclareTextCompositeCommand{h}{PU}{\acircumflex}{\9036\251}
15034 \DeclareTextCompositeCommand{~}{PU}{\acircumflex}{\9036\253}
15035 \DeclareTextCompositeCommand{'}{PU}{e}{\80\351}
15036 \DeclareTextCompositeCommand{d}{PU}{e}{\9036\271}
15037 \DeclareTextCompositeCommand{'}{PU}{e}{\80\350}
15038 \DeclareTextCompositeCommand{h}{PU}{e}{\9036\273}
15039 \DeclareTextCompositeCommand{~}{PU}{e}{\9036\275}
15040 \DeclareTextCompositeCommand{'}{PU}{\ecircumflex}{\9036\277}
15041 \DeclareTextCompositeCommand{d}{PU}{\ecircumflex}{\9036\307}
15042 \DeclareTextCompositeCommand{'}{PU}{\ecircumflex}{\9036\301}
15043 \DeclareTextCompositeCommand{h}{PU}{\ecircumflex}{\9036\303}
15044 \DeclareTextCompositeCommand{~}{PU}{\ecircumflex}{\9036\305}
15045 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}
15046 \DeclareTextCompositeCommand{d}{PU}{i}{\9036\313}
15047 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}
15048 \DeclareTextCompositeCommand{h}{PU}{i}{\9036\311}
15049 \DeclareTextCompositeCommand{~}{PU}{i}{\81\051}
15050 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}
15051 \DeclareTextCompositeCommand{d}{PU}{o}{\9036\315}
15052 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}
15053 \DeclareTextCompositeCommand{h}{PU}{o}{\9036\317}
15054 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}
15055 \DeclareTextCompositeCommand{'}{PU}{\ocircumflex}{\9036\321}
15056 \DeclareTextCompositeCommand{d}{PU}{\ocircumflex}{\9036\331}
15057 \DeclareTextCompositeCommand{'}{PU}{\ocircumflex}{\9036\323}
15058 \DeclareTextCompositeCommand{h}{PU}{\ocircumflex}{\9036\325}
15059 \DeclareTextCompositeCommand{~}{PU}{\ocircumflex}{\9036\327}
15060 \DeclareTextCompositeCommand{'}{PU}{\ohorn}{\9036\333}
15061 \DeclareTextCompositeCommand{d}{PU}{\ohorn}{\9036\343}
15062 \DeclareTextCompositeCommand{'}{PU}{\ohorn}{\9036\335}
15063 \DeclareTextCompositeCommand{h}{PU}{\ohorn}{\9036\337}
15064 \DeclareTextCompositeCommand{~}{PU}{\ohorn}{\9036\341}
15065 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}
15066 \DeclareTextCompositeCommand{d}{PU}{u}{\9036\345}
15067 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}
15068 \DeclareTextCompositeCommand{h}{PU}{u}{\9036\347}
15069 \DeclareTextCompositeCommand{~}{PU}{u}{\81\151}
15070 \DeclareTextCompositeCommand{'}{PU}{\uhorn}{\9036\351}
15071 \DeclareTextCompositeCommand{d}{PU}{\uhorn}{\9036\361}
15072 \DeclareTextCompositeCommand{'}{PU}{\uhorn}{\9036\353}
15073 \DeclareTextCompositeCommand{h}{PU}{\uhorn}{\9036\355}
15074 \DeclareTextCompositeCommand{~}{PU}{\uhorn}{\9036\357}
15075 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}
15076 \DeclareTextCompositeCommand{d}{PU}{y}{\9036\365}

15077 \DeclareTextCompositeCommand{'}{PU}{y}{\9036\363}
15078 \DeclareTextCompositeCommand{h}{PU}{y}{\9036\367}
15079 \DeclareTextCompositeCommand{~}{PU}{y}{\9036\371}
15080 \DeclareTextCompositeCommand{'}{PU}{A}{\80\301}
15081 \DeclareTextCompositeCommand{d}{PU}{A}{\9036\240}
15082 \DeclareTextCompositeCommand{'}{PU}{A}{\80\300}
15083 \DeclareTextCompositeCommand{h}{PU}{A}{\9036\242}
15084 \DeclareTextCompositeCommand{~}{PU}{A}{\80\303}
15085 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\256}
15086 \DeclareTextCompositeCommand{d}{PU}{\ABREVE}{\9036\266}
15087 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\260}
15088 \DeclareTextCompositeCommand{h}{PU}{\ABREVE}{\9036\262}
15089 \DeclareTextCompositeCommand{~}{PU}{\ABREVE}{\9036\264}
15090 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\244}
15091 \DeclareTextCompositeCommand{d}{PU}{\ACIRCUMFLEX}{\9036\254}
15092 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\246}
15093 \DeclareTextCompositeCommand{h}{PU}{\ACIRCUMFLEX}{\9036\250}
15094 \DeclareTextCompositeCommand{~}{PU}{\ACIRCUMFLEX}{\9036\252}
15095 \DeclareTextCompositeCommand{'}{PU}{E}{\80\311}
15096 \DeclareTextCompositeCommand{d}{PU}{E}{\9036\270}
15097 \DeclareTextCompositeCommand{'}{PU}{E}{\80\310}
15098 \DeclareTextCompositeCommand{h}{PU}{E}{\9036\272}
15099 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}
15100 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\276}
15101 \DeclareTextCompositeCommand{d}{PU}{\ECIRCUMFLEX}{\9036\306}
15102 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\300}
15103 \DeclareTextCompositeCommand{h}{PU}{\ECIRCUMFLEX}{\9036\302}
15104 \DeclareTextCompositeCommand{~}{PU}{\ECIRCUMFLEX}{\9036\304}
15105 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}
15106 \DeclareTextCompositeCommand{d}{PU}{I}{\9036\312}
15107 \DeclareTextCompositeCommand{'}{PU}{I}{\80\314}
15108 \DeclareTextCompositeCommand{h}{PU}{I}{\9036\310}
15109 \DeclareTextCompositeCommand{~}{PU}{I}{\81\050}
15110 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}
15111 \DeclareTextCompositeCommand{d}{PU}{O}{\9036\314}
15112 \DeclareTextCompositeCommand{'}{PU}{O}{\80\322}
15113 \DeclareTextCompositeCommand{h}{PU}{O}{\9036\316}
15114 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}
15115 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\320}
15116 \DeclareTextCompositeCommand{d}{PU}{\OCIRCUMFLEX}{\9036\330}
15117 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\322}
15118 \DeclareTextCompositeCommand{h}{PU}{\OCIRCUMFLEX}{\9036\324}
15119 \DeclareTextCompositeCommand{~}{PU}{\OCIRCUMFLEX}{\9036\326}
15120 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\332}
15121 \DeclareTextCompositeCommand{d}{PU}{\OHORN}{\9036\342}
15122 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\334}
15123 \DeclareTextCompositeCommand{h}{PU}{\OHORN}{\9036\336}
15124 \DeclareTextCompositeCommand{~}{PU}{\OHORN}{\9036\340}
15125 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}
15126 \DeclareTextCompositeCommand{d}{PU}{U}{\9036\344}
15127 \DeclareTextCompositeCommand{'}{PU}{U}{\80\331}
15128 \DeclareTextCompositeCommand{h}{PU}{U}{\9036\346}
15129 \DeclareTextCompositeCommand{~}{PU}{U}{\81\150}
15130 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\350}
15131 \DeclareTextCompositeCommand{d}{PU}{\UHORN}{\9036\360}
15132 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\352}
15133 \DeclareTextCompositeCommand{h}{PU}{\UHORN}{\9036\354}

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15134 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
15135 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
15136 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
15137 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15138 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15139 \DeclareTextCompositeCommand{\-}{PU}{Y}{\9036\370}

15140 </puvnc>

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50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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15141 <*puarenc>

15142 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
TER HAMZA
15143 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15144 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15145 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15146 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15147 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15148 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
15149 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
15150 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
15151 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
15152 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
TER THEH
15153 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
TER JEEM
15154 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
15155 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
15156 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
15157 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
15158 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
15159 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN
15160 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
15161 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
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