

Hypertext marks in L^AT_EX

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1 Documentation overview for hyperref

The documentation for package hyperref consists of several files:

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

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


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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File 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{hycheck}{%
62       Unknown command '\expandafter\strip@prefix\meaning\HyC@cmd'%
63     }\@ehd
64     \expandafter\endinput
65   \fi
66   \@ifstar{%
67     \def\HyC@star{*}%
68     \HyC@check
69   }{%
70     \let\HyC@star\@empty
71     \HyC@check
72   }%
73 }
```

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

```

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

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}
```

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

```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

216 \x\)%
217 \x\[%
218 \x\l%
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```
231 \Hy@SetCatcodes
```

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

```

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

```

4.2 Compatibility with format dumps

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

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

```

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

```

`\Hy@AtBeginDocument` For the case that package ‘hyperref’ is loaded using `\AtBeginDocument`, we have to wrap the calls of `\AtBeginDocument`/`\AfterBeginDocument` in `\AtEndOfPackage`. However, packages must be loaded in `\AtEndOfPackage` *before* package ‘kvoptions’ has to perform its option cleanup. Therefore we use a hook.

```

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

```

`\Hy@AtEndOfPackage`

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

```

251 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
252 }

```

\Hy@AtBeginDocumentHook

```

253 \def\Hy@AtBeginDocumentHook{}

```

\Hy@AtEndOfPackageHook

```

254 \def\Hy@AtEndOfPackageHook{}

```

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

```

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

```

4.3 Switches

```

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

```

```

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

```

Defaults for the switches are now set.

```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

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

```

5.1 Macros for recursions

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

```

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

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

```

5.2 Babel's protection of shorthand characters

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

```

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

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

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

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

Example (TeX):

```

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

```

`\hypercalcbp`

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

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

- They are surrounded by parentheses. The hexadecimal form is not supported.

- Like PostScript language strings they use the same escaping mechanism:

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

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
404 \begingroup
```

6.2.1 Preprocessing

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

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

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

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

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

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

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

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

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

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

```
422 \@inmathwarn\pdfstringdef
```

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

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

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

```
424 \let\add@accent\HyPsd@add@accent
```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here.

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

```

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

```

Newline `\newline` or `\\` do not work in bookmarks, in text annotations they should expand to `\r`. In pdf strings `\\` stands for a backslash. Therefore the commands are disabled now. The user can redefine them for a result what he want:

backslash: `\pdfstringdefDisableCommands{\let\\ \textbackslash}`

new line: `\pdfstringdefDisableCommands{\let\\ \textCR}`

disabled: `\pdfstringdefDisableCommands{\let\\ \empty}`

At any case, however, the optional argument or the star cannot be scanned in a 100% sure manner.

```

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

```

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

```

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

```

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

```

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

```

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

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

```

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

```

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

```

Disable \cyr, used in russianb.ldf.

```

509 \let\cyr\relax

```

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

```

510 \let\es@roman\@Roman

```

Package german.

```
511 \let\glqq\textglqq
512 \let\grqq\textgrqq
513 \let\glq\textglq
514 \let\grq\textgrq
515 \let\flqq\textflqq
516 \let\frqq\textfrqq
517 \let\flq\textflq
518 \let\frq\textfrq
```

Package french. The support is deferred, because it needs `\GenericError` to be disabled (see below).

Package FrenchPro. This package uses:

```
\if@mid@expandable{not fully expandable code}{fully expandable code}
519 \let\if@mid@expandable\@firstoftwo
```

AMS classes.

```
520 \HyPsd@AMSclassfix
```

Redefinition of `\hspace` `\hspace` don't work in bookmarks, the following fix tries to set a space if the argument is a positive length.

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

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

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

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

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

Miscellaneous commands.

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

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

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

Patch for cjk bookmarks.

```
536 \HyPsd@CJKhook
```

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

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

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

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

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

Package `xspace`.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

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

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

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

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

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

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

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

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

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

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

```

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

```

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

```

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

```

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

```

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

```

6.2.3 Postprocessing

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

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

Protecting spaces and removing grouping characters. In order to check the tokens we must separate them. This will be done with \TeX 's argument parsing. With this method we must 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.

```
576 \HyPsd@ProtectSpaces#1%
577 \let\HyPsd@String\@empty
578 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
579 \global\let#1\HyPsd@String
```

Check tokens. After removing the spaces and the grouping characters the string now should only 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 $\backslash\text{HyPsd@CheckCatcodes}$ the command $\backslash\text{HyPsd@RemoveMask}$ is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if $\backslash\text{HyPsd@CheckCatcodes}$ is called.

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

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

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

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

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

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

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

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

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

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

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

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

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

```

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

```

Support for package `xspace`. `\xspace` looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package `xspace` there are tokens with catcode 11 and 12, `\HyPsd@empty` and `\HyPsd@SPACEOPTI`. With package `xspace` marker for the italic correction `\` and `\xspace` come with. In the package `xspace` case the two markers are replaced by commands and an `\edef` performs the `\xspace` processing.

In the opposite of the original `\xspace` `\HyPsd@xspace` uses an argument instead of a `\futurelet`, so we have to provide such an argument, if `\HyPsd@xspace` comes last. Because `\HyPsd@Subst` with several equal tokens (`--`) needs a safe last token, in both cases the string gets an additional `\HyPsd@empty`.

```

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

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The `PDFDocEncoding` contains some ligatures, but the current version 3 of the `AcrobatReader` lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the `AcrobatReader` is better. To break the ligatures the user can use an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

Since newer `AcrobatReader` versions now show the `en-` and `emdash` in a correct way (`AR7/Linux`, `AR8/Linux`), the substitution code for them is enabled starting with version 6.781.

```

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

```

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

```

632      \let\HyPsd@empty\@empty

```

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

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

```

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

```

```

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

```

Optimizing spaces. Spaces are often used, but they have a very long form \040. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the .out file, but if the entries are read back, several spaces are merged to a single one.

With Unicode the spaces are replaced by their octal sequences.

```

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

```

Converting to Unicode. At last the eight bit letters have to be converted to Unicode, the masks \8 and \9 are removed and the Unicode marker is added.

```

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

```

Try conversion back to PDFDocEncoding.

```

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

```

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

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

`\Hy@pdfstringdef`

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

6.3 Encodings

6.3.1 Xe_{TeX}

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

```

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

```

6.3.2 Workaround for package linguex

```

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

```

6.3.3 PD1 encoding

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

preting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

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

```

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

```

6.3.4 PU encoding

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

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

```

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

```

6.4 Additional user commands

6.4.1 \texorpdfstring

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

```

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

```

6.4.2 Hooks for \pdfstringdef

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

```

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

```

```

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

```

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

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

```

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

```

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

```

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

```

`\HyPsd@DisableCommands`

```

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

```

`\pdfstringdefWarn` The purpose of `\pdfstringdefWarn` is to produce a warning message, so the user can see, that something can go wrong with the conversion to PDF strings.

The prefix `\<>-` is added to the token. `\noexpand` protects the probably undefined one during the first expansion step. Then `\HyPsd@CheckCatcodes` can detect the not allowed token, `\HyPsd@CatcodeWarning` prints a warning message, after `\HyPsd@RemovePrefix` has removed the prefix.

`\pdfstringdefWarn` is intended for document authors or package writers, examples for use can be seen in the definition of `\HyPsd@ifnextchar` or `\HyPsd@protected@testopt`.

```

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

```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little. In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```

823 \begingroup

```

```

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

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

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

```

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

```

```

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

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

```

```

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

```

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

```

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

```

```

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

```

```

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

```

```

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

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

```

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

```

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

```

6.5.3 CJK patch

```

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

```

\HyPsd@CJKhook

```

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

```

6.5.4 CJK bookmarks

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

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

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

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

```

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

```

```

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

```

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

```

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

```

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

```

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

```

```

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

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

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

```

\HyPsd@CJK@Unicode

```

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

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

```

```

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

```

```

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

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

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

```

```

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

```

```

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

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

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

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

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

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

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

```

\HyPsd@add@accent

```

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

```

6.5.7 Unexpandable spaces

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

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

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

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

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

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

6.5.8 Marker for commands

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

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

6.5.9 `\hspace fix`

`\HyPsd@hspace`

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

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

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

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

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

6.5.10 Fix for AMS classes

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

```

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

```

6.5.11 Reference commands

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

\HyPsd@@autorefname

```

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

```

6.5.12 Redefining the defining commands

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

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

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

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

The difference between \HyPsd@DefCommand and \HyPsd@LetCommand is that the first one also cancels this 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 unbalanced \if... tokens, the cases \let\if...\iftrue and \let\if...\iffalse are checked and ignored.

\HyPsd@DefCommand

\HyPsd@LetCommand

```

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

```

```

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

```

6.5.13 \ifnextchar

`\HyPsd@ifnextchar` In `\pdfstringdef` `\ifnextchar` is disabled via a `\let` command to save time. First a warning message is given, then the three arguments are canceled. `\ifnextchar` cannot work in a correct manner, because it uses `\futurelet`, but this is a stomach feature, that doesn't work in an expanding context. There are several variants of `\ifnextchar`:

- `\@ifnextchar`
- `\kernel@ifnextchar`
- `\new@ifnextchar` from package `amsgen.sty` (bug report latex/3662).

```

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

```

6.5.14 \@protected@testoptifnextchar

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

```

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

```

```

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

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

`\HyPsd@Warning` For several reasons `\space` is masked and does not have its normal meaning. But it is used in warning messages, so it is redefined locally:

```

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

```

6.6.2 Protecting spaces

```

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

```

`\HyPsd@ProtectSpaces` `\HyPsd@ProtectSpaces` calls with the expanded string `\HyPsd@@ProtectSpacesFi`. The expanded string is protected by `|` at the beginning and end of the expanded string. Because of this there can be no group at the beginning or end of the string and grouping characters are not removed by the call of `\HyPsd@@ProtectSpacesFi`.

```

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

```

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

```

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

```

Remove mask.

`\HyPsd@RemoveMask` `\HyPsd@RemoveMask` removes the protecting `|`. It is used by `\HyPsd@@ProtectSpacesFi` and by the code in `\pdfstringdef` that removes the grouping characters.

```

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

```

```

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

```

6.6.3 Remove grouping braces

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

```

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

```

`\HyPsd@@RemoveBraces` `\HyPsd@@RemoveBraces` is called with the expanded string, the end marked by `\HyPsd@End`, the expanded string again, but enclosed in braces and the string command. The first expanded string is scanned by the parameter text #1#2. By a comparison with the original form in #3 we can decide whether #1 is a single token or a group. To avoid the case that #2 is a group, the string is extended by a | before.

While removing the grouping braces an italic correction marker is inserted for supporting package `xspace` and letting ligatures broken.

Because the string is already expanded, the `\if` commands should disappeared. So we can move some parts out of the argument of `\Hy@ReturnAfterFi`.

```

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

```

```

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

```

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

```

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

```

6.6.4 Catcode check

Check catcodes.

\HyPsd@CheckCatcodes Because \ifcat expands its arguments, this is prevented by \noexpand. In case of command tokens and active characters \ifcat now sees a \relax. After protecting spaces and removing braces #1 should be a single token, no group of several tokens, nor an empty group. (So the \expandafter\relax between \ifcat and \noexpand is only for safety and it should be possible to remove it.)

\protect and \relax should be removed silently. But it is too dangerous and breaks some code giving them the meaning of \@empty. So commands with the meaning of \protect are removed here. (\protect should have the meaning of \@typeset@protect that is equal to \relax).

```

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

```

```

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

```

```

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

```

Remove counts, dimens, skips.

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

```

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

```

`\HyPsd@AfterDimenRemove` If the value of the `dimen` (`\kern`) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by space(s)? The following code replaces positive values greater than `1ex` with a space and removes them else.

```

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

```

`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```

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

```

Catcode warnings.

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

```

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

```

```

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

```

\HyPsd@RemoveSpaceWarning

```

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

```

\HyPsd@ReplaceSpaceWarning

```

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

```

6.6.5 Check for wrong glyphs

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

```

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

```

```

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

```

Spaces.

\HyPsd@spaceopti In the string the spaces are represented by \HyPsd@spaceopti tokens. Within an \edef it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next \HyPsd@spaceopti by an protected space \040.

```

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

```

6.6.6 Replacing tokens

\HyPsd@Subst To save tokens \HyPsd@StringSubst is an wrapper for the command \HyPsd@Subst that does all the work: In string stored in command #3 it replaces the tokens #1 with #2.

```

#1 Exact the tokens that should be replaced.
#2 The replacement (don't need to be expanded).
#3 Command with the string.

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

```

```

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

```

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

```

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

```

`\HyPsd@EscapeTeX`

```

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

```

6.6.7 Support for package `xspace`

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

```

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

```

```

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

```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, \8 is replaced by \00, and \9 is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

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

```

\HyPsd@ConvertToUnicode

```

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

```

\HyPsd@DoConvert

```

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

```

\HyPsd@DoEscape

```

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

```

```

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

```

\HyPsd@GetTwoBytes

```

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

```

\HyPsd@GetOneByte

```

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

```

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

```

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

```

\HyPsd@Char

```

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

```

```

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

```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `eTeX` here for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

`\numexpr 123/4\relax` is replaced by
`\number\dimexpr.25\dimexpr 123sp\relax\relax`

```

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

```

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

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

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

```

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

```

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

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

```

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

```

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

UTF-8: 11110uuu 10uuzzzz 10yyyyyy 10xxxxxx

```

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

```

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

7 Support of other packages

7.1 Class memoir

```

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

```

```
2238 }{}
```

7.2 Package subfigure

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

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

7.3 Package xr and xr-hyper

The beta version of xr that supports \XR@addURL is called xr-hyper. Therefore we test for the macro itself and not for the package name:

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

If reading external aux files check whether they have a non zero fourth field in \newlabel and if so, add the URL as the fifth field.

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

```

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

```

Providing dummy definitions.

```

2286 \let\literalps@out\@gobble
2287 \newcommand\pdfbookmark[3][]{ }
2288 \def\Acrobatmenu#1#2{\leavevmode#2}
2289 \def\Hy@writebookmark#1#2#3#4#5{ }%

```

8 Help macros for links

Anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to `\baselineskip`, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine `\HyperRaiseLinkDefault` to be eg the height of a `\strut`
2. Redefine `\HyperRaiseLinkHook` to do something complicated; it must give a value to `\HyperRaiseLinkLength`, which is what actually gets used

```

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

```

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

```

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

```

```

2322 \Hy@RestoreSpaceFactor
2323 \fi
2324 }

```

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

```

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

```

9 Options

9.1 Help macros

\Hy@boolkey

```

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

```

```

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

```

\Hy@WarnOptionValue

```

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

```

\Hy@DisableOption

```

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

```

\Hy@WarnOptionDisabled

```

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

```

\Hy@CheckOptionValue Some options take a string value out of a limited set of values. Macro \Hy@CheckOptionValue checks whether the given value #1 for option #2 is a member of the value list #3.

```

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

```

```

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

```

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

```

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

```

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

```

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

```

`\Hy@UseNameKey`

```

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

```

9.2 Defining the options

```

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

```

```

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

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

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

```

```

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

```

If we are going to PDF via HyperTeX \special commands, the dvips (-z option) processor does not know the *height* of a link, as it works solely on the position of the closing \special. If we use this option, the \special is raised up by the right amount, to fool the dvi processor.

```

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

```

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

```

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

```

Determines whether an automatic anchor is put on each page

```

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

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like \textbf or the like.

```

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

```

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

```

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

```

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

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

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

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

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

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

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

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

```

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

```

```

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

```

10 Options for different drivers

```

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

```

```

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

```

```

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

```

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

```

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

```

11 Options to add extra features

Make included figures (assuming they use the standard graphics package) be hypertext links. Off by default. Needs more work.

```

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

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

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

```

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

```

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

```

```

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

```

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

```

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

```

Configuration of encap char.

```

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

```

12 Language options

The \autoref feature depends on the language.

```

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

```

```

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

```

```

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

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```
2987 \def\HyLang@russian{%
```

The abbreviated reference to the equation: it is not for “the good face of the book”, but maybe it will be better to get the company for the `\theoremautorefname`?

```
2988 \def\equationautorefname{\cyr\cyrv\cyrrery\cyrr.}%
```

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

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

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

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

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

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

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

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

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

```
3001 \def\itemautorefname{\cyr\cyrp.}%
3002 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

Names of the figure and table have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3003 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3004 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%
```

Names of the part, chapter, section(s) have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3005 \def\partautorefname{\cyr\cyrch.}%
3006 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3007 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

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

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

The sectioning command have stable (almost standard) and common abbreviation form for all levels (the meaning of these references visible from the section number). No problem.

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

The names of references to paragraphs also have stable (almost standard) and common abbreviation form for all levels (the meaning of these references is visible from the section number). No problem in the middle of sentence.

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

Commented variant can be used in books but since it has common form for both nominative and accusative but it changes in other forms, like “of \autoref{auto}” etc.

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

The name of verbatim line. Here could be a standard of the abbreviation (used very rare). But the author preprint publications (which have not any editor or corrector) can use this abbreviation for the page reference. So the meaning of the line reference can be read as reference to the page.

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

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

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

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

```
3021 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%
```

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But . . .

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

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

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

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

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

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

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

```

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

```

```

3150 }%
3151 }

```

13 Options to change appearance of links

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

```

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

```

14 Bookmarking

```

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

```

```

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

```

The depth of the outlines is controlled by option `bookmarksdepth`. The option acts globally and distinguishes three cases:

- `bookmarksdepth`: Without value `hyperref` uses counter `tocdepth` (compatible behaviour and default).
- `bookmarksdepth=<number>`: the depth is set to `<number>`.
- `bookmarksdepth=<name>`: The `<name>` must not start with a number or minus sign. It is a document division name (part, chapter, section, ...). Internally the value of macro `\toclevel@<name>` is used.

```

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

```

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

```

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

```

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

```

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

```

```

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

Option CJKbookmarks enables the patch for CJK bookmarks.

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

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

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

```

15 PDF-specific options

`\@pdfpagetransition` The value of option `pdfpagetransition` is stored in `\@pdfpagetransition`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

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

```

`\@pdfpageduration` The value of option `pdfpageduration` is stored in `\@pdfpageduration`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

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

```

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

```

3278 \newif\ifHy@useHidKey

```

```

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

```

The value of the bordercolor options are not processed by the color package. Therefore the value consists of space separated rgb numbers in the range 0 until 1.

Package xcolor provides \XC@bordercolor since version 1.1. If the two spaces in the color specification are missing, then the value is processed as color specification from package xcolor by using \XC@bordercolor (since xcolor 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```

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

```

```

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

```

```

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

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

```

```

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

```

```

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

```

```

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

```

```

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

```

```

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

```

Default values:

```

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

```

```

3726 \dimen@=0.99626401\dimen@
3727 \xdef\Hy@pageheight{\strip@pt\dimen@}%
3728 \endgroup
3729 }
3730 \def\HyInd@EncapChar{\|}

```

Allow the user to use \ExecuteOptions in the cfg file even though this package does not use the normal option mechanism. Use \hyper@normalise as a scratch macro, since it is going to be defined in a couple of lines anyway.

```

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

```

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

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

```

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

```

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

```

3743 \ifpackageloaded{tex4ht}{-%
3744   \ifpackagewith{hyperref}{tex4ht}{-}{-%
3745     \PassOptionsToPackage{tex4ht}{hyperref}%
3746   }-%
3747 }{-}
3748 \let\ReadBookmarks\relax
3749 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

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

```

```

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

```

15.1 PDF/A

```

3774 \Hy@DisableOption{pdfa}

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

```

15.2 Patch for babel's \texttilde

Babel does not define \texttilde in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix this, \texttilde is defined in babel manner.

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

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

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

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

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

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

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

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

```

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

```

15.2.1 Driver loading

```

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

```

Some drivers can be detected. Check for these drivers, whether the given driver option is ok. Otherwise force the right driver or use the default driver.

```

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

```

```

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

```

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

```

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

```

```

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

```

Support for open outlines is enabled for XeTeX >= 0.9995. I don't know, if older versions also support this. AFAIK older dvipdfmx versions will break, thus the switch cannot be turned on by default.

```

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

```

15.2.2 Bookmarks

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

for grouping consistency:

```

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

```

```

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

```

```

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

```

16 User hypertext macros

We need to normalise all user commands taking a URL argument; Within the argument the following special definitions apply: \#, \%, ~ produce #, %, ~ respectively. for consistency ~ produces ~ as well. At the *top level only* ie not within the argument of another command, you can use # and % unescaped, to produce themselves. even if, say, # is entered as # it will be converted to \# so it does not die if written to an aux file etc. \# will write as # locally while making \specials.

```

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

```

```

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

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

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

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

```

```

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

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

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

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

```

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

```

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

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

```

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

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

```

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

```

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

```

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

```

```

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

```

17 Underlying basic hypertext macros

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

```

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

```

The problem here is that the first (URL) parameter may be a local file: reference (in which case some browsers treat it differently) or a genuine URL, in which case we'll have to activate a real Web browser. Note that a simple name is also a URL, as that is

interpreted as a relative file name. We have to worry about # signs in a local file as well.

```
4448 \def\hyper@readexternallink#1\#2#3#4{%
```

Parameters are:

1. The URL or file name
2. The type
3. The internal name
4. The link string

We need to get the 1st parameter properly expanded, so we delimit the arguments rather than passing it inside a group.

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

Now (potentially), we are passed: 1) The link type 2) The internal name, 3) the link string, 4) the URL type (http, mailto, file etc), 5) the URL details 6) anything after a real : in the URL 7) the whole URL again

```
4451 \def\@pdftempwordfile{file}%  
4452 \def\@pdftempwordrun{run}%  
4453 \def\@hyper@readexternallink#1#2#3#4:#5:#6\#7{%
```

If there are no colons at all (#6 is blank), its a local file; if the URL type (#4) is blank, its probably a Mac filename, so treat it like a file: URL. The only flaw is if its a relative Mac path, with several colon-separated elements — then we lose. Such names must be prefixed with an explicit dvi:

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

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

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

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

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

otherwise its a URL

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

```

4479 \fi
4480 \fi
4481 \fi
4482 }

```

By default, turn run: into file:

```

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

```

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

```

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

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

```

Anchors have a name, and marked text. We have to be careful with the marked text, as if we break off part of something to put a `\special` around it, all hell breaks loose. Therefore, we check the category code of the first token, and only proceed if its safe. Tanmoy sorted this out.

A curious case arises if the original parameter was in braces. That means that `#2` comes here a multiple letters, and the `noexpand` just looks at the first one, putting the rest in the output. Yuck.

```

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

18 Compatibility with the *LT_εX2html* package

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

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

```

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

```

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

```

This is really too much. The `LATEX2html` package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the ‘printed’ way, since we are about fidelity to the page.

```

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

```

19 Forms creation

Allow for creation of PDF or HTML forms. The effects here are limited somewhat by the need to support both output formats, so it may not be as clever as something which only wants to make PDF forms.

I (Sebastian) could not have started this without the encouragement of T V Raman.

19.1 Field flags

The field flags are organized in a bit set.

```

4580 \RequirePackage{bitset}

```

Each flag has a option name, an `\if` switch, and a bit position. The default is always ‘false’, the flag is clear. This is also the default of the switch created by `\newif`.

The names of the flags in the PDF specification (1.7) are used as lowercase option names.

```

\HyField@NewFlag  #1: type: F annot flags, Ff field flags
                  #2: PDF name
                  #3: PDF position
4581 \def\HyField@NewFlag#1#2{%
4582   \lowercase{\HyField@NewOption{#2}}%
4583   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4584 }

```

```

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

```

```

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

```

`\HyField@NewBitsetFlag` Package ‘bitset’ uses zero based positions, the PDF specification starts with one.

#1: option

#2: PDF name

#3: type: F annot flags, Ff field flags

#4: PDF position

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

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

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

`\HyField@@UseFlag`

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

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

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

`\HyField@@SetFlag`

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

`\HyField@PrintFlags`

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

```

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

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

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

```

“Table 8.75 Field flags specific to button fields”

```

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

```

“Table 8.77 Field flags specific to text fields”

```

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

```

“Table 8.79 field flags specific to choice fields”

```

4671 \HyField@NewFlag{Ff}{Combo}{18}
4672 \HyField@NewFlag{Ff}{Edit}{19}
4673 \HyField@NewFlag{Ff}{Sort}{20}
4674 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4675 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4676 \HyField@NewFlag{Ff}{CommitOnSelChange}{27}% PDF 1.5

```

Signature fields are not supported.

Until 6.76i hyperref uses field option ‘combo’ to set three flags ‘Combo’, ‘Edit’, and ‘Sort’. Option ‘popdown’ sets flag ‘Combo’ only.

```

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

```

```

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

```

Annotation flags. The form objects are widget annotations. There are two flags for readonly settings, the one in the annotation flags is ignored, instead the other in the field flags is used.

Flag Print is not much useful, because hyperref do not use the appearance entry of the annotations for most fields.

```

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

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

```

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

```

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

```

```

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

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

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

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

```

```

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

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

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

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

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

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

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

```

```

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

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

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

```

19.1.7 Text fields

\HyField@FlagsText

```

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

```

```

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

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

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

```

19.2 Choice field

\HyField@PDFChoices #1: list of choices in key value syntax, key = exported name, value = displayed text.

Input: \Fld@default, \Fld@value, \ifFld@multiselect

Result: \Fld@choices with entries: /Opt, /DV, /V, /I.

```

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

```

```

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

```

\HyField@@PDFChoices

```

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

```

```

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

```

19.3 Forms

\HyField@SetKeys

```

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

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

```

```

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

```

```

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

```

```

5140 \define@key{Field}{value}{%
5141   \def\Fld@value{#1}%
5142 }
5143 \define@key{Field}{checkboxsymbol}{%
5144   \Fld@DingDef\Fld@cbsymbol{#1}%
5145 }
5146 \define@key{Field}{radiosymbol}{%
5147   \Fld@DingDef\Fld@radiosymbol{#1}%
5148 }
5149 \def\Fld@DingDef#1#2{%
5150   \def\Fld@temp{}%
5151   \Fld@@DingDef#2\ding{}}\@nil
5152   \let#1\Fld@temp
5153 }
5154 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5155   \expandafter\def\expandafter\Fld@temp\expandafter{%
5156     \Fld@temp
5157     #1%
5158   }%
5159   \ifx\\#3\\%
5160     \expandafter\@gobble
5161   \else
5162     \begingroup
5163       \lccode'0=#2\relax
5164       \lowercase{\endgroup
5165         \expandafter\def\expandafter\Fld@temp\expandafter{%
5166           \Fld@temp
5167           0%
5168         }%
5169       }%
5170       \expandafter\@firstofone
5171     \fi
5172     {%
5173       \Fld@@DingDef#3\@nil
5174     }%
5175 }

5176 \define@key{Field}{rotation}{%
5177   \def\Fld@rotation{#1}%
5178 }

5179 \define@key{Field}{backgroundcolor}{%
5180   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5181 }
5182 \define@key{Field}{bordercolor}{%
5183   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5184 }
5185 \define@key{Field}{color}{%
5186   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5187 }

5188 \def\Fld@onclick@code{}
5189 \def\Fld@format@code{}
5190 \def\Fld@validate@code{}
5191 \def\Fld@calculate@code{}
5192 \def\Fld@keystroke@code{}
5193 \def\Fld@onfocus@code{}
5194 \def\Fld@onblur@code{}
5195 \def\Fld@onmousedown@code{}

```

```

5196 \def\Fld@onmouseup@code{}
5197 \def\Fld@onenter@code{}
5198 \def\Fld@onexit@code{}
5199 \def\Hy@temp#1{%
5200   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5201 }
5202 \def\Hy@@temp#1#2{%
5203   \ifHy@pdfa
5204     \define@key{Field}{#2}{%
5205       \PackageError{hyperref}{%
5206         PDF/A: Additional action ‘#2’ is prohibited%
5207       }\@ehc
5208     }%
5209   \else
5210     \define@key{Field}{#2}{%
5211       \def#1{##1}%
5212     }%
5213   \fi
5214 }
5215 \Hy@temp{keystroke}
5216 \Hy@temp{format}
5217 \Hy@temp{validate}
5218 \Hy@temp{calculate}
5219 \Hy@temp{onfocus}
5220 \Hy@temp{onblur}
5221 \Hy@temp{onenter}
5222 \Hy@temp{onexit}
5223 \def\Hy@temp#1{%
5224   \define@key{Field}{#1}{%
5225     \Field@addtoks{#1}{##1}%
5226   }%
5227 }
5228 \Hy@temp{onselect}
5229 \Hy@temp{onchange}
5230 \Hy@temp{ondblclick}
5231 \Hy@temp{onmousedown}
5232 \Hy@temp{onmouseup}
5233 \Hy@temp{onmouseover}
5234 \Hy@temp{onmousemove}
5235 \Hy@temp{onmouseout}
5236 \Hy@temp{onkeypress}
5237 \Hy@temp{onkeydown}
5238 \Hy@temp{onkeyup}
5239 \ifHy@pdfa
5240   \define@key{Field}{onclick}{%
5241     \PackageError{hyperref}{%
5242       PDF/A: Action ‘onclick’ is prohibited%
5243     }\@ehc
5244   }%
5245 \else
5246   \define@key{Field}{onclick}{%
5247     \def\Fld@onclick@code{#1}%
5248     \Field@addtoks{onclick}{#1}%
5249   }%
5250 \fi
5251 \DeclareRobustCommand\TextField{%
5252   \@ifnextchar[{\@TextField}{\@TextField[]}%

```

```

5253 }
5254 \DeclareRobustCommand\ChoiceMenu{%
5255   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5256 }
5257 \DeclareRobustCommand\CheckBox{%
5258   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5259 }
5260 \DeclareRobustCommand\PushButton{%
5261   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5262 }
5263 \DeclareRobustCommand\Gauge{%
5264   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5265 }
5266 \DeclareRobustCommand\Submit{%
5267   \@ifnextchar[{\@Submit}{\@Submit[]}%
5268 }
5269 \DeclareRobustCommand\Reset{%
5270   \@ifnextchar[{\@Reset}{\@Reset[]}%
5271 }
5272 \def\LayoutTextField#1#2{% label, field
5273   #1 #2%
5274 }
5275 \def\LayoutChoiceField#1#2{% label, field
5276   #1 #2%
5277 }
5278 \def\LayoutCheckField#1#2{% label, field
5279   #1 #2%
5280 }
5281 \def\LayoutPushButtonField#1{% button
5282   #1%
5283 }
5284 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5285 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5286 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5287 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5288 \def\MakeButtonField#1{%
5289   \sbox0{%
5290     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5291   }%
5292   \@tempdima\ht0 %
5293   \advance\@tempdima by \Fld@borderwidth bp %
5294   \advance\@tempdima by \Fld@borderwidth bp %
5295   \ht0\@tempdima
5296   \@tempdima\dp0 %
5297   \advance\@tempdima by \Fld@borderwidth bp %
5298   \advance\@tempdima by \Fld@borderwidth bp %
5299   \dp0\@tempdima
5300   \box0\relax
5301 }
5302 \def\DefaultHeightofSubmit{14pt}
5303 \def\DefaultWidthofSubmit{2cm}
5304 \def\DefaultHeightofReset{14pt}
5305 \def\DefaultWidthofReset{2cm}
5306 \def\DefaultHeightofCheckBox{\baselineskip}
5307 \def\DefaultWidthofCheckBox{\baselineskip}
5308 \def\DefaultHeightofChoiceMenu{\baselineskip}
5309 \def\DefaultWidthofChoiceMenu{\baselineskip}

```

```

5310 \def\DefaultHeightofText{\baselineskip}
5311 \def\DefaultHeightofTextMultiline{4\baselineskip}
5312 \def\DefaultWidthofText{3cm}
5313 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5314 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5315 \def\DefaultOptionsofPushButton{print}
5316 \def\DefaultOptionsofCheckBox{print}
5317 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5318 \def\DefaultOptionsofListBox{print}
5319 \def\DefaultOptionsofComboBox{print,edit,sort}
5320 \def\DefaultOptionsofPopdownBox{print}
5321 \def\DefaultOptionsofRadio{print,notoggletooft}

```

20 Setup

```

5322 \ifHy@figures
5323 \Hy@Info{Hyper figures ON}%
5324 \else
5325 \Hy@Info{Hyper figures OFF}%
5326 \fi
5327 \ifHy@nesting
5328 \Hy@Info{Link nesting ON}%
5329 \else
5330 \Hy@Info{Link nesting OFF}%
5331 \fi
5332 \ifHy@hyperindex
5333 \Hy@Info{Hyper index ON}%
5334 \else
5335 \Hy@Info{Hyper index OFF}%
5336 \fi
5337 \ifHy@backref
5338 \Hy@Info{backreferencing ON}%
5339 \else
5340 \Hy@Info{backreferencing OFF}%
5341 \fi
5342 \ifHy@colorlinks
5343 \Hy@Info{Link coloring ON}%
5344 \else
5345 \Hy@Info{Link coloring OFF}%
5346 \fi
5347 \ifHy@ocgcolorlinks
5348 \Hy@Info{Link coloring with OCG ON}%
5349 \else
5350 \Hy@Info{Link coloring with OCG OFF}%
5351 \fi
5352 \ifHy@pdfa
5353 \Hy@Info{PDF/A mode ON}%
5354 \else
5355 \Hy@Info{PDF/A mode OFF}%
5356 \fi

```

21 Low-level utility macros

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

```

5357 \edef\hyper@hash{\string#}
5358 \edef\hyper@tilde{\string~}
5359 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5360 \def\@currentHref{Doc-Start}
5361 \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.

```

5362 \Hy@AtBeginDocument{%
5363   \Hy@pdfstringtrue
5364   \PDF@SetupDoc
5365   \let\PDF@SetupDoc\@empty
5366   \Hy@DisableOption{pdfpagescrop}%
5367   \Hy@DisableOption{pdfpagemode}%
5368   \Hy@DisableOption{pdfnonfullscreenpagemode}%
5369   \Hy@DisableOption{pdfdirection}%
5370   \Hy@DisableOption{pdfviewarea}%
5371   \Hy@DisableOption{pdfviewclip}%
5372   \Hy@DisableOption{pdfprintarea}%
5373   \Hy@DisableOption{pdfprintclip}%
5374   \Hy@DisableOption{pdfprintscaling}%
5375   \Hy@DisableOption{pdfduplex}%
5376   \Hy@DisableOption{pdfpicktraybypdfsize}%
5377   \Hy@DisableOption{pdfprintpagerange}%
5378   \Hy@DisableOption{pdfnumcopies}%
5379   \Hy@DisableOption{pdfstartview}%
5380   \Hy@DisableOption{pdfstartpage}%
5381   \Hy@DisableOption{pdftoolbar}%
5382   \Hy@DisableOption{pdfmenubar}%
5383   \Hy@DisableOption{pdfwindowui}%
5384   \Hy@DisableOption{pdfitwindow}%
5385   \Hy@DisableOption{pdfcenterwindow}%
5386   \Hy@DisableOption{pdfdisplaydoctitle}%
5387   \Hy@DisableOption{pdfpagelayout}%
5388   \Hy@DisableOption{pdflang}%
5389   \Hy@DisableOption{baseurl}%
5390   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5391   \Hy@pdfstringfalse
5392 }

```

Ignore star from referencing macros:

```

5393 \LetLtxMacro\NoHy@OrgRef\ref
5394 \DeclareRobustCommand*\ref{%
5395   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5396 }
5397 \LetLtxMacro\NoHy@OrgPageRef\pageref
5398 \DeclareRobustCommand*\pageref{%
5399   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5400 }

```

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.

```

5401 \def\NoHyper{%
5402   \def\hyper@link@[##1]##2##3##4{##4}%
5403   \def\hyper@@anchor##1{%
5404     \global\let\hyper@livelink\hyper@link
5405     \gdef\hyper@link##1##2##3{##3}%
5406     \def\hyper@anchor##1{%
5407       \def\hyper@anchorstart##1{%
5408         \let\hyper@anchorend\@empty
5409         \def\hyper@linkstart##1##2{%
5410           \let\hyper@linkend\@empty
5411           \def\hyper@linkurl##1##2{##1}%
5412           \def\hyper@linkfile##1##2##3{##1}%
5413           \def\hyper@link@[##1]##2##3{%
5414             \let\Hy@backout\@gobble
5415           }
5416         \def\stop@hyper{%
5417           \def\hyper@link@[##1]##2##3##4{##4}%
5418           \let\Hy@backout\@gobble
5419           \def\hyper@@anchor##1{%
5420             \def\hyper@link##1##2##3{##3}%
5421             \def\hyper@anchor##1{%
5422               \def\hyper@anchorstart##1{%
5423                 \let\hyper@anchorend\@empty
5424                 \def\hyper@linkstart##1##2{%
5425                   \let\hyper@linkend\@empty
5426                   \def\hyper@linkurl##1##2{##1}%
5427                   \def\hyper@linkfile##1##2##3{##1}%
5428                   \def\hyper@link@[##1]##2##3{%
5429                     }
5430                 }
5431               \def\endNoHyper{%
5432                 \global\let\hyper@link\hyper@livelink
5433               }
5434             }
5435           }
5436         }
5437       }
5438     }
5439   }
5440 }
5441 \def\endNoHyper{%
5442   \global\let\hyper@link\hyper@livelink
5443 }
5444 \let\PDF@SetupDoc\@empty
5445 \end{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:

```

5434 \*nohyperref
5435 \RequirePackage{letltxmacro}[2008/06/13]
5436 \let\hyper@@anchor\@gobble
5437 \def\hyper@link##1##2##3{##3}%
5438 \let\hyper@anchorstart\@gobble
5439 \let\hyper@anchorend\@empty
5440 \let\hyper@linkstart\@gobbletwo
5441 \let\hyper@linkend\@empty
5442 \def\hyper@linkurl##1##2{##1}%
5443 \def\hyper@linkfile##1##2##3{##1}%
5444 \def\hyper@link@[##1]##2##3{%
5445   \let\PDF@SetupDoc\@empty

```

```

5446 \let\PDF@FinishDoc\@empty
5447 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5448 \def\Acrobatmenu#1#2{\leavevmode#2}
5449 \let\pdfstringdefDisableCommands\@gobbletwo
5450 \let\texorpdfstring\@firstoftwo
5451 \let\pdfbookmark\@undefined
5452 \newcommand\pdfbookmark[3][]{ }
5453 \let\phantomsection\@empty
5454 \let\hypersetup\@gobble
5455 \let\hyperbaseurl\@gobble
5456 \let\href\@gobble
5457 \let\hyperdef\@gobbletwo
5458 \let\hyperlink\@gobble
5459 \let\hypertarget\@gobble
5460 \def\hyperref{%
5461   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5462 }
5463 \long\def\@gobbleopt[#1]{ }
5464 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5465 \LetLtxMacro\NoHy@OrgRef\ref
5466 \DeclareRobustCommand*\ref{%
5467   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5468 }
5469 \LetLtxMacro\NoHy@OrgPageRef\pageref
5470 \DeclareRobustCommand*\pageref{%
5471   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5472 }
5473 \</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}

```

5474 \*package>
5475 \Hy@AtBeginDocument{%

```

First the code to deal with removing the hyperref package from a document.

Write some stuff into the aux file so if the next run is done without hyperref, then \contentsline and \newlabel are defined to cope with the extra arguments.

```

5476 \if@filesw
5477   \ifHy@typexml
5478     \immediate\closeout\@mainaux
5479     \immediate\openout\@mainaux\jobname.aux\relax
5480     \immediate\write\@auxout{<relaxxml>\relax}%
5481   \fi
5482   \immediate\write\@auxout{%
5483     \string\providecommand\string\HyperFirstAtBeginDocument{%
5484       \string\AtBeginDocument}^^J%
5485     \string\HyperFirstAtBeginDocument{%
5486       \string\ifx\string\hyper@anchor\string\@undefined^^J%
5487       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5488       \string\gdef\string\contentsline%

```


25 Title strings

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

```

5530 \ifHy@usetitle
5531   \let\HyOrg@title\title
5532   \let\HyOrg@author\author
5533   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5534   \def\Hy@scanopttitle[#1]{%
5535     \gdef\Hy@title{#1}%
5536     \HyOrg@title{#1}%
5537   }%
5538   \def\Hy@scantitle#1{%
5539     \gdef\Hy@title{#1}%
5540     \HyOrg@title{#1}%
5541   }%
5542   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5543   \def\Hy@scanoptauthor[#1]{%
5544     \gdef\Hy@author{#1}%
5545     \HyOrg@author{#1}%
5546   }%
5547   \def\Hy@scanauthor#1{%
5548     \gdef\Hy@author{#1}%
5549     \HyOrg@author{#1}%
5550   }%

```

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.

```

5551 \begingroup
5552   \def\process@me#1\@nil#2{%
5553     \expandafter\let\expandafter\x\csname @#2\endcsname
5554     \edef\y{\expandafter\strip@prefix\meaning\x}%
5555     \def\c##1#1##2\@nil{%
5556       \ifx\\##1\\%
5557         \else
5558           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5559             \expandafter{x}%
5560         \fi
5561       }%
5562     \expandafter\c\y\relax#1\@nil
5563   }%
5564   \expandafter\process@me\string\@latex@\@nil{title}%
5565   \expandafter\process@me\string\@latex@\@nil{author}%
5566 \endgroup
5567 \fi
5568 \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.

```

5569 \def\Hy@UseMaketitleString#1{%

```

```

5570 \ltx@ifundefined{Hy@#1}{}{%
5571   \begingroup
5572   \let\Hy@saved@hook\pdfstringdefPreHook
5573   \pdfstringdefDisableCommands{%
5574     \expandafter\let\expandafter\\csname Hy@newline@#1\endcsname
5575     \let\newline\\%
5576   }%
5577   \expandafter\ifx\csname @pdf#1\endcsname\@empty
5578     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5579       \csname Hy@#1\endcsname\@empty
5580     }%
5581   \fi
5582   \global\let\pdfstringdefPreHook\Hy@saved@hook
5583 \endgroup
5584 }%
5585 }
5586 \def\Hy@newline@title#1{ #1}
5587 \def\Hy@newline@author#1{, #1}
5588 \def\Hy@UseMaketitleInfos{%
5589   \Hy@UseMaketitleString{title}%
5590   \Hy@UseMaketitleString{author}%
5591 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5592 \RequirePackage{atbegshi}[2007/09/09]
5593 \def\Hy@EveryPageHook{}
5594 \def\Hy@EveryPageBoxHook{}
5595 \def\Hy@FirstPageHook{}
5596 \AtBeginShipout{%
5597   \Hy@EveryPageHook
5598   \ifx\Hy@EveryPageBoxHook\@empty
5599     \else
5600       \setbox\AtBeginShipoutBox=\vbox{%
5601         \offinterlineskip
5602         \Hy@EveryPageBoxHook
5603         \box\AtBeginShipoutBox
5604       }%
5605     \fi
5606 }
5607 \AtBeginShipoutFirst{%
5608   \Hy@FirstPageHook
5609 }
5610 \g@addto@macro\Hy@FirstPageHook{%
5611   \PDF@FinishDoc
5612   \gdef\PDF@FinishDoc{}%
5613 }

```

27.1 PDF /PageLabels

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

```

5614 \ifHy@pagelabels
5615   \begingroup\expandafter\expandafter\expandafter\endgroup
5616   \expandafter\ifx\csname thepage\endcsname\relax
5617     \Hy@pagelabelsfalse
5618     \Hy@WarningNoLine{%
5619       Option 'pdfpagelabels' is turned off\MessageBreak
5620       because \string\thepage\space is undefined%
5621     }%
5622     \csname fi\endcsname
5623     \csname iffalse\expandafter\endcsname
5624   \fi

```

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

```

5625 \def\thispdfpagelabel#1{%
5626   \gdef\HyPL@thisLabel{#1}%
5627 }%
5628 \global\let\HyPL@thisLabel\relax

```

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

```

5629 \def\HyPL@Labels{}%

```

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

```

5630 \newcount\Hy@abspage
5631 \Hy@abspage=0 %

```

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

```

5632 \def\HyPL@LastType{init}%
5633 \def\HyPL@LastNumber{0}%
5634 \def\HyPL@LastPrefix{}%

```

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

```

5635 \def\HyPL@arabic{D}%
5636 \def\HyPL@Roman{R}%
5637 \def\HyPL@roman{r}%
5638 \def\HyPL@Alph{A}%
5639 \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.

```

5640 \def\HyPL@EveryPage{%
5641   \begingroup
5642   \ifx\HyPL@thisLabel\relax
5643     \let\HyPL@page\thepage
5644   \else
5645     \let\HyPL@page\HyPL@thisLabel
5646     \global\let\HyPL@thisLabel\relax
5647   \fi
5648   \let\HyPL@Type\relax
5649   \ifnum\the\c@page>0 %
5650     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5651   \fi
5652   \let\Hy@temp Y%
5653   \ifx\HyPL@Type\HyPL@LastType
5654   \else
5655     \let\Hy@temp N%
5656   \fi

```

```

5657 \ifx\HyPL@Type\relax
5658 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5659 \else
5660 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5661 \fi
5662 \ifx\HyPL@Prefix\HyPL@LastPrefix
5663 \else
5664 \let\Hy@temp N%
5665 \fi
5666 \if Y\Hy@temp
5667 \advance\c@page by -1 %
5668 \ifnum\HyPL@LastNumber=\the\c@page\relax
5669 \else
5670 \let\Hy@temp N%
5671 \fi
5672 \Hy@StepCount\c@page
5673 \fi
5674 \if N\Hy@temp
5675 \ifx\HyPL@Type\relax
5676 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5677 \else
5678 \HyPL@StorePageLabel{%
5679 \ifx\HyPL@Prefix@empty
5680 \else
5681 /P(\HyPL@Prefix)%
5682 \fi
5683 /S/\csname HyPL\HyPL@Type\endcsname
5684 \ifnum\the\c@page=1 %
5685 \else
5686 \space/St \the\c@page
5687 \fi
5688 }%
5689 \fi
5690 \fi
5691 \xdef\HyPL@LastNumber{\the\c@page}%
5692 \global\let\HyPL@LastType\HyPL@Type
5693 \global\let\HyPL@LastPrefix\HyPL@Prefix
5694 \endgroup
5695 \Hy@GlobalStepCount\Hy@abspage
5696 }%

```

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

```

5697 \def\HyPL@CheckThePage#1\@nil{%
5698 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5699 }%

```

`\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`.

```

5700 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5701 \def\Hy@tempa{#4}%
5702 \def\Hy@tempb{\csname\endcsname\c@page}%
5703 \ifx\Hy@tempa\Hy@tempb
5704 \expandafter\ifx\csname HyPL#3\endcsname\relax
5705 \else

```

```

5706     \def\HyPL@Type{#3}%
5707     \def\HyPL@Prefix{#2}%
5708     \fi
5709   \else
5710     \begingroup
5711     \let\Hy@next\endgroup
5712     \let\HyPL@found\@undefined
5713     \def\arabic{\HyPL@Format{arabic}}%
5714     \def\Roman{\HyPL@Format{Roman}}%
5715     \def\roman{\HyPL@Format{roman}}%
5716     \def\Alph{\HyPL@Format{Alph}}%
5717     \def\alph{\HyPL@Format{alph}}%
5718     \protected@edef\Hy@temp{#1}%
5719     \ifx\HyPL@found\relax
5720       \toks@{\expandafter{\Hy@temp}}%
5721       \edef\Hy@next{\endgroup
5722         \noexpand\HyPL@@@CheckThePage\the\toks@
5723         \noexpand\HyPL@found\relax\noexpand\@nil
5724       }%
5725     \fi
5726     \Hy@next
5727   \fi
5728 }%

```

`\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`.

```

5729 \def\HyPL@Format#1#2{%
5730   \ifx\HyPL@found\@undefined
5731     \expandafter\ifx\csname c@#2\endcsname\c@page
5732       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5733     \else
5734       \expandafter\noexpand\csname#1\endcsname{#2}%
5735     \fi
5736   \else
5737     \expandafter\noexpand\csname#1\endcsname{#2}%
5738   \fi
5739 }%

```

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

```

5740 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5741   \def\Hy@tempa{#3}%
5742   \def\Hy@tempb{\HyPL@found\relax}%
5743   \ifx\Hy@tempa\Hy@tempb
5744     \def\HyPL@Type{#2}%
5745     \def\HyPL@Prefix{#1}%
5746   \fi
5747 }%

```

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

```

5748 \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`.

```

5749 \def\HyPL@Useless{0<</S/D>>}%
5750 \@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.

```

5751 \def\HyPL@SetPageLabels{%
5752   \@onelevel@sanitize\HyPL@Labels
5753   \ifx\HyPL@Labels\@empty
5754   \else
5755     \ifx\HyPL@Labels\HyPL@Useless
5756     \else
5757       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5758     \fi
5759   \fi
5760 }%

5761 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5762 \fi

Option 'pdfpagelabels' has been used and is now disabled.
5763 \Hy@DisableOption{pdfpagelabels}
5764 \</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`

```

5765 \<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.

```

5766 \<*vTeX>
5767 \providecommand*{\XR@ext}{pdf}
5768 \edef\Hy@VTeXversion{%
5769   \ifx\VTeXversion\@undefined
5770     \z@
5771   \else
5772     \ifx\VTeXversion\relax
5773     \z@
5774   \else
5775     \VTeXversion
5776   \fi
5777 \fi
5778 }
5779 \begingroup
5780 \ifnum\Hy@VTeXversion<660 %
5781   \gdef\Hy@PutCatalog#1{%
5782     \Hy@WarningNoLine{%
5783       VTeX 6.59g or above required for pdfpagelabels%
5784     }%
5785   }%
5786 \else
5787   \gdef\Hy@PutCatalog#1{%
5788     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5789   }%
5790   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%

```

```

5791 \ifx\#2\%
5792 \else
5793 \immediate\special{!pdfpagelabels #2}%
5794 \fi
5795 }%
5796 \fi
5797 \endgroup
5798 \</vtx>

5799 \<*pdftex | vtx>

```

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

```

5800 \ifHy@pagelabels
5801 \def\HyPL@StorePageLabel#1{%
5802 \toks@{\expandafter{\HyPL@Labels}}%
5803 \xdef\HyPL@Labels{%
5804 \the\toks@
5805 \the\Hy@abspage<<#1>>%
5806 }%
5807 }%

```

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.

```

5808 \RequirePackage{atveryend}[2009/12/07]%
5809 \AtVeryEndDocument{%
5810 \HyPL@SetPageLabels
5811 }%

5812 \fi
5813 \</pdftex | vtx>

```

27.1.2 xetex

```

5814 \<*xetex>
5815 \HyPsd@LoadUnicode
5816 \Hy@unicodetrue
5817 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5818 \else
5819 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5820 \fi
5821 \HyPsd@LoadStringEncoding
5822 \define@key{Hyp}{unicode}[true]{%
5823 \Hy@boolkey{unicode}{#1}%
5824 \ifHy@unicode
5825 \else
5826 \Hy@Warning{%
5827 XeTeX driver only supports 'unicode=true'.\MessageBreak
5828 Ignoring option setting 'unicode=false'%
5829 }%
5830 \Hy@unicodetrue
5831 \fi
5832 }
5833 \define@key{Hyp}{pdfencoding}{%
5834 \edef\HyPsd@temp{#1}%
5835 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5836 \let\HyPsd@pdfencoding\HyPsd@temp
5837 \else

```

```

5838 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5839 \let\HyPsd@pdfencoding\HyPsd@temp
5840 \else
5841 \Hy@Warning{%
5842 XeTeX driver only supports\MessageBreak
5843 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5844 setting 'pdfencoding=\HyPsd@temp'%
5845 }%
5846 \fi
5847 \fi
5848 }
5849 \let\HyXeTeX@CheckUnicode\relax
5850 \xetex

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5851 <*pdfmarkbase>
5852 \begingroup
5853 \@ifundefined{headerps@out}{}{%
5854 \toks@\expandafter{\Hy@FirstPageHook}%
5855 \xdef\Hy@FirstPageHook{%
5856 \noexpand\headerps@out{%
5857 systemdict /pdfmark known%
5858 {%
5859 userdict /?pdfmark systemdict /exec get put%
5860 }{%
5861 userdict /?pdfmark systemdict /pop get put %
5862 userdict /pdfmark systemdict /cleartomark get put%
5863 }%
5864 ifelse%
5865 }%
5866 \the\toks@
5867 }%
5868 }%
5869 \endgroup
5870 </pdfmarkbase>

\Hy@PutCatalog

5871 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5872 <*pdfmarkbase>
5873 \def\Hy@PutCatalog#1{%
5874 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5875 }
5876 </pdfmarkbase>

5877 <*pdfmarkbase | dvipdfm | xetex>
5878 \ifHy@pagelabels

```

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

```

5879 \def\HyPL@StorePageLabel#1{%
5880 \if@files
5881 \begingroup
5882 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5883 \immediate\write\@mainaux{%
5884 \string\HyPL@Entry{\Hy@tempa}%
5885 }%
5886 \endgroup
5887 \fi
5888 }%

```

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.

```

5889 \Hy@AtBeginDocument{%
5890   \if@filesw
5891     \immediate\write\@mainaux{%
5892       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5893     }%
5894   \fi
5895   \ifx\HyPL@Labels\@empty
5896     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5897   \else
5898     \HyPL@SetPageLabels
5899   \fi
5900   \let\HyPL@Entry\@gobble
5901 }%
```

`\HyPL@Entry`

```

5902 \def\HyPL@Entry#1{%
5903   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5904     \HyPL@Labels
5905     #1%
5906   }%
5907 }%

5908 \fi
5909 </pdfmarkbase | dvipdfm | xetex>
5910 <*package>
5911 \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

```

5912 \def\Hy@CounterExists#1{%
5913   \begingroup\expandafter\expandafter\expandafter\endgroup
5914   \expandafter\ifx\csname c@#1\endcsname\relax
5915     \expandafter\@gobble
5916   \else
5917     \begingroup\expandafter\expandafter\expandafter\endgroup
5918     \expandafter\ifx\csname the#1\endcsname\relax
```

```

5919 \expandafter\expandafter\expandafter\@gobble
5920 \else
5921 \expandafter\expandafter\expandafter\@firstofone
5922 \fi
5923 \fi
5924 }
5925 \Hy@CounterExists{section}{%
5926 \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5927 }
5928 \Hy@CounterExists{part}{%
5929 \newcommand\theHpart{\arabic{part}}}%
5930 }
5931 \ltx@ifundefined{thechapter}{%
5932 \newcommand\theHsection {\arabic{section}}}%
5933 \newcommand\theHfigure {\arabic{figure}}}%
5934 \newcommand\theHtable {\arabic{table}}}%
5935 }{%
5936 \newcommand\theHchapter {\arabic{chapter}}}%
5937 \newcommand\theHfigure {\theHchapter.\arabic{figure}}}%
5938 \newcommand\theHtable {\theHchapter.\arabic{table}}}%
5939 \newcommand\theHsection {\theHchapter.\arabic{section}}}%
5940 }
5941 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5942 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5943 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
5944 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5945 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
5946 \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.

```

5947 \let\H@item\item
5948 \newcounter{Item}
5949 \def\theHItem{\arabic{Item}}
5950 \def\item{%
5951 \@hyper@itemfalse
5952 \if@nmbrlist\@hyper@itemtrue\fi
5953 \H@item
5954 }
5955 \newcommand\theHenumi {\theHItem}
5956 \newcommand\theHenumii {\theHItem}
5957 \newcommand\theHenumiii {\theHItem}
5958 \newcommand\theHenumiv {\theHItem}
5959 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5960 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5961 \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.

```

5962 \let\H@refstepcounter\refstepcounter
5963 \edef\name@of@eq{equation}%
5964 \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.

```

5965 \newif\if@hyper@item
5966 \newif\if@skiphyperref
5967 \@hyper@itemfalse
5968 \@skiphyperreffalse
5969 \def\refstepcounter#1{%
5970   \ifHy@pdfstring
5971   \else
5972     \H@refstepcounter{#1}%
5973     \edef\This@name{#1}%
5974     \ifx\This@name\name@of@slide
5975     \else
5976       \if@skiphyperref
5977       \else
5978         \if@hyper@item
5979         \stepcounter{Item}%
5980         \hyper@refstepcounter{Item}%
5981         \@hyper@itemfalse
5982       \else
5983         \hyper@refstepcounter{#1}%
5984       \fi
5985     \fi
5986   \fi
5987 \fi
5988 }
5989 \let\Hy@saved@refstepcounter\refstepcounter

```

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

```

5990 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5991 \def\hyper@refstepcounter#1{%
5992   \edef\This@name{#1}%
5993   \ifx\This@name\name@of@eq
5994     \@ifundefined{theHequation}{%
5995       \make@stripped@name{\theequation}%
5996       \let\theHequation\newname
5997     }{}%
5998   \fi
5999   \@ifundefined{theH#1}{%
6000     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6001   }{}%
6002   \hyper@makecurrent{#1}%
6003   \ifmeasuring@
6004   \else
6005     \Hy@raisedlink{%
6006       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6007     }%
6008   \fi
6009 }

```

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`.

```

6010 \begingroup\expandafter\expandafter\expandafter\endgroup
6011 \expandafter\ifx\csname chapter\endcsname\relax
6012   \def\Hy@chapterstring{section}%
6013 \else
6014   \def\Hy@chapterstring{chapter}%
6015 \fi
6016 \def\Hy@appendixstring{appendix}
6017 \def\Hy@chapapp{\Hy@chapterstring}
6018 \let\HyOrg@appendix\appendix
6019 \def\appendix{%
6020   \ltx@ifundefined{chapter}%
6021     {\gdef\theHsection{\Alph{section}}}%
6022     {\gdef\theHchapter{\Alph{chapter}}}%
6023   \xdef\Hy@chapapp{\Hy@appendixstring}%
6024   \HyOrg@appendix
6025 }

```

\Hy@Test@alph

```

6026 \def\Hy@Test@alph#1{%
6027   \ifcase#1\or
6028     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6029     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
6030     u\or v\or w\or x\or y\or z%
6031   \else
6032     \@ctrerr
6033   \fi
6034 }

```

\Hy@Test@Alph

```

6035 \def\Hy@Test@Alph#1{%
6036   \ifcase#1\or
6037     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6038     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6039     U\or V\or W\or X\or Y\or Z%
6040   \else
6041     \@ctrerr
6042   \fi
6043 }

```

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

```

6044 \def\hyper@makecurrent#1{%
6045   \begingroup
6046     \edef\Hy@param{#1}%
6047     \ifx\Hy@param\Hy@chapterstring
6048       \let\Hy@param\Hy@chapapp
6049     \fi
6050     \ifHy@hypertextnames
6051       \let\@number\@firstofone
6052       \def\@fnsymbol##1{\fnsymbol\number##1}%
6053       \ifx\@alph\Hy@Test@alph
6054         \else
6055           \def\@alph{alph\number}%
6056         \fi
6057       \ifx\@Alph\Hy@Test@Alph
6058         \else
6059           \def\@Alph{Alph\number}%

```

```

6060 \fi
6061 \ifHy@naturalnames
6062 \let\textlatin\@firstofone
6063 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6064 \else
6065 \xdef\HyperGlobalCurrentHref{%
6066 \csname
6067 the%
6068 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6069 #1%
6070 \endcsname
6071 }%
6072 \fi
6073 \xdef\HyperGlobalCurrentHref{%
6074 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6075 }%
6076 \else
6077 \Hy@GlobalStepCount\Hy@linkcounter
6078 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6079 \fi
6080 \endgroup
6081 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6082 \ifHy@localanchorname
6083 \let\@currentHref\HyperLocalCurrentHref
6084 \else
6085 \global\let\@currentHref\HyperGlobalCurrentHref
6086 \fi
6087 }

```

\Hy@MakeCurrentHref

```

6088 \def\Hy@MakeCurrentHref#1{%
6089 \edef\HyperLocalCurrentHref{#1}%
6090 \@onelevel@sanitize\HyperLocalCurrentHref
6091 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6092 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6093 \ifHy@localanchorname
6094 \let\@currentHref\HyperLocalCurrentHref
6095 \else
6096 \global\let\@currentHref\HyperGlobalCurrentHref
6097 \fi
6098 }

```

\Hy@MakeCurrentHrefAuto

```

6099 \def\Hy@MakeCurrentHrefAuto#1{%
6100 \Hy@GlobalStepCount\Hy@linkcounter
6101 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6102 }

```

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

```

6103 \def\@currentHlabel{\@currentHref}

6104 \ifpackageloaded{fancyvrb}{%
6105 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{-}%
6106 \def\FV@StepLineNo{%
6107 \FV@SetLineNo
6108 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6109 \FV@StepLineNo

```

```

6110 }%
6111 }%
6112 }{}

```

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`

```

6113 \Hy@AtBeginDocument{%
6114   \ifclassloaded{revtex4}{%
6115     \@namedef{ver@lastpage.sty}{1994/06/25}%
6116   }{}%
6117   \@ifpackageloaded{lastpage}{%
6118     \ifHy@pageanchor
6119     \else
6120       \Hy@WarningNoLine{%
6121         The \string\pageref{LastPage} link doesn't work\MessageBreak
6122         with disabled option 'pageanchor'%
6123       }%
6124     \fi
6125   \def\lastpage@putlabel{%
6126     \addtocounter{page}{-1}%
6127     \if@filesw
6128       \begingroup
6129         \let\@number\@firstofone
6130         \ifHy@pageanchor
6131           \ifHy@hypertextnames
6132             \ifHy@plainpages
6133               \def\Hy@temp{\arabic{page}}%
6134             \else
6135               \Hy@unicodedefalse
6136               \pdfstringdef\Hy@temp{\thepage}%
6137             \fi
6138           \else
6139             \def\Hy@temp{\the\Hy@pagecounter}%
6140           \fi
6141         \fi
6142         \immediate\write\@auxout{%
6143           \string\newlabel
6144             {LastPage}{}{\thepage}{}{%
6145               \ifHy@pageanchor page.\Hy@temp\fi}{}%
6146           }%
6147       \endgroup
6148     \fi
6149     \addtocounter{page}{1}%
6150   }%
6151   \@ifclassloaded{revtex4}{%
6152     \begingroup
6153     \toks@\expandafter{\lastpage@putlabel}%

```

```

6154 \edef\x{\endgroup
6155 \def\noexpand\lastpage@putlabel{%
6156 \noexpand\stepcounter{page}%
6157 \the\toks@
6158 \noexpand\addtocounter{page}\noexpand\m@ne
6159 }%
6160 }%
6161 \x
6162 }{}%
6163 }{}%
6164 }
6165 \</package>
6166 \<*check>
6167 \checkpackage{lastpage}[1994/06/25]
6168 \checkcommand\def\lastpage@putlabel{%
6169 \addtocounter{page}{-1}%
6170 \immediate\write\@auxout{%
6171 \string\newlabel{LastPage}{{}\{thepage}}%
6172 }%
6173 \addtocounter{page}{1}%
6174 }
6175 \</check>
6176 \<*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.

```

6177 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
6178 \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:

```

6179 \@ifpackageloaded{titlesec}{%
6180 \def\ttl@Hy@steplink#1{%
6181 \Hy@MakeCurrentHrefAuto{#1*}%
6182 \edef\ttl@Hy@saveanchor{%
6183 \noexpand\Hy@raisedlink{%
6184 \noexpand\hyper@anchorstart{\@currentHref}%
6185 \noexpand\hyper@anchorend
6186 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6187 \noexpand\ttl@Hy@PatchSaveWrite
6188 }%
6189 }%
6190 }%
6191 \def\ttl@Hy@PatchSaveWrite{%
6192 \begingroup
6193 \toks@\expandafter{\ttl@savewrite}%
6194 \edef\x{\endgroup
6195 \def\noexpand\ttl@savewrite{%
6196 \let\noexpand\@currentHref

```

```

6197         \noexpand\ttl@Hy@SavedCurrentHref
6198         \the\toks@
6199     }%
6200 }%
6201 \x
6202 }%
6203 \def\ttl@Hy@refstepcounter#1{%
6204     \let\ttl@b\Hy@raisedlink
6205     \def\Hy@raisedlink##1{%
6206         \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6207     }%
6208     \refstepcounter{#1}%
6209     \let\Hy@raisedlink\ttl@b
6210 }%
6211 }{}

```

Package titletoc support:

```

6212 \ifpackageloaded{titletoc}{%
6213     \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6214 }{}

```

32 Package varioref support

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

```

6215 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
6216 \ifpackageloaded{varioref}{%
6217     \def\vref@pagenum#1#2{%
6218         \ifundefined{r@#2}{%
6219             \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6220         }{}%
6221         \edef#1{\getpagerefnumber{#2}}%
6222     }%
6223 }{}

```

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

```

6224 \def\Hy@varioref@refstepcounter#1{%
6225     \stepcounter{#1}%
6226     \protected@edef\@currentlabel{%
6227         \csname p@#1\expandafter\endcsname\csname the#1\endcsname
6228     }%
6229 }
6230 \AtBeginDocument{%
6231     \ifx\refstepcounter\Hy@varioref@refstepcounter
6232         \let\H@refstepcounter\refstepcounter
6233         \let\refstepcounter\Hy@saved@refstepcounter
6234     \fi
6235 }

```

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

```

6236 \ifpackageloaded{longtable}{%
6237   \begingroup
6238   \def\y{\LT@array}%
6239   \@ifundefined{scr@LT@array}{%
6240     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
6241   }\def\y{\scr@LT@array}%
6242   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6243     \expandafter\endgroup
6244     \expandafter\def\y[##1]##2{%
6245       \H@refstepcounter{#1}%
6246       \hyper@makecurrent{table}%
6247       \let\Hy@LT@currentHref\@currentHref
6248       #2\@sharp###3#4%
6249     }%
6250   }%
6251   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

6252 \begingroup
6253 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
6254   \endgroup
6255   \def\LT@start{%
6256     #1%
6257     \ifvoid\LT@foot#2\fi
6258     \let\@currentHref\Hy@LT@currentHref
6259     \Hy@raisedlink{%
6260       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6261     }%
6262     #3%
6263   }%
6264 }%
6265 \expandafter\x\LT@start\@nil
6266 }{}

```

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.

```

6267 \let\new@refstepcounter\refstepcounter
6268 \let\H@equation\equation
6269 \let\H@endequation\endequation
6270 \ifpackageloaded{amsmath}{%
6271   \long\def\Hy@temp{%
6272     \incr@eqnum
6273     \mathdisplay@push
6274     \st@rredfalse \global\@eqnswtrue
6275     \mathdisplay{equation}%
6276   }%
6277   \ifx\Hy@temp\equation
6278     \expandafter\ifx\cename if@fleqn\expandafter\endcsname

```

```

6279             \csname iftrue\endcsname
6280     \else
6281       \long\def\equation{%
6282         \mathdisplay@push
6283         \st@rredfalse \global\@eqnswtrue
6284         \mathdisplay{equation}%
6285         \incr@eqnum
6286       }%
6287     \fi
6288   \fi
6289 }{%
6290 \def\equation{%
6291   \let\refstepcounter\H@refstepcounter
6292   \H@equation
6293   \@ifundefined{theHequation}{%
6294     \make@stripped@name{\theequation}%
6295     \let\theHequation\newname
6296   }{%
6297     \hyper@makecurrent{equation}%
6298     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6299     \let\refstepcounter\new@refstepcounter
6300   }%
6301   \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6302 }

```

My goodness, why can't \LaTeX 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.

```

6303 \newif\if@eqnstar
6304 \@eqnstarfalse
6305 \let\H@eqnarray\eqnarray
6306 \let\H@endeqnarray\endeqnarray
6307 \def\eqnarray{%
6308   \let\Hy@reserved@a\relax
6309   \def\@currentHref{}%
6310   \H@eqnarray
6311   \if@eqnstar
6312   \else
6313     \ifx\\\@currentHref\\%
6314     \else
6315       \@ifundefined{theHequation}{%
6316         \make@stripped@name{\theequation}%
6317         \let\theHequation\newname
6318       }{%
6319         \hyper@makecurrent{equation}%
6320         \hyper@anchorstart{\@currentHref}\hyper@anchorend
6321       }%
6322     \fi
6323   }
6324 \def\endeqnarray{%
6325   \H@endeqnarray
6326 }

```

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.

```

6327 \@namedef{eqnarray*}{%

```

```

6328 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6329 }
6330 \@namedef{endeqnarray*}{%
6331 \nonumber\endeqnarray\@eqnstarfalse
6332 }

```

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

```

6333 \ltx@ifundefined{subeqnarray}{%}{%
6334 \let\H@subeqnarray\subeqnarray
6335 \let\H@endsubeqnarray\endsubeqnarray
6336 \def\subeqnarray{%
6337 \let\Hy@reserved@a\relax
6338 \H@subeqnarray
6339 \@ifundefined{theHequation}{%
6340 \make@stripped@name{\theequation}%
6341 \let\theHequation\newname
6342 }{}%
6343 \hyper@makecurrent{equation}%
6344 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6345 }%
6346 \def\endsubeqnarray{%
6347 \H@endsubeqnarray
6348 }%
6349 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6350 }

```

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

```

6351 \def\make@stripped@name#1{%
6352 \begingroup
6353 \escapechar\m@ne
6354 \global\let\newname\@empty
6355 \protected@edef\Hy@tempa{#1}%
6356 \edef\@tempb{%
6357 \noexpand\@tfor\noexpand\Hy@tempa:=%
6358 \expandafter\strip@prefix\meaning\Hy@tempa
6359 }%
6360 \@tempb\do{%
6361 \if\Hy@tempa\else
6362 \if\Hy@tempa\else
6363 \xdef\newname{\newname\Hy@tempa}%
6364 \fi
6365 \fi
6366 }%
6367 \endgroup
6368 }

```

Support for amsmath's subequations:

```

6369 \begingroup\expandafter\expandafter\expandafter\endgroup
6370 \expandafter\ifx\csname subequations\endcsname\relax
6371 \else
6372 \let\HyOrg@subequations\subequations
6373 \def\subequations{%
6374 \stepcounter{equation}%
6375 \protected@edef\theHparentequation{%
6376 \@ifundefined{theHequation}\theequation\theHequation
6377 }%
6378 \addtocounter{equation}{-1}%
6379 \HyOrg@subequations

```

```

6380 \def\theHequation{\theHparentequation\alph{equation}}%
6381 \ignorespaces
6382 }%
6383 \fi

```

Support for package amsthm (Daniel Müllner):

```

6384 \ifpackageloaded{amsthm}{%
6385 \def\@thm#1#2#3{%
6386 \ifhmode
6387 \unskip\unskip\par
6388 \fi
6389 \normalfont
6390 \trivlist
6391 \let\thmheadnl\relax
6392 \let\thm@swap\@gobble
6393 \thm@notefont{\fontseries\mddefault\upshape}%
6394 \thm@headpunct{.}% add period after heading
6395 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6396 \thm@space@setup
6397 #1% style overrides
6398 \@topsep \thm@preskip % used by thm head
6399 \@topsepadd \thm@postskip % used by \@endparentv
6400 \def\dth@counter{#2}%
6401 \ifx\@empty\dth@counter
6402 \def\@tempa{%
6403 \oparg{\@begintheorem{#3}{}}{}%
6404 }%
6405 \else
6406 \H@refstepcounter{#2}%
6407 \hyper@makecurrent{#2}%
6408 \let\Hy@dth@currentHref\@currentHref
6409 \def\@tempa{%
6410 \oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
6411 }%
6412 \fi
6413 \@tempa
6414 }%
6415 \dth@everypar={%
6416 \@minipagefalse
6417 \global\@newlistfalse
6418 \@noparitemfalse
6419 \if@inlabel
6420 \global\@inlabelfalse
6421 \begingroup
6422 \setbox\z@\lastbox
6423 \ifvoid\z@
6424 \kern-\itemindent
6425 \fi
6426 \endgroup
6427 \ifx\@empty\dth@counter
6428 \else
6429 \Hy@raisedlink{%
6430 \hyper@anchorstart{%
6431 \ltx@ifundefined{Hy@dth@currentHref}%
6432 \@currentHref\Hy@dth@currentHref
6433 }\hyper@anchorend
6434 }%
6435 \fi

```

```

6436 \unhbox\@labels
6437 \fi
6438 \if@nobreak
6439 \@nobreakfalse \clubpenalty\@M
6440 \else
6441 \clubpenalty\@clubpenalty \everypar{}%
6442 \fi
6443 }%
6444 }{}

```

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.

```

6445 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6446 \ifHy@hyperfootnotes
6447 \newcounter{Hfootnote}%
6448 \let\H@@footnotetext\@footnotetext
6449 \let\H@@footnotemark\@footnotemark
6450 \def\@xfootnotenext[#1]{%
6451 \begingroup
6452 \cename c@\@mpfn\endcename #1\relax
6453 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6454 \endgroup
6455 \ifx\@footnotetext\@mpfootnotetext
6456 \expandafter\H@@mpfootnotetext
6457 \else
6458 \expandafter\H@@footnotetext
6459 \fi
6460 }%
6461 \def\@xfootnotemark[#1]{%
6462 \begingroup
6463 \c@footnote #1\relax
6464 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6465 \endgroup
6466 \H@@footnotemark
6467 }%
6468 \let\H@@mpfootnotetext\@mpfootnotetext
6469 \long\def\@mpfootnotetext#1{%
6470 \H@@mpfootnotetext{%
6471 \ifHy@nesting
6472 \expandafter\hyper@@anchor\expandafter{%
6473 \Hy@footnote@currentHref
6474 }{#1}%
6475 \else
6476 \Hy@raisedlink{%
6477 \expandafter\hyper@@anchor\expandafter{%
6478 \Hy@footnote@currentHref
6479 }{\relax}%
6480 }#1%
6481 \fi
6482 }%
6483 }%

```

```

6484 \long\def\@footnotetext#1{%
6485   \H@@footnotetext{%
6486     \ifHy@nesting
6487       \expandafter\hyper@@anchor\expandafter{%
6488         \Hy@footnote@currentHref
6489       }{#1}%
6490     \else
6491       \Hy@raisedlink{%
6492         \expandafter\hyper@@anchor\expandafter{%
6493           \Hy@footnote@currentHref
6494         }\relax}%
6495     }%
6496     \let\@currentHref\Hy@footnote@currentHref
6497     \let\@currentlabelname\@empty
6498     #1%
6499   \fi
6500 }%
6501 }%

```

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.

```

6502 \def\@footnotemark{%
6503   \leavevmode
6504   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
6505   \stepcounter{Hfootnote}%
6506   \global\let\Hy@saved@currentHref\@currentHref
6507   \hyper@makecurrent{Hfootnote}%
6508   \global\let\Hy@footnote@currentHref\@currentHref
6509   \global\let\@currentHref\Hy@saved@currentHref
6510   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6511   \@makefnmark
6512   \hyper@linkend
6513   \ifhmode\spacefactor\x@sf\fi
6514   \relax
6515 }%

```

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

```

6516 \@ifpackageloaded{longtable}{%
6517   \CheckCommand*\LT@p@ftntext}[1]{%
6518     \edef\@tempa{%
6519       \the\LT@p@ftn
6520       \noexpand\footnotetext[\the\c@footnote]%
6521     }%
6522     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6523   }%
6524   \long\def\LT@p@ftntext#1{%
6525     \edef\@tempa{%
6526       \the\LT@p@ftn
6527       \begingroup
6528       \noexpand\c@footnote=\the\c@footnote\relax
6529       \noexpand\protected@xdef
6530       \noexpand\@thefnmark{\noexpand\thempfn}%
6531       \noexpand\protected@xdef\noexpand\@thefnmark{%

```

```

6532     \noexpand\thempfn
6533   }%
6534   \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6535   \expandafter{%
6536     \Hy@footnote@currentHref
6537   }%
6538 }%
6539 \global\LT@p@ftn\expandafter{%
6540   \@tempa{#1}%
6541   \endgroup
6542 }%
6543 }%
6544 \long\def\Hy@LT@footnotetext#1#2{%
6545   \H@@footnotetext{%
6546     \ifHy@nesting
6547       \hyper@@anchor{#1}{#2}%
6548     \else
6549       \Hy@raisedlink{%
6550         \hyper@@anchor{#1}{\relax}%
6551       }%
6552     \def\@currentHref{#1}%
6553     \let\@currentlabelname\@empty
6554     #2%
6555   \fi
6556 }%
6557 }%
6558 }{}%

```

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

```

6559 \ifpackageloaded{fancyvrb}{%
6560   \def\V@@footnotetext{%
6561     \insert\footins\bgroup
6562     \csname reset@font\endcsname
6563     \footnotesize
6564     \interlinepenalty\interfootnotelinepenalty
6565     \splittopskip\footnotesep
6566     \splitmaxdepth\dp\strutbox
6567     \floatingpenalty \@MM
6568     \hsize\columnwidth
6569     \@parboxrestore
6570     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6571     \@makefnmark{}%
6572     \rule{\z@}{\footnotesep}%
6573     \bgroup
6574     \aftergroup\V@@@footnotetext
6575     \Hy@raisedlink{%
6576       \expandafter\hyper@@anchor\expandafter{%
6577         \Hy@footnote@currentHref
6578       }\relax}%
6579   }%
6580   \let\@currentHref\Hy@footnote@currentHref
6581   \let\@currentlabelname\@empty
6582   \ignorespaces
6583 }%
6584 }{}%

```

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

```

6585 \def\Hy@temp#1{%
6586   \begingroup
6587   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6588   \endgroup
6589   \@footnotemark
6590 }%
6591 \ifx\Hy@temp\footref
6592   \def\footref#1{%
6593     \begingroup
6594     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6595     \endgroup
6596     \H@@@footnotemark
6597   }%
6598 \fi

```

But the special footnotes in `\maketitle` are much too hard to deal with properly. Let them revert to plain behaviour. The koma classes add an optional argument.

```

6599 \let\HyOrg@maketitle\maketitle
6600 \def\maketitle{%
6601   \let\Hy@saved@footnotemark\@footnotemark
6602   \let\Hy@saved@footnotetext\@footnotetext
6603   \let\@footnotemark\H@@@footnotemark
6604   \let\@footnotetext\H@@@footnotetext
6605   \@ifnextchar[\Hy@maketitle@optarg{% ]
6606     \HyOrg@maketitle
6607     \Hy@maketitle@end
6608   }%
6609 }%
6610 \def\Hy@maketitle@optarg[#1]{%
6611   \HyOrg@maketitle[{#1}]%
6612   \Hy@maketitle@end
6613 }%
6614 \def\Hy@maketitle@end{%
6615   \ifx\@footnotemark\H@@@footnotemark
6616     \let\@footnotemark\Hy@saved@footnotemark
6617   \fi
6618   \ifx\@footnotetext\H@@@footnotetext
6619     \let\@footnotetext\Hy@saved@footnotetext
6620   \fi
6621 }%

```

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

```

6622 \def\realfootnote{%
6623   \@ifnextchar[\@xfootnote{%
6624     \stepcounter{\@mpfn}%
6625     \protected@xdef\@thefnmark{\thempfn}%
6626     \H@@@footnotemark\H@@@footnotetext
6627   }%
6628 }%

6629 \fi
6630 \Hy@DisableOption{hyperfootnotes}

6631 \</package>
6632 \<*check>
6633 \checklatex
6634 \checkcommand\def\@xfootnotenext[#1]{%
6635   \begingroup

```

```

6636 \csname c@\@mpfn\endcsname #1\relax
6637 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6638 \endgroup
6639 \@footnotetext
6640 }
6641 \checkcommand\def\@xfootnotemark[#1]{%
6642 \begingroup
6643 \c@footnote #1\relax
6644 \unrestored@protected@xdef\@thefnmark{\thefnmark}%
6645 \endgroup
6646 \@footnotemark
6647 }
6648 \checkcommand\def\@footnotemark{%
6649 \leavevmode
6650 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6651 \@makefnmark
6652 \ifhmode\spacefactor\@x@sf\fi
6653 \relax
6654 }
6655 \end{check}
6656 \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.

```

6657 \def\caption{%
6658 \ifx\@capttype\@undefined
6659 \latex@error{\noexpand\caption outside float}\@ehd
6660 \expandafter\@gobble
6661 \else
6662 \H@refstepcounter\@capttype
6663 \let\Hy@tempa\@caption
6664 \ifundefined{float@caption}{%
6665 }{%
6666 \expandafter\ifx\csname @float@c@\@capttype\endcsname
6667 \float@caption
6668 \let\Hy@tempa\Hy@float@caption
6669 \fi
6670 }%
6671 \expandafter\@firstofone
6672 \fi
6673 {\@dblarg{\Hy@tempa\@capttype}}%
6674 }
6675 \long\def\@caption#1[#2]#3{%
6676 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6677 \csname iftrue\endcsname
6678 \global\let\@currentHref\hc@currentHref
6679 \else
6680 \hyper@makecurrent{\@capttype}%
6681 \fi
6682 \ifundefined{NR@getttitle}{%
6683 \def\@currentlabelname{#2}%
6684 }{%
6685 \NR@getttitle{#2}%
6686 }%

```

```

6687 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6688   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6689 }%
6690 \begingroup
6691   \@parboxrestore
6692   \if@minipage
6693     \setminipage
6694   \fi
6695   \normalsize
6696   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6697     \csname iftrue\endcsname
6698     \global\@capstartfalse
6699     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6700   \else
6701     \makecaption{\csname fnum@#1\endcsname}{%
6702       \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6703   \ifHy@nesting
6704     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6705   \else
6706     \Hy@raisedlink{%
6707       \expandafter\hyper@@anchor\expandafter{%
6708         \@currentHref
6709       }\relax}%
6710     }%
6711     #3%
6712   \fi
6713 }%
6714 \fi
6715 \par
6716 \endgroup
6717 }

```

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.

```

6718 \let\Hy@float@caption\@caption
6719 \ifpackageloaded{float}{%
6720   \def\Hy@float@caption{%
6721     \ifx\Hy@float@currentHref\@undefined
6722       \hyper@makecurrent{\@capttype}%
6723       \global\let\Hy@float@currentHref\@currentHref
6724     \else
6725       \let\@currentHref\Hy@float@currentHref
6726     \fi
6727     \float@caption
6728   }%
6729   \let\HyOrg@float@makebox\float@makebox
6730   \renewcommand{\float@makebox}[1]{%
6731     \HyOrg@float@makebox{%
6732       #1\relax
6733       \ifx\Hy@float@currentHref\@undefined
6734         \else
6735           \expandafter\hyper@@anchor\expandafter{%
6736             \Hy@float@currentHref
6737           }\relax}%
6738       \global\let\Hy@float@currentHref\@undefined
6739     \fi

```

```

6740 }%
6741 }%
6742 {}

6743 </package>
6744 <*check>
6745 \checklatex[1999/06/01 - 2000/06/01]
6746 \checkcommand\def\caption{%
6747   \ifx\@capttype\@undefined
6748     \@latex@error{\noexpand\caption outside float}\@ehd
6749     \expandafter\@gobble
6750   \else
6751     \refstepcounter\@capttype
6752     \expandafter\@firstofone
6753   \fi
6754   {\@dblarg{\@caption\@capttype}}}%
6755 }
6756 \checkcommand\long\def\@caption#1[#2]#3{%
6757   \par
6758   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6759     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
6760   }%
6761   \begingroup
6762     \@parboxrestore
6763     \if@minipage
6764       \@setminipage
6765     \fi
6766     \normalsize
6767     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6768   \endgroup
6769 }
6770 </check>
6771 <*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.

```

6772 \def\hyper@natlinkstart#1{%
6773   \Hy@backout{#1}%
6774   \hyper@linkstart{cite}{cite.#1}%
6775   \def\hyper@nat@current{#1}%
6776 }
6777 \def\hyper@natlinkend{%
6778   \hyper@linkend
6779 }
6780 \def\hyper@natlinkbreak#1#2{%
6781   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6782 }
6783 \def\hyper@natanchorstart#1{%

```

```

6784 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6785 }
6786 \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.

```

6787 \ltx@ifundefined{NAT@parse}{%
6788 \providecommand*\@extra@binfo{}}%
6789 \providecommand*\@extra@b@citeb{}}%
6790 \def\bibcite#1#2{%
6791 \@newl@bel{b}{#1}\@extra@binfo}{%
6792 \hyper@link[cite]{#1}\@extra@b@citeb}{#2}%
6793 }%
6794 }%
6795 \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.”.

```

6796 \let\Hy@bibcite\bibcite
6797 \begingroup
6798 \ifundefined{bbl@cite@choice}{}{%
6799 \g@addto@macro\bbl@cite@choice{%
6800 \let\bibcite\Hy@bibcite
6801 }%
6802 }%
6803 \endgroup

```

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

```

6804 \providecommand*\@BIBLABEL{\@biblabel}%
6805 \def\@lbibitem[#1]#2{%
6806 \@skiphyperreftrue
6807 \H@item[%
6808 \ifx\Hy@raisedlink\@empty
6809 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6810 \@BIBLABEL{#1}%
6811 \hyper@anchorend
6812 \else
6813 \Hy@raisedlink{%
6814 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6815 }%
6816 \@BIBLABEL{#1}%
6817 \fi
6818 \hfill
6819 ]%
6820 \@skiphyperreffalse
6821 \if@filesw
6822 \begingroup
6823 \let\protect\noexpand
6824 \immediate\write\@auxout{%
6825 \string\bibcite{#2}{#1}%
6826 }%
6827 \endgroup
6828 \fi
6829 \ignorespaces
6830 }%

```

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

```

6831 \def\@bibitem#1{%
6832   \@skiphyperreftrue\H@item\@skiphyperreffalse
6833   \Hy@raisedlink{%
6834     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6835   }%
6836   \if@filesw
6837     \begingroup
6838     \let\protect\noexpand
6839     \immediate\write\@auxout{%
6840       \string\bibcite{#1}{\the\value{\@listctr}}}%
6841     }%
6842   \endgroup
6843   \fi
6844   \ignorespaces
6845 }%
6846 }{}

6847 \</package>
6848 \<*check>
6849 \checklatex
6850 \checkcommand\def\@lbibitem[#1]#2{%
6851   \item[\@biblabel{#1}\hfill]%
6852   \if@filesw
6853     {%
6854       \let\protect\noexpand
6855       \immediate\write\@auxout{%
6856         \string\bibcite{#2}{#1}%
6857       }%
6858     }%
6859   \fi
6860   \ignorespaces
6861 }
6862 \checkcommand\def\@bibitem#1{%
6863   \item
6864   \if@filesw
6865     \immediate\write\@auxout{%
6866       \string\bibcite{#1}{\the\value{\@listctr}}}%
6867     }%
6868   \fi
6869   \ignorespaces
6870 }
6871 \</check>
6872 \<*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.

```

6873 \ifclassloaded{revtex}{%
6874   \Hy@Info{*** compatibility with revtex **** }%
6875   \def\revtex@checking#1#2{%
6876     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6877     \expandafter\def\csname b@#1\endcsname{#2}%
6878     \@SetMaxRnhelLabel{#1}%
6879     \expandafter\let\csname b@#1\endcsname\T@temp
6880   }%

```

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

```

6881 \ifundefined{CITE}{\def\CITE{\@cite}}{}%
6882 \providecommand*{\@extra@b@citeb}{}%
6883 \def\CITEX[#1]#2{%
6884   \let\@citea\@empty
6885   \leavevmode
6886   \unskip
6887   $^{}%
6888   \scriptstyle
6889   \@CITE{%
6890     \@for\@citeb:=#2\do{%
6891       \@citea
6892       \def\@citea{,\penalty\@m\ }%
6893       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6894       \if@filesw
6895         \immediate\write\@auxout{\string\citation{\@citeb}}%
6896       \fi
6897       \ifundefined{b@\@citeb\extra@b@citeb}{%
6898         \mbox{\reset@font\bfseries ?}%
6899         \G@refundefinedtrue
6900         \@latex@warning{%
6901           Citation '\@citeb' on page \thepage \space undefined%
6902         }%
6903       }{%
6904         {\csname b@\@citeb\extra@b@citeb\endcsname}%
6905       }%
6906     }%
6907   }{#1}%
6908 }$%
6909 }%

```

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.

```

6910 \def\citex[#1]#2{%
6911   \let\@citea\@empty
6912   \@cite{%
6913     \@for\@citeb:=#2\do{%
6914       \@citea
6915       \def\@citea{,\penalty\@m\ }%
6916       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6917       \if@filesw
6918         \immediate\write\@auxout{\string\citation{\@citeb}}%
6919       \fi
6920       \ifundefined{b@\@citeb\extra@b@citeb}{%
6921         \mbox{\reset@font\bfseries ?}%
6922         \G@refundefinedtrue
6923         \@latex@warning{%
6924           Citation '\@citeb' on page \thepage \space undefined%
6925         }%
6926       }{%
6927         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
6928       }%
6929     }%
6930   }{#1}%
6931 }%
6932 }{}

```

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.

```

6933 \ifpackageloaded{harvard}{%
6934   \Hy@AtBeginDocument{%
6935     \Hy@Info{*** compatibility with harvard **** }%
6936     \Hy@raiselinksfalse
6937     \def\harvardcite#1#2#3#4{%
6938       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{cite.#1}{#2}}%
6939       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{cite.#1}{#3}}%
6940       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{cite.#1}{#4}}%
6941       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6942     }%
6943     \def\HAR@citetoaux#1{%
6944       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6945       \ifHy@backref
6946         \ifx\@empty\@currentlabel
6947           \else
6948             \@bsphack
6949             \if@filesw
6950               \protected@write\@auxout{}{%
6951                 \string\@writefile{brf}{%
6952                   \string\backcite{#1}{%
6953                     {\thepage}{\@currentlabel}{\@currentHref}%
6954                   }%
6955                 }%
6956               }%
6957             \fi
6958             \@esphack
6959           \fi
6960         \fi
6961       }%
6962       \def\harvarditem{%
6963         \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6964       }%
6965       \def\@harvarditem[#1]#2#3#4#5\par{%
6966         \item[]%
6967         \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6968         \if@filesw
6969           \begingroup
6970             \def\protect##1{\string ##1\space}%
6971             \ifthenelse{\equal{#1}{\null}}{%
6972               {\def\next{{#4}{#2}{#3}}}%
6973               {\def\next{{#4}{#2}{#1}{#3}}}%
6974             \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6975           \endgroup
6976         \fi
6977         \protect\hspace*{-\labelwidth}%
6978         \protect\hspace*{-\labelsep}%
6979         \ignorespaces
6980         #5%
6981         \ifHy@backref

```

```

6982     \newblock
6983     \backref{\csname br@#4\endcsname}%
6984     \fi
6985     \par
6986 }%

```

\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:

```

6987 \long\def\HAR@checkcitations#1#2#3#4{%
6988   \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6989   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6990     \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6991     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6992       \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6993       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6994         \else
6995           \@tempswatrue
6996         \fi
6997       \else
6998         \@tempswatrue
6999       \fi
7000     \else
7001       \@tempswatrue
7002     \fi
7003   }%
7004 }%

7005 }{}

```

37.2 Package chicago

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

```

7006 \@ifpackageloaded{chicago}{%

```

\citeN

```

7007 \def\citeN{%
7008   \def\@citeseppen{-1000}%
7009   \def\@cite##1##2{##1}%
7010   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7011   \@citedata@opt
7012 }%

```

\shortciteN

```

7013 \def\shortciteN{%
7014   \def\@citeseppen{-1000}%
7015   \def\@cite##1##2{##1}%
7016   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7017   \@citedata@opt
7018 }%

```

\@citedata@opt

```

7019 \def\@citedata@opt{%
7020   \let\@cite@opt\@empty
7021   \@ifnextchar {%
7022     \@tempswatrue

```

```

7023 \citedatax@opt
7024 }{%
7025 \@tempswafalse
7026 \citedatax[]%
7027 }%
7028 }%

```

\citedatax@opt

```

7029 \def\citedatax@opt[#1]{%
7030 \def\cite@opt{, #1}%
7031 \citedatax[{#1}]%
7032 }%

7033 }{}

```

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.

```

7034 \def\Hy@EveryPageAnchor{%
7035 \Hy@DistillerDestFix
7036 \ifHy@pageanchor
7037 \ifHy@hypertextnames
7038 \ifHy@plainpages
7039 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7040 \else
7041 \begingroup
7042 \let\@number\@firstofone
7043 \Hy@unicodetfalse
7044 \pdfstringdef\@the@H@page{\thepage}%
7045 \endgroup
7046 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7047 \fi
7048 \else
7049 \Hy@GlobalStepCount\Hy@pagecounter
7050 \def\Hy@TempPageAnchor{%
7051 \hyper@@anchor{page.\the\Hy@pagecounter}%
7052 }%
7053 \fi
7054 \vbox to 0pt{%
7055 \kern\voffset
7056 \kern\topmargin
7057 \kern-1bp\relax
7058 \hbox to 0pt{%
7059 \kern\hoffset
7060 \kern\ifodd\value{page}%
7061 \oddsidemargin
7062 \else
7063 \evensidemargin
7064 \fi
7065 \kern-1bp\relax
7066 \Hy@TempPageAnchor

```

```

7067     \hss
7068   }%
7069   \vss
7070 }%
7071 \fi
7072 }
7073 \g@addto@macro\Hy@EveryPageBoxHook{%
7074   \Hy@EveryPageAnchor
7075 }

```

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.

```

7076 \def\addcontentsline#1#2#3{% toc extension, type, tag
7077   \begingroup
7078     \let\label\@gobble
7079     \ifx\@currentHref\@empty
7080       \Hy@Warning{%
7081         No destination for bookmark of \string\addcontentsline,%
7082         \MessageBreak destination is added%
7083       }%
7084     \phantomsection
7085   \fi
7086   \expandafter\ifx\csname toplevel@#2\endcsname\relax
7087     \begingroup
7088       \def\Hy@tempa{#1}%
7089       \ifx\Hy@tempa\Hy@bookmarkstype
7090         \Hy@WarningNoLine{%
7091           bookmark level for unknown #2 defaults to 0%
7092         }%
7093       \else
7094         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7095       \fi
7096     \endgroup
7097     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7098   \fi
7099   \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
7100   \Hy@writebookmark{\csname the#2\endcsname}%
7101     {#3}%
7102     {\@currentHref}%
7103     {\Hy@toplevel}%
7104     {#1}%
7105   \ifHy@verbose
7106     \begingroup
7107       \def\Hy@tempa{#3}%
7108       \@onelevel@sanitize\Hy@tempa
7109       \let\temp@online\on@line
7110       \let\on@line\@empty
7111       \Hy@Info{%
7112         bookmark\temp@online:\MessageBreak
7113         thecounter {\csname the#2\endcsname}\MessageBreak
7114         text {\Hy@tempa}\MessageBreak
7115         reference {\@currentHref}\MessageBreak
7116         toplevel {\Hy@toplevel}\MessageBreak

```

```

7117         type {#1}%
7118     }%
7119     \endgroup
7120 \fi
7121 \addtocontents{#1}{%
7122     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7123 }%
7124 \endgroup
7125 }
7126 \def\contentsline#1#2#3#4{%
7127     \ifx\#4\%
7128         \csname l@#1\endcsname{#2}{#3}%
7129     \else
7130         \ifcase\Hy@linktoc % none
7131             \csname l@#1\endcsname{#2}{#3}%
7132         \or % section
7133             \csname l@#1\endcsname{%
7134                 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7135             }{#3}%
7136         \or % page
7137             \csname l@#1\endcsname{{#2}}{%
7138                 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7139             }%
7140         \else % all
7141             \csname l@#1\endcsname{%
7142                 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7143             }{%
7144                 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7145             }%
7146         \fi
7147     \fi
7148 }

7149 \</package>
7150 \<*check>
7151 \checklatex
7152 \checkcommand\def\addcontentsline#1#2#3{%
7153     \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7154 }
7155 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7156 \</check>
7157 \<*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.

```

7158 \let\H@definecounter\@definecounter
7159 \def\@definecounter#1{%
7160     \H@definecounter{#1}%
7161     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7162 }

```

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.

```

7163 \let\H@newctr\@newctr
7164 \def\@newctr#1[#2]{%

```

```

7165 \H@newctr#1[#2]%
7166 \expandafter\def\csname theH#1\endcsname{%
7167   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
7168 }%
7169 }

```

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.

```

7170 \ifpackageloaded{amsmath}{%
7171   \def\Hy@make@anchor{%
7172     \Hy@MakeCurrentHrefAuto{AMS}%
7173     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7174   }%
7175   \def\Hy@make@df@tag@@#1{%
7176     \gdef\df@tag{%
7177       \maketag@@@{\Hy@make@anchor#1}%
7178       \def\@currentlabel{#1}%
7179     }%
7180   }%
7181   \def\Hy@make@df@tag@@@#1{%
7182     \gdef\df@tag{%
7183       \tagform@{\Hy@make@anchor#1}%
7184       \toks@{\exp{\p@equation{#1}}}%
7185       \edef\@currentlabel{\the\toks@}%
7186     }%
7187   }%
7188   \let\HyOrg@make@df@tag@@\make@df@tag@@
7189   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
7190   \let\make@df@tag@@\Hy@make@df@tag@@
7191   \let\make@df@tag@@@\Hy@make@df@tag@@@
7192 }{}

```

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

```

7193 \ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
7194   \let\H@seteqlabel\@seteqlabel
7195   \def\@seteqlabel#1{%
7196     \H@seteqlabel{#1}%
7197     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7198     \Hy@raisedlink{%
7199       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7200     }%
7201   }%
7202 }{}

```

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.

```

7203 \let\HyOrg@addtoreset\@addtoreset
7204 \def\@addtoreset#1#2{%
7205   \HyOrg@addtoreset{#1}{#2}%
7206   \expandafter\xdef\csname theH#1\endcsname{%
7207     \expandafter\noexpand
7208       \csname the\@ifundefined{theH#2}{H#2}\endcsname
7209     .\noexpand\the\noexpand\value{#1}%
7210   }%
7211 }

```

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

```

7212 </package>
7213 <*check>
7214 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7215 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7216   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7217     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7218       \@addtoreset{#2}{#3}%
7219       \@xp\xdef\csname the#2\endcsname{%
7220         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7221       }%
7222     }%
7223   }%
7224 }%
7225 </check>
7226 <*package>
7227 \@ifpackageloaded{amsmath}{%
7228   \@ifpackagelater{amsmath}{1999/12/14}{%
7229     \renewcommand*{\numberwithin}[3][\arabic]{%
7230       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7231         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7232           \HyOrg@addtoreset{#2}{#3}%
7233           \@xp\xdef\csname the#2\endcsname{%
7234             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7235           }%
7236           \@xp\xdef\csname theH#2\endcsname{%
7237             \@xp\@nx
7238             \csname the\@ifundefined{theH#3}{H#3}\endcsname
7239             .\@nx#1{#2}%
7240           }%
7241         }%
7242       }%
7243     }%
7244   }{%
7245     \Hy@WarningNoLine{%
7246       \string\numberwithin\space of package 'amsmath' %
7247       only fixed\MessageBreak

```

```

7248     for version 2000/06/06 v2.12 or newer%
7249   }%
7250 }%
7251 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7252 \ifHy@figures
7253   \let\Hy@Gin@setfile\Gin@setfile
7254   \def\Gin@setfile#1#2#3{%
7255     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7256   }%
7257 \fi
7258 \Hy@DisableOption{hyperfigures}

```

43 hyperindex entries

Internal command names are prefixed with \HyInd@.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the | feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the | specifier for something like emboldening entries. That would make Makeindex fail (cannot have two | specifiers). The solution is for the author to use generic coding, and put in the requisite \hyperpage in his/her own macros along with the boldness.

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

```

7259 \ifHy@hyperindex
7260   \def\HyInd@ParenLeft{()%
7261   \def\HyInd@ParenRight{)}%
7262   \def\hyperindexformat#1#2{%
7263     \let\HyOrg@hyperpage\hyperpage
7264     \let\hyperpage\@firstofone
7265     #1{\HyOrg@hyperpage{#2}}%
7266     \let\hyperpage\HyOrg@hyperpage
7267   }%
7268   \Hy@nextfalse
7269   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7270   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7271   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7272   \begingroup
7273     \lccode'\|=\expandafter\HyInd@EncapChar\relax
7274     \lccode'\|/\='\\relax
7275   \lowercase{\endgroup
7276   \ifHy@next
7277     \let\HyInd@org@wrindex\@wrindex
7278     \def\@wrindex#1#2{\HyInd@@wrindex{#1}{#2}||}%
7279     \def\HyInd@@wrindex#1#2|#3|#4\\{%
7280       \ifx\\#3\\%
7281         \HyInd@org@wrindex{#1}{#2|hyperpage}%
7282       \else
7283         \HyInd@@@wrindex{#1}{#2}{#3}\\%
7284       \fi
7285     }%

```

```

7286 \def\HyInd@@@wrindex#1#2#3#4\{\%
7287 \def\Hy@temp@A{#3}%
7288 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7289 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7290 \relax
7291 \HyInd@org@wrindex{#1}{\%
7292 #2|hyperindexformat{/#3#4}%
7293 }%
7294 \else
7295 \ifx\#4\%
7296 \ifx\Hy@temp@A\HyInd@ParenRight
7297 \HyInd@org@wrindex{#1}{#2|#3}%
7298 \else
7299 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7300 \fi
7301 \else
7302 \HyInd@org@wrindex{#1}{\%
7303 #2|#3hyperindexformat{/#4}%
7304 }%
7305 \fi
7306 \fi
7307 }%
7308 \else
7309 \def\@wrindex#1{\@@wrindex#1||\}%
7310 \def\@@wrindex#1|#2|#3\{\%
7311 \if@files
7312 \ifx\#2\%
7313 \protected@write\@indexfile{\%
7314 \string\indexentry{#1|hyperpage}{\thepage}%
7315 }%
7316 \else
7317 \HyInd@@@wrindex{#1}#2\%
7318 \fi
7319 \fi
7320 \endgroup
7321 \@esphack
7322 }%
7323 \def\HyInd@@@wrindex#1#2#3\{\%
7324 \def\Hy@temp@A{#2}%
7325 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7326 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7327 \relax
7328 \protected@write\@indexfile{\%
7329 \string\indexentry{
7330 #1|hyperindexformat{/#2#3}%
7331 }{\thepage}%
7332 }%
7333 \else
7334 \ifx\#3\%
7335 \ifx\Hy@temp@A\HyInd@ParenRight
7336 \protected@write\@indexfile{\%
7337 \string\indexentry{#1|#2}{\thepage}%
7338 }%
7339 \else
7340 \protected@write\@indexfile{\%
7341 \string\indexentry{#1|#2hyperpage}{\thepage}%
7342 }%

```

```

7343         \fi
7344     \else
7345         \protected@write\@indexfile{}\{
7346             \string\indexentry{%
7347                 #1|#2hyperindexformat{/#3}%
7348             }\thepage}%
7349     }%
7350     \fi
7351     \fi
7352 }%
7353 \fi
7354 }%
7355 \fi
7356 \Hy@DisableOption{hyperindex}
7357 \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.

```

7358 \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.

```

7359 \def\hyperpage#1{%
7360   \HyInd@hyperpage#1\nohyperpage{}\@nil
7361 }
7362 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7363   \HyInd@@hyperpage{#1}%
7364   #2%
7365   \def\Hy@temp{#3}%
7366   \ifx\Hy@temp\@empty
7367   \else
7368     \Hy@ReturnAfterFi{%
7369       \HyInd@hyperpage#3\@nil
7370     }%
7371   \fi
7372 }
7373 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7374 \def\@hyperpage#1--#2--#3\\\{%
7375   \ifx\#2\\\%
7376     \@commahyperpage{#1}%
7377   \else
7378     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7379   \fi
7380 }
7381 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7382 \def\@commahyperpage#1, #2,#3\\\{%
7383   \ifx\#2\\\%
7384     \HyInd@pagelink{#1}%
7385   \else
7386     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7387   \fi
7388 }

```

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

```

7389 \def\HyInd@pagelink#1{%
7390   \begingroup

```

```

7391 \toks@={}%
7392 \HyInd@removespaces#1 \@nil
7393 \endgroup
7394 }
7395 \def\HyInd@removespaces#1 #2\@nil{%
7396 \toks@=\expandafter{\the\toks@#1}%
7397 \ifx\#2\%
7398 \edef\x{\the\toks@}%
7399 \ifx\x\@empty
7400 \else
7401 \hyperlink{page.\the\toks@}{\the\toks@}%
7402 \fi
7403 \else
7404 \Hy@ReturnAfterFi{%
7405 \HyInd@removespaces#2\@nil
7406 }%
7407 \fi
7408 }

```

44 Compatibility with foiltex

```

7409 \@ifclassloaded{foils}{%
7410 \providecommand*\ext@table{lot}%
7411 \providecommand*\ext@figure{lof}%
7412 }{}

```

45 Compatibility with seminar slide package

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

```

7413 \@ifclassloaded{seminar}{%
7414 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7415 }{%
7416 \Hy@seminarslidesfalse
7417 }
7418 \@ifpackageloaded{slidesec}{%
7419 \newcommand\theHslidesection {\arabic{slidesection}}%
7420 \newcommand\theHslidesubsection{%
7421 \theHslidesection.\arabic{slidesubsection}}%
7422 }%
7423 \def\slide@heading[#1]#2{%
7424 \H@refstepcounter{slidesection}%
7425 \@addtoreset{slidesubsection}{slidesection}%
7426 \addtocontents{los}{%
7427 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7428 {\@SCTR}{slideheading.\theslidesection}}%
7429 }%
7430 \def\Hy@tempa{#2}%
7431 \ifx\Hy@tempa\@empty
7432 \else
7433 {%
7434 \edef\@currentlabel{%
7435 \csname p@slidesection\endcsname\theslidesection
7436 }%
7437 \makeslideheading{#2}%
7438 }%

```

```

7439 \fi
7440 \gdef\theslideheading{#1}%
7441 \gdef\theslidesubheading{}%
7442 \ifHy@bookmarksnumbered
7443   \def\Hy@slidetitle{\theslide\section\space #1}%
7444 \else
7445   \def\Hy@slidetitle{#1}%
7446 \fi
7447 \ifHy@hypertextnames
7448   \ifHy@naturalnames
7449     \hyper@@anchor{slideheading.\theslide\section}{\relax}%
7450     \Hy@writebookmark
7451       {\theslide\section}%
7452       {\Hy@slidetitle}%
7453       {slideheading.\theslide\section}%
7454       {1}%
7455       {toc}%
7456   \else
7457     \hyper@@anchor{slideheading.\theHslide\section}{\relax}%
7458     \Hy@writebookmark
7459       {\theslide\section}%
7460       {\Hy@slidetitle}%
7461       {slideheading.\theHslide\section}%
7462       {1}%
7463       {toc}%
7464   \fi
7465 \else
7466   \Hy@GlobalStepCount\Hy@linkcounter
7467   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7468   \Hy@writebookmark
7469     {\theslide\section}%
7470     {\Hy@slidetitle}%
7471     {slideheading.\the\Hy@linkcounter}%
7472     {1}%
7473     {toc}%
7474 \fi
7475 }%
7476 \def\slide@subheading[#1]#2{%
7477   \H@refstepcounter{slidesubsection}%
7478   \addtocontents{los}{%
7479     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7480     {\@SCTR}{slideheading.\theslidesubsection}%
7481   }%
7482   \def\Hy@tempa{#2}%
7483   \ifx\Hy@tempa\@empty
7484   \else
7485     {%
7486       \edef\@currentlabel{%
7487         \csname p@slidesubsection\endcsname\theslidesubsection
7488       }%
7489       \makeslidesubheading{#2}%
7490     }%
7491   \fi
7492   \gdef\theslidesubheading{#1}%
7493   \ifHy@bookmarksnumbered
7494     \def\Hy@slidetitle{\theslidesubsection\space #1}%
7495   \else

```

```

7496 \def\Hy@slidetitle{#1}%
7497 \fi
7498 \ifHy@hypertextnames
7499 \ifHy@naturalnames
7500 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7501 \Hy@writebookmark
7502 {\theslidesubsection}%
7503 {\Hy@slidetitle}%
7504 {slideheading.\theslidesubsection}%
7505 {2}%
7506 {toc}%
7507 \else
7508 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7509 \Hy@writebookmark
7510 {\theslidesubsection}%
7511 {\Hy@slidetitle}%
7512 {slideheading.\theHslidesubsection}%
7513 {2}%
7514 {toc}%
7515 \fi
7516 \else
7517 \Hy@GlobalStepCount\Hy@linkcounter
7518 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7519 \Hy@writebookmark
7520 {\theslidesubsection}%
7521 {\Hy@slidetitle}%
7522 {slideheading.\the\Hy@linkcounter}%
7523 {1}%
7524 {toc}%
7525 \fi
7526 }%
7527 \providecommand*\listofslides{List of Slides}%
7528 \def\listofslides{%
7529 \section*{%
7530 \listofslides
7531 \@mkboth{%
7532 \expandafter\MakeUppercase\listofslides
7533 }{%
7534 \expandafter\MakeUppercase\listofslides
7535 }%
7536 }%
7537 \def\l@slide##1##2##3##4{%
7538 \slide@undottedcline{%
7539 \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
7540 }{}%
7541 }%
7542 \let\l@subslide\l@slide
7543 \@startlos
7544 }%
7545 \def\slide@contents{%
7546 \def\l@slide##1##2##3##4{%
7547 \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7548 }%
7549 \let\l@subslide\@gobblefour
7550 \@startlos
7551 }%
7552 \def\Slide@contents{%

```

```

7553 \def\l@slide##1##2##3##4{%
7554 \ifcase\lslide@flag
7555 \message{##1 ** \the\c@slidesection}%
7556 \ifnum##1>\c@slidesection
7557 \def\lslide@flag{1}%
7558 {%
7559 \large
7560 \slide@cline{%
7561 \slidenumberline{$\Rightarrow\bullet$}%
7562 {\hyperlink{##4}{##2}}}%
7563 }{##3}%
7564 }%
7565 \else
7566 {%
7567 \large
7568 \slide@cline{%
7569 \slidenumberline{$\surd\;\bullet$}%
7570 {\hyperlink{##4}{##2}}}%
7571 }{##3}%
7572 }%
7573 \fi
7574 \or
7575 \def\lslide@flag{2}%
7576 {%
7577 \large
7578 \slide@cline{%
7579 \slidenumberline{$\bullet$}%
7580 {\hyperlink{##4}{##2}}}%
7581 }{##3}%
7582 }%
7583 \or
7584 {%
7585 \large
7586 \slide@cline{%
7587 \slidenumberline{$\bullet$}%
7588 {\hyperlink{##4}{##2}}}%
7589 }{##3}%
7590 }%
7591 \fi
7592 }%
7593 \def\l@subslide##1##2##3##4{%
7594 \ifnum\lslide@flag=1 %
7595 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7596 \fi
7597 }%
7598 \def\lslide@flag{0}%
7599 \@startlos
7600 }%
7601 }{}

```

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.)

```

7602 \ifHy@texht
7603 \expandafter\endinput
7604 \fi
7605 \let\real@setref\@setref
7606 \def\@setref#1#2#3{% csname, extract group, refname

```

```

7607 \ifx#1\relax
7608 \protect\G@refundefinedtrue
7609 \nfss@text{\reset@font\bfseries ??}%
7610 \@latex@warning{%
7611   Reference '#3' on page \thepage \space undefined%
7612 }%
7613 \else
7614 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7615 \fi
7616 }

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

7617 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7618 \begingroup
7619 \toks0={\hyper@@link{#5}{#4}}%
7620 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7621 \edef\x{\endgroup
7622   \the\toks0 {\the\toks1 }%
7623 }%
7624 \x
7625 }

7626 \def\@pagesetref#1#2#3{% curname, extract macro, ref
7627 \ifx#1\relax
7628 \protect\G@refundefinedtrue
7629 \nfss@text{\reset@font\bfseries ??}%
7630 \@latex@warning{%
7631   Reference '#3' on page \thepage \space undefined%
7632 }%
7633 \else
7634 \protect\hyper@@link
7635   {\expandafter\@fifthoffive#1}%
7636   {page.\expandafter\@secondoffive#1}%
7637   {\expandafter\@secondoffive#1}%
7638 \fi
7639 }

7640 \</package>
7641 \<*check>
7642 \checklatex
7643 \checkcommand\def\@setref#1#2#3{%
7644 \ifx#1\relax
7645 \protect\G@refundefinedtrue
7646 \nfss@text{\reset@font\bfseries ??}%
7647 \@latex@warning{%
7648   Reference '#3' on page \thepage \space undefined%
7649 }%
7650 \else
7651 \expandafter#2#1\null
7652 \fi
7653 }
7654 \</check>
7655 \<*package>

```

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

```

7656 \def\HyRef@StarSetRef#1{%
7657 \begingroup
7658 \Hy@safe@activetrue

```

```

7659 \edef\x{#1}%
7660 \@onelevel@sanitize\x
7661 \edef\x{\endgroup
7662   \noexpand\HyRef@@StarSetRef
7663   \expandafter\noexpand\csname r@\x\endcsname{\x}%
7664 }%
7665 \x
7666 }
7667 \def\HyRef@@StarSetRef#1#2#3{%
7668   \ifx#1\@undefined
7669     \let#1\relax
7670   \fi
7671   \real@setref#1#3{#2}%
7672 }
7673 \def\@refstar#1{%
7674   \HyRef@StarSetRef{#1}\@firstoffive
7675 }
7676 \def\@pagerefstar#1{%
7677   \HyRef@StarSetRef{#1}\@secondoffive
7678 }
7679 \def\@namerefstar#1{%
7680   \HyRef@StarSetRef{#1}\@thirdoffive
7681 }
7682 \Hy@AtBeginDocument{%
7683   \@ifpackageloaded{varioref}{%
7684     \def\@Refstar#1{%
7685       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7686     }%
7687     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7688       \MakeUppercase#1%
7689     }%
7690     \DeclareRobustCommand*\@Ref*{%
7691       \@ifstar\@Refstar\HyRef@Ref
7692     }%
7693     \def\HyRef@Ref#1{%
7694       \hyperref[{#1}]{\Ref*{#1}}%
7695     }%
7696     \def\Vr@f#1{%
7697       \leavevmode\unskip\vref@space
7698       \hyperref[{#1}]{%
7699         \Ref*{#1}%
7700         \let\vref@space\nobreakspace
7701         \@vpageref{\unskip}{#1}%
7702       }%
7703     }%
7704     \def\vr@f#1{%
7705       \leavevmode\unskip\vref@space
7706       \begingroup
7707         \let\T@pageref\@pagerefstar
7708         \hyperref[{#1}]{%
7709           \ref*{#1}%
7710           \vpageref{\unskip}{#1}%
7711         }%
7712       \endgroup
7713     }%
7714   }{}%
7715 }

```

```

7716 \DeclareRobustCommand*\autopageref}{%
7717   \ifstar{%
7718     \HyRef@autopagerefname\pageref*%
7719   }\HyRef@autopageref
7720 }
7721 \def\HyRef@autopageref#1{%
7722   \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
7723 }
7724 \def\HyRef@autopagerefname{%
7725   \ltx@ifundefined{pageautorefname}{%
7726     \ltx@ifundefined{pagename}{%
7727       \Hy@Warning{No autoref name for 'page'}%
7728     }{%
7729       \pagename\nobreakspace
7730     }%
7731   }{%
7732     \pageautorefname\nobreakspace
7733   }%
7734 }
7735 \DeclareRobustCommand*\autoref}{%
7736   \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7737 }
7738 \def\HyRef@autoref#1#2{%
7739   \begingroup
7740     \Hy@safe@activetrue
7741     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7742   \endgroup
7743 }
7744 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7745   \HyRef@ShowKeysRef{#2}%
7746   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7747   \edef\HyRef@thisref{%
7748     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7749   }%
7750   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7751   \Hy@safe@activesfalse
7752   #3{%
7753     \expandafter\@fifthoffive#1\@empty\@empty\@empty
7754   }{%
7755     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7756   }{%
7757     \HyRef@currentHtag
7758     \expandafter\@firstoffive#1\@empty\@empty\@empty
7759     \null
7760   }%
7761   \else
7762     \protect\G@refundefinedtrue
7763     \nfss@text{\reset@font\bfseries ??}%
7764     \@latex@warning{%
7765       Reference '#2' on page \thepage\space undefined%
7766     }%
7767   \fi
7768 }
7769 \def\HyRef@testreftype#1.#2\.{%
7770   \ltx@ifundefined{#1autorefname}{%
7771     \ltx@ifundefined{#1name}{%
7772       \HyRef@StripStar#1\*\@nil{#1}%

```

```

7773 \ltx@ifundefined{\HyRef@name autorefname}{%
7774 \ltx@ifundefined{\HyRef@name name}{%
7775 \def\HyRef@currentHtag{%
7776 \Hy@Warning{No autoref name for '#1'}%
7777 }{%
7778 \edef\HyRef@currentHtag{%
7779 \expandafter\noexpand\csname\HyRef@name name\endcsname
7780 \noexpand~%
7781 }%
7782 }%
7783 }{%
7784 \edef\HyRef@currentHtag{%
7785 \expandafter\noexpand
7786 \csname\HyRef@name autorefname\endcsname
7787 \noexpand~%
7788 }%
7789 }%
7790 }{%
7791 \edef\HyRef@currentHtag{%
7792 \expandafter\noexpand\csname#1name\endcsname
7793 \noexpand~%
7794 }%
7795 }%
7796 }{%
7797 \edef\HyRef@currentHtag{%
7798 \expandafter\noexpand\csname#1autorefname\endcsname
7799 \noexpand~%
7800 }%
7801 }%
7802 }
7803 \def\HyRef@StripStar#1*\#2\@nil#3{%
7804 \def\HyRef@name{#2}%
7805 \ifx\HyRef@name\HyRef@CaseStar
7806 \def\HyRef@name{#1}%
7807 \else
7808 \def\HyRef@name{#3}%
7809 \fi
7810 }
7811 \def\HyRef@CaseStar{*\\}
7812 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7813 \let\HyRef@ShowKeysRef\@gobble
7814 \def\HyRef@ShowKeysInit{%
7815 \begingroup\expandafter\expandafter\expandafter\endgroup
7816 \expandafter\ifx\csname SK@@label\endcsname\relax
7817 \else
7818 \ifx\SK@ref\@empty
7819 \else
7820 \def\HyRef@ShowKeysRef{%
7821 \SK@\SK@@ref
7822 }%
7823 \fi
7824 \fi
7825 }
7826 \@ifpackageloaded{showkeys}{%

```

```

7827 \HyRef@ShowKeysInit
7828 }{%
7829 \Hy@AtBeginDocument{%
7830 \Ifpackageloaded{showkeys}{%
7831 \HyRef@ShowKeysInit
7832 }{}%
7833 }%
7834 }

```

Defaults for the names that `\autoref` uses.

```

7835 \providecommand*\AMSautorefname{\equationautorefname}
7836 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7837 \providecommand*\Itemautorefname{\itemautorefname}
7838 \providecommand*\itemautorefname{item}
7839 \providecommand*\equationautorefname{Equation}
7840 \providecommand*\footnoteautorefname{footnote}
7841 \providecommand*\itemautorefname{item}
7842 \providecommand*\figureautorefname{Figure}
7843 \providecommand*\tableautorefname{Table}
7844 \providecommand*\partautorefname{Part}
7845 \providecommand*\appendixautorefname{Appendix}
7846 \providecommand*\chapterautorefname{chapter}
7847 \providecommand*\sectionautorefname{section}
7848 \providecommand*\subsectionautorefname{subsection}
7849 \providecommand*\subsubsectionautorefname{subsubsection}
7850 \providecommand*\paragraphautorefname{paragraph}
7851 \providecommand*\subparagraphautorefname{subparagraph}
7852 \providecommand*\FancyVerbLineautorefname{line}
7853 \providecommand*\theoremautorefname{Theorem}
7854 \providecommand*\pageautorefname{page}
7855 </package>

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

7856 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7857 \RequirePackage{pdfTeXcmds}[2009/04/10]
7858 \begingroup\expandafter\expandafter\expandafter\endgroup
7859 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7860 \begingroup
7861 \catcode'\|=0 %
7862 \@makeother\|%
7863 |@firstofone{|endgroup
7864 |def|Hy@pstringdef#1#2{%
7865 |begingroup
7866 |edef~{|string~}%
7867 |xdef|Hy@gtemp{#2}%
7868 |endgroup

```

```

7869 |let#1|Hy@gtemp
7870 |@onelevel@sanitize#1%
7871 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7872 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7873 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7874 }%
7875 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7876 #1%
7877 |ifx|\#2|\%%
7878 |else
7879 \\\%
7880 |Hy@ReturnAfterFi{%
7881 |Hy@ExchangeBackslash#2|@nil
7882 }%
7883 |fi
7884 }%
7885 }%
7886 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7887 #1%
7888 \ifx\#2\%%
7889 \else
7890 \@backslashchar{%
7891 \Hy@ReturnAfterFi{%
7892 \Hy@ExchangeLeftParenthesis#2\@nil
7893 }%
7894 \fi
7895 }%
7896 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7897 #1%
7898 \ifx\#2\%%
7899 \else
7900 \@backslashchar{%
7901 \Hy@ReturnAfterFi{%
7902 \Hy@ExchangeRightParenthesis#2\@nil
7903 }%
7904 \fi
7905 }%
7906 \else
7907 \def\Hy@pstringdef#1#2{%
7908 \begingroup
7909 \edef~{\string~}%
7910 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7911 \endgroup
7912 \let#1\Hy@gtemp
7913 }%
7914 \fi
7915 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)

```

46.2 pdfTeX

```

7916 <*pdfTeX>
7917 \providecommand*{\XR@ext}{pdf}
7918 \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`.

- pdfTeX 1.10a, 2003-01-16: \pdfoptionpdfminorversion
- pdfTeX 1.30, 2005-08-08: \pdfminorversion

```

7919 \let\Hy@pdfminorversion\relax
7920 \begingroup\expandafter\expandafter\expandafter\endgroup
7921 \expandafter\ifx\curname pdfminorversion\endcurname\relax
7922 \begingroup\expandafter\expandafter\expandafter\endgroup
7923 \expandafter\ifx\curname pdfoptionpdfminorversion\endcurname\relax
7924 \else
7925   \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7926 \fi
7927 \else
7928   \def\Hy@pdfminorversion{\pdfminorversion}%
7929 \fi
7930 \ifundefined{Hy@pdfminorversion}{%
7931   \PackageInfo{hyperref}{%
7932     PDF version is not set, because pdfTeX is too old (<1.10a)%
7933   }%
7934 }{%
7935   \ifHy@ocgcolorlinks
7936     \ifnum\Hy@pdfminorversion<5 %
7937       \kvsetkeys{Hyp}{pdfversion=1.5}%
7938     \fi
7939   \fi
7940   \ifHy@setpdfversion
7941     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7942     \else
7943       \Hy@pdfminorversion=\Hy@pdfversion\relax
7944     \fi
7945     \PackageInfo{hyperref}{%
7946       \expandafter\string\Hy@pdfminorversion
7947       :=\number\Hy@pdfversion\space
7948     }%
7949   \fi
7950   \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7951 }
7952 \Hy@DisableOption{pdfversion}%

7953 \ifHy@ocgcolorlinks
7954   \immediate\pdfobj{%
7955     <<%
7956       /Type/OCG%
7957       /Name(View)%
7958       /Usage<<%
7959         /Print<<%
7960           /PrintState/OFF%
7961         >>%
7962       /View<<%
7963         /ViewState/ON%
7964       >>%
7965     >>%
7966   }%
7967   \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7968   \immediate\pdfobj{%
7969     <<%
7970       /Type/OCG%
7971       /Name(Print)%

```

```

7973     /Usage<<%
7974     /Print<<%
7975     /PrintState/ON%
7976     >>%
7977     /View<<%
7978     /ViewState/OFF%
7979     >>%
7980     >>%
7981     >>%
7982 }%
7983 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
7984 \immediate\pdfobj{%
7985 [%
7986   \OBJ@OCG@view\space\OBJ@OCG@print
7987 ]%
7988 }%
7989 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
7990 \pdfcatalog{%
7991   /OCProperties<<%
7992   /OCGs \OBJ@OCGs
7993   /D<<%
7994   /OFF[\OBJ@OCG@print]%
7995   /AS[%
7996     <<%
7997     /Event/View%
7998     /OCGs \OBJ@OCGs
7999     /Category[/View]%
8000     >>%
8001     <<%
8002     /Event/Print%
8003     /OCGs \OBJ@OCGs
8004     /Category[/Print]%
8005     >>%
8006     <<%
8007     /Event/Export%
8008     /OCGs \OBJ@OCGs
8009     /Category[/Print]%
8010     >>%
8011   ]%
8012   >>%
8013   >>%
8014 }%
8015 \begingroup
8016 \edef\x{\endgroup
8017   \pdfpageresources{%
8018     /Properties<<%
8019     /OCView \OBJ@OCG@view
8020     /OCPrint \OBJ@OCG@print
8021     >>%
8022   }%
8023 }%
8024 \x
8025 \Hy@AtBeginDocument{%
8026   \def\Hy@colorlink#1{%
8027     \begingroup
8028     \ifHy@ocgcolorlinks
8029       \def\Hy@ocgcolor{#1}%

```

```

8030      \setbox0=\hbox\bgroup\color@begingroup
8031      \else
8032      \HyColor@UseColor#1%
8033      \fi
8034  }%
8035  \def\Hy@endcolorlink{%
8036    \ifHy@ocgcolorlinks
8037    \color@endgroup\egroup
8038    \mbox{%
8039      \pdfliteral page{/OC/OCPrint BDC}%
8040      \rlap{\copy0}%
8041      \pdfliteral page{EMC/OC/OCView BDC}%
8042      \begingroup
8043      \expandafter\HyColor@UseColor\Hy@ocgcolor
8044      \box0 %
8045      \endgroup
8046      \pdfliteral page{EMC}%
8047    }%
8048    \fi
8049    \endgroup
8050  }%
8051 }%
8052 \else
8053 \Hy@DisableOption{ocgcolorlinks}%
8054 \fi

```

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

```

8055 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8056 \ifx\pdfstartlink\@undefined% less than version 14
8057 \let\pdfstartlink\pdfannotlink
8058 \let\pdfinkmargin\@tempdima
8059 \let\pdfxform\pdfform
8060 \let\pdflastxform\pdflastform
8061 \let\pdfrefxform\pdfrefform
8062 \else
8063 \pdfinkmargin1pt %
8064 \fi

```

First set up the default linking

```
8065 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8066 \def\new@pdfink#1{%
8067   \ifhmode
8068     \@savsf\spacefactor
8069   \fi
8070   \Hy@SaveLastskip
8071   \Hy@VerboseAnchor{#1}%
8072   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8073   \Hy@DestName\Hy@pstringDest\@pdfview
8074   \Hy@RestoreLastskip
8075   \ifhmode
8076     \spacefactor\@savsf
8077   \fi
8078 }
8079 \let\pdf@endanchor\@empty

```

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

```

8080 \def\Hy@DestName#1#2{%
8081   \pdfdest name{#1}#2\relax
8082 }

```

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.

```

8083 \providecommand*\@pdfborder{0 0 1}
8084 \providecommand*\@pdfborderstyle{}
8085 \def\Hy@undefinedname{UNDEFINED}
8086 \def\find@pdflink#1#2{%
8087   \leavevmode
8088   \protected@edef\Hy@testname{#2}%
8089   \ifx\Hy@testname\@empty
8090     \Hy@Warning{%
8091       Empty destination name,\MessageBreak
8092       using '\Hy@undefinedname'%
8093     }%
8094     \let\Hy@testname\Hy@undefinedname
8095   \else
8096     \Hy@pstringdef\Hy@testname{%
8097       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8098     }%
8099   \fi
8100   \Hy@StartlinkName{%
8101     \ifHy@pdfa /F 4\fi
8102     \Hy@setpdfborder
8103     \ifx\@pdfhighlight\@empty
8104       \else
8105         /H\@pdfhighlight
8106       \fi
8107       \ifx\CurrentBorderColor\relax
8108       \else
8109         /C[\CurrentBorderColor]%
8110       \fi
8111     }\Hy@testname
8112     \expandafter\Hy@colorlink\csname @#1color\endcsname
8113   }
8114   \def\Hy@StartlinkName#1#2{%
8115     \pdfstartlink attr{#1}goto name{#2}\relax
8116   }
8117   \def\close@pdflink{%
8118     \Hy@endcolorlink
8119     \Hy@VerboseLinkStop
8120   \pdfendlink
8121 }
8122 \def\hyper@anchor#1{%
8123   \new@pdflink{#1}\anchor@spot\pdf@endanchor
8124 }
8125 \def\hyper@anchorstart#1{%
8126   \new@pdflink{#1}%
8127   \Hy@activeanchortrue
8128 }
8129 \def\hyper@anchorend{%
8130   \pdf@endanchor
8131   \Hy@activeanchorfalse

```

```

8132 }
8133 \def\hyper@linkstart#1#2{%
8134   \Hy@VerboseLinkStart{#1}{#2}%
8135   \ltx@ifundefined{@#1bordercolor}{%
8136     \let\CurrentBorderColor\relax
8137   }{%
8138     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8139   }%
8140   \find@pdfink{#1}{#2}%
8141 }
8142 \def\hyper@linkend{\close@pdfink}
8143 \def\hyper@link#1#2#3{%
8144   \Hy@VerboseLinkStart{#1}{#2}%
8145   \ltx@ifundefined{@#1bordercolor}{%
8146     \let\CurrentBorderColor\relax
8147   }{%
8148     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8149   }%
8150   \find@pdfink{#1}{#2}#3%
8151   \close@pdfink
8152 }
8153 \let\CurrentBorderColor\@linkbordercolor
8154 \def\hyper@linkurl#1#2{%
8155   \begingroup
8156     \Hy@pstringdef\Hy@pstringURI{#2}%
8157     \hyper@chars
8158     \leavevmode
8159     \pdfstartlink
8160     attr{%
8161       \Hy@setpdfborder
8162       \ifx\@pdfhighlight\@empty
8163       \else
8164         /H\@pdfhighlight
8165       \fi
8166       \ifx\@urlbordercolor\relax
8167       \else
8168         /C[\@urlbordercolor]%
8169       \fi
8170     }%
8171     user{%
8172       /Subtype/Link%
8173       \ifHy@pdfa /F 4\fi
8174       /A<<%
8175         /Type/Action%
8176         /S/URI%
8177         /URI(\Hy@pstringURI)%
8178       >>%
8179     }%
8180     \relax
8181     \Hy@colorlink\@urlcolor#1%
8182   \close@pdfink
8183 \endgroup
8184 }
8185 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8186   \begingroup
8187     \Hy@pstringdef\Hy@pstringF{#2}%
8188     \Hy@pstringdef\Hy@pstringD{#3}%

```

```

8189 \leavevmode
8190 \pdfstartlink
8191 attr{%
8192   \Hy@setpdfborder
8193   \ifx\@pdfhighlight\@empty
8194   \else
8195     /H\@pdfhighlight
8196   \fi
8197   \ifx\@filebordercolor\relax
8198   \else
8199     /C[\@filebordercolor]%
8200   \fi
8201 }%
8202 user {%
8203   /Subtype/Link%
8204   \ifHy@pdfa /F 4\fi
8205   /A<<%
8206   /F(\Hy@pstringF)%
8207   /S/GoToR%
8208   \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}

```

```

8209   \ifx\#3\%
8210     /D[0 \@pdfstartview]%
8211   \else
8212     /D(\Hy@pstringD)%
8213   \fi
8214   >>%
8215 }%
8216 \relax
8217 \Hy@colorlink\@filecolor#1%
8218 \close@pdflink
8219 \endgroup
8220 }
8221 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
8222 \begingroup
8223   \Hy@pstringdef\Hy@pstringF{#1}%
8224   \Hy@pstringdef\Hy@pstringP{#3}%
8225   \leavevmode
8226   \pdfstartlink
8227   attr{%
8228     \Hy@setpdfborder
8229     \ifx\@pdfhighlight\@empty
8230     \else
8231       /H\@pdfhighlight
8232     \fi
8233     \ifx\@runbordercolor\relax
8234     \else

```

```

8235      /C[\@runbordercolor]%
8236      \fi
8237    }%
8238    user {%
8239      /Subtype/Link%
8240      \ifHy@pdfa /F 4\fi
8241      /A<<%
8242      /F(\Hy@pstringF)%
8243      /S/Launch%
8244      \Hy@SetNewWindow
8245      \ifx\#3\%
8246      \else
8247      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8248      \fi
8249      >>%
8250    }%
8251    \relax
8252    \Hy@colorlink\@runcolor#2%
8253    \close@pdflink
8254  \endgroup
8255 }

```

\@pdfproducer

```

8256 \ifx\@pdfproducer\relax
8257 \begingroup\expandafter\expandafter\expandafter\endgroup
8258 \expandafter\ifx\csname luatexversion\endcsname\relax
8259 \def\@pdfproducer{pdfTeX}%
8260 \ifx\eTeXversion\@undefined
8261 \else
8262 \ifx\eTeXversion\relax
8263 \else
8264 \ifnum\eTeXversion>0 %
8265 \def\@pdfproducer{pdfTeX}%
8266 \fi
8267 \fi
8268 \fi
8269 \ifx\pdfTeXversion\@undefined
8270 \else
8271 \ifnum\pdfTeXversion<100 %
8272 \edef\@pdfproducer{%
8273 \@pdfproducer
8274 \the\pdfTeXversion.\pdfTeXrevision
8275 }%
8276 \else
8277 \ifnum\pdfTeXversion<130 %
8278 \edef\@pdfproducer{%
8279 \@pdfproducer-%
8280 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8281 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8282 \pdfTeXrevision
8283 }%
8284 \else
8285 \ifnum\pdfTeXversion<140 %
8286 \else
8287 \def\@pdfproducer{pdfTeX}%
8288 \fi
8289 \edef\@pdfproducer{%

```

```

8290      \@pdfproducer-%
8291      \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8292      \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8293      \pdfTeXrevision
8294    }%
8295  \fi
8296 \fi
8297 \fi
8298 \else
8299 \begingroup
8300   \count@=\luatexversion
8301   \divide\count@ by 100 %
8302   \edef\x{\the\count@}%
8303   \count@=-\x\relax
8304   \multiply\count@ by 100 %
8305   \advance\count@ by \luatexversion
8306   \edef\x{\endgroup
8307     \def\noexpand\@pdfproducer{%
8308       LuaTeX-\x.\the\count@.\luatexrevision
8309     }%
8310   }%
8311 \x
8312 \fi
8313 \fi

```

\PDF@SetupDox

```

8314 \def\PDF@SetupDoc{%
8315   \ifx\@pdfpagescrop\@empty
8316   \else
8317     \edef\process@me{%
8318       \pdfpagesattr={%
8319         /CropBox[\@pdfpagescrop]%
8320         \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8321         \else
8322           ^^J\the\pdfpagesattr
8323         \fi
8324       }%
8325     }%
8326     \process@me
8327   \fi
8328   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8329   \pdfcatalog{%
8330     /PageMode/\@pdfpagemode
8331     \ifx\@baseurl\@empty
8332     \else
8333       /URI<</Base(\Hy@pstringB)>>%
8334     \fi
8335   }%
8336   \ifx\@pdfstartpage\@empty
8337   \else
8338     \ifx\@pdfstartview\@empty
8339     \else
8340       openaction goto page\@pdfstartpage{\@pdfstartview}%
8341     \fi
8342   \fi
8343   \edef\Hy@temp{%
8344     \ifHy@toolbar\else /HideToolbar true\fi

```

```

8345 \ifHy@menubar\else /HideMenubar true\fi
8346 \ifHy@windowui\else /HideWindowUI true\fi
8347 \ifHy@fitwindow /FitWindow true\fi
8348 \ifHy@centerwindow /CenterWindow true\fi
8349 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8350 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8351 \Hy@UseNameKey{Direction}\@pdfdirection
8352 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8353 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8354 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8355 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8356 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8357 \Hy@UseNameKey{Duplex}\@pdfduplex
8358 \ifx\@pdfpicktraybypdfsize\@empty
8359 \else
8360 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8361 \fi
8362 \ifx\@pdfprintpagerange\@empty
8363 \else
8364 /PrintPageRange[\@pdfprintpagerange]%
8365 \fi
8366 \ifx\@pdfnumcopies\@empty
8367 \else
8368 /NumCopies \@pdfnumcopies
8369 \fi
8370 }%
8371 \pdfcatalog{%
8372 \ifx\Hy@temp\@empty
8373 \else
8374 /ViewerPreferences<<\Hy@temp>>%
8375 \fi
8376 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8377 \ifx\@pdflang\@empty
8378 \else
8379 /Lang(\@pdflang)%
8380 \fi
8381 }%
8382 }

```

\PDF@FinishDoc

```

8383 \def\PDF@FinishDoc{%
8384 \Hy@UseMaketitleInfos
8385 \HyInfo@GenerateAddons
8386 \pdfinfo{%
8387 /Author(\@pdfauthor)%
8388 /Title(\@pdftitle)%
8389 /Subject(\@pdfsubject)%
8390 /Creator(\@pdfcreator)%
8391 \ifx\@pdfcreationdate\@empty
8392 \else
8393 /CreationDate(\@pdfcreationdate)%
8394 \fi
8395 \ifx\@pdfmoddate\@empty
8396 \else
8397 /ModDate(\@pdfmoddate)%
8398 \fi
8399 \ifx\@pdfproducer\relax

```

```

8400 \else
8401   /Producer(\@pdfproducer)%
8402 \fi
8403 /Keywords(\@pdfkeywords)%
8404 \ifx\@pdftrapped\@empty
8405 \else
8406   /Trapped/\@pdftrapped
8407 \fi
8408 \HyInfo@Addons
8409 }%
8410 \Hy@DisableOption{pdfauthor}%
8411 \Hy@DisableOption{pdftitle}%
8412 \Hy@DisableOption{pdfsubject}%
8413 \Hy@DisableOption{pdfcreator}%
8414 \Hy@DisableOption{pdfcreationdate}%
8415 \Hy@DisableOption{pdfmoddate}%
8416 \Hy@DisableOption{pdfproducer}%
8417 \Hy@DisableOption{pdfkeywords}%
8418 \Hy@DisableOption{pdftrapped}%
8419 \Hy@DisableOption{pdfinfo}%
8420 }

```

`\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`.

```

8421 \def\hyper@pagetransition{%
8422   \ifx\@pdfpagetransition\relax
8423   \else
8424     \expandafter\Hy@RemoveTransPageAttr
8425     \the\pdfpageattr^^J/Trans{>>\END
8426     \ifx\@pdfpagetransition\@empty
8427     \else
8428       \edef\@processme{%
8429         \global\pdfpageattr{%
8430           \the\pdfpageattr
8431             ^^J/Trans << /S /\@pdfpagetransition\space >>%
8432         }%
8433       }%
8434       \@processme
8435     \fi
8436   \fi
8437 }

```

`\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.

```

8438 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8439   \ifx\#2\%
8440     \global\pdfpageattr{#1}%
8441   \else
8442     \Hy@RemoveTransPageAttr#1#4\END
8443   \fi
8444 }

```

`\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.

```

8445 \def\hyper@pageduration{%
8446   \ifx\@pdfpageduration\relax
8447   \else
8448     \expandafter
8449     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
8450   \ifx\@pdfpageduration\@empty
8451   \else
8452     \edef\@processme{%
8453       \global\pdfpageattr{%
8454         \the\pdfpageattr
8455         ^^J/Dur \@pdfpageduration\space
8456       }%
8457     }%
8458     \@processme
8459   \fi
8460 \fi
8461 }

```

\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.

```

8462 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8463   \ifx\#2\%
8464     \global\pdfpageattr{#1}%
8465   \else
8466     \Hy@RemoveDurPageAttr#1#4\END
8467   \fi
8468 }

```

\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).

```

8469 \def\hyper@pagehidden{%
8470   \ifHy@useHidKey
8471   \expandafter
8472   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
8473   \ifHy@pdfpagehidden
8474     \edef\@processme{%
8475       \global\pdfpageattr{%
8476         \the\pdfpageattr
8477         ^^J/Hid true % SPACE
8478       }%
8479     }%
8480     \@processme
8481   \fi
8482 \fi
8483 }

```

\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.

```

8484 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8485   \ifx\#2\%

```

```

8486 \global\pdfpageattr{#1}%
8487 \else
8488 \Hy@RemoveHidPageAttr#1#4\END
8489 \fi
8490 }

```

```

8491 \g@addto@macro\Hy@EveryPageHook{%
8492 \hyper@pagetransition
8493 \hyper@pageduration
8494 \hyper@pagehidden
8495 }

```

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

```

8496 </pdfTeX>
8497 <*pdfTeX | xetex>
8498 \Hy@AtBeginDocument{%
8499 \ifHy@setpagesize
8500 \expandafter\@firstofone
8501 \else
8502 \expandafter\@gobble
8503 \fi
8504 {%
8505 \@ifclassloaded{seminar}{%
8506 <*pdfTeX>
8507 \setlength{\pdfhorigin}{1truein}%
8508 \setlength{\pdfvorigin}{1truein}%
8509 </pdfTeX>
8510 \ifportrait
8511 \ifdim\paperwidth=\z@
8512 \else
8513 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8514 \fi
8515 \ifdim\paperheight=\z@
8516 \else
8517 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8518 \fi
8519 \else
8520 \ifdim\paperheight=\z@
8521 \else
8522 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8523 \fi
8524 \ifdim\paperwidth=\z@
8525 \else
8526 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8527 \fi
8528 \fi
8529 }{%
8530 \ltx@ifundefined{stockwidth}{%
8531 \ifdim\paperwidth>\z@
8532 \setlength{\pdfpagewidth}{\paperwidth}%
8533 \fi
8534 \ifdim\paperheight>\z@
8535 \setlength{\pdfpageheight}{\paperheight}%
8536 \fi
8537 }{%
8538 \ifdim\stockwidth>\z@
8539 \setlength{\pdfpagewidth}{\stockwidth}%

```

```

8540     \fi
8541     \ifdim\stockheight>\z@
8542         \setlength{\pdfpageheight}{\stockheight}%
8543     \fi
8544 }%
8545 }%
8546 }%
8547 \Hy@DisableOption{setpagesize}%
8548 }
8549 </pdfTeX | xetex>
8550 <*pdfTeX>
8551 \def\Acrobatmenu#1#2{%
8552     \Hy@Acrobatmenu{#1}{#2}{%
8553         \pdfstartlink
8554         attr{%
8555             \Hy@setpdfborder
8556             \ifx\@pdfhighlight\@empty
8557             \else
8558                 /H\@pdfhighlight
8559             \fi
8560             \ifx\@menubordercolor\relax
8561             \else
8562                 /C[\@menubordercolor]%
8563             \fi
8564         }%
8565         user{%
8566             /Subtype/Link%
8567             \ifHy@pdfa /F 4\fi
8568             /A<<%
8569             /S/Named/N/#1%
8570         >>%
8571     }%
8572     \relax
8573     \Hy@colorlink\@menucolor#2%
8574     \close@pdflink
8575 }%
8576 }

```

46.2.1 Fix for problem with different nesting levels

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

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

```

8577 \def\Hy@FixNotFirstPage{%
8578     \gdef\Hy@FixNotFirstPage{%
8579         \setbox\AtBeginShipoutBox=\hbox{%
8580             \copy\AtBeginShipoutBox
8581         }%
8582     }%
8583 }
8584 \AtBeginShipout{\Hy@FixNotFirstPage}
8585 </pdfTeX>

```

46.3 hypertext

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.

```
8586 (*hypertext)
8587 \providecommand*{\XR@ext}{dvi}
8588 \def\PDF@FinishDoc{}
8589 \def\PDF@SetupDoc{%
8590   \ifx\@baseurl\@empty
8591     \else
8592       \special{html:<base href="\@baseurl">}%
8593     \fi
8594 }
8595 \def\hyper@anchor#1{%
8596   \Hy@SaveLastskip
8597   \Hy@VerboseAnchor{#1}%
8598   \begingroup
8599     \let\protect=\string
8600     \hyper@chars
8601     \special{html:<a name=%
8602       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8603   \endgroup
8604   \Hy@activeanchortrue
8605   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8606   \special{html:</a>}%
8607   \Hy@activeanchorfalse
8608   \Hy@RestoreLastskip
8609 }
8610 \def\hyper@anchorstart#1{%
```

```

8611 \Hy@SaveLastskip
8612 \Hy@VerboseAnchor{#1}%
8613 \begingroup
8614 \hyper@chars
8615 \special{html:<a name=%
8616 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8617 \endgroup
8618 \Hy@activeanchortrue
8619 }
8620 \def\hyper@anchorend{%
8621 \special{html:</a>}%
8622 \Hy@activeanchorfalse
8623 \Hy@RestoreLastskip
8624 }
8625 \def\@urltype{url}
8626 \def\hyper@linkstart#1#2{%
8627 \Hy@VerboseLinkStart{#1}{#2}%
8628 \expandafter\Hy@colorlink\csname @#1color\endcsname
8629 \def\Hy@tempa{#1}%
8630 \ifx\Hy@tempa\@urltype
8631 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8632 \else
8633 \begingroup
8634 \hyper@chars
8635 \special{html:<a href=%
8636 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
8637 \endgroup
8638 \fi
8639 }
8640 \def\hyper@linkend{%
8641 \special{html:</a>}%
8642 \Hy@endcolorlink
8643 }
8644 \def\hyper@linkfile#1#2#3{%
8645 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
8646 }
8647 \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.

```

8648 \leavevmode
8649 \ifHy@raiselinks
8650 \Hy@SaveSpaceFactor
8651 \Hy@SaveSavedSpaceFactor
8652 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
8653 \Hy@RestoreSavedSpaceFactor
8654 \@linkdim\dp\@tempboxa
8655 \lower\@linkdim\hbox{%
8656 \hyper@chars
8657 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8658 }%
8659 \Hy@colorlink\@urlcolor
8660 \Hy@RestoreSpaceFactor
8661 #1%
8662 \Hy@SaveSpaceFactor
8663 \@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).

```

8664 \advance\@linkdim by -6.5\p@
8665 \raise\@linkdim\hbox{\special{html:</a>}}}%
8666 \Hy@endcolorlink
8667 \Hy@RestoreSpaceFactor
8668 \else
8669 \begingroup
8670 \hyper@chars
8671 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8672 \Hy@colorlink\@urlcolor#1%
8673 \special{html:</a>}}}%
8674 \Hy@endcolorlink
8675 \endgroup
8676 \fi
8677 }

```

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

```

8678 \def\hyper@link#1#2#3{%
8679 \Hy@VerboseLinkStart{#1}{#2}%
8680 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}}%
8681 }

8682 \def\hyper@image#1#2{%
8683 \begingroup
8684 \hyper@chars
8685 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8686 \endgroup
8687 }
8688 \</hypertex>
8689 \<*dviwindo>

```

46.4 dviwindo

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

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

```

8690 \providecommand*\XR@ext}{dvi}
8691 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8692 \def\hyper@anchor#1{%
8693 \Hy@SaveLastskip
8694 \Hy@VerboseAnchor{#1}%
8695 \begingroup
8696 \let\protect=\string
8697 \special{mark: #1}%
8698 \endgroup
8699 \Hy@activeanchortrue
8700 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8701 \Hy@activeanchorfalse

```

```

8702 \Hy@RestoreLastskip
8703 }
8704 \def\hyper@anchorstart#1{%
8705 \Hy@SaveLastskip
8706 \Hy@VerboseAnchor{#1}%
8707 \special{mark: #1}%
8708 \Hy@activeanchortrue
8709 }
8710 \def\hyper@anchorend{%
8711 \Hy@activeanchorfalse
8712 \Hy@RestoreLastskip
8713 }
8714 \def\hyper@linkstart#1#2{%
8715 \Hy@VerboseLinkStart{#1}{#2}%
8716 \expandafter\Hy@colorlink\csname @#1color\endcsname
8717 \special{button: %
8718 10000000 %
8719 \number\baselineskip\space
8720 #2%
8721 }%
8722 }
8723 \def\hyper@linkend{%
8724 \Hy@endcolorlink
8725 }
8726 \def\hyper@link#1#2#3{%
8727 \Hy@VerboseLinkStart{#1}{#2}%
8728 \leavevmode
8729 \ifHy@raiselinks
8730 \Hy@SaveSpaceFactor
8731 \Hy@SaveSavedSpaceFactor
8732 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
8733 \Hy@RestoreSavedSpaceFactor
8734 \@linkdim\dp\@tempboxa
8735 \lower\@linkdim\hbox{%
8736 \special{button: %
8737 \number\wd\@tempboxa\space
8738 \number\ht\@tempboxa\space
8739 #2%
8740 }%
8741 \expandafter\Hy@colorlink\csname @#1color\endcsname
8742 \Hy@RestoreSpaceFactor
8743 #3%
8744 \Hy@SaveSpaceFactor
8745 \Hy@endcolorlink
8746 }%
8747 \@linkdim\ht\@tempboxa
8748 \advance\@linkdim by -6.5\p@
8749 \raise\@linkdim\hbox{}%
8750 \Hy@RestoreSpaceFactor
8751 \else
8752 \special{button: %
8753 \number\wd\@tempboxa\space
8754 \number\ht\@tempboxa\space
8755 #2%
8756 }%
8757 \expandafter\Hy@colorlink\csname @#1color\endcsname
8758 #3%

```

```

8759 \Hy@endcolorlink
8760 \fi
8761 }
8762 \def\hyper@linkurl#1#2{%
8763 \begingroup
8764 \hyper@chars
8765 \leavevmode
8766 \ifHy@raiselinks
8767 \Hy@SaveSpaceFactor
8768 \Hy@SaveSavedSpaceFactor
8769 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
8770 \Hy@RestoreSavedSpaceFactor
8771 \@linkdim\dp\@tempboxa
8772 \lower\@linkdim\hbox{%
8773 \special{button: %
8774 \number\wd\@tempboxa\space
8775 \number\ht\@tempboxa\space
8776 launch: \wwwbrowser\space
8777 #2%
8778 }%
8779 \Hy@colorlink\@urlcolor
8780 \Hy@RestoreSpaceFactor
8781 #1%
8782 \Hy@SaveSpaceFactor
8783 \Hy@endcolorlink
8784 }%
8785 \@linkdim\ht\@tempboxa
8786 \advance\@linkdim by -6.5\p@
8787 \raise\@linkdim\hbox{}%
8788 \Hy@RestoreSpaceFactor
8789 \else
8790 \special{button: %
8791 \number\wd\@tempboxa\space
8792 \number\ht\@tempboxa\space
8793 launch: \wwwbrowser\space
8794 #2%
8795 }%
8796 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8797 \fi
8798 \endgroup
8799 }
8800 \def\hyper@linkfile#1#2#3{%
8801 \begingroup
8802 \hyper@chars
8803 \leavevmode
8804 \ifHy@raiselinks
8805 \Hy@SaveSpaceFactor
8806 \Hy@SaveSavedSpaceFactor
8807 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
8808 \Hy@RestoreSavedSpaceFactor
8809 \@linkdim\dp\@tempboxa
8810 \lower\@linkdim\hbox{%
8811 \special{button: %
8812 \number\wd\@tempboxa\space
8813 \number\ht\@tempboxa\space
8814 #3,%
8815 file: #2%

```

```

8816     }%
8817     \Hy@colorlink\@filecolor
8818     \Hy@RestoreSpaceFactor
8819     #1%
8820     \Hy@SaveSpaceFactor
8821     \Hy@endcolorlink
8822 }%
8823 \@linkdim\ht\@tempboxa
8824 \advance\@linkdim by -6.5\p@
8825 \raise\@linkdim\hbox{}%
8826 \Hy@RestoreSpaceFactor
8827 \else
8828 \special{button: %
8829 \number\wd\@tempboxa\space
8830 \number\ht\@tempboxa\space
8831 #3,%
8832 file: #2%
8833 }%
8834 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8835 \fi
8836 \endgroup
8837 }
8838 \ifx\@pdfproducer\relax
8839 \def\@pdfproducer{dviwindo + Distiller}%
8840 \fi
8841 \HyInfo@AddonUnsupportedtrue
8842 \def\PDF@FinishDoc{%
8843 \Hy@UseMaketitleInfos
8844 \HyInfo@TrappedUnsupported
8845 \special{PDF: Keywords \@pdfkeywords}%
8846 \special{PDF: Title \@pdftitle}%
8847 \special{PDF: Creator \@pdfcreator}%
8848 \ifx\@pdfcreationdate\@empty
8849 \else
8850 \special{PDF: CreationDate \@pdfcreationdate}%
8851 \fi
8852 \ifx\@pdfmoddate\@empty
8853 \else
8854 \special{PDF: ModDate \@pdfmoddate}%
8855 \fi
8856 \special{PDF: Author \@pdfauthor}%
8857 \ifx\@pdfproducer\relax
8858 \else
8859 \special{PDF: Producer \@pdfproducer}%
8860 \fi
8861 \special{PDF: Subject \@pdfsubject}%
8862 \Hy@DisableOption{pdfauthor}%
8863 \Hy@DisableOption{pdftitle}%
8864 \Hy@DisableOption{pdfsubject}%
8865 \Hy@DisableOption{pdfcreator}%
8866 \Hy@DisableOption{pdfcreationdate}%
8867 \Hy@DisableOption{pdfmoddate}%
8868 \Hy@DisableOption{pdfproducer}%
8869 \Hy@DisableOption{pdfkeywords}%
8870 \Hy@DisableOption{pdftrapped}%
8871 \Hy@DisableOption{pdfinfo}%
8872 }

```

```

8873 \def\PDF@SetupDoc{%
8874   \ifx\@baseurl\@empty
8875   \else
8876     \special{PDF: Base \@baseurl}%
8877   \fi
8878   \ifx\@pdfpagescrop\@empty\else
8879     \special{PDF: BBox \@pdfpagescrop}%
8880   \fi
8881   \def\Hy@temp{%
8882     \ifx\@pdfstartpage\@empty
8883     \else
8884       \ifx\@pdfstartview\@empty
8885       \else
8886         \edef\Hy@temp{%
8887           ,Page=\@pdfstartpage
8888           ,View=\@pdfstartview
8889         }%
8890       \fi
8891     \fi
8892     \edef\Hy@temp{%
8893       \noexpand\pdfmark{%
8894         pdfmark=/DOCVIEW,%
8895         PageMode=/\@pdfpagemode
8896       }\Hy@temp
8897     }%
8898   }%
8899   \Hy@temp
8900   \ifx\@pdfpagescrop\@empty
8901   \else
8902     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8903   \fi
8904   \edef\Hy@temp{%
8905     \ifHy@toolbar\else /HideToolbar true\fi
8906     \ifHy@menubar\else /HideMenubar true\fi
8907     \ifHy>windowui\else /HideWindowUI true\fi
8908     \ifHy@fitwindow /FitWindow true\fi
8909     \ifHy@centerwindow /CenterWindow true\fi
8910     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8911     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8912     \Hy@UseNameKey{Direction}\@pdfdirection
8913     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8914     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8915     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8916     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8917     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8918     \Hy@UseNameKey{Duplex}\@pdfduplex
8919     \ifx\@pdfpicktraybypdfsize\@empty
8920     \else
8921       /PickTrayByPDFSize \@pdfpicktraybypdfsize
8922     \fi
8923     \ifx\@pdfprintpagerange\@empty
8924     \else
8925       /PrintPageRange[\@pdfprintpagerange]%
8926     \fi
8927     \ifx\@pdfnumcopies\@empty
8928     \else
8929       /NumCopies \@pdfnumcopies

```

```

8930   \fi
8931 }%
8932 \pdfmark{pdfmark=/PUT,%
8933   Raw={%
8934     \string{Catalog\string}<<%
8935     \ifx\Hy@temp\@empty
8936     \else
8937       /ViewerPreferences<<\Hy@temp>>%
8938     \fi
8939     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8940     \ifx\@pdflang\@empty
8941     \else
8942       /Lang(\@pdflang)%
8943     \fi
8944   >>%
8945 }%
8946 }%
8947 }
8948 </dviwindo>
8949 <*dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8950 \providecommand*{\XR@ext}{pdf}
8951 \Hy@setbreaklinks{true}
8952 \newsavebox{\pdfm@box}
8953 \def\@pdfm@mark#1{\special{pdf:#1}}
8954 \def\@pdfm@dest#1{%
8955   \Hy@SaveLastskip
8956   \Hy@VerboseAnchor{#1}%
8957   \begingroup
8958     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8959   \def\x{XYZ}%
8960   \ifx\x\@pdfview
8961     \def\x{XYZ @xpos @ypos null}%
8962   \else
8963     \def\x{FitH}%
8964     \ifx\x\@pdfview
8965       \def\x{FitH @ypos}%
8966     \else
8967       \def\x{FitBH}%
8968       \ifx\x\@pdfview
8969         \def\x{FitBH @ypos}%
8970       \else
8971         \def\x{FitV}%
8972         \ifx\x\@pdfview
8973           \def\x{FitV @xpos}%
8974         \else
8975           \def\x{FitBV}%
8976           \ifx\x\@pdfview
8977             \def\x{FitBV @xpos}%
8978           \else
8979             \def\x{Fit}%
8980             \ifx\x\@pdfview
8981               \let\x\@pdfview
8982             \else

```

```

8983         \def\x{FitB}%
8984         \ifx\x\@pdfview
8985             \let\x\@pdfview
8986         \else
8987             \def\x{FitR}%
8988             \ifx\x\@pdfview
8989                 \Hy@Warning{'pdfview=FitR' is not supported}%
8990                 \def\x{XYZ @xpos @ypos null}%
8991             \else
8992                 \@onelevel@sanitize\@pdfview
8993                 \Hy@Warning{%
8994                     Unknown value '\@pdfview' for pdfview%
8995                 }%
8996                 \def\x{XYZ @xpos @ypos null}%
8997             \fi
8998         \fi
8999     \fi
9000 \fi
9001 \fi
9002 \fi
9003 \fi
9004 \fi
9005 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9006 \endgroup
9007 \Hy@RestoreLastskip
9008 }
9009 \providecommand*\@pdfview{XYZ}
9010 \providecommand*\@pdfborder{0 0 1}
9011 \providecommand*\@pdfborderstyle{}
9012 \def\hyper@anchor#1{%
9013     \@pdfm@dest{#1}%
9014 }
9015 \def\hyper@anchorstart#1{%
9016     \Hy@activeanchortrue
9017     \@pdfm@dest{#1}%
9018 }
9019 \def\hyper@anchorend{%
9020     \Hy@activeanchorfalse
9021 }
9022 \newcounter{Hy@AnnotLevel}
9023 \ifHy@ocgcolorlinks
9024     \def\OBJ@OCG@view{@OCG@view}%
9025     \@pdfm@mark{%
9026         obj \OBJ@OCG@view <<%
9027             /Type/OCG%
9028             /Name(View)%
9029             /Usage<<%
9030             /Print<<%
9031             /PrintState/OFF%
9032             >>%
9033             /View<<%
9034             /ViewState/ON%
9035             >>%
9036             >>%
9037         }%
9038     }%
9039     \@pdfm@mark{close \OBJ@OCG@view}%

```

```

9040 \def\OBJ@OCG@print{@OCG@print}%
9041 \@pdfm@mark{%
9042   obj \OBJ@OCG@print <<%
9043     /Type/OCG%
9044     /Name(Print)%
9045     /Usage<<%
9046     /Print<<%
9047     /PrintState/ON%
9048     >>%
9049     /View<<%
9050     /ViewState/OFF%
9051     >>%
9052     >>%
9053   >>%
9054 }%
9055 \@pdfm@mark{close \OBJ@OCG@print}%
9056 \def\OBJ@OCGs{@OCGs}%
9057 \@pdfm@mark{%
9058   obj \OBJ@OCGs [%
9059     \OBJ@OCG@view\space\OBJ@OCG@print
9060   ]%
9061 }%
9062 \@pdfm@mark{close \OBJ@OCGs}%
9063 \@pdfm@mark{%
9064   put @catalog <<%
9065     /OCProperties<<%
9066     /OCGs \OBJ@OCGs
9067     /D<<%
9068     /OFF[\OBJ@OCG@print]%
9069     /AS[%
9070       <<%
9071         /Event/View%
9072         /OCGs \OBJ@OCGs
9073         /Category[/View]%
9074       >>%
9075       <<%
9076         /Event/Print%
9077         /OCGs \OBJ@OCGs
9078         /Category[/Print]%
9079       >>%
9080       <<%
9081         /Event/Export%
9082         /OCGs \OBJ@OCGs
9083         /Category[/Print]%
9084       >>%
9085     ]%
9086   >>%
9087   >>%
9088   >>%
9089 }%
9090 \AtBeginShipout{%
9091   \setbox\AtBeginShipoutBox=\hbox{%
9092     \copy\AtBeginShipoutBox
9093     \@pdfm@mark{%
9094       put @resources <<%
9095       /Properties<<%
9096       /OCView \OBJ@OCG@view

```

```

9097      /OCPrint \OBJ@OCG@print
9098      >>%
9099      >>%
9100      }%
9101      }%
9102      }%
9103      \Hy@AtBeginDocument{%
9104      \def\Hy@colorlink#1{%
9105      \begingroup
9106      \ifHy@ocgcolorlinks
9107      \def\Hy@ocgcolor{#1}%
9108      \setbox0=\hbox\bgroup\color@begingroup
9109      \else
9110      \HyColor@UseColor#1%
9111      \fi
9112      }%
9113      \def\Hy@endcolorlink{%
9114      \ifHy@ocgcolorlinks
9115      \color@endgroup\egroup
9116      \mbox{%
9117      \@pdfm@mark{content /OC/OCPrint BDC}%
9118      \rlap{\copy0}%
9119      \@pdfm@mark{content EMC/OC/OCView BDC}%
9120      \begingroup
9121      \expandafter\HyColor@UseColor\Hy@ocgcolor
9122      \box0 %
9123      \endgroup
9124      \@pdfm@mark{content EMC}%
9125      }%
9126      \fi
9127      \endgroup
9128      }%
9129      }%
9130      \else
9131      \Hy@DisableOption{ocgcolorlinks}%
9132      \fi
9133      \def\Hy@BeginAnnot#1{%
9134      \stepcounter{Hy@AnnotLevel}%
9135      \ifnum\value{Hy@AnnotLevel}=\@ne
9136      #1%
9137      \fi
9138      }
9139      \def\Hy@endAnnot{%
9140      \ifnum\value{Hy@AnnotLevel}=\@ne
9141      \Hy@endcolorlink
9142      \@pdfm@mark{eann}%
9143      \fi
9144      \addtocounter{Hy@AnnotLevel}\m@ne
9145      }
9146      \def\Hy@undefinedname{UNDEFINED}
9147      \def\hyper@linkstart#1#2{%
9148      \Hy@VerboseLinkStart{#1}{#2}%
9149      \Hy@BeginAnnot{%
9150      \protected@edef\Hy@testname{#2}%
9151      \ifx\Hy@testname\@empty
9152      \Hy@Warning{%
9153      Empty destination name,\MessageBreak

```

```

9154     using '\Hy@undefinedname'%
9155 }%
9156 \let\Hy@testname\Hy@undefinedname
9157 \else
9158 \Hy@pstringdef\Hy@testname{%
9159 \expandafter\HyperDestNameFilter\expandafter{%
9160 \Hy@testname
9161 }%
9162 }%
9163 \fi
9164 \@pdfm@mark{%
9165 bann<<%
9166 /Type/Annot%
9167 /Subtype/Link%
9168 \ifHy@pdfa /F 4\fi
9169 \Hy@setpdfborder
9170 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9171 \else
9172 /C[\csname @#1bordercolor\endcsname]%
9173 \fi
9174 /A<<%
9175 /S/GoTo%
9176 /D(\Hy@testname)%
9177 >>%
9178 >>%
9179 }%
9180 \expandafter\Hy@colorlink\csname @#1color\endcsname
9181 }%
9182 }
9183 \def\hyper@linkend{\Hy@EndAnnot}%
9184 \def\hyper@link#1#2#3{%
9185 \hyper@linkstart{#1}{#2}#3\hyper@linkend
9186 }
9187 \def\hyper@linkfile#1#2#3{%
9188 \leavevmode
9189 \Hy@BeginAnnot{%
9190 \Hy@pstringdef\Hy@pstringF{#2}%
9191 \Hy@pstringdef\Hy@pstringD{#3}%
9192 \@pdfm@mark{%
9193 bann<<%
9194 /Type/Annot%
9195 /Subtype/Link%
9196 \ifHy@pdfa /F 4\fi
9197 \Hy@setpdfborder
9198 \ifx\@filebordercolor\relax
9199 \else
9200 /C[\@filebordercolor]%
9201 \fi
9202 /A<<%
9203 /S/GoToR%
9204 /F(\Hy@pstringF)%
9205 /D\ifx\@#3\@0\@pdfstartview\else(\Hy@pstringD)\fi
9206 \Hy@SetNewWindow
9207 >>%
9208 >>%
9209 }%
9210 \Hy@colorlink\@filecolor

```

```

9211 }%
9212 #1%
9213 \Hy@EndAnnot
9214 }
9215 \def\hyper@linkurl#1#2{%
9216 \leavevmode
9217 \Hy@BeginAnnot{%
9218 \Hy@pstringdef\Hy@pstringURI{#2}%
9219 \@pdfm@mark{%
9220 bann<<%
9221 /Type/Annot%
9222 /Subtype/Link%
9223 \ifHy@pdfa /F 4\fi
9224 \Hy@setpdfborder
9225 \ifx\@urlbordercolor\relax
9226 \else
9227 /C[\@urlbordercolor]%
9228 \fi
9229 /A<<%
9230 /S/URI%
9231 /URI(\Hy@pstringURI)%
9232 >>%
9233 >>%
9234 }%
9235 \Hy@colorlink\@urlcolor
9236 }%
9237 #1%
9238 \Hy@EndAnnot
9239 }
9240 \def\Acrobatmenu#1#2{%
9241 \Hy@Acrobatmenu{#1}{#2}{%
9242 \Hy@BeginAnnot{%
9243 \@pdfm@mark{%
9244 bann<<%
9245 /Type/Annot%
9246 /Subtype/Link%
9247 \ifHy@pdfa /F 4\fi
9248 /A<<%
9249 /S/Named%
9250 /N/#1%
9251 >>%
9252 \Hy@setpdfborder
9253 \ifx\@menubordercolor\relax
9254 \relax
9255 /C[\@menubordercolor]%
9256 \fi
9257 >>%
9258 }%
9259 \Hy@colorlink\@menucolor
9260 }%
9261 #2%
9262 \Hy@EndAnnot
9263 }%
9264 }
9265 \ifx\@pdfproducer\relax
9266 \def\@pdfproducer{dvi}

```

Detect Xe_{TeX}. However, but xdvipdfmx will overwrite it in the final PDF file.

```

9267 \begingroup\expandafter\expandafter\expandafter\endgroup
9268 \expandafter\ifx\csname XeTeXversion\endcsname\relax
9269 \else
9270 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9271 \fi
9272 \fi
9273 \def\PDF@FinishDoc{%
9274 \Hy@UseMaketitleInfos
9275 \HyInfo@GenerateAddons
9276 \@pdfm@mark{%
9277 docinfo<<%
9278 /Title(\@pdftitle)%
9279 /Subject(\@pdfsubject)%
9280 /Creator(\@pdfcreator)%
9281 \ifx\@pdfcreationdate\@empty
9282 \else
9283 /CreationDate(\@pdfcreationdate)%
9284 \fi
9285 \ifx\@pdfmoddate\@empty
9286 \else
9287 /ModDate(\@pdfmoddate)%
9288 \fi
9289 /Author(\@pdfauthor)%
9290 \ifx\@pdfproducer\relax
9291 \else
9292 /Producer(\@pdfproducer)%
9293 \fi
9294 /Keywords(\@pdfkeywords)%
9295 \ifx\@pdftrapped\@empty
9296 \else
9297 /Trapped/\@pdftrapped
9298 \fi
9299 \HyInfo@Addons
9300 >>%
9301 }%
9302 \Hy@DisableOption{pdfauthor}%
9303 \Hy@DisableOption{pdftitle}%
9304 \Hy@DisableOption{pdfsubject}%
9305 \Hy@DisableOption{pdfcreator}%
9306 \Hy@DisableOption{pdfcreationdate}%
9307 \Hy@DisableOption{pdfmoddate}%
9308 \Hy@DisableOption{pdfproducer}%
9309 \Hy@DisableOption{pdfkeywords}%
9310 \Hy@DisableOption{pdftrapped}%
9311 \Hy@DisableOption{pdfinfo}%
9312 }
9313 \def\PDF@SetupDoc{%
9314 \edef\Hy@temp{%
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 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9343 \@pdfm@mark{%
9344   docview<<%
9345     \ifx\@pdfstartpage\@empty
9346     \else
9347       \ifx\@pdfstartview\@empty
9348       \else
9349         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9350       \fi
9351     \fi
9352     \ifx\@baseurl\@empty
9353     \else
9354       /URI<</Base(\Hy@pstringB)>>%
9355     \fi
9356     /PageMode/\@pdfpagemode
9357     \ifx\Hy@temp\@empty
9358     \else
9359       /ViewerPreferences<<\Hy@temp>>%
9360     \fi
9361     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9362     \ifx\@pdflang\@empty
9363     \else
9364       /Lang(\@pdflang)%
9365     \fi
9366   >>%
9367 }%
9368 \ifx\@pdfpagescrop\@empty
9369 \else
9370   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9371 \fi
9372 }
9373 </dvi pdfm | xetex>

```

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

```

9374 <*dvi pdfm>
9375 \AtBeginShipoutFirst{%
9376   \ifHy@setpagesize
9377   \begingroup
9378     \@ifundefined{stockwidth}{%

```

```

9379 \ifdim\paperwidth>\z@
9380 \ifdim\paperheight>\z@
9381 \special{papersize=\the\paperwidth,\the\paperheight}%
9382 \fi
9383 \fi
9384 }{%
9385 \ifdim\stockwidth>\z@
9386 \ifdim\stockheight>\z@
9387 \special{papersize=\the\stockwidth,\the\stockheight}%
9388 \fi
9389 \fi
9390 }%
9391 \endgroup
9392 \fi
9393 \Hy@DisableOption{setpagesize}%
9394 }
9395 </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.

```

9396 <*\texhtml>
9397 \providecommand*{\XR@ext}{htm}
9398 \RequirePackage{vtexhtml}
9399 \newif\if@Localurl
9400 \def\PDF@FinishDoc{}
9401 \def\PDF@SetupDoc{%
9402 \ifx\@baseurl\@empty
9403 \else
9404 \special{!direct <base href="\@baseurl">}%
9405 \fi
9406 }
9407 \def\@urltype{url}
9408 \def\hyper@link#1#2#3{%
9409 \Hy@VerboseLinkStart{#1}{#2}%
9410 \leavevmode
9411 \special{!direct <a href=%
9412 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9413 #3%
9414 \special{!direct </a>}%
9415 }
9416 \def\hyper@linkurl#1#2{%
9417 \begingroup
9418 \hyper@chars
9419 \leavevmode
9420 \MathBSuppress=1\relax
9421 \special{!direct <a href=%
9422 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9423 #1%
9424 \MathBSuppress=0\relax
9425 \special{!direct </a>}%
9426 \endgroup
9427 }
9428 \def\hyper@linkfile#1#2#3{%
9429 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9430 }

```

```

9431 \def\hyper@linkstart#1#2{%
9432   \Hy@VerboseLinkStart{#1}{#2}%
9433   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
9434     \@Localurltrue
9435     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9436   \else
9437     \@Localurlfalse
9438     \begingroup
9439       \hyper@chars
9440       \special{!aref \HyperDestNameFilter{#2}}%
9441     \endgroup
9442   \fi
9443 }
9444 \def\hyper@linkend{%
9445   \if@Localurl
9446     \special{!endaref}%
9447   \else
9448     \special{!direct </a>}%
9449   \fi
9450 }
9451 \def\hyper@anchorstart#1{%
9452   \Hy@SaveLastskip
9453   \Hy@VerboseAnchor{#1}%
9454   \begingroup
9455     \hyper@chars
9456     \special{!aname #1}%
9457     \special{!direct <a name=%
9458       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9459   \endgroup
9460   \Hy@activeanchortrue
9461 }
9462 \def\hyper@anchorend{%
9463   \special{!direct </a>}%
9464   \Hy@activeanchorfalse
9465   \Hy@RestoreLastskip
9466 }
9467 \def\hyper@anchor#1{%
9468   \Hy@SaveLastskip
9469   \Hy@VerboseAnchor{#1}%
9470   \begingroup
9471     \let\protect=\string
9472     \hyper@chars
9473     \leavevmode
9474     \special{!aname #1}%
9475     \special{!direct <a name=%
9476       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9477   \endgroup
9478   \Hy@activeanchortrue
9479   \bgroup\anchor@spot\egroup
9480   \special{!direct </a>}%
9481   \Hy@activeanchorfalse
9482   \Hy@RestoreLastskip
9483 }
9484 \def\@Form[#1]{%
9485   \typeout{Sorry, TeXpider does not yet support FORMs}%
9486 }
9487 \def\@endForm{}

```

```

9488 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9489 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9490 }
9491 \def\@TextField[#1]#2{% parameters, label
9492 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9493 }
9494 \def\@CheckBox[#1]#2{% parameters, label
9495 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9496 }
9497 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
9498 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9499 }
9500 \def\@PushButton[#1]#2{% parameters, label
9501 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9502 }
9503 \def\@Reset[#1]#2{%
9504 \typeout{Sorry, TeXpider does not yet support FORMs}%
9505 }
9506 \def\@Submit[#1]#2{%
9507 \typeout{Sorry, TeXpider does not yet support FORMs}%
9508 }
9509 </vtexhtml>
9510 <*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.

```

9511 \ifx\mediaheight\@undefined
9512 \else
9513 \ifx\mediaheight\relax
9514 \else
9515 \ifHy@setpagesize
9516 \providecommand*\VTeXInitMediaSize{%
9517 \ltx@ifundefined{stockwidth}{%
9518 \ifdim\paperheight>0pt %
9519 \setlength\mediaheight\paperheight
9520 \fi
9521 \ifdim\paperheight>0pt %
9522 \setlength\mediawidth\paperwidth
9523 \fi
9524 }{%
9525 \ifdim\stockheight>0pt %
9526 \setlength\mediaheight\stockheight
9527 \fi
9528 \ifdim\stockwidth>0pt %
9529 \setlength\mediawidth\stockwidth
9530 \fi
9531 }%
9532 }%
9533 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9534 \fi
9535 \Hy@DisableOption{setpagesize}%
9536 \fi
9537 \fi

```

Older versions of VTeX require xyz in lower case.

```

9538 \providecommand*\@pdfview{xyz}
9539 \providecommand*\@pdfborder{0 0 1}

```

```

9540 \providecommand*\@pdfborderstyle{}
9541 \let\CurrentBorderColor\@linkbordercolor
9542 \def\hyper@anchor#1{%
9543   \Hy@SaveLastskip
9544   \Hy@VerboseAnchor{#1}%
9545   \begingroup
9546     \let\protect=\string
9547     \hyper@chars
9548     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9549   \endgroup
9550   \Hy@activeanchortrue
9551   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9552   \Hy@activeanchorfalse
9553   \Hy@RestoreLastskip
9554 }
9555 \def\hyper@anchorstart#1{%
9556   \Hy@SaveLastskip
9557   \Hy@VerboseAnchor{#1}%
9558   \begingroup
9559     \hyper@chars
9560     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9561   \endgroup
9562   \Hy@activeanchortrue
9563 }
9564 \def\hyper@anchorend{%
9565   \Hy@activeanchorfalse
9566   \Hy@RestoreLastskip
9567 }
9568 \def\@urltype{url}
9569 \def\Hy@undefinedname{UNDEFINED}
9570 \def\hyper@linkstart#1#2{%
9571   \Hy@VerboseLinkStart{#1}{#2}%
9572   \Hy@pstringdef\Hy@pstringURI{#2}%
9573   \expandafter\Hy@colorlink\csname @#1color\endcsname
9574   \ltx@ifundefined{@#1bordercolor}{%
9575     \let\CurrentBorderColor\relax
9576   }{%
9577     \edef\CurrentBorderColor{%
9578       \csname @#1bordercolor\endcsname
9579     }%
9580   }%
9581   \def\Hy@tempa{#1}%
9582   \ifx\Hy@tempa\@urltype
9583     \special{!%
9584       aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9585       a=<%
9586         \ifHy@pdfa /F 4\fi
9587         \Hy@setpdfborder
9588         \ifx\CurrentBorderColor\relax
9589           \else
9590             /C [\CurrentBorderColor]%
9591           \fi
9592         >%
9593       }%
9594   \else
9595     \protected@edef\Hy@testname{#2}%
9596     \ifx\Hy@testname\@empty

```

```

9597 \Hy@Warning{%
9598   Empty destination name,\MessageBreak
9599   using '\Hy@undefinedname'%
9600 }%
9601 \let\Hy@testname\Hy@undefinedname
9602 \fi
9603 \special{!%
9604   aref \expandafter\HyperDestNameFilter
9605   \expandafter{\Hy@testname};%
9606   a=<%
9607   \ifHy@pdfa /F 4\fi
9608   \Hy@setpdfborder
9609   \ifx\CurrentBorderColor\relax
9610   \else
9611     /C [\CurrentBorderColor]%
9612   \fi
9613   >%
9614 }%
9615 \fi
9616 }
9617 \def\hyper@linkend{%
9618   \special{!endaref}%
9619   \Hy@endcolorlink
9620 }
9621 \def\hyper@linkfile#1#2#3{%
9622   \leavevmode
9623   \special{!%
9624     aref <%
9625     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi
9626     f=#2>#3;%
9627     a=<%
9628     \ifHy@pdfa /F 4\fi
9629     \Hy@setpdfborder
9630     \ifx\@filebordercolor\relax
9631     \else
9632       /C [\@filebordercolor]%
9633     \fi
9634     >%
9635   }%
9636   \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9637   \special{!endaref}%
9638 }
9639 \def\hyper@linkurl#1#2{%
9640   \begingroup
9641   \Hy@pstringdef\Hy@pstringURI{#2}%
9642   \hyper@chars
9643   \leavevmode
9644   \special{!%
9645     aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9646     a=<%
9647     \ifHy@pdfa /F 4\fi
9648     \Hy@setpdfborder
9649     \ifx\@urlbordercolor\relax
9650     \else
9651       /C [\@urlbordercolor]%
9652     \fi
9653     >%

```

```

9654 }%
9655 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9656 \special{!endaref}%
9657 \endgroup
9658 }
9659 \def\hyper@link#1#2#3{%
9660 \Hy@VerboseLinkStart{#1}{#2}%
9661 \ltx@ifundefined{#1bordercolor}{%
9662 \let\CurrentBorderColor\relax
9663 }{%
9664 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9665 }%
9666 \leavevmode
9667 \protected@edef\Hy@testname{#2}%
9668 \ifx\Hy@testname\@empty
9669 \Hy@Warning{%
9670 Empty destination name,\MessageBreak
9671 using '\Hy@undefinedname'%
9672 }%
9673 \let\Hy@testname\Hy@undefinedname
9674 \fi
9675 \special{!%
9676 aref \expandafter\HyperDestNameFilter
9677 \expandafter{\Hy@testname};%
9678 a=<%
9679 \ifHy@pdfa /F 4\fi
9680 \Hy@setpdfborder
9681 \ifx\CurrentBorderColor\relax
9682 \else
9683 /C [\CurrentBorderColor]%
9684 \fi
9685 >%
9686 }%
9687 \expandafter
9688 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9689 \special{!endaref}%
9690 }
9691 \def\hyper@image#1#2{%
9692 \hyper@linkurl{#2}{#1}%
9693 }
9694 \def\@hyper@launch run:#1\#2#3{%
9695 \Hy@pstringdef\Hy@pstringF{#1}%
9696 \Hy@pstringdef\Hy@pstringP{#3}%
9697 \leavevmode
9698 \special{!aref %
9699 <u=%
9700 /Type/Action%
9701 /S/Launch%
9702 /F(\Hy@pstringF)%
9703 \Hy@SetNewWindow
9704 \ifx\#3\%
9705 \else
9706 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9707 \fi%
9708 >;%
9709 a=<%
9710 \ifHy@pdfa /F 4\fi

```

```

9711 \Hy@setpdfborder
9712 \ifx\@runbordercolor\relax
9713 \else
9714 /C[\@runbordercolor]%
9715 \fi
9716 >%
9717 }%
9718 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9719 \special{!endaref}%
9720 }
9721 \def\Acrobatmenu#1#2{%
9722 \Hy@Acrobatmenu{#1}{#2}{%
9723 \special{!%
9724 aref <u=/S /Named /N /#1>;%
9725 a=<%
9726 \ifHy@pdfa /F 4\fi
9727 \Hy@setpdfborder
9728 \ifx\@menubordercolor\relax
9729 \else
9730 /C[\@menubordercolor]%
9731 \fi
9732 >%
9733 }%
9734 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9735 \special{!endaref}%
9736 }%
9737 }

```

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

The code below makes sense for \TeX 7.02 or later.

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

```

9738 \ifnum\Hy@VTeXversion<702 %
9739 \else
9740 \def\hyper@pagetransition{%
9741 \ifx\@pdfpagetransition\relax
9742 \else
9743 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9744 \else
9745 \hvtex@parse@trans\@pdfpagetransition
9746 \fi
9747 \fi
9748 }%

```

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

Syntax of \TeX $\text{\special{!trans <transition_effect>}}$:

```

<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:

```

9749 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9750 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9751 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9752 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9753 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9754 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9755 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

9756 \def\hvtex@par@dimension{/Dm}%
9757 \def\hvtex@par@direction{/Di}%
9758 \def\hvtex@par@duration{/D}%
9759 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9760 \def\hvtex@gettoken{%
9761   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9762 }%

```

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

```

9763 \def\hvtex@gettoken@#1 #2\@nil{%
9764   \edef\hvtex@token{#1}%
9765   \edef\hvtex@buffer{#2}%
9766 }%
9767 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9768 \let\hvtex@trans@code\@empty
9769 \let\hvtex@param@dimension\@empty
9770 \let\hvtex@param@direction\@empty
9771 \let\hvtex@param@duration\@empty
9772 \let\hvtex@param@motion\@empty
9773 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9774 \hvtex@gettoken
9775 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9776   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9777     \else
9778       \hvtex@gettoken
9779     \fi
9780 \fi
9781 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9782 \hvtex@trans@params
9783 }%

```

Reentrant macro to parse optional parameters.

```

9784 \def\hvtex@trans@params{%
9785   \ifx\hvtex@buffer\@empty
9786   \else
9787     \hvtex@gettoken
9788     \let\hvtex@trans@par\hvtex@token
9789     \ifx\hvtex@buffer\@empty
9790     \else
9791       \hvtex@gettoken
9792       \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

9793       \let\hvtex@param@duration\hvtex@token
9794       \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

9795       \expandafter\edef\expandafter\hvtex@param@motion
9796       \expandafter{\expandafter\@gobble\hvtex@token}%
9797       \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

9798       \expandafter\edef\expandafter\hvtex@param@dimension
9799       \expandafter{\expandafter\@gobble\hvtex@token}%
9800       \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).

```

9801       \let\hvtex@param@direction\hvtex@token
9802       \fi\fi\fi
9803       \fi
9804       \fi
9805       \ifx\hvtex@buffer\@empty
9806       \let\next\hvtex@produce@trans
9807       \else
9808       \let\next\hvtex@trans@params
9809       \fi
9810       \next
9811   }%

```

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

```

9812 \def\hvtex@produce@trans{%
9813   \let\vtex@trans@special\@empty
9814   \if S\hvtex@trans@code
9815     \edef\vtex@trans@special{\hvtex@trans@code
9816       \hvtex@param@dimension\hvtex@param@motion}%
9817   \else\if B\hvtex@trans@code
9818     \edef\vtex@trans@special{%
9819       \hvtex@trans@code\hvtex@param@dimension
9820     }%
9821   \else\if X\hvtex@trans@code
9822     \edef\vtex@trans@special{%
9823       \hvtex@trans@code\hvtex@param@motion
9824     }%
9825   \else\if W\hvtex@trans@code
9826     \edef\vtex@trans@special{%
9827       \hvtex@trans@code\hvtex@param@direction
9828     }%
9829   \else\if D\hvtex@trans@code

```

```

9830 \let\vtex@trans@special\hvtex@trans@code
9831 \else\if R\hvtex@trans@code
9832 \let\vtex@trans@special\hvtex@trans@code
9833 \else\if G\hvtex@trans@code
9834 \edef\vtex@trans@special{%
9835 \hvtex@trans@code\hvtex@param@direction
9836 }%
9837 \fi\fi\fi\fi\fi\fi
9838 \ifx\vtex@trans@special\@empty
9839 \else
9840 \ifx\hvtex@param@duration\@empty
9841 \else
9842 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9843 \multiply\dimen@\@m
9844 \edef\vtex@trans@special{%
9845 \vtex@trans@special,\strip@pt\dimen@
9846 }%
9847 \fi

```

And all the mess is just for this.

```

9848 \special{!trans \vtex@trans@special}%
9849 \fi
9850 }%
9851 \def\hyper@pageduration{%
9852 \ifx\@pdfpageduration\relax
9853 \else
9854 \ifx\@pdfpageduration\@empty
9855 \special{!duration-}%
9856 \else
9857 \special{!duration \@pdfpageduration}%
9858 \fi
9859 \fi
9860 }%
9861 \def\hyper@pagehidden{%
9862 \ifHy@useHidKey
9863 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9864 \fi
9865 }%
9866 \g@addto@macro\Hy@EveryPageBoxHook{%
9867 \hyper@pagetransition
9868 \hyper@pageduration
9869 \hyper@pagehidden
9870 }%
9871 \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

```

9872 \ifx\@pdfproducer\relax

```

```

9873 \def\@pdfproducer{VTeX}%
9874 \ifnum\Hy@VTeXversion>\z@
9875   \count@\VTeXversion
9876   \divide\count@ 100 %
9877   \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9878   \multiply\count@ -100 %
9879   \advance\count@\VTeXversion
9880   \edef\@pdfproducer{%
9881     \@pdfproducer
9882     .\ifnum\count@<10 0\fi\the\count@
9883     \ifx\VTeXOS\@undefined\else
9884       \ifnum\VTeXOS>0 %
9885         \ifnum\VTeXOS<6 %
9886           \space(%
9887             \ifcase\VTeXOS
9888               \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9889             \fi
9890             )%
9891           \fi
9892         \fi
9893       \fi
9894       ,\space
9895       \ifnum\OpMode=\@ne PDF\else PS\fi
9896       \space backend%
9897       \ifx\gexmode\@undefined\else
9898         \ifnum\gexmode>\z@\space with GeX\fi
9899       \fi
9900     }%
9901   \fi
9902 \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).

```

9903 \def\PDF@SetupDoc{%
9904   \ifx\@pdfpagescrop\@empty
9905     \else
9906       \special{!pdfinfo b=<\@pdfpagescrop>}%
9907     \fi
9908   \ifx\@pdfstartpage\@empty
9909     \else
9910       \ifx\@pdfstartview\@empty
9911         \else
9912           \special{!onopen Page\@pdfstartpage}%
9913         \fi
9914       \fi

```

```

9915 \special{!pdfinfo p=</\@pdfpagemode>}%
9916 \ifx\@baseurl\@empty
9917 \else
9918 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9919 \fi
9920 \special{!pdfinfo v=<<<%
9921 \ifHy@toolbar\else /HideToolbar true\fi
9922 \ifHy@menubar\else /HideMenubar true\fi
9923 \ifHy>windowui\else /HideWindowUI true\fi
9924 \ifHy@fitwindow /FitWindow true\fi
9925 \ifHy@centerwindow /CenterWindow true\fi
9926 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9927 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9928 \Hy@UseNameKey{Direction}\@pdfdirection
9929 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9930 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9931 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9932 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9933 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9934 \Hy@UseNameKey{Duplex}\@pdfduplex
9935 \ifx\@pdfpicktraybypdfsize\@empty
9936 \else
9937 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9938 \fi
9939 \ifx\@pdfprintpagerange\@empty
9940 \else
9941 /PrintPageRange[\@pdfprintpagerange]%
9942 \fi
9943 \ifx\@pdfnumcopies\@empty
9944 \else
9945 /NumCopies \@pdfnumcopies
9946 \fi
9947 >>>}%
9948 \ifx\@pdfpagelayout\@empty
9949 \else
9950 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9951 \fi
9952 }%
9953 \HyInfo@AddonUnsupportedtrue
9954 \def\PDF@FinishDoc{%
9955 \Hy@UseMaketitleInfos
9956 \HyInfo@TrappedUnsupported
9957 \special{!pdfinfo a=<\@pdfauthor>}%
9958 \special{!pdfinfo t=<\@pdftitle>}%
9959 \special{!pdfinfo s=<\@pdfsubject>}%
9960 \special{!pdfinfo c=<\@pdfcreator>}%
9961 \ifx\@pdfproducer\relax
9962 \else
9963 \special{!pdfinfo r=<\@pdfproducer>}%
9964 \fi
9965 \special{!pdfinfo k=<\@pdfkeywords>}%
9966 \Hy@DisableOption{pdfauthor}%
9967 \Hy@DisableOption{pdftitle}%
9968 \Hy@DisableOption{pdfsubject}%
9969 \Hy@DisableOption{pdfcreator}%
9970 \Hy@DisableOption{pdfcreationdate}%
9971 \Hy@DisableOption{pdfmoddate}%

```

```

9972 \Hy@DisableOption{pdfproducer}%
9973 \Hy@DisableOption{pdfkeywords}%
9974 \Hy@DisableOption{pdftrapped}%
9975 \Hy@DisableOption{pdfinfo}%
9976 }
9977 </vtex>

```

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.

```

9978 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
9979 <package>\providecommand*{\Hy@DistillerDestFix}{%
9980 <*pdfmark | dviwindo>
9981 \def\Hy@DistillerDestFix{%
9982   \begingroup
9983     \let\x\literalps@out

```

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

```

9984   \ifnum \@ifundefined{OpMode}{0}{%
9985     \@ifundefined{gexmode}{0}{%
9986       \ifnum\gexmode>0 \OpMode\else 0\fi
9987     }>1 %
9988     \def\x##1{%
9989       \immediate\special{!=##1}%
9990     }%
9991   \fi
9992   \x{%
9993     /product where{%
9994       pop %
9995       product(Distiller)search{%
9996         pop pop pop %
9997         version(.)search{%
9998           exch pop exch pop%
9999           (3011)eq{%
10000             gsave %
10001             newpath 0 0 moveto closepath clip%
10002             /Courier findfont 10 scalefont setfont %
10003             72 72 moveto(.)show %
10004             grestore%
10005           }if%
10006         }{pop}ifelse%
10007       }{pop}ifelse%
10008     }if%
10009   }%
10010   \endgroup
10011 }
10012 </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

```
10013 <*pdfmark>
10014 \Hy@breaklinks@unsupported
10015 \def\hyper@anchor#1{%
10016   \Hy@SaveLastskip
10017   \Hy@VerboseAnchor{#1}%
10018   \begingroup
10019     \pdfmark[\anchor@spot]{%
10020       pdfmark=/DEST,%
10021       linktype=anchor,%
10022       View=/\@pdfview \@pdfviewparams,%
10023       DestAnchor={#1}%
10024     }%
10025   \endgroup
10026   \Hy@RestoreLastskip
10027 }
10028 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
10029 \def\hyper@anchorstart#1{%
10030   \Hy@SaveLastskip
10031   \Hy@VerboseAnchor{#1}%
10032   \literalps@out{H.S}%
10033   \Hy@AllowHyphens
10034   \xdef\hyper@currentanchor{#1}%
10035   \Hy@activeanchortrue
10036 }
10037 \def\hyper@anchorend{%
10038   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10039   \pdfmark{%
10040     pdfmark=/DEST,%
10041     linktype=anchor,%
10042     View=/\@pdfview \@pdfviewparams,%
10043     DestAnchor=\hyper@currentanchor,%
10044   }%
10045   \Hy@activeanchorfalse
10046   \Hy@RestoreLastskip
10047 }
10048 \def\hyper@linkstart#1#2{%
10049   \Hy@VerboseLinkStart{#1}{#2}%
10050   \ifHy@breaklinks
10051   \else
10052     \leavevmode
10053     \Hy@SaveSpaceFactor
10054     \hbox\bgroup
```

```

10055 \Hy@RestoreSpaceFactor
10056 \fi
10057 \expandafter\Hy@colorlink\csname @#1color\endcsname
10058 \literalps@out{H.S}%
10059 \Hy@AllowHyphens
10060 \xdef\hyper@currentanchor{#2}%
10061 \gdef\hyper@currentlinktype{#1}%
10062 }
10063 \def\hyper@linkend{%
10064 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10065 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
10066 \let\Hy@tempcolor\relax
10067 }{%
10068 \edef\Hy@tempcolor{%
10069 \csname @\hyper@currentlinktype bordercolor\endcsname
10070 }%
10071 }%
10072 \pdfmark{%
10073 pdfmark=/ANN,%
10074 linktype=link,%
10075 Subtype=/Link,%
10076 PDFAFlags=4,%
10077 Dest=\hyper@currentanchor,%
10078 AcroHighlight=\@pdfhighlight,%
10079 Border=\@pdfborder,%
10080 BorderStyle=\@pdfborderstyle,%
10081 Color=\Hy@tempcolor,%
10082 Raw=H.B%
10083 }%
10084 \Hy@endcolorlink
10085 \ifHy@breaklinks
10086 \else
10087 \Hy@SaveSpaceFactor
10088 \egroup
10089 \Hy@RestoreSpaceFactor
10090 \fi
10091 }

```

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.

```

10092 \begingroup
10093 \catcode'P=12 %
10094 \catcode'T=12 %
10095 \lowercase{\endgroup
10096 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
10097 }
10098 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

10099 \def\hyper@pagetransition{%
10100 \ifx\@pdfpagetransition\relax
10101 \else
10102 \ifx\@pdfpagetransition\@empty
10103 % 1. Does an old entry have to be deleted?
10104 % 2. If 1=yes, how to delete?
10105 \else

```

```

10106 \pdfmark{%
10107 pdfmark=/PUT,%
10108 Raw={%
10109 \string{ThisPage\string}%
10110 <</Trans << /S /\@pdfpagetransition\space >> >>%
10111 }%
10112 }%
10113 \fi
10114 \fi
10115 }

```

\hyper@pageduration

```

10116 \def\hyper@pageduration{%
10117 \ifx\@pdfpageduration\relax
10118 \else
10119 \ifx\@pdfpageduration\@empty
10120 % 1. Does an old entry have to be deleted?
10121 % 2. If 1=yes, how to delete?
10122 \else
10123 \pdfmark{%
10124 pdfmark=/PUT,%
10125 Raw={%
10126 \string{ThisPage\string}%
10127 <</Dur \@pdfpageduration>>%
10128 }%
10129 }%
10130 \fi
10131 \fi
10132 }

```

\hyper@pagehidden

```

10133 \def\hyper@pagehidden{%
10134 \ifHy@useHidKey
10135 \pdfmark{%
10136 pdfmark=/PUT,%
10137 Raw={%
10138 \string{ThisPage\string}%
10139 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10140 }%
10141 }%
10142 \fi
10143 }

10144 \g@addto@macro\Hy@EveryPageBoxHook{%
10145 \hyper@pagetransition
10146 \hyper@pageduration
10147 \hyper@pagehidden
10148 }

10149 \def\hyper@image#1#2{%
10150 \hyper@linkurl{#2}{#1}%
10151 }
10152 \def\Hy@undefinedname{UNDEFINED}
10153 \def\hyper@link#1#2#3{%
10154 \Hy@VerboseLinkStart{#1}{#2}%
10155 \ltx@ifundefined{@#1bordercolor}{%
10156 \let\Hy@tempcolor\relax
10157 }{%

```

```

10158 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10159 }%
10160 \begingroup
10161 \protected@edef\Hy@testname{#2}%
10162 \ifx\Hy@testname\@empty
10163 \Hy@Warning{%
10164     Empty destination name,\MessageBreak
10165     using '\Hy@undefinedname'%
10166 }%
10167 \let\Hy@testname\Hy@undefinedname
10168 \fi
10169 \pdfmark[{#3}]{%
10170     Color=\Hy@tempcolor,%
10171     linktype={#1},%
10172     AcroHighlight=\@pdfhighlight,%
10173     Border=\@pdfborder,%
10174     BorderStyle=\@pdfborderstyle,%
10175     pdfmark=/ANN,%
10176     Subtype=/Link,%
10177     PDFAFlags=4,%
10178     Dest=\Hy@testname
10179 }%
10180 \endgroup
10181 }
10182 \newtoks\pdf@docset
10183 \def\PDF@FinishDoc{%
10184 \Hy@UseMaketitleInfos
10185 \Hy@Info@GenerateAddons
10186 \let\Hy@temp\@empty
10187 \ifx\@pdfcreationdate\@empty
10188 \else
10189 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10190 \fi
10191 \ifx\@pdfmoddate\@empty
10192 \else
10193 \expandafter\def\expandafter\Hy@temp\expandafter{%
10194 \Hy@temp
10195     ModDate=\@pdfmoddate,%
10196 }%
10197 \fi
10198 \ifx\@pdfproducer\relax
10199 \else
10200 \expandafter\def\expandafter\Hy@temp\expandafter{%
10201 \Hy@temp
10202     Producer=\@pdfproducer,%
10203 }%
10204 \fi
10205 \expandafter
10206 \pdfmark\expandafter{%
10207 \Hy@temp
10208 pdfmark=/DOCINFO,%
10209 Title=\@pdftitle,%
10210 Subject=\@pdfsubject,%
10211 Creator=\@pdfcreator,%
10212 Author=\@pdfauthor,%
10213 Keywords=\@pdfkeywords,%
10214 Trapped=\@pdftrapped

```

```

10215 }%
10216 \ifx\HyInfo@Addons\@empty
10217 \else
10218 \pdfmark{%
10219 pdfmark=/DOCINFO,%
10220 Raw={\HyInfo@Addons}%
10221 }%
10222 \fi
10223 \Hy@DisableOption{pdfauthor}%
10224 \Hy@DisableOption{pdftitle}%
10225 \Hy@DisableOption{pdfsubject}%
10226 \Hy@DisableOption{pdfcreator}%
10227 \Hy@DisableOption{pdfcreationdate}%
10228 \Hy@DisableOption{pdfmoddate}%
10229 \Hy@DisableOption{pdfproducer}%
10230 \Hy@DisableOption{pdfkeywords}%
10231 \Hy@DisableOption{pdftrapped}%
10232 \Hy@DisableOption{pdfinfo}%
10233 }
10234 \def\PDF@SetupDoc{%
10235 \def\Hy@temp{}%
10236 \ifx\@pdfstartpage\@empty
10237 \else
10238 \ifx\@pdfstartview\@empty
10239 \else
10240 \edef\Hy@temp{%
10241 ,Page=\@pdfstartpage
10242 ,View=\@pdfstartview
10243 }%
10244 \fi
10245 \fi
10246 \edef\Hy@temp{%
10247 \noexpand\pdfmark{%
10248 pdfmark=/DOCVIEW,%
10249 PageMode=/\@pdfpagemode
10250 \Hy@temp
10251 }%
10252 }%
10253 \Hy@temp
10254 \ifx\@pdfpagescrop\@empty
10255 \else
10256 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10257 \fi
10258 \edef\Hy@temp{%
10259 \ifHy@toolbar\else /HideToolbar true\fi
10260 \ifHy@menubar\else /HideMenubar true\fi
10261 \ifHy>windowui\else /HideWindowUI true\fi
10262 \ifHy@fitwindow /FitWindow true\fi
10263 \ifHy@centerwindow /CenterWindow true\fi
10264 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10265 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10266 \Hy@UseNameKey{Direction}\@pdfdirection
10267 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10268 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10269 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10270 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10271 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling

```

```

10272 \Hy@UseNameKey{Duplex}\@pdfduplex
10273 \ifx\@pdfpicktraybypdfsize\@empty
10274 \else
10275   /PickTrayByPDFSize \@pdfpicktraybypdfsize
10276 \fi
10277 \ifx\@pdfprintpagerange\@empty
10278 \else
10279   /PrintPageRange[\@pdfprintpagerange]%
10280 \fi
10281 \ifx\@pdfnumcopies\@empty
10282 \else
10283   /NumCopies \@pdfnumcopies
10284 \fi
10285 }%
10286 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10287 \pdfmark{%
10288   pdfmark=/PUT,%
10289   Raw={%
10290     \string{Catalog\string}<<%
10291     \ifx\Hy@temp\@empty
10292     \else
10293       /ViewerPreferences<<\Hy@temp>>%
10294     \fi
10295     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10296     \ifx\@pdflang\@empty
10297     \else
10298       /Lang(\@pdflang)%
10299     \fi
10300     \ifx\@baseurl\@empty
10301     \else
10302       /URI<</Base(\Hy@pstringB)>>%
10303     \fi
10304     >>%
10305   }%
10306 }%
10307 }
10308 </pdfmark>
10309 <*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.

```

10310 \newif\ifHy@pdfmarkerror
10311 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
10312 \def\pdfmark@[#1]#2{%
10313   \Hy@pdfmarkerrorfalse
10314   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10315   \@processme
10316   \let\pdf@type\relax
10317   \kvsetkeys{PDF}{#2}%
10318   \ifHy@pdfmarkerror
10319   \else
10320     \ifx\pdf@type\relax
10321       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10322     \ifx\#1\%

```

```

10323 \else
10324 \pdf@rect{#1}%
10325 \fi
10326 \else
10327 \ifx\#1\%
10328 \literalps@out{%
10329 [\the\pdf@toks\space\pdf@type\space pdfmark%
10330 }%
10331 \else
10332 \ltx@ifundefined{@\pdf@linktype color}{%
10333 \Hy@colorlink\@linkcolor
10334 }{%
10335 \expandafter\Hy@colorlink
10336 \csname @\pdf@linktype color\endcsname
10337 }%
10338 \pdf@rect{#1}%
10339 \literalps@out{%
10340 [\the\pdf@toks\space\pdf@type\space pdfmark%
10341 }%
10342 \Hy@endcolorlink
10343 \fi
10344 \fi
10345 \fi
10346 }

```

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}

```

```

10347 \newsavebox{\pdf@box}
10348 \providecommand*{\Hy@setouterhbox}{\sbox}
10349 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10350 \def\Hy@DEST{/DEST}
10351 \def\pdf@rect#1{%
10352 \begingroup
10353 \chardef\x=1 %
10354 \def\Hy@temp{#1}%
10355 \ifx\Hy@temp\ltx@empty
10356 \chardef\x=0 %
10357 \else
10358 \def\y{\anchor@spot}%
10359 \ifx\Hy@temp\y
10360 \def\y{\relax}%
10361 \ifx\anchor@spot\y
10362 \chardef\x=0 %
10363 \fi
10364 \fi
10365 \fi
10366 \expandafter\endgroup
10367 \ifcase\x
10368 \literalps@out{H.S}%

```

```

10369 \literalps@out{H.R}%
10370 \else
10371 \leavevmode
10372 \Hy@SaveSpaceFactor
10373 \ifHy@breaklinks
10374 \Hy@setouterhbox\pdf@box{%
10375 \Hy@RestoreSpaceFactor
10376 \Hy@AllowHyphens#1%
10377 \Hy@SaveSpaceFactor
10378 }%
10379 \else
10380 \sbox\pdf@box{%
10381 \Hy@RestoreSpaceFactor
10382 #1%
10383 \Hy@SaveSpaceFactor
10384 }%
10385 \fi
10386 \dimen@ \ht\pdf@box
10387 \ifdim\dp\pdf@box=\z@
10388 \literalps@out{H.S}%
10389 \else
10390 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10391 \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...).

```

10392 \ifHy@breaklinks
10393 \expandafter\Hy@breaklinksunhbox
10394 \else
10395 \expandafter\box
10396 \fi
10397 \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

10398 \ifdim\dimen@=\z@
10399 \literalps@out{H.R}%
10400 \else
10401 \raise\dimen@\hbox{\literalps@out{H.R}}%
10402 \fi
10403 \Hy@RestoreSpaceFactor
10404 \fi
10405 \ifx\pdf@type\Hy@DEST
10406 \else
10407 \pdf@addtoksx{H.B}%
10408 \fi
10409 }

```

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.

```

10410 \newtoks\pdf@toks
10411 \newtoks\pdf@defaulttoks
10412 \pdf@defaulttoks={}%
10413 \def\pdf@addtoks#1#2{%
10414 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%

```

```

10415 \@processme
10416 }
10417 \def\pdf@addtoksx#1{%
10418 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10419 \@processme
10420 }
10421 \def\PDFdefaults#1{%
10422 \pdf@defaulttoks={#1}%
10423 }

```

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

```

10424 % what is the type of pdfmark?
10425 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10426 % what is the link type?
10427 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10428 \def\pdf@linktype{link}
10429 % parameter is a stream of PDF
10430 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10431 % parameter is a name
10432 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10433 % parameter is a array
10434 \define@key{PDF}{Border}{%
10435 \edef\Hy@temp{#1}%
10436 \ifx\Hy@temp\@empty
10437 \else
10438 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10439 \fi
10440 }
10441 \let\Hy@BorderArrayPatch\@empty
10442 % parameter is a dictionary
10443 \define@key{PDF}{BorderStyle}{%
10444 \edef\Hy@temp{#1}%
10445 \ifx\Hy@temp\@empty
10446 \else
10447 \pdf@addtoks{<<#1>>}{BS}%
10448 \fi
10449 }
10450 % parameter is a array
10451 \define@key{PDF}{Color}{%
10452 \ifx\relax#1\relax
10453 \else
10454 \pdf@addtoks{[#1]}{Color}% hash-ok
10455 \fi
10456 }
10457 % parameter is a string
10458 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10459 % parameter is a integer
10460 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10461 % parameter is a array
10462 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10463 % parameter is a string
10464 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10465 % parameter is a string or file
10466 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10467 % parameter is a destination
10468 \define@key{PDF}{Dest}{%
10469 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10470 \ifx\Hy@pstringDest\@empty

```

```

10471 \Hy@pdfmarkerrortrue
10472 \Hy@Warning{Destination with empty name ignored}%
10473 \else
10474 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10475 \fi
10476 }
10477 \define@key{PDF}{DestAnchor}{%
10478 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10479 \ifx\Hy@pstringDest\@empty
10480 \Hy@pdfmarkerrortrue
10481 \Hy@Warning{Destination with empty name ignored}%
10482 \else
10483 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10484 \fi
10485 }
10486 % parameter is a string
10487 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10488 % parameter is a string
10489 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10490 % parameter is a int
10491 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10492 \define@key{PDF}{PDFAFlags}{%
10493 \ifHy@pdfa
10494 \pdf@addtoks{#1}{F}%
10495 \fi
10496 }
10497 % parameter is a name
10498 \define@key{PDF}{AcroHighlight}{%
10499 \begingroup
10500 \edef\x{#1}%
10501 \expandafter\endgroup\ifx\x\@empty
10502 \else
10503 \pdf@addtoks{#1}{H}%
10504 \fi
10505 }
10506 % parameter is a string
10507 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10508 % parameter is a string
10509 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10510 % parameter is a string
10511 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10512 % parameter is a string
10513 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10514 % parameter is a Boolean
10515 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10516 % parameter is a integer or name
10517 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10518 % parameter is a name
10519 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10520 % parameter is a string
10521 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10522 % parameter is a array
10523 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10524 % parameter is a integer
10525 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10526 % parameter is a name
10527 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}

```

```

10528 % parameter is a string
10529 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10530 % parameter is a string
10531 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10532 % parameter is a string
10533 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10534 % parameter is an array
10535 \define@key{PDF}{View}{\pdf@addtoks{(#1)}{View}}% hash-ok
10536 % parameter is a string
10537 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10538 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10539 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10540 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10541 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10542 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10543 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10544 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10545 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10546 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10547 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
10548 \define@key{PDF}{Trapped}{%
10549   \edef\Hy@temp{#1}%
10550   \ifx\Hy@temp\empty
10551     \else
10552       \pdf@addtoks{/#1}{Trapped}%
10553     \fi
10554 }
10555
10556 </pdfmarkbase>
10557 <*pdfmark>
10558 \def\Acrobatmenu#1#2{%
10559   \Hy@Acrobatmenu{#1}{#2}{%
10560     \pdfmark[{#2}]{%
10561       linktype=menu,%
10562       pdfmark=/ANN,%
10563       AcroHighlight=\@pdfhighlight,%
10564       Border=\@pdfborder,%
10565       BorderStyle=\@pdfborderstyle,%
10566       Action={<< /Subtype /Named /N /#1 >>},%
10567       Subtype=/Link,%
10568       PDFAFlags=4%
10569     }%
10570   }%
10571 }

```

And now for some useful examples:

```

10572 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10573 \def\PDFNextPage@[#1]#2{%
10574   \pdfmark[{#2}]{%
10575     #1,%
10576     Border=\@pdfborder,%
10577     BorderStyle=\@pdfborderstyle,%
10578     Color=.2 .1 .5,%
10579     pdfmark=/ANN,%
10580     Subtype=/Link,%
10581     PDFAFlags=4,%

```

```

10582   Page=/Next%
10583 }%
10584 }
10585 \def\PDFPreviousPage{%
10586   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10587 }
10588 \def\PDFPreviousPage@[#1]#2{%
10589   \pdfmark[#{#2}]{%
10590     #1,%
10591     Border=\@pdfborder,%
10592     BorderStyle=\@pdfborderstyle,%
10593     Color=.4 .4 .1,%
10594     pdfmark=/ANN,%
10595     Subtype=/Link,%
10596     PDFAFlags=4,%
10597     Page=/Prev%
10598   }%
10599 }
10600 \def\PDFOpen#1{%
10601   \pdfmark{#1,pdfmark=/DOCVIEW}%
10602 }

```

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

```

10603 \def\hyper@linkurl#1#2{%
10604   \begingroup
10605     \Hy@pstringdef\Hy@pstringURI{#2}%
10606     \hyper@chars
10607     \leavevmode
10608     \pdfmark[#{#1}]{%
10609       pdfmark=/ANN,%
10610       linktype=url,%
10611       AcroHighlight=\@pdfhighlight,%
10612       Border=\@pdfborder,%
10613       BorderStyle=\@pdfborderstyle,%
10614       Color=\@urlbordercolor,%
10615       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10616       Subtype=/Link,%
10617       PDFAFlags=4%
10618     }%
10619   \endgroup
10620 }
10621 \def\hyper@linkfile#1#2#3{%
10622   \begingroup
10623     \Hy@pstringdef\Hy@pstringF{#2}%
10624     \Hy@pstringdef\Hy@pstringD{#3}%
10625     \leavevmode
10626     \pdfmark[#{#1}]{%
10627       pdfmark=/ANN,%
10628       Subtype=/Link,%
10629       PDFAFlags=4,%
10630       AcroHighlight=\@pdfhighlight,%
10631       Border=\@pdfborder,%
10632       BorderStyle=\@pdfborderstyle,%
10633       linktype=file,%
10634       Color=\@filebordercolor,%
10635       Action={%
10636         <<%
10637         /S/GoToR%

```

```

10638      \Hy@SetNewWindow
10639      /F(\Hy@pstringF)%
10640      /D\ifx\#3\0 \pdfstartview\else(\Hy@pstringD)cvn\fi
10641      >>%
10642    }%
10643  }%
10644  \endgroup
10645 }
10646 \def\@hyper@launch run:#1\#2#3{%
10647   \begingroup
10648   \Hy@pstringdef\Hy@pstringF{#1}%
10649   \Hy@pstringdef\Hy@pstringP{#3}%
10650   \leavevmode
10651   \pdfmark[{#2}]{%
10652     pdfmark=/ANN,%
10653     Subtype=/Link,%
10654     PDFAFlags=4,%
10655     AcroHighlight=\pdfhighlight,%
10656     Border=\pdfborder,%
10657     BorderStyle=\pdfborderstyle,%
10658     linktype=run,%
10659     Color=\runbordercolor,%
10660     Action={%
10661       <<%
10662         /S/Launch%
10663         \Hy@SetNewWindow
10664         /F(\Hy@pstringF)%
10665         \ifx\#3\%
10666         \else
10667           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10668         \fi
10669       >>%
10670     }%
10671   }%
10672   \endgroup
10673 }
10674 \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.

```

10675 (*dvips)
10676 \providecommand*\XR@ext}{pdf}
10677 \def\Hy@raisedlink{}
10678 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10679 \def\headerps@out#1{\special{! #1}}%
10680 \input{pdfmark.def}%
10681 \ifx\@pdfproducer\relax
10682   \def\@pdfproducer{dvips + Distiller}%
10683 \fi
10684 \providecommand*\pdfborder{0 0 1}
10685 \providecommand*\pdfborderstyle{}

```

```

10686 \providecommand*\@pdfview{XYZ}
10687 \providecommand*\@pdfviewparams{ H.V}
10688 \def\Hy@BorderArrayPatch{BorderArrayPatch}

10689 \g@addto@macro\Hy@FirstPageHook{%
10690   \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.

```

10691   /DvipsToPDF{72.27 mul Resolution div} def%
10692   /PDFToDvips{72.27 div Resolution mul} def%
10693   /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.

```

10694   /BorderArrayPatch{%
10695     \exch{%
10696       dup dup type/integertype eq exch type/realtype eq or%
10697       {BPToDvips}if%
10698     }forall}%
10699   }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.

```

10700   /HyperBorder {1 PDFToDvips} def%
10701   /H.V {pdf@hoff pdf@voff null} def%
10702   /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

```

10703   /H.S {%
10704     currentpoint %
10705     HyperBorder add /pdf@lly exch def %
10706     dup DvipsToPDF 72 add /pdf@hoff exch def %
10707     HyperBorder sub /pdf@llx exch def%
10708   } def%

```

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

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

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

```

10709   /H.L {%
10710     2 sub dup%
10711     /HyperBasePt exch def %

```

```

10712 PDFToDvips /HyperBaseDvips exch def %
10713 currentpoint %
10714 HyperBaseDvips sub /pdf@ury exch def%
10715 /pdf@urx exch def%
10716 } def%
10717 /H.A {%
10718 H.L %
10719 % | /pdf@voff| = the distance from the top of the page to a point
10720 % | \baselineskip| above the current point in PDF coordinates
10721 currentpoint exch pop %
10722 vsize 72 sub exch DvipsToPDF %
10723 HyperBasePt sub % baseline skip
10724 sub /pdf@voff exch def%
10725 } def%
10726 /H.R {%
10727 currentpoint %
10728 HyperBorder sub /pdf@ury exch def %
10729 HyperBorder add /pdf@urx exch def %
10730 % | /pdf@voff| = the distance from the top of the page to the current point, in
10731 % PDF coordinates
10732 currentpoint exch pop vsize 72 sub %
10733 exch DvipsToPDF sub /pdf@voff exch def%
10734 } def%
10735 }%
10736 }
10737 \AtBeginShipoutFirst{%
10738 \ifHy@setpagesize
10739 \begingroup
10740 \@ifundefined{stockwidth}{%
10741 \ifdim\paperwidth>\z@
10742 \ifdim\paperheight>\z@
10743 \special{papersize=\the\paperwidth,\the\paperheight}%
10744 \fi
10745 \fi
10746 }{%
10747 \ifdim\stockwidth>\z@
10748 \ifdim\stockheight>\z@
10749 \special{papersize=\the\stockwidth,\the\stockheight}%
10750 \fi
10751 \fi
10752 }%
10753 \endgroup
10754 \fi
10755 \Hy@DisableOption{setpagesize}%
10756 }
10757 </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.

```

10758 <*vtexpdfmark>
10759 \providecommand*{\XR@ext}{pdf}
10760 \def\Hy@raisedlink{}

```

```

10761 \def\literalps@out#1{\special{pS:#1}}%
10762 \def\headerps@out#1{\immediate\special{pS:#1}}%
10763 \input{pdfmark.def}%
10764 \ifx\@pdfproducer\relax
10765   \ifnum\OpMode=\@ne
10766     \def\@pdfproducer{VTeX}%
10767   \else
10768     \def\@pdfproducer{VTeX + Distiller}%
10769   \fi
10770 \fi
10771 \providecommand*\@pdfborder{0 0 1}
10772 \providecommand*\@pdfborderstyle{}
10773 \providecommand*\@pdfview{XYZ}
10774 \providecommand*\@pdfviewparams{ H.V}

10775 \g@addto@macro\Hy@FirstPageHook{%
10776   \headerps@out{%
10777     /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.

```

10778   /HyperBorder {1} def%
10779   /H.V {pdf@hoff pdf@voff null} def%
10780   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10781   /H.S {%
10782     currentpoint %
10783     HyperBorder sub%
10784     /pdf@lly exch def %
10785     dup 72 add /pdf@hoff exch def %
10786     HyperBorder sub%
10787     /pdf@llx exch def%
10788   } def%

```

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

```

10789   /H.L {%
10790     2 sub%
10791     /HyperBasePt exch def %
10792     currentpoint %
10793     HyperBasePt add HyperBorder add%
10794     /pdf@ury exch def %
10795     HyperBorder add%
10796     /pdf@urx exch def%
10797   } def%
10798   /H.A {%
10799     H.L %
10800     currentpoint exch pop %
10801     vsize 72 sub exch %
10802     HyperBasePt add add%
10803     /pdf@voff exch def%
10804   } def%

```

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

```

10805   /H.R {%
10806     currentpoint %

```

```

10807   HyperBorder add%
10808   /pdf@ury exch def %
10809   HyperBorder add%
10810   /pdf@urx exch def %
10811   currentpoint exch pop vsize 72 sub add%
10812   /pdf@voff exch def%
10813   } def%
10814   }%
10815 }
10816 </vtxpdfmark>

```

46.11 Textures

```

10817 <*textures>
10818 \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.

```

10819 \begingroup
10820 \obeylines %
10821 \gdef\Hy@ps@CR{\noexpand
10822   }%
10823 \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`.

```

10824 \def\literalps@out#1{%
10825   \special{postscript 0 0 transform}%
10826   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10827 }%
10828 %

```

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.

```

10829 \def\headerps@out#1{%
10830   \special{%
10831     prepostscript TeXdict begin\Hy@ps@CR
10832       #1\Hy@ps@CR
10833     end%
10834   }%
10835 }%
10836 %

```

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.

```

10837 \g@addto@macro\Hy@FirstPageHook{%
10838   \headerps@out{%
10839     /betterpdfmark {%
10840       systemdict begin %
10841         dup /BP eq%
10842         {cleartomark gsave nulldevice []}%
10843         {dup /EP eq%
10844           {cleartomark cleartomark grestore}%
10845           {cleartomark}%
10846           ifelse%
10847         }ifelse %
10848       end%
10849     }def\Hy@ps@CR
10850     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10851   }% end of \headerps@out
10852 }% end of \AtBeginShipoutFirst
10853 %
10854 \input{pdfmark.def}%
10855 %
10856 \ifx\@pdfproducer\relax
10857   \def\@pdfproducer{Textures + Distiller}%
10858 \fi
10859 \providecommand*\@pdfborder{0 0 1}
10860 \providecommand*\@pdfborderstyle{}
10861 \providecommand*\@pdfview{XYZ}
10862 \providecommand*\@pdfviewparams{ H.V}
10863 %

```

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 .

```

10864 \Hy@AtBeginDocument{%
10865   \headerps@out{%

```

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

```

10866   /vsize {\Hy@pageheight} def%
10867   /DvipsToPDF {} def%
10868   /PDFToDvips {} def%
10869   /BPToDvips {} def%
10870   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10871   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10872   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10873   /H.S {%
10874     currentpoint %
10875     HyperBorder add /pdf@lly exch def %
10876     dup DvipsToPDF 72 add /pdf@hoff exch def %
10877     HyperBorder sub /pdf@llx exch def%
10878   } def\Hy@ps@CR
10879   /H.L {%
10880     2 sub %
10881     PDFToDvips /HyperBase exch def %
10882     currentpoint %

```

```

10883   HyperBase sub /pdf@ury exch def%
10884   /pdf@urx exch def%
10885 } def\Hy@ps@CR
10886 /H.A {%
10887   H.L %
10888   currentpoint exch pop %
10889   vsize 72 sub exch DvipsToPDF %
10890   HyperBase sub % baseline skip
10891   sub /pdf@voff exch def%
10892 } def\Hy@ps@CR
10893 /H.R {%
10894   currentpoint %
10895   HyperBorder sub /pdf@ury exch def %
10896   HyperBorder add /pdf@urx exch def %
10897   currentpoint exch pop vsize 72 sub %
10898   exch DvipsToPDF sub /pdf@voff exch def%
10899 } def\Hy@ps@CR
10900 }%
10901 }

10902 \Hy@AtBeginDocument{%
10903   \ifHy@colorlinks
10904     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10905   \fi
10906 }

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertex.def` with what is established by loading `pdfmark.def`, or any other driver.

```

10907 \expandafter\let\expandafter\keepPDF@SetupDoc
10908   \csname PDF@SetupDoc\endcsname
10909 \def\PDF@SetupDoc{%
10910   \ifx\@baseurl\@empty
10911     \else
10912       \special{html:<base href="\@baseurl">}%
10913     \fi
10914   \keepPDF@SetupDoc
10915 }

10916 \def\hyper@anchor#1{%
10917   \Hy@SaveLastskip
10918   \Hy@VerboseAnchor{#1}%
10919   \begingroup
10920     \let\protect=\string
10921     \special{html:<a name=%
10922       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10923   \endgroup
10924   \Hy@activeanchortrue
10925   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10926   \special{html:</a>}%
10927   \Hy@activeanchorfalse
10928   \Hy@RestoreLastskip
10929 }

10930 \def\hyper@anchorstart#1{%
10931   \Hy@SaveLastskip
10932   \Hy@VerboseAnchor{#1}%
10933   \begingroup
10934     \hyper@chars
10935     \special{html:<a name=%
10936       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%

```

```

10937 \endgroup
10938 \Hy@activeanchortrue
10939 }
10940 \def\hyper@anchorend{%
10941 \special{html:</a>}%
10942 \Hy@activeanchorfalse
10943 \Hy@RestoreLastskip
10944 }
10945 \def\@urltype{url}
10946 \def\hyper@linkstart#1#2{%
10947 \Hy@VerboseLinkStart{#1}{#2}%
10948 \expandafter\Hy@colorlink\csname @#1color\endcsname
10949 \def\Hy@tempa{#1}%
10950 \ifx\Hy@tempa\@urltype
10951 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10952 \else
10953 \begingroup
10954 \hyper@chars
10955 \special{%
10956 html:<a href=%
10957 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>%
10958 }%
10959 \endgroup
10960 \fi
10961 }
10962 \def\hyper@linkend{%
10963 \special{html:</a>}%
10964 \Hy@endcolorlink
10965 }
10966 \def\hyper@linkfile#1#2#3{%
10967 \hyper@linkurl{#1}{%
10968 \Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi
10969 }%
10970 }
10971 \def\hyper@linkurl#1#2{%
10972 \leavevmode
10973 \ifHy@raiselinks
10974 \Hy@SaveSpaceFactor
10975 \Hy@SaveSavedSpaceFactor
10976 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10977 \Hy@RestoreSavedSpaceFactor
10978 \@linkdim\dp\@tempboxa
10979 \lower\@linkdim\hbox{%
10980 \hyper@chars
10981 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10982 }%
10983 \Hy@colorlink\@urlcolor
10984 \Hy@RestoreSpaceFactor
10985 #1%
10986 \Hy@SaveSpaceFactor
10987 \@linkdim\ht\@tempboxa
10988 \advance\@linkdim by -6.5\p@
10989 \raise\@linkdim\hbox{\special{html:</a>}}%
10990 \Hy@endcolorlink
10991 \Hy@RestoreSpaceFactor
10992 \else
10993 \begingroup

```

```

10994 \hyper@chars
10995 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10996 \Hy@colorlink\@urlcolor#1%
10997 \special{html:</a>}%
10998 \Hy@endcolorlink
10999 \endgroup
11000 \fi
11001 }

```

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

```

11002 \def\hyper@link#1#2#3{%
11003 \Hy@VerboseLinkStart{#1}{#2}%
11004 \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}%
11005 }
11006 \def\hyper@image#1#2{%
11007 \begingroup
11008 \hyper@chars
11009 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
11010 \endgroup
11011 }
11012 </textures>

```

46.12 dvipsone

```

11013 % \subsection{dvipsone driver}
11014 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
11015 % |\special| commands.
11016 <*dvipsone>
11017 \providecommand*\XR@ext{-pdf}
11018 \def\Hy@raisedlink{}
11019 \providecommand*\@pdfborder{0 0 1}
11020 \providecommand*\@pdfborderstyle{}
11021 \def\literalps@out#1{\special{ps:#1}}%
11022 \def\headerps@out#1{\special{headertext=#1}}%
11023 \input{pdfmark.def}%
11024 \ifx\@pdfproducer\relax
11025 \def\@pdfproducer{dvipsone + Distiller}%
11026 \fi
11027 \HyInfo@AddonUnsupportedtrue
11028 \def\PDF@FinishDoc{%
11029 \Hy@UseMaketitleInfos
11030 \HyInfo@TrappedUnsupported
11031 \special{PDF: Keywords \@pdfkeywords}%
11032 \special{PDF: Title \@pdftitle}%
11033 \special{PDF: Creator \@pdfcreator}%
11034 \ifx\@pdfcreationdate\@empty
11035 \else
11036 \special{PDF: CreationDate \@pdfcreationdate}%
11037 \fi
11038 \ifx\@pdfmoddate\@empty
11039 \else
11040 \special{PDF: ModDate \@pdfmoddate}%
11041 \fi
11042 \special{PDF: Author \@pdfauthor}%
11043 \ifx\@pdfproducer\relax
11044 \else
11045 \special{PDF: Producer \@pdfproducer}%
11046 \fi

```

```

11047 \special{PDF: Subject \@pdfsubject}%
11048 \Hy@DisableOption{pdfauthor}%
11049 \Hy@DisableOption{pdftitle}%
11050 \Hy@DisableOption{pdfsubject}%
11051 \Hy@DisableOption{pdfcreator}%
11052 \Hy@DisableOption{pdfcreationdate}%
11053 \Hy@DisableOption{pdfmoddate}%
11054 \Hy@DisableOption{pdfproducer}%
11055 \Hy@DisableOption{pdfkeywords}%
11056 \Hy@DisableOption{pdftrapped}%
11057 \Hy@DisableOption{pdfinfo}%
11058 }
11059 \def\PDF@SetupDoc{%
11060 \def\Hy@temp{%
11061 \ifx\@pdfstartpage\@empty
11062 \else
11063 \ifx\@pdfstartview\@empty
11064 \else
11065 \edef\Hy@temp{%
11066 ,Page=\@pdfstartpage
11067 ,View=\@pdfstartview
11068 }%
11069 \fi
11070 \fi
11071 \edef\Hy@temp{%
11072 \noexpand\pdfmark{%
11073 pdfmark=/DOCVIEW,%
11074 PageMode=\/@pdfpagemode
11075 \Hy@temp
11076 }%
11077 }%
11078 \Hy@temp
11079 \ifx\@pdfpagescrop\@empty
11080 \else
11081 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11082 \fi
11083 \edef\Hy@temp{%
11084 \ifHy@toolbar\else /HideToolbar true\fi
11085 \ifHy@menubar\else /HideMenubar true\fi
11086 \ifHy>windowui\else /HideWindowUI true\fi
11087 \ifHy@fitwindow /FitWindow true\fi
11088 \ifHy@centerwindow /CenterWindow true\fi
11089 \ifHy@displaydoctitle /DisplayDocTitle true\fi
11090 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11091 \Hy@UseNameKey{Direction}\@pdfdirection
11092 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11093 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11094 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11095 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11096 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11097 \Hy@UseNameKey{Duplex}\@pdfduplex
11098 \ifx\@pdfpicktraybypdfsize\@empty
11099 \else
11100 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11101 \fi
11102 \ifx\@pdfprintpagerange\@empty
11103 \else

```

```

11104    /PrintPageRange[\@pdfprintpagerange]%
11105    \fi
11106    \ifx\@pdfnumcopies\@empty
11107    \else
11108    /NumCopies \@pdfnumcopies
11109    \fi
11110  }%
11111  \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11112  \pdfmark{%
11113    pdfmark=/PUT,%
11114    Raw={%
11115      \string{Catalog\string}<<%
11116      \ifx\Hy@temp\@empty
11117      \else
11118      /ViewerPreferences<<\Hy@temp>>%
11119      \fi
11120      \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11121      \ifx\@pdflang\@empty
11122      \else
11123      /Lang(\@pdflang)%
11124      \fi
11125      \ifx\@baseurl\@empty
11126      \else
11127      /URI<</Base(\Hy@pstringB)>>%
11128      \fi
11129      >>%
11130    }%
11131  }%
11132 }
11133 \providecommand*\@pdfview{XYZ}
11134 \providecommand*\@pdfviewparams{ %
11135   gsave revscl currentpoint grestore %
11136   72 add exch pop null exch null%
11137 }
11138 \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 .

```

11139 \g@addto@macro\Hy@FirstPageHook{%
11140   \headerps@out{%

```

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

```

11141   /DvipsToPDF { 65781 div } def%
11142   /PDFToDvips { 65781 mul } def%
11143   /BPToDvips{65781 mul}def%
11144   /HyperBorder { 1 PDFToDvips } def%
11145   /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.

```

11146   /BorderArrayPatch{%
11147     [exch{%
11148       dup dup type/integertype eq exch type/realtype eq or%
11149       {BPToDvips}if%
11150     }forall]%

```

```

11151 }def%
11152 /H.S {%
11153   currentpoint %
11154   HyperBorder add /pdf@lly exch def %
11155   dup DvipsToPDF 72 add /pdf@hoff exch def %
11156   HyperBorder sub /pdf@llx exch def%
11157 } def%
11158 /H.L {%
11159   2 sub %
11160   PDFToDvips /HyperBase exch def %
11161   currentpoint %
11162   HyperBase sub /pdf@ury exch def%
11163   /pdf@urx exch def%
11164 } def%
11165 /H.A {%
11166   H.L %
11167   currentpoint exch pop %
11168   HyperBase sub % baseline skip
11169   DvipsToPDF /pdf@voff exch def%
11170 } def%
11171 /H.R {%
11172   currentpoint %
11173   HyperBorder sub /pdf@ury exch def %
11174   HyperBorder add /pdf@urx exch def %
11175   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11176 } def%
11177 }%
11178 }
11179 </dvipsone>

```

46.13 TeX4ht

```

11180 <*tex4ht>
11181 \providecommand*{\XR@ext}{html}
11182 \def\Hy@raisedlink{}
11183 \ifpackageloaded{tex4ht}{%
11184   \typeout{hyperref tex4ht: tex4ht already loaded}%
11185 }{%
11186   \RequirePackage[hTeX4ht]{tex4ht}%
11187 }
11188 \hyperlinkfileprefix{}
11189 \def\PDF@FinishDoc{}
11190 \def\PDF@SetupDoc{%
11191   \ifx\@baseurl\@empty
11192   \else
11193     \special{t4ht=<base href="\@baseurl">}%
11194   \fi
11195 }
11196 \def\hyper@anchor#1{%
11197   \Hy@SaveLastskip
11198   \Hy@VerboseAnchor{#1}%
11199   \begingroup
11200     \let\protect=\string
11201     \special{t4ht=<a name=%
11202       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11203   \endgroup
11204   \Hy@activeanchortrue
11205   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink

```

```

11206 \special{t4ht=</a>}%
11207 \Hy@activeanchorfalse
11208 \Hy@RestoreLastskip
11209 }
11210 \def\hyper@anchorstart#1{%
11211 \Hy@SaveLastskip
11212 \Hy@VerboseAnchor{#1}%
11213 \begingroup
11214 \hyper@chars\special{t4ht=<a name=%
11215 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11216 \endgroup
11217 \Hy@activeanchortrue
11218 }
11219 \def\hyper@anchorend{%
11220 \special{t4ht=</a>}%
11221 \Hy@activeanchorfalse
11222 \Hy@RestoreLastskip
11223 }
11224 \def\@urltype{url}
11225 \def\hyper@linkstart#1#2{%
11226 \Hy@VerboseLinkStart{#1}{#2}%
11227 \expandafter\Hy@colorlink\csname @#1color\endcsname
11228 \def\Hy@tempa{#1}%
11229 \ifx\Hy@tempa\@urltype
11230 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11231 \else
11232 \begingroup
11233 \hyper@chars
11234 \special{t4ht=<a href=%
11235 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
11236 \endgroup
11237 \fi
11238 }
11239 \def\hyper@linkend{%
11240 \special{t4ht=</a>}%
11241 \Hy@endcolorlink
11242 }
11243 \def\hyper@linkfile#1#2#3{%
11244 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
11245 }
11246 \def\hyper@linkurl#1#2{%
11247 \leavevmode
11248 \ifHy@raiselinks
11249 \Hy@SaveSpaceFactor
11250 \Hy@SaveSavedSpaceFactor
11251 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11252 \Hy@RestoreSavedSpaceFactor
11253 \@linkdim\dp\@tempboxa
11254 \lower\@linkdim\hbox{%
11255 \begingroup
11256 \hyper@chars
11257 \special{%
11258 t4ht=<a href=\hyper@quote#2\hyper@quote>%
11259 }%
11260 \endgroup
11261 }%
11262 \Hy@colorlink\@urlcolor

```

```

11263 \Hy@RestoreSpaceFactor
11264 #1%
11265 \Hy@SaveSpaceFactor
11266 \Hy@endcolorlink
11267 \@linkdim\ht\@tempboxa
11268 \advance\@linkdim by -6.5\p@
11269 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11270 \Hy@RestoreSpaceFactor
11271 \else
11272 \begingroup
11273 \hyper@chars
11274 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11275 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11276 \special{t4ht=</a>}%
11277 \endgroup
11278 \fi
11279 }

```

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

```

11280 \def\hyper@link#1#2#3{%
11281 \Hy@VerboseLinkStart{#1}{#2}%
11282 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
11283 }
11284 \def\hyper@image#1#2{%
11285 \begingroup
11286 \hyper@chars
11287 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11288 \endgroup
11289 }
11290 \let\autoref\ref
11291 \ifx \rEfLiNK \UnDef
11292 \def\rEfLiNK #1#2{#2}%
11293 \fi
11294 \def\backref#1{}

```

Fix for tex4ht.

```

11295 \AtBeginDocument{%
11296 \expandafter\let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
11297 \expandafter\def\csname Make:Label\endcsname#1#2{%
11298 \ifhmode
11299 \Hy@SaveSpaceFactor
11300 \else
11301 \global\Hy@SavedSpaceFactor=1000 %
11302 \fi
11303 \Hy@OrgMakeLabel{#1}{%
11304 \Hy@RestoreSpaceFactor
11305 #2%
11306 \Hy@SaveSpaceFactor
11307 }%
11308 \Hy@RestoreSpaceFactor
11309 }%
11310 }
11311 </tex4ht>
11312 <*tex4htcfg>
11313 \IfFileExists{\jobname.cfg}{\endinput}{}
11314 \Preamble{html}
11315 \begin{document}%
11316 \EndPreamble
11317 \def\TeX{\TeX}

```

```

11318 \def\OMEGA{\Omega}
11319 \def\LaTeX{\LaTeX}
11320 \def\LaTeXe{\LaTeX2e}
11321 \def\TeX{e-TeX}
11322 \def\MF{Metafont}
11323 \def\MP{MetaPost}
11324 \</tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11325 \<*pdfmark>
11326 \long\def\@Form[#1]{%
11327 \g@addto@macro\Hy@FirstPageHook{%
11328 \headerps@out{%
11329 [%
11330 \_objdef{pdfDocEncoding}%
11331 /type/dict%
11332 /OBJ pdfmark%
11333 [%
11334 {pdfDocEncoding}%
11335 <<%
11336 /Type/Encoding%
11337 /Differences[%
11338 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11339 /tilde %
11340 39/quotesingle %
11341 96/grave %
11342 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11343 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11344 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11345 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11346 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11347 164/currency %
11348 166/brokenbar %
11349 168/dieresis/copyright/ordfeminine %
11350 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11351 /twosuperior/threesuperior/acute/mu %
11352 183/periodcentered/cedilla/onesuperior/ordmasculine %
11353 188/onequarter/onehalf/threequarters %
11354 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11355 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11356 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11357 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11358 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11359 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11360 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11361 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11362 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11363 /ucircumflex/udieresis/yacute/thorn/ydieresis%
11364 ]%
11365 >>%
11366 /PUT pdfmark%
11367 [%
11368 \_objdef{ZaDb}%
11369 /type/dict%
11370 /OBJ pdfmark%

```

```

11371 [%
11372   {ZaDb}%
11373   <<%
11374     /Type/Font%
11375     /Subtype/Type1%
11376     /Name/ZaDb%
11377     /BaseFont/ZapfDingbats%
11378   >>%
11379 /PUT pdfmark%
11380 [%
11381   /__objdef{Helv}%
11382   /type/dict%
11383 /OBJ pdfmark%
11384 [%
11385   {Helv}%
11386   <<%
11387     /Type/Font%
11388     /Subtype/Type1%
11389     /Name/Helv%
11390     /BaseFont/Helvetica%
11391     /Encoding{pdfDocEncoding}%
11392   >>%
11393 /PUT pdfmark%
11394 [%
11395   /__objdef{aform}%
11396   /type/dict%
11397 /OBJ pdfmark%
11398 [%
11399   /__objdef{afields}%
11400   /type/array%
11401 /OBJ pdfmark%
11402 {%
11403   [%
11404     /BBox[0 0 100 100]%
11405     /__objdef{Check}%
11406   /BP pdfmark %
11407   1 0 0 setrgbcolor%
11408   /ZapfDingbats 80 selectfont %
11409   20 20 moveto%
11410   (4)show%
11411   [/EP pdfmark%
11412   [%
11413     /BBox[0 0 100 100]%
11414     /__objdef{Cross}%
11415   /BP pdfmark %
11416   1 0 0 setrgbcolor%
11417   /ZapfDingbats 80 selectfont %
11418   20 20 moveto%
11419   (8)show%
11420   [/EP pdfmark%
11421   [%
11422     /BBox[0 0 250 100]%
11423     /__objdef{Submit}%
11424   /BP pdfmark %
11425   0.6 setgray %
11426   0 0 250 100 rectfill %
11427   1 setgray %

```

```

11428 2 2 moveto %
11429 2 98 lineto %
11430 248 98 lineto %
11431 246 96 lineto %
11432 4 96 lineto %
11433 4 4 lineto %
11434 fill %
11435 0.34 setgray %
11436 248 98 moveto %
11437 248 2 lineto %
11438 2 2 lineto %
11439 4 4 lineto %
11440 246 4 lineto %
11441 246 96 lineto %
11442 fill%
11443 /Helvetica 76 selectfont %
11444 0 setgray %
11445 8 22.5 moveto%
11446 (Submit)show%
11447 [/EP pdfmark%
11448 [%
11449 /BBox[0 0 250 100]%
11450 /_objdef{SubmitP}%
11451 /BP pdfmark %
11452 0.6 setgray %
11453 0 0 250 100 rectfill %
11454 0.34 setgray %
11455 2 2 moveto %
11456 2 98 lineto %
11457 248 98 lineto %
11458 246 96 lineto %
11459 4 96 lineto %
11460 4 4 lineto %
11461 fill %
11462 1 setgray %
11463 248 98 moveto %
11464 248 2 lineto %
11465 2 2 lineto %
11466 4 4 lineto %
11467 246 4 lineto %
11468 246 96 lineto %
11469 fill%
11470 /Helvetica 76 selectfont %
11471 0 setgray %
11472 10 20.5 moveto%
11473 (Submit)show%
11474 [/EP pdfmark%
11475 } ?pdfmark%
11476 [%
11477 {aform}%
11478 <<%
11479 /Fields{afields}%
11480 /DR<<%
11481 /Font<<%
11482 /ZaDb{ZaDb}%
11483 /Helv{Helv}%
11484 >>%

```

```

11485 >>%
11486 /DA(/Helv 10 Tf 0 g)%
11487 /CO{corder}%
11488 \ifHy@pdfa
11489 \else
11490 /NeedAppearances true%
11491 \fi
11492 >>%
11493 /PUT pdfmark%
11494 [%
11495 {Catalog}%
11496 <<%
11497 /AcroForm{aform}%
11498 >>%
11499 /PUT pdfmark%
11500 [%
11501 /__objdef{corder}%
11502 /type/array%
11503 /OBJ pdfmark% dps
11504 }}%
11505 \kvsetkeys{Form}{#1}%
11506 }
11507 \def\@endForm{}
11508 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11509 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11510 }
11511 \def\@TextField[#1]#2{% parameters, label
11512 \def\Fld@name{#2}%
11513 \def\Fld@default{}%
11514 \let\Fld@value\@empty
11515 \def\Fld@width{\DefaultWidthofText}%
11516 \def\Fld@height{%
11517 \ifFld@multiline
11518 \DefaultHeightofTextMultiline
11519 \else
11520 \DefaultHeightofText
11521 \fi
11522 }%
11523 \begingroup
11524 \Field@toks={ }%
11525 \expandafter\HyField@SetKeys\expandafter{%
11526 \DefaultOptionsofText,#1%
11527 }%
11528 \HyField@FlagsText
11529 \ifFld@hidden\def\Fld@width{1sp}\fi
11530 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11531 \LayoutTextField{#2}{%
11532 \Hy@escapeform\PDFForm@Text
11533 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11534 pdfmark=/ANN,Raw={\PDFForm@Text}%
11535 }%
11536 }%
11537 \endgroup
11538 }
11539 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11540 \def\Fld@name{#2}%
11541 \let\Fld@default\relax

```

```

11542 \let\Fld@value\relax
11543 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11544 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11545 \begingroup
11546 \Fld@menulength=0 %
11547 \@tempdima\z@
11548 \@for\@curropt:=#3\do{%
11549 \expandafter\Fld@checkequals\@curropt==\%
11550 \Hy@StepCount\Fld@menulength
11551 \settowidth{\@tempdimb}{\@currDisplay}%
11552 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11553 }%
11554 \advance\@tempdima by 15\p@
11555 \Field@toks={ }%
11556 \begingroup
11557 \HyField@SetKeys{#1}%
11558 \edef\x{\endgroup
11559 \noexpand\expandafter
11560 \noexpand\HyField@SetKeys
11561 \noexpand\expandafter{%
11562 \expandafter\noexpand\csname DefaultOptionsof%
11563 \ifFld@radio
11564 Radio%
11565 \else
11566 \ifFld@combo
11567 \ifFld@popdown
11568 PopdownBox%
11569 \else
11570 ComboBox%
11571 \fi
11572 \else
11573 ListBox%
11574 \fi
11575 \fi
11576 \endcsname
11577 }%
11578 }\x
11579 \HyField@SetKeys{#1}%
11580 \ifFld@hidden\def\Fld@width{1sp}\fi
11581 \ifx\Fld@value\relax
11582 \let\Fld@value\Fld@default
11583 \fi
11584 \LayoutChoiceField{#2}{%
11585 \ifFld@radio
11586 \HyField@FlagsRadioButton
11587 \@@Radio{#3}%
11588 \else
11589 \begingroup
11590 \HyField@FlagsChoice
11591 \ifdim\Fld@width<\@tempdima
11592 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11593 \edef\Fld@width{\the\@tempdima}%
11594 \fi
11595 \ifFld@combo
11596 \else
11597 \@tempdima=\the\Fld@menulength\Fld@charsize
11598 \advance\@tempdima by \Fld@borderwidth bp %

```

```

11599      \advance\@tempdima by \Fld@borderwidth bp %
11600      \edef\Fld@height{\the\@tempdima}%
11601      \fi
11602      \@@Listbox{#3}%
11603      \endgroup
11604      \fi
11605      }%
11606      \endgroup
11607  }
11608  \def\@@Radio#1{%
11609      \Fld@listcount=0 %
11610      \@for\@curropt:=#1\do{%
11611          \expandafter\Fld@checkequals\@curropt==\%
11612          \Hy@StepCount\Fld@listcount
11613          \@currDisplay\space
11614          \Hy@escapeform\PDFForm@Radio
11615          \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11616              pdfmark=/ANN,%
11617              Raw={%
11618                  \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11619              }%
11620          } % deliberate space between radio buttons
11621          }%
11622      }
11623      \newcount\Fld@listcount
11624      \def\@@Listbox#1{%
11625          \HyField@PDFChoices{#1}%
11626          \Hy@escapeform\PDFForm@List
11627          \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11628              pdfmark=/ANN,Raw={\PDFForm@List}%
11629          }%
11630      }
11631      \def\@PushButton[#1]#2{% parameters, label
11632          \def\Fld@name{#2}%
11633          \begingroup
11634              \Field@toks={}%
11635              \expandafter\HyField@SetKeys\expandafter{%
11636                  \DefaultOptionsofPushButton,#1%
11637              }%
11638              \ifHy@pdfa
11639                  \PackageError{hyperref}{%
11640                      PDF/A: Push button with JavaScript is prohibited%
11641                  }\@ehc
11642                  \LayoutPushButtonField{%
11643                      \leavevmode
11644                      \MakeButtonField{#2}%
11645                  }%
11646              \else
11647                  \HyField@FlagsPushButton
11648                  \ifFld@hidden\def\Fld@width{1sp}\fi
11649                  \LayoutPushButtonField{%
11650                      \leavevmode
11651                      \Hy@escapeform\PDFForm@Push
11652                      \pdfmark[\MakeButtonField{#2}]{%
11653                          pdfmark=/ANN,Raw={\PDFForm@Push}%
11654                      }%
11655                  }%

```

```

11656 \fi
11657 \endgroup
11658 }
11659 \def\@Submit[#1]#2{%
11660 \Field@toks={ }%
11661 \def\Fld@width{\DefaultWidthofSubmit}%
11662 \def\Fld@height{\DefaultHeightofSubmit}%
11663 \begingroup
11664 \expandafter\HyField@SetKeys\expandafter{%
11665 \DefaultOptionsofSubmit,#1%
11666 }%
11667 \HyField@FlagsPushButton
11668 \HyField@FlagsSubmit
11669 \ifFld@hidden\def\Fld@width{1sp}\fi
11670 \Hy@escapeform\PDFForm@Submit
11671 \pdfmark[\MakeButtonField{#2}]{%
11672 pdfmark=/ANN,%
11673 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11674 }%
11675 \endgroup
11676 }
11677 \def\@Reset[#1]#2{%
11678 \Field@toks={ }%
11679 \def\Fld@width{\DefaultWidthofReset}%
11680 \def\Fld@height{\DefaultHeightofReset}%
11681 \begingroup
11682 \expandafter\HyField@SetKeys\expandafter{%
11683 \DefaultOptionsofReset,#1%
11684 }%
11685 \leavevmode
11686 \ifHy@pdfa
11687 \PackageError{hyperref}{%
11688 PDF/A: Reset action is prohibited%
11689 }\@ehc
11690 \MakeButtonField{#2}%
11691 \else
11692 \HyField@FlagsPushButton
11693 \ifFld@hidden\def\Fld@width{1sp}\fi
11694 \Hy@escapeform\PDFForm@Reset
11695 \pdfmark[\MakeButtonField{#2}]{%
11696 pdfmark=/ANN,Raw={\PDFForm@Reset}%
11697 }%
11698 \fi
11699 \endgroup
11700 }%
11701 \def\@CheckBox[#1]#2{% parameters, label
11702 \def\Fld@name{#2}%
11703 \def\Fld@default{0}%
11704 \begingroup
11705 \def\Fld@width{\DefaultWidthofCheckBox}%
11706 \def\Fld@height{\DefaultHeightofCheckBox}%
11707 \Field@toks={ }%
11708 \expandafter\HyField@SetKeys\expandafter{%
11709 \DefaultOptionsofCheckBox,#1%
11710 }%
11711 \HyField@FlagsCheckBox
11712 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

11713 \LayoutCheckField{#2}{%
11714 \Hy@escapeform\PDFForm@Check
11715 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11716 pdfmark=/ANN,Raw={\PDFForm@Check}%
11717 }%
11718 }%
11719 \endgroup
11720 }
11721 \pdfmark

```

47.2 HyperTeX

```

11722 \hypertex
11723 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11724 \def\@endForm{}
11725 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11726 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11727 }
11728 \def\@TextField[#1]#2{% parameters, label
11729 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11730 }
11731 \def\@CheckBox[#1]#2{% parameters, label
11732 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11733 }
11734 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11735 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11736 }
11737 \def\@PushButton[#1]#2{% parameters, label
11738 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11739 }
11740 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11741 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11742 \hypertex

```

47.3 TeX4ht

```

11743 \tex4ht
11744 \def\@Form[#1]{%
11745 \kvsetkeys{Form}{#1}%
11746 \HCode{<form action="\Form@action" method="\Form@method">}%
11747 }
11748 \def\@endForm{\HCode{</form>}}
11749 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11750 \typeout{Sorry, TeX4ht does not support gauges}%
11751 }
11752 \def\@TextField[#1]#2{% parameters, label
11753 \let\Hy@reserved@a\@empty
11754 \def\Fld@name{#2}%
11755 \def\Fld@default{}%
11756 \bgroup
11757 \Field@toks={ }%
11758 \kvsetkeys{Field}{#1}%
11759 \HCode{<label for="\Fld@name">#2</label>}%
11760 \ifFld@password
11761 \@@PasswordField
11762 \else
11763 \@@TextField
11764 \fi
11765 \egroup

```

```

11766 }
11767 \def\@@PasswordField{%
11768   \HCode{%
11769     <input type="password" %
11770     id="\Fld@name" %
11771     name="\Fld@name" %
11772     \ifFld@hidden type="hidden" \fi
11773     value="\Fld@default" %
11774     \the\Field@toks
11775     >%
11776   }%
11777 }
11778 \def\@@TextField{%
11779   \ifFld@multiline
11780     \HCode{<textarea %
11781       \ifFld@readonly readonly \fi
11782       id="\Fld@name" %
11783       name="\Fld@name" %
11784       \ifFld@hidden type="hidden" \fi
11785       \the\Field@toks>%
11786   }%
11787   \Fld@default
11788   \HCode{</textarea>}%
11789   \else
11790     \HCode{<input type="text" %
11791       \ifFld@readonly readonly \fi
11792       id="\Fld@name" %
11793       name="\Fld@name" %
11794       \ifFld@hidden type="hidden" \fi
11795       value="\Fld@default" %
11796       \the\Field@toks>%
11797   }%
11798   \fi
11799 }
11800 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11801   \def\Fld@name{#2}%
11802   \def\Fld@default{#3}%
11803   \let\Hy@reserved@a\relax
11804   \begingroup
11805     \expandafter\Fld@findlength#3\\%
11806     \Field@toks={ }%
11807     \kvsetkeys{Field}{#1}%
11808     #2%
11809     \ifFld@radio
11810       \expandafter\@@Radio#3\\%
11811     \else
11812       \expandafter\@@Menu#3\\%
11813     \fi
11814   \endgroup
11815 }
11816 \def\Fld@findlength#1\\{%
11817   \Fld@menulength=0 %
11818   \@for\@currupt:=#1\do{\Hy@StepCount\Fld@menulength}%
11819 }
11820 \def\@@Menu#1\\{%
11821   \HCode{<select size="\the\Fld@menulength" %
11822     name="\Fld@name" %

```

```

11823 \the\Field@toks>%
11824 }%
11825 \@for\@curropt:=#1\do{%
11826 \expandafter\Fld@checkequals\@curropt==\\%
11827 \HCode{<option %
11828 \ifx\@curropt\Fld@default selected \fi
11829 value="\@currValue">\@currDisplay</option>%
11830 }%
11831 }%
11832 \HCode{</select>}%
11833 }
11834 \def\@@Radio#1\{%
11835 \@for\@curropt:=#1\do{%
11836 \expandafter\Fld@checkequals\@curropt==\\%
11837 \HCode{<input type="radio" %
11838 \ifx\@curropt\Fld@default checked \fi
11839 name="\Fld@name" %
11840 value="\@currValue" %
11841 \the\Field@toks>%
11842 }%
11843 \@currDisplay
11844 }%
11845 }
11846 \def\@PushButton[#1]#2{% parameters, label
11847 \def\Fld@name{#2}%
11848 \bgroup
11849 \Field@toks={ }%
11850 \kvsetkeys{Field}{#1}%
11851 \HCode{<input type="button" %
11852 name="\Fld@name" %
11853 value="#2" %
11854 \the\Field@toks>%
11855 }%
11856 \HCode{</button>}%
11857 \egroup
11858 }
11859 \def\@Submit[#1]#2{%
11860 \HCode{<button type="submit">#2</button>}%
11861 }
11862 \def\@Reset[#1]#2{%
11863 \HCode{<button type="reset">#2</button>}%
11864 }
11865 \def\@CheckBox[#1]#2{% parameters, label
11866 \let\Hy@reserved@a\@empty
11867 \def\Fld@name{#2}%
11868 \def\Fld@default{0}%
11869 \bgroup
11870 \Field@toks={ }%
11871 \kvsetkeys{Field}{#1}%
11872 \HCode{<input type="checkbox" %
11873 \ifFld@checked checked \fi
11874 \ifFld@disabled disabled \fi
11875 \ifFld@readonly readonly \fi
11876 name="\Fld@name" %
11877 \ifFld@hidden type="hidden" \fi
11878 value="\Fld@default" %
11879 \the\Field@toks>%

```

```

11880     #2%
11881   }%
11882   \egroup
11883 }
11884 </tex4ht>

```

47.4 pdfTeX

```

11885 <*pdfTeX>
11886 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11887   \typeout{Sorry, pdfTeX does not support FORM gauges}%
11888 }
11889 \def\MakeFieldObject#1#2{\sbox0{#1}%
11890   \immediate\pdfxform0 %
11891   \expandafter\edef\csname #2Object\endcsname{%
11892     \the\pdfastxform\space 0 R%
11893   }%
11894 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
11895 }%
11896 \def\HyField@afields{}
11897 \begingroup\expandafter\expandafter\expandafter\endgroup
11898 \expandafter\ifx\csname pdfastlink\endcsname\relax
11899   \let\HyField@AddToFields\relax
11900   \PackageInfo{hyperref}{%
11901     You need pdfTeX 1.40.0 for setting the /Fields entry.%
11902     \MessageBreak
11903     Adobe Reader/Acrobat accepts an empty /Field array,%
11904     \MessageBreak
11905     but other PDF viewers might complain%
11906   }%
11907 \else
11908   \def\HyField@AuxAddToFields#1{%
11909     \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11910     \Hy@AtBeginDocument{%
11911       \if@filesw
11912         \immediate\write\@mainaux{%
11913           \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11914         }%
11915       \fi
11916       \let\HyField@AfterAuxOpen\@firstofone
11917       \def\HyField@AuxAddToFields#1{%
11918         \xdef\HyField@afields{%
11919           \ifx\HyField@afields\@empty
11920             \else
11921               \HyField@afields
11922             \space
11923           \fi
11924           #1 0 R%
11925         }%
11926       }%
11927     }%
11928     \def\HyField@AddToFields{%
11929       \expandafter\HyField@@AddToFields\expandafter{%
11930         \the\pdfastlink
11931       }%
11932     }%
11933     \def\HyField@@AddToFields#1{%
11934       \HyField@AfterAuxOpen{%

```

```

11935 \if@filesw
11936 \write\@mainaux{%
11937 \string\HyField@AuxAddToFields{#1}%
11938 }%
11939 \fi
11940 }%
11941 }%
11942 \fi
11943 \def\@Form[#1]{%
11944 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11945 \kvsetkeys{Form}{#1}%
11946 \Hy@FormObjects
11947 \ifnum\pdfTeXversion>13 %
11948 \pdfrefobj\OBJ@pdfdocencoding
11949 \pdfrefobj\OBJ@ZaDb
11950 \pdfrefobj\OBJ@Helv
11951 \fi
11952 \AtVeryEndDocument{%
11953 \immediate\pdfobj{%
11954 <<%
11955 /Fields[\HyField@afields]%
11956 /DR<<%
11957 /Font<<%
11958 /ZaDb \OBJ@ZaDb\space 0 R%
11959 /Helv \OBJ@Helv\space 0 R%
11960 >>%
11961 >>%
11962 /DA(/Helv 10 Tf 0 g)%
11963 \ifHy@pdfa
11964 \else
11965 /NeedAppearances true%
11966 \fi
11967 >>%
11968 }%
11969 \edef\OBJ@acroform{\the\pdfastobj}%
11970 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11971 }%
11972 \MakeFieldObject{%
Same as \ding{123} of package pifont.
11973 \begingroup
11974 \fontfamily{pzd}%
11975 \fontencoding{U}%
11976 \fontseries{m}%
11977 \fontshape{n}%
11978 \selectfont
11979 \char123 %
11980 \endgroup
11981 }{Ding}%
11982 \MakeFieldObject{%
11983 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11984 }{Submit}%
11985 \MakeFieldObject{%
11986 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11987 }{SubmitP}%
11988 }
11989 \def\@endForm{}
11990 \def\@TextField[#1]#2{% parameters, label

```

```

11991 \def\Fld@name{#2}%
11992 \def\Fld@default{ }%
11993 \let\Fld@value\@empty
11994 \def\Fld@width{\DefaultWidthofText}%
11995 \def\Fld@height{%
11996   \ifFld@multiline
11997     \DefaultHeightofTextMultiline
11998   \else
11999     \DefaultHeightofText
12000   \fi
12001 }%
12002 \begingroup
12003   \Field@toks={ }%
12004   \expandafter\HyField@SetKeys\expandafter{%
12005     \DefaultOptionsofText,#1%
12006   }%
12007   \PDFForm@Name
12008   \HyField@FlagsText
12009   \ifFld@hidden\def\Fld@width{1sp}\fi
12010   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12011   \LayoutTextField{#2}{%
12012     \Hy@escapeform\PDFForm@Text
12013     \pdfstartlink user {\PDFForm@Text}\relax
12014     \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
12015     \HyField@AddToFields
12016   }%
12017 \endgroup
12018 }
12019 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12020   \def\Fld@name{#2}%
12021   \let\Fld@default\relax
12022   \let\Fld@value\relax
12023   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12024   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12025   \begingroup
12026     \Fld@menulength=0 %
12027     \@tempdima\z@
12028     \@for\@curropt:=#3\do{%
12029       \expandafter\Fld@checkequals\@curropt==\%
12030       \Hy@StepCount\Fld@menulength
12031       \settowidth{\@tempdimb}{\@currDisplay}%
12032       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12033     }%
12034     \advance\@tempdima by 15\p@
12035     \Field@toks={ }%
12036     \begingroup
12037       \HyField@SetKeys{#1}%
12038     \edef\x{\endgroup
12039       \noexpand\expandafter
12040       \noexpand\HyField@SetKeys
12041       \noexpand\expandafter{%
12042         \expandafter\noexpand\csname DefaultOptionsof%
12043           \ifFld@radio
12044             Radio%
12045           \else
12046             \ifFld@combo
12047               \ifFld@popdown

```

```

12048         PopdownBox%
12049     \else
12050         ComboBox%
12051     \fi
12052 \else
12053     ListBox%
12054 \fi
12055 \fi
12056 \endcsname
12057 }%
12058 }\x
12059 \HyField@SetKeys{#1}%
12060 \PDFForm@Name
12061 \ifFld@hidden\def\Fld@width{1sp}\fi
12062 \ifx\Fld@value\relax
12063     \let\Fld@value\Fld@default
12064 \fi
12065 \LayoutChoiceField{#2}{%
12066     \ifFld@radio
12067         \HyField@FlagsRadioButton
12068         \@@Radio{#3}%
12069     \else
12070         \begingroup
12071         \HyField@FlagsChoice
12072         \ifdim\Fld@width<\@tempdima
12073             \ifdim\@tempdima<1cm\@tempdima1cm\fi
12074             \edef\Fld@width{\the\@tempdima}%
12075         \fi
12076         \ifFld@combo
12077         \else
12078             \@tempdima=\the\Fld@menulength\Fld@charsize
12079             \advance\@tempdima by \Fld@borderwidth bp %
12080             \advance\@tempdima by \Fld@borderwidth bp %
12081             \edef\Fld@height{\the\@tempdima}%
12082         \fi
12083         \@@ListBox{#3}%
12084     \endgroup
12085 \fi
12086 }%
12087 \endgroup
12088 }
12089 \def\@@Radio#1{%
12090     \Fld@listcount=0 %
12091     \@for\@curropt:=#1\do{%
12092         \expandafter\Fld@checkequals\@curropt==\\%
12093         \Hy@StepCount\Fld@listcount
12094         \@currDisplay\space
12095         \leavevmode
12096         \Hy@escapeform\PDFForm@Radio
12097         \pdfstartlink user {%
12098             \PDFForm@Radio
12099             /AP<<%
12100             /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.

```

12101     /\@currValue\space \DingObject

```

```

12102     >>%
12103     >>%
12104 }%
12105 \relax
12106 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
12107 \ifnum\Fld@listcount=1 %
12108   \HyField@AddToFields
12109 \fi
12110 \space % deliberate space between radio buttons
12111 }%
12112 }
12113 \newcount\Fld@listcount
12114 \def\@@ListBox#1{%
12115   \HyField@PDFChoices{#1}%
12116   \leavevmode
12117   \Hy@escapeform\PDFForm@List
12118   \pdfstartlink user {\PDFForm@List}\relax
12119   \MakeChoiceField{\Fld@width}{\Fld@height}%
12120   \pdfendlink
12121   \HyField@AddToFields
12122 }
12123 \def\@PushButton[#1]#2{% parameters, label
12124   \def\Fld@name{#2}%
12125   \begingroup
12126     \Field@toks={ }%
12127     \expandafter\HyField@SetKeys\expandafter{%
12128       \DefaultOptionsofPushButton,#1%
12129     }%
12130     \PDFForm@Name
12131     \ifHy@pdfa
12132       \PackageError{hyperref}{%
12133         PDF/A: Push button with JavaScript is prohibited%
12134       }\@ehc
12135       \LayoutPushButtonField{%
12136         \leavevmode
12137         \MakeButtonField{#2}%
12138       }%
12139     \else
12140       \HyField@FlagsPushButton
12141       \ifFld@hidden\def\Fld@width{1sp}\fi
12142       \LayoutPushButtonField{%
12143         \leavevmode
12144         \Hy@escapeform\PDFForm@Push
12145         \pdfstartlink user {\PDFForm@Push}\relax
12146         \MakeButtonField{#2}%
12147         \pdfendlink
12148         \HyField@AddToFields
12149       }%
12150     \fi
12151   \endgroup
12152 }
12153 \def\@Submit[#1]#2{%
12154   \Field@toks={ }%
12155   \def\Fld@width{\DefaultWidthofSubmit}%
12156   \def\Fld@height{\DefaultHeightofSubmit}%
12157   \begingroup
12158     \expandafter\HyField@SetKeys\expandafter{%

```

```

12159 \DefaultOptionsofSubmit,#1%
12160 }%
12161 \HyField@FlagsPushButton
12162 \HyField@FlagsSubmit
12163 \ifFld@hidden\def\Fld@width{1sp}\fi
12164 \leavevmode
12165 \Hy@escapeform\PDFForm@Submit
12166 \pdfstartlink user {%
12167 \PDFForm@Submit
12168 /AP<</N \SubmitObject/D \SubmitPObject>>%
12169 }%
12170 \relax
12171 \MakeButtonField{#2}%
12172 \pdfendlink
12173 \HyField@AddToFields
12174 \endgroup
12175 }
12176 \def\@Reset[#1]#2{%
12177 \Field@toks={ }%
12178 \def\Fld@width{\DefaultWidthofReset}%
12179 \def\Fld@height{\DefaultHeightofReset}%
12180 \begingroup
12181 \expandafter\HyField@SetKeys\expandafter{%
12182 \DefaultOptionsofReset,#1%
12183 }%
12184 \leavevmode
12185 \ifHy@pdfa
12186 \PackageError{hyperref}{%
12187 PDF/A: Reset action is prohibited%
12188 }\@ehc
12189 \MakeButtonField{#2}%
12190 \else
12191 \HyField@FlagsPushButton
12192 \ifFld@hidden\def\Fld@width{1sp}\fi
12193 \Hy@escapeform\PDFForm@Reset
12194 \pdfstartlink user {\PDFForm@Reset}\relax
12195 \MakeButtonField{#2}%
12196 \pdfendlink
12197 \HyField@AddToFields
12198 \fi
12199 \endgroup
12200 }
12201 \def\@CheckBox[#1]#2{% parameters, label
12202 \def\Fld@name{#2}%
12203 \def\Fld@default{0}%
12204 \begingroup
12205 \def\Fld@width{\DefaultWidthofCheckBox}%
12206 \def\Fld@height{\DefaultHeightofCheckBox}%
12207 \Field@toks={ }%
12208 \expandafter\HyField@SetKeys\expandafter{%
12209 \DefaultOptionsofCheckBox,#1%
12210 }%
12211 \PDFForm@Name
12212 \HyField@FlagsCheckBox
12213 \ifFld@hidden\def\Fld@width{1sp}\fi
12214 \LayoutCheckField{#2}{%
12215 \Hy@escapeform\PDFForm@Check

```

```

12216 \pdfstartlink user {\PDFForm@Check}\relax
12217 \MakeCheckField{\Fld@width}{\Fld@height}%
12218 \pdfendlink
12219 \HyField@AddToFields
12220 }%
12221 \endgroup
12222 }
12223 \def\Hy@FormObjects{%
12224 \pdfobj {%
12225 <<%
12226 /Type/Encoding%
12227 /Differences[%
12228 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12229 /ring/tilde %
12230 39/quotesingle %
12231 96/grave %
12232 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12233 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12234 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12235 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12236 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12237 164/currency %
12238 166/brokenbar %
12239 168/dieresis/copyright/ordfeminine %
12240 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12241 /twosuperior/threesuperior/acute/mu %
12242 183/periodcentered/cedilla/onesuperior/ordmasculine %
12243 188/onequarter/onehalf/threequarters %
12244 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12245 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12246 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12247 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12248 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12249 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12250 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12251 /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
12252 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12253 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12254 ]%
12255 >>%
12256 }%
12257 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
12258 \pdfobj{%
12259 <<%
12260 /Type/Font%
12261 /Subtype/Type1%
12262 /Name/ZaDb%
12263 /BaseFont/ZapfDingbats%
12264 >>%
12265 }%
12266 \xdef\OBJ@ZaDb{\the\pdflastobj}%
12267 \pdfobj{%
12268 <<%
12269 /Type/Font%
12270 /Subtype/Type1%
12271 /Name/Helv%
12272 /BaseFont/Helvetica%

```

```

12273      /Encoding \OBJ@pdfdocencoding\space 0 R%
12274      >>%
12275    }%
12276    \xdef\OBJ@Helv{\the\pdfastobj}%
12277    \global\let\Hy@FormObjects\relax
12278  }
12279 </pdftex>

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

12280 <*dvipdfm | xetex>

```

\@Gauge

```

12281 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12282   \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12283 }

```

\@Form

```

12284 \def\@Form[#1]{%
12285   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12286   \kvsetkeys{Form}{#1}%
12287   \Hy@FormObjects
12288   \@pdfm@mark{obj @afields []}%
12289   \@pdfm@mark{obj @corder []}%
12290   \@pdfm@mark{%
12291     obj @aform <<%
12292       /Fields @afields%
12293       /DR<<%
12294       /Font<<%
12295       /ZaDb @OBJZaDb%
12296       /Helv @OBJHelv%
12297       >>%
12298     >>%
12299     /DA(/Helv 10 Tf 0 g)%
12300     /CO @corder%
12301     \ifHy@pdfa
12302     \else
12303       /NeedAppearances true%
12304     \fi
12305     >>%
12306   }%
12307   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
12308 }

```

\@endForm

```

12309 \def\@endForm{}

```

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

```

12310 \def\dvipdfm@setdim{%
12311   height \the\ht\pdfm@box\space
12312   width \the\wd\pdfm@box\space
12313   depth \the\dp\pdfm@box\space
12314 }

```

\HyField@AnnotCount

```
12315 \newcount\HyField@AnnotCount
12316 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
12317 \def\HyField@AdvanceAnnotCount{%
12318   \global\advance\HyField@AnnotCount\@ne
12319 }
```

\HyField@TheAnnotCount

```
12320 \def\HyField@TheAnnotCount{%
12321   \the\HyField@AnnotCount
12322 }
```

\@TextField

```
12323 \def\@TextField[#1]#2{% parameters, label
12324   \def\Fld@name{#2}%
12325   \def\Fld@default{}%
12326   \let\Fld@value\@empty
12327   \def\Fld@width{\DefaultWidthofText}%
12328   \def\Fld@height{%
12329     \ifFld@multiline
12330       \DefaultHeightofTextMultiline
12331     \else
12332       \DefaultHeightofText
12333     \fi
12334   }%
12335   \begingroup
12336     \Field@toks={ }%
12337     \expandafter\HyField@SetKeys\expandafter{%
12338       \DefaultOptionsofText,#1%
12339     }%
12340     \PDFForm@Name
12341     \HyField@FlagsText
12342     \ifFld@hidden\def\Fld@width{1sp}\fi
12343     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12344     \setbox\pdfm@box=\hbox{%
12345       \MakeTextField{\Fld@width}{\Fld@height}%
12346     }%
12347     \HyField@AdvanceAnnotCount
12348     \LayoutTextField{#2}{%
12349       \Hy@escapeform\PDFForm@Text
12350       \@pdfm@mark{%
12351         ann @text\HyField@TheAnnotCount\space
12352         \dvipdfm@setdim << \PDFForm@Text >>%
12353       }%
12354     }%
12355     \unhbox\pdfm@box
12356     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12357     % record in @afields array
12358   \endgroup
12359 }
```

\@ChoiceMenu

```
12360 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12361   \def\Fld@name{#2}%
```

```

12362 \let\Fld@default\relax
12363 \let\Fld@value\relax
12364 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12365 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12366 \begingroup
12367 \Fld@menulength=0 %
12368 \@tempdima\z@
12369 \@for\@curropt:=#3\do{%
12370 \expandafter\Fld@checkequals\@curropt==\%
12371 \Hy@StepCount\Fld@menulength
12372 \settowidth{\@tempdimb}{\@currDisplay}%
12373 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12374 }%
12375 \advance\@tempdima by 15\p@
12376 \Field@toks={ }%
12377 \begingroup
12378 \HyField@SetKeys{#1}%
12379 \edef\x{\endgroup
12380 \noexpand\expandafter
12381 \noexpand\HyField@SetKeys
12382 \noexpand\expandafter{%
12383 \expandafter\noexpand\csname DefaultOptionsof%
12384 \ifFld@radio
12385 Radio%
12386 \else
12387 \ifFld@combo
12388 \ifFld@popdown
12389 PopdownBox%
12390 \else
12391 ComboBox%
12392 \fi
12393 \else
12394 ListBox%
12395 \fi
12396 \fi
12397 \endcsname
12398 }%
12399 }\x
12400 \HyField@SetKeys{#1}%
12401 \PDFForm@Name
12402 \ifFld@hidden\def\Fld@width{1sp}\fi
12403 \ifx\Fld@value\relax
12404 \let\Fld@value\Fld@default
12405 \fi
12406 \LayoutChoiceField{#2}{%
12407 \ifFld@radio
12408 \HyField@FlagsRadioButton
12409 @@Radio{#3}%
12410 \else
12411 \begingroup
12412 \HyField@FlagsChoice
12413 \ifdim\Fld@width<\@tempdima
12414 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12415 \edef\Fld@width{\the\@tempdima}%
12416 \fi
12417 \ifFld@combo
12418 \else

```

```

12419         \@tempdima=\the\Fld@menulength\Fld@charsize
12420         \advance\@tempdima by \Fld@borderwidth bp %
12421         \advance\@tempdima by \Fld@borderwidth bp %
12422         \edef\Fld@height{\the\@tempdima}%
12423     \fi
12424     \@@ListBox{#3}%
12425 \endgroup
12426 \fi
12427 }%
12428 \endgroup
12429 }

```

\@@Radio

```

12430 \def\@@Radio#1{%
12431     \Fld@listcount=0 %
12432     \setbox\pdfm@box=\hbox{%
12433         \MakeRadioField{\Fld@width}{\Fld@height}%
12434     }%
12435     \@for\@curropt:=#1\do{%
12436         \expandafter\Fld@checkequals\@curropt==\%
12437         \Hy@StepCount\Fld@listcount
12438         \@currDisplay\space
12439         \leavevmode
12440         \Hy@escapeform\PDFForm@Radio
12441         \ifnum\Fld@listcount=1 %
12442             \HyField@AdvanceAnnotCount
12443         \fi
12444         \@pdfm@mark{%
12445             ann %
12446             \ifnum\Fld@listcount=1 %
12447                 @radio\HyField@TheAnnotCount%
12448             \space
12449         \fi
12450         \dvi pdfm@setdim
12451         <<%
12452         \PDFForm@Radio
12453         /AP<</N<</\@currValue /null>>>>%
12454         >>%
12455     }%
12456     \unhcopy\pdfm@box\space% deliberate space between radio buttons
12457     \ifnum\Fld@listcount=1 %
12458         \@pdfm@mark{%
12459             put @afields @radio\HyField@TheAnnotCount
12460         }%
12461     \fi
12462 }%
12463 }

```

\Fld@listcount

```

12464 \newcount\Fld@listcount

```

\@@ListBox

```

12465 \def\@@ListBox#1{%
12466     \HyField@PDFChoices{#1}%
12467     \setbox\pdfm@box=\hbox{%
12468         \MakeChoiceField{\Fld@width}{\Fld@height}%
12469     }%

```

```

12470 \leavevmode
12471 \Hy@escapeform\PDFForm@List
12472 \HyField@AdvanceAnnotCount
12473 \@pdfm@mark{%
12474   ann @list\HyField@TheAnnotCount\space
12475   \dvipdfm@setdim
12476   <<\PDFForm@List>>%
12477 }%
12478 \unhbox\pdfm@box
12479 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12480 }

```

\@PushButton

```

12481 \def\@PushButton[#1]#2{% parameters, label
12482   \def\Fld@name{#2}%
12483   \begingroup
12484     \Field@toks={}%
12485     \expandafter\HyField@SetKeys\expandafter{%
12486       \DefaultOptionsofPushButton,#1%
12487     }%
12488     \PDFForm@Name
12489     \ifHy@pdfa
12490       \PackageError{hyperref}{%
12491         PDF/A: Push button with JavaScript is prohibited%
12492       }\@ehc
12493       \LayoutPushButtonField{%
12494         \leavevmode
12495         \MakeButtonField{#2}%
12496       }%
12497     \else
12498       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12499       \HyField@FlagsPushButton
12500       \ifFld@hidden\def\Fld@width{1sp}\fi
12501       \HyField@AdvanceAnnotCount
12502       \LayoutPushButtonField{%
12503         \leavevmode
12504         \Hy@escapeform\PDFForm@Push
12505         \@pdfm@mark{%
12506           ann @push\HyField@TheAnnotCount\space
12507           \dvipdfm@setdim
12508           <<\PDFForm@Push>>%
12509         }%
12510       }%
12511       \unhbox\pdfm@box
12512       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12513     \fi
12514   \endgroup
12515 }

```

\@Submit

```

12516 \def\@Submit[#1]#2{%
12517   \Field@toks={}%
12518   \def\Fld@width{\DefaultWidthofSubmit}%
12519   \def\Fld@height{\DefaultHeightofSubmit}%
12520   \begingroup
12521     \expandafter\HyField@SetKeys\expandafter{%
12522       \DefaultOptionsofSubmit,#1%

```

```

12523 }%
12524 \HyField@FlagsPushButton
12525 \HyField@FlagsSubmit
12526 \ifFld@hidden\def\Fld@width{1sp}\fi
12527 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12528 \leavevmode
12529 \Hy@escapeform\PDFForm@Submit
12530 \HyField@AdvanceAnnotCount
12531 \@pdfm@mark{%
12532   ann @submit\HyField@TheAnnotCount\space
12533   \dvipdfm@setdim
12534   <<\PDFForm@Submit>>%
12535 }%
12536 \unhbox\pdfm@box%
12537 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12538 \endgroup
12539 }

```

\@Reset

```

12540 \def\@Reset[#1]#2{%
12541   \Field@toks={ }%
12542   \def\Fld@width{\DefaultWidthofReset}%
12543   \def\Fld@height{\DefaultHeightofReset}%
12544   \begingroup
12545     \expandafter\HyField@SetKeys\expandafter{%
12546       \DefaultOptionsofReset,#1%
12547     }%
12548     \leavevmode
12549     \ifHy@pdfa
12550       \PackageError{hyperref}{%
12551         PDF/A: Reset action is prohibited%
12552       }\@ehc
12553       \MakeButtonField{#2}%
12554     \else
12555       \HyField@FlagsPushButton
12556       \ifFld@hidden\def\Fld@width{1sp}\fi
12557       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12558       \Hy@escapeform\PDFForm@Reset
12559       \HyField@AdvanceAnnotCount
12560       \@pdfm@mark{%
12561         ann @reset\HyField@TheAnnotCount\space
12562         \dvipdfm@setdim
12563         <<\PDFForm@Reset>>%
12564       }%
12565       \unhbox\pdfm@box
12566       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12567     \fi
12568   \endgroup
12569 }

```

\@CheckBox

```

12570 \def\@CheckBox[#1]#2{% parameters, label
12571   \def\Fld@name{#2}%
12572   \def\Fld@default{0}%
12573   \begingroup
12574     \def\Fld@width{\DefaultWidthofCheckBox}%
12575     \def\Fld@height{\DefaultHeightofCheckBox}%

```

```

12576 \Field@toks={ }%
12577 \expandafter\HyField@SetKeys\expandafter{%
12578 \DefaultOptionsofCheckBox,#1%
12579 }%
12580 \PDFForm@Name
12581 \HyField@FlagsCheckBox
12582 \ifFld@hidden\def\Fld@width{1sp}\fi
12583 \setbox\pdfm@box=\hbox{%
12584 \MakeCheckField{\Fld@width}{\Fld@height}%
12585 }%
12586 \HyField@AdvanceAnnotCount
12587 \LayoutCheckField{#2}{%
12588 \Hy@escapeform\PDFForm@Check
12589 \@pdfm@mark{%
12590 ann @check\HyField@TheAnnotCount\space
12591 \dvipdfm@setdim
12592 <<\PDFForm@Check>>%
12593 }%
12594 \unhbox\pdfm@box
12595 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12596 }%
12597 \endgroup
12598 }

12599 \def\Hy@FormObjects{%
12600 \@pdfm@mark{obj @OBJpdfdocencoding%
12601 <<%
12602 /Type/Encoding%
12603 /Differences%
12604 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12605 39/quotesingle %
12606 96/grave %
12607 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12608 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12609 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12610 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12611 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12612 164/currency %
12613 166/brokenbar %
12614 168/dieresis/copyright/ordfeminine %
12615 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12616 /twosuperior/threesuperior/acute/mu %
12617 183/periodcentered/cedilla/onesuperior/ordmasculine %
12618 188/onequarter/onehalf/threequarters %
12619 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12620 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12621 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12622 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12623 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12624 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12625 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12626 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
12627 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12628 /thorn/ydieresis%
12629 ]%
12630 >>%
12631 }%
12632 \@pdfm@mark{obj @OBJZaDb%

```

```

12633 <<%
12634 /Type/Font%
12635 /Subtype/Type1%
12636 /Name/ZaDb%
12637 /BaseFont/ZapfDingbats%
12638 >>%
12639 }%
12640 \@pdfm@mark{obj @OBJHelv%
12641 <<%
12642 /Type/Font%
12643 /Subtype/Type1%
12644 /Name/Helv%
12645 /BaseFont/Helvetica%
12646 /Encoding @OBJpdfdocencoding%
12647 >>%
12648 }%
12649 \global\let\Hy@FormObjects\relax
12650 }
12651 </dvipdfm | xetex>

```

47.6 Common forms part

```
12652 (*pdfform)
```

\Hy@escapestring

```

12653 \begingroup\expandafter\expandafter\expandafter\endgroup
12654 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12655 \let\Hy@escapestring\@firstofone
12656 \def\Hy@escapeform#1{%
12657 \ifHy@escapeform
12658 \def\Hy@escapestring##1{%
12659 \noexpand\Hy@escapestring{\noexpand##1}%
12660 }%
12661 \edef\Hy@temp{#1}%
12662 \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{ }\@nil
12663 \def\Hy@escapestring##1{%
12664 \@ifundefined{Hy@esc@\string##1}{%
12665 ##1%
12666 \ThisShouldNotHappen
12667 }{%
12668 \csname Hy@esc@\string##1\endcsname
12669 }%
12670 }%
12671 \else
12672 \let\Hy@escapestring\@firstofone
12673 \fi
12674 }%
12675 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
12676 \ifx\#3\%
12677 \else
12678 \expandafter
12679 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12680 \Hy@ReturnAfterFi{%
12681 \Hy@@escapeform#3\@nil
12682 }%
12683 \fi
12684 }%

```

```

12685 \else
12686   \def\Hy@escapeform#1{%
12687     \ifHy@escapeform
12688       \let\Hy@escapestring\pdfescapestring
12689     \else
12690       \let\Hy@escapestring\@firstofone
12691     \fi
12692   }%
12693   \Hy@escapeform{}}%
12694 \fi

```

\PDFForm@Name

```

12695 \def\PDFForm@Name{%
12696   \begingroup
12697   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12698     \ifHy@unicode
12699       \Hy@unicodedefalse
12700     \fi
12701   \fi
12702   \HyPsd@XeTeXBigCharstrue
12703   \pdfstringdef\Hy@gtemp\Fld@name
12704 \endgroup
12705 \let\Fld@name\Hy@gtemp
12706 }

```

\PDFForm@Check

```

12707 \def\PDFForm@Check{%
12708   /Subtype/Widget%
12709   \Fld@annotflags
12710   /T(\Fld@name)%
12711   /FT/Btn%
12712   \Fld@flags
12713   /Q \Fld@align
12714   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12715   /MK<<%
12716     \ifnum\Fld@rotation=\z@
12717     \else
12718       /R \Fld@rotation
12719     \fi
12720     \ifx\Fld@bordercolor\relax
12721     \else
12722       /BC[\Fld@bordercolor]%
12723     \fi
12724     \ifx\Fld@bcolor\relax
12725     \else
12726       /BG[\Fld@bcolor]%
12727     \fi
12728     /CA(\Hy@escapestring{\Fld@cbsymbol}})%
12729   >>%
12730   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12731     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12732   /H/P%
12733   \ifFld@checked /V/Yes\else /V/Off\fi
12734 }

```

\PDFForm@Push

```

12735 \ifHy@pdfa

```

```

12736 \else
12737   \def\PDFForm@Push{%
12738     /Subtype/Widget%
12739     \Fld@annotflags
12740     /T(\Fld@name)%
12741     /FT/Btn%
12742     \Fld@flags
12743     /H/P%
12744     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12745     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
12746       \ifx\Fld@bordercolor\relax\else 1\fi
12747       \space
12748     \else
12749       /MK<<%
12750       \ifnum\Fld@rotation=\z@
12751       \else
12752         /R \Fld@rotation
12753       \fi
12754       \ifx\Fld@bordercolor\relax
12755       \else
12756         /BC[\Fld@bordercolor]%
12757       \fi
12758       >>%
12759     \fi
12760     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12761   }%
12762 \fi

```

\Fld@additionalactions

```

12763 \def\Fld@@additionalactions{%
K input (keystroke) format
12764 \ifx\Fld@keystroke@code\@empty
12765 \else
12766   /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12767 \fi
F display format
12768 \ifx\Fld@format@code\@empty
12769 \else
12770   /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12771 \fi
V validation
12772 \ifx\Fld@validate@code\@empty
12773 \else
12774   /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12775 \fi
C calculation
12776 \ifx\Fld@calculate@code\@empty
12777 \else
12778   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12779 \fi
Fo receiving the input focus
12780 \ifx\Fld@onfocus@code\@empty
12781 \else
12782   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12783 \fi

```

Bl loosing the input focus (blurred)

```
12784 \ifx\Fld@onblur@code\@empty
12785 \else
12786 /B1<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12787 \fi
```

D pressing the mouse button (down)

```
12788 \ifx\Fld@onmousedown@code\@empty
12789 \else
12790 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12791 \fi
```

U releasing the mouse button (up)

```
12792 \ifx\Fld@onmouseup@code\@empty
12793 \else
12794 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12795 \fi
```

E cursor enters the annotation's active area.

```
12796 \ifx\Fld@onenter@code\@empty
12797 \else
12798 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12799 \fi
```

X cursor exits the annotation's active area.

```
12800 \ifx\Fld@onexit@code\@empty
12801 \else
12802 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12803 \fi
```

```
12804 }
```

```
12805 \def\Fld@additionalactions{%
12806 \if\Fld@@additionalactions-%
12807 \else
12808 \ifHy@pdfa
12809 \else
12810 /AA<<\Fld@@additionalactions>>%
12811 \fi
12812 \fi
12813 }
```

\PDFForm@List

```
12814 \def\PDFForm@List{%
12815 /Subtype/Widget%
12816 \Fld@annotflags
12817 /T(\Fld@name)%
12818 /FT/Ch%
12819 \Fld@flags
12820 /Q \Fld@align
12821 /BS<</W \Fld@borderwidth/S\Fld@borderstyle>>%
12822 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12823 \ifx\Fld@bordercolor\relax\else 1\fi
12824 \ifx\Fld@bcolor\relax \else 1\fi
12825 \space
12826 \else
12827 /MK<<%
12828 \ifnum\Fld@rotation=\z@
12829 \else
12830 /R \Fld@rotation
12831 \fi
```

```

12832 \ifx\Fld@bordercolor\relax
12833 \else
12834 /BC[\Fld@bordercolor]%
12835 \fi
12836 \ifx\Fld@bcolor\relax
12837 \else
12838 /BG[\Fld@bcolor]%
12839 \fi
12840 >>%
12841 \fi
12842 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12843 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12844 \Fld@choices
12845 \Fld@additionalactions
12846 }

```

\PDFForm@Radio

```

12847 \def\PDFForm@Radio{%
12848 /Subtype/Widget%
12849 \Fld@annotflags
12850 /T(\Fld@name)%
12851 /FT/Btn%
12852 \Fld@flags
12853 /H/P%
12854 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12855 /MK<<%
12856 \ifnum\Fld@rotation=\z@
12857 \else
12858 /R \Fld@rotation
12859 \fi
12860 \ifx\Fld@bordercolor\relax
12861 \else
12862 /BC[\Fld@bordercolor]%
12863 \fi
12864 \ifx\Fld@bcolor\relax
12865 \else
12866 /BG[\Fld@bcolor]%
12867 \fi
12868 /CA(\Fld@radiosymbol)%
12869 >>%
12870 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12871 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12872 \ifx\@currValue\Fld@default
12873 /V/\Fld@default
12874 \else
12875 /V/Off%
12876 \fi
12877 \Fld@additionalactions
12878 }

```

\PDFForm@Text

```

12879 \def\PDFForm@Text{%
12880 /Subtype/Widget%
12881 \Fld@annotflags
12882 /T(\Fld@name)%
12883 /FT/Tx%
12884 \Fld@flags

```

```

12885 /Q \Fld@align
12886 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12887 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12888     \ifx\Fld@bordercolor\relax\else 1\fi
12889     \ifx\Fld@bcolor\relax \else 1\fi
12890     \space
12891 \else
12892 /MK<<%
12893     \ifnum\Fld@rotation=\z@
12894     \else
12895         /R \Fld@rotation
12896     \fi
12897     \ifx\Fld@bordercolor\relax
12898     \else
12899         /BC[\Fld@bordercolor]%
12900     \fi
12901     \ifx\Fld@bcolor\relax
12902     \else
12903         /BG[\Fld@bcolor]%
12904     \fi
12905 >>%
12906 \fi
12907 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12908     \ifx\Fld@color@empty\else\space\Fld@color\fi)%
12909 /DV(\Hy@escapestring{\Fld@default})%
12910 /V(\Hy@escapestring{\Fld@value})%
12911 \Fld@additionalactions
12912 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12913 }

```

\PDFForm@Submit

```

12914 \def\PDFForm@Submit{%
12915 /Subtype/Widget%
12916 \Fld@annotflags
12917 /T(\Fld@name)%
12918 /FT/Btn%
12919 \Fld@flags
12920 /H/P%
12921 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12922 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12923     \ifx\Fld@bordercolor\relax\else 1\fi
12924     \space
12925 \else
12926 /MK<<%
12927     \ifnum\Fld@rotation=\z@
12928     \else
12929         /R \Fld@rotation
12930     \fi
12931     \ifx\Fld@bordercolor\relax
12932     \else
12933         /BC[\Fld@bordercolor]%
12934     \fi
12935 >>%
12936 \fi
12937 /A<<%
12938 /S/SubmitForm%
12939 /F<<%

```

```

12940      /FS/URL%
12941      /F(\Hy@escapestring{\Form@action})%
12942      >>%
12943      \Fld@submitflags
12944      >>%
12945  }

```

\PDFForm@Reset

```

12946 \ifHy@pdfa
12947 \else
12948   \def\PDFForm@Reset{%
12949     /Subtype/Widget%
12950     \Fld@annotflags
12951     /T(\Fld@name)%
12952     /FT/Btn%
12953     \Fld@flags
12954     /H/P%
12955     /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12956     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
12957       \ifx\Fld@bordercolor\relax\else 1\fi
12958       \space
12959     \else
12960       /MK<<%
12961       \ifnum\Fld@rotation=\z@
12962       \else
12963         /R \Fld@rotation
12964       \fi
12965       \ifx\Fld@bordercolor\relax
12966       \else
12967         /BC[\Fld@bordercolor]%
12968       \fi
12969     %   /CA (Clear)
12970     %   /AC (Done)
12971     >>%
12972     \fi
12973     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12974     /A<</S/ResetForm>>%
12975   }%
12976 \fi

12977 </pdfform>
12978 <*package>

```

48 Bookmarks in the PDF file

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

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

```

12979 \def\phantomsection{%
12980   \Hy@MakeCurrentHrefAuto{section*}%
12981   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12982 }

```

12983 \langle /package \rangle

48.1 Bookmarks

12984 \langle *outlines \rangle

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.

```
12985 \def\Hy@writebookmark#1#2#3#4#5{%
12986   % section number, text, label, level, file
12987   \ifx\WriteBookmarks\relax%
12988   \else
12989     \ifnum#4>\Hy@bookmarksdepth\relax
12990     \else
12991       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12992     \fi
12993   \fi
12994 }
12995 \def\Hy@currentbookmarklevel{0}
12996 \def\Hy@numberline#1{#1 }
12997 \def\@@@writetorep#1#2#3#4#5{%
12998   \begingroup
12999   \edef\Hy@tempa{#5}%
13000   \ifx\Hy@tempa\Hy@bookmarkstype
13001     \edef\Hy@level{#4}%
13002     \ifx\Hy@levelcheck Y%
13003       \@tempcnta\Hy@level\relax
13004       \advance\@tempcnta by -1 %
13005       \ifnum\Hy@currentbookmarklevel<\@tempcnta
13006         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
13007         \advance\@tempcnta by 1 %
13008         \Hy@Warning{%
13009           Difference (\the\@tempcnta) between bookmark levels is %
13010           greater \MessageBreak than one, level fixed%
13011         }%
13012         \@tempcnta\Hy@currentbookmarklevel
13013         \advance\@tempcnta by 1 %
13014         \edef\Hy@level{\the\@tempcnta}%
13015       \fi
13016     \else
13017       \global\let\Hy@levelcheck Y%
13018     \fi
13019     \global\let\Hy@currentbookmarklevel\Hy@level
13020     \@tempcnta\Hy@level\relax
13021     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
```

```

13022 \advance\@tempcnta by -1 %
13023 \edef\Hy@tempa{#3}%
13024 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
13025 \ifx\Hy@tempa\Hy@tempb
13026 \Hy@Warning{%
13027     The anchor of a bookmark and its parent's must not%
13028     \MessageBreak be the same. Added a new anchor%
13029 }%
13030 \phantomsection
13031 \fi
13032 \ifHy@bookmarksnumbered
13033 \let\numberline\Hy@numberline
13034 \let\booknumberline\Hy@numberline
13035 \let\partnumberline\Hy@numberline
13036 \let\chapternumberline\Hy@numberline
13037 \else
13038 \let\numberline\@gobble
13039 \let\booknumberline\@gobble
13040 \let\partnumberline\@gobble
13041 \let\chapternumberline\@gobble
13042 \fi
13043 \HyPsd@XeTeXBigCharstrue
13044 \pdfstringdef\Hy@tempa{#2}%
13045 \HyPsd@SanitizeForOutFile\Hy@tempa
13046 \if@filesw
13047 \stepcounter{bookmark@seq@number}%
13048 \ifundefined{@outlinefile}{%
13049 }{%
13050 \protected@write\@outlinefile{}{%
13051 \protect\BOOKMARK
13052 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
13053 {\Hy@tempa}\Hy@tempb}%
13054 \@percentchar\space\thebookmark@seq@number
13055 }%
13056 }%
13057 \fi
13058 \fi
13059 \endgroup
13060 }
13061 \newcounter{bookmark@seq@number}

13062 \begingroup
13063 \lccode'('= '{%
13064 \lccode'='='}%
13065 \lccode'1=\z@
13066 \lccode'2=\z@
13067 \lccode'3=\z@
13068 \lccode'5=\z@
13069 \lccode'7=\z@
13070 \lccode'\#=\z@
13071 \lccode'\='=\z@
13072 \lccode'\{=\z@
13073 \lccode'\}=\z@
13074 \lowercase{%
13075 \endgroup
13076 \def\HyPsd@SanitizeForOutFile#1{%
13077 \@onelevel@sanitize\Hy@tempa
13078 \escapechar'\%

```

```

13079 \edef\Hy@tempa{%
13080   \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
13081 }%
13082 \edef\Hy@tempa{%
13083   \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
13084 }%
13085 }%
13086 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
13087   #1%
13088   \ifx\#2\%
13089     \expandafter\ltx@gobble
13090   \else
13091     \expandafter\ltx@firstofone
13092   \fi
13093   {%
13094     \string\173%
13095     \HyPsd@SanitizeOut@BraceLeft#2\@nil
13096   }%
13097 }%
13098 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
13099   #1%
13100   \ifx\#2\%
13101     \expandafter\ltx@gobble
13102   \else
13103     \expandafter\ltx@firstofone
13104   \fi
13105   {%
13106     \string\175%
13107     \HyPsd@SanitizeOut@BraceRight#2\@nil
13108   }%
13109 }%
13110 }

```

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

```

13111 \newcommand{\currentpdfbookmark}{%
13112   \pdfbookmark[\Hy@currentbookmarklevel]%
13113 }
13114 \newcommand{\subpdfbookmark}{%
13115   \@tempcnta\Hy@currentbookmarklevel
13116   \Hy@StepCount\@tempcnta
13117   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
13118 }
13119 \newcommand{\belowpdfbookmark}[2]{%
13120   \@tempcnta\Hy@currentbookmarklevel
13121   \Hy@StepCount\@tempcnta
13122   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
13123   \advance\@tempcnta by -1 %
13124   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
13125 }

```

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.

```

13126 \renewcommand\pdfbookmark[3][0]{%
13127   \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%
13128   \hyper@anchorstart{#3.#1}\hyper@anchorend
13129 }

```

```

13130 \def\BOOKMARK{%
13131   \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
13132 }
13133 \def\@BOOKMARK[#1]{%
13134   \@ifnextchar[{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}%
13135 }

```

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`

```

13136 \RequirePackage{rerunfilecheck}[2009/12/10]
13137 \def\Hy@OutlineRerunCheck{%
13138   \RerunFileCheck{\jobname.out}{%
13139     \immediate\closeout\@outlinefile
13140   }{%
13141     Rerun to get outlines right\MessageBreak
13142     or use package ‘bookmark’%
13143   }%
13144 }

```

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 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.

```

13145 < *vtex >
13146 \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.

```

13147 \begingroup
13148   \catcode'\=12 %
13149   \ifnum\Hy@VTeXversion<650 %
13150     \catcode'\=12 %
13151     \gdef\hv@pdf@char#1#2#3{%
13152       \char
13153       \ifcase'#1#2#3 %
13154         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
13155         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
13156         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
13157         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
13158         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
13159         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
13160         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
13161         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
13162         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
13163         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
13164         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
13165         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
13166         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
13167         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
13168         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%

```

```

13169 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
13170 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
13171 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
13172 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
13173 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13174 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13175 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13176 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
13177 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13178 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13179 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13180 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13181 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13182 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
13183 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13184 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13185 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13186 \fi
13187 }%
13188 \else
13189 \gdef\hv@pdf@char{\char'}%
13190 \fi
13191 \endgroup

```

\@@BOOKMARK

```

13192 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13193 \expandafter\edef\csname @count@#3\endcsname{%
13194 \the\@serial@counter
13195 }%
13196 \edef\@mycount{\the\@serial@counter}%
13197 \Hy@StepCount\@serial@counter
13198 \edef\@parcount{%
13199 \expandafter\ifx\csname @count@#5\endcsname\relax
13200 0%
13201 \else
13202 \csname @count@#5\endcsname
13203 \fi
13204 }%
13205 \immediate\special{%
13206 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13207 s=\ifx#2-c\else o\fi,t=#4%
13208 }%
13209 }%

```

\ReadBookmarks

```

13210 \def\ReadBookmarks{%
13211 \begingroup
13212 \def\0{\hv@pdf@char 0}%
13213 \def\1{\hv@pdf@char 1}%
13214 \def\2{\hv@pdf@char 2}%
13215 \def\3{\hv@pdf@char 3}%
13216 \def\({}%
13217 \def\)}%
13218 \def\do##1{%
13219 \ifnum\catcode'##1=\active
13220 \@makeother##1%
13221 \else

```

```

13222     \ifnum\catcode'##1=6 %
13223     \@makeother##1%
13224     \fi
13225     \fi
13226 }%
13227 \dospecials
13228 \Hy@safe@activetrue
13229 \InputIfFileExists{\jobname.out}{-}{-}%
13230 \endgroup
13231 \ifx\WriteBookmarks\relax
13232 \else
13233 \if@filesw
13234 \newwrite\@outlinefile
13235 \Hy@OutlineRerunCheck
13236 \immediate\openout\@outlinefile=\jobname.out\relax
13237 \ifHy@typexml
13238 \immediate\write\@outlinefile{<relaxxml>\relax}%
13239 \fi
13240 \fi
13241 \fi
13242 }

13243 </vtex>
13244 <!*vtex>
13245 \def\ReadBookmarks{%
13246 \begingroup
13247 \def\do##1{%
13248 \ifnum\catcode'##1=\active
13249 \@makeother##1%
13250 \else
13251 \ifnum\catcode'##1=6 %
13252 \@makeother##1%
13253 \fi
13254 \fi
13255 }%
13256 \dospecials
13257 \Hy@safe@activetrue
13258 \escapechar='\%
13259 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13260 \calc@bm@number{##5}%
13261 }%
13262 \InputIfFileExists{\jobname.out}{-}{-}%
13263 \ifx\WriteBookmarks\relax
13264 \global\let\WriteBookmarks\relax
13265 \fi
13266 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13267 \def\Hy@temp{##4}%
13268 <*pdfTex>
13269 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13270 \Hy@OutlineName{\Hy@pstringName{%
13271 ##2\check@bm@number{##3}}%
13272 }{%
13273 \expandafter\strip@prefix\meaning\Hy@temp
13274 }%
13275 </pdfTex>
13276 <*pdfmark>
13277 \pdfmark{%
13278 pdfmark=/OUT,%

```

```

13279     Count={##2\check@bm@number{##3}},%
13280     Dest={##3},%
13281     Title=\expandafter\strip@prefix\meaning\Hy@temp
13282 }%
13283 </pdfmark>
13284 <*dvipdfm | xetex>
13285   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13286   \@pdfm@mark{%
13287     outline \ifHy@DvipdfmxOutlineOpen
13288       [%
13289         \ifnum##21>\z@
13290         \else
13291         -%
13292         \fi
13293       ] %
13294       \fi
13295       ##1<<%
13296       /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13297       /A<<%
13298       /S/GoTo%
13299       /D(\Hy@pstringName)%
13300       >>%
13301       >>%
13302     }%
13303 </dvipdfm | xetex>
13304 }%
13305 {%
13306   \def\WriteBookmarks{0}%
13307   \InputIfFileExists{\jobname.out}{\relax}%
13308 }%
13309 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}}%
13310 \ifx\WriteBookmarks\relax
13311 \else
13312   \if@filesw
13313     \newwrite\@outlinefile
13314     \Hy@OutlineRerunCheck
13315     \immediate\openout\@outlinefile=\jobname.out\relax
13316     \ifHy@typexml
13317       \immediate\write\@outlinefile{<relaxxml>\relax}%
13318     \fi
13319   \fi
13320 \fi
13321 \endgroup
13322 }
13323 <*pdftex>
13324 \def\Hy@OutlineName#1#2#3#4{%
13325   \pdfoutline goto name{#2}count#3{#4}%
13326 }
13327 </pdftex>
13328 \def\check@bm@number#1{%
13329   \expandafter\ifx\csname B_#1\endcsname\relax
13330     0%
13331   \else
13332     \csname B_#1\endcsname
13333   \fi
13334 }
13335 \def\calc@bm@number#1{%

```

```

13336 \@tempcnta=\check@bm@number{#1}\relax
13337 \advance\@tempcnta by 1 %
13338 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13339 }
13340 \!/vtex>

13341 \ifHy@implicit
13342 \else
13343 \expandafter\endinput
13344 \fi

13345 \!/outlines>
13346 \!<*outlines | hypertex>

13347 \newlength\Hy@SectionHShift
13348 \def\Hy@SectionAnchorHref#1{%
13349 \ifx\protect\@typeset@protect
13350 \Hy@@@SectionAnchor{#1}%
13351 \fi
13352 }
13353 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
13354 \leavevmode
13355 \hbox to 0pt{%
13356 \kern-\Hy@SectionHShift
13357 \Hy@raisedlink{%
13358 \hyper@anchorstart{#1}\hyper@anchorend
13359 }%
13360 \hss
13361 }%
13362 }
13363 \let\H@old@ssect\@ssect
13364 \def\@ssect#1#2#3#4#5{%
13365 \Hy@MakeCurrentHrefAuto{section*}%
13366 \setlength{\Hy@SectionHShift}{#1}%
13367 \begingroup
13368 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13369 \toks\tw@\expandafter{%
13370 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13371 #5%
13372 }%
13373 \edef\x{\endgroup
13374 \the\toks@{\the\toks\tw@}%
13375 }\x
13376 }
13377 \let\H@old@schapter\@schapter
13378 \def\@schapter#1{%
13379 \begingroup
13380 \let\@mkboth\@gobbletwo
13381 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13382 \Hy@raisedlink{%
13383 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13384 }%
13385 \endgroup
13386 \H@old@schapter{#1}%
13387 }

```

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:

```

13388 \ltx@ifundefined{@chapter}{%}{%
13389   \let\Hy@org@chapter\@chapter
13390   \def\@chapter{%
13391     \def\Hy@next{%
13392       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13393       \Hy@raisedlink{%
13394         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13395       }%
13396     }%
13397     \ifnum\c@secnumdepth>\m@ne
13398       \ltx@ifundefined{if@mainmatter}%
13399       \iftrue{\csname if@mainmatter\endcsname}%
13400       \let\Hy@next\relax
13401     \fi
13402   \fi
13403   \Hy@next
13404   \Hy@org@chapter
13405 }%
13406 }

13407 \let\H@old@part\@part
13408 \begingroup\expandafter\expandafter\expandafter\endgroup
13409 \expandafter\ifx\csname chapter\endcsname\relax
13410   \let\Hy@secnum@part\z@
13411 \else
13412   \let\Hy@secnum@part\m@ne
13413 \fi
13414 \def\@part{%
13415   \ifnum\Hy@secnum@part>\c@secnumdepth
13416     \phantomsection
13417   \fi
13418   \H@old@part
13419 }

13420 \let\H@old@spart\@spart
13421 \def\@spart#1{%
13422   \Hy@MakeCurrentHrefAuto{part*}%
13423   \Hy@raisedlink{%
13424     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13425   }%
13426   \H@old@spart{#1}%
13427 }

13428 \let\H@old@sect\@sect
13429 \def\@sect#1#2#3#4#5#6[#7]#8{%
13430   \ifnum #2>\c@secnumdepth
13431     \expandafter\@firstoftwo
13432   \else
13433     \expandafter\@secondoftwo
13434   \fi
13435   {%
13436     \Hy@MakeCurrentHrefAuto{section*}%
13437     \setlength{\Hy@SectionHShift}{#3}%
13438     \begingroup
13439     \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13440     \toks\tw@\expandafter{%
13441       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13442       #8%
13443     }%
13444     \edef\x{\endgroup

```

```

13445 \the\toks@{\the\toks\tw@}%
13446 }\x
13447 }{%
13448 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13449 }%
13450 }

13451 </outlines | hypertex>
13452 <*outlines>

13453 \expandafter\def\csname Parent-4\endcsname{}
13454 \expandafter\def\csname Parent-3\endcsname{}
13455 \expandafter\def\csname Parent-2\endcsname{}
13456 \expandafter\def\csname Parent-1\endcsname{}
13457 \expandafter\def\csname Parent0\endcsname{}
13458 \expandafter\def\csname Parent1\endcsname{}
13459 \expandafter\def\csname Parent2\endcsname{}
13460 \expandafter\def\csname Parent3\endcsname{}
13461 \expandafter\def\csname Parent4\endcsname{}

13462 </outlines>

```

49 Compatibility with koma-script classes

```

13463 <*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.

```

13464 \def\Hy@tempa{%
13465 \def\@addchap{##1}##2{%
13466 \typeout{##2}%
13467 \if@twoside
13468 \@mkboth{##1}{}%
13469 \else
13470 \@mkboth{}{##1}%
13471 \fi
13472 \addtocontents{lof}{\protect\addvspace{10\p@}}%
13473 \addtocontents{lot}{\protect\addvspace{10\p@}}%
13474 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13475 \Hy@raisedlink{%
13476 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13477 }%
13478 \if@twocolumn
13479 \@topnewpage[\@makeschapterhead{##2}]%
13480 \else
13481 \@makeschapterhead{##2}%
13482 \@afterheading
13483 \fi
13484 \addcontentsline{toc}{chapter}{##1}%
13485 }%
13486 }
13487 \ifclassloaded{scrbook}{%
13488 \ifclasslater{scrbook}{2001/01/01}{%
13489 \let\Hy@tempa\@empty
13490 }{}%
13491 }{}%

```

```

13492 \@ifclassloaded{scrreprt}{%
13493   \@ifclasslater{scrreprt}{2001/01/01}{%
13494     \let\Hy@tempa\@empty
13495   }{}%
13496 }{}%
13497   \let\Hy@tempa\@empty
13498 }%
13499 }%
13500 \Hy@tempa
13501 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

13502 <*pd1enc>
13503 \DeclareFontEncoding{PD1}{}{}

```

Accents

```

13504 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
13505 \DeclareTextAccent{\'}{PD1}{\textacute}
13506 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
13507 \DeclareTextAccent{\~}{PD1}{\texttilde}
13508 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
13509 \DeclareTextAccent{\r}{PD1}{\textring}
13510 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
13511 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
13512 \DeclareTextAccent{\c}{PD1}{\textcedilla}
13513 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
13514 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
13515 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
13516 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
13517 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
13518 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
13519 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
13520 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
13521 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
13522 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
13523 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
13524 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
13525 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
13526 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
13527 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
13528 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
13529 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
13530 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
13531 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
13532 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
13533 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13534 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13535 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13536 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13537 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13538 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13539 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}

```

```

13540 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
13541 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
13542 \DeclareTextCommand{\newtie}{PD1}[1]{%
13543   \TextSymbolUnavailable{\newtie{#1}}#1%
13544 }

```

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

```

13545 % U+0009 (CHARACTER TABULATION)
13546 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
13547 % U+000A (LINE FEED)
13548 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
13549 % U+000D (CARRIAGE RETURN)
13550 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

13551 % U+02D8 BREVE; breve
13552 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
13553 % U+02C7 CARON; caron
13554 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13555 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13556 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
13557 % U+02D9 DOT ABOVE; dotaccent
13558 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13559 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13560 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13561 % U+02DB OGONEK; ogonek
13562 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13563 % U+02DA RING ABOVE; ring
13564 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13565 % U+02DC SMALL TILDE; ilde, *tilde
13566 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

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

\041: U+0021 EXCLAMATION MARK; exclam

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13567 % U+0022 QUOTATION MARK; quotedbl
13568 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
13569 % U+0023 NUMBER SIGN; numbersign
13570 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
13571 % U+0024 DOLLAR SIGN; dollar
13572 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
13573 % U+0025 PERCENT SIGN; percent
13574 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
13575 % U+0026 AMPERSAND; ampersand
13576 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

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\047: U+0027 APOSTROPHE; quotesingle

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13577 % U+0028 LEFT PARENTHESIS; parenleft
13578 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
13579 % U+0029 RIGHT PARENTHESIS; parenright
13580 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \051 U+0029

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\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

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13581 % U+002E FULL STOP; period

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13582 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E

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\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
 13583 % U+003C LESS-THAN SIGN; less
 13584 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13585 % U+003E GREATER-THAN SIGN; greater
 13586 \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
 13587 % U+005C REVERSE SOLIDUS; backslash
 13588 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13589 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13590 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13591 % U+005F LOW LINE; underscore
 13592 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13593 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13594 % U+0060 GRAVE ACCENT; grave
 13595 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13596 % U+0069 LATIN SMALL LETTER I; i
 13597 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13598 % U+007B LEFT CURLY BRACKET; braceleft
 13599 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13600 % U+007C VERTICAL LINE; *bar, verticalbar
 13601 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13602 % U+007D RIGHT CURLY BRACKET; braceright
 13603 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13604 % U+007E TILDE; asciitilde
 13605 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13606 % U+2022 BULLET; bullet
 13607 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13608 % U+2020 DAGGER; dagger
 13609 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13610 % U+2021 DOUBLE DAGGER; daggerdbl
 13611 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13612 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13613 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13614 % U+2014 EM DASH; emdash
 13615 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014

13616 % U+2013 EN DASH; endash
13617 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
13618 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
13619 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
13620 % U+2044 FRACTION SLASH; fraction
13621 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
13622 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
13623 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
13624 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
ingright
13625 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
13626 % U+2212 MINUS SIGN; minus
13627 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
13628 % U+2030 PER MILLE SIGN; perthousand
13629 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
13630 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
13631 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
13632 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
13633 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
13634 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
13635 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
13636 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
13637 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
13638 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
13639 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
13640 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
13641 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
13642 % U+2122 TRADE MARK SIGN; trademark
13643 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
13644 % U+FB01 LATIN SMALL LIGATURE FI; fi
13645 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
13646 % U+FB02 LATIN SMALL LIGATURE FL; fl
13647 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13648 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13649 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13650 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13651 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13652 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13653 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13654 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13655 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
13656 \DeclareTextCommand{\IJ}{PD1}{\230}
13657 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13658 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13659 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13660 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13661 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13662 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13663 % U+0153 LATIN SMALL LIGATURE OE; oe
13664 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13665 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13666 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
13667 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
13668 \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.

13669 % U+20AC EURO SIGN; *Euro, euro
 13670 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 13671 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13672 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 13673 % U+00A2 CENT SIGN; cent
 13674 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 13675 % U+00A3 POUND SIGN; sterling
 13676 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 13677 % U+00A4 CURRENCY SIGN; currency
 13678 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 13679 % U+00A5 YEN SIGN; yen
 13680 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 13681 % U+00A6 BROKEN BAR; brokenbar
 13682 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 13683 % U+00A7 SECTION SIGN; section
 13684 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 13685 % U+00A8 DIAERESIS; dieresis
 13686 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 13687 % U+00A9 COPYRIGHT SIGN; copyright
 13688 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 13689 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13690 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 13691 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 13692 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 13693 % U+00AC NOT SIGN; logicalnot
 13694 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 13695 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 13696 % U+00AE REGISTERED SIGN; registered
 13697 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 13698 % U+00AF MACRON; *macron, overscore
 13699 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 13700 % U+00B0 DEGREE SIGN; degree
 13701 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 13702 % U+00B1 PLUS-MINUS SIGN; plusminus
 13703 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 13704 % U+00B2 SUPERScript TWO; twosuperior
 13705 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 13706 % U+00B3 SUPERScript THREE; threesuperior
 13707 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 13708 % U+00B4 ACUTE ACCENT; acute
 13709 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 13710 % U+00B5 MICRO SIGN; mu, mul
 13711 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 13712 % U+00B6 PILCROW SIGN; paragraph
 13713 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 13714 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13715 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 13716 % U+00B8 CEDILLA; cedilla
 13717 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 13718 % U+00B9 SUPERScript ONE; onesuperior
 13719 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 13720 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13721 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 13722 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright

13723 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13724 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13725 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13726 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13727 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13728 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13729 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13730 % U+00BF INVERTED QUESTION MARK; questiondown
13731 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13732 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13733 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13734 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13735 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13736 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13737 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13738 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13739 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
13740 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13741 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
13742 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13743 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13744 % U+00C6 LATIN CAPITAL LETTER AE; AE
13745 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13746 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13747 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13748 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13749 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13750 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13751 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13752 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13753 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13754 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13755 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
13756 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13757 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13758 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13759 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13760 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13761 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13762 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13763 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
13764 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13765 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13766 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13767 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13768 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13769 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13770 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13771 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13772 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13773 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13774 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13775 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13776 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13777 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13778 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
13779 % U+00D7 MULTIPLICATION SIGN; multiply

13780 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13781 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13782 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13783 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13784 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13785 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13786 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13787 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13788 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13789 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13790 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
13791 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13792 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13793 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13794 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13795 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13796 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13797 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13798 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13799 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13800 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13801 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13802 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13803 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13804 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13805 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13806 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13807 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13808 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13809 % U+00E6 LATIN SMALL LETTER AE; ae
13810 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13811 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13812 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13813 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13814 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13815 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13816 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13817 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13818 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13819 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13820 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13821 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13822 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13823 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13824 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13825 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13826 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13827 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13828 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13829 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13830 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13831 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13832 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13833 % U+00F0 LATIN SMALL LETTER ETH; eth
13834 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13835 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13836 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1

13837 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 13838 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
 13839 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 13840 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
 13841 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 13842 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
 13843 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 13844 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
 13845 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 13846 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
 13847 % U+00F7 DIVISION SIGN; divide
 13848 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 13849 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 13850 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 13851 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 13852 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
 13853 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 13854 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
 13855 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 13856 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
 13857 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 13858 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
 13859 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 13860 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
 13861 % U+00FE LATIN SMALL LETTER THORN; thorn
 13862 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 13863 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 13864 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
 13865 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13866 \DeclareTextCommand{\SS}{PD1}{SS}
 13867 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13868 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 13869 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 13870 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 13871 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 13872 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 13873 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 13874 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 13875 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13876 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 13877 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 13878 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 13879 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 13880 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 13881 \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).

13882 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
 13883 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
 13884 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
 13885 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
 13886 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute

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13887 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13888 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13889 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13890 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13891 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13892 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13893 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13894 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13895 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
13896 </pdlenc>

```

50.2 PU encoding

```

13897 <*puenc>
13898 \DeclareFontEncoding{PU}{-}{-}

```

50.2.1 NFSS2 accents

```

13899 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
13900 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
13901 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
13902 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
13903 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
13904 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
13905 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
13906 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
13907 % U+0304 COMBINING MACRON; macroncmb
13908 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
13909 % U+0306 COMBINING BREVE; brevecmb
13910 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
13911 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
13912 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
13913 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
13914 % U+0308 COMBINING DIAERESIS; dieresiscomb
13915 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
13916 % U+030A COMBINING RING ABOVE; ringcmb
13917 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
13918 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
13919 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
13920 % U+030C COMBINING CARON; caroncmb
13921 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
13922 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13923 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
13924 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
13925 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13926 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
13927 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
13928 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
13929 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13930 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
13931 % U+0327 COMBINING CEDILLA; cedillacmb
13932 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
13933 % U+0328 COMBINING OGONEK; ogonekcmb
13934 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
13935 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
13936 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
13937 % U+20DD COMBINING ENCLOSING CIRCLE
13938 \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.

```

13939 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
13940 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
13941 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}
13942 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
13943 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
13944 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
13945 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13946 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
13947 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
13948 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13949 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13950 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
13951 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13952 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13953 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13954 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13955 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13956 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13957 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

13958 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13959 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13960 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
13961 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13962 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13963 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13964 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13965 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13966 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13967 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13968 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13969 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13970 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13971 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13972 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13973 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13974 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13975 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13976 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13977 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13978 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13979 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'\{#1}}
13980 \DeclareTextCommand{\capitalacute}{PU}[1]{\'\{#1}}
13981 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{\{#1}}
13982 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{\{#1}}
13983 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"\{#1}}
13984 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13985 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13986 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13987 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13988 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13989 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}
13990 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13991 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```
13992 % U+0009 (CHARACTER TABULATION)
13993 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13994 % U+000A (LINE FEED)
13995 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13996 % U+000D (CARRIAGE RETURN)
13997 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
13998 % U+0022 QUOTATION MARK; quotedbl
13999 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
14000 % U+0023 NUMBER SIGN; numbersign
14001 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
14002 % U+0024 DOLLAR SIGN; dollar
14003 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
14004 % U+0025 PERCENT SIGN; percent
14005 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
14006 % U+0026 AMPERSAND; ampersand
14007 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
14008 % U+0027 APOSTROPHE; quotesingle
14009 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
14010 % U+0028 LEFT PARENTHESIS; parenleft
14011 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
14012 % U+0029 RIGHT PARENTHESIS; parenright
14013 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
14014 % U+002A ASTERISK; asterisk
14015 \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
14016 % U+003C LESS-THAN SIGN; less
14017 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
\80\075: U+003D EQUALS SIGN; equal
14018 % U+003E GREATER-THAN SIGN; greater
14019 \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
14020 % U+005C REVERSE SOLIDUS; backslash
14021 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
```

14022 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14023 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 14024 % U+005F LOW LINE; underscore
 14025 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 14026 % U+0060 GRAVE ACCENT; grave
 14027 \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
 14028 % U+0069 LATIN SMALL LETTER I; i
 14029 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 14030 \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
 14031 % U+007B LEFT CURLY BRACKET; braceleft
 14032 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 14033 % U+007C VERTICAL LINE; *bar, verticalbar
 14034 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 14035 % U+007D RIGHT CURLY BRACKET; braceright
 14036 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 14037 % U+007E TILDE; asciitilde
 14038 \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
 14039 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 14040 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 14041 % U+00A2 CENT SIGN; cent
 14042 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 14043 % U+00A3 POUND SIGN; sterling
 14044 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 14045 % U+00A4 CURRENCY SIGN; currency
 14046 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 14047 % U+00A5 YEN SIGN; yen
 14048 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 14049 % U+00A6 BROKEN BAR; brokenbar
 14050 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 14051 % U+00A7 SECTION SIGN; section
 14052 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 14053 % U+00A8 DIAERESIS; dieresis
 14054 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 14055 % U+00A9 COPYRIGHT SIGN; copyright
 14056 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 14057 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 14058 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 14059 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 14060 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 14061 % U+00AC NOT SIGN; logicalnot
 14062 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 14063 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 14064 % U+00AE REGISTERED SIGN; registered

14065 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
14066 % U+00AF MACRON; *macron, overscore
14067 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
14068 % U+00B0 DEGREE SIGN; degree
14069 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
14070 % U+00B1 PLUS-MINUS SIGN; plusminus
14071 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
14072 % U+00B2 SUPERScript TWO; twosuperior
14073 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
14074 % U+00B3 SUPERScript THREE; threesuperior
14075 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
14076 % U+00B4 ACUTE ACCENT; acute
14077 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
14078 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
14079 % U+00B5 MICRO SIGN; mu, mul
14080 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
14081 % U+00B6 PILCROW SIGN; paragraph
14082 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
14083 % U+00B7 MIDDLE DOT; middot, *periodcentered
14084 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
14085 % U+00B8 CEDILLA; cedilla
14086 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
14087 % U+00B9 SUPERScript ONE; onesuperior
14088 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
14089 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14090 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
14091 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
14092 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
14093 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14094 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
14095 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14096 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
14097 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14098 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
14099 % U+00BF INVERTED QUESTION MARK; questiondown
14100 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
14101 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14102 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
14103 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14104 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
14105 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14106 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
14107 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14108 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
14109 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14110 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
14111 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14112 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
14113 % U+00C6 LATIN CAPITAL LETTER AE; AE
14114 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
14115 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14116 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
14117 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14118 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
14119 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14120 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9

14121 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14122 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
14123 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14124 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
14125 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14126 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
14127 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14128 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
14129 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14130 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
14131 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14132 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
14133 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14134 \DeclareTextCompositeCommand{\DH}{PU}{\80\320}% U+00D0
14135 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14136 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
14137 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14138 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
14139 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14140 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
14141 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14142 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
14143 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14144 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
14145 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14146 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
14147 % U+00D7 MULTIPLICATION SIGN; multiply
14148 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
14149 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14150 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
14151 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14152 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
14153 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14154 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
14155 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14156 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
14157 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14158 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
14159 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14160 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
14161 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14162 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
14163 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14164 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
14165 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14166 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
14167 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14168 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
14169 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14170 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
14171 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14172 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
14173 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14174 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
14175 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14176 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14177 % U+00E6 LATIN SMALL LETTER AE; ae

14178 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
14179 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14180 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14181 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14182 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
14183 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14184 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14185 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14186 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
14187 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14188 \DeclareTextCompositeCommand{\\"}{PU}{e}{\80\353}% U+00EB
14189 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14190 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
14191 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14192 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14193 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\355}% U+00ED
14194 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14195 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14196 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14197 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14198 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14199 \DeclareTextCompositeCommand{\\"}{PU}{i}{\80\357}% U+00EF
14200 \DeclareTextCompositeCommand{\\"}{PU}{i}{\80\357}% U+00EF
14201 % U+00F0 LATIN SMALL LETTER ETH; eth
14202 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
14203 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14204 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
14205 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14206 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
14207 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14208 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
14209 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14210 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
14211 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14212 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
14213 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14214 \DeclareTextCompositeCommand{\\"}{PU}{o}{\80\366}% U+00F6
14215 % U+00F7 DIVISION SIGN; divide
14216 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
14217 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14218 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
14219 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14220 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
14221 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14222 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
14223 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14224 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
14225 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14226 \DeclareTextCompositeCommand{\\"}{PU}{u}{\80\374}% U+00FC
14227 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14228 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
14229 % U+00FE LATIN SMALL LETTER THORN; thorn
14230 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
14231 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14232 \DeclareTextCompositeCommand{\\"}{PU}{y}{\80\377}% U+00FF

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

14233 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
14234 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
14235 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
14236 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
14237 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
14238 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
14239 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
14240 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
14241 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
14242 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
14243 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
14244 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
14245 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
14246 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
14247 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
14248 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
14249 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
14250 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
14251 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
14252 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
14253 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
14254 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
14255 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
14256 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
14257 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
14258 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
14259 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
14260 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
14261 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
14262 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
14263 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
14264 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
14265 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
14266 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
14267 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
14268 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
14269 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
14270 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
14271 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
14272 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
14273 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
14274 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
14275 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
14276 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
14277 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
14278 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
14279 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
14280 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
14281 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14282 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14283 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14284 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14285 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14286 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14287 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14288 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B

14289 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14290 \DeclareTextCompositeCommand{\`}{PU}{G}{\81\034}% U+011C
14291 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14292 \DeclareTextCompositeCommand{\`}{PU}{g}{\81\035}% U+011D
14293 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14294 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14295 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14296 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14297 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14298 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14299 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14300 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14301 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
14302 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14303 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14304 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14305 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
14306 \DeclareTextCompositeCommand{\`}{PU}{H}{\81\044}% U+0124
14307 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14308 \DeclareTextCompositeCommand{\`}{PU}{h}{\81\045}% U+0125
14309 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14310 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14311 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14312 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
14313 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14314 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14315 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14316 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14317 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14318 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14319 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14320 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14321 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14322 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14323 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14324 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14325 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14326 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14327 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14328 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14329 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14330 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14331 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14332 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14333 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14334 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14335 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14336 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
14337 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14338 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14339 % U+0133 LATIN SMALL LIGATURE IJ; ij
14340 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
14341 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
14342 \DeclareTextCompositeCommand{\`}{PU}{J}{\81\064}% U+0134
14343 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
14344 \DeclareTextCompositeCommand{\`}{PU}{j}{\81\065}% U+0135

14345 \DeclareTextCompositeCommand{\~}{PU}{\j}{\81\065}% U+0135
 14346 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 14347 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 14348 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 14349 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be \textkgreenlandic, following the glyph naming convention. However latex/base/inputenc.dtx has choosen \textkra.

14350 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 14351 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 14352 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 14353 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 14354 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 14355 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 14356 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 14357 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 14358 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 14359 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 14360 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 14361 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 14362 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 14363 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

There seems to be no variants of letters 'L' and 'l' with a dot above (reasonable). Therefore the \. accent is reused instead of making a separate accent macro \textmiddledot.

14364 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 14365 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 14366 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 14367 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 14368 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14369 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 14370 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14371 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 14372 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 14373 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 14374 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 14375 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 14376 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 14377 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 14378 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 14379 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 14380 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 14381 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 14382 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 14383 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 14384 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 14385 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 14386 % U+014A LATIN CAPITAL LETTER ENG; Eng
 14387 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 14388 % U+014B LATIN SMALL LETTER ENG; eng
 14389 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 14390 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 14391 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C

14392 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 14393 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 14394 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 14395 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 14396 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 14397 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 14398 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac
 acute, Ohungarumlaut
 14399 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 14400 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblac
 acute, ohun
 garumlaut
 14401 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 14402 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14403 \DeclareTextCompositeCommand{\OE}{PU}{\81\122}% U+0152
 14404 % U+0153 LATIN SMALL LIGATURE OE; oe
 14405 \DeclareTextCompositeCommand{\oe}{PU}{\81\123}% U+0153
 14406 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 14407 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 14408 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 14409 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 14410 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac
 cent
 14411 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 14412 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 14413 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 14414 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 14415 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 14416 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 14417 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 14418 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 14419 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 14420 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 14421 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 14422 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 14423 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 14424 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 14425 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 14426 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 14427 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 14428 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 14429 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 14430 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 14431 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 14432 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 14433 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 14434 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac
 cent
 14435 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 14436 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 14437 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 14438 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 14439 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 14440 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 14441 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 14442 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 14443 \DeclareTextCompositeCommand{\textTslash}{PU}{\81\146}% U+0166
 14444 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar

14445 \DeclareTextCommand{\textslash}{PU}{\81\147}% U+0167
14446 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14447 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14448 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14449 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14450 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14451 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14452 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14453 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14454 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14455 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14456 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14457 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14458 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14459 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14460 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14461 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14462 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
14463 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
14464 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
14465 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
14466 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
14467 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
14468 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
14469 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
14470 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
14471 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
14472 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
14473 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
14474 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
14475 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
14476 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
14477 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
14478 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14479 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
14480 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
14481 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
14482 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
14483 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
14484 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
14485 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
14486 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
14487 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
14488 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14489 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
14490 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14491 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
14492 % U+017F LATIN SMALL LETTER LONG S; longs, slong
14493 \DeclareTextCommand{\textlong}{PU}{\81\177}% U+017F

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

14494 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14495 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
14496 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
14497 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD

14498 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
14499 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
14500 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
14501 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
14502 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
14503 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
14504 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
14505 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
14506 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
14507 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
14508 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
14509 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
14510 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
14511 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
14512 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
14513 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
14514 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
14515 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
14516 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
14517 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14518 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14519 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14520 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14521 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14522 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14523 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14524 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14525 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14526 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14527 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14528 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14529 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14530 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14531 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14532 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14533 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14534 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14535 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14536 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14537 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
14538 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14539 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
14540 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14541 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
14542 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14543 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
14544 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14545 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
14546 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14547 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
14548 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14549 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14550 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14551 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14552 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave

14553 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 14554 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 14555 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 14556 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; idblgrave
 14557 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 14558 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 14559 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14560 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14561 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 14562 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 14563 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 14564 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 14565 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 14566 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 14567 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 14568 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 14569 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 14570 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 14571 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 14572 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14573 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14574 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14575 % U+021F LATIN SMALL LETTER H WITH CARON
 14576 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14577 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14578 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14579 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14580 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14581 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14582 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14583 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14584 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14585 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14586 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14587 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14588 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14589 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14590 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14591 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14592 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14593 % U+0237 LATIN SMALL LETTER DOTLESS J
 14594 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

14595 % U+02C7 CARON; caron
 14596 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14597 % U+02D8 BREVE; breve
 14598 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14599 % U+02D9 DOT ABOVE; dotaccent
 14600 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14601 % U+02DA RING ABOVE; ring
 14602 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14603 % U+02DB OGONEK; ogonek
 14604 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14605 % U+02DC SMALL TILDE; ilde, *tilde
 14606 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14607 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut

14608 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14609 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14610 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14611 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14612 % U+02F7 MODIFIER LETTER LOW TILDE
 14613 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

14614 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14615 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14616 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14617 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14618 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14619 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14620 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14621 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14622 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinvertedddoublecmb
 14623 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

14624 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 14625 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 14626 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 14627 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 14628 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 14629 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 14630 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 14631 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 14632 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 14633 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 14634 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 14635 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 14636 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 cronos
 14637 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 14638 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
 14639 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 14640 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 14641 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 14642 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; io-
 tadiesistonos
 14643 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
 14644 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 14645 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 14646 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 14647 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 14648 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 14649 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 14650 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 14651 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 14652 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 14653 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 14654 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 14655 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 14656 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 14657 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 14658 % U+0398 GREEK CAPITAL LETTER THETA; Theta

14659 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14660 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14661 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14662 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14663 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14664 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14665 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14666 % U+039C GREEK CAPITAL LETTER MU; Mu
14667 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14668 % U+039D GREEK CAPITAL LETTER NU; Nu
14669 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14670 % U+039E GREEK CAPITAL LETTER XI; Xi
14671 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14672 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14673 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14674 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14675 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14676 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14677 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
14678 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
14679 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
14680 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
14681 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
14682 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
14683 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
14684 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
14685 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
14686 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
14687 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
14688 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
14689 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
14690 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
14691 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14692 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14693 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14694 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14695 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilon
14696 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14697 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
14698 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14699 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
14700 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14701 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
14702 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14703 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
14704 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
14705 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilon
14706 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
14707 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
14708 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
14709 % U+03B2 GREEK SMALL LETTER BETA; beta
14710 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
14711 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
14712 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
14713 % U+03B4 GREEK SMALL LETTER DELTA; delta

14714 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
14715 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
14716 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
14717 % U+03B6 GREEK SMALL LETTER ZETA; zeta
14718 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
14719 % U+03B7 GREEK SMALL LETTER ETA; eta
14720 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
14721 % U+03B8 GREEK SMALL LETTER THETA; theta
14722 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
14723 % U+03B9 GREEK SMALL LETTER IOTA; iota
14724 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
14725 % U+03BA GREEK SMALL LETTER KAPPA; kappa
14726 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
14727 % U+03BB GREEK SMALL LETTER LAMDA; lambda
14728 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
14729 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
14730 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
14731 % U+03BD GREEK SMALL LETTER NU; nu
14732 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
14733 % U+03BE GREEK SMALL LETTER XI; xi
14734 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
14735 % U+03BF GREEK SMALL LETTER OMICRON; omicron
14736 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
14737 % U+03C0 GREEK SMALL LETTER PI; pi
14738 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
14739 % U+03C1 GREEK SMALL LETTER RHO; rho
14740 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
14741 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
14742 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
14743 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
14744 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
14745 % U+03C4 GREEK SMALL LETTER TAU; tau
14746 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
14747 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
14748 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
14749 % U+03C6 GREEK SMALL LETTER PHI; phi
14750 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
14751 % U+03C7 GREEK SMALL LETTER CHI; chi
14752 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
14753 % U+03C8 GREEK SMALL LETTER PSI; psi
14754 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
14755 % U+03C9 GREEK SMALL LETTER OMEGA; omega
14756 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
14757 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
14758 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
14759 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
14760 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
14761 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
14762 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
14763 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
14764 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
14765 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
14766 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
14767 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
14768 % U+03DA GREEK LETTER STIGMA; Stigmagreek
14769 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA

14770 % U+03DB GREEK SMALL LETTER STIGMA
 14771 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 14772 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14773 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14774 % U+03DD GREEK SMALL LETTER DIGAMMA
 14775 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14776 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14777 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14778 % U+03DF GREEK SMALL LETTER KOPPA
 14779 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14780 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 14781 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 14782 % U+03E1 GREEK SMALL LETTER SAMPI
 14783 \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.

14784 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 14785 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
 14786 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
 14787 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 14788 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
 14789 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 14790 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 14791 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 14792 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
 14793 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
 14794 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 14795 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 14796 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
 14797 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyril-
 lic, *afii10055
 14798 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 14799 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
 14800 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 14801 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
 14802 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 14803 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 14804 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 14805 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 14806 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 14807 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 14808 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 14809 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 14810 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 14811 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
 14812 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 14813 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
 14814 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
 14815 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 14816 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
 14817 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
 14818 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
 14819 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
 14820 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
 14821 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018

14822 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14823 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14824 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14825 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14826 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14827 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14828 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14829 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14830 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14831 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14832 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14833 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14834 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14835 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
14836 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14837 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
14838 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14839 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14840 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
14841 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14842 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14843 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14844 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14845 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14846 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14847 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14848 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14849 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14850 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14851 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14852 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14853 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14854 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14855 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14856 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14857 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14858 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14859 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14860 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14861 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14862 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14863 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14864 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14865 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14866 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14867 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14868 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14869 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14870 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14871 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14872 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14873 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14874 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14875 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14876 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14877 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14878 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047

14879 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14880 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14881 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14882 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14883 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14884 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14885 \DeclareTextCommand{\cyr a}{PU}{\84\060}% U+0430
14886 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14887 \DeclareTextCommand{\cyr b}{PU}{\84\061}% U+0431
14888 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14889 \DeclareTextCommand{\cyr v}{PU}{\84\062}% U+0432
14890 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14891 \DeclareTextCommand{\cyr g}{PU}{\84\063}% U+0433
14892 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14893 \DeclareTextCommand{\cyr d}{PU}{\84\064}% U+0434
14894 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14895 \DeclareTextCommand{\cyr e}{PU}{\84\065}% U+0435
14896 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14897 \DeclareTextCommand{\cyr zh}{PU}{\84\066}% U+0436
14898 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14899 \DeclareTextCommand{\cyr z}{PU}{\84\067}% U+0437
14900 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14901 \DeclareTextCommand{\cyr i}{PU}{\84\070}% U+0438
14902 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14903 \DeclareTextCommand{\cyr ishrt}{PU}{\84\071}% U+0439
14904 \DeclareTextCompositeCommand{\U}{PU}{\cyr i}{\84\071}% U+0439
14905 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14906 \DeclareTextCommand{\cyr k}{PU}{\84\072}% U+043A
14907 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14908 \DeclareTextCommand{\cyr l}{PU}{\84\073}% U+043B
14909 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14910 \DeclareTextCommand{\cyr m}{PU}{\84\074}% U+043C
14911 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14912 \DeclareTextCommand{\cyr n}{PU}{\84\075}% U+043D
14913 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14914 \DeclareTextCommand{\cyr o}{PU}{\84\076}% U+043E
14915 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14916 \DeclareTextCommand{\cyr p}{PU}{\84\077}% U+043F
14917 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14918 \DeclareTextCommand{\cyr r}{PU}{\84\100}% U+0440
14919 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14920 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
14921 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14922 \DeclareTextCommand{\cyr t}{PU}{\84\102}% U+0442
14923 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14924 \DeclareTextCommand{\cyr u}{PU}{\84\103}% U+0443
14925 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14926 \DeclareTextCommand{\cyr f}{PU}{\84\104}% U+0444
14927 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14928 \DeclareTextCommand{\cyr h}{PU}{\84\105}% U+0445
14929 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14930 \DeclareTextCommand{\cyr c}{PU}{\84\106}% U+0446
14931 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14932 \DeclareTextCommand{\cyr ch}{PU}{\84\107}% U+0447
14933 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14934 \DeclareTextCommand{\cyr sh}{PU}{\84\110}% U+0448
14935 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic

14936 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14937 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14938 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14939 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14940 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14941 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14942 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
14943 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14944 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
14945 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14946 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
14947 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14948 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
14949 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14950 \DeclareTextCompositeCommand{\'}{PU}{\cyrYe}{\84\120}% U+0450
14951 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14952 \DeclareTextCommand{\cyrYo}{PU}{\84\121}% U+0451
14953 \DeclareTextCompositeCommand{\"}{PU}{\cyrYe}{\84\121}% U+0451
14954 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14955 \DeclareTextCommand{\cyrDje}{PU}{\84\122}% U+0452
14956 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14957 \DeclareTextCompositeCommand{\'}{PU}{\cyrG}{\84\123}% U+0453
14958 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14959 \DeclareTextCommand{\cyrIe}{PU}{\84\124}% U+0454
14960 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14961 \DeclareTextCommand{\cyrDze}{PU}{\84\125}% U+0455
14962 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
14963 \DeclareTextCommand{\cyrIi}{PU}{\84\126}% U+0456
14964 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14965 \DeclareTextCommand{\cyrYi}{PU}{\84\127}% U+0457
14966 \DeclareTextCompositeCommand{\"}{PU}{\cyrIi}{\84\127}% U+0457
14967 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14968 \DeclareTextCommand{\cyrJe}{PU}{\84\130}% U+0458
14969 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14970 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
14971 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14972 \DeclareTextCommand{\cyrNje}{PU}{\84\132}% U+045A
14973 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14974 \DeclareTextCommand{\cyrTshe}{PU}{\84\133}% U+045B
14975 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14976 \DeclareTextCompositeCommand{\'}{PU}{\cyrK}{\84\134}% U+045C
14977 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14978 \DeclareTextCompositeCommand{\'}{PU}{\cyrI}{\84\135}% U+045D
14979 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14980 \DeclareTextCommand{\cyrUshrt}{PU}{\84\136}% U+045E
14981 \DeclareTextCompositeCommand{\U}{PU}{\cyrU}{\84\136}% U+045E
14982 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14983 \DeclareTextCommand{\cyrDzhe}{PU}{\84\137}% U+045F
14984 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14985 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14986 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14987 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14988 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14989 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14990 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14991 \DeclareTextCommand{\cyrYat}{PU}{\84\143}% U+0463

14992 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 14993 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 14994 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 14995 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 14996 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
 14997 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 14998 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
 14999 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 15000 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
 tifiedcyrillic
 15001 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 15002 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
 fiedcyrillic
 15003 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 15004 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigncyrillic
 15005 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 15006 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigncyrillic
 15007 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 15008 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbignotified-
 cyrillic
 15009 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 15010 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbignotifiedcyril-
 lic
 15011 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 15012 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 15013 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 15014 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 15015 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 15016 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 15017 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 15018 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 15019 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 15020 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 15021 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 15022 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 15023 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 15024 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 15025 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 15026 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 15027 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 15028 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; Izhitsadblgravecyrillic
 15029 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 15030 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; izhitsadblgravecyrillic
 15031 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 15032 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 15033 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 15034 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 15035 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 15036 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 15037 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 15038 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 15039 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 15040 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-
 cyrillic

15041 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 15042 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-cyrillic
 15043 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 15044 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 15045 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 15046 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 15047 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 15048 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 15049 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 15050 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 15051 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 15052 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 15053 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 15054 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 15055 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 15056 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 15057 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 15058 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 15059 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 15060 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 15061 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 15062 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 15063 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 15064 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 15065 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 15066 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 15067 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 15068 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 15069 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 15070 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 15071 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 15072 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 15073 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 15074 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 15075 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 15076 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 15077 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 15078 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 15079 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496

15080 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 15081 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 15082 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 15083 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 15084 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 15085 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 15086 \DeclareTextCommand{\cyrzdesc}{PU}{\84\231}% U+0499
 15087 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 15088 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 15089 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 15090 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 15091 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 15092 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kavericalstrokecyrillic
 15093 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 15094 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kavericalstrokecyrillic
 15095 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 15096 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 15097 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 15098 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 15099 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 15100 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 15101 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 15102 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 15103 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 15104 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 15105 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 15106 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 15107 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 15108 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 15109 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 15110 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 15111 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 15112 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 15113 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 15114 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 15115 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 15116 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 15117 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 15118 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 15119 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 15120 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 15121 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 15122 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA

15123 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-cyrillic
15124 \DeclareTextCommand{\cyrtdsc}{PU}{\84\253}% U+04AB
15125 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
15126 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
15127 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
15128 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-cyrillic
15129 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
15130 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
15131 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
15132 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
15133 \DeclareTextCommand{\cyr}{PU}{\84\257}% U+04AF
15134 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
15135 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
15136 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
15137 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
15138 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
15139 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
15140 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescender-cyrillic
15141 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
15142 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
15143 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
15144 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
15145 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
15146 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
15147 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
15148 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
15149 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
15150 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
verticalstrokecyrillic
15151 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
15152 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
verticalstrokecyrillic
15153 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
15154 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
15155 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
15156 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
15157 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
15158 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-cyrillic
15159 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
15160 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
15161 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
15162 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
15163 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
15164 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE

15165 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 15166 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 15167 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 15168 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 15169 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 15170 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 15171 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 15172 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 15173 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 15174 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 15175 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 15176 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 15177 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 15178 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 15179 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 15180 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 15181 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 15182 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 15183 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 15184 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 15185 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15186 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
 15187 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15188 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
 15189 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15190 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15191 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15192 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15193 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15194 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15195 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15196 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15197 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 15198 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 15199 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 15200 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 15201 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 15202 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 15203 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 15204 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 15205 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 15206 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 15207 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 15208 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
 15209 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 15210 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 15211 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 15212 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 15213 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 15214 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-sicyrillic
 15215 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA

15216 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
 siscyrillic
 15217 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
 15218 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 15219 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 15220 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrillic
 15221 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
 15222 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic
 15223 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 15224 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 15225 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 15226 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrillic
 15227 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 15228 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 15229 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 15230 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 15231 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2
 15232 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 15233 \DeclareTextCompositeCommand{=}{PU}{\cyri}{\84\343}% U+04E3
 15234 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 15235 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 15236 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 15237 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 15238 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyril-
 lic
 15239 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 15240 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 15241 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 15242 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 15243 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 15244 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 15245 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 15246 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERE-
 SIS; Obarreddieresiscyrillic
 15247 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 15248 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarred-
 dieresiscyrillic
 15249 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 15250 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 15251 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 15252 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 15253 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 15254 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 15255 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 15256 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 15257 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
 15258 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 15259 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 15260 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 15261 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 15262 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 15263 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2

15264 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 15265 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 15266 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 15267 \DeclareTextCompositeCommand{\"}{PU}{\CYRCH}{\84\364}% U+04F4
 15268 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 cyrillic
 15269 \DeclareTextCompositeCommand{\"}{PU}{\cyrch}{\84\365}% U+04F5
 15270 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 15271 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 15272 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 15273 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 15274 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 15275 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
 15276 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 15277 \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
 15278 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15279 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15280 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15281 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

15282 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15283 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

15284 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15285 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 15286 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15287 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 15288 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15289 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15290 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15291 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15292 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15293 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 15294 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15295 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 15296 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15297 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 15298 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 15299 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 15300 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 15301 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 15302 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 15303 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 15304 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 15305 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E

15306 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
15307 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
15308 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
15309 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
15310 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
15311 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
15312 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
15313 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
15314 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
15315 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
15316 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
15317 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
15318 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
15319 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
15320 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
15321 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
15322 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
15323 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
15324 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
15325 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
15326 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
15327 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
15328 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15329 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15330 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15331 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15332 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15333 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15334 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15335 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15336 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15337 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15338 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15339 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15340 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15341 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15342 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15343 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15344 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15345 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15346 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15347 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15348 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15349 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15350 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15351 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15352 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15353 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15354 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15355 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15356 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15357 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15358 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15359 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15360 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15361 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15362 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent

15363 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15364 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15365 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15366 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15367 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15368 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15369 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15370 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15371 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15372 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15373 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15374 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15375 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15376 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15377 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15378 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15379 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15380 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15381 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
15382 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15383 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
15384 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
15385 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\202}% U+1E82
15386 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
15387 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\203}% U+1E83
15388 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
15389 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
15390 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
15391 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
15392 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
15393 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
15394 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
15395 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
15396 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
15397 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
15398 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
15399 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
15400 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
15401 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
15402 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
15403 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
15404 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
15405 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
15406 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
15407 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
15408 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
15409 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
15410 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
15411 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
15412 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
15413 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
15414 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
15415 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
15416 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
15417 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
15418 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
15419 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97

15420 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15421 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15422 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15423 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15424 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15425 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15426 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15427 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15428 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15429 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15430 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15431 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 15432 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15433 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 15434 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15435 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15436 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15437 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15438 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 15439 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15440 % U+2013 EN DASH; endash
 15441 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15442 % U+2014 EM DASH; emdash
 15443 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15444 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15445 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15446 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15447 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15448 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15449 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15450 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15451 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15452 % U+201C LEFT DOUBLE QUOTATION MARK; quotedbllleft
 15453 \DeclareTextCommand{\textquotedbllleft}{PU}{\9040\034}% U+201C
 15454 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedbllright
 15455 \DeclareTextCommand{\textquotedbllright}{PU}{\9040\035}% U+201D
 15456 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15457 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15458 % U+2020 DAGGER; dagger
 15459 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15460 % U+2021 DOUBLE DAGGER; daggerdbl
 15461 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15462 % U+2022 BULLET; bullet
 15463 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15464 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15465 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15466 % U+2030 PER MILLE SIGN; perthousand
 15467 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15468 % U+2031 PER TEN THOUSAND SIGN
 15469 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15470 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guils-
 inglleft
 15471 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039

15472 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guiltingright
15473 \DeclareTextCommand{\guiltingright}{PU}{\9040\072}% U+203A
15474 % U+203B REFERENCE MARK; referencemark
15475 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
15476 % U+203D INTERROBANG
15477 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
15478 % U+2044 FRACTION SLASH; fraction
15479 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
15480 % U+2045 LEFT SQUARE BRACKET WITH QUILL
15481 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
15482 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
15483 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
15484 % U+2052 COMMERCIAL MINUS SIGN
15485 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

15486 % U+2070 SUPERSCRIPT ZERO; zerosuperior
15487 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
15488 % U+2074 SUPERSCRIPT FOUR; foursuperior
15489 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
15490 % U+2075 SUPERSCRIPT FIVE; fivesuperior
15491 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
15492 % U+2076 SUPERSCRIPT SIX; sixsuperior
15493 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
15494 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
15495 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
15496 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
15497 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
15498 % U+2079 SUPERSCRIPT NINE; ninesuperior
15499 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
15500 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
15501 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
15502 % U+207B SUPERSCRIPT MINUS
15503 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
15504 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
15505 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
15506 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
15507 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
15508 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
15509 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
15510 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
15511 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
15512 % U+2080 SUBSCRIPT ZERO; zeroinferior
15513 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
15514 % U+2081 SUBSCRIPT ONE; oneinferior
15515 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
15516 % U+2082 SUBSCRIPT TWO; twoinferior
15517 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
15518 % U+2083 SUBSCRIPT THREE; threeinferior
15519 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
15520 % U+2084 SUBSCRIPT FOUR; fourinferior
15521 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
15522 % U+2085 SUBSCRIPT FIVE; fiveinferior
15523 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
15524 % U+2086 SUBSCRIPT SIX; sixinferior
15525 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086

15526 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15527 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15528 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15529 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15530 % U+2089 SUBSCRIPT NINE; nineinferior
 15531 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15532 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15533 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15534 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15535 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

15536 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15537 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15538 % U+20A4 LIRA SIGN; afii08941, *lira
 15539 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15540 % U+20A6 NAIRA SIGN
 15541 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15542 % U+20A7 PESETA SIGN; peseta
 15543 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15544 % U+20A9 WON SIGN; won
 15545 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15546 % U+20AB DONG SIGN; dong
 15547 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15548 % U+20AC EURO SIGN; *Euro, euro
 15549 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15550 % U+20B1 PESO SIGN
 15551 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15552 % U+20B2 GUARANI SIGN
 15553 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

15554 % U+2103 DEGREE CELSIUS; centigrade
 15555 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15556 % U+2116 NUMERO SIGN; *afii61352, numero
 15557 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15558 % U+2117 SOUND RECORDING COPYRIGHT
 15559 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15560 % U+211E PRESCRIPTION TAKE; prescription
 15561 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15562 % U+2120 SERVICE MARK
 15563 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15564 % U+2122 TRADE MARK SIGN; trademark
 15565 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15566 % U+2126 OHM SIGN; Ohm, Omega
 15567 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15568 % U+2127 INVERTED OHM SIGN
 15569 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15570 % U+212B ANGSTROM SIGN; angstrom
 15571 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15572 % U+212E ESTIMATED SYMBOL; estimated
 15573 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15574 % U+2135 ALEF SYMBOL; aleph
 15575 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15576 % U+2190 LEFTWARDS ARROW; arrowleft

15577 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15578 % U+2191 UPWARDS ARROW; arrowup
 15579 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15580 % U+2192 RIGHTWARDS ARROW; arrowright
 15581 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15582 % U+2193 DOWNWARDS ARROW; arrowdown
 15583 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

15584 % U+2212 MINUS SIGN; minus
 15585 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15586 % U+221A SQUARE ROOT; radical
 15587 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

15588 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 15589 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 15590 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 15591 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

15592 % U+2422 BLANK SYMBOL
 15593 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 15594 % U+2423 OPEN BOX; blank
 15595 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

15596 % U+2460 CIRCLED DIGIT ONE; onecircle
 15597 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 15598 % U+2461 CIRCLED DIGIT TWO; twocircle
 15599 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 15600 % U+2462 CIRCLED DIGIT THREE; threecircle
 15601 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 15602 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 15603 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 15604 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 15605 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 15606 % U+2465 CIRCLED DIGIT SIX; sixcircle
 15607 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 15608 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 15609 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 15610 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 15611 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 15612 % U+2468 CIRCLED DIGIT NINE; ninecircle
 15613 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 15614 % U+2469 CIRCLED NUMBER TEN; tencircle
 15615 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 15616 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 15617 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 15618 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 15619 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 15620 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 15621 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 15622 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 15623 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15624 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15625 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E

15626 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 15627 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 15628 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 15629 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 15630 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 15631 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 15632 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 15633 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 15634 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 15635 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 15636 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 15637 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 15638 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 15639 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 15640 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15641 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15642 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15643 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15644 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15645 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15646 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15647 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15648 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 15649 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 15650 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 15651 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 15652 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 15653 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 15654 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 15655 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 15656 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 15657 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 15658 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 15659 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 15660 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 15661 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 15662 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 15663 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 15664 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 15665 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 15666 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 15667 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 15668 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 15669 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 15670 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 15671 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 15672 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 15673 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 15674 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 15675 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 15676 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 15677 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 15678 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 15679 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 15680 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 15681 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 15682 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle

15683 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15684 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15685 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15686 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15687 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15688 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15689 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15690 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15691 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15692 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15693 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15694 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15695 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15696 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15697 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15698 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15699 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15700 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15701 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15702 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15703 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15704 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15705 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
15706 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
15707 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
15708 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
15709 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
15710 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
15711 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
15712 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
15713 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
15714 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
15715 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
15716 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
15717 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
15718 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
15719 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
15720 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
15721 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
15722 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
15723 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
15724 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
15725 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
15726 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
15727 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
15728 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
15729 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
15730 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
15731 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
15732 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
15733 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
15734 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
15735 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
15736 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
15737 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
15738 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
15739 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9

15740 % U+24EA CIRCLED DIGIT ZERO
 15741 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15742 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15743 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15744 % U+25EF LARGE CIRCLE; largecircle
 15745 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15746 % U+266A EIGHTH NOTE; musicalnote
 15747 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15748 % U+26AD MARRIAGE SYMBOL
 15749 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15750 % U+26AE DIVORCE SYMBOL
 15751 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15752 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15753 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15754 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15755 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

15756 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15757 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 15758 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15759 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

15760 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

15761 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 15762 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 15763 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 15764 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 15765 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 15766 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 15767 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 15768 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

15769 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 15770 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 15771 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 15772 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 15773 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 15774 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

15775 <*puvnenc>

15776 \DeclareTextCommand{\abreve}{PU}{\81\003}
15777 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15778 \DeclareTextCommand{\dj}{PU}{\81\021}
15779 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15780 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15781 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15782 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15783 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15784 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15785 \DeclareTextCommand{\DJ}{PU}{\81\020}
15786 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15787 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15788 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15789 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15790 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15791 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15792 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15793 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15794 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15795 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15796 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15797 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
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15894 \DeclareTextCompositeCommand{~}{PU}{\OHORN}{\9036\340}
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15899 \DeclareTextCompositeCommand{~}{PU}{U}{\81\150}
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15908 \DeclareTextCompositeCommand{h}{PU}{Y}{\9036\366}
15909 \DeclareTextCompositeCommand{~}{PU}{Y}{\9036\370}
15910 </puvnc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

15911 <*puarenc>
15912 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
TER HAMZA
15913 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15914 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15915 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15916 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15917 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15918 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
15919 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
15920 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
15921 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
15922 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
TER THEH
15923 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
TER JEEM
15924 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
15925 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
15926 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
15927 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
15928 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
15929 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN
15930 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
15931 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
TER SHEEN
15932 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD

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15933 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD
15934 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH
15935 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH
15936 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN
15937 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LET-
TER GHAIN
15938 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL
15939 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH
15940 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF
15941 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF
15942 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM
15943 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LET-
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15944 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON
15945 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
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15947 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
TER ALEF MAKSURA
15948 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
15949 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
15950 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
15951 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
15952 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
15953 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15954 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15955 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15956 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

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15957 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15958 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
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15959 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15960 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
TER KAF
15961 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15962 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
TER YEH

15963 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15964 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ
15965 </puarenc>

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51 End of file hycheck.tex

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15966 <*check>
15967 \typeout{}
15968 \begin{document}
15969 \end{document}
15970 </check>

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