

Hypertext marks in L^AT_EX

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2010/05/01 v6.80z

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

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

```

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

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

```

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

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

```

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

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

```

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

`\HyC@noValue`

```

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

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


```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

`\HyC@DeclareRobustCommand` `\DeclareRobustCommand{\cmd}` makes the command `\cmd` robust, that then calls `\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@activetrue` babel is not loaded.

```

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

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

```

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

```

`\hypercalcbp`

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

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- Strings are stored either in PDFDocEncoding, which is a superset of 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 (v \TeX driver, Unicode support).

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

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

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

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

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

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

```
410 \ifHy@unicode
411 \edef\8{\string\8}%
412 \edef\9{\string\9}%
413 \fontencoding{PU}%
414 \HyPsd@UTFviii
415 \def\ifpdfstringunicode##1##2{##1}%
416 \else
417 \fontencoding{PD1}%
418 \def\ifpdfstringunicode##1##2{##2}%
419 \fi
420 \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).

```
421 \@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).

```
422 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
423 \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.

```
424 \let\{\textbraceleft
425 \let\}\textbraceright
426 \let\%\textbackslash
427 \let\#\textnumbersign
428 \let\$\textdollar
```

```

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

```

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

```

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

```

438 \def\TeX{\TeX}%
439 \def\LaTeX{\LaTeX}%
440 \def\LaTeXe{\LaTeX2e}%
441 \def\eTeX{e-TeX}%
442 \def\SliTeX{SliTeX}%
443 \def\MF{Metafont}%
444 \def\MP{Metapost}%

```

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

```

445 \let\fontencoding\@gobble
446 \let\fontfamily\@gobble
447 \let\fontseries\@gobble
448 \let\fontshape\@gobble
449 \let\fontsize\@gobbletwo
450 \let\selectfont\@empty
451 \let\usefont\@gobblefour
452 \let\emph\@firstofone
453 \let\textnormal\@firstofone
454 \let\textrm\@firstofone
455 \let\textsf\@firstofone
456 \let\texttt\@firstofone
457 \let\textbf\@firstofone
458 \let\textmd\@firstofone
459 \let\textit\@firstofone
460 \let\textsc\@firstofone
461 \let\textsl\@firstofone
462 \let\textup\@firstofone
463 \let\normalfont\@empty
464 \let\rmfamily\@empty
465 \let\sfamily\@empty

```

```

466 \let\ttfamily\@empty
467 \let\bfseries\@empty
468 \let\mdseries\@empty
469 \let\itshape\@empty
470 \let\scshape\@empty
471 \let\slshape\@empty
472 \let\upshape\@empty
473 \let\em\@empty
474 \let\rm\@empty
475 \let\Huge\@empty
476 \let\LARGE\@empty
477 \let\Large\@empty
478 \let\footnotesize\@empty
479 \let\huge\@empty
480 \let\large\@empty
481 \let\normalsize\@empty
482 \let\scriptsize\@empty
483 \let\small\@empty
484 \let\tiny\@empty
485 \let\mathversion\@gobble
486 \let\phantom\@gobble
487 \let\vphantom\@gobble
488 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

490 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
491 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

492 \let\textlatin\@firstofone
493 \ltx@ifundefined{language@group}{\@firstofone}%
494 \csname HyPsd@babel@language@group\endcsname
495 }%
496 \HyPsd@GreekPatch
497 \HyPsd@SpanishPatch
498 \HyPsd@RussianPatch
499 \HyPsd@BabelPatch
500 \let\@safe@activetrue\relax
501 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

502 \let\cyr\relax

```

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

```

503 \let\es@roman\@Roman

```

Package german.

```

504 \let\glqq\textglqq
505 \let\grqq\textgrqq
506 \let\glq\textglq

```

```

507 \let\grq\textgrq
508 \let\flqq\textflqq
509 \let\frqq\textfrqq
510 \let\flq\textflq
511 \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}

512 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

513 \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.

```

514 \let\hspace\HyPsd@hspace

```

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

```

515 \let\label\@gobble
516 \let\index\@gobble
517 \let\glossary\@gobble
518 \let\href\@secondoftwo
519 \let\@mkboth\@gobbletwo

```

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

```

520 \let\ref\HyPsd@ref
521 \let\pageref\HyPsd@pageref
522 \let\nameref\HyPsd@nameref
523 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

524 \let\leavevmode\@empty
525 \let\mbox\@empty

```

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

```

526 \def\halign{\pdfstringdefWarn\halign\@gobble}%
527 \let\ignorespaces\HyPsd@ignorespaces
528 \let\Hy@SectionAnchorHref\@gobble

```

Patch for cjk bookmarks.

```

529 \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`).

```
530 \Hy@pdfstringtrue
531 \pdfstringdefPreHook
```

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

```
532 \HyPsd@LetUnexpandableSpace\space
533 \HyPsd@LetUnexpandableSpace\ %
534 \HyPsd@LetUnexpandableSpace~%
535 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
536 \ltx@ifundefined{@xspace}{%
537   \let\xspace\HyPsd@ITALCORR
538 }{%
539   \let\xspace\HyPsd@XSPACE
540 }%
541 \let\/\HyPsd@ITALCORR
542 \let\bgroup\/%
543 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
544 \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:

```
545 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
546 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
547 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
548 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
549 \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).

```

550 \begingroup
551   \let\GenericError\@gobblefour
552   \let\GenericWarning\@gobbletwo
553   \let\GenericInfo\@gobbletwo

```

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

```

554 \ifx\nofrenchguillemets\@undefined
555   \else
556     \nofrenchguillemets
557   \fi

```

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

```

558 \let\Hy@temp\xdef
559 \let\def\HyPsd@DefCommand
560 \let\gdef\HyPsd@DefCommand
561 \let\edef\HyPsd@DefCommand
562 \let\xdef\HyPsd@DefCommand
563 \let\futurelet\HyPsd@LetCommand
564 \let\let\HyPsd@LetCommand
565 \Hy@temp#1{#2}%
566 \endgroup

```

6.2.3 Postprocessing

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

```
567 \ifx#1\@empty
568 \else
```

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

- T_EX 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 T_EX'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.
- T_EX 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.

```
569 \HyPsd@ProtectSpaces#1%
570 \let\HyPsd@String\@empty
571 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
572 \global\let#1\HyPsd@String
```

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

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

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

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

```
573 \let\HyPsd@SPACEOPTI\relax
574 {%
575 \let\HyPsd@String\@empty
576 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
577 \global\let#1\HyPsd@String
578 }%
579 \expandafter\HyPsd@RemoveMask\expandafter
580 \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.

```
581 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
582 \let\HyPsd@String\@empty
583 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
584 \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.

```
585 \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.

```
586 \ifHy@unicode
587 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
588 \HyPsd@SPACEOPTI#1%
589 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
590 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
591 {\HyPsd@SPACEOPTI\80\273}#1%
592 \else
593 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
594 \expandafter\HyPsd@Subst\expandafter{%
595 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
596 \string\273}{\HyPsd@SPACEOPTI\273}#1%
597 \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.

```
598 \ifHy@unicode
599 \HyPsd@StringSubst{\)}{\80\051}#1%
600 \HyPsd@Subst){\80\051}#1%
601 \let\HyPsd@empty\relax
602 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
603 {\HyPsd@empty\80\051}#1%
604 \else
605 \HyPsd@StringSubst{\)}{\051}#1%
606 \HyPsd@Subst){\051}#1%
607 \let\HyPsd@empty\relax
```

```

608      \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
609      \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`.

```

610      \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
611      \ltx@ifundefined{@xspace}{%
612      }{%
613          \let\HyPsd@xspace\relax
614          \expandafter\HyPsd@Subst\expandafter
615              {\HyPsd@XSPACE}\HyPsd@xspace#1%
616          \let\HyPsd@xspace\HyPsd@doxspace
617      }%
618      \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.

```

619      \HyPsd@Subst{---}\textemdash#1%
620      \HyPsd@Subst{--}\textendash#1%
621 %      \HyPsd@Subst{fi}\textfi#1%
622 %      \HyPsd@Subst{fl}\textfl#1%
623      \HyPsd@Subst{!'}\textexclamdown#1%
624      \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

625      \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.

```

626      \ifHy@unicode
627          \HyPsd@StringSubst{\textparenleft#1%
628          \HyPsd@Subst(\textparenleft#1%
629      \else

```

```

630 \HyPsd@StringSubst\({\050}#1%
631 \HyPsd@Subst({\050}#1%
632 \HyPsd@StringSubst{\050}{\string\{ }#1%
633 \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.

```

634 \ifHy@unicode
635 \edef\HyPsd@SPACEOPTI{\80\040}%
636 \else
637 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
638 \fi
639 \xdef#1{#1\@empty}%
640 \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.

```

641 \endgroup
642 \begingroup
643 \ifHy@unicode
644 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

645 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
646 \ltx@ifundefined{StringEncodingConvertTest}{%
647 }{%
648 \EdefUnescapeString\HyPsd@temp#1%
649 \ifxetex
650 \let\HyPsd@UnescapedString\HyPsd@temp
651 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
652 {utf16be}{ascii-print}{%
653 \EdefEscapeString\HyPsd@temp\HyPsd@temp
654 \global\let#1\HyPsd@temp
655 \HyPsd@EscapeTeX#1%
656 \Hy@unicodedefalse
657 }{%
658 \HyPsd@ToBigChars#1%
659 }%
660 \else
661 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
662 {utf16be}{pdfdoc}{%
663 \EdefEscapeString\HyPsd@temp\HyPsd@temp
664 \global\let#1\HyPsd@temp
665 \HyPsd@EscapeTeX#1%
666 \Hy@unicodedefalse
667 }{%
668 \fi
669 }%
670 \fi
671 \fi
672 \HyPsd@XeTeXBigCharsfalse

```

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

```
673 \pdfstringdefPostHook#1%
674 \endgroup
675 }
```

`\Hy@pdfstringdef`

```
676 \def\Hy@pdfstringdef#1#2{%
677 \pdfstringdef\Hy@gtemp{#2}%
678 \let#1\Hy@gtemp
679 }
```

6.3 Encodings

6.3.1 XeTeX

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

```

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

```

6.3.2 Workaround for package linguex

```

753 \@ifpackageloaded{linguex}{%
754 \let\HyLinguex@OrgB\b
755 \let\HyLinguex@OrgC\c
756 \let\HyLinguex@OrgD\d
757 \def\HyLinguex@Restore{%
758 \let\b\HyLinguex@OrgB
759 \let\c\HyLinguex@OrgC
760 \let\d\HyLinguex@OrgD
761 }%
762 \Hy@AtEndOfPackage{%
763 \pdfstringdefDisableCommands{%
764 \ltx@ifundefined{oldb}{\let\b\oldb}%
765 \ltx@ifundefined{oldc}{\let\c\oldc}%
766 \ltx@ifundefined{oldd}{\let\d\oldd}%
767 }%
768 }%
769 }{%
770 \let\HyLinguex@Restore\relax
771 }%

```

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.

```

772 \ifundefined{T@PD1}{%
773   \input{pdlenc.def}%
774   \HyLinguex@Restore
775 }{}
776 \DeclareFontFamily{PD1}{pdf}{}
777 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
778 \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.

```

779 \def\HyPsd@InitUnicode{%
780   \ifundefined{T@PU}{%
781     \input{puenc.def}%
782     \HyLinguex@Restore
783   }{}%
784   \DeclareFontFamily{PU}{pdf}{}%
785   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
786   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
787   \let\HyPsd@InitUnicode\relax
788 }

```

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.

```

789 \def\texorpdfstring{%
790   \ifHy@pdfstring
791     \expandafter\@secondoftwo
792   \else
793     \expandafter\@firstoftwo
794   \fi
795 }

```

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`.

```

796 \ifundefined{pdfstringdefPreHook}{%
797   \let\pdfstringdefPreHook\@empty
798 }{}

```

```

799 \@ifundefined{pdfstringdefPostHook}{%
800   \let\pdfstringdefPostHook\@gobble
801 }{}

```

`\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`.

```

802 \def\pdfstringdefDisableCommands{%
803   \begingroup
804   \makeatletter
805   \HyPsd@DisableCommands
806 }

```

`\HyPsd@DisableCommands`

```

807 \long\def\HyPsd@DisableCommands#1{%
808   \toks0=\expandafter{\pdfstringdefPreHook}%
809   \toks1={#1}%
810   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
811   \endgroup
812 }

```

`\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`.

```

813 \def\pdfstringdefWarn#1{%
814   \expandafter\noexpand\csname<>-string#1\endcsname
815 }

```

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.

```

816 \begingroup

```

```

817 \catcode0=12 %
818 \def\x{\endgroup
819 \def\HyPsd@ignorespaces{%
820 \romannumeral\expandafter'\expandafter^^@%
821 \romannumeral'^^@%
822 }%
823 }%
824 \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`.

```

825 \def\HyPsd@BabelPatch{%
826 \let\HyOrg@languageshorthands\languageshorthands
827 \let\languageshorthands\HyPsd@LanguageShorthands
828 }
829 \RequirePackage{pdftexcmds}[2009/04/10]
830 \begingroup\expandafter\expandafter\expandafter\endgroup
831 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
832 \let\HyPsd@langshort@system\@empty
833 \def\HyPsd@LanguageShorthands#1{%
834 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
835 \HyPsd@langshort@system
836 \expandafter\@gobble
837 \else
838 \expandafter\@firstofone
839 \fi
840 {%
841 \HyOrg@languageshorthands{#1}%
842 }%
843 }%
844 \else
845 \def\HyPsd@LanguageShorthands#1{%
846 \ifnum\pdf@strcmp{#1}{system}=\z@
847 \expandafter\@gobble
848 \else
849 \expandafter\@firstofone
850 \fi
851 {%
852 \HyOrg@languageshorthands{#1}%
853 }%
854 }%
855 \fi
856 \def\Hy@temp{%
857 \@ifpackageloaded{babel}{%
858 \@ifpackagelater{babel}{2008/03/16}{%
859 \let\Hy@temp\@empty
860 }{%

```



```

861 \def\HyPsd@BabelPatch{%
862 \let\HyOrg@languageshorthands\languageshorthands
863 }%
864 }%
865 }{}%
866 }
867 \Hy@temp
868 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
869 \newif\ifHy@next

Nothing to do for english.

870 \ltx@ifundefined{danish@sh@{@sel}}{}{%
871 \def\HyPsd@babel@danish{%
872 \declare@shorthand{danish}{"}{}%
873 \declare@shorthand{danish}{"}~{}{}%
874 }%
875 }
876 \ltx@ifundefined{dutch@sh@{@sel}}{}{%
877 \def\HyPsd@babel@dutch{%
878 \declare@shorthand{dutch}{"}{}%
879 \declare@shorthand{dutch}{"}~{}{}%
880 }%
881 }
882 \ltx@ifundefined{finnish@sh@{@sel}}{}{%
883 \def\HyPsd@babel@finnish{%
884 \declare@shorthand{finnish}{"}{}%
885 }%
886 }
887 \ltx@ifundefined{french@sh@{@sel}}{}{%
888 \def\HyPsd@babel@frenchb{%
889 \def\guill@spacing{ }%
890 }%
891 }
892 \ltx@ifundefined{german@sh@{@sel}}{}{%
893 \def\HyPsd@babel@german{%
894 \declare@shorthand{german}{"}f{}f{}%
895 \declare@shorthand{german}{"}|{}{}%
896 \declare@shorthand{german}{"}~{}{}%
897 }%
898 }
899 \ltx@ifundefined{macedonian@sh@{@sel}}{}{%
900 \def\HyPsd@babel@macedonian{%
901 \declare@shorthand{macedonian}{"}|{}{}%
902 \declare@shorthand{macedonian}{"}~{}{}%
903 }%
904 }{}
905 \ltx@ifundefined{ngerman@sh@{@sel}}{}{%
906 \def\HyPsd@babel@ngerman{%
907 \declare@shorthand{ngerman}{"}|{}{}%
908 \declare@shorthand{ngerman}{"}~{}{}%
909 }%
910 }
911 \ltx@ifundefined{portuges@sh@{@sel}}{}{%
912 \def\HyPsd@babel@portuges{%
913 \declare@shorthand{portuges}{"}|{}{}%
914 }%
915 }

```

```

916 \ltx@ifundefined{russian@sh@"@sel}{-}{%
917   \def\HyPsd@babel@russian{%
918     \declare@shorthand{russian}{-}{-}%
919     \declare@shorthand{russian}{-}{-}%
920   }%
921 }
922 \ltx@ifundefined{slovene@sh@"@sel}{-}{%
923   \def\HyPsd@babel@slovene{%
924     \declare@shorthand{slovene}{-}{-}%
925   }%
926 }

```

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

```

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

```

```

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

```

```

1029 \or\texteta\textEta
1030 \or\texttheta\textTheta
1031 \else
1032   {}{}%
1033 \fi
1034 }
1035 \def\HyPsd@GreekNumII#1#2#3#4{%
1036   #1{%
1037     \ifnum#3>\z@
1038       \textnumeralsignlowergreek
1039     \fi
1040   }%
1041   \expandafter#2%
1042   \ifcase#3 %
1043     {}{}%
1044     \or\textiota\textIota
1045     \or\textkappa\textKappa
1046     \or\textlambda\textLambda
1047     \or\textmu\textMu
1048     \or\textnu\textNu
1049     \or\textxi\textXi
1050     \or\textomicron\textOmicron
1051     \or\textpi\textPi
1052     \or\textkoppagreek\textKoppagreek
1053     \else
1054       {}{}%
1055     \fi
1056     \HyPsd@GreekNumI#1#2#4%
1057   }
1058 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1059   #1{%
1060     \ifnum#3>\z@
1061       \textnumeralsignlowergreek
1062     \fi
1063   }%
1064   \expandafter#2%
1065   \ifcase#3 %
1066     {}{}%
1067     \or\textrho\textRho
1068     \or\textsigma\textSigma
1069     \or\texttau\textTau
1070     \or\textupsilon\textUpsilon
1071     \or\textphi\textPhi
1072     \or\textchi\textChi
1073     \or\textpsi\textPsi
1074     \or\textomega\textOmega
1075     \or\textsampigreek\textSampigreek
1076     \else
1077       {}{}%
1078     \fi
1079     \HyPsd@GreekNumII#1#2#4#5%
1080   }
1081 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1082   \HyPsd@GreekNumI\@firstofone#1#2%
1083   \HyPsd@@GreekNum#1{#3#4#5}%
1084 }
1085 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%

```

```

1086 \HyPsd@GreekNumII\@firstofone#1#2#3%
1087 \HyPsd@@GreekNum#1{#4#5#6}%
1088 }
1089 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1090 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1091 \HyPsd@@GreekNum#1{#5#6#7}%
1092 }

1093 \def\HyPsd@SpanishPatch{%
1094 \ltx@ifundefined{es@save@dot}{%
1095 }{%
1096 \let\.\es@save@dot
1097 }%
1098 }

```

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

```

1099 \def\HyPsd@RussianPatch{%
1100 \ltx@ifundefined{russian@sh@"@-@}{%
1101 }{%
1102 \@namedef{russian@sh@"@-@}{-}%
1103 }%
1104 }

```

6.5.3 CJK patch

```

1105 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1106 \def\HyPsd@CJKhook{%
1107 \ltx@ifpackageloaded{CJK}{%
1108 \let\CJK@kern\relax
1109 \let\CJKkern\relax
1110 \let\CJK@CJK\relax
1111 \ifHy@CJKbookmarks
1112 \HyPsd@CJKhook@bookmarks
1113 \fi
1114 \HyPsd@CJKhook@unicode
1115 }{%
1116 }

```

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).

```

1117 \begingroup
1118 \catcode"7F=\active
1119 \toks@{%
1120 \let\CJK@ignorespaces\empty
1121 \def\CJK@char#1{\@gobbletwo}%

```

```

1122 \let\CJK@charx\@gobblefour
1123 \let\CJK@punctchar\@gobblefour
1124 \def\CJK@punctcharx#1{\@gobblefour}%
1125 \catcode"7F=\active
1126 \def^^7f#1^^7f#2^^7f{%
1127   \string #1\HyPsd@DecimalToOctal{#2}%
1128 }%
1129 % ... ?
1130 \ifHy@unicode
1131   \def\Hy@cjkpu{\80}%
1132 \else
1133   \let\Hy@cjkpu\@empty
1134 \fi
1135 \HyPsd@CJKActiveChars
1136 }%
1137 \count@=127 %
1138 \@whilenum\count@<255 \do{%
1139   \advance\count@ by 1 %
1140   \lccode'\~=\count@
1141   \lowercase{%
1142     \toks@\expandafter{\the\toks@ ~}%
1143   }%
1144 }%
1145 \toks@\expandafter{\the\toks@ !}%
1146 \xdef\HyPsd@CJKhook@bookmarks{%
1147   \the\toks@
1148 }%
1149 \endgroup

```

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

```

1150 \def\HyPsd@CJKActiveChars#1{%
1151   \ifx#1!%
1152     \let\HyPsd@CJKActiveChars\relax
1153   \else
1154     \edef#1{\noexpand\Hy@cjkpu\string#1}%
1155   \fi
1156   \HyPsd@CJKActiveChars
1157 }

```

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

```

1158 \def\HyPsd@DecimalToOctal#1{%
1159   \ifcase #1 %
1160     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1161     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1162     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1163     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1164     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1165     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1166     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1167     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1168     \or @\or A\or B\or C\or D\or E\or F\or G%
1169     \or H\or I\or J\or K\or L\or M\or N\or O%
1170     \or P\or Q\or R\or S\or T\or U\or V\or W%
1171     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1172     \or \140\or a\or b\or c\or d\or e\or f\or g%
1173     \or h\or i\or j\or k\or l\or m\or n\or o%

```

```

1174 \or p\or q\or r\or s\or t\or u\or v\or w%
1175 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1176 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1177 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1178 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1179 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1180 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1181 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1182 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1183 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1184 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1185 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1186 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1187 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1188 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1189 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1190 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1191 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1192 \fi
1193 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1194 \def\HyPsd@CJKhook@unicode{%
1195 \let\Unicode\HyPsd@CJK@Unicode
1196 \let\CJKnumber\HyPsd@CJKnumber
1197 \let\CJKdigits\HyPsd@CJKdigits
1198 }

```

\HyPsd@CJK@Unicode

```

1199 \def\HyPsd@CJK@Unicode#1#2{%
1200 \ifnum#1<256 %
1201 \HyPsd@DecimalToOctalFirst{#1}%
1202 \HyPsd@DecimalToOctalSecond{#2}%
1203 \else
1204 \933%
1205 \expandafter\expandafter\expandafter\HyPsd@HighA
1206 \intcalcDiv{#1}{4}!%
1207 \933%
1208 \ifcase\intcalcMod{#1}{4} %
1209 4\or 5\or 6\or 7%
1210 \fi
1211 \HyPsd@DecimalToOctalSecond{#2}%
1212 \fi
1213 }

1214 \def\HyPsd@HighA#1!{%
1215 \expandafter\expandafter\expandafter\HyPsd@HighB
1216 \IntCalcDiv#1!64!!%
1217 \expandafter\expandafter\expandafter\HyPsd@HighD
1218 \IntCalcMod#1!64!!%
1219 }
1220 \def\HyPsd@HighB#1!{%
1221 \expandafter\expandafter\expandafter\HyPsd@HighC
1222 \IntCalcDec#1!!%
1223 }

```

```

1224 \def\HyPsd@HighC#1!{%
1225   \IntCalcDiv#1!4!%
1226   \@backslashchar
1227   \IntCalcMod#1!4!%
1228 }
1229 \def\HyPsd@HighD#1!{%
1230   \ifcase\IntCalcDiv#1!8! %
1231     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1232   \fi
1233   \ifcase\IntCalcMod#1!8! %
1234     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1235   \fi
1236 }
1237 \def\HyPsd@DecimalToOctalFirst#1{%
1238   \9%
1239   \ifcase#1 %
1240     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1241     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1242     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1243     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1244     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1245     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1246     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1247     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1248     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1249     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1250     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1251     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1252     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1253     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1254     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1255     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1256     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1257     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1258     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1259     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1260     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1261     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1262     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1263     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1264     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1265     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1266     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1267     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1268     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1269     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1270     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1271     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1272   \fi
1273 }
1274 \def\HyPsd@DecimalToOctalSecond#1{%
1275   \ifcase #1 %
1276     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1277     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1278     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1279     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1280     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%

```



```

1281 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1282 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1283 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1284 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1285 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1286 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1287 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1288 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1289 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1290 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1291 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1292 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1293 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1294 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1295 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1296 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1297 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1298 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1299 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1300 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1301 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1302 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1303 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1304 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1305 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1306 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1307 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1308 \fi
1309 }

1310 \def\HyPsd@CJKNnumber#1{%
1311 \ifnum#1<\z@
1312 \CJKN@minus
1313 \expandafter\HyPsd@@CJKNnumber\expandafter{\number-\number#1}%
1314 \else
1315 \expandafter\HyPsd@@CJKNnumber\expandafter{\number#1}%
1316 \fi
1317 }

1318 \def\HyPsd@@CJKNnumber#1{%
1319 \ifcase#1 %
1320 \CJKN@zero\or\CJKN@one\or\CJKN@two\or\CJKN@three\or\CJKN@four\or
1321 \CJKN@five\or\CJKN@six\or\CJKN@seven\or\CJKN@eight\or\CJKN@nine\or
1322 \CJKN@ten\or\CJKN@ten\CJKN@one\or\CJKN@ten\CJKN@two\or
1323 \CJKN@ten\CJKN@three\or\CJKN@ten\CJKN@four\or\CJKN@ten\CJKN@five\or
1324 \CJKN@ten\CJKN@six\or\CJKN@ten\CJKN@seven\or\CJKN@ten\CJKN@eight\or
1325 \CJKN@ten\CJKN@nine
1326 \else
1327 \ifnum#1<10000 %
1328 \HyPsd@CJKNnumberFour#1!\@empty{20}%
1329 \@empty
1330 \else
1331 \ifnum#1<100000000 %
1332 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1333 \IntCalcDiv#1!10000!%
1334 !\@empty{20}%
1335 \CJKN@tenthousand
1336 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1337 \IntCalcMod#1!10000!%

```

```

1338      !\CJK@zero{10}%
1339      \@empty
1340      \else
1341      \expandafter\HyPsd@CJKnumberLarge
1342      \number\IntCalcDiv#1!100000000!\expandafter!%
1343      \number\IntCalcMod#1!100000000!!%
1344      \fi
1345      \fi
1346      \fi
1347  }
1348  \def\HyPsd@CJKnumberLarge#1!#2!{%
1349  \HyPsd@CJKnumberFour#1!{}{20}%
1350  \CJK@hundredmillion
1351  \ifnum#2=\z@
1352  \else
1353  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1354  \IntCalcDiv#2!10000!%
1355  !\CJK@zero{10}%
1356  \CJK@tenthousand
1357  \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1358  \IntCalcMod#2!10000!%
1359  !\CJK@zero{10}%
1360  \@empty
1361  \fi
1362  }
1363  \def\HyPsd@CJKnumberFour#1!#2#3{%
1364  \ifnum#1=\z@
1365  \expandafter\@gobble
1366  \else
1367  \ifnum#1<1000 %
1368  #2%
1369  \HyPsd@CJKnumberThree#1!{}{#3}%
1370  \else
1371  \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1372  \CJK@thousand
1373  \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1374  \IntCalcMod#1!1000!%
1375  !\CJK@zero{10}%
1376  \fi
1377  \fi
1378  }
1379  \def\HyPsd@CJKnumberThree#1!#2#3{%
1380  \ifnum#1=\z@
1381  \else
1382  \ifnum#1<100 %
1383  #2%
1384  \HyPsd@CJKnumberTwo#1!{}{#3}%
1385  \else
1386  \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1387  \CJK@hundred
1388  \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1389  \IntCalcMod#1!100!%
1390  !\CJK@zero{10}%
1391  \fi
1392  \fi
1393  }
1394  \def\HyPsd@CJKnumberTwo#1!#2#3{%

```

```

1395 \ifnum#1=\z@
1396 \else
1397 \ifnum#1<#3 %
1398   #2%
1399   \HyPsd@@CJKnumber{#1}%
1400 \else
1401   \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1402   \CJK@ten
1403   \ifnum\IntCalcMod#1!10!=\z@
1404   \else
1405   \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1406   \fi
1407 \fi
1408 \fi
1409 }

1410 \def\HyPsd@CJKdigits#1{%
1411   \ifx*#1\relax
1412   \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1413   \else
1414   \HyPsd@@CJKdigits\CJK@null{#1}%
1415   \fi
1416 }

1417 \def\HyPsd@@CJKdigits#1#2{%
1418   \ifx\#2\%
1419   \else
1420   \HyPsd@@@CJKdigits#1#2\@nil
1421   \fi
1422 }%

1423 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1424   \HyPsd@CJKdigit#1{#2}%
1425   \ifx\#3\%
1426   \expandafter\@gobble
1427   \else
1428   \expandafter\@firstofone
1429   \fi
1430   {%
1431   \HyPsd@@@CJKdigits#1#3\@nil
1432   }%
1433 }

1434 \def\HyPsd@CJKdigit#1#2{%
1435   \ifcase#2 %
1436   #1\or
1437   \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1438   \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1439   \fi
1440 }

```

6.5.6 \@inmathwarn-Patch

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

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

1441 \def\HyPsd@inmathwarn#1#2{%
1442   \ifx#2\expandafter
1443     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1444       \HyPsd@GLYPHERR
1445       \expandafter\@gobble\string#1%
1446       >%
1447       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1448     \else
1449       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1450     \fi
1451   \else
1452     \expandafter#2%
1453   \fi
1454 }
1455 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1456 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1457 \def\HyPsd@add@accent#1#2{%
1458   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1459   #2%
1460 }%

```

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`.

```
1461 \def\HyPsd@LetUnexpandableSpace#1{%
1462   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1463 }
```

`\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.

```
1464 \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.

```
1465 \edef\HyPsd@XSPACE{\string#\string X}
1466 \edef\HyPsd@ITALCORR{\string#\string I}
1467 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 \hspace fix

`\HyPsd@hspace`

```
1468 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1469 \def\HyPsd@@hspace#1*#2\END{%
1470   \ifx\#2\%
1471     \HyPsd@hspacetest{#1}%
1472   \else
1473     \expandafter\HyPsd@hspacetest
1474   \fi
1475 }
```

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

```
1476 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1477 \ltx@ifundefined{tocsection}{%
1478   \let\HyPsd@AMSClassfix\relax
1479 }{%
1480   \def\HyPsd@AMSClassfix{%
1481     \let\tocpart\HyPsd@tocsection
1482     \let\tocchapter\HyPsd@tocsection
1483     \let\tocappendix\HyPsd@tocsection
1484   }
```

```

1484 \let\tocsection\HyPsd@tocsection
1485 \let\tocsubsection\HyPsd@tocsection
1486 \let\tocsubsubsection\HyPsd@tocsection
1487 \let\tocparagraph\HyPsd@tocsection
1488 }%
1489 \def\HyPsd@tocsection#1#2#3{%
1490 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1491 #3%
1492 }%
1493 }

```

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.

```

1494 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1495 \def\HyPsd@@ref#1*#2\END{%
1496 \ifx\#2\%
1497 \HyPsd@@@ref{#1}%
1498 \else
1499 \expandafter\HyPsd@@@ref
1500 \fi
1501 }%

```

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

```

1502 \def\HyPsd@@@ref#1{%
1503 \expandafter\ifx\csname r@#1\endcsname\relax
1504 ??%
1505 \else
1506 \expandafter\expandafter\expandafter
1507 \@car\csname r@#1\endcsname\@nil
1508 \fi
1509 }

```

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

```

1510 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1511 \def\HyPsd@@pageref#1*#2\END{%
1512 \ifx\#2\%
1513 \HyPsd@@@pageref{#1}%
1514 \else
1515 \expandafter\HyPsd@@@pageref
1516 \fi
1517 }

```

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

```

1518 \def\HyPsd@@@pageref#1{%
1519 \expandafter\ifx\csname r@#1\endcsname\relax
1520 ??%
1521 \else
1522 \expandafter\expandafter\expandafter\expandafter
1523 \expandafter\expandafter\expandafter\@car
1524 \expandafter\expandafter\expandafter\@gobble

```

```

1525 \csname r@#1\endcsname{}\@nil
1526 \fi
1527 }

```

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

```

1528 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1529 \def\HyPsd@@nameref#1*#2\END{%
1530 \ifx\#2\%
1531 \HyPsd@@@nameref{#1}%
1532 \else
1533 \expandafter\HyPsd@@@nameref
1534 \fi
1535 }

```

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

```

1536 \def\HyPsd@@@nameref#1{%
1537 \expandafter\ifx\csname r@#1\endcsname\relax
1538 ??%
1539 \else
1540 \expandafter\expandafter\expandafter\expandafter
1541 \expandafter\expandafter\expandafter\@car
1542 \expandafter\expandafter\expandafter\@gobbletwo
1543 \csname r@#1\endcsname{}\}\@nil
1544 \fi
1545 }

```

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

```

1546 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1547 \def\HyPsd@@autoref#1*#2\END{%
1548 \ifx\#2\%
1549 \HyPsd@@@autoref{#1}%
1550 \else
1551 \expandafter\HyPsd@@@autoref
1552 \fi
1553 }

```

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

```

1554 \def\HyPsd@@@autoref#1{%
1555 \expandafter\ifx\csname r@#1\endcsname\relax
1556 ??%
1557 \else
1558 \expandafter\expandafter\expandafter\HyPsd@autorefname
1559 \csname r@#1\endcsname{}\}\}\@nil
1560 \expandafter\expandafter\expandafter
1561 \@car\csname r@#1\endcsname\@nil
1562 \fi
1563 }

```

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

```

1564 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%

```

```

1565 \ifx\#4\%
1566 \else
1567 \HyPsd@@autorefname#4.\@nil
1568 \fi
1569 }

```

\HyPsd@@autorefname

```

1570 \def\HyPsd@@autorefname#1.#2\@nil{%
1571 \ltx@ifundefined{#1autorefname}{%
1572 \ltx@ifundefined{#1name}{%
1573 }{%
1574 \csname#1name\endcsname\space
1575 }%
1576 }{%
1577 \csname#1autorefname\endcsname\space
1578 }%
1579 }

```

6.5.12 Redefining the defining commands

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

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

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

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

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

\HyPsd@DefCommand

\HyPsd@LetCommand

```

1580 \begingroup
1581 \def\x#1#2{%
1582 \endgroup
1583 \let#1\def
1584 \def\HyPsd@DefCommand##1##2##{%
1585 #1%
1586 \expandafter\noexpand

```



```

1587 \csname\expandafter\@gobble\string##1\@empty\endcsname
1588 \@gobble
1589 }%
1590 \let#2\let
1591 \def\HyPsd@@LetCommand##1{%
1592 \expandafter\ifx\csname##1\expandafter\endcsname
1593 \csname iftrue\endcsname
1594 \pdfstringdefWarn\let
1595 \expandafter\@gobble
1596 \else
1597 \expandafter\ifx\csname##1\expandafter\endcsname
1598 \csname iffalse\endcsname
1599 \pdfstringdefWarn\let
1600 \expandafter\expandafter\expandafter\@gobble
1601 \else
1602 #2%
1603 \expandafter\noexpand
1604 \csname##1\expandafter\expandafter\expandafter\endcsname
1605 \fi
1606 \fi
1607 }%
1608 }%
1609 \expandafter\x\csname <def>-command\expandafter\endcsname
1610 \csname <let>-command\endcsname
1611 \def\HyPsd@LetCommand#1{%
1612 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1613 \expandafter\expandafter\expandafter{%
1614 \expandafter\@gobble\string#1\@empty
1615 }%
1616 }

```

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).

```

1617 \def\HyPsd@ifnextchar#1{%
1618 \pdfstringdefWarn#1%
1619 \expandafter\@gobbletwo\@gobble
1620 }

```

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`.

```

1621 \def\HyPsd@protected@testopt#1{%

```

```

1622 \pdfstringdefWarn#1%
1623 \@gobbletwo
1624 }

```

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:

```

1625 \def\HyPsd@Warning#1{%
1626   \begingroup
1627   \def\space{ }%
1628   \Hy@Warning{#1}%
1629   \endgroup
1630 }

```

6.6.2 Protecting spaces

```

1631 \RequirePackage{etexcmds}[2007/09/09]
1632 \ifetex@unexpanded
1633   \expandafter\@secondoftwo
1634 \else
1635   \expandafter\@firstoftwo
1636 \fi
1637 {%

```

`\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`.

```

1638 \def\HyPsd@ProtectSpaces#1{%
1639   \iftrue
1640     \expandafter\HyPsd@@ProtectSpacesFi
1641     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1642   \fi
1643 }%

```

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

```

1644 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1645   \fi
1646   \ifx\scrollmode#2\scrollmode
1647     \HyPsd@RemoveMask#1\HyPsd@End#3%
1648   \else
1649     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1650     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1651   \fi
1652 }%

```

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.

```

1653 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1654   \toks@{\expandafter{#1}}%
1655   \xdef#2{\the\toks@}%
1656 }%

```

```

1657 }{%
1658   \let\HyPsd@fi\fi
1659   \def\HyPsd@ProtectSpaces#1{%
1660     \xdef#1{%
1661       \iftrue
1662         \expandafter\HyPsd@@ProtectSpacesFi
1663         \expandafter|\expandafter\@empty#1| %
1664       \HyPsd@fi
1665     }%
1666     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1667   }%
1668   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1669     \fi
1670     \etex@unexpanded{#1}%
1671     \ifx\scrollmode#2\scrollmode
1672     \else
1673       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1674     \HyPsd@fi
1675   }%
1676   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1677     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1678   }%
1679 }

```

6.6.3 Remove grouping braces

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

```

1680 \def\HyPsd@RemoveBraces#1{%
1681   \ifx\scrollmode#1\scrollmode
1682   \else
1683     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1684   \fi
1685 }

```

`\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`.

```

1686 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1687   \fi
1688   \def\Hy@temp@A{#1#2}%
1689   \def\Hy@temp@B{#3}%
1690   \ifx\Hy@temp@A\Hy@temp@B
1691     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1692       \HyPsd@String#1%
1693     }%
1694   \ifx\scrollmode#2\scrollmode
1695   \else
1696     \Hy@ReturnAfterFiFiEnd{%
1697       \HyPsd@RemoveBraces{#2}%
1698     }%

```

```

1699 \fi
1700 \else
1701 \def\Hy@temp@A{#1}%
1702 \HyPsd@AppendItalcorr\HyPsd@String
1703 \ifx\Hy@temp@A\@empty
1704 \Hy@ReturnAfterElseFiFiEnd{%
1705 \HyPsd@RemoveBraces{#2}%
1706 }%
1707 \else
1708 \HyPsd@ProtectSpaces\Hy@temp@A
1709 \HyPsd@AppendItalcorr\Hy@temp@A
1710 \Hy@ReturnAfterFiFiEnd{%
1711 \expandafter\HyPsd@RemoveBraces\expandafter
1712 {\Hy@temp@A#2}%
1713 }%
1714 \fi
1715 \fi
1716 \Hy@ReturnEnd
1717 }

```

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

```

1718 \def\HyPsd@AppendItalcorr#1{%
1719 \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1}%
1720 }
1721 \def\HyPsd@@AppendItalcorr#1#2{%
1722 \expandafter\def\expandafter#2\expandafter{#2#1}%
1723 }

```

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).

```

1724 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1725 \global\let\HyPsd@Rest\relax
1726 \ifcat\relax\noexpand#1\relax
1727 \ifx#1\protect
1728 \else
1729 \ifx#1\penalty
1730 \setbox\z@=\hbox{%
1731 \afterassignment\HyPsd@AfterCountRemove
1732 \count@=#2\HyPsd@End
1733 }%
1734 \else
1735 \ifx#1\kern
1736 \setbox\z@=\hbox{%
1737 \afterassignment\HyPsd@AfterDimenRemove

```

```

1738         \dimen@=#2\HyPsd@End
1739     }%
1740 \else
1741     \ifx#1\hskip
1742     \setbox\z@=\hbox{%
1743         \afterassignment\HyPsd@AfterSkipRemove
1744         \skip@=#2\HyPsd@End
1745     }%
1746 \else
1747     \HyPsd@CatcodeWarning{#1}%
1748 \fi
1749 \fi
1750 \fi
1751 \fi
1752 \else
1753     \ifcat#1A% letter
1754     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1755         \HyPsd@String#1%
1756     }%
1757 \else
1758     \ifcat#1 % SPACE
1759     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1760         \HyPsd@String\HyPsd@SPACEOPTI
1761     }%
1762 \else
1763     \ifcat$#1%
1764     \HyPsd@CatcodeWarning{math shift}%
1765 \else
1766     \ifcat&#1%
1767     \HyPsd@CatcodeWarning{alignment tab}%
1768 \else
1769     \ifcat^#1%
1770     \HyPsd@CatcodeWarning{superscript}%
1771 \else
1772     \ifcat_#1%
1773     \HyPsd@CatcodeWarning{subscript}%
1774 \else
1775     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1776         \HyPsd@String#1%
1777     }%
1778 \fi
1779 \fi
1780 \fi
1781 \fi
1782 \fi
1783 \fi
1784 \fi
1785 \ifx\HyPsd@Rest\relax
1786 \ifx\scrollmode#2\scrollmode
1787 \else
1788     \Hy@ReturnAfterFiFiEnd{%
1789         \HyPsd@CheckCatcodes#2\HyPsd@End
1790     }%
1791 \fi
1792 \else
1793     \ifx\HyPsd@Rest\@empty
1794     \else

```

```

1795 \Hy@ReturnAfterFiFiEnd{%
1796 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1797 }%
1798 \fi
1799 \fi
1800 \Hy@ReturnEnd
1801 }

```

Remove counts, dimens, skips.

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

```

1802 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1803 \gdef\HyPsd@Rest{#1}%
1804 }

```

`\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.

```

1805 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1806 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1807 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1808 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1809 \else
1810 \ifdim\dimen@=\z@
1811 \else
1812 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1813 \fi
1814 \gdef\HyPsd@Rest{#1}%
1815 \fi
1816 }

```

`\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).

```

1817 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1818 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1819 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1820 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1821 \else
1822 \ifdim\skip@=\z@
1823 \else
1824 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1825 \fi
1826 \gdef\HyPsd@Rest{#1}%
1827 \fi
1828 }

```

Catcode warnings.

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

```

1829 \def\HyPsd@CatcodeWarning#1{%
1830 \HyPsd@Warning{%
1831 Token not allowed in a PDF string (%
1832 \ifHy@unicode
1833 Unicode%
1834 \else

```

```

1835     PDFDocEncoding%
1836     \fi
1837   ):%
1838   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1839 }%
1840 }
1841 \begingroup
1842 \catcode'\|=0 %
1843 \catcode'\|=12 %
1844 |gdef|HyPsd@RemoveCmdPrefix#1{%
1845   |expandafter|HyPsd@@RemoveCmdPrefix
1846   |string#1|@empty\<>-|@empty|@empty
1847 }%
1848 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1849 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1850 \def\HyPsd@RemoveSpaceWarning#1{%
1851   \HyPsd@Warning{%
1852     Token not allowed in a PDF string (%)
1853     \ifHy@unicode
1854       Unicode%
1855     \else
1856       PDFDocEncoding%
1857     \fi
1858   ):%
1859   \MessageBreak #1\MessageBreak
1860   removed%
1861 }%
1862 }

```

\HyPsd@ReplaceSpaceWarning

```

1863 \def\HyPsd@ReplaceSpaceWarning#1{%
1864   \HyPsd@Warning{%
1865     Token not allowed in a PDF string (%)
1866     \ifHy@unicode
1867       Unicode%
1868     \else
1869       PDFDocEncoding%
1870     \fi
1871   ):%
1872   \MessageBreak #1\MessageBreak
1873   replaced by space%
1874 }%
1875 }

```

6.6.5 Check for wrong glyphs

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

```

1876 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1877   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1878     \HyPsd@String#1%
1879   }%
1880   \ifx\|#2\%
1881   \else
1882     \Hy@ReturnAfterFi{%

```

```

1883 \HyPsd@GlyphProcessWarning#2\@empty
1884 }%
1885 \fi
1886 }
1887 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1888 \HyPsd@@GlyphProcessWarning#1++>%
1889 \HyPsd@GlyphProcess#2\@empty
1890 }
1891 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1892 \ifx\#2\%
1893 \HyPsd@Warning{%
1894 Glyph not defined in %
1895 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1896 removing \@backslashchar#1'%
1897 }%
1898 \else
1899 \HyPsd@Warning{%
1900 Composite letter \@backslashchar#1+#2'\MessageBreak
1901 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1902 \MessageBreak
1903 removing \@backslashchar#1'%
1904 }%
1905 \fi
1906 }

```

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.

```

1907 \def\HyPsd@spaceopti#1{ % first space
1908 \ifx\HyPsd@spaceopti#1%
1909 \040%
1910 \else
1911 #1%
1912 \fi
1913 }%

```

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.

1914 \def\HyPsd@Subst#1#2#3{%
1915 \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1916 \fi
1917 ##1%
1918 \ifx\scrollmode##2\scrollmode
1919 \else
1920 #2%
1921 \HyPsd@@ReplaceFi##2\END
1922 \fi
1923 }%

```



```

1924 \xdef#3{%
1925   \iftrue
1926     \expandafter\HyPsd@@ReplaceFi#3#1\END
1927   \fi
1928 }%
1929 }

```

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

```

1930 \def\HyPsd@StringSubst#1{%
1931   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1932 }

```

`\HyPsd@EscapeTeX`

```

1933 \begingroup
1934 \lccode'\!='\%%
1935 \lccode'\|='\%%
1936 \lccode'\(='\{%
1937 \lccode'\)='\}%
1938 \lccode'0=\ltx@zero
1939 \lccode'1=\ltx@zero
1940 \lccode'3=\ltx@zero
1941 \lccode'4=\ltx@zero
1942 \lccode'5=\ltx@zero
1943 \lccode'7=\ltx@zero
1944 \lowercase{\endgroup
1945 \def\HyPsd@EscapeTeX#1{%
1946   \HyPsd@Subst!{|045}#1%
1947   \HyPsd@Subst({|173}#1%
1948   \HyPsd@Subst){|175}#1%
1949 }%
1950 }

```

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.

```

1951 \def\HyPsd@doxspace#1{%
1952   \ifx#1\relax\else
1953     \ifx#1.\else
1954       \ifx#1:\else
1955         \ifx#1,\else
1956           \ifx#1;\else
1957             \ifx#1!\else
1958               \ifx#1?\else
1959                 \ifx#1/\else
1960                   \ifx#1-\else
1961                     \ifx#1'\else
1962                       \HyPsd@SPACEOPTI
1963                     \fi
1964                   \fi
1965                 \fi
1966               \fi
1967             \fi
1968           \fi

```

```

1969  \fi
1970  \fi
1971  \fi
1972  \fi
1973  #1%
1974 }%

```

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.

```

1975 \begingroup
1976 \catcode'\|=0 %
1977 \catcode'\=12 %

```

\HyPsd@ConvertToUnicode

```

1978 |gdef|HyPsd@ConvertToUnicode#1{%
1979 |xdef#1{%
1980 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1981 }%
1982 |ifx#1|@empty
1983 |else
1984 |xdef#1{%
1985 \376\377%
1986 #1%
1987 }%
1988 |fi
1989 }%

```

\HyPsd@DoConvert

```

1990 |gdef|HyPsd@DoConvert#1{%
1991 |ifx#1|@empty
1992 |else
1993 |Hy@ReturnAfterFi{%
1994 |ifx#1\%%
1995 \%%
1996 |expandafter|HyPsd@DoEscape
1997 |else
1998 |HyPsd@Char{#1}%
1999 |expandafter|HyPsd@DoConvert
2000 |fi
2001 }%
2002 |fi
2003 }%

```

\HyPsd@DoEscape

```

2004 |gdef|HyPsd@DoEscape#1{%
2005 |ifx#19%
2006 |expandafter|HyPsd@GetTwoBytes
2007 |else
2008 |Hy@ReturnAfterFi{%
2009 |ifx#18%
2010 00%
2011 |expandafter|HyPsd@GetTwoBytes
2012 |else

```

```

2013      #1%
2014      |expandafter|HyPsd@GetOneByte
2015      |fi
2016      }%
2017      |fi
2018      }%

```

`\HyPsd@GetTwoBytes`

```

2019 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2020   #1\#2#3#4%
2021   |HyPsd@DoConvert
2022   }%

```

`\HyPsd@GetOneByte`

```

2023 |gdef|HyPsd@GetOneByte#1#2{%
2024   #1#2%
2025   |HyPsd@DoConvert
2026   }%
2027 |endgroup

```

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

```

2028 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2029   \xdef#4{#4#1#2}%
2030   \HyPsd@@ConvertToUnicode#3\END#4%
2031 }

```

`\HyPsd@Char`

```

2032 \begingroup
2033 \catcode0=9 %
2034 \catcode'\^=7 %
2035 \catcode'\^^=12 %
2036 \def\x{^^^0000}%
2037 \expandafter\endgroup
2038 \ifx\x\@empty
2039   \def\HyPsd@Char#1{%
2040     \ifnum'#1<128 %
2041       \@backslashchar 000#1%
2042     \else
2043       \ifnum'#1<65536 %
2044         \expandafter\HyPsd@CharTwoByte\number'#1!%
2045       \else
2046         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2047         \intcalcSub{'#1}{65536}!%
2048       \fi
2049     \fi
2050   }%
2051 \def\HyPsd@CharTwoByte#1!{%
2052   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2053   \IntCalcDiv#1!256!!%
2054   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2055   \IntCalcMod#1!256!!%
2056 }%
2057 \def\HyPsd@CharOctByte#1!{%
2058   \@backslashchar
2059   \IntCalcDiv#1!64!%
2060   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2061   \IntCalcMod#1!8!%

```

```

2062 }%
2063 \def\HyPsd@CharSurrogate#1!{%
2064 \@backslashchar 33%
2065 \IntCalcDiv#1!262144!%
2066 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2067 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2068 \@backslashchar 33%
2069 \expandafter\expandafter\expandafter\IntCalcAdd
2070 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2071 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2072 \IntCalcMod#1!256!!%
2073 }%
2074 \else
2075 \def\HyPsd@Char#1{%
2076 \@backslashchar 000#1%
2077 }%
2078 \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`

```

2079 \begingroup\expandafter\expandafter\expandafter\endgroup
2080 \expandafter\ifx\csname numexpr\endcsname\relax
2081 \let\HyPsd@UTFviii\relax
2082 \else
2083 \begingroup
2084 \lccode'\~='^f4\relax
2085 \lowercase{\endgroup
2086 \def\HyPsd@UTFviii{%
2087 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2088 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2089 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2090 \ifx~\HyPsd@UTFviii@ccxliv@undef
2091 \let~\HyPsd@UTFviii@ccxliv@def
2092 \fi
2093 \let\unichar\HyPsd@unichar
2094 }%
2095 }%
2096 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2097 \edef\HyPsd@UTFviii@ccxliv@def{%
2098 \noexpand\UTFviii@four@octets\string ~^f4%
2099 }%

```

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

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

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

```

2100 \def\HyPsd@UTFviii@two#1#2{%
2101 \expandafter\HyPsd@UTFviii@@two
2102 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2103 \number'#1\expandafter| %
2104 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2105 \number'#2 \@nil
2106 }%
2107 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2108 \expandafter\8%
2109 \number\numexpr #1-48\expandafter\relax
2110 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2111 \number\numexpr #3-8*%
2112 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2113 \number\numexpr #4-8*#3\relax
2114 }%

```

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

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

```

2115 \def\HyPsd@UTFviii@three#1#2#3{%
2116 \expandafter\HyPsd@UTFviii@@three
2117 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2118 \number'#1\expandafter| %
2119 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2120 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2121 \number'#2\expandafter| %
2122 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2123 \number'#3 \@nil
2124 }%
2125 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2126 \expandafter\9%
2127 \number\numexpr #1-56\expandafter\relax
2128 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2129 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2130 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2131 \number\numexpr #6-16\expandafter\relax
2132 \number\numexpr #7-8*#6\relax
2133 }%

```

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

```

```

2134 \def\HyPsd@UTFviii@four#1#2{%
2135 \expandafter\HyPsd@@UTFviii@four\number
2136 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2137 \expandafter|\number
2138 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2139 }%
2140 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2141 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2142 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2143 \ifodd#2 %
2144 \number\dimexpr(#2-1)/2\relax
2145 \else
2146 \number\dimexpr#2/2\relax
2147 \fi
2148 \number\dimexpr\ifodd#2 4+\fi
2149 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2150 \933%
2151 \expandafter\HyPsd@@@UTFviii@four\number
2152 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2153 }%
2154 \def\HyPsd@@@UTFviii@four#1|#2{%
2155 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2156 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2157 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2158 \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2159 }%

```

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

```

2160 \def\HyPsd@unichar#1{%
2161 \ifHy@unicode
2162 \ifnum#1>"10FFFF %
2163 \HyPsd@UnicodeReplacementCharacter % illegal
2164 \else
2165 \ifnum#1>"FFFF %

```

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

```

2166 \expandafter\HyPsd@unichar\expandafter{%
2167 \number\dimexpr 55296+
2168 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2169 \relax\relax\relax
2170 }%

```

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

```

2171 \expandafter\HyPsd@unichar\expandafter{%
2172 \number\dimexpr#1-9216%
2173 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2174 \relax\relax\relax
2175 }%
2176 \else
2177 \ifnum#1>"7FF %
2178 \9%
2179 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2180 \number
2181 \dimexpr.00390625\dimexpr\number#1sp\relax\relax

```

```

2182     }%
2183     \else
2184     \8%
2185     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2186     \fi
2187     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2188     \number
2189     \numexpr#1-256*\number
2190     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2191     }%
2192     \fi
2193     \fi
2194     \else
2195     .% unsupported (Unicode -> PDF Doc Encoding)
2196     \fi
2197 }%
2198 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2199 \def\HyPsd@unichar@first@byte#1{%
2200 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2201 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2202 \number
2203 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2204 \relax\relax\relax
2205 }%
2206 }%
2207 \def\HyPsd@unichar@second@byte#1{%
2208 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2209 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2210 \number
2211 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2212 \relax\relax\relax
2213 }%
2214 }%
2215 \def\HyPsd@unichar@octtwo#1{%
2216 \number\dimexpr.125\dimexpr#1sp\relax\relax
2217 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2218 \relax\relax\relax
2219 }%
2220 \fi

```

7 Support of other packages

7.1 Class memoir

```

2221 \@ifclassloaded{memoir}{%
2222 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%
2223 }{}

```

7.2 Package subfigure

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

```

2224 \@ifpackageloaded{subfigure}{%
2225 \ltx@ifundefined{sub@label}{%
2226 \Hy@hypertexnamesfalse
2227 }{%
2228 \renewcommand*{\sub@label}[1]{%
2229 \@bsphack

```

```

2230 \subfig@oldlabel{#1}%
2231 \if@filesw
2232 \begingroup
2233 \edef\@currentlabstr{%
2234 \expandafter\strip@prefix\meaning\@currentlabelname
2235 }%
2236 \protected@write\@auxout{}\@auxout{%
2237 \string\newlabel{sub@#1}{%
2238 {\@nameuse{@@thesub\@capttype}}%
2239 {\thepage}%
2240 }%
2241 \expandafter\strip@period\@currentlabstr
2242 \relax.\relax\@@@%
2243 }%
2244 {\@currentHref}%
2245 }%
2246 }%
2247 }%
2248 \endgroup
2249 \fi
2250 \@esphack
2251 }%
2252 \@ifpackagelater{subfigure}{2002/03/26}{\@auxout}{%
2253 \providecommand*\@toclevel@subfigure{1}%
2254 \providecommand*\@toclevel@subtable{1}%
2255 }%
2256 }%
2257 }{}

```

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:

```

2258 \ltx@ifundefined{XR@addURL}{%
2259 }{%

```

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.

```

2260 \def\XR@addURL#1{\XR@dURL#1}{\@auxout}{\@auxout}{\@auxout}{\@auxout}%
2261 \def\XR@dURL#1#2#3#4#5{\@auxout}{\@auxout}{\@auxout}{\@auxout}{\@auxout}%
2262 {\@auxout}{\@auxout}%
2263 \if!#4!%
2264 \else
2265 {\@auxout}{\@auxout}{\XR@URL}%
2266 \fi
2267 }%
2268 }

```

```

2269 \def\Hy@true{true}
2270 \def\Hy@false{false}

```

Providing dummy definitions.

```

2271 \let\literalps@out\@gobble
2272 \newcommand\pdfbookmark[3]{}
2273 \def\Acrobatmenu#1#2{\leavevmode#2}
2274 \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

```
2275 \let\HyperRaiseLinkHook\@empty
2276 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2277 \def\Hy@raisedlink#1{%
2278   \ifvmode
2279     #1%
2280   \else
2281     \penalty\@M
2282     \smash{%
2283       \begingroup
2284         \let\HyperRaiseLinkLength\@tempdima
2285         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2286         \HyperRaiseLinkHook
2287       \expandafter\endgroup
2288       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
2289     }%
2290   \fi
2291 }
```

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

```
2292 \def\Hy@SaveLastskip{%
2293   \let\Hy@RestoreLastskip\relax
2294   \ifvmode
2295     \ifdim\lastskip=\z@
2296       \let\Hy@RestoreLastskip\nobreak
2297     \else
2298       \begingroup
2299         \skip@=-\lastskip
2300         \edef\x{%
2301           \endgroup
2302           \def\noexpand\Hy@RestoreLastskip{%
2303             \noexpand\ifvmode
2304               \noexpand\nobreak
2305               \vskip\the\skip@
2306               \vskip\the\lastskip\relax
2307             \noexpand\fi
2308           }%
2309         }%
2310       \x
2311     \fi
2312   \else
2313     \ifhmode
2314       \ifdim\lastskip=\z@
```

```

2315     \let\Hy@RestoreLastskip\nobreak
2316   \else
2317     \begingroup
2318     \skip@=-\lastskip
2319     \edef\x{%
2320       \endgroup
2321       \def\noexpand\Hy@RestoreLastskip{%
2322         \noexpand\ifhmode
2323         \noexpand\nobreak
2324         \hskip\the\skip@
2325         \hskip\the\lastskip\relax
2326         \noexpand\fi
2327       }%
2328     }%
2329   \x
2330 \fi
2331 \fi
2332 \fi
2333 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2334 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2335 \def\Hy@@boolkey[#1]#2#3{%
2336   \edef\Hy@tempa{#3}%
2337   \lowercase\expandafter{%
2338     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2339   }%
2340   \ifx\Hy@tempa\@empty
2341     \let\Hy@tempa\Hy@true
2342   \fi
2343   \ifx\Hy@tempa\Hy@true
2344   \else
2345     \ifx\Hy@tempa\Hy@false
2346     \else
2347       \let\Hy@tempa\relax
2348     \fi
2349   \fi
2350   \ifx\Hy@tempa\relax
2351     \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2352   \else
2353     \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2354     \csname Hy@#2\Hy@tempa\endcsname
2355   \fi
2356 }

```

\Hy@WarnOptionValue

```

2357 \def\Hy@WarnOptionValue#1#2#3{%
2358   \Hy@Warning{%
2359     Unexpected value ‘#1’\MessageBreak
2360     of option ‘#2’ instead of\MessageBreak
2361     #3%
2362   }%

```

2363 }

\Hy@DisableOption

```
2364 \def\Hy@DisableOption#1{%
2365   \@ifundefined{KV@Hyp@#1@default}{%
2366     \define@key{Hyp}{#1}%
2367   }{%
2368     \define@key{Hyp}{#1}[]%
2369   }%
2370   {\Hy@WarnOptionDisabled{#1}}}%
2371 }
```

\Hy@WarnOptionDisabled

```
2372 \def\Hy@WarnOptionDisabled#1{%
2373   \Hy@Warning{%
2374     Option '#1' has already been used,\MessageBreak
2375     setting the option has no effect%
2376   }%
2377 }
```

\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.

```
2378 \def\Hy@CheckOptionValue#1#2#3{%
2379   \begingroup
2380   \edef\x{#1}%
2381   \@onelevel@sanitize\x
2382   \let\y=y%
2383   \def\do##1##2{%
2384     \def\z{##1}%
2385     \@onelevel@sanitize\z
2386     \ifx\x\z
2387       \let\y=n%
2388       \let\do\@gobbletwo
2389     \fi
2390   }%
2391   #3%
2392   \ifx\y y%
2393     \def\do##1##2{%
2394       * '#1'%
2395       \ifx\##2\\else\space(##2)\fi
2396       \MessageBreak
2397     }%
2398     \Hy@Warning{%
2399       Values of option '#2':\MessageBreak
2400       #3%
2401       * An empty value disables the option.\MessageBreak
2402       Unknown value '\x'%
2403     }%
2404   \fi
2405   \endgroup
2406 }
```

\Hy@DefNameKey #1: option name

 #2: \do list with known values, first argument of \do is value, second argument is a comment.

```
2407 \def\Hy@DefNameKey#1{%
```

```

2408 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2409 }

```

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

```

2410 \def\Hy@@DefNameKey#1#2#3{%
2411   \define@key{Hyp}{#2}{%
2412     \edef#1{##1}%
2413     \ifx#1\@empty
2414     \else
2415       \Hy@CheckOptionValue{##1}{#2}{#3}%
2416     \fi
2417   }%
2418   \let#1\@empty
2419 }

```

\Hy@UseNameKey

```

2420 \def\Hy@UseNameKey#1#2{%
2421   \ifx#2\@empty
2422   \else
2423     /#1/#2%
2424   \fi
2425 }

```

9.2 Defining the options

```

2426 \define@key{Hyp}{implicit}[true]{%
2427   \Hy@boolkey{implicit}{#1}%
2428 }
2429 \define@key{Hyp}{draft}[true]{%
2430   \Hy@boolkey{draft}{#1}%
2431 }
2432 \define@key{Hyp}{final}[true]{%
2433   \Hy@boolkey{final}{#1}%
2434 }
2435 \let\KV@Hyp@nolinks\KV@Hyp@draft
2436 \def\Hy@ObsoletePaperOption#1{%
2437   \Hy@WarningNoLine{%
2438     Option ‘#1’ is no longer used%
2439   }%
2440   \define@key{Hyp}{#1}[true]{}%
2441 }
2442 \def\Hy@temp#1{%
2443   \define@key{Hyp}{#1}[true]{%
2444     \Hy@ObsoletePaperOption{#1}%
2445   }%
2446 }
2447 \Hy@temp{a4paper}
2448 \Hy@temp{a5paper}
2449 \Hy@temp{b5paper}
2450 \Hy@temp{letterpaper}
2451 \Hy@temp{legalpaper}
2452 \Hy@temp{executivepaper}
2453 \define@key{Hyp}{setpagesize}[true]{%
2454   \Hy@boolkey{setpagesize}{#1}%

```

```

2455 }
2456 \define@key{Hyp}{debug}[true]{%
2457   \Hy@boolkey[debug]{verbose}{#1}%
2458 }
2459 \define@key{Hyp}{linktocpage}[true]{%
2460   \Hy@boolkey[linktocpage]{#1}%
2461   \ifHy@linktocpage
2462     \let\Hy@linktoc\Hy@linktoc@page
2463   \else
2464     \let\Hy@linktoc\Hy@linktoc@section
2465   \fi
2466 }
2467 \chardef\Hy@linktoc@none=0 %
2468 \chardef\Hy@linktoc@section=1 %
2469 \chardef\Hy@linktoc@page=2 %
2470 \chardef\Hy@linktoc@all=3 %
2471 \ifHy@linktocpage
2472   \let\Hy@linktoc\Hy@linktoc@page
2473 \else
2474   \let\Hy@linktoc\Hy@linktoc@section
2475 \fi
2476 \define@key{Hyp}{linktoc}{%
2477   \@ifundefined{Hy@linktoc@#1}{%
2478     \Hy@Warning{%
2479       Unexpected value '#1' of\MessageBreak
2480       option 'linktoc' instead of 'none',\MessageBreak
2481       'section', 'page' or 'all'%
2482     }%
2483   }{%
2484     \expandafter\let\expandafter\Hy@linktoc
2485     \csname Hy@linktoc@#1\endcsname
2486   }%
2487 }
2488 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2489 \let\XR@ext\relax
2490 \define@key{Hyp}{verbose}[true]{%
2491   \Hy@boolkey[verbose]{#1}%
2492 }
2493 \define@key{Hyp}{typexml}[true]{%
2494   \Hy@boolkey[typexml]{#1}%
2495 }

```

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.

```

2496 \define@key{Hyp}{raiselinks}[true]{%
2497   \Hy@boolkey[raiselinks]{#1}%
2498 }

```

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

```

2499 \def\Hy@setbreaklinks#1{%
2500   \csname breaklinks#1\endcsname
2501 }
2502 \def\Hy@breaklinks@unsupported{%
2503   \ifx\Hy@setbreaklinks\@gobble
2504     \ifHy@breaklinks
2505       \Hy@WarningNoLine{%

```

```

2506      You have enabled option 'breaklinks'.\MessageBreak
2507      But driver '\Hy@driver.def' does not support this.\MessageBreak
2508      Expect trouble with the link areas of broken links%
2509    }%
2510  \fi
2511 \fi
2512 }

```

```

2513 \define@key{Hyp}{breaklinks}[true]{%
2514   \Hy@boolkey{breaklinks}{#1}%
2515   \let\Hy@setbreaklinks\@gobble
2516 }

```

```

2517 \define@key{Hyp}{localanchorname}[true]{%
2518   \Hy@boolkey{localanchorname}{#1}%
2519 }

```

Determines whether an automatic anchor is put on each page

```

2520 \define@key{Hyp}{pageanchor}[true]{%
2521   \Hy@boolkey{pageanchor}{#1}%
2522 }

```

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.

```

2523 \define@key{Hyp}{plainpages}[true]{%
2524   \Hy@boolkey{plainpages}{#1}%
2525 }

```

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

```

2526 \define@key{Hyp}{naturalnames}[true]{%
2527   \Hy@boolkey{naturalnames}{#1}%
2528 }

```

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

```

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

```

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

```

2532 \define@key{Hyp}{nesting}[true]{%
2533   \Hy@boolkey{nesting}{#1}%
2534 }

```

```

2535 \define@key{Hyp}{unicode}[true]{%
2536   \Hy@boolkey{unicode}{#1}%
2537   \ifHy@unicode
2538     \def\HyPsd@pdfencoding{unicode}%
2539     \HyPsd@LoadUnicode
2540   \else
2541     \def\HyPsd@pdfencoding{pdfdoc}%
2542   \fi
2543 }
2544 \def\HyPsd@LoadUnicode{%
2545   \@ifundefined{T@PU}{%
2546     \input{puenc.def}%
2547     \HyLinguex@Restore
2548   }{}%
2549   \DeclareFontFamily{PU}{pdf}{}%
2550   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2551   \DeclareFontSubstitution{PU}{pdf}{m}{n}%

```

```

2552 \global\let\HyPsd@LoadUnicode\relax
2553 }
2554 \Hy@AtBeginDocument{%
2555   \ifx\HyPsd@LoadUnicode\relax
2556   \else
2557   \def\HyPsd@LoadUnicode{%
2558     \PackageError{hyperref}{%
2559       Unicode support for bookmarks is not available.\MessageBreak
2560       Activate unicode support by using one of the options\MessageBreak
2561       'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2562       in the preamble%
2563     }\@ehc
2564     \global\let\HyPsd@LoadUnicode\relax
2565     \global\Hy@unicodedefalse
2566     \global\let\Hy@unicodetrue\Hy@unicodedefalse
2567   }%
2568 \fi
2569 }

2570 \define@key{Hyp}{pdfencoding}{%
2571   \edef\HyPsd@temp{#1}%
2572   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2573     \let\HyPsd@pdfencoding\HyPsd@temp
2574     \Hy@unicodedefalse
2575   \else
2576     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2577       \z@
2578     \else
2579       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2580         \z@
2581       \else
2582         \@ne
2583       \fi
2584     \fi
2585     \let\HyPsd@pdfencoding\HyPsd@temp
2586     \hypersetup{unicode}%
2587     \ifHy@unicode
2588       \def\HyPsd@pdfencoding{#1}%
2589       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2590         \HyPsd@LoadStringEncoding
2591       \fi
2592     \else
2593       \Hy@Warning{Cannot switch to unicode bookmarks}%
2594       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2595     \fi
2596   \else
2597     \@onelevel@sanitize\HyPsd@temp
2598     \Hy@Warning{%
2599       Values of option 'pdfencoding':\MessageBreak
2600       'pdfdoc', 'unicode', 'auto'.\MessageBreak
2601       Ignoring unknown value '\HyPsd@temp'%
2602     }%
2603   \fi
2604 \fi
2605 }

2606 \def\HyPsd@pdfencoding@auto{auto}
2607 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2608 \def\HyPsd@pdfencoding@unicode{unicode}

```

```

2609 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2610 \def\HyPsd@LoadStringEnc{%
2611   \RequirePackage{stringenc}[2009/12/15]%
2612   \let\HyPsd@LoadStringEnc\relax
2613 }
2614 \Hy@AtBeginDocument{%
2615   \ifpackageloaded{stringenc}{%
2616     \let\HyPsd@LoadStringEnc\relax
2617   }{%
2618     \def\HyPsd@LoadStringEnc{%
2619       \Hy@WarningNoLine{%
2620         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2621         in the preamble or load the package there%
2622       }%
2623     }%
2624   }%
2625 }

2626 \newif\ifHy@setpdfversion
2627 \define@key{Hyp}{pdfversion}{%
2628   \ifundefined{Hy@pdfversion@#1}{%
2629     \PackageWarning{hyperref}{%
2630       Unsupported PDF version '#1'\MessageBreak
2631       Valid values: 1.2 until 1.9%
2632     }%
2633   }{%
2634     \Hy@setpdfversiontrue
2635     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2636   }%
2637 }
2638 \@namedef{Hy@pdfversion@1.2}{2}%
2639 \@namedef{Hy@pdfversion@1.3}{3}%
2640 \@namedef{Hy@pdfversion@1.4}{4}%
2641 \@namedef{Hy@pdfversion@1.5}{5}%
2642 \@namedef{Hy@pdfversion@1.6}{6}%
2643 \@namedef{Hy@pdfversion@1.7}{7}%
2644 \@namedef{Hy@pdfversion@1.8}{8}%
2645 \@namedef{Hy@pdfversion@1.9}{9}%
2646 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2647 \define@key{Hyp}{hyperref}[true]{}
2648 \define@key{Hyp}{tex4ht}[true]{}%
2649 \Hy@texhttrue
2650 \setkeys{Hyp}{colorlinks=true}%
2651 \def\BeforeTeXIVht{\usepackage{color}}%
2652 \def\Hy@driver{htex4ht}%
2653 \def\MaybeStopEarly{%
2654   \typeout{Hyperref stopped early}%
2655   \Hy@AtBeginDocument{%
2656     \PDF@FinishDoc
2657     \gdef\PDF@FinishDoc{}%
2658   }%
2659   \endinput
2660 }%
2661 }
2662 \define@key{Hyp}{pdftex}[true]{}

```



```

2663 \def\Hy@driver{hpdtex}%
2664 }
2665 \define@key{Hyp}{nativepdf}[true]{%
2666 \def\Hy@driver{hdvips}%
2667 }
2668 \define@key{Hyp}{dvipdfm}[true]{%
2669 \def\Hy@driver{hdvipdfm}%
2670 }
2671 \define@key{Hyp}{dvipdfmx}[true]{%
2672 \def\Hy@driver{hdvipdfm}%
2673 }
2674 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2675 \expandafter\ifx\csname if#1\expandafter\endcsname
2676 \csname iftrue\endcsname
2677 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2678 \else
2679 \chardef\SpecialDvipdfmxOutlineOpen\z@
2680 \fi
2681 }
2682 \define@key{Hyp}{xetex}[true]{%
2683 \def\Hy@driver{hxetex}%
2684 }
2685 \define@key{Hyp}{pdfmark}[true]{%
2686 \def\Hy@driver{hdvips}%
2687 }
2688 \define@key{Hyp}{dvips}[true]{%
2689 \def\Hy@driver{hdvips}%
2690 }
2691 \define@key{Hyp}{hypertex}[true]{%
2692 \def\Hy@driver{hypertex}%
2693 }
2694 \let\Hy@MaybeStopNow\relax
2695 \define@key{Hyp}{vtex}[true]{%
2696 \begingroup\expandafter\expandafter\expandafter\endgroup
2697 \expandafter\ifx\csname OpMode\endcsname\relax
2698 \@latex@error{Non-VTeX processor}{}%
2699 \global\let\Hy@MaybeStopNow\endinput
2700 \endinput
2701 \else
2702 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2703 \def\Hy@driver{hvtex}%
2704 \else
2705 \ifnum\OpMode=10\relax
2706 \def\Hy@driver{hvtexhtm}%
2707 \def\MaybeStopEarly{%
2708 \typeout{Hyperref stopped early}%
2709 \Hy@AtBeginDocument{%
2710 \PDF@FinishDoc
2711 \gdef\PDF@FinishDoc{}}%
2712 }%
2713 \endinput
2714 }%
2715 \else
2716 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2717 \global\let\Hy@MaybeStopNow\endinput
2718 \endinput
2719 \fi

```

```

2720 \fi
2721 \fi
2722 }
2723 \define@key{Hyp}{vtexpdfmark}[true]{%
2724 \begingroup\expandafter\expandafter\expandafter\endgroup
2725 \expandafter\ifx\csname OpMode\endcsname\relax
2726 \latexerror{Non-VTeX processor}{}%
2727 \let\Hy@MaybeStopNow\endinput
2728 \endinput
2729 \else
2730 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2731 \def\Hy@driver{hvtexmrk}%
2732 \else
2733 \latexerror{Mode (\the\OpMode) has no hyperref driver}{}%
2734 \let\Hy@MaybeStopNow\endinput
2735 \endinput
2736 \fi
2737 \fi
2738 }
2739 \define@key{Hyp}{dviwindo}[true]{%
2740 \def\Hy@driver{hdviwind}%
2741 \setkeys{Hyp}{colorlinks}%
2742 \ifpdf
2743 \else
2744 \ifxetex
2745 \else
2746 \PassOptionsToPackage{dviwindo}{color}%
2747 \fi
2748 \fi
2749 }
2750 \define@key{Hyp}{dvipsone}[true]{%
2751 \def\Hy@driver{hdvipson}%
2752 }
2753 \define@key{Hyp}{textures}[true]{%
2754 \def\Hy@driver{htexture}%
2755 }
2756 \define@key{Hyp}{latex2html}[true]{%
2757 \Hy@AtBeginDocument{\@latex2htmlX}%
2758 }

```

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

```

2759 \define@key{Hyp}{ps2pdf}[true]{%
2760 \def\Hy@driver{hdvips}%
2761 \providecommand*\pdfborder{0 0 1}%
2762 }

```

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.

```

2763 \define@key{Hyp}{hyperfigures}[true]{%
2764 \Hy@boolkey{hyperfigures}{figures}{#1}%
2765 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2766 \define@key{Hyp}{hyperfootnotes}[true]{%
2767 \Hy@boolkey{hyperfootnotes}{#1}%
2768 }

```

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

```

2769 \def\back@none{none}
2770 \def\back@section{section}
2771 \def\back@page{page}
2772 \def\back@slide{slide}
2773 \define@key{Hyp}{backref}[section]{%
2774   \lowercase{\def\Hy@tempa{#1}}}%
2775   \ifx\Hy@tempa\@empty
2776     \let\Hy@tempa\back@section
2777   \fi
2778   \ifx\Hy@tempa\Hy@false
2779     \let\Hy@tempa\back@none
2780   \fi
2781   \ifx\Hy@tempa\back@slide
2782     \let\Hy@tempa\back@section
2783   \fi
2784   \ifx\Hy@tempa\back@page
2785     \PassOptionsToPackage{hyperpageref}{backref}%
2786     \Hy@backreftrue
2787   \else
2788     \ifx\Hy@tempa\back@section
2789       \PassOptionsToPackage{hyperref}{backref}%
2790       \Hy@backreftrue
2791     \else
2792       \ifx\Hy@tempa\back@none
2793         \Hy@backreffalse
2794       \else
2795         \Hy@WarnOptionValue{#1}{backref}{%
2796           'section', 'slide', 'page', 'none',\MessageBreak
2797           or 'false'}%
2798       \fi
2799     \fi
2800   \fi
2801 }
2802 \define@key{Hyp}{pagebackref}[true]{%
2803   \edef\Hy@tempa{#1}%
2804   \lowercase\expandafter{%
2805     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2806   }%
2807   \ifx\Hy@tempa\@empty
2808     \let\Hy@tempa\Hy@true
2809   \fi
2810   \ifx\Hy@tempa\Hy@true
2811     \PassOptionsToPackage{hyperpageref}{backref}%
2812     \Hy@backreftrue
2813   \else
2814     \ifx\Hy@tempa\Hy@false
2815       \Hy@backreffalse
2816     \else
2817       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2818     \fi
2819   \fi
2820 }

```

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

```

2821 \define@key{Hyp}{hyperindex}[true]{%
2822   \Hy@boolkey{hyperindex}{#1}%

```

2823 }

Configuration of encap char.

2824 \define@key{Hyp}{encap}{\|}{%}

2825 \def\HyInd@EncapChar{#1}%

2826 }

12 Language options

The \autoref feature depends on the language.

2827 \def\HyLang@afrikaans{%

2828 \def\equationautorefname{Vergelyking}%

2829 \def\footnoteautorefname{Voetnota}%

2830 \def\itemautorefname{Item}%

2831 \def\figureautorefname{Figuur}%

2832 \def\tableautorefname{Tabel}%

2833 \def\partautorefname{Deel}%

2834 \def\appendixautorefname{Bylae}%

2835 \def\chapterautorefname{Hoofstuk}%

2836 \def\sectionautorefname{Afdeling}%

2837 \def\subsectionautorefname{Subafdeling}%

2838 \def\subsubsectionautorefname{Subsubafdeling}%

2839 \def\paragraphautorefname{Paragraaf}%

2840 \def\subparagraphautorefname{Subparagraaf}%

2841 \def\FancyVerbLineautorefname{Lyn}%

2842 \def\theoremautorefname{Teorema}%

2843 \def\pageautorefname{Bladsy}%

2844 }

2845 \def\HyLang@english{%

2846 \def\equationautorefname{Equation}%

2847 \def\footnoteautorefname{footnote}%

2848 \def\itemautorefname{item}%

2849 \def\figureautorefname{Figure}%

2850 \def\tableautorefname{Table}%

2851 \def\partautorefname{Part}%

2852 \def\appendixautorefname{Appendix}%

2853 \def\chapterautorefname{chapter}%

2854 \def\sectionautorefname{section}%

2855 \def\subsectionautorefname{subsection}%

2856 \def\subsubsectionautorefname{subsubsection}%

2857 \def\paragraphautorefname{paragraph}%

2858 \def\subparagraphautorefname{subparagraph}%

2859 \def\FancyVerbLineautorefname{line}%

2860 \def\theoremautorefname{Theorem}%

2861 \def\pageautorefname{page}%

2862 }

2863 \def\HyLang@french{%

2864 \def\equationautorefname{'Equation}%

2865 \def\footnoteautorefname{note}%

2866 \def\itemautorefname{item}%

2867 \def\figureautorefname{Figure}%

2868 \def\tableautorefname{Tableau}%

2869 \def\partautorefname{Partie}%

2870 \def\appendixautorefname{Appendice}%

2871 \def\chapterautorefname{chapitre}%

2872 \def\sectionautorefname{section}%

2873 \def\subsectionautorefname{sous-section}%

```

2874 \def\subsubsectionautorefname{sous-sous-section}%
2875 \def\paragraphautorefname{paragraphe}%
2876 \def\subparagraphautorefname{sous-paragraphe}%
2877 \def\FancyVerbLineautorefname{ligne}%
2878 \def\theoremautorefname{Th\'eor\'eme}%
2879 \def\pageautorefname{page}%
2880 }
2881 \def\HyLang@german{%
2882 \def\equationautorefname{Gleichung}%
2883 \def\footnoteautorefname{Fu\ss note}%
2884 \def\itemautorefname{Punkt}%
2885 \def\figureautorefname{Abbildung}%
2886 \def\tableautorefname{Tabelle}%
2887 \def\partautorefname{Teil}%
2888 \def\appendixautorefname{Anhang}%
2889 \def\chapterautorefname{Kapitel}%
2890 \def\sectionautorefname{Abschnitt}%
2891 \def\subsectionautorefname{Unterabschnitt}%
2892 \def\subsubsectionautorefname{Unterunterabschnitt}%
2893 \def\paragraphautorefname{Absatz}%
2894 \def\subparagraphautorefname{Unterabsatz}%
2895 \def\FancyVerbLineautorefname{Zeile}%
2896 \def\theoremautorefname{Theorem}%
2897 \def\pageautorefname{Seite}%
2898 }
2899 \def\HyLang@italian{%
2900 \def\equationautorefname{Equazione}%
2901 \def\footnoteautorefname{nota}%
2902 \def\itemautorefname{punto}%
2903 \def\figureautorefname{Figura}%
2904 \def\tableautorefname{Tabella}%
2905 \def\partautorefname{Parte}%
2906 \def\appendixautorefname{Appendice}%
2907 \def\chapterautorefname{Capitolo}%
2908 \def\sectionautorefname{sezione}%
2909 \def\subsectionautorefname{sottosezione}%
2910 \def\subsubsectionautorefname{sottosottosezione}%
2911 \def\paragraphautorefname{paragrafo}%
2912 \def\subparagraphautorefname{sottoparagrafo}%
2913 \def\FancyVerbLineautorefname{linea}%
2914 \def\theoremautorefname{Teorema}%
2915 \def\pageautorefname{Pag.\@}%
2916 }
2917 \def\HyLang@magyar{%
2918 \def\equationautorefname{Egyenlet}%
2919 \def\footnoteautorefname{l\'abjegyzet}%
2920 \def\itemautorefname{Elem}%
2921 \def\figureautorefname{'Abra}%
2922 \def\tableautorefname{T\'abl\'azat}%
2923 \def\partautorefname{R\'esz}%
2924 \def\appendixautorefname{F\'uggel\'ek}%
2925 \def\chapterautorefname{fejezet}%
2926 \def\sectionautorefname{szakasz}%
2927 \def\subsectionautorefname{alszakasz}%
2928 \def\subsubsectionautorefname{alalszakasz}%
2929 \def\paragraphautorefname{bekezd\'es}%
2930 \def\subparagraphautorefname{albekezd\'es}%

```


2965 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
 2966 % \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.

2967 \def\itemautorefname{\cyr\cyrp.}%
 2968 % \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.

2969 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
 2970 \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.

2971 \def\partautorefname{\cyr\cyrch.}%
 2972 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
 2973 \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.

2974 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
 2975 % \def\appendixautorefname{%
 2976 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
 2977 % }%

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.

2978 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
 2979 \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.

2980 \def\paragraphautorefname{\cyr\cyrp.}%
 2981 \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.

2982 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
 2983 % \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.

2984 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

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

2985 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
 2986 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

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

2987 % \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 ...

```
2988 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2989 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cym\cyr.}%
```

```
2990 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cym\cyr.}%
```

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

```
2991 \def\pageautorefname{\cyr\cyr.}%
```

```
2992 }
```

```
2993 \def\HyLang@spanish{%
```

```
2994 \def\equationautorefname{Ecuaci'on}%
```

```
2995 \def\footnoteautorefname{Nota a pie de p'agina}%
```

```
2996 \def\itemautorefname{Elemento}%
```

```
2997 \def\figureautorefname{Figura}%
```

```
2998 \def\tableautorefname{Tabla}%
```

```
2999 \def\partautorefname{Parte}%
```

```
3000 \def\appendixautorefname{Ap'endice}%
```

```
3001 \def\chapterautorefname{Cap'itulo}%
```

```
3002 \def\sectionautorefname{Secci'on}%
```

```
3003 \def\subsectionautorefname{Subsecci'on}%
```

```
3004 \def\subsubsectionautorefname{Subsubsecci'on}%
```

```
3005 \def\paragraphautorefname{P'arrafo}%
```

```
3006 \def\subparagraphautorefname{Subp'arrafo}%
```

```
3007 \def\FancyVerbLineautorefname{L'inea}%
```

```
3008 \def\theoremautorefname{Teorema}%
```

```
3009 \def\pageautorefname{P'agina}%
```

```
3010 }
```

```
3011 \def\HyLang@vietnamese{%
```

```
3012 \def\equationautorefname{Ph\uhorn{ }ohorn{ }ng tr'inh}%
```

```
3013 \def\footnoteautorefname{Ch'u th'ich}%
```

```
3014 \def\itemautorefname{m\du{c}%
```

```
3015 \def\figureautorefname{H'inh}%
```

```
3016 \def\tableautorefname{B'h{a}ng}%
```

```
3017 \def\partautorefname{Ph'\acircumflex{n}%
```

```
3018 \def\appendixautorefname{Ph\du{ }l\du{c}%
```

```
3019 \def\chapterautorefname{ch\uhorn{ }ohorn{ }ng}%
```

```
3020 \def\sectionautorefname{m\du{c}%
```

```
3021 \def\subsectionautorefname{m\du{c}%
```

```
3022 \def\subsubsectionautorefname{m\du{c}%
```

```
3023 \def\paragraphautorefname{\dj{ }o\da{n}%
```

```
3024 \def\subparagraphautorefname{\dj{ }o\da{n}%
```

```
3025 \def\FancyVerbLineautorefname{d'ong}%
```

```
3026 \def\theoremautorefname{DJ\di{ }nh l'y}%
```

```
3027 \def\pageautorefname{Trang}%
```

```
3028 }
```

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

```
3029 \def\HyLang@addto#1#2{%
```

```
3030 #2%
```

```
3031 \@temptokena{#2}%
```

```
3032 \ifx#1\relax
```

```
3033 \let#1\@empty
```

```
3034 \fi
```

```
3035 \ifx#1\@undefined
```



```

3036 \edef#1{\the\@temptokena}%
3037 \else
3038 \toks@\expandafter{#1}%
3039 \edef#1{\the\toks@\the\@temptokena}%
3040 \fi
3041 \@temptokena{}\toks@\@temptokena
3042 }

3043 \def\HyLang@DeclareLang#1#2#3{%
3044 \ifpackagewith{babel}{#1}{%
3045 \expandafter\HyLang@addto
3046 \csname extras#1\expandafter\endcsname
3047 \csname HyLang@#2\endcsname
3048 #3%
3049 \@namedef{HyLang@#1@done}{}%
3050 }{}%
3051 \begingroup
3052 \edef\x##1#2{%
3053 \noexpand\ifx##2\relax
3054 \errmessage{No definitions for language #2' found!}%
3055 \noexpand\fi
3056 \endgroup
3057 \noexpand\define@key{Hyp}{#1}[]{}%
3058 \noexpand\@ifundefined{HyLang@#1@done}{%
3059 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3060 #3%
3061 \noexpand\@namedef{HyLang@#1@done}{}%
3062 }{}%
3063 }%
3064 }%
3065 \expandafter\x\csname extras#1\expandafter\endcsname
3066 \csname HyLang@#2\endcsname
3067 }

3068 \HyLang@DeclareLang{english}{english}{}
3069 \HyLang@DeclareLang{UKenglish}{english}{}
3070 \HyLang@DeclareLang{british}{english}{}
3071 \HyLang@DeclareLang{USenglish}{english}{}
3072 \HyLang@DeclareLang{american}{english}{}
3073 \HyLang@DeclareLang{german}{german}{}
3074 \HyLang@DeclareLang{austrian}{german}{}
3075 \HyLang@DeclareLang{ngerman}{german}{}
3076 \HyLang@DeclareLang{naustrian}{german}{}
3077 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3078 \HyLang@DeclareLang{brazil}{portuges}{}
3079 \HyLang@DeclareLang{brazilian}{portuges}{}
3080 \HyLang@DeclareLang{portuguese}{portuges}{}
3081 \HyLang@DeclareLang{spanish}{spanish}{}
3082 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3083 \HyLang@DeclareLang{french}{french}{}
3084 \HyLang@DeclareLang{frenchb}{french}{}
3085 \HyLang@DeclareLang{français}{french}{}
3086 \HyLang@DeclareLang{acadian}{french}{}
3087 \HyLang@DeclareLang{canadien}{french}{}
3088 \HyLang@DeclareLang{italian}{italian}{}
3089 \HyLang@DeclareLang{magyar}{magyar}{}
3090 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3091 \define@key{Hyp}{vietnamese}[]{%
3092   \HyLang@addto\extravietnamese\HyLang@vietnamese
3093   \Hy@AtEndOfPackage{%
3094     \ifundefined{T@PU}{-}{%
3095       \input{puvnenc.def}%
3096     }%
3097   }%
3098 }
3099 \define@key{Hyp}{vietnam}[]{%
3100   \HyLang@addto\extravietnam\HyLang@vietnamese
3101   \Hy@AtEndOfPackage{%
3102     \ifundefined{T@PU}{-}{%
3103       \input{puvnenc.def}%
3104     }%
3105   }%
3106 }

```

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

```

3107 \define@key{Hyp}{arabic}[]{%
3108   \Hy@AtEndOfPackage{%
3109     \ifundefined{T@PU}{-}{%
3110       \input{puarenc.def}%
3111     }%
3112   }%
3113 }

```

13 Options to change appearance of links

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

```

3114 \define@key{Hyp}{colorlinks}[true]{%
3115   \Hy@boolkey{colorlinks}{#1}%
3116 }
3117 \define@key{Hyp}{ocgcolorlinks}[true]{%
3118   \Hy@boolkey{ocgcolorlinks}{#1}%
3119 }
3120 \Hy@AtBeginDocument{%
3121   \begingroup
3122     \ifundefined{OBJ@OCG@view}{%
3123       \ifHy@ocgcolorlinks
3124         \Hy@Warning{%
3125           Driver does not support ‘ocgcolorlinks’,\MessageBreak
3126           using ‘colorlinks’ instead%
3127         }%
3128       \fi
3129     }{%
3130   \endgroup
3131 }
3132 \define@key{Hyp}{frenchlinks}[true]{%
3133   \Hy@boolkey{frenchlinks}{#1}%
3134 }

```

14 Bookmarking

```

3135 \begingroup\expandafter\expandafter\expandafter\endgroup
3136 \expandafter\ifx\csname chapter\endcsname\relax

```

```

3137 \def\toclevel@part{0}%
3138 \else
3139 \def\toclevel@part{-1}%
3140 \fi
3141 \def\toclevel@chapter{0}
3142 \def\toclevel@section{1}
3143 \def\toclevel@subsection{2}
3144 \def\toclevel@subsubsection{3}
3145 \def\toclevel@paragraph{4}
3146 \def\toclevel@subparagraph{5}
3147 \def\toclevel@figure{0}
3148 \def\toclevel@table{0}
3149 \@ifpackageloaded{listings}{%
3150 \providecommand*\theHlstlisting{\thelstlisting}%
3151 \providecommand*\toclevel@lstlisting{0}%
3152 }{}
3153 \@ifpackageloaded{listing}{%
3154 \providecommand*\theHlisting{\thelisting}%
3155 \providecommand*\toclevel@listing{0}%
3156 }{}

3157 \define@key{Hyp}{bookmarks}[true]{%
3158 \Hy@boolkey{bookmarks}{#1}%
3159 }

3160 \define@key{Hyp}{bookmarksopen}[true]{%
3161 \Hy@boolkey{bookmarksopen}{#1}%
3162 }

```

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.

```

3163 \let\Hy@bookmarksdepth\c@tocdepth
3164 \define@key{Hyp}{bookmarksdepth}[]{%
3165 \begingroup
3166 \edef\x{#1}%
3167 \ifx\x\empty
3168 \global\let\Hy@bookmarksdepth\c@tocdepth
3169 \else
3170 \@ifundefined{toclevel@\x}{%
3171 \@onelevel@sanitize\x
3172 \edef\y{\expandafter\@car\x\@nil}%
3173 \ifcase 0\expandafter\ifx\y-1\fi
3174 \expandafter\ifnum\expandafter'\y>47 %
3175 \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3176 \Hy@Warning{Unknown document division name (\x)}%
3177 \else
3178 \setbox\z@=\hbox{%
3179 \count@=\x
3180 \xdef\Hy@bookmarksdepth{\the\count@}%
3181 }%

```

```

3182     \fi
3183   }{%
3184     \setbox\z@=\hbox{%
3185       \count@=\csname toplevel@\x\endcsname
3186       \xdef\Hy@bookmarksdepth{\the\count@}%
3187     }%
3188   }%
3189   \fi
3190 \endgroup
3191 }

```

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

```

3192 \define@key{Hyp}{bookmarksopenlevel}{%
3193   \def\@bookmarksopenlevel{#1}%
3194 }
3195 \def\@bookmarksopenlevel{\maxdimen}
3196 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3197 \define@key{Hyp}{bookmarkstype}{%
3198   \def\Hy@bookmarkstype{#1}%
3199 }
3200 \def\Hy@bookmarkstype{toc}

```

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

```

3201 \define@key{Hyp}{bookmarksnumbered}[true]{%
3202   \Hy@boolkey{bookmarksnumbered}{#1}%
3203 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3204 \define@key{Hyp}{CJKbookmarks}[true]{%
3205   \Hy@boolkey{CJKbookmarks}{#1}%
3206 }
3207 \def\Hy@temp#1{%
3208   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3209 }
3210 \def\Hy@@temp#1#2#3{%
3211   \define@key{Hyp}{#2color}{%
3212     \HyColor@HyperrefColor{##1}#1%
3213   }%
3214   \def#1{#3}%
3215 }
3216 \Hy@temp{link}{red}
3217 \Hy@temp{anchor}{black}
3218 \Hy@temp{cite}{green}
3219 \Hy@temp{file}{cyan}
3220 \Hy@temp{url}{magenta}
3221 \Hy@temp{menu}{red}
3222 \Hy@temp{run}{\@filecolor}
3223 \define@key{Hyp}{pagecolor}{%
3224   \Hy@WarningPageColor
3225 }
3226 \def\Hy@WarningPageColor{%
3227   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3228   \global\let\Hy@WarningPageColor\relax
3229 }
3230 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3231 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3232 \let\@baseurl\@empty

```

```

3233 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3234 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3235 \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.

```

3236 \let\@pdfpagetransition\relax
3237 \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.

```

3238 \let\@pdfpageduration\relax
3239 \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.

```

3240 \newif\ifHy@useHidKey
3241 \Hy@useHidKeyfalse
3242 \define@key{Hyp}{pdfpagehidden}[true]{%
3243   \Hy@boolkey{pdfpagehidden}{#1}%
3244   \ifHy@pdfpagehidden
3245     \global\Hy@useHidKeytrue
3246   \fi
3247 }

```

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).

```

3248 \def\Hy@ColorList{cite,file,link,menu,run,url}
3249 \@for\Hy@temp:=\Hy@ColorList\do{%
3250   \edef\Hy@temp{%
3251     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3252       \noexpand\Hy@Color@HyperrefBorderColor
3253       {##1}%
3254       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3255       {hyperref}%
3256       {\Hy@temp bordercolor}%
3257     }%
3258   }%
3259   \Hy@temp
3260 }
3261 \define@key{Hyp}{pagebordercolor}{%
3262   \Hy@WarningPageBorderColor
3263 }
3264 \def\Hy@WarningPageBorderColor{%
3265   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%

```

```

3266 \global\let\Hy@WarningPageBorderColor\relax
3267 }

3268 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3269 \Hy@DefNameKey{pdfhighlight}{%
3270   \do{/I}{Invert}%
3271   \do{/N}{None}%
3272   \do{/O}{Outline}%
3273   \do{/P}{Push}%
3274 }
3275 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
3276 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3277 \def\Hy@setpdfborder{%
3278   \ifx\@pdfborder\@empty
3279     \else
3280       /Border[\@pdfborder]%
3281     \fi
3282   \ifx\@pdfborderstyle\@empty
3283     \else
3284       /BS<<\@pdfborderstyle>>%
3285     \fi
3286 }
3287 \Hy@DefNameKey{pdfpagemode}{%
3288   \do{UseNone}{}%
3289   \do{UseOutlines}{}%
3290   \do{UseThumbs}{}%
3291   \do{FullScreen}{}%
3292   \do{UseOC}{PDF 1.5}%
3293   \do{UseAttachments}{PDF 1.6}%
3294 }
3295 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3296   \do{UseNone}{}%
3297   \do{UseOutlines}{}%
3298   \do{UseThumbs}{}%
3299   \do{FullScreen}{}%
3300   \do{UseOC}{PDF 1.5}%
3301   \do{UseAttachments}{PDF 1.6}%
3302 }
3303 \Hy@DefNameKey{pdfdirection}{%
3304   \do{L2R}{Left to right}%
3305   \do{R2L}{Right to left}%
3306 }
3307 \Hy@DefNameKey{pdfviewarea}{%
3308   \do{MediaBox}{}%
3309   \do{CropBox}{}%
3310   \do{BleedBox}{}%
3311   \do{TrimBox}{}%
3312   \do{ArtBox}{}%
3313 }
3314 \Hy@DefNameKey{pdfviewclip}{%
3315   \do{MediaBox}{}%
3316   \do{CropBox}{}%
3317   \do{BleedBox}{}%
3318   \do{TrimBox}{}%
3319   \do{ArtBox}{}%
3320 }
3321 \Hy@DefNameKey{pdfprintarea}{%
3322   \do{MediaBox}{}%

```

```

3323 \do{CropBox}{}%
3324 \do{BleedBox}{}%
3325 \do{TrimBox}{}%
3326 \do{ArtBox}{}%
3327 }
3328 \Hy@DefNameKey{pdfprintclip}{%
3329 \do{MediaBox}{}%
3330 \do{CropBox}{}%
3331 \do{BleedBox}{}%
3332 \do{TrimBox}{}%
3333 \do{ArtBox}{}%
3334 }
3335 \Hy@DefNameKey{pdfprintscaling}{%
3336 \do{AppDefault}{}%
3337 \do{None}{}%
3338 }
3339 \Hy@DefNameKey{pdfduplex}{%
3340 \do{Simplex}{}%
3341 \do{DuplexFlipShortEdge}{}%
3342 \do{DuplexFlipLongEdge}{}%
3343 }
3344 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3345 \do{true}{}%
3346 \do{false}{}%
3347 }
3348 \define@key{Hyp}{pdfprintpagerange}{%
3349 \def\@pdfprintpagerange{#1}%
3350 }
3351 \Hy@DefNameKey{pdfnumcopies}{%
3352 \do{2}{two copies}%
3353 \do{3}{three copies}%
3354 \do{4}{four copies}%
3355 \do{5}{five copies}%
3356 }
3357 \define@key{Hyp}{pdfusetitle}[true]{%
3358 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3359 }
3360 \def\HyXeTeX@CheckUnicode{%
3361 \ifxetex
3362 \ifHy@unicode
3363 \else
3364 \Hy@WarningNoLine{%
3365 XeTeX driver only supports unicode.\MessageBreak
3366 Enabling option ‘unicode’%
3367 }%
3368 \setkeys{Hyp}{unicode}%
3369 \fi
3370 \else
3371 \let\HyXeTeX@CheckUnicode\relax
3372 \fi
3373 }
3374 \def\HyPsd@PrerenderUnicode#1{%
3375 \begingroup
3376 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3377 \else
3378 \sbox0{%
3379 \let\GenericInfo\@gobbletwo

```

```

3380 \let\GenericWarning\@gobbletwo
3381 \let\GenericError\@gobblefour
3382 \PrerenderUnicode{#1}%
3383 }%
3384 \fi
3385 \endgroup
3386 }
3387 \define@key{Hyp}{pdftitle}{%
3388 \HyXeTeX@CheckUnicode
3389 \HyPsd@XeTeXBigCharstrue
3390 \HyPsd@PrerenderUnicode{#1}%
3391 \pdfstringdef\@pdftitle{#1}%
3392 }
3393 \define@key{Hyp}{pdfauthor}{%
3394 \HyXeTeX@CheckUnicode
3395 \HyPsd@XeTeXBigCharstrue
3396 \HyPsd@PrerenderUnicode{#1}%
3397 \pdfstringdef\@pdfauthor{#1}%
3398 }
3399 \define@key{Hyp}{pdfproducer}{%
3400 \HyXeTeX@CheckUnicode
3401 \HyPsd@XeTeXBigCharstrue
3402 \HyPsd@PrerenderUnicode{#1}%
3403 \pdfstringdef\@pdfproducer{#1}%
3404 }
3405 \define@key{Hyp}{pdfcreator}{%
3406 \HyXeTeX@CheckUnicode
3407 \HyPsd@XeTeXBigCharstrue
3408 \HyPsd@PrerenderUnicode{#1}%
3409 \pdfstringdef\@pdfcreator{#1}%
3410 }
3411 \define@key{Hyp}{pdfcreationdate}{%
3412 \begingroup
3413 \Hy@unicodedefalse
3414 \pdfstringdef\@pdfcreationdate{#1}%
3415 \endgroup
3416 }
3417 \define@key{Hyp}{pdfmoddate}{%
3418 \begingroup
3419 \Hy@unicodedefalse
3420 \pdfstringdef\@pdfmoddate{#1}%
3421 \endgroup
3422 }
3423 \define@key{Hyp}{pdfsubject}{%
3424 \HyXeTeX@CheckUnicode
3425 \HyPsd@XeTeXBigCharstrue
3426 \HyPsd@PrerenderUnicode{#1}%
3427 \pdfstringdef\@pdfsubject{#1}%
3428 }
3429 \define@key{Hyp}{pdfkeywords}{%
3430 \HyXeTeX@CheckUnicode
3431 \HyPsd@XeTeXBigCharstrue
3432 \HyPsd@PrerenderUnicode{#1}%
3433 \pdfstringdef\@pdfkeywords{#1}%
3434 }
3435 \define@key{Hyp}{pdftrapped}{%
3436 \lowercase{\edef\Hy@temp{#1}}%

```



```

3437 \ifx\Hy@temp\HyInfo@trapped@true
3438 \def\@pdftrapped{True}%
3439 \else
3440 \ifx\Hy@temp\HyInfo@trapped@false
3441 \def\@pdftrapped{False}%
3442 \else
3443 \ifx\Hy@temp\HyInfo@trapped@unknown
3444 \def\@pdftrapped{Unknown}%
3445 \else
3446 \ifx\Hy@temp\@empty
3447 \else
3448 \Hy@Warning{%
3449     Unsupported value '#1'\MessageBreak
3450     for option 'pdftrapped'%
3451 }%
3452 \fi
3453 \def\@pdftrapped{}%
3454 \fi
3455 \fi
3456 \fi
3457 }
3458 \def\HyInfo@trapped@true{true}
3459 \def\HyInfo@trapped@false{false}
3460 \def\HyInfo@trapped@unknown{unknown}
3461 \def\HyInfo@TrappedUnsupported{%
3462 \ifx\@pdftrapped\@empty
3463 \else
3464 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3465 \gdef\HyInfo@TrappedUnsupported{}%
3466 \fi
3467 }
3468 \define@key{Hyp}{pdfinfo}{%
3469 \kvsetkeys{pdfinfo}{#1}%
3470 }
3471 \def\Hy@temp#1{%
3472 \lowercase{\Hy@temp@A{#1}}{#1}%
3473 }
3474 \def\Hy@temp@A#1#2{%
3475 \define@key{pdfinfo}{#2}{%
3476 \hypersetup{pdf#1={##1}}%
3477 }%
3478 }
3479 \Hy@temp{Title}
3480 \Hy@temp{Author}
3481 \Hy@temp{Keywords}
3482 \Hy@temp{Subject}
3483 \Hy@temp{Creator}
3484 \Hy@temp{Producer}
3485 \Hy@temp{CreationDate}
3486 \Hy@temp{ModDate}
3487 \Hy@temp{Trapped}
3488 \newif\ifHyInfo@AddonUnsupported
3489 \kv@set@family@handler{pdfinfo}{%
3490 \HyInfo@AddonHandler{#1}{#2}%
3491 }
3492 \let\HyInfo@do\relax
3493 \def\HyInfo@AddonHandler#1#2{%

```

```

3494 \ifx\kv@value\relax
3495   \Hy@Warning{%
3496     Option 'pdfinfo': ignoring key '\kv@key' without value%
3497   }%
3498 \else
3499   \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3500   \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3501   \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3502     \ifHyInfo@AddonUnsupported
3503       \Hy@Warning{%
3504         This driver does not support additional\MessageBreak
3505         information entries, therefore\MessageBreak
3506         '\kv@key' is ignored%
3507       }%
3508     \else
3509       \define@key{pdfinfo}{\HyInfo@Key}{%
3510         \HyXeTeX@CheckUnicode
3511         \HyPsd@XeTeXBigCharstrue
3512         \HyPsd@PrerenderUnicode{##1}%
3513         \pdfstringdef\HyInfo@Value{##1}%
3514         \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3515         \HyInfo@Value
3516       }%
3517       \edef\HyInfo@AddonList{%
3518         \HyInfo@AddonList
3519         \HyInfo@do{\HyInfo@Key}%
3520       }%
3521       \kv@parse@normalized{%
3522         \HyInfo@Key={#2}%
3523       }{%
3524         \kv@processor@default{pdfinfo}%
3525       }%
3526     \fi
3527 \else
3528   \kv@parse@normalized{%
3529     \HyInfo@Key={#2}%
3530   }{%
3531     \kv@processor@default{pdfinfo}%
3532   }%
3533 \fi
3534 \fi
3535 }
3536 \def\HyInfo@GenerateAddons{%
3537   \ifHyInfo@AddonUnsupported
3538     \def\HyInfo@Addons{}%
3539   \else
3540     \begingroup
3541     \toks@{}%
3542     \def\HyInfo@do##1{%
3543       \EdefEscapeName\HyInfo@Key{##1}%
3544       \edef\x{%
3545         \toks@{%
3546           \the\toks@
3547           /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3548         }%
3549       }%
3550       \x

```

```

3551 }%
3552 \HyInfo@AddonList
3553 \edef\x{\endgroup
3554 \def\noexpand\HyInfo@Addons{\the\toks@}%
3555 }%
3556 \x
3557 \fi
3558 }
3559 \def\HyInfo@AddonList{}

3560 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3561 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3562 \let\setpdfinkmargin\@gobble
3563 \def\calculate@pdfview#1 #2\{%
3564 \def\@pdfview{#1}%
3565 \ifx\#2\%
3566 \def\@pdfviewparams{-32768}%
3567 \else
3568 \def\@pdfviewparams{#2}%
3569 \fi
3570 }
3571 \begingroup\expandafter\expandafter\expandafter\endgroup
3572 \expandafter\ifx\csname numexpr\endcsname\relax
3573 \def\Hy@number#1{%
3574 \expandafter\@firstofone\expandafter{\number#1}%
3575 }%
3576 \else
3577 \def\Hy@number#1{%
3578 \the\numexpr#1\relax
3579 }%
3580 \fi
3581 \define@key{Hyp}{pdfstartpage}{%
3582 \ifx\#1\%
3583 \def\@pdfstartpage{}%
3584 \else
3585 \edef\@pdfstartpage{\Hy@number{#1}}%
3586 \fi
3587 }%
3588 \define@key{Hyp}{pdfstartview}{%
3589 \ifx\#1\%
3590 \def\@pdfstartview{}%
3591 \else
3592 \hypercalcbpdef\@pdfstartview{/#1}%
3593 \fi
3594 }
3595 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3596 \define@key{Hyp}{pdftoolbar}[true]{%
3597 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3598 }
3599 \define@key{Hyp}{pdfmenubar}[true]{%
3600 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3601 }
3602 \define@key{Hyp}{pdfwindowui}[true]{%
3603 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3604 }
3605 \define@key{Hyp}{pdffitwindow}[true]{%
3606 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3607 }

```

```

3608 \define@key{Hyp}{pdfcenterwindow}[true]{%
3609   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3610 }
3611 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3612   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3613 }
3614 \define@key{Hyp}{pdfa}[true]{%
3615   \Hy@boolkey[pdfa]{#1}%
3616 }
3617 \define@key{Hyp}{pdfnewwindow}[true]{%
3618   \def\Hy@temp{#1}%
3619   \ifx\Hy@temp\empty
3620     \Hy@newwindowsetfalse
3621   \else
3622     \Hy@newwindowsettrue
3623     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3624   \fi
3625 }
3626 \def\Hy@SetNewWindow{%
3627   \ifHy@newwindowset
3628     /NewWindow %
3629   \ifHy@newwindow true\else false\fi
3630 \fi
3631 }
3632 \Hy@DefNameKey{pdfpagelayout}{%
3633   \do{SinglePage}{}%
3634   \do{OneColumn}{}%
3635   \do{TwoColumnLeft}{}%
3636   \do{TwoColumnRight}{}%
3637   \do{TwoPageLeft}{PDF 1.5}%
3638   \do{TwoPageRight}{PDF 1.5}%
3639 }
3640 \define@key{Hyp}{pdflang}{%
3641   \def\@pdflang{#1}%
3642 }
3643 \define@key{Hyp}{pdfpagelabels}[true]{%
3644   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3645 }
3646 \define@key{Hyp}{pdfescapeform}[true]{%
3647   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3648 }

```

Default values:

```

3649 \def\@linkbordercolor{1 0 0}
3650 \def\@urlbordercolor{0 1 1}
3651 \def\@menubordercolor{1 0 0}
3652 \def\@filebordercolor{0 .5 .5}
3653 \def\@runbordercolor{0 .7 .7}
3654 \def\@citebordercolor{0 1 0}
3655 \def\@pdfhighlight{/I}
3656 \def\@pdftitle{}
3657 \def\@pdfauthor{}
3658 \let\@pdfproducer\relax
3659 \def\@pdfcreator{LaTeX with hyperref package}
3660 \def\@pdfcreationdate{}
3661 \def\@pdfmoddate{}
3662 \def\@pdfsubject{}
3663 \def\@pdfkeywords{}

```

```

3664 \def\@pdftrapped{}
3665 \def\@pdfpagescrop{}
3666 \def\@pdfstartview{ /Fit }
3667 \def\@pdfstartpage{1}
3668 \def\@pdfprintpagerange{}
3669 \def\@pdflang{}
3670 \let\PDF@SetupDoc\@empty
3671 \let\PDF@FinishDoc\@empty
3672 \let\phantomsection\@empty
3673 \let\special@paper\@empty
3674 \def\HyperDestNameFilter#1{#1}
3675 \Hy@AtBeginDocument{%
3676   \begingroup
3677     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3678     \dimen@=\x\relax
3679     \ifdim\dimen@>\z@
3680     \else
3681       \dimen@=11in\relax
3682       \Hy@WarningNoLine{%
3683         Height of page (\expandafter\string\x) %
3684         is invalid (\the\x),\MessageBreak
3685         using 11in%
3686       }%
3687     \fi
3688     \dimen@=0.99626401\dimen@
3689     \xdef\Hy@pageheight{\strip@pt\dimen@}%
3690   \endgroup
3691 }
3692 \def\HyInd@EncapChar{\|}
3693 \def\hypersetup{\setkeys{Hyp}}

```

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

```

3694 \let\hyper@normalise\ExecuteOptions
3695 \let\ExecuteOptions\hypersetup
3696 \Hy@RestoreCatcodes
3697 \InputIfFileExists{hyperref.cfg}{-}{-}
3698 \Hy@SetCatcodes
3699 \let\ExecuteOptions\hyper@normalise
3700 \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.

```

3701 \RequirePackage{kvoptions}[2009/07/21]
3702 \SetupKeyvalOptions{family=Hyp}
3703 \DeclareLocalOptions{%
3704   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3705 }

```

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

```

3706 \@ifpackageloaded{tex4ht}{%
3707   \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
3708   \PassOptionsToPackage{tex4ht}{hyperref}%
3709 }%
3710 }{-}

```

```

3711 \let\ReadBookmarks\relax
3712 \ProcessKeyvalOptions{Hyp}

    After processing options.

3713 \Hy@AtBeginDocument{%
3714   \ifHy@draft
3715     \let\hyper@@anchor\@gobble
3716     \gdef\hyper@link#1#2#3{#3}%
3717     \let\hyper@anchorstart\@gobble
3718     \let\hyper@anchorend\@empty
3719     \let\hyper@linkstart\@gobbletwo
3720     \let\hyper@linkend\@empty
3721     \def\hyper@linkurl#1#2{#1}%
3722     \def\hyper@linkfile#1#2#3{#1}%
3723     \def\hyper@link@[#1]#2#3{#1}%
3724     \def\Acrobatmenu#1#2{\leavevmode#2}%
3725     \let\PDF@SetupDoc\@empty
3726     \let\PDF@FinishDoc\@empty
3727     \let\@fifthoffive\@secondoftwo
3728     \let\@secondoffive\@secondoftwo
3729     \let\ReadBookmarks\relax
3730     \let\WriteBookmarks\relax
3731     \Hy@WarningNoLine{ draft mode on}%
3732   \fi
3733   \Hy@DisableOption{draft}%
3734   \Hy@DisableOption{nolinks}%
3735   \Hy@DisableOption{final}%
3736 }

```

15.1 PDF/A

```

3737 \Hy@DisableOption{pdfa}

3738 \ifHy@pdfa
3739   \setkeys{Hyp}{pdfversion=1.4}%
3740   \def\Hy@Acrobatmenu#1#2{%
3741     \leavevmode
3742     \begingroup
3743       \edef\x{#1}%
3744       \@onelevel@sanitize\x
3745       \ifx\x\Hy@NextPage
3746         \let\y=Y%
3747       \else
3748         \ifx\x\Hy@PrevPage
3749           \let\y=Y%
3750         \else
3751           \ifx\x\Hy@FirstPage
3752             \let\y=Y%
3753           \else
3754             \ifx\x\Hy@LastPage
3755               \let\y=Y%
3756             \else
3757               \let\y=N%
3758             \fi
3759           \fi
3760         \fi
3761       \fi
3762     \expandafter\endgroup

```

```

3763 \ifx\y Y%
3764 \else
3765 \PackageError{hyperref}{%
3766 PDF/A: Named action '#1' is not permitted%
3767 }\@ehc
3768 {#2}%
3769 \expandafter\@gobble
3770 \fi
3771 }%
3772 \def\Hy@temp#1{%
3773 \expandafter\def\csname Hy@#1\endcsname{#1}%
3774 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3775 }%
3776 \Hy@temp{NextPage}%
3777 \Hy@temp{PrevPage}%
3778 \Hy@temp{FirstPage}%
3779 \Hy@temp{LastPage}%
3780 \else
3781 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3782 \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.

```

3783 \Hy@nextfalse
3784 \ltx@ifundefined{spanish@sh@"@sel}{ }\Hy@nexttrue}
3785 \ltx@ifundefined{galician@sh@"@sel}{ }\Hy@nexttrue}
3786 \ltx@ifundefined{estonian@sh@"@sel}{ }\Hy@nexttrue}
3787 \ifHy@next
3788 \let\texttilde\~%
3789 \fi

3790 \ifHy@figures
3791 \Hy@Info{Hyper figures ON}%
3792 \else
3793 \Hy@Info{Hyper figures OFF}%
3794 \fi

3795 \ifHy@nesting
3796 \Hy@Info{Link nesting ON}%
3797 \else
3798 \Hy@Info{Link nesting OFF}%
3799 \fi

3800 \ifHy@hyperindex
3801 \Hy@Info{Hyper index ON}%
3802 \else
3803 \Hy@Info{Hyper index OFF}%
3804 \fi

3805 \ifHy@plainpages
3806 \Hy@Info{Plain pages ON}%
3807 \else
3808 \Hy@Info{Plain pages OFF}%
3809 \fi

3810 \ifHy@backref
3811 \Hy@Info{Backreferencing ON}%
3812 \else
3813 \Hy@Info{Backreferencing OFF}%
3814 \fi

```

```

3815 \ifHy@typexml
3816   \Hy@AtEndOfPackage{%
3817     \RequirePackage{color}%
3818     \RequirePackage{nameref}%
3819   }%
3820 \fi
3821 \Hy@DisableOption{typexml}
3822 \ifHy@implicit
3823   \typeout{Implicit mode ON; LaTeX internals redefined}%
3824 \else
3825   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3826   \def\MaybeStopEarly{%
3827     \typeout{Hyperref stopped early}%
3828     \Hy@AtBeginDocument{%
3829       \PDF@FinishDoc
3830       \gdef\PDF@FinishDoc{}%
3831     }%
3832   \endinput
3833 }%
3834 \Hy@AtBeginDocument{%
3835   \let\autoref\ref
3836   \let\autopageref\pageref
3837   \ifx\@pdfpagemode\@empty
3838     \gdef\@pdfpagemode{UseNone}%
3839   \fi
3840   \global\Hy@backreffalse
3841 }%
3842 \Hy@AtEndOfPackage{%
3843   \global\let\ReadBookmarks\relax
3844   \global\let\WriteBookmarks\relax
3845 }%
3846 \fi
3847 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3848 \Hy@AtEndOfPackage{%
3849   \@ifpackageloaded{tex4ht}{%
3850     \def\Hy@driver{htex4ht}%
3851     \Hy@texhttrue
3852   }{}%

```

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.

```

3853   \ifx\Hy@driver\@empty
3854   \else
3855     \def\Hy@temp{hpdftex}%
3856     \ifpdf
3857       \ifx\Hy@driver\Hy@temp
3858       \else
3859         \Hy@WarningNoLine{%
3860           Wrong driver ‘\Hy@driver.def’;\MessageBreak
3861           pdfTeX is running in PDF mode.\MessageBreak
3862           Forcing driver ‘\Hy@temp.def’%
3863         }%
3864         \let\Hy@driver\Hy@temp
3865       \fi
3866     \else

```



```

3867 \ifx\Hy@driver\Hy@temp
3868 \Hy@WarningNoLine{%
3869   Wrong driver '\Hy@driver.def';\MessageBreak
3870   pdfTeX is not running in PDF mode.\MessageBreak
3871   Using default driver%
3872 }%
3873 \let\Hy@driver\@empty
3874 \fi
3875 \fi
3876 \fi
3877 \ifx\Hy@driver\@empty
3878 \else
3879 \def\Hy@temp{hxtex}%
3880 \ifxetex
3881 \ifx\Hy@driver\Hy@temp
3882 \else
3883 \Hy@WarningNoLine{%
3884   Wrong driver '\Hy@driver.def';\MessageBreak
3885   XeTeX is running.\MessageBreak
3886   Forcing driver '\Hy@temp.def' for XeTeX%
3887 }%
3888 \let\Hy@driver\Hy@temp
3889 \fi
3890 \fi
3891 \fi
3892 \ifx\Hy@driver\@empty
3893 \else
3894 \def\Hy@temp{hvtexhtm}%
3895 \ifvtexhtml
3896 \ifx\Hy@driver\Hy@temp
3897 \else
3898 \Hy@WarningNoLine{%
3899   Wrong driver '\Hy@driver.def';\MessageBreak
3900   VTeX is running in HTML mode.\MessageBreak
3901   Forcing driver '\Hy@temp.def'%
3902 }%
3903 \let\Hy@driver\Hy@temp
3904 \fi
3905 \else
3906 \ifx\Hy@driver\Hy@temp
3907 \Hy@WarningNoLine{%
3908   Wrong driver '\Hy@driver.def';\MessageBreak
3909   VTeX is not running in HTML mode.\MessageBreak
3910   Using default driver%
3911 }%
3912 \let\Hy@driver\@empty
3913 \fi
3914 \fi
3915 \fi

```

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

```

3916 \ifx\Hy@driver\@empty
3917 \providecommand*{\Hy@defaultdriver}{hypertex}%
3918 \ifpdf
3919 \def\Hy@driver{hpdfTeX}%
3920 \else
3921 \ifxetex
3922 \def\Hy@driver{hxtex}%

```

```

3923 \else
3924 \ifvtexhtml
3925 \def\Hy@driver{hvtexhtm}%
3926 \def\MaybeStopEarly{%
3927 \typeout{Hyperref stopped early}%
3928 \Hy@AtBeginDocument{%
3929 \PDF@FinishDoc
3930 \gdef\PDF@FinishDoc{}}%
3931 }%
3932 \endinput
3933 }%
3934 \else
3935 \ifvtexpdf
3936 \def\Hy@driver{hvtex}%
3937 \else
3938 \ifvtexps
3939 \def\Hy@driver{hvtex}%
3940 \else
3941 \let\Hy@driver\Hy@defaultdriver
3942 \fi
3943 \fi
3944 \fi
3945 \fi
3946 \fi
3947 \ifx\Hy@driver\Hy@defaultdriver
3948 \def\Hy@temp{hdvwind}%
3949 \ifx\Hy@temp\Hy@driver
3950 \setkeys{Hyp}{colorlinks}%
3951 \PassOptionsToPackage{dviwindo}{color}%
3952 \fi
3953 \fi
3954 \typeout{* hyperref using default driver \Hy@driver\ltx@space*}%
3955 \else
3956 \typeout{* hyperref using driver \Hy@driver\ltx@space*}%
3957 \fi
3958 \input{\Hy@driver.def}%
3959 \let\@unprocessedoptions\relax
3960 \Hy@RestoreCatcodes
3961 }

```

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.

```

3962 \newif\ifHy@DvipdfmxOutlineOpen
3963 \ifxetex
3964 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3965 \else
3966 \Hy@DvipdfmxOutlineOpentruer
3967 \fi
3968 \fi
3969 \begingroup\expandafter\expandafter\expandafter\endgroup
3970 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3971 \else
3972 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3973 \Hy@DvipdfmxOutlineOpentruer
3974 \fi
3975 \fi
3976 \Hy@DisableOption{tex4ht}

```

```

3977 \Hy@DisableOption{pdftex}
3978 \Hy@DisableOption{nativepdf}
3979 \Hy@DisableOption{dvipdfm}
3980 \Hy@DisableOption{dvipdfmx}
3981 \Hy@DisableOption{dvipdfmx-outline-open}
3982 \Hy@DisableOption{pdfmark}
3983 \Hy@DisableOption{dvips}
3984 \Hy@DisableOption{hypertex}
3985 \Hy@DisableOption{vtex}
3986 \Hy@DisableOption{vtexpdfmark}
3987 \Hy@DisableOption{dviwindo}
3988 \Hy@DisableOption{dvipsone}
3989 \Hy@DisableOption{textures}
3990 \Hy@DisableOption{latex2html}
3991 \Hy@DisableOption{ps2pdf}
3992 \Hy@DisableOption{xetex}
3993 \Hy@AtEndOfPackage{%
3994   \Hy@DisableOption{pdfversion}%
3995 }

```

15.2.2 Bookmarks

```

3996 \def\WriteBookmarks{0}
3997 \def\@bookmarkopenstatus#1{%
3998   \ifHy@bookmarksopen

```

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

```

3999   \ifnum#1<\expandafter\@firstofone\expandafter
4000     {\number\@bookmarksopenlevel} % explicit space
4001   \else
4002     -%
4003   \fi
4004 \else
4005   -%
4006 \fi
4007 }
4008 \ifHy@bookmarks
4009   \Hy@Info{Bookmarks ON}%
4010   \ifx\@pdfpagemode\@empty
4011     \def\@pdfpagemode{UseOutlines}%
4012   \fi
4013 \else
4014   \def\@bookmarkopenstatus#1{%
4015     \Hy@Info{Bookmarks OFF}%
4016     \Hy@AtEndOfPackage{%
4017       \global\let\ReadBookmarks\relax
4018       \global\let\WriteBookmarks\relax
4019     }%
4020     \ifx\@pdfpagemode\@empty
4021       \def\@pdfpagemode{UseNone}%
4022     \fi
4023   \fi
4024 \Hy@DisableOption{bookmarks}

```

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

```

4025 \def\Hy@CatcodeWrapper#1{%
4026   \def\Hy@endWrap{}%
4027   \def\TMP@EnsureCode##1##2{%
4028     \edef\Hy@endWrap{%

```

```

4029 \Hy@EndWrap
4030 \catcode##1 \the\catcode##1\relax
4031 }%
4032 \catcode##1 ##2\relax
4033 }%
4034 \TMP@EnsureCode{10}{12}% ^^J
4035 \TMP@EnsureCode{33}{12}% !
4036 \TMP@EnsureCode{34}{12}% "
4037 \TMP@EnsureCode{36}{3}% $ (math)
4038 \TMP@EnsureCode{38}{4}% & (alignment)
4039 \TMP@EnsureCode{39}{12}% '
4040 \TMP@EnsureCode{40}{12}% (
4041 \TMP@EnsureCode{41}{12}% )
4042 \TMP@EnsureCode{42}{12}% *
4043 \TMP@EnsureCode{43}{12}% +
4044 \TMP@EnsureCode{44}{12}% ,
4045 \TMP@EnsureCode{45}{12}% -
4046 \TMP@EnsureCode{46}{12}% .
4047 \TMP@EnsureCode{47}{12}% /
4048 \TMP@EnsureCode{58}{12}% :
4049 \TMP@EnsureCode{59}{12}% ;
4050 \TMP@EnsureCode{60}{12}% <
4051 \TMP@EnsureCode{61}{12}% =
4052 \TMP@EnsureCode{62}{12}% >
4053 \TMP@EnsureCode{63}{12}% ?
4054 \TMP@EnsureCode{91}{12}% [
4055 \TMP@EnsureCode{93}{12}% ]
4056 \TMP@EnsureCode{94}{7}% ^ (superscript)
4057 \TMP@EnsureCode{95}{8}% _ (subscript)
4058 \TMP@EnsureCode{96}{12}% '
4059 \TMP@EnsureCode{124}{12}% |
4060 \TMP@EnsureCode{126}{13}% ~ (active)
4061 ##1\relax
4062 \Hy@EndWrap
4063 }

```

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

```

4064 \Hy@AtBeginDocument{%
4065 \ifHy@ocgcolorlinks
4066 \setkeys{Hyp}{colorlinks}%
4067 \ifHy@pdfa
4068 \Hy@Warning{%
4069 PDF/A: Optional Content Groups are prohibited,\MessageBreak
4070 using 'colorlinks' instead of 'ocgcolorlinks'%
4071 }%
4072 \Hy@ocgcolorlinksfalse
4073 \fi
4074 \fi
4075 \ifHy@ocgcolorlinks
4076 \else
4077 \Hy@DisableOption{ocgcolorlinks}%
4078 \fi
4079 \ifHy@colorlinks
4080 \def\pdfborder{0 0 0}%
4081 \let\pdfborderstyle\empty
4082 \ifHy@typexml
4083 \else

```

```

4084 \Hy@CatcodeWrapper{%
4085 \RequirePackage{color}%
4086 }%
4087 \fi
4088 \def\Hy@colorlink#1{%
4089 \begingroup
4090 \HyColor@UseColor#1%
4091 }%
4092 \def\Hy@endcolorlink{\endgroup}%
4093 \Hy@Info{Link coloring ON}%
4094 \else
4095 \ifHy@frenchlinks
4096 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4097 \def\Hy@endcolorlink{\endgroup}%
4098 \Hy@Info{French linking ON}%
4099 \else
for grouping consistency:
4100 \def\Hy@colorlink#1{\begingroup}%
4101 \def\Hy@endcolorlink{\endgroup}%
4102 \Hy@Info{Link coloring OFF}%
4103 \fi
4104 \fi
4105 \Hy@DisableOption{colorlinks}%
4106 \Hy@DisableOption{frenchlinks}%
4107 \ifHy@texht
4108 \long\def\@firstoffive#1#2#3#4#5{#1}%
4109 \long\def\@secondoffive#1#2#3#4#5{#2}%
4110 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4111 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4112 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4113 \providecommand*\@safe@activetrue{}%
4114 \providecommand*\@safe@activesfalse{}%
4115 \def\T@ref#1{%
4116 \Hy@safe@activetrue
4117 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4118 \Hy@safe@activesfalse
4119 }%
4120 \def\T@pageref#1{%
4121 \Hy@safe@activetrue
4122 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4123 \Hy@safe@activesfalse
4124 }%
4125 \else
4126 \ifHy@typexml
4127 \else
4128 \Hy@CatcodeWrapper{%
4129 \RequirePackage{nameref}%
4130 }%
4131 \fi
4132 \fi
4133 \DeclareRobustCommand\ref{%
4134 \@ifstar\@refstar\T@ref
4135 }%
4136 \DeclareRobustCommand\pageref{%
4137 \@ifstar\@pagerefstar\T@pageref
4138 }%
4139 % \@ifclassloaded{memoir}{%

```

```

4140 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4141 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4142 % }%
4143 % }\ltx@secondoftwo
4144 % {%
4145 % \DeclareRobustCommand*{\nameref}{%
4146 % \ifstar\@mem@titlerefno link\@mem@titleref
4147 % }%
4148 % }\ltx@secondoftwo
4149 % \DeclareRobustCommand*{\nameref}{%
4150 % \ifstar\@namerefstar\T@nameref
4151 % }%
4152 % }%
4153 }
4154 \Hy@AtBeginDocument{%
4155 \ifHy@texht
4156 \else
4157 \Hy@CatcodeWrapper{%
4158 \ReadBookmarks
4159 }%
4160 \fi
4161 }
4162 \ifHy@backref
4163 \RequirePackage{backref}%
4164 \else
4165 \let\Hy@backout\@gobble
4166 \fi
4167 \Hy@DisableOption{backref}
4168 \Hy@DisableOption{pagebackref}
4169 \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.

```

4170 \begingroup
4171 \endlinechar=-1 %
4172 \catcode'\^^A=14 %
4173 \catcode'\^^M\active
4174 \catcode'\%\active
4175 \catcode'\#\active
4176 \catcode'\_\active
4177 \catcode'\$\active
4178 \catcode'\&\active
4179 \gdef\hyper@normalise{^^A
4180 \begingroup
4181 \catcode'\^^M\active
4182 \def^^M{ }^^A
4183 \catcode'\%\active
4184 \let%\@percentchar
4185 \let%\@percentchar
4186 \catcode'\#\active

```

```

4187 \def#{\hyper@hash}^^A
4188 \def\#{\hyper@hash}^^A
4189 \@makeother\&^^A
4190 \edef&{\string&}^^A
4191 \edef\&{\string&}^^A
4192 \edef\textunderscore{\string_}^^A
4193 \let\_ \textunderscore
4194 \catcode'\_ \active
4195 \let\_ \textunderscore
4196 \let~\hyper@tilde
4197 \let\~\hyper@tilde
4198 \let\textasciitilde\hyper@tilde
4199 \let\\ \@backslashchar
4200 \edef$\string$}^^A
4201 \Hy@safe@activetrue
4202 \hyper@n@rmalise
4203 }^^A
4204 \catcode'\#=6 ^^A
4205 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4206 \gdef\hyper@n@rmalise#1#2{^^A
4207 \def\Hy@tempa{#2}^^A
4208 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4209 \Hy@ReturnAfterElseFi{^^A
4210 \hyper@@normalise{#1}^^A
4211 }^^A
4212 \else
4213 \Hy@ReturnAfterFi{^^A
4214 \hyper@@normalise{#1}{#2}^^A
4215 }^^A
4216 \fi
4217 }^^A
4218 \gdef\hyper@@normalise#1#2{^^A
4219 \edef\Hy@tempa{^^A
4220 \endgroup
4221 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4222 }^^A
4223 \Hy@tempa
4224 }^^A
4225 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4226 #1^^A
4227 \ifx\limits#2\limits
4228 \else
4229 \Hy@ReturnAfterFi{^^A
4230 \Hy@RemovePercentCr #2\@nil
4231 }^^A
4232 \fi
4233 }^^A
4234 \endgroup
4235 \providecommand*\hyper@chars{%
4236 \let\#\hyper@hash
4237 \let\%\@percentchar
4238 \Hy@safe@activetrue
4239 }

4240 \def\hyperlink#1#2{%
4241 \hyper@@link{}{#1}{#2}%
4242 }

4243 \def\Hy@VerboseLinkStart#1#2{%

```

```

4244 \ifHy@verbose
4245   \begingroup
4246     \Hy@safe@activetrue
4247     \xdef\Hy@VerboseGlobalTemp{(#1) ‘#2’}%
4248     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4249     \xdef\Hy@VerboseGlobalTemp{%
4250       \Hy@VerboseGlobalTemp, %
4251       line \the\inputlineno
4252     }%
4253   \endgroup
4254   \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4255   \@onelevel@sanitize\Hy@VerboseLinkInfo
4256 \fi
4257 }

4258 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4259 \def\Hy@VerboseLinkStop{%
4260   \ifHy@verbose
4261     \begingroup
4262       \edef\x{\endgroup
4263         \write\m@ne{%
4264           Package ‘hyperref’ Info: %
4265           End of reference \Hy@VerboseLinkInfo.%
4266         }%
4267       }%
4268     \x
4269   \fi
4270 }

4271 \def\Hy@VerboseAnchor#1{%
4272   \ifHy@verbose
4273     \begingroup
4274       \Hy@safe@activetrue
4275       \Hy@Info{Anchor ‘\HyperDestNameFilter{#1}’}%
4276     \endgroup
4277   \fi
4278 }

4279 \def\Hy@AllowHyphens{%
4280   \relax
4281   \ifhmode
4282     \penalty\@M
4283     \hskip\z@skip
4284   \fi
4285 }

4286 \DeclareRobustCommand*{\href}{%
4287   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href}%
4288 }
4289 \def\Hy@href#1{%
4290   \hyper@normalise\href@
4291 }
4292 \begingroup
4293   \catcode'\$=6 %
4294   \catcode'\#=12 %
4295   \gdef\href@#1{\expandafter\href@split$1##\}%
4296   \gdef\href@split$1#$2#$3\{\%
4297     \hyper@@link{$1}{$2}%
4298   }%
4299 \endgroup

```


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

```

4300 \RequirePackage{url}
4301 \let\HyOrg@url\url
4302 \def\Hurl{\begingroup \Url}
4303 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
4304 \def\nolinkurl@#1{\Hurl{#1}}
4305 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
4306 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4307 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
4308 \providecommand\hyper@image[2]{#2}

4309 \def\hypertarget#1#2{%
4310   \ifHy@nesting
4311     \hyper@@anchor{#1}{#2}%
4312   \else
4313     \hyper@@anchor{#1}{\relax}#2%
4314   \fi
4315 }

```

\hyperref is more complicated, as it includes the concept of a category of link, used to make the name. This is not really used in this package. \hyperdef sets up an anchor in the same way. They each have three parameters of category, linkname, and marked text, and \hyperref also has a first parameter of URL. If there is an optional first parameter to \hyperdef, it is the name of a L^AT_EX label which can be used in a short form of \hyperref later, to avoid remembering the name and category.

```

4316 \DeclareRobustCommand*{\hyperref}{%
4317   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
4318 }
4319 \def\Hy@babelnormalise#1[#2]{%
4320   \begingroup
4321     \Hy@safe@activetrue
4322     \edef\Hy@tempa{%
4323       \endgroup
4324       \noexpand#1[#2]}%
4325   }%
4326   \Hy@tempa
4327 }
4328 \def\@hyperref{\hyper@normalise\@hyperref}
4329 \def\@hyperref#1#2#3{%
4330   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4331   \expandafter\tryhyper@link\ref@one\{#1}%
4332 }
4333 \def\tryhyper@link#1\#2{%
4334   \hyper@@link{#2}{#1}%
4335 }

4336 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}}
4337 \def\@hyperdef#1#2#3{%, category, name, text
4338   \ifx\#1\\%
4339     \def\Hy@AnchorName{#2}%
4340   \else
4341     \def\Hy@AnchorName{#1.#2}%
4342   \fi
4343   \ifHy@nesting
4344     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4345   \else
4346     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4347   \fi

```

4348 }

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

```

4349 \def\label@hyperref[#1]{%
4350   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4351 }%
4352 \def\label@@hyperref#1#2#3{%
4353   \ifx#1\relax
4354     \protect\G@refundefinedtrue
4355     \@latex@warning{%
4356       Hyper reference ‘#2’ on page \thepage \space undefined%
4357     }%
4358     \hyper@@link{}{??}{#3}%
4359   \else
4360     \hyper@@link{\expandafter\@fifthoffive#1}%
4361     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4362   \fi
4363 }
4364 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4365                               % anchor text
4366   \@bsphack
4367   \ifx\#2\%
4368     \def\Hy@AnchorName{#3}%
4369   \else
4370     \def\Hy@AnchorName{#2.#3}%
4371   \fi
4372   \if@filesw
4373     \protected@write\@auxout{}{%
4374       \string\newlabel{#1}{\{}{}\}\{\Hy@AnchorName\}\}%
4375     }%
4376   \fi
4377   \@esphack
4378   \ifHy@nesting
4379     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4380   \else
4381     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4382   \fi
4383 }
```

17 Underlying basic hypertext macros

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

```

4384 \def\hyper@@link{\let\Hy@reserved@a\relax
4385   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
4386 }
4387 \def\hyper@link@[#1]#2#3#4{%
4388   \begingroup
4389   \protected@edef\Hy@tempa{#2}%
4390   \Hy@safe@activestrue
4391   \edef\x{#3}%
4392   \ifx\Hy@tempa\@empty
4393     \toks0{\hyper@link{#1}}%

```

```

4394 \else
4395 \toks0{\expandafter\hyper@readexternallink#2\{\{#1\}}%
4396 \fi
4397 \toks2{%
4398 \Hy@safe@activesfalse
4399 #4%
4400 }%
4401 \edef\Hy@tempa{\the\toks2}%
4402 \edef\x{\endgroup
4403 \ifx\Hy@tempa\@empty
4404 \noexpand\Hy@Warning{Suppressing empty link}%
4405 \else
4406 \the\toks0 {\x}{\the\toks2}%
4407 \fi
4408 }%
4409 \x
4410 }

```

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.

```

4411 \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.

```

4412 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4413 }

```

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

```

4414 \def\@pdftempwordfile{file}%
4415 \def\@pdftempwordrun{run}%
4416 \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:

```

4417 \ifx\{#6\}%
4418 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
4419 \else
4420 \ifx\{#4\}%
4421 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
4422 \else

```

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

```

4423 \def\@pdftempa{#4}%

```

```

4424 \ifx\@pdftempa\@pdftempwordfile
4425 \expandafter\@hyper@linkfile#7\{\#3}\{\#2}%
4426 \else

```

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

```

4427 \ifx\@pdftempa\@pdftempwordrun
4428 \ifHy@pdfa
4429 \PackageError{hyperref}{%
4430 PDF/A: Launch action is prohibited%
4431 }\@ehc
4432 \begingroup
4433 \leavevmode
4434 #2%
4435 \endgroup
4436 \else
4437 \expandafter\@hyper@launch#7\{\#3}\{\#2}%
4438 \fi
4439 \else

```

otherwise its a URL

```

4440 \hyper@linkurl{\#3}\{\#7\ifx\#2\\\else\hyper@hash#2\fi}%
4441 \fi
4442 \fi
4443 \fi
4444 \fi
4445 }

```

By default, turn run: into file:

```

4446 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
4447 \hyper@linkurl{\#2}\{\#1}%
4448 \Hy@linkfileprefix
4449 #1%
4450 \ifx\#3\\\%
4451 \else
4452 \hyper@hash
4453 #3%
4454 \fi
4455 }%
4456 }

```

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

```

4457 \def\@hyper@linkfile file:#1\#2#3{%
4458 %file url,link string, name
4459 \filename@parse{\#1}%
4460 \ifx\filename@ext\relax
4461 \edef\filename@ext{\XR@ext}%
4462 \fi
4463 \def\use@file{\filename@area\filename@base.\filename@ext}%
4464 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
4465 \hyper@linkfile{\#2}\{\use@file}\{\#3}%
4466 }\%
4467 \ifx\@baseurl\@empty
4468 \hyper@linkurl{\#2}\{\%
4469 \Hy@linkfileprefix\use@file\ifx\#3\\\else\hyper@hash#3\fi
4470 }\%
4471 \else
4472 \hyper@linkurl{\#2}\{\use@file\ifx\#3\\\else\hyper@hash#3\fi}%
4473 \fi

```

```

4474 }%
4475 }

4476 \def\Hy@ifStringEndsWith#1#2{%
4477 \begingroup
4478 \edef\x{#1}%
4479 \@onelevel@sanitize\x
4480 \edef\x{. \x}%
4481 \edef\y{#2}%
4482 \@onelevel@sanitize\y
4483 \edef\y{. \y}%
4484 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4485 \endgroup
4486 \ifx\relax##2\relax
4487 \expandafter\ltx@secondoftwo
4488 \else
4489 \expandafter\ltx@firstoftwo
4490 \fi
4491 }%
4492 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4493 }

```

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.

```

4494 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4495 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4496 \ifx\#1\%
4497 #2\Hy@Warning{Ignoring empty anchor}%
4498 \else
4499 \def\anchor@spot{#2#3}%
4500 \let\put@me@back\@empty
4501 \ifx\relax#2\relax
4502 \else
4503 \ifHy@nesting
4504 \else
4505 \ifcat a\noexpand#2\relax
4506 \else
4507 \ifcat 0\noexpand#2 \relax
4508 \else
4509 % \typeout{Anchor start is not alphanumeric %
4510 % on input line\the\inputlineno%
4511 % }%
4512 \let\anchor@spot\@empty
4513 \def\put@me@back{#2#3}%
4514 \fi
4515 \fi
4516 \fi
4517 \fi
4518 \ifHy@activeanchor
4519 \anchor@spot
4520 \else
4521 \hyper@anchor{#1}%
4522 \fi

```

```

4523 \expandafter\put@me@back
4524 \fi
4525 \let\anchor@spot\@empty
4526 }

```

18 Compatibility with the *L^AT_EX2html* package

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

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

```

4527 \let\htmladdimg\hyperimage
4528 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4529 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4530 \def\htmlref#1#2{% anchor text, label
4531 \label@hyperref[{#2}]{#1}%
4532 }

```

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

```

4533 \def\@latextohtmlX{%
4534 \let\hhyperref\hyperref
4535 \def\hyperref##1##2##3##4{% anchor text for HTML
4536 % text to print before label in print
4537 % label
4538 % post-label text in print
4539 ##2\ref{##4}##3%
4540 }%
4541 }

```

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.

```

4542 \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

```

```

4543 \def\HyField@NewFlag#1#2{%
4544   \lowercase{\HyField@NewOption{#2}}%
4545   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4546 }

```

\HyField@NewFlagOnly

```

4547 \def\HyField@NewFlagOnly#1#2{%
4548   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4549 }

```

\HyField@NewOption #1: option name

```

4550 \def\HyField@NewOption#1{%
4551   \expandafter\newif\csname ifFld@#1\endcsname
4552   \define@key{Field}{#1}[true]{%
4553     \lowercase{\Field@boolkey{##1}}{#1}%
4554   }%
4555 }

```

\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

```

4556 \def\HyField@NewBitsetFlag#1#2#3#4{%
4557   \begingroup
4558   \count@=#4\relax
4559   \advance\count@\m@ne
4560   \def\x##1{%
4561     \endgroup
4562     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4563     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4564       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4565         (\number#4) #2%
4566       }%
4567     \else
4568       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4569         \csname HyField@#3@##1\endcsname
4570         /#2%
4571       }%
4572     \fi
4573   }%
4574   \expandafter\x\expandafter{\the\count@}%
4575 }

```

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

```

4576 \def\HyField@UseFlag#1#2{%
4577   \lowercase{\HyField@@UseFlag{#2}}{#1}%
4578 }

```

\HyField@@UseFlag

```

4579 \def\HyField@@UseFlag#1#2{%
4580   \bitsetSetValue{HyField@#2}{%
4581     \csname HyField@#2@#1\endcsname
4582   }{%
4583     \csname ifFld@#1\endcsname 1\else 0\fi
4584   }%
4585 }

```

```

\HyField@SetFlag The bit set is HyField@#1
4586 \def\HyField@SetFlag#1#2{%
4587 \lowercase{\HyField@@SetFlag{#2}}{#1}%
4588 }

\HyField@@SetFlag
4589 \def\HyField@@SetFlag#1#2{%
4590 \bitsetSetValue{HyField@#2}{%
4591 \csname HyField@#2@#1\endcsname
4592 }{1}%
4593 }

\HyField@PrintFlags
4594 \def\HyField@PrintFlags#1#2{%
4595 \ifHy@verbose
4596 \begingroup
4597 \let\Hy@temp\@empty
4598 \let\MessageBreak\relax
4599 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4600 \bitsetGetSetBitList{HyField@#1}\do{%
4601 \edef\Hy@temp{%
4602 \Hy@temp
4603 \csname HyField@#1@\x\endcsname\MessageBreak
4604 }%
4605 }%
4606 \edef\x{\endgroup
4607 \noexpand\Hy@Info{%
4608 Field flags: %
4609 \expandafter\ifx\@car#1\@nil S\else/\fi
4610 #1 %
4611 \bitsetGetDec{HyField@#1} %
4612 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4613 \Hy@temp
4614 for #2%
4615 }%
4616 }\x
4617 \fi
4618 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4619 \HyField@NewFlag{Ff}{ReadOnly}{1}
4620 \HyField@NewFlag{Ff}{Required}{2}
4621 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4622 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4623 \HyField@NewFlag{Ff}{Radio}{16}
4624 \HyField@NewFlag{Ff}{Pushbutton}{17}
4625 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4626 \HyField@NewFlag{Ff}{Multiline}{13}
4627 \HyField@NewFlag{Ff}{Password}{14}
4628 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4629 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4

```


4630 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
 4631 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
 4632 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

“Table 8.79 field flags specific to choice fields”

4633 \HyField@NewFlag{Ff}{Combo}{18}
 4634 \HyField@NewFlag{Ff}{Edit}{19}
 4635 \HyField@NewFlag{Ff}{Sort}{20}
 4636 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
 4637 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
 4638 \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.

```
4639 \newif\ifFld@popdown
4640 \define@key{Field}{popdown}[true]{%
4641   \lowercase{\Field@boolkey{#1}}{popdown}%
4642 }
```

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.

```
4643 \HyField@NewFlag{F}{Invisible}{1}
4644 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4645 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4646 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4647 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4648 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4649 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4650 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4651 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4652 \ifHy@pdfa
4653   \def\HyField@PDFAFflagWarning#1#2{%
4654     \Hy@Warning{%
4655       PDF/A: Annotation flag ‘#1’ must\MessageBreak
4656       be set to ‘#2’%
4657     }%
4658   }%
4659   \Fld@invisiblefalse
4660   \def\Fld@invisibletrue{%
4661     \HyField@PDFAFflagWarning{invisible}{false}%
4662   }%
4663   \Fld@hiddenfalse
4664   \def\Fld@hiddentrue{%
4665     \HyField@PDFAFflagWarning{hidden}{false}%
4666   }%
4667   \Fld@printtrue
4668   \def\Fld@printfalse{%
4669     \HyField@PDFAFflagWarning{print}{true}%
4670   }%
4671   \Fld@nozoomtrue
4672   \def\Fld@nozoomfalse{%
4673     \HyField@PDFAFflagWarning{nozoom}{true}%
4674   }%
4675   \Fld@norotatetrue
```

```

4676 \def\Fld@norotatefalse{%
4677   \HyField@PDFAFldWarning{norotate}{true}%
4678 }%
4679 \Fld@noviewfalse
4680 \def\Fld@noviewtrue{%
4681   \HyField@PDFAFldWarning{noview}{false}%
4682 }%
4683 \fi

```

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

```

4684 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4685 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4686 \HyField@NewFlag{Submit}{GetMethod}{4}
4687 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4688 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4689 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4690 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4691 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4692 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4693 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4694 \HyField@NewFlag{Submit}{ExclFKey}{12}
4695 \HyField@NewFlag{Submit}{EmbedForm}{14}

4696 \define@key{Field}{export}{%
4697   \lowercase{\def\Hy@temp{#1}}%
4698   \@ifundefined{Fld@export@Hy@temp}{%
4699     \@onelevel@sanitize\Hy@temp
4700     \PackageError{hyperref}{%
4701       Unknown export format ‘\Hy@temp’.\MessageBreak
4702       Known formats are ‘FDF’, ‘HTML’, ‘XFDF’, and ‘PDF’%
4703     }\@ehc
4704   }{%
4705     \let\Fld@export\Hy@temp
4706   }%
4707 }
4708 \def\Fld@export{fdf}
4709 \@namedef{Fld@export@fdf}{0}%
4710 \@namedef{Fld@export@html}{1}%
4711 \@namedef{Fld@export@xdf}{2}%
4712 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4713 \def\HyField@FlagsSubmit{%
4714   \bitsetReset{HyField@Submit}%
4715   \ifcase\@nameuse{Fld@export@Fld@export} %
4716     % FDF
4717     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4718     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4719     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4720     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4721     \HyField@UseFlag{Submit}{CanonicalFormat}%
4722     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4723     \HyField@UseFlag{Submit}{ExclFKey}%
4724     \HyField@UseFlag{Submit}{EmbedForm}%
4725   \or % HTML
4726     \HyField@SetFlag{Submit}{ExportFormat}%

```

```

4727 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4728 \HyField@UseFlag{Submit}{GetMethod}%
4729 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4730 \HyField@UseFlag{Submit}{CanonicalFormat}%
4731 \or % XFDF
4732 \HyField@SetFlag{Submit}{XFDF}%
4733 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4734 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4735 \HyField@UseFlag{Submit}{CanonicalFormat}%
4736 \or % PDF
4737 \HyField@SetFlag{Submit}{SubmitPDF}%
4738 \HyField@UseFlag{Submit}{GetMethod}%
4739 \fi
4740 \HyField@PrintFlags{Submit}{submit button field}%
4741 \bitsetIsEmpty{HyField@Submit}{%
4742 \def\Fld@submitflags{%
4743 }{%
4744 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
4745 }%
4746 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4747 \def\HyField@FlagsAnnot#1{%
4748 \bitsetReset{HyField@F}%
4749 \HyField@UseFlag{F}{Invisible}%
4750 \HyField@UseFlag{F}{Hidden}%
4751 \HyField@UseFlag{F}{Print}%
4752 \HyField@UseFlag{F}{NoZoom}%
4753 \HyField@UseFlag{F}{NoRotate}%
4754 \HyField@UseFlag{F}{NoView}%
4755 \HyField@UseFlag{F}{Locked}%
4756 \HyField@UseFlag{F}{ToggleNoView}%
4757 \HyField@UseFlag{F}{LockedContents}%
4758 \HyField@PrintFlags{F}{#1}%
4759 \bitsetIsEmpty{HyField@F}{%
4760 \def\Fld@annotflags{%
4761 }{%
4762 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
4763 }%
4764 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4765 \def\HyField@FlagsPushButton{%
4766 \HyField@FlagsAnnot{push button field}%
4767 \bitsetReset{HyField@Ff}%
4768 \HyField@UseFlag{Ff}{ReadOnly}%
4769 \HyField@UseFlag{Ff}{Required}%
4770 \HyField@UseFlag{Ff}{NoExport}%
4771 \HyField@SetFlag{Ff}{PushButton}%
4772 \HyField@PrintFlags{Ff}{push button field}%
4773 \bitsetIsEmpty{HyField@Ff}{%
4774 \def\Fld@flags{%

```

```

4775 }{%
4776     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4777 }%
4778 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4779 \def\HyField@FlagsCheckBox{%
4780     \HyField@FlagsAnnot{check box field}%
4781     \bitsetReset{HyField@Ff}%
4782     \HyField@UseFlag{Ff}{ReadOnly}%
4783     \HyField@UseFlag{Ff}{Required}%
4784     \HyField@UseFlag{Ff}{NoExport}%
4785     \HyField@PrintFlags{Ff}{check box field}%
4786     \bitsetIsEmpty{HyField@Ff}{%
4787         \def\Fld@flags{}%
4788     }{%
4789         \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4790     }%
4791 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4792 \def\HyField@FlagsRadioButton{%
4793     \HyField@FlagsAnnot{radio button field}%
4794     \bitsetReset{HyField@Ff}%
4795     \HyField@UseFlag{Ff}{ReadOnly}%
4796     \HyField@UseFlag{Ff}{Required}%
4797     \HyField@UseFlag{Ff}{NoExport}%
4798     \HyField@UseFlag{Ff}{NoToggleToOff}%
4799     \HyField@SetFlag{Ff}{Radio}%
4800     \HyField@UseFlag{Ff}{RadiosInUnison}%
4801     \HyField@PrintFlags{Ff}{radio button field}%
4802     \bitsetIsEmpty{HyField@Ff}{%
4803         \def\Fld@flags{}%
4804     }{%
4805         \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4806     }%
4807 }

```

19.1.7 Text fields

\HyField@FlagsText

```

4808 \def\HyField@FlagsText{%
4809     \HyField@FlagsAnnot{text field}%
4810     \bitsetReset{HyField@Ff}%
4811     \HyField@UseFlag{Ff}{ReadOnly}%
4812     \HyField@UseFlag{Ff}{Required}%
4813     \HyField@UseFlag{Ff}{NoExport}%
4814     \HyField@UseFlag{Ff}{Multiline}%
4815     \HyField@UseFlag{Ff}{Password}%
4816     \HyField@UseFlag{Ff}{FileSelect}%
4817     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4818     \HyField@UseFlag{Ff}{DoNotScroll}%

```

```

4819 \ifFld@comb
4820 \ifcase0\ifFld@multiline
4821     \else\ifFld@password
4822     \else\ifFld@fileselect
4823     \else 1\fi\fi\fi\relax
4824     \PackageError{hyperref}{%
4825         Field option 'comb' cannot used together with\MessageBreak
4826         'multiline', 'password', or 'fileselect'%
4827     }\@ehc
4828 \else
4829     \HyField@UseFlag{Ff}{Comb}%
4830 \fi
4831 \fi
4832 \HyField@UseFlag{Ff}{RichText}%
4833 \HyField@PrintFlags{Ff}{text field}%
4834 \bitsetIsEmpty{HyField@Ff}{%
4835     \def\Fld@flags{%
4836     }{%
4837     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4838     }%
4839 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4840 \def\HyField@FlagsChoice{%
4841     \HyField@FlagsAnnot{choice field}%
4842     \bitsetReset{HyField@Ff}%
4843     \HyField@UseFlag{Ff}{ReadOnly}%
4844     \HyField@UseFlag{Ff}{Required}%
4845     \HyField@UseFlag{Ff}{NoExport}%
4846     \HyField@UseFlag{Ff}{Combo}%
4847     \ifFld@combo
4848         \HyField@UseFlag{Ff}{Edit}%
4849     \fi
4850     \HyField@UseFlag{Ff}{Sort}%
4851     \HyField@UseFlag{Ff}{MultiSelect}%
4852     \ifFld@combo
4853         \ifFld@edit
4854             \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4855         \fi
4856     \fi
4857     \HyField@UseFlag{Ff}{CommitOnSelChange}%
4858     \HyField@PrintFlags{Ff}{choice field}%
4859     \bitsetIsEmpty{HyField@Ff}{%
4860         \def\Fld@flags{%
4861         }{%
4862         \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4863         }%
4864 }

```

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.

```

4865 \def\HyField@PDFChoices#1{%
4866   \begingroup
4867   \gdef\Fld@choices{%
4868     \def\HyTmp@optlist{%
4869       \let\HyTmp@optitem\relax
4870       \count@=0 %
4871       \kv@parse{#1}{%
4872         \Hy@pdfstringdef\kv@key\kv@key
4873         \ifx\kv@value\relax
4874           \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4875             \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4876           \else
4877             \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4878           \fi
4879         \else
4880           \Hy@pdfstringdef\kv@value\kv@value
4881           \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4882         \fi
4883       \edef\HyTmp@optlist{%
4884         \HyTmp@optlist
4885         \HyTmp@optitem{\the\count@}{\kv@key}0%
4886       }%
4887       \advance\count@ by 1 %
4888       \@gobbletwo
4889     }%
4890     \xdef\Fld@choices{/Opt[\Fld@choices]}%
4891     \ifFld@multiselect
4892       \HyField@@PDFChoices{DV}\Fld@default
4893       \HyField@@PDFChoices{V}\Fld@value
4894     \else
4895       \ifx\Fld@default\relax
4896       \else
4897         \pdfstringdef\Hy@gtemp\Fld@default
4898         \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4899       \fi
4900       \ifx\Fld@value\relax
4901       \else
4902         \pdfstringdef\Hy@gtemp\Fld@value
4903         \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4904       \fi
4905     \fi
4906   \endgroup
4907 }

```

\HyField@@PDFChoices

```

4908 \def\HyField@@PDFChoices#1#2{%
4909   \ifx#2\relax
4910   \else
4911     \count@=0 %
4912     \def\HyTmp@optitem##1##2##3{%
4913       \def\HyTmp@key{##2}%
4914       \ifx\HyTmp@key\Hy@gtemp
4915         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4916           \HyTmp@optlist
4917           \HyTmp@optitem{##1}{##2}1%
4918         }%
4919       \let\HyTmp@found=Y%

```

```

4920 \else
4921 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4922 \HyTmp@optlist
4923 \HyTmp@optitem{##1}{##2}##3%
4924 }%
4925 \fi
4926 }%
4927 \expandafter\comma@parse\expandafter{#2}{%
4928 \pdfstringdef\Hy@gtemp\comma@entry
4929 \let\HyTmp@found=N %
4930 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4931 \HyTmp@optlist
4932 \ifx\HyTmp@found Y%
4933 \advance\count@ by 1 %
4934 \else
4935 \@onelevel@sanitize\comma@entry
4936 \PackageWarning{hyperref}{%
4937 \string\ChoiceBox: Ignoring value '\comma@entry',%
4938 \MessageBreak
4939 it cannot be found in the choices%
4940 }%
4941 \fi
4942 \@gobble
4943 }%
4944 \def\HyTmp@optitem##1##2##3{%
4945 \ifnum##3=1 %
4946 (##2)%
4947 \fi
4948 }%
4949 \ifcase\count@
4950 \or
4951 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4952 \else
4953 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4954 \ifx#1V%
4955 \def\HyTmp@optitem##1##2##3{%
4956 \ifnum##3=1 %
4957 \@firstofone{ ##1}%
4958 \fi
4959 }%
4960 \edef\HyTmp@optlist{\HyTmp@optlist}%
4961 \xdef\Fld@choices{%
4962 \Fld@choices
4963 /I[\expandafter\@firstofone\HyTmp@optlist]%
4964 }%
4965 \fi
4966 \fi
4967 \fi
4968 }

```

19.3 Forms

\HyField@SetKeys

```

4969 \def\HyField@SetKeys{%
4970 \setkeys{Field}%
4971 }

```

```

4972 \newif\ifFld@checked
4973 \newif\ifFld@disabled
4974 \Fld@checkedfalse
4975 \Fld@disabledfalse
4976 \newcount\Fld@menulength
4977 \newdimen\Fld@Width
4978 \newdimen\Fld@charsize
4979 \Fld@charsize=10\p@
4980 \def\Fld@maxlen{0}
4981 \def\Fld@align{0}
4982 \def\Fld@color{0 0 0 rg}
4983 \def\Fld@bcolor{1 1 1}
4984 \def\Fld@bordercolor{1 0 0}
4985 \def\Fld@bordersep{1\p@}
4986 \def\Fld@borderwidth{1}
4987 \def\Fld@borderstyle{S}
4988 \def\Fld@cbsymbol{4}
4989 \def\Fld@radiosymbol{H}
4990 \def\Fld@rotation{0}
4991 \def\Fld@Form{\@ifnextchar[{\@Form}{\@Form[]}}
4992 \def\endForm{\@endForm}
4993 \newif\ifForm@html
4994 \Form@htmlfalse
4995 \def\Fld@Form@boolkey#1#2{%
4996   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4997 }
4998 \define@key{Form}{action}{%
4999   \hyper@normalise\Hy@DefFormAction{#1}%
5000 }
5001 \def\Hy@DefFormAction{\def\Fld@Form@action}
5002 \def\enc@html{html}
5003 \define@key{Form}{encoding}{%
5004   \def\Hy@tempa{#1}%
5005   \ifx\Hy@tempa\enc@html
5006     \Form@htmltrue
5007     \def\Fld@export{html}%
5008   \else
5009     \Hy@Warning{%
5010       Form 'encoding' key with \MessageBreak
5011       unknown value '#1'%
5012     }%
5013     \Form@htmlfalse
5014   \fi
5015 }
5016 \define@key{Form}{method}{%
5017   \lowercase{\def\Hy@temp{#1}}%
5018   \@ifundefined{Form@method@\Hy@temp}{%
5019     \@onelevel@sanitize\Hy@temp
5020     \PackageError{hyperref}{%
5021       Unknown method '\Hy@temp'.\MessageBreak
5022       Known values are 'post' and 'get'%
5023     }\@ehc
5024   }{%
5025     \let\Fld@Form@method\Hy@temp
5026     \ifcase\@nameuse{Form@method@\Hy@temp} %
5027       \Fld@getmethodfalse
5028     \else

```



```

5029     \Fld@getmethodtrue
5030     \fi
5031   }%
5032 }
5033 \def\Fld@method{}
5034 \@namedef{Form@method@post}{0}
5035 \@namedef{Form@method@get}{1}
5036 \def\Fld@boolkey#1#2{%
5037   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5038 }
5039 \newtoks\Fld@toks
5040 \Fld@toks={ }%
5041 \def\Fld@addtoks#1#2{%
5042   \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
5043   \@processme
5044 }
5045 \def\Fld@checkequals#1=#2=#3\{\{%
5046   \def\@currDisplay{#1}%
5047   \ifx\#2\%
5048     \def\@currValue{#1}%
5049   \else
5050     \def\@currValue{#2}%
5051   \fi
5052 }
5053 \define@key{Field}{loc}{%
5054   \def\Fld@loc{#1}%
5055 }
5056 \define@key{Field}{checked}[true]{%
5057   \lowercase{\Fld@boolkey{#1}}{checked}%
5058 }
5059 \define@key{Field}{disabled}[true]{%
5060   \lowercase{\Fld@boolkey{#1}}{disabled}%
5061 }
5062 \define@key{Field}{accesskey}{%
5063   \Fld@addtoks{accesskey}{#1}%
5064 }
5065 \define@key{Field}{tabkey}{%
5066   \Fld@addtoks{tabkey}{#1}%
5067 }
5068 \define@key{Field}{name}{%
5069   \def\Fld@name{#1}%
5070 }
5071 \define@key{Field}{width}{%
5072   \def\Fld@width{#1}%
5073   \Fld@Width#1\setbox0=\hbox{m}%
5074 }
5075 \define@key{Field}{maxlen}{%
5076   \def\Fld@maxlen{#1}%
5077 }
5078 \define@key{Field}{menulength}{%
5079   \Fld@menulength=#1\relax
5080 }
5081 \define@key{Field}{height}{%
5082   \def\Fld@height{#1}%
5083 }
5084 \define@key{Field}{charsize}{%
5085   \Fld@charsize#1%

```

```

5086 }
5087 \define@key{Field}{borderwidth}{%
5088   \def\Fld@borderwidth{#1}%
5089 }
5090 \define@key{Field}{borderstyle}{%
5091   \def\Fld@borderstyle{#1}%
5092 }
5093 \define@key{Field}{bordersep}{%
5094   \def\Fld@bordersep{#1}%
5095 }
5096 \define@key{Field}{default}{%
5097   \def\Fld@default{#1}%
5098 }
5099 \define@key{Field}{align}{%
5100   \def\Fld@align{#1}%
5101 }
5102 \define@key{Field}{value}{%
5103   \def\Fld@value{#1}%
5104 }
5105 \define@key{Field}{checkboxsymbol}{%
5106   \Fld@DingDef\Fld@cbsymbol{#1}%
5107 }
5108 \define@key{Field}{radiosymbol}{%
5109   \Fld@DingDef\Fld@radiosymbol{#1}%
5110 }
5111 \def\Fld@DingDef#1#2{%
5112   \def\Fld@temp{}%
5113   \Fld@@DingDef#2\ding{ }\@nil
5114   \let#1\Fld@temp
5115 }
5116 \def\Fld@@DingDef#1\ding{#2#3}\@nil{%
5117   \expandafter\def\expandafter\Fld@temp\expandafter{%
5118     \Fld@temp
5119     #1%
5120   }%
5121   \ifx\\#3\\%
5122     \expandafter\@gobble
5123   \else
5124     \begingroup
5125     \lccode'0=#2\relax
5126     \lowercase{\endgroup
5127       \expandafter\def\expandafter\Fld@temp\expandafter{%
5128         \Fld@temp
5129         0%
5130       }%
5131     }%
5132     \expandafter\@firstofone
5133   \fi
5134   {%
5135     \Fld@@DingDef#3\@nil
5136   }%
5137 }

5138 \define@key{Field}{rotation}{%
5139   \def\Fld@rotation{#1}%
5140 }

5141 \define@key{Field}{backgroundcolor}{%
5142   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%

```

```

5143 }
5144 \define@key{Field}{bordercolor}{%
5145   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5146 }
5147 \define@key{Field}{color}{%
5148   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5149 }

5150 \def\Fld@onclick@code{}
5151 \def\Fld@format@code{}
5152 \def\Fld@validate@code{}
5153 \def\Fld@calculate@code{}
5154 \def\Fld@keystroke@code{}
5155 \def\Fld@onfocus@code{}
5156 \def\Fld@onblur@code{}
5157 \def\Fld@onmousedown@code{}
5158 \def\Fld@onmouseup@code{}
5159 \def\Fld@onenter@code{}
5160 \def\Fld@onexit@code{}
5161 \def\Hy@temp#1{%
5162   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5163 }
5164 \def\Hy@@temp#1#2{%
5165   \ifHy@pdfa
5166     \define@key{Field}{#2}{%
5167       \PackageError{hyperref}{%
5168         PDF/A: Additional action ‘#2’ is prohibited%
5169       }\@ehc
5170     }%
5171   \else
5172     \define@key{Field}{#2}{%
5173       \def#1{##1}%
5174     }%
5175   \fi
5176 }
5177 \Hy@temp{keystroke}
5178 \Hy@temp{format}
5179 \Hy@temp{validate}
5180 \Hy@temp{calculate}
5181 \Hy@temp{onfocus}
5182 \Hy@temp{onblur}
5183 \Hy@temp{onenter}
5184 \Hy@temp{onexit}
5185 \def\Hy@temp#1{%
5186   \define@key{Field}{#1}{%
5187     \Field@addtoks{#1}{##1}%
5188   }%
5189 }
5190 \Hy@temp{onselect}
5191 \Hy@temp{onchange}
5192 \Hy@temp{ondblclick}
5193 \Hy@temp{onmousedown}
5194 \Hy@temp{onmouseup}
5195 \Hy@temp{onmouseover}
5196 \Hy@temp{onmousemove}
5197 \Hy@temp{onmouseout}
5198 \Hy@temp{onkeypress}
5199 \Hy@temp{onkeydown}

```

```

5200 \Hy@temp{onkeyup}
5201 \ifHy@pdfa
5202   \define@key{Field}{onclick}{%
5203     \PackageError{hyperref}{%
5204       PDF/A: Action 'onclick' is prohibited%
5205     }\@ehc
5206   }%
5207 \else
5208   \define@key{Field}{onclick}{%
5209     \def\Fld@onclick@code{#1}%
5210     \Field@addtoks{onclick}{#1}%
5211   }%
5212 \fi

5213 \DeclareRobustCommand\TextField{%
5214   \@ifnextchar[{\@TextField}{\@TextField[]}%
5215 }
5216 \DeclareRobustCommand\ChoiceMenu{%
5217   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5218 }
5219 \DeclareRobustCommand\CheckBox{%
5220   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5221 }
5222 \DeclareRobustCommand\PushButton{%
5223   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5224 }
5225 \DeclareRobustCommand\Gauge{%
5226   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5227 }
5228 \DeclareRobustCommand\Submit{%
5229   \@ifnextchar[{\@Submit}{\@Submit[]}%
5230 }
5231 \DeclareRobustCommand\Reset{%
5232   \@ifnextchar[{\@Reset}{\@Reset[]}%
5233 }
5234 \def\LayoutTextField#1#2{% label, field
5235   #1 #2%
5236 }
5237 \def\LayoutChoiceField#1#2{% label, field
5238   #1 #2%
5239 }
5240 \def\LayoutCheckField#1#2{% label, field
5241   #1 #2%
5242 }
5243 \def\LayoutPushButtonField#1{% button
5244   #1%
5245 }
5246 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5247 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5248 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5249 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5250 \def\MakeButtonField#1{%
5251   \sbox0{%
5252     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5253   }%
5254   \@tempdima\ht0 %
5255   \advance\@tempdima by \Fld@borderwidth bp %
5256   \advance\@tempdima by \Fld@borderwidth bp %

```

```

5257 \ht0\@tempdima
5258 \@tempdima\dp0 %
5259 \advance\@tempdima by \Fld@borderwidth bp %
5260 \advance\@tempdima by \Fld@borderwidth bp %
5261 \dp0\@tempdima
5262 \box0\relax
5263 }
5264 \def\DefaultHeightofSubmit{14pt}
5265 \def\DefaultWidthofSubmit{2cm}
5266 \def\DefaultHeightofReset{14pt}
5267 \def\DefaultWidthofReset{2cm}
5268 \def\DefaultHeightofCheckBox{\baselineskip}
5269 \def\DefaultWidthofCheckBox{\baselineskip}
5270 \def\DefaultHeightofChoiceMenu{\baselineskip}
5271 \def\DefaultWidthofChoiceMenu{\baselineskip}
5272 \def\DefaultHeightofText{\baselineskip}
5273 \def\DefaultHeightofTextMultiline{4\baselineskip}
5274 \def\DefaultWidthofText{3cm}
5275 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5276 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5277 \def\DefaultOptionsofPushButton{print}
5278 \def\DefaultOptionsofCheckBox{print}
5279 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5280 \def\DefaultOptionsofListBox{print}
5281 \def\DefaultOptionsofComboBox{print,edit,sort}
5282 \def\DefaultOptionsofPopdownBox{print}
5283 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5284 \ifHy@figures
5285 \Hy@Info{Hyper figures ON}%
5286 \else
5287 \Hy@Info{Hyper figures OFF}%
5288 \fi
5289 \ifHy@nesting
5290 \Hy@Info{Link nesting ON}%
5291 \else
5292 \Hy@Info{Link nesting OFF}%
5293 \fi
5294 \ifHy@hyperindex
5295 \Hy@Info{Hyper index ON}%
5296 \else
5297 \Hy@Info{Hyper index OFF}%
5298 \fi
5299 \ifHy@backref
5300 \Hy@Info{backreferencing ON}%
5301 \else
5302 \Hy@Info{backreferencing OFF}%
5303 \fi
5304 \ifHy@colorlinks
5305 \Hy@Info{Link coloring ON}%
5306 \else
5307 \Hy@Info{Link coloring OFF}%
5308 \fi

```

```

5309 \ifHy@ocgcolorlinks
5310 \Hy@Info{Link coloring with OCG ON}%
5311 \else
5312 \Hy@Info{Link coloring with OCG OFF}%
5313 \fi
5314 \ifHy@pdfa
5315 \Hy@Info{PDF/A mode ON}%
5316 \else
5317 \Hy@Info{PDF/A mode OFF}%
5318 \fi

```

21 Low-level utility macros

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

```

5319 \edef\hyper@hash{\string#}
5320 \edef\hyper@tilde{\string~}
5321 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5322 \def\@currentHref{Doc-Start}
5323 \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.

```

5324 \Hy@AtBeginDocument{%
5325 \Hy@pdfstringtrue
5326 \PDF@SetupDoc
5327 \let\PDF@SetupDoc\@empty
5328 \Hy@DisableOption{pdfpagescrop}%
5329 \Hy@DisableOption{pdfpagemode}%
5330 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5331 \Hy@DisableOption{pdfdirection}%
5332 \Hy@DisableOption{pdfviewarea}%
5333 \Hy@DisableOption{pdfviewclip}%
5334 \Hy@DisableOption{pdfprintarea}%
5335 \Hy@DisableOption{pdfprintclip}%
5336 \Hy@DisableOption{pdfprintscaling}%
5337 \Hy@DisableOption{pdfduplex}%
5338 \Hy@DisableOption{pdfpicktraybypdfsize}%
5339 \Hy@DisableOption{pdfprintpagerange}%
5340 \Hy@DisableOption{pdfnumcopies}%
5341 \Hy@DisableOption{pdfstartview}%
5342 \Hy@DisableOption{pdfstartpage}%
5343 \Hy@DisableOption{pdftoolbar}%
5344 \Hy@DisableOption{pdfmenubar}%
5345 \Hy@DisableOption{pdfwindowui}%
5346 \Hy@DisableOption{pdfwindow}%
5347 \Hy@DisableOption{pdfcenterwindow}%
5348 \Hy@DisableOption{pdfdisplaydoctitle}%
5349 \Hy@DisableOption{pdfpagelayout}%
5350 \Hy@DisableOption{pdflang}%
5351 \Hy@DisableOption{baseurl}%
5352 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5353 \Hy@pdfstringfalse
5354 }

```

Ignore star from referencing macros:

```

5355 \LetLtxMacro\NoHy@OrgRef\ref

```

```

5356 \DeclareRobustCommand*{\ref}{%
5357   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5358 }
5359 \LetLtxMacro\NoHy@OrgPageRef\pageref
5360 \DeclareRobustCommand*{\pageref}{%
5361   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5362 }

```

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.

```

5363 \def\NoHyper{%
5364   \def\hyper@link@{##1}##2##3##4{##4}%
5365   \def\hyper@@anchor##1{%
5366     \global\let\hyper@livelink\hyper@link
5367     \gdef\hyper@link##1##2##3{##3}%
5368     \def\hyper@anchor##1{%
5369       \def\hyper@anchorstart##1{%
5370         \let\hyper@anchorend\@empty
5371         \def\hyper@linkstart##1##2{%
5372           \let\hyper@linkend\@empty
5373           \def\hyper@linkurl##1##2{##1}%
5374           \def\hyper@linkfile##1##2##3{##1}%
5375           \def\hyper@link@{##1}##2##3{%
5376             \let\Hy@backout\@gobble
5377           }
5378           \def\stop@hyper{%
5379             \def\hyper@link@{##1}##2##3##4{##4}%
5380             \let\Hy@backout\@gobble
5381             \def\hyper@@anchor##1{%
5382               \def\hyper@link##1##2##3{##3}%
5383               \def\hyper@anchor##1{%
5384                 \def\hyper@anchorstart##1{%
5385                   \let\hyper@anchorend\@empty
5386                   \def\hyper@linkstart##1##2{%
5387                     \let\hyper@linkend\@empty
5388                     \def\hyper@linkurl##1##2{##1}%
5389                     \def\hyper@linkfile##1##2##3{##1}%
5390                     \def\hyper@link@{##1}##2##3{%
5391                       }
5392                   \def\endNoHyper{%
5393                     \global\let\hyper@link\hyper@livelink
5394                   }
5395                 }

```

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:

```

5396 <*nohyperref>
5397 \RequirePackage{letltxmacro}[2008/06/13]
5398 \let\hyper@@anchor\@gobble
5399 \def\hyper@link#1#2#3{#3}%
5400 \let\hyper@anchorstart\@gobble
5401 \let\hyper@anchorend\@empty
5402 \let\hyper@linkstart\@gobbletwo
5403 \let\hyper@linkend\@empty
5404 \def\hyper@linkurl#1#2{#1}%
5405 \def\hyper@linkfile#1#2#3{#1}%
5406 \def\hyper@link@{#1}#2#3{#3}%
5407 \let\PDF@SetupDoc\@empty
5408 \let\PDF@FinishDoc\@empty
5409 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5410 \def\Acrobatmenu#1#2{\leavevmode#2}
5411 \let\pdfstringdefDisableCommands\@gobbletwo
5412 \let\texorpdfstring\@firstoftwo
5413 \let\pdfbookmark\@undefined
5414 \newcommand\pdfbookmark[3]{}{}
5415 \let\phantomsection\@empty
5416 \let\hypersetup\@gobble
5417 \let\hyperbaseurl\@gobble
5418 \let\href\@gobble
5419 \let\hyperdef\@gobbletwo
5420 \let\hyperlink\@gobble
5421 \let\hypertarget\@gobble
5422 \def\hyperref{%
5423   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5424 }
5425 \long\def\@gobbleopt[#1]{}
5426 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5427 \LetLtxMacro\NoHy@OrgRef\ref
5428 \DeclareRobustCommand*\ref{%
5429   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5430 }
5431 \LetLtxMacro\NoHy@OrgPageRef\pageref
5432 \DeclareRobustCommand*\pageref{%
5433   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5434 }
5435 </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}`

```

5436 <*package>
5437 \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.

```

5438 \if@filesw
5439 \ifHy@typexml
5440 \immediate\closeout\@mainaux
5441 \immediate\openout\@mainaux\jobname.aux\relax
5442 \immediate\write\@auxout{<relaxxml>\relax}%
5443 \fi
5444 \immediate\write\@auxout{%
5445 \string\providecommand\string\HyperFirstAtBeginDocument{%
5446 \string\AtBeginDocument}^^J%
5447 \string\HyperFirstAtBeginDocument{%
5448 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5449 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5450 \string\gdef\string\contentsline%
5451 \string#1\string#2\string#3\string#4{%
5452 \string\oldcontentsline%
5453 {\string#1}{\string#2}{\string#3}}^^J%
5454 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5455 \string\gdef\string\newlabel\string#1\string#2{%
5456 \string\newlabelxx{\string#1}\string#2}^^J%
5457 \string\gdef\string\newlabelxx%
5458 \string#1\string#2\string#3\string#4\string#5\string#6{%
5459 \string\oldnewlabel{\string#1}{\string#2}{\string#3}}^^J%

```

But the new aux file will be read again at the end, with the normal definitions expected, so better put things back as they were.

```

5460 \string\AtEndDocument{%
5461 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5462 \string\let\string\contentsline\string\oldcontentsline^^J%
5463 \string\let\string\newlabel\string\oldnewlabel^^J%
5464 \string\fi%
5465 }^^J%

```

If the document is being run with hyperref put this definition into the aux file, so we can spot it on the next run.

```

5466 \string\fi%
5467 }^^J%
5468 \string\global\string\let\string\hyper@last\relax^^J%
5469 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5470 }%
5471 \fi
5472 \def\HyperFirstAtBeginDocument#1{#1}%

```

Now the code to deal with adding the hyperref package to a document with aux and toc written the standard way.

If hyperref was used last time, do nothing. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```

5473 \ifx\hyper@last\@undefined
5474 \def\@starttoc#1{%
5475 \begingroup
5476 \makeatletter
5477 \IfFileExists{\jobname.#1}{%
5478 \Hy@WarningNoLine{%
5479 old #1 file detected, not used; run LaTeX again%
5480 }%

```

```

5481     }{}%
5482     \if@filesw
5483         \expandafter\newwrite\csname tf@#1\endcsname
5484         \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5485         \fi
5486         \@nobreakfalse
5487     \endgroup
5488 }%
5489 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5490 \fi
5491 }

```

25 Title strings

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

```

5492 \ifHy@usetitle
5493   \let\HyOrg@title\title
5494   \let\HyOrg@author\author
5495   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5496   \def\Hy@scanopttitle[#1]{%
5497     \gdef\Hy@title{#1}%
5498     \HyOrg@title{#1}%
5499   }%
5500   \def\Hy@scantitle#1{%
5501     \gdef\Hy@title{#1}%
5502     \HyOrg@title{#1}%
5503   }%
5504   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5505   \def\Hy@scanoptauthor[#1]{%
5506     \gdef\Hy@author{#1}%
5507     \HyOrg@author{#1}%
5508   }%
5509   \def\Hy@scanauthor#1{%
5510     \gdef\Hy@author{#1}%
5511     \HyOrg@author{#1}%
5512   }%

```

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.

```

5513 \begingroup
5514 \def\process@me#1\@nil#2{%
5515   \expandafter\let\expandafter\x\csname @#2\endcsname
5516   \edef\y{\expandafter\strip@prefix\meaning\x}%
5517   \def\c##1#1##2\@nil{%
5518     \ifx\##1\%
5519       \else
5520         \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5521           \expandafter{x}%
5522       \fi
5523     }%
5524   \expandafter\c\y\relax#1\@nil
5525   }%
5526   \expandafter\process@me\string\@latex@\@nil{title}%
5527   \expandafter\process@me\string\@latex@\@nil{author}%
5528 \endgroup

```

```

5529 \fi
5530 \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.

```

5531 \def\Hy@UseMaketitleString#1{%
5532   \ltx@ifundefined{Hy@#1}{-}{%
5533     \begingroup
5534     \let\Hy@saved@hook\pdfstringdefPreHook
5535     \pdfstringdefDisableCommands{%
5536       \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
5537       \let\newline\\%
5538     }%
5539     \expandafter\ifx\csname @pdf#1\endcsname \@empty
5540     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5541       \csname Hy@#1\endcsname \@empty
5542     }%
5543     \fi
5544     \global\let\pdfstringdefPreHook\Hy@saved@hook
5545   \endgroup
5546 }%
5547 }
5548 \def\Hy@newline@title#1{ #1}
5549 \def\Hy@newline@author#1{, #1}
5550 \def\Hy@UseMaketitleInfos{%
5551   \Hy@UseMaketitleString{title}%
5552   \Hy@UseMaketitleString{author}%
5553 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5554 \RequirePackage{atbegshi}[2007/09/09]
5555 \def\Hy@EveryPageHook{}
5556 \def\Hy@EveryPageBoxHook{}
5557 \def\Hy@FirstPageHook{}
5558 \AtBeginShipout{%
5559   \Hy@EveryPageHook
5560   \ifx\Hy@EveryPageBoxHook \@empty
5561   \else
5562     \setbox\AtBeginShipoutBox=\vbox{%
5563       \offinterlineskip
5564       \Hy@EveryPageBoxHook
5565       \box\AtBeginShipoutBox
5566     }%

```

```

5567 \fi
5568 }
5569 \AtBeginShipoutFirst{%
5570 \Hy@FirstPageHook
5571 }
5572 \g@addto@macro\Hy@FirstPageHook{%
5573 \PDF@FinishDoc
5574 \gdef\PDF@FinishDoc{}}%
5575 }

```

27.1 PDF /PageLabels

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

```

5576 \ifHy@pagelabels
5577 \begingroup\expandafter\expandafter\expandafter\endgroup
5578 \expandafter\ifx\csname thepage\endcsname\relax
5579 \Hy@pagelabelsfalse
5580 \Hy@WarningNoLine{%
5581 Option 'pdfpagelabels' is turned off\MessageBreak
5582 because \string\thepage\space is undefined%
5583 }%
5584 \csname fi\endcsname
5585 \csname iffalse\expandafter\endcsname
5586 \fi

```

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

```

5587 \def\thispdfpagelabel#1{%
5588 \gdef\HyPL@thisLabel{#1}%
5589 }%
5590 \global\let\HyPL@thisLabel\relax

```

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

```

5591 \def\HyPL@Labels{}%

```

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

```

5592 \newcount\Hy@abspage
5593 \Hy@abspage=0 %

```

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

```

5594 \def\HyPL@LastType{init}%
5595 \def\HyPL@LastNumber{0}%
5596 \def\HyPL@LastPrefix{}%

```

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

```

5597 \def\HyPL@arabic{D}%
5598 \def\HyPL@Roman{R}%
5599 \def\HyPL@roman{r}%
5600 \def\HyPL@Alph{A}%
5601 \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.

```

5602 \def\HyPL@EveryPage{%
5603 \begingroup
5604 \ifx\HyPL@thisLabel\relax
5605 \let\HyPL@page\thepage

```

```

5606 \else
5607 \let\HyPL@page\HyPL@thisLabel
5608 \global\let\HyPL@thisLabel\relax
5609 \fi
5610 \let\HyPL@Type\relax
5611 \ifnum\the\c@page>0 %
5612 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5613 \fi
5614 \let\Hy@temp Y%
5615 \ifx\HyPL@Type\HyPL@LastType
5616 \else
5617 \let\Hy@temp N%
5618 \fi
5619 \ifx\HyPL@Type\relax
5620 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5621 \else
5622 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5623 \fi
5624 \ifx\HyPL@Prefix\HyPL@LastPrefix
5625 \else
5626 \let\Hy@temp N%
5627 \fi
5628 \if Y\Hy@temp
5629 \advance\c@page by -1 %
5630 \ifnum\HyPL@LastNumber=\the\c@page\relax
5631 \else
5632 \let\Hy@temp N%
5633 \fi
5634 \Hy@StepCount\c@page
5635 \fi
5636 \if N\Hy@temp
5637 \ifx\HyPL@Type\relax
5638 \HyPL@storePageLabel{/P(\HyPL@Prefix)}%
5639 \else
5640 \HyPL@storePageLabel{%
5641 \ifx\HyPL@Prefix\@empty
5642 \else
5643 /P(\HyPL@Prefix)%
5644 \fi
5645 /S/\csname HyPL\HyPL@Type\endcsname
5646 \ifnum\the\c@page=1 %
5647 \else
5648 \space/St \the\c@page
5649 \fi
5650 }%
5651 \fi
5652 \fi
5653 \xdef\HyPL@LastNumber{\the\c@page}%
5654 \global\let\HyPL@LastType\HyPL@Type
5655 \global\let\HyPL@LastPrefix\HyPL@Prefix
5656 \endgroup
5657 \Hy@GlobalStepCount\Hy@abspage
5658 }%

```

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

```

5659 \def\HyPL@CheckThePage#1\@nil{%
5660 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil

```

5661 }%

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

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

```

5662 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5663   \def\Hy@tempa{#4}%
5664   \def\Hy@tempb{\csname\endcsname\c@page}%
5665   \ifx\Hy@tempa\Hy@tempb
5666     \expandafter\ifx\csname HyPL#3\endcsname\relax
5667     \else
5668       \def\HyPL@Type{#3}%
5669       \def\HyPL@Prefix{#2}%
5670     \fi
5671   \else
5672     \begingroup
5673     \let\Hy@next\endgroup
5674     \let\HyPL@found\@undefined
5675     \def\arabic{\HyPL@Format{arabic}}%
5676     \def\Roman{\HyPL@Format{Roman}}%
5677     \def\roman{\HyPL@Format{roman}}%
5678     \def\Alph{\HyPL@Format{Alph}}%
5679     \def\alph{\HyPL@Format{alph}}%
5680     \protected@edef\Hy@temp{#1}%
5681     \ifx\HyPL@found\relax
5682       \toks@{\expandafter{\Hy@temp}}%
5683       \edef\Hy@next{\endgroup
5684         \noexpand\HyPL@@@CheckThePage\the\toks@
5685         \noexpand\HyPL@found\relax\noexpand\@nil
5686       }%
5687     \fi
5688     \Hy@next
5689   \fi
5690 }%
```

`\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`.

```

5691 \def\HyPL@Format#1#2{%
5692   \ifx\HyPL@found\@undefined
5693     \expandafter\ifx\csname c@#2\endcsname\c@page
5694     \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5695   \else
5696     \expandafter\noexpand\csname#1\endcsname{#2}%
5697   \fi
5698 \else
5699   \expandafter\noexpand\csname#1\endcsname{#2}%
5700 \fi
5701 }%
```

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

```

5702 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5703   \def\Hy@tempa{#3}%
5704   \def\Hy@tempb{\HyPL@found\relax}%

```

```

5705 \ifx\Hy@tempa\Hy@tempb
5706 \def\HyPL@Type{@#2}%
5707 \def\HyPL@Prefix{#1}%
5708 \fi
5709 }%

```

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

```

5710 \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`.

```

5711 \def\HyPL@Useless{0<</S/D>>}%
5712 \@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.

```

5713 \def\HyPL@SetPageLabels{%
5714 \onelevel@sanitize\HyPL@Labels
5715 \ifx\HyPL@Labels@empty
5716 \else
5717 \ifx\HyPL@Labels\HyPL@Useless
5718 \else
5719 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5720 \fi
5721 \fi
5722 }%

```

```

5723 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5724 \fi

```

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

```

5725 \Hy@DisableOption{pdfpagelabels}
5726 </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`

```

5727 <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.

```

5728 <*vTeX>
5729 \providecommand*{\XR@ext}{pdf}
5730 \edef\Hy@VTeXversion{%
5731 \ifx\VTeXversion\@undefined
5732 \z@
5733 \else
5734 \ifx\VTeXversion\relax
5735 \z@
5736 \else
5737 \VTeXversion

```

```

5738   \fi
5739   \fi
5740 }
5741 \begingroup
5742 \ifnum\Hy@VTeXversion<660 %
5743   \gdef\Hy@PutCatalog#1{%
5744     \Hy@WarningNoLine{%
5745       VTeX 6.59g or above required for pdfpagelabels%
5746     }%
5747   }%
5748 \else
5749   \gdef\Hy@PutCatalog#1{%
5750     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5751   }%
5752   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5753     \ifx\#2\%
5754       \else
5755         \immediate\special{!pdfpagelabels #2}%
5756       \fi
5757     }%
5758   \fi
5759 \endgroup
5760 \</vtex>

5761 \<*pdftex | vtex>

```

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

```

5762 \ifHy@pagelabels
5763   \def\HyPL@StorePageLabel#1{%
5764     \toks@\expandafter{\HyPL@Labels}%
5765     \xdef\HyPL@Labels{%
5766       \the\toks@
5767       \the\Hy@abspage<<#1>>%
5768     }%
5769   }%

```

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.

```

5770 \RequirePackage{atveryend}[2009/12/07]%
5771 \AtVeryEndDocument{%
5772   \HyPL@SetPageLabels
5773 }%

5774 \fi
5775 \</pdftex | vtex>

```

27.1.2 xetex

```

5776 \<*xetex>
5777 \HyPsd@LoadUnicode
5778 \Hy@unicodetrue
5779 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5780 \else
5781   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5782 \fi
5783 \HyPsd@LoadStringEncoding
5784 \define@key{Hyp}{unicode}[true]{%

```



```

5785 \Hy@boolkey{unicode}{#1}%
5786 \ifHy@unicode
5787 \else
5788 \Hy@Warning{%
5789 XeTeX driver only supports 'unicode=true'.\MessageBreak
5790 Ignoring option setting 'unicode=false'%
5791 }%
5792 \Hy@unicodetrue
5793 \fi
5794 }
5795 \define@key{Hyp}{pdfencoding}{%
5796 \edef\HyPsd@temp{#1}%
5797 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5798 \let\HyPsd@pdfencoding\HyPsd@temp
5799 \else
5800 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5801 \let\HyPsd@pdfencoding\HyPsd@temp
5802 \else
5803 \Hy@Warning{%
5804 XeTeX driver only supports\MessageBreak
5805 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5806 setting 'pdfencoding=\HyPsd@temp'%
5807 }%
5808 \fi
5809 \fi
5810 }
5811 \let\HyXeTeX@CheckUnicode\relax
5812 </xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5813 <*pdfmarkbase>
5814 \begingroup
5815 \@ifundefined{headerps@out}{%
5816 \toks@{\expandafter{\Hy@FirstPageHook}%
5817 \xdef\Hy@FirstPageHook{%
5818 \noexpand\headerps@out{%
5819 systemdict /pdfmark known%
5820 {%
5821 userdict /?pdfmark systemdict /exec get put%
5822 }{%
5823 userdict /?pdfmark systemdict /pop get put %
5824 userdict /pdfmark systemdict /cleartomark get put%
5825 }%
5826 ifelse%
5827 }%
5828 \the\toks@
5829 }%
5830 }%
5831 \endgroup
5832 </pdfmarkbase>

\Hy@PutCatalog

5833 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5834 <*pdfmarkbase>
5835 \def\Hy@PutCatalog#1{%
5836 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog}\string} << #1 >>}}%
5837 }
5838 </pdfmarkbase>

```

```
5839 <*pdfmarkbase | dvipdfm | xetex>
5840 \ifHy@pagelabels
```

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

```
5841 \def\HyPL@StorePageLabel#1{%
5842   \if@filesw
5843     \begingroup
5844     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5845     \immediate\write\@mainaux{%
5846       \string\HyPL@Entry{\Hy@tempa}%
5847     }%
5848   \endgroup
5849   \fi
5850 }%
```

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.

```
5851 \Hy@AtBeginDocument{%
5852   \if@filesw
5853     \immediate\write\@mainaux{%
5854       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5855     }%
5856   \fi
5857   \ifx\HyPL@Labels\@empty
5858     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5859   \else
5860     \HyPL@SetPageLabels
5861   \fi
5862   \let\HyPL@Entry\@gobble
5863 }%
```

`\HyPL@Entry`

```
5864 \def\HyPL@Entry#1{%
5865   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5866     \HyPL@Labels
5867     #1%
5868   }%
5869 }%

5870 \fi
5871 </pdfmarkbase | dvipdfm | xetex>
5872 <*package>
5873 \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

```

5874 \def\Hy@CounterExists#1{%
5875   \begingroup\expandafter\expandafter\expandafter\endgroup
5876   \expandafter\ifx\csname c@#1\endcsname\relax
5877     \expandafter\@gobble
5878   \else
5879     \begingroup\expandafter\expandafter\expandafter\endgroup
5880     \expandafter\ifx\csname the#1\endcsname\relax
5881       \expandafter\expandafter\expandafter\@gobble
5882     \else
5883       \expandafter\expandafter\expandafter\@firstofone
5884     \fi
5885   \fi
5886 }
5887 \Hy@CounterExists{section}{%
5888   \newcommand\theHequation{\theHsection.\arabic{equation}}%
5889 }
5890 \Hy@CounterExists{part}{%
5891   \newcommand\theHpart{\arabic{part}}%
5892 }
5893 \ltx@ifundefined{thechapter}{%
5894   \newcommand\theHsection   {\arabic{section}}%
5895   \newcommand\theHfigure    {\arabic{figure}}%
5896   \newcommand\theHtable     {\arabic{table}}%
5897 }{%
5898   \newcommand\theHchapter   {\arabic{chapter}}%
5899   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}%
5900   \newcommand\theHtable     {\theHchapter.\arabic{table}}%
5901   \newcommand\theHsection   {\theHchapter.\arabic{section}}%
5902 }
5903 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5904 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5905 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5906 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
5907 \newcommand\theHtheorem     {\theHsection.\arabic{theorem}}
5908 \newcommand\theHthm         {\theHsection.\arabic{thm}}

5909 \let\H@item\item
5910 \newcounter{Item}
5911 \def\theHItem{\arabic{Item}}
5912 \def\item{%
5913   \@hyper@itemfalse
5914   \if@nmbbrlist\@hyper@itemtrue\fi
5915   \H@item
5916 }

5917 \newcommand\theHenumi      {\theHItem}
5918 \newcommand\theHenumii     {\theHItem}
5919 \newcommand\theHenumiii    {\theHItem}

```

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.

```

5920 \newcommand\theHenumiv {\theHItem}
5921 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5922 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5923 \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.

```

5924 \let\H@refstepcounter\refstepcounter
5925 \edef\name@of@eq{equation}%
5926 \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.

```

5927 \newif\if@hyper@item
5928 \newif\if@skiphyperref
5929 \@hyper@itemfalse
5930 \@skiphyperreffalse
5931 \def\refstepcounter#1{%
5932   \ifHy@pdfstring
5933   \else
5934     \H@refstepcounter{#1}%
5935     \edef\This@name{#1}%
5936     \ifx\This@name\name@of@slide
5937     \else
5938       \if@skiphyperref
5939       \else
5940         \if@hyper@item
5941         \stepcounter{Item}%
5942         \hyper@refstepcounter{Item}%
5943         \@hyper@itemfalse
5944       \else
5945         \hyper@refstepcounter{#1}%
5946       \fi
5947     \fi
5948   \fi
5949 \fi
5950 }

```

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

```

5951 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5952 \def\hyper@refstepcounter#1{%
5953   \edef\This@name{#1}%
5954   \ifx\This@name\name@of@eq
5955     \@ifundefined{theHequation}{%
5956       \make@stripped@name{\theequation}%
5957       \let\theHequation\newname
5958     }{}%
5959   \fi
5960   \@ifundefined{theH#1}{%
5961     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5962   }{}%
5963   \hyper@makecurrent{#1}%
5964   \ifmeasuring@

```

```

5965 \else
5966   \Hy@raisedlink{%
5967     \hyper@anchorstart{\@currentHref}\hyper@anchorend
5968   }%
5969 \fi
5970 }

```

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`.

```

5971 \begingroup\expandafter\expandafter\expandafter\endgroup
5972 \expandafter\ifx\csname chapter\endcsname\relax
5973   \def\Hy@chapterstring{section}%
5974 \else
5975   \def\Hy@chapterstring{chapter}%
5976 \fi
5977 \def\Hy@appendixstring{appendix}
5978 \def\Hy@chapapp{\Hy@chapterstring}
5979 \let\HyOrg@appendix\appendix
5980 \def\appendix{%
5981   \ltx@ifundefined{chapter}%
5982     {\gdef\theHsection{\Alph{section}}}%
5983     {\gdef\theHchapter{\Alph{chapter}}}%
5984   \xdef\Hy@chapapp{\Hy@appendixstring}%
5985   \HyOrg@appendix
5986 }

```

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

```

5987 \def\hyper@makecurrent#1{%
5988   \begingroup
5989   \edef\Hy@param{#1}%
5990   \ifx\Hy@param\Hy@chapterstring
5991     \let\Hy@param\Hy@chapapp
5992   \fi
5993   \ifHy@hypertextnames
5994     \let\@number\@firstofone
5995     \ifundefined{latin@Alph}{ }{%
5996       \ifx\@Alph\greek@Alph
5997         \def\@Alph{Alph\@arabic}%
5998       \fi
5999     }%
6000     \ifx\@Alph\@Alph@bul
6001       \def\@Alph{Alph\@arabic}%
6002     \fi
6003     \ifx\@alph\@alph@bul
6004       \def\@alph{alph\@arabic}%
6005     \fi
6006     \ifHy@naturalnames
6007       \let\textlatin\@firstofone
6008       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6009     \else
6010       \xdef\HyperGlobalCurrentHref{%
6011         \csname

```

```

6012         the%
6013         \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6014         #1%
6015         \endcsname
6016     }%
6017 \fi
6018 \xdef\HyperGlobalCurrentHref{%
6019     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6020 }%
6021 \else
6022     \Hy@GlobalStepCount\Hy@linkcounter
6023     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6024 \fi
6025 \endgroup
6026 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6027 \ifHy@localanchorname
6028     \let\@currentHref\HyperLocalCurrentHref
6029 \else
6030     \global\let\@currentHref\HyperGlobalCurrentHref
6031 \fi
6032 }

```

\Hy@MakeCurrentHref

```

6033 \def\Hy@MakeCurrentHref#1{%
6034     \edef\HyperLocalCurrentHref{#1}%
6035     \@onelevel@sanitize\HyperLocalCurrentHref
6036     \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6037     \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6038     \ifHy@localanchorname
6039         \let\@currentHref\HyperLocalCurrentHref
6040     \else
6041         \global\let\@currentHref\HyperGlobalCurrentHref
6042     \fi
6043 }

```

\Hy@MakeCurrentHrefAuto

```

6044 \def\Hy@MakeCurrentHrefAuto#1{%
6045     \Hy@GlobalStepCount\Hy@linkcounter
6046     \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6047 }

```

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

```

6048 \def\@currentHlabel{\@currentHref}

6049 \@ifpackageloaded{fancyvrb}{%
6050     \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
6051         \def\FV@StepLineNo{%
6052             \FV@SetLineNo
6053             \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6054             \FV@StepLineNo
6055         }%
6056     }%
6057 }{}

```

29 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package lastpage is loaded after package hyperref. The same algorithm (options `hypertexnames` and `plainpages`) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 38). The link will not work if option `pageanchor` is set to false.

`\lastpage@putlabel`

```

6058 \Hy@AtBeginDocument{%
6059   \ifclassloaded{revtex4}{%
6060     \@namedef{ver@lastpage.sty}{1994/06/25}%
6061   }{}%
6062   \ifpackageloaded{lastpage}{%
6063     \ifHy@pageanchor
6064     \else
6065       \Hy@WarningNoLine{%
6066         The \string\pageref{LastPage} link doesn't work\MessageBreak
6067         with disabled option 'pageanchor'%
6068       }%
6069     \fi
6070     \def\lastpage@putlabel{%
6071       \addtocounter{page}{-1}%
6072       \if@filesw
6073         \begingroup
6074           \let\@number\@firstofone
6075           \ifHy@pageanchor
6076             \ifHy@hypertexnames
6077               \ifHy@plainpages
6078                 \def\Hy@temp{\arabic{page}}%
6079               \else
6080                 \Hy@unicodedefalse
6081                 \pdfstringdef\Hy@temp{\thepage}%
6082               \fi
6083             \else
6084               \def\Hy@temp{\the\Hy@pagecounter}%
6085             \fi
6086           \fi
6087           \immediate\write\@auxout{%
6088             \string\newlabel
6089             {LastPage}{\thepage}{\thepage}{\thepage}{\thepage}%
6090             \ifHy@pageanchor page.\Hy@temp\fi}{\thepage}%
6091           }%
6092         \endgroup
6093       \fi
6094       \addtocounter{page}{1}%
6095     }%
6096   \ifclassloaded{revtex4}{%
6097     \begingroup
6098       \toks@\expandafter{\lastpage@putlabel}%
6099     \edef\x{\endgroup
6100       \def\noexpand\lastpage@putlabel{%
6101         \noexpand\stepcounter{page}%
6102         \the\toks@
6103         \noexpand\addtocounter{page}\noexpand\m@ne

```

```

6104     }%
6105     }%
6106     \x
6107     }{}%
6108     }{}%
6109 }
6110 \</package>
6111 \<*check>
6112 \checkpackage{lastpage}{1994/06/25}
6113 \checkcommand\def\lastpage@putlabel{%
6114   \addtocounter{page}{-1}%
6115   \immediate\write\@auxout{%
6116     \string\newlabel{LastPage}{\the\thepage}}%
6117   }%
6118   \addtocounter{page}{1}%
6119 }
6120 \</check>
6121 \<*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.

```

6122 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
6123 \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:

```

6124 \ifpackageloaded{titlesec}{%
6125   \def\ttl@Hy@steplink#1{%
6126     \Hy@MakeCurrentHrefAuto{#1*}%
6127     \edef\ttl@Hy@saveanchor{%
6128       \noexpand\Hy@raisedlink{%
6129         \noexpand\hyper@anchorstart{\@currentHref}%
6130         \noexpand\hyper@anchorend
6131       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6132       \noexpand\ttl@Hy@PatchSaveWrite
6133     }%
6134   }%
6135 }%
6136 \def\ttl@Hy@PatchSaveWrite{%
6137   \begingroup
6138   \toks@{\expandafter{\ttl@savewrite}}%
6139   \edef\x{\endgroup
6140     \def\noexpand\ttl@savewrite{%
6141       \let\noexpand\@currentHref
6142       \noexpand\ttl@Hy@SavedCurrentHref
6143     \the\toks@
6144     }%
6145   }%
6146   \x

```



```

6185 \endgroup
6186 \def\LT@start{%
6187   #1%
6188   \let\@currentHref\Hy@LT@currentHref
6189   \Hy@raisedlink{%
6190     \hyper@anchorstart{\@currentHref}\hyper@anchorend
6191   }%
6192   \ifvoid\LT@firsthead\copy
6193     #2%
6194   }%
6195 }%
6196 \expandafter\x\LT@start\@nil
6197 }{}

```

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.

```

6198 \let\new@refstepcounter\refstepcounter
6199 \let\H@equation\equation
6200 \let\H@endequation\endequation

6201 \ifpackageloaded{amsmath}{%
6202   \long\def\Hy@temp{%
6203     \incr@eqnum
6204     \mathdisplay@push
6205     \st@rredfalse \global\@eqnswtrue
6206     \mathdisplay{equation}%
6207   }%
6208   \ifx\Hy@temp\equation
6209     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6210       \csname iftrue\endcsname
6211   \else
6212     \long\def\equation{%
6213       \mathdisplay@push
6214       \st@rredfalse \global\@eqnswtrue
6215       \mathdisplay{equation}%
6216       \incr@eqnum
6217     }%
6218   \fi
6219 \fi
6220 }{%
6221 \def\equation{%
6222   \let\refstepcounter\H@refstepcounter
6223   \H@equation
6224   \@ifundefined{theHequation}{%
6225     \make@stripped@name{\theequation}%
6226     \let\theHequation\newname
6227   }{}%
6228   \hyper@makecurrent{equation}%
6229   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
6230 \let\refstepcounter\new@refstepcounter
6231 }%

```

```

6232 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6233 }

```

My goodness, why can't L^AT_EX be consistent? Why is `\eqnarray` set up differently from other objects?

People (you know who you are, Thomas Beuth) sometimes make an `eqnarray` where *all* the lines end with `\notag`, so there is no suitable anchor at all. In this case, pass by on the other side.

```

6234 \newif\if@eqnstar
6235 \@eqnstarfalse
6236 \let\H@eqnarray\eqnarray
6237 \let\H@endeqnarray\endeqnarray
6238 \def\eqnarray{%
6239   \let\Hy@reserved@a\relax
6240   \def\@currentHref{}%
6241   \H@eqnarray
6242   \if@eqnstar
6243   \else
6244     \ifx\\ \@currentHref\\%
6245     \else
6246       \@ifundefined{theHequation}{%
6247         \make@stripped@name{\theequation}%
6248         \let\theHequation\newname
6249       }{}%
6250       \hyper@makecurrent{equation}%
6251       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6252     \fi
6253   \fi
6254 }
6255 \def\endeqnarray{%
6256   \H@endeqnarray
6257 }

```

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.

```

6258 \@namedef{eqnarray*}{%
6259   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6260 }
6261 \@namedef{endeqnarray*}{%
6262   \nonumber\endeqnarray\@eqnstarfalse
6263 }

```

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

```

6264 \ltx@ifundefined{subeqnarray}{}{%
6265   \let\H@subeqnarray\subeqnarray
6266   \let\H@endsubeqnarray\endsubeqnarray
6267   \def\subeqnarray{%
6268     \let\Hy@reserved@a\relax
6269     \H@subeqnarray
6270     \@ifundefined{theHequation}{%
6271       \make@stripped@name{\theequation}%
6272       \let\theHequation\newname
6273     }{}%
6274     \hyper@makecurrent{equation}%
6275     \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6276   }%
6277   \def\endsubeqnarray{%
6278     \H@endsubeqnarray

```

```

6279 }%
6280 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6281 }

```

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

```

6282 \def\make@stripped@name#1{%
6283   \begingroup
6284   \escapechar\m@ne
6285   \global\let\newname\@empty
6286   \protected@edef\Hy@tempa{#1}%
6287   \edef\@tempb{%
6288     \noexpand\@tfor\noexpand\Hy@tempa:=%
6289     \expandafter\strip@prefix\meaning\Hy@tempa
6290   }%
6291   \@tempb\do{%
6292     \if{\Hy@tempa\else
6293     \if}\Hy@tempa\else
6294     \xdef\newname{\newname\Hy@tempa}%
6295     \fi
6296     \fi
6297   }%
6298   \endgroup
6299 }

```

Support for amsmath's subequations:

```

6300 \begingroup\expandafter\expandafter\expandafter\endgroup
6301 \expandafter\ifx\csname subequations\endcsname\relax
6302 \else
6303   \let\HyOrg@subequations\subequations
6304   \def\subequations{%
6305     \stepcounter{equation}%
6306     \protected@edef\theHparentequation{%
6307       \@ifundefined{theHequation}\theequation\theHequation
6308     }%
6309     \addtocounter{equation}{-1}%
6310     \HyOrg@subequations
6311     \def\theHequation{\theHparentequation\alph{equation}}%
6312     \ignorespaces
6313   }%
6314   \fi

```

Support for package amsthm (Daniel Müllner):

```

6315 \@ifpackageloaded{amsthm}{%
6316   \def\@thm#1#2#3{%
6317     \ifhmode
6318       \unskip\unskip\par
6319     \fi
6320     \normalfont
6321     \trivlist
6322     \let\thmheadnl\relax
6323     \let\thm@swap\@gobble
6324     \thm@notefont{\fontseries\mddefault\upshape}%
6325     \thm@headpunct{.}% add period after heading
6326     \thm@headsep 5\p@ plus\p@ minus\p@\relax
6327     \thm@space@setup
6328     #1% style overrides
6329     \@topsep \thm@preskip           % used by thm head
6330     \@topsepadd \thm@postskip      % used by \@endparenv

```

```

6331 \def\dth@counter{#2}%
6332 \ifx\@empty\dth@counter
6333 \def\@tempa{%
6334 \@oparg{\@begintheorem{#3}{}}{}%
6335 }%
6336 \else
6337 \H@refstepcounter{#2}%
6338 \hyper@makecurrent{#2}%
6339 \let\Hy@dth@currentHref\@currentHref
6340 \def\@tempa{%
6341 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
6342 }%
6343 \fi
6344 \@tempa
6345 }%
6346 \dth@everypar={%
6347 \@minipagefalse
6348 \global\@newlistfalse
6349 \@noprimitfalse
6350 \if@inlabel
6351 \global\@inlabelfalse
6352 \begingroup
6353 \setbox\z@\lastbox
6354 \ifvoid\z@
6355 \kern-\itemindent
6356 \fi
6357 \endgroup
6358 \ifx\@empty\dth@counter
6359 \else
6360 \Hy@raisedlink{%
6361 \hyper@anchorstart{%
6362 \ltx@ifundefined{Hy@dth@currentHref}%
6363 \@currentHref\Hy@dth@currentHref
6364 }\hyper@anchorend
6365 }%
6366 \fi
6367 \unhbox\@labels
6368 \fi
6369 \if@nobreak
6370 \@nobreakfalse \clubpenalty\@M
6371 \else
6372 \clubpenalty\@clubpenalty \everypar{}%
6373 \fi
6374 }%
6375 }{}

```

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.

```

6376 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6377 \ifHy@hyperfootnotes
6378 \newcounter{Hfootnote}%

```

```

6379 \let\H@@footnotetext\@footnotetext
6380 \let\H@@footnotemark\@footnotemark
6381 \def\@xfootnotenext[#1]{%
6382   \begingroup
6383     \csname c@\@mpfn\endcsname #1\relax
6384     \unrestored@protected@xdef\@thefnmark{\thempfn}%
6385   \endgroup
6386   \ifx\@footnotetext\@mpfootnotetext
6387     \expandafter\H@@mpfootnotetext
6388   \else
6389     \expandafter\H@@footnotetext
6390   \fi
6391 }%
6392 \def\@xfootnotemark[#1]{%
6393   \begingroup
6394     \c@footnote #1\relax
6395     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6396   \endgroup
6397   \H@@footnotemark
6398 }%
6399 \let\H@@mpfootnotetext\@mpfootnotetext
6400 \long\def\@mpfootnotetext#1{%
6401   \H@@mpfootnotetext{%
6402     \ifHy@nesting
6403       \expandafter\hyper@@anchor\expandafter{%
6404         \Hy@footnote@currentHref
6405       }{#1}%
6406     \else
6407       \Hy@raisedlink{%
6408         \expandafter\hyper@@anchor\expandafter{%
6409           \Hy@footnote@currentHref
6410         }\relax}%
6411       }{#1}%
6412     \fi
6413   }%
6414 }%
6415 \long\def\@footnotetext#1{%
6416   \H@@footnotetext{%
6417     \ifHy@nesting
6418       \expandafter\hyper@@anchor\expandafter{%
6419         \Hy@footnote@currentHref
6420       }{#1}%
6421     \else
6422       \Hy@raisedlink{%
6423         \expandafter\hyper@@anchor\expandafter{%
6424           \Hy@footnote@currentHref
6425         }\relax}%
6426       }%
6427       \let\@currentHref\Hy@footnote@currentHref
6428       \let\@currentlabelname\@empty
6429       #1%
6430     \fi
6431   }%
6432 }%

```

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.

```

6433 \def\@footnotemark{%
6434 \leavevmode
6435 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6436 \stepcounter{Hfootnote}%
6437 \global\let\Hy@saved@currentHref\@currentHref
6438 \hyper@makecurrent{Hfootnote}%
6439 \global\let\Hy@footnote@currentHref\@currentHref
6440 \global\let\@currentHref\Hy@saved@currentHref
6441 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6442 \@makefnmark
6443 \hyper@linkend
6444 \ifhmode\spacefactor\@x@sf\fi
6445 \relax
6446 }%

```

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

```

6447 \@ifpackageloaded{longtable}{%
6448 \CheckCommand*{\LT@p@ftntext}[1]{%
6449 \edef\@tempa{%
6450 \the\LT@p@ftn
6451 \noexpand\footnotetext[\the\c@footnote]%
6452 }%
6453 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6454 }%
6455 \long\def\LT@p@ftntext#1{%
6456 \edef\@tempa{%
6457 \the\LT@p@ftn
6458 \begingroup
6459 \noexpand\c@footnote=\the\c@footnote\relax
6460 \noexpand\protected@xdef
6461 \noexpand\@thefnmark{\noexpand\thempfn}%
6462 \noexpand\protected@xdef\noexpand\@thefnmark{%
6463 \noexpand\thempfn
6464 }%
6465 \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6466 \expandafter{%
6467 \Hy@footnote@currentHref
6468 }%
6469 }%
6470 \global\LT@p@ftn\expandafter{%
6471 \@tempa{#1}%
6472 \endgroup
6473 }%
6474 }%
6475 \long\def\Hy@LT@footnotetext#1#2{%
6476 \H@@@footnotetext{%
6477 \ifHy@nesting
6478 \hyper@@@anchor{#1}{#2}%
6479 \else
6480 \Hy@raisedlink{%
6481 \hyper@@@anchor{#1}{\relax}%
6482 }%
6483 \def\@currentHref{#1}%

```

```

6484     \let\@currentlabelname\@empty
6485     #2%
6486     \fi
6487   }%
6488 }%
6489 }{}%

```

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

```

6490 \ifpackageloaded{fancyvrb}{%
6491   \def\V@@footnotetext{%
6492     \insert\footins\bgroup
6493     \csname reset@font\endcsname
6494     \footnotesize
6495     \interlinepenalty\interfootnotelinepenalty
6496     \splittopskip\footnotesep
6497     \splitmaxdepth\dp\strutbox
6498     \floatingpenalty \@MM
6499     \hsize\columnwidth
6500     \@parboxrestore
6501     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6502     \@makefnmark{}%
6503     \rule{\z@}{\footnotesep}%
6504     \bgroup
6505     \aftergroup\V@@@footnotetext
6506     \Hy@raisedlink{%
6507       \expandafter\hyper@@anchor\expandafter{%
6508         \Hy@footnote@currentHref
6509       }\relax}%
6510   }%
6511   \let\@currentHref\Hy@footnote@currentHref
6512   \let\@currentlabelname\@empty
6513   \ignorespaces
6514 }%
6515 }{}%

```

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

```

6516 \def\Hy@temp#1{%
6517   \begingroup
6518     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6519   \endgroup
6520   \@footnotemark
6521 }%
6522 \ifx\Hy@temp\footref
6523   \def\footref#1{%
6524     \begingroup
6525       \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6526     \endgroup
6527     \H@@@footnotemark
6528   }%
6529 \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.

```

6530 \let\HyOrg@maketitle\maketitle
6531 \def\maketitle{%
6532   \let\Hy@saved@footnotemark\@footnotemark
6533   \let\Hy@saved@footnotetext\@footnotetext
6534   \let\@footnotemark\H@@@footnotemark

```



```

6535 \let\@footnotetext\H@@footnotetext
6536 \@ifnextchar[\Hy@maketitle@optarg{% ]
6537 \HyOrg@maketitle
6538 \Hy@maketitle@end
6539 }%
6540 }%
6541 \def\Hy@maketitle@optarg[#1]{%
6542 \HyOrg@maketitle[{#1}]%
6543 \Hy@maketitle@end
6544 }%
6545 \def\Hy@maketitle@end{%
6546 \ifx\@footnotemark\H@@footnotemark
6547 \let\@footnotemark\Hy@saved@footnotemark
6548 \fi
6549 \ifx\@footnotetext\H@@footnotetext
6550 \let\@footnotetext\Hy@saved@footnotetext
6551 \fi
6552 }%

```

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

```

6553 \def\realfootnote{%
6554 \@ifnextchar[\@xfootnote{%
6555 \stepcounter{\@mpfn}%
6556 \protected@xdef\@thefnmark{\thempfn}%
6557 \H@@@footnotemark\H@@footnotetext
6558 }%
6559 }%

6560 \fi
6561 \Hy@DisableOption{hyperfootnotes}

6562 </package>
6563 <*check>
6564 \checklatex
6565 \checkcommand\def\@xfootnotenext[#1]{%
6566 \begingroup
6567 \csname c@\@mpfn\endcsname #1\relax
6568 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6569 \endgroup
6570 \@footnotetext
6571 }
6572 \checkcommand\def\@xfootnotemark[#1]{%
6573 \begingroup
6574 \c@footnote #1\relax
6575 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6576 \endgroup
6577 \@footnotemark
6578 }
6579 \checkcommand\def\@footnotemark{%
6580 \leavevmode
6581 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6582 \@makefnmark
6583 \ifhmode\spacefactor\@x@sf\fi
6584 \relax
6585 }
6586 </check>
6587 <*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.

```

6588 \def\caption{%
6589   \ifx\@capttype\@undefined
6590     \@latex@error{\noexpand\caption outside float}\@ehd
6591     \expandafter\@gobble
6592   \else
6593     \H@refstepcounter\@capttype
6594     \let\Hy@tempa\@caption
6595     \ifundefined{float@caption}{%
6596       {%
6597         \expandafter\ifx\csname @float@c@\@capttype\endcsname
6598           \float@caption
6599           \let\Hy@tempa\Hy@float@caption
6600         \fi
6601       }%
6602     \expandafter\@firstofone
6603   \fi
6604   {\@dblarg{\Hy@tempa\@capttype}}%
6605 }
6606 \long\def\@caption#1[#2]#3{%
6607   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6608     \csname iftrue\endcsname
6609     \global\let\@currentHref\hc@currentHref
6610   \else
6611     \hyper@makecurrent{\@capttype}%
6612   \fi
6613   \@ifundefined{NR@gettitle}{%
6614     \def\@currentlabelname{#2}%
6615   }{%
6616     \NR@gettitle{#2}%
6617   }%
6618   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6619     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6620   }%
6621   \begingroup
6622     \@parboxrestore
6623     \if@minipage
6624       \@setminipage
6625     \fi
6626     \normalsize
6627     \expandafter\ifx\csname if@capstart\expandafter\endcsname
6628       \csname iftrue\endcsname
6629       \global\@capstartfalse
6630       \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6631     \else
6632       \@makecaption{\csname fnum@#1\endcsname}{%
6633         \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6634       \ifHy@nesting
6635         \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6636       \else
6637         \Hy@raisedlink{%
6638           \expandafter\hyper@@anchor\expandafter{%
6639             \@currentHref

```

```

6640         }{\relax}%
6641     }%
6642     #3%
6643     \fi
6644 }%
6645 \fi
6646 \par
6647 \endgroup
6648 }

```

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.

```

6649 \let\Hy@float@caption\@caption
6650 \ifpackageloaded{float}{%
6651   \def\Hy@float@caption{%
6652     \ifx\Hy@float@currentHref\@undefined
6653       \hyper@makecurrent{\@capttype}%
6654       \global\let\Hy@float@currentHref\@currentHref
6655     \else
6656       \let\@currentHref\Hy@float@currentHref
6657     \fi
6658     \float@caption
6659   }%
6660   \let\HyOrg@float@makebox\float@makebox
6661   \renewcommand{\float@makebox}[1]{%
6662     \HyOrg@float@makebox{%
6663       #1\relax
6664       \ifx\Hy@float@currentHref\@undefined
6665       \else
6666         \expandafter\hyper@@anchor\expandafter{%
6667           \Hy@float@currentHref
6668         }{\relax}%
6669       \global\let\Hy@float@currentHref\@undefined
6670     \fi
6671   }%
6672 }%
6673 }{}

6674 \</package>
6675 \<*check>
6676 \checklatex[1999/06/01 - 2000/06/01]
6677 \checkcommand\def\caption{%
6678   \ifx\@capttype\@undefined
6679     \@latex@error{\noexpand\caption outside float}\@ehd
6680     \expandafter\@gobble
6681   \else
6682     \refstepcounter{\@capttype
6683     \expandafter\@firstofone
6684   \fi
6685   {\@dblarg{\@caption\@capttype}}}%
6686 }
6687 \checkcommand\long\def\@caption#1[#2]#3{%
6688   \par
6689   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6690     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6691   }%
6692   \begingroup
6693     \@parboxrestore

```

```

6694 \if@minipage
6695 \setminipage
6696 \fi
6697 \normalsize
6698 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6699 \endgroup
6700 }
6701 </check>
6702 <*package>

```

37 Bibliographic references

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

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

```

6703 \def\hyper@natlinkstart#1{%
6704 \Hy@backout{#1}%
6705 \hyper@linkstart{cite}{cite.#1}%
6706 \def\hyper@nat@current{#1}%
6707 }
6708 \def\hyper@natlinkend{%
6709 \hyper@linkend
6710 }
6711 \def\hyper@natlinkbreak#1#2{%
6712 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6713 }
6714 \def\hyper@natanchorstart#1{%
6715 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6716 }
6717 \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.

```

6718 \ltx@ifundefined{NAT@parse}{%
6719 \providecommand*\@extra@binfo{}%
6720 \providecommand*\@extra@b@citeb{}%
6721 \def\bibcite#1#2{%
6722 \@newl@bel{b}{#1\@extra@binfo}{%
6723 \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6724 }%
6725 }%
6726 \gdef\@extra@binfo{}%

```

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

```

6727 \let\Hy@bibcite\bibcite
6728 \begingroup
6729 \@ifundefined{bbl@cite@choice}{}{%
6730 \g@addto@macro\bbl@cite@choice{%

```

```

6731 \let\bibcite\Hy@bibcite
6732 }%
6733 }%
6734 \endgroup
\@BIBLABEL is working around a ‘feature’ of RevTeX.
6735 \providecommand*{\@BIBLABEL}{\@biblabel}%
6736 \def\@lbibitem[#1]#2{%
6737 \@skiphyperreftrue
6738 \H@item[%
6739 \ifx\Hy@raisedlink\@empty
6740 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6741 \@BIBLABEL{#1}%
6742 \hyper@anchorend
6743 \else
6744 \Hy@raisedlink{%
6745 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6746 }%
6747 \@BIBLABEL{#1}%
6748 \fi
6749 \hfill
6750 ]%
6751 \@skiphyperreffalse
6752 \if@filesw
6753 \begingroup
6754 \let\protect\noexpand
6755 \immediate\write\@auxout{%
6756 \string\bibcite{#2}{#1}%
6757 }%
6758 \endgroup
6759 \fi
6760 \ignorespaces
6761 }%

```

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

```

6762 \def\@bibitem#1{%
6763 \@skiphyperreftrue\H@item\@skiphyperreffalse
6764 \Hy@raisedlink{%
6765 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6766 }%
6767 \if@filesw
6768 \begingroup
6769 \let\protect\noexpand
6770 \immediate\write\@auxout{%
6771 \string\bibcite{#1}{\the\value{\@listctr}}%
6772 }%
6773 \endgroup
6774 \fi
6775 \ignorespaces
6776 }%
6777 }{}

6778 </package>
6779 <*check>
6780 \checklatex
6781 \checkcommand\def\@lbibitem[#1]#2{%
6782 \item[\@biblabel{#1}\hfill}%
6783 \if@filesw

```

```

6784   {%
6785     \let\protect\noexpand
6786     \immediate\write\@auxout{%
6787       \string\bibcite{#2}{#1}%
6788     }%
6789   }%
6790 \fi
6791 \ignorespaces
6792 }
6793 \checkcommand\def\@bibitem#1{%
6794   \item
6795   \if@filesw
6796     \immediate\write\@auxout{%
6797       \string\bibcite{#1}{\the\value{\@listctr}}%
6798     }%
6799   \fi
6800 \ignorespaces
6801 }
6802 \</check>
6803 \<*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.

```

6804 \@ifclassloaded{revtex}{%
6805   \Hy@Info{*** compatibility with revtex **** }%
6806   \def\revtex@checking#1#2{%
6807     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6808     \expandafter\def\csname b@#1\endcsname{#2}%
6809     \@SetMaxRnhefLabel{#1}%
6810     \expandafter\let\csname b@#1\endcsname\T@temp
6811   }%

```

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

```

6812 \@ifundefined{CITE}{\def\CITE{\@cite}}{%
6813 \providecommand*\@extra@b@citeb{}%
6814 \def\CITEX[#1]#2{%
6815   \let\@citea\@empty
6816   \leavevmode
6817   \unskip
6818   $^{}%
6819   \scriptstyle
6820   \@CITE{%
6821     \@for\@citeb:=#2\do{%
6822       \@citea
6823       \def\@citea{,\penalty\@m\ }%
6824       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6825       \if@filesw
6826         \immediate\write\@auxout{\string\citation{\@citeb}}%
6827       \fi
6828       \@ifundefined{b@\@citeb\extra@b@citeb}{%
6829         \mbox{\reset@font\bfseries ?}%
6830         \G@refundefinedtrue
6831         \@latex@warning{%
6832           Citation ‘\@citeb’ on page \thepage \space undefined%
6833         }%
6834       }{%

```

```

6835      {\csname b@\@citeb\@extra@b@citeb\endcsname}%
6836      }%
6837      }%
6838      }{#1}%
6839      }$%
6840      }%

```

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.

```

6841 \def\@citex[#1]#2{%
6842   \let\@citea\@empty
6843   \@cite{%
6844     \@for\@citeb:=#2\do{%
6845       \@citea
6846       \def\@citea{,\penalty\@m\ }%
6847       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6848       \if@filesw
6849         \immediate\write\@auxout{\string\citation{\@citeb}}%
6850       \fi
6851       \ifundefined{b@\@citeb\@extra@b@citeb}{%
6852         \mbox{\reset@font\bfseries ?}%
6853         \G@refundefinedtrue
6854         \@latex@warning{%
6855           Citation '\@citeb' on page \thepage \space undefined%
6856         }%
6857       }{%
6858         \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
6859       }%
6860     }{#1}%
6861   }%
6862 }%
6863 }{}

```

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.

```

6864 \ifpackageloaded{harvard}{%
6865   \Hy@AtBeginDocument{%
6866     \Hy@Info{*** compatibility with harvard **** }%
6867     \Hy@raiselinksfalse
6868     \def\harvardcite#1#2#3#4{%
6869       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite.#1}{#2}}%
6870       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite.#1}{#3}}%
6871       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite.#1}{#4}}%
6872       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6873     }%
6874     \def\HAR@citetoaux#1{%
6875       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6876       \ifHy@backref
6877         \ifx\@empty\@currentlabel
6878           \else
6879             \@bspack

```

```

6880     \if@filesw
6881         \protected@write\@auxout{}\{
6882             \string\@writefile{brf}\{
6883                 \string\backcite{#1}\{
6884                     {\thepage}\{\@currentlabel}\{\@currentHref}\}
6885                 }%
6886             }%
6887         }%
6888     \fi
6889     \@esphack
6890 \fi
6891 \fi
6892 }%
6893 \def\harvarditem{%
6894     \ifnextchar[{\@harvarditem}\@harvarditem[\null]}%
6895 }%
6896 \def\@harvarditem[#1]#2#3#4#5\par{%
6897     \item[]%
6898     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6899 \if@filesw
6900     \begingroup
6901     \def\protect##1{\string ##1\space}%
6902     \ifthenelse{\equal{#1}\null}}%
6903     {\def\next{{#4}{#2}{#2}{#3}}}%
6904     {\def\next{{#4}{#2}{#1}{#3}}}%
6905     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6906 \endgroup
6907 \fi
6908 \protect\hspace*{-\labelwidth}%
6909 \protect\hspace*{-\labelsep}%
6910 \ignorespaces
6911 #5%
6912 \ifHy@backref
6913     \newblock
6914     \backref{\csname br@#4\endcsname}%
6915 \fi
6916 \par
6917 }%

```

\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:

```

6918 \long\def\HAR@checkcitations#1#2#3#4{%
6919     \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#2}}%
6920     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6921     \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#3}}%
6922     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6923     \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#4}}%
6924     \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6925     \else
6926         \@tempswatrue
6927     \fi
6928 \else
6929     \@tempswatrue
6930 \fi
6931 \else
6932     \@tempswatrue

```



```

6933     \fi
6934   }%
6935 }%

6936 }{}

```

37.2 Package chicago

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

```

6937 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

6938 \def\citeN{%
6939   \def\@citesep{-1000}%
6940   \def\@cite##1##2{##1}%
6941   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6942   \@citedata@opt
6943 }%

```

`\shortciteN`

```

6944 \def\shortciteN{%
6945   \def\@citesep{-1000}%
6946   \def\@cite##1##2{##1}%
6947   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6948   \@citedata@opt
6949 }%

```

`\@citedata@opt`

```

6950 \def\@citedata@opt{%
6951   \let\@cite@opt\@empty
6952   \@ifnextchar [{%
6953     \@tempswatrue
6954     \@citedatax@opt
6955   }{%
6956     \@tempswafalse
6957     \@citedatax[]%
6958   }%
6959 }%

```

`\@citedatax@opt`

```

6960 \def\@citedatax@opt[#1]{%
6961   \def\@cite@opt{, #1}%
6962   \@citedatax[{#1}]%
6963 }%

6964 }{}

```

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.

```

6965 \def\Hy@EveryPageAnchor{%
6966   \Hy@DistillerDestFix
6967   \ifHy@pageanchor
6968     \ifHy@hypertextnames
6969       \ifHy@plainpages
6970         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}}%
6971       \else
6972         \begingroup
6973         \let\@number\@firstofone
6974         \Hy@unicodfalse
6975         \pdfstringdef\@the@H@page{\thepage}%
6976       \endgroup
6977       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}}%
6978     \fi
6979   \else
6980     \Hy@GlobalStepCount\Hy@pagecounter
6981     \def\Hy@TempPageAnchor{%
6982       \hyper@@anchor{page.\the\Hy@pagecounter}%
6983     }%
6984   \fi
6985   \vbox to 0pt{%
6986     \kern\voffset
6987     \kern\topmargin
6988     \kern-1bp\relax
6989     \hbox to 0pt{%
6990       \kern\hoffset
6991       \kern\ifodd\value{page}%
6992         \oddsidemargin
6993       \else
6994         \evensidemargin
6995       \fi
6996       \kern-1bp\relax
6997       \Hy@TempPageAnchor
6998       \hss
6999     }%
7000   \vss
7001 }%
7002 \fi
7003 }
7004 \g@addto@macro\Hy@EveryPageBoxHook{%
7005   \Hy@EveryPageAnchor
7006 }

```

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.

```

7007 \def\addcontentsline#1#2#3{% toc extension, type, tag
7008   \begingroup
7009   \let\label\@gobble
7010   \ifx\@currentHref\@empty
7011     \Hy@Warning{%
7012       No destination for bookmark of \string\addcontentsline,%
7013       \MessageBreak destination is added%

```

```

7014 }%
7015 \phantomsection
7016 \fi
7017 \expandafter\ifx\csname toplevel@#2\endcsname\relax
7018 \begingroup
7019 \def\Hy@tempa{#1}%
7020 \ifx\Hy@tempa\Hy@bookmarkstype
7021 \Hy@WarningNoLine{%
7022 bookmark level for unknown #2 defaults to 0%
7023 }%
7024 \else
7025 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7026 \fi
7027 \endgroup
7028 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7029 \fi
7030 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
7031 \Hy@writebookmark{\csname the#2\endcsname}%
7032 {#3}%
7033 {\@currentHref}%
7034 {\Hy@toclevel}%
7035 {#1}%
7036 \ifHy@verbose
7037 \begingroup
7038 \def\Hy@tempa{#3}%
7039 \@onelevel@sanitize\Hy@tempa
7040 \let\temp@online\on@line
7041 \let\on@line\@empty
7042 \Hy@Info{%
7043 bookmark\temp@online:\MessageBreak
7044 thecounter {\csname the#2\endcsname}\MessageBreak
7045 text {\Hy@tempa}\MessageBreak
7046 reference {\@currentHref}\MessageBreak
7047 toplevel {\Hy@toclevel}\MessageBreak
7048 type {#1}%
7049 }%
7050 \endgroup
7051 \fi
7052 \addtocontents{#1}{%
7053 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7054 }%
7055 \endgroup
7056 }
7057 \def\contentsline#1#2#3#4{%
7058 \ifx\#4\%
7059 \csname l@#1\endcsname{#2}{#3}%
7060 \else
7061 \ifcase\Hy@linktoc % none
7062 \csname l@#1\endcsname{#2}{#3}%
7063 \or % section
7064 \csname l@#1\endcsname{%
7065 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7066 }{#3}%
7067 \or % page
7068 \csname l@#1\endcsname{#2}{#3}%
7069 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7070 }%

```

```

7071 \else % all
7072 \csname l@#1\endcsname{%
7073 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7074 }{%
7075 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7076 }%
7077 \fi
7078 \fi
7079 }

7080 </package>
7081 <*check>
7082 \checklatex
7083 \checkcommand\def\addcontentsline#1#2#3{%
7084 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7085 }
7086 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7087 </check>
7088 <*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.

```

7089 \let\H@definecounter\@definecounter
7090 \def\@definecounter#1{%
7091 \H@definecounter{#1}%
7092 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7093 }

```

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.

```

7094 \let\H@newctr\@newctr
7095 \def\@newctr#1[#2]{%
7096 \H@newctr#1[{#2}]%
7097 \expandafter\def\csname theH#1\endcsname{%
7098 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
7099 }%
7100 }

```

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.

```

7101 \ifpackageloaded{amsmath}{%
7102 \def\Hy@make@anchor{%
7103 \Hy@MakeCurrentHrefAuto{AMS}%
7104 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7105 }%
7106 \def\Hy@make@df@tag@@#1{%
7107 \gdef\df@tag{%

```

```

7108 \maketag@@@{\Hy@make@anchor#1}%
7109 \def\@currentlabel{#1}%
7110 }%
7111 }%
7112 \def\Hy@make@df@tag@@@#1{%
7113 \gdef\df@tag{%
7114 \tagform@{\Hy@make@anchor#1}%
7115 \toks@\xp{\p@equation{#1}}%
7116 \edef\@currentlabel{\the\toks@}%
7117 }%
7118 }%
7119 \let\HyOrg@make@df@tag@@\make@df@tag@@
7120 \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
7121 \let\make@df@tag@@\Hy@make@df@tag@@
7122 \let\make@df@tag@@@ \Hy@make@df@tag@@@
7123 }{}

```

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

```

7124 \ifpackagewith{hyperref}{pdfTeX}{%
7125 \let\H@seteqlabel\@seteqlabel
7126 \def\@seteqlabel#1{%
7127 \H@seteqlabel{#1}%
7128 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7129 \Hy@raisedlink{%
7130 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7131 }%
7132 }%
7133 }{}

```

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.

```

7134 \let\HyOrg@addtoreset\@addtoreset
7135 \def\@addtoreset#1#2{%
7136 \HyOrg@addtoreset{#1}{#2}%
7137 \expandafter\xdef\csname theH#1\endcsname{%
7138 \expandafter\noexpand
7139 \csname the\@ifundefined{theH#2}{H#2}\endcsname
7140 .\noexpand\the\noexpand\value{#1}%
7141 }%
7142 }

```

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

```

7143 </package>

```

```

7144 <*check>
7145 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7146 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7147   \ifundefined{c@#2}{\@nocounterr{#2}}{%
7148     \ifundefined{c@#3}{\@nocnterr{#3}}{%
7149       \addtoreset{#2}{#3}%
7150       \exp\xdef\csname the#2\endcsname{%
7151         \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7152       }%
7153     }%
7154   }%
7155 }%
7156 </check>
7157 <*package>
7158 \ifpackageloaded{amsmath}{%
7159   \ifpackagelater{amsmath}{1999/12/14}{%
7160     \renewcommand*{\numberwithin}[3][\arabic]{%
7161       \ifundefined{c@#2}{\@nocounterr{#2}}{%
7162         \ifundefined{c@#3}{\@nocnterr{#3}}{%
7163           \HyOrg@addtoreset{#2}{#3}%
7164           \exp\xdef\csname the#2\endcsname{%
7165             \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7166           }%
7167           \exp\xdef\csname theH#2\endcsname{%
7168             \exp\@nx
7169             \csname the\ifundefined{theH#3}{H#3}\endcsname
7170             .\@nx#1{#2}%
7171           }%
7172         }%
7173       }%
7174     }%
7175   }%
7176   \Hy@WarningNoLine{%
7177     \string\numberwithin\space of package ‘amsmath’ %
7178     only fixed\MessageBreak
7179     for version 2000/06/06 v2.12 or newer%
7180   }%
7181 }%
7182 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7183 \ifHy@figures
7184 \let\Hy@Gin@setfile\Gin@setfile
7185 \def\Gin@setfile#1#2#3{%
7186   \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7187 }%
7188 \fi
7189 \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.

```

7190 \ifHy@hyperindex
7191   \def\HyInd@ParenLeft{()%
7192   \def\HyInd@ParenRight{)%
7193   \def\hyperindexformat#1#2{%
7194     \let\HyOrg@hyperpage\hyperpage
7195     \let\hyperpage\@firstofone
7196     #1{\HyOrg@hyperpage{#2}}%
7197     \let\hyperpage\HyOrg@hyperpage
7198   }%
7199   \Hy@nextfalse
7200   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7201   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7202   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7203   \begingroup
7204     \lccode'\|=\expandafter'\HyInd@EncapChar\relax
7205     \lccode'\|/'\|'\relax
7206   \lowercase{\endgroup
7207   \ifHy@next
7208     \let\HyInd@org@wrindex\@wrindex
7209     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||}%
7210     \def\HyInd@@wrindex#1#2|#3|#4\|{%
7211       \ifx\|#3\|
7212         \HyInd@org@wrindex{#1}{#2|hyperpage}%
7213       \else
7214         \HyInd@@@wrindex{#1}{#2}#3\|
7215       \fi
7216     }%
7217     \def\HyInd@@@wrindex#1#2#3#4\|{%
7218       \def\Hy@temp@A{#3}%
7219       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7220         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7221       \relax
7222       \HyInd@org@wrindex{#1}{%
7223         #2|hyperindexformat{/#3#4}%
7224       }%
7225     \else
7226       \ifx\|#4\|
7227         \ifx\Hy@temp@A\HyInd@ParenRight
7228           \HyInd@org@wrindex{#1}{#2|#3}%
7229         \else
7230           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7231         \fi
7232       \else
7233         \HyInd@org@wrindex{#1}{%
7234           #2|#3hyperindexformat{/#4}%
7235         }%
7236       \fi
7237     \fi
7238   }%

```

```

7239 \else
7240 \def\@wrindex#1{\@@wrindex#1||\}%
7241 \def\@@wrindex#1|#2|#3\{\{%
7242 \if@filesw
7243 \ifx\|#2\%\%
7244 \protected@write\@indexfile{}\{%
7245 \string\indexentry{#1|hyperpage}\{thepage}%
7246 }\%
7247 \else
7248 \HyInd@@@wrindex{#1}#2\%\%
7249 \fi
7250 \fi
7251 \endgroup
7252 \@esphack
7253 }\%
7254 \def\HyInd@@@wrindex#1#2#3\{\{%
7255 \def\Hy@temp@A{#2}%
7256 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7257 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7258 \relax
7259 \protected@write\@indexfile{}\{%
7260 \string\indexentry{%
7261 #1|hyperindexformat{/#2#3}%
7262 }\{thepage}%
7263 }\%
7264 \else
7265 \ifx\|#3\%\%
7266 \ifx\Hy@temp@A\HyInd@ParenRight
7267 \protected@write\@indexfile{}\{%
7268 \string\indexentry{#1|#2}\{thepage}%
7269 }\%
7270 \else
7271 \protected@write\@indexfile{}\{%
7272 \string\indexentry{#1|#2hyperpage}\{thepage}%
7273 }\%
7274 \fi
7275 \else
7276 \protected@write\@indexfile{}\{%
7277 \string\indexentry{%
7278 #1|#2hyperindexformat{/#3}%
7279 }\{thepage}%
7280 }\%
7281 \fi
7282 \fi
7283 }\%
7284 \fi
7285 }\%
7286 \fi
7287 \Hy@DisableOption{hyperindex}
7288 \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.

```
7289 \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.


```

7290 \def\hyperpage#1{%
7291   \HyInd@hyperpage#1\nohyperpage{}\@nil
7292 }
7293 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7294   \HyInd@@hyperpage{#1}%
7295   #2%
7296   \def\Hy@temp{#3}%
7297   \ifx\Hy@temp\@empty
7298   \else
7299     \Hy@ReturnAfterFi{%
7300       \HyInd@hyperpage#3\@nil
7301     }%
7302   \fi
7303 }
7304 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}
7305 \def\@hyperpage#1--#2--#3\{%
7306   \ifx\#2\%
7307     \@commahyperpage{#1}%
7308   \else
7309     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7310   \fi
7311 }
7312 \def\@commahyperpage#1{\@commahyperpage#1, \}
7313 \def\@commahyperpage#1, #2,#3\{%
7314   \ifx\#2\%
7315     \HyInd@pagelink{#1}%
7316   \else
7317     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7318   \fi
7319 }

```

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

```

7320 \def\HyInd@pagelink#1{%
7321   \begingroup
7322   \toks@={}%
7323   \HyInd@removespaces#1 \@nil
7324   \endgroup
7325 }
7326 \def\HyInd@removespaces#1 #2\@nil{%
7327   \toks@=\expandafter{\the\toks@#1}%
7328   \ifx\#2\%
7329     \edef\x{\the\toks@}%
7330     \ifx\x\@empty
7331     \else
7332       \hyperlink{page.\the\toks@}{\the\toks@}%
7333     \fi
7334   \else
7335     \Hy@ReturnAfterFi{%
7336       \HyInd@removespaces#2\@nil
7337     }%
7338   \fi
7339 }

```

44 Compatibility with foiltex

```

7340 \@ifclassloaded{foils}{%

```

```

7341 \providecommand*\ext@table{lot}%
7342 \providecommand*\ext@figure{lof}%
7343 }{}

```

45 Compatibility with seminar slide package

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

```

7344 \ifclassloaded{seminar}{%
7345   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7346 }{%
7347   \Hy@seminarslidesfalse
7348 }
7349 \ifpackageloaded{slidesec}{%
7350   \newcommand\theHslidesection {\arabic{slidesection}}%
7351   \newcommand\theHslidesubsection{%
7352     \theHslidesection.\arabic{slidesubsection}%
7353   }%
7354   \def\slide@heading[#1]#2{%
7355     \H@refstepcounter{slidesection}%
7356     \@addtoreset{slidesubsection}{slidesection}%
7357     \addtocontents{los}{%
7358       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7359       {\@SCTR}{slideheading.\theslidesection}%
7360     }%
7361     \def\Hy@tempa{#2}%
7362     \ifx\Hy@tempa\@empty
7363     \else
7364       {%
7365         \edef\@currentlabel{%
7366           \csname p@slidesection\endcsname\theslidesection
7367         }%
7368         \makeslideheading{#2}%
7369       }%
7370     \fi
7371     \gdef\theslideheading{#1}%
7372     \gdef\theslidesubheading{}%
7373     \ifHy@bookmarksnumbered
7374       \def\Hy@slidetitle{\theslidesection\space #1}%
7375     \else
7376       \def\Hy@slidetitle{#1}%
7377     \fi
7378     \ifHy@hypertextnames
7379       \ifHy@naturalnames
7380         \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7381         \Hy@writebookmark
7382           {\theslidesection}%
7383           {\Hy@slidetitle}%
7384           {slideheading.\theslidesection}%
7385           {1}%
7386           {toc}%
7387       \else
7388         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7389         \Hy@writebookmark
7390           {\theslidesection}%
7391           {\Hy@slidetitle}%
7392           {slideheading.\theHslidesection}%

```

```

7393         {1}%
7394         {toc}%
7395     \fi
7396 \else
7397     \Hy@GlobalStepCount\Hy@linkcounter
7398     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7399     \Hy@writebookmark
7400         {\theslidesubsection}%
7401         {\Hy@slidetitle}%
7402         {slideheading.\the\Hy@linkcounter}%
7403         {1}%
7404         {toc}%
7405 \fi
7406 }%
7407 \def\slide@subheading[#1]#2{%
7408     \H@refstepcounter{slidesubsection}%
7409     \addtocontents{los}{%
7410         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7411         {\@SCTR}{slideheading.\theslidesubsection}%
7412     }%
7413 \def\Hy@tempa{#2}%
7414 \ifx\Hy@tempa\@empty
7415 \else
7416     {%
7417         \edef\@currentlabel{%
7418             \csname p@slidesubsection\endcsname\theslidesubsection
7419         }%
7420         \makeslidesubheading{#2}%
7421     }%
7422 \fi
7423 \gdef\theslidesubheading{#1}%
7424 \ifHy@bookmarksnumbered
7425     \def\Hy@slidetitle{\theslidesubsection\space #1}%
7426 \else
7427     \def\Hy@slidetitle{#1}%
7428 \fi
7429 \ifHy@hypertextnames
7430     \ifHy@naturalnames
7431         \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7432         \Hy@writebookmark
7433             {\theslidesubsection}%
7434             {\Hy@slidetitle}%
7435             {slideheading.\theslidesubsection}%
7436             {2}%
7437             {toc}%
7438     \else
7439         \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7440         \Hy@writebookmark
7441             {\theslidesubsection}%
7442             {\Hy@slidetitle}%
7443             {slideheading.\theHslidesubsection}%
7444             {2}%
7445             {toc}%
7446     \fi
7447 \else
7448     \Hy@GlobalStepCount\Hy@linkcounter
7449     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%

```

```

7450 \Hy@writebookmark
7451 {\theslidesubsection}%
7452 {\Hy@slidetitle}%
7453 {slideheading.\the\Hy@linkcounter}%
7454 {1}%
7455 {toc}%
7456 \fi
7457 }%
7458 \providecommand*{\listslidenam}{List of Slides}%
7459 \def\listofslides{%
7460 \section*{%
7461 \listslidenam
7462 \@mkboth{%
7463 \expandafter\MakeUppercase\listslidenam
7464 }{%
7465 \expandafter\MakeUppercase\listslidenam
7466 }%
7467 }%
7468 \def\l@slide##1##2##3##4{%
7469 \slide@undottedcline{%
7470 \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
7471 }{%
7472 }%
7473 \let\l@subslide\l@slide
7474 \@startlos
7475 }%
7476 \def\slide@contents{%
7477 \def\l@slide##1##2##3##4{%
7478 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7479 }%
7480 \let\l@subslide\@gobblefour
7481 \@startlos
7482 }%
7483 \def\Slide@contents{%
7484 \def\l@slide##1##2##3##4{%
7485 \ifcase\lslide@flag
7486 \message{##1 ** \the\c@slidesection}%
7487 \ifnum##1>\c@slidesection
7488 \def\lslide@flag{1}%
7489 {%
7490 \large
7491 \slide@ccline{%
7492 \slidenumberline{$\Rightarrow\bullet$}%
7493 {\hyperlink{##4}{##2}}}%
7494 }{##3}%
7495 }%
7496 \else
7497 {%
7498 \large
7499 \slide@ccline{%
7500 \slidenumberline{$\surd\;\bullet$}%
7501 {\hyperlink{##4}{##2}}}%
7502 }{##3}%
7503 }%
7504 \fi
7505 \or
7506 \def\lslide@flag{2}%

```

```

7507      {%
7508        \large
7509        \slide@cline{%
7510          \slidenumberline{$\bullet$}%
7511          {\hyperlink{##4}{##2}}%
7512        }{##3}%
7513      }%
7514    \or
7515    {%
7516      \large
7517      \slide@cline{%
7518        \slidenumberline{$\bullet$}%
7519        {\hyperlink{##4}{##2}}%
7520      }{##3}%
7521    }%
7522    \fi
7523  }%
7524  \def\l@subslide##1##2##3##4{%
7525    \ifnum\lslide@flag=1 %
7526      \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7527    \fi
7528  }%
7529  \def\lslide@flag{0}%
7530  \@startlos
7531  }%
7532 }{}

```

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.)

```

7533 \ifHy@texht
7534   \expandafter\endinput
7535 \fi
7536 \let\real@setref\@setref
7537 \def\@setref#1#2#3{% csname, extract group, refname
7538   \ifx#1\relax
7539     \protect\G@refundefinedtrue
7540     \nfss@text{\reset@font\bfseries ??}%
7541     \@latex@warning{%
7542       Reference ‘#3’ on page \thepage \space undefined%
7543     }%
7544   \else
7545     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7546   \fi
7547 }

```

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

```

7548 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7549   \begingroup
7550   \toks0={\hyper@@link{#5}{#4}}%
7551   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7552   \edef\x{\endgroup
7553     \the\toks0 {\the\toks1 }%
7554   }%
7555   \x
7556 }
7557 \def\@pagesetref#1#2#3{% csname, extract macro, ref

```

```

7558 \ifx#1\relax
7559 \protect\G@refundefinedtrue
7560 \nfss@text{\reset@font\bfseries ??}%
7561 \@latex@warning{%
7562   Reference '#3' on page \thepage \space undefined%
7563 }%
7564 \else
7565 \protect\hyper@@link
7566   {\expandafter\@fifthoffive#1}%
7567   {page.\expandafter\@secondoffive#1}%
7568   {\expandafter\@secondoffive#1}%
7569 \fi
7570 }

7571 </package>
7572 <*check>
7573 \checklatex
7574 \checkcommand\def\@setref#1#2#3{%
7575   \ifx#1\relax
7576     \protect\G@refundefinedtrue
7577     \nfss@text{\reset@font\bfseries ??}%
7578     \@latex@warning{%
7579       Reference '#3' on page \thepage\space undefined%
7580     }%
7581   \else
7582     \expandafter#2#1\null
7583   \fi
7584 }
7585 </check>
7586 <*package>

```

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

```

7587 \def\HyRef@StarSetRef#1{%
7588   \begingroup
7589   \Hy@safe@activetrue
7590   \edef\x{#1}%
7591   \@onelevel@sanitize\x
7592   \edef\x{\endgroup
7593     \noexpand\HyRef@@StarSetRef
7594     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7595   }%
7596   \x
7597 }

7598 \def\HyRef@@StarSetRef#1#2#3{%
7599   \ifx#1\@undefined
7600     \let#1\relax
7601   \fi
7602   \real@setref#1#3{#2}%
7603 }

7604 \def\@refstar#1{%
7605   \HyRef@StarSetRef{#1}\@firstoffive
7606 }

7607 \def\@pagerefstar#1{%
7608   \HyRef@StarSetRef{#1}\@secondoffive
7609 }

7610 \def\@namerefstar#1{%
7611   \HyRef@StarSetRef{#1}\@thirdoffive

```

```

7612 }
7613 \Hy@AtBeginDocument{%
7614   \ifpackageloaded{varioref}{%
7615     \def\@Refstar#1{%
7616       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7617     }%
7618     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7619       \MakeUppercase#1%
7620     }%
7621     \DeclareRobustCommand*\@Ref{%
7622       \ifstar\@Refstar\HyRef@Ref
7623     }%
7624     \def\HyRef@Ref#1{%
7625       \hyperref[{#1}]{\Ref*{#1}}%
7626     }%
7627     \def\Vr@f#1{%
7628       \leavevmode\unskip\vref@space
7629       \hyperref[{#1}]{%
7630         \Ref*{#1}%
7631         \let\vref@space\nobreakspace
7632         \@vpageref[\unskip]{#1}%
7633       }%
7634     }%
7635     \def\vr@f#1{%
7636       \leavevmode\unskip\vref@space
7637       \begingroup
7638       \let\T@pageref\@pagerefstar
7639       \hyperref[{#1}]{%
7640         \ref*{#1}%
7641         \vpageref[\unskip]{#1}%
7642       }%
7643     \endgroup
7644   }%
7645 }{}%
7646 }
7647 \DeclareRobustCommand*\@autopageref{%
7648   \ifstar{%
7649     \HyRef@autopagerefname\pageref*%
7650   }\HyRef@autopageref
7651 }
7652 \def\HyRef@autopageref#1{%
7653   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
7654 }
7655 \def\HyRef@autopagerefname{%
7656   \ltx@ifundefined{pageautorefname}{%
7657     \ltx@ifundefined{pagename}{%
7658       \Hy@Warning{No autoref name for 'page'}%
7659     }{%
7660       \pagename\nobreakspace
7661     }%
7662   }{%
7663     \pageautorefname\nobreakspace
7664   }%
7665 }
7666 \DeclareRobustCommand*\@autoref{%
7667   \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@link}%
7668 }

```

```

7669 \def\HyRef@autoref#1#2{%
7670   \begingroup
7671   \Hy@safe@activetrue
7672   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7673 \endgroup
7674 }
7675 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7676   \HyRef@ShowKeysRef{#2}%
7677   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7678   \edef\HyRef@thisref{%
7679     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7680   }%
7681   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7682   \Hy@safe@activesfalse
7683   #3{%
7684     \expandafter\@ffthoffive#1\@empty\@empty\@empty
7685   }{%
7686     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7687   }{%
7688     \HyRef@currentHtag
7689     \expandafter\@firstoffive#1\@empty\@empty\@empty
7690     \null
7691   }%
7692 \else
7693   \protect\G@refundefinedtrue
7694   \nfss@text{\reset@font\bfseries ??}%
7695   \@latex@warning{%
7696     Reference ‘#2’ on page \thepage\space undefined%
7697   }%
7698 \fi
7699 }
7700 \def\HyRef@testreftype#1.#2\.%
7701 \ltx@ifundefined{#1autorefname}{%
7702   \ltx@ifundefined{#1name}{%
7703     \HyRef@StripStar#1\*\@nil{#1}%
7704     \ltx@ifundefined{\HyRef@name autorefname}{%
7705       \ltx@ifundefined{\HyRef@name name}{%
7706         \def\HyRef@currentHtag{}%
7707         \Hy@Warning{No autoref name for ‘#1’}%
7708       }{%
7709         \edef\HyRef@currentHtag{%
7710           \expandafter\noexpand\csname\HyRef@name name\endcsname
7711           \noexpand~%
7712         }%
7713       }%
7714     }{%
7715       \edef\HyRef@currentHtag{%
7716         \expandafter\noexpand
7717         \csname\HyRef@name autorefname\endcsname
7718         \noexpand~%
7719       }%
7720     }%
7721   }{%
7722     \edef\HyRef@currentHtag{%
7723       \expandafter\noexpand\csname#1name\endcsname
7724       \noexpand~%
7725     }%

```



```

7726 }%
7727 {%
7728 \edef\HyRef@currentHtag{%
7729 \expandafter\noexpand\csname#1autorefname\endcsname
7730 \noexpand~%
7731 }%
7732 }%
7733 }
7734 \def\HyRef@StripStar#1*\#2\@nil#3{%
7735 \def\HyRef@name{#2}%
7736 \ifx\HyRef@name\HyRef@CaseStar
7737 \def\HyRef@name{#1}%
7738 \else
7739 \def\HyRef@name{#3}%
7740 \fi
7741 }
7742 \def\HyRef@CaseStar{*\\}
7743 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7744 \let\HyRef@ShowKeysRef\@gobble
7745 \def\HyRef@ShowKeysInit{%
7746 \begingroup\expandafter\expandafter\expandafter\endgroup
7747 \expandafter\ifx\csname SK@@label\endcsname\relax
7748 \else
7749 \ifx\SK@ref\@empty
7750 \else
7751 \def\HyRef@ShowKeysRef{%
7752 \SK@\SK@@ref
7753 }%
7754 \fi
7755 \fi
7756 }
7757 \@ifpackageloaded{showkeys}{%
7758 \HyRef@ShowKeysInit
7759 }{%
7760 \Hy@AtBeginDocument{%
7761 \@ifpackageloaded{showkeys}{%
7762 \HyRef@ShowKeysInit
7763 }{}%
7764 }%
7765 }

```

Defaults for the names that \autoref uses.

```

7766 \providecommand*\AMSautorefname{\equationautorefname}
7767 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7768 \providecommand*\Itemautorefname{\itemautorefname}
7769 \providecommand*\itemautorefname{item}
7770 \providecommand*\equationautorefname{Equation}
7771 \providecommand*\footnoteautorefname{footnote}
7772 \providecommand*\itemautorefname{item}
7773 \providecommand*\figureautorefname{Figure}
7774 \providecommand*\tableautorefname{Table}
7775 \providecommand*\partautorefname{Part}
7776 \providecommand*\appendixautorefname{Appendix}
7777 \providecommand*\chapterautorefname{chapter}

```

```

7778 \providecommand*\sectionautorefname{section}
7779 \providecommand*\subsectionautorefname{subsection}
7780 \providecommand*\subsubsectionautorefname{subsubsection}
7781 \providecommand*\paragraphautorefname{paragraph}
7782 \providecommand*\subparagraphautorefname{subparagraph}
7783 \providecommand*\FancyVerbLineautorefname{line}
7784 \providecommand*\theoremautorefname{Theorem}
7785 \providecommand*\pageautorefname{page}
7786 </package>

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

7787 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7788 \RequirePackage{pdfTeXcmds}[2009/04/10]
7789 \begingroup\expandafter\expandafter\expandafter\endgroup
7790 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7791 \begingroup
7792 \catcode'\=0 %
7793 \@makeother\%
7794 |@firstofone{|endgroup
7795 |def|Hy@pstringdef#1#2{%
7796 |begingroup
7797 |edef~{|string~}%
7798 |xdef|Hy@gtemp{#2}%
7799 |endgroup
7800 |let#1|Hy@gtemp
7801 |@onelevel@sanitize#1%
7802 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7803 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7804 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7805 }%
7806 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7807 #1%
7808 |ifx|\#2\|%%
7809 |else
7810 \\\%
7811 |Hy@ReturnAfterFi{%
7812 |Hy@ExchangeBackslash#2|@nil
7813 }%
7814 |fi
7815 }%
7816 }%
7817 \def|Hy@ExchangeLeftParenthesis#1(#2\|@nil{%
7818 #1%
7819 \ifx\#2\|%%
7820 \else
7821 \@backslashchar(%

```

```

7822 \Hy@ReturnAfterFi{%
7823 \Hy@ExchangeLeftParenthesis#2\@nil
7824 }%
7825 \fi
7826 }%
7827 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7828 #1%
7829 \ifx\#2\%
7830 \else
7831 \@backslashchar)%
7832 \Hy@ReturnAfterFi{%
7833 \Hy@ExchangeRightParenthesis#2\@nil
7834 }%
7835 \fi
7836 }%
7837 \else
7838 \def\Hy@pstringdef#1#2{%
7839 \begingroup
7840 \edef~{\string~}%
7841 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7842 \endgroup
7843 \let#1\Hy@gtemp
7844 }%
7845 \fi
7846 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7847 <*pdfTeX>
7848 \providecommand*{\XR@ext}{pdf}
7849 \Hy@setbreaklinks{true}

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option `pdfversion`.

- pdfT_EX 1.10a, 2003-01-16: `\pdfoptionpdfminorversion`
- pdfT_EX 1.30, 2005-08-081: `\pdfminorversion`

```

7850 \let\Hy@pdfminorversion\relax
7851 \begingroup\expandafter\expandafter\expandafter\endgroup
7852 \expandafter\ifx\cname pdfminorversion\endcsname\relax
7853 \begingroup\expandafter\expandafter\expandafter\endgroup
7854 \expandafter\ifx\cname pdfoptionpdfminorversion\endcsname\relax
7855 \else
7856 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7857 \fi
7858 \else
7859 \def\Hy@pdfminorversion{\pdfminorversion}%
7860 \fi
7861 \ifundefined{Hy@pdfminorversion}{%
7862 \PackageInfo{hyperref}{%
7863 PDF version is not set, because pdfTeX is too old (<1.10a)%
7864 }%
7865 }{%
7866 \ifHy@ocgcolorlinks
7867 \ifnum\Hy@pdfminorversion<5 %

```

```

7868     \setkeys{Hyp}{pdfversion=1.5}%
7869     \fi
7870 \fi
7871 \ifHy@setpdfversion
7872   \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7873   \else
7874     \Hy@pdfminorversion=\Hy@pdfversion\relax
7875   \fi
7876   \PackageInfo{hyperref}{%
7877     \expandafter\string\Hy@pdfminorversion
7878     :=\number\Hy@pdfversion\space
7879   }%
7880 \fi
7881 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7882 }
7883 \Hy@DisableOption{pdfversion}%

7884 \ifHy@ocgcolorlinks
7885   \immediate\pdfobj{%
7886     <<%
7887     /Type/OCG%
7888     /Name(View)%
7889     /Usage<<%
7890     /Print<<%
7891     /PrintState/OFF%
7892     >>%
7893     /View<<%
7894     /ViewState/ON%
7895     >>%
7896     >>%
7897     >>%
7898   }%
7899   \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7900   \immediate\pdfobj{%
7901     <<%
7902     /Type/OCG%
7903     /Name(Print)%
7904     /Usage<<%
7905     /Print<<%
7906     /PrintState/ON%
7907     >>%
7908     /View<<%
7909     /ViewState/OFF%
7910     >>%
7911     >>%
7912     >>%
7913   }%
7914   \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7915   \immediate\pdfobj{%
7916     [%
7917       \OBJ@OCG@view\space\OBJ@OCG@print
7918     ]%
7919   }%
7920   \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7921   \pdfcatalog{%
7922     /OCProperties<<%
7923     /OCGs \OBJ@OCGs
7924     /D<<%

```

```

7925      /OFF[\OBJ@OCG@print]%
7926      /AS[%
7927      <<%
7928          /Event/View%
7929          /OCGs \OBJ@OCGs
7930          /Category[/View]%
7931      >>%
7932      <<%
7933          /Event/Print%
7934          /OCGs \OBJ@OCGs
7935          /Category[/Print]%
7936      >>%
7937      <<%
7938          /Event/Export%
7939          /OCGs \OBJ@OCGs
7940          /Category[/Print]%
7941      >>%
7942      ]%
7943      >>%
7944      >>%
7945      }%
7946      \begingroup
7947      \edef\x{\endgroup
7948      \pdfpageresources{%
7949      /Properties<<%
7950      /OCView \OBJ@OCG@view
7951      /OCPrint \OBJ@OCG@print
7952      >>%
7953      }%
7954      }%
7955      \x
7956      \Hy@AtBeginDocument{%
7957      \def\Hy@colorlink#1{%
7958      \begingroup
7959      \ifHy@ocgcolorlinks
7960      \def\Hy@ocgcolor{#1}%
7961      \setbox0=\color@hbox
7962      \else
7963      \HyColor@UseColor#1%
7964      \fi
7965      }%
7966      \def\Hy@endcolorlink{%
7967      \ifHy@ocgcolorlinks
7968      \color@endbox
7969      \mbox{%
7970      \pdfliteral page{/OC/OCPrint BDC}%
7971      \rlap{\copy0}%
7972      \pdfliteral page{EMC/OC/OCView BDC}%
7973      \begingroup
7974      \expandafter\HyColor@UseColor\Hy@ocgcolor
7975      \box0 %
7976      \endgroup
7977      \pdfliteral page{EMC}%
7978      }%
7979      \fi
7980      \endgroup
7981      }%

```

```

7982 }%
7983 \else
7984 \Hy@DisableOption{ocgcolorlinks}%
7985 \fi

```

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

```

7986 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7987 \ifx\pdfstartlink\@undefined% less than version 14
7988 \let\pdfstartlink\pdfannotlink
7989 \let\pdfinkmargin\@tempdima
7990 \let\pdfxform\pdfform
7991 \let\pdflastxform\pdfastform
7992 \let\pdfrefxform\pdfrefform
7993 \else
7994 \pdfinkmargin1pt %
7995 \fi

```

First set up the default linking

```

7996 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

7997 \def\new@pdfink#1{%
7998 \Hy@SaveLastskip
7999 \Hy@VerboseAnchor{#1}%
8000 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8001 \Hy@DestName\Hy@pstringDest\@pdfview
8002 \Hy@RestoreLastskip
8003 }
8004 \let\pdf@endanchor\@empty

```

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

```

8005 \def\Hy@DestName#1#2{%
8006 \pdfdest name{#1}#2\relax
8007 }

```

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.

```

8008 \providecommand*\@pdfborder{0 0 1}
8009 \providecommand*\@pdfborderstyle{}
8010 \def\Hy@undefinedname{UNDEFINED}
8011 \def\find@pdfink#1#2{%
8012 \leavevmode
8013 \protected@edef\Hy@testname{#2}%
8014 \ifx\Hy@testname\@empty
8015 \Hy@Warning{%
8016 Empty destination name,\MessageBreak
8017 using '\Hy@undefinedname'%
8018 }%
8019 \let\Hy@testname\Hy@undefinedname
8020 \else
8021 \Hy@pstringdef\Hy@testname{%
8022 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8023 }%
8024 \fi
8025 \Hy@StartlinkName{%

```

```

8026 \ifHy@pdfa /F 4\fi
8027 \Hy@setpdfborder
8028 \ifx\@pdfhighlight\@empty
8029 \else
8030 /H\@pdfhighlight
8031 \fi
8032 \ifx\CurrentBorderColor\relax
8033 \else
8034 /C[\CurrentBorderColor]%
8035 \fi
8036 }\Hy@testname
8037 \expandafter\Hy@colorlink\csname @#1color\endcsname
8038 }
8039 \def\Hy@StartlinkName#1#2{%
8040 \pdfstartlink attr{#1}goto name{#2}\relax
8041 }
8042 \def\close@pdflink{%
8043 \Hy@endcolorlink
8044 \Hy@VerboseLinkStop
8045 \pdfendlink
8046 }
8047 \def\hyper@anchor#1{%
8048 \new@pdfink{#1}\anchor@spot\pdf@endanchor
8049 }
8050 \def\hyper@anchorstart#1{%
8051 \new@pdfink{#1}%
8052 \Hy@activeanchortrue
8053 }
8054 \def\hyper@anchorend{%
8055 \pdf@endanchor
8056 \Hy@activeanchorfalse
8057 }
8058 \def\hyper@linkstart#1#2{%
8059 \Hy@VerboseLinkStart{#1}{#2}%
8060 \ltx@ifundefined{@#1bordercolor}{%
8061 \let\CurrentBorderColor\relax
8062 }{%
8063 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8064 }%
8065 \find@pdfink{#1}{#2}%
8066 }
8067 \def\hyper@linkend{\close@pdfink}
8068 \def\hyper@link#1#2#3{%
8069 \Hy@VerboseLinkStart{#1}{#2}%
8070 \ltx@ifundefined{@#1bordercolor}{%
8071 \let\CurrentBorderColor\relax
8072 }{%
8073 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8074 }%
8075 \find@pdfink{#1}{#2}#3%
8076 \close@pdfink
8077 }
8078 \let\CurrentBorderColor\@linkbordercolor
8079 \def\hyper@linkurl#1#2{%
8080 \begingroup
8081 \Hy@pstringdef\Hy@pstringURI{#2}%
8082 \hyper@chars

```

```

8083 \leavevmode
8084 \pdfstartlink
8085   attr{%
8086     \Hy@setpdfborder
8087     \ifx\@pdfhighlight\@empty
8088     \else
8089       /H\@pdfhighlight
8090     \fi
8091     \ifx\@urlbordercolor\relax
8092     \else
8093       /C[\@urlbordercolor]%
8094     \fi
8095   }%
8096   user{%
8097     /Subtype/Link%
8098     \ifHy@pdfa /F 4\fi
8099     /A<<%
8100     /Type/Action%
8101     /S/URI%
8102     /URI(\Hy@pstringURI)%
8103   >>%
8104   }%
8105   \relax
8106   \Hy@colorlink\@urlcolor#1%
8107   \close@pdflink
8108 \endgroup
8109 }
8110 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8111   \begingroup
8112     \Hy@pstringdef\Hy@pstringF{#2}%
8113     \Hy@pstringdef\Hy@pstringD{#3}%
8114     \leavevmode
8115     \pdfstartlink
8116     attr{%
8117       \Hy@setpdfborder
8118       \ifx\@pdfhighlight\@empty
8119       \else
8120         /H\@pdfhighlight
8121       \fi
8122       \ifx\@filebordercolor\relax
8123       \else
8124         /C[\@filebordercolor]%
8125       \fi
8126     }%
8127     user {%
8128       /Subtype/Link%
8129       \ifHy@pdfa /F 4\fi
8130       /A<<%
8131       /F(\Hy@pstringF)%
8132       /S/GoToR%
8133       \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}

8134      \ifx\|#3\|%
8135      /D[0 \@pdfstartview]%
8136      \else
8137      /D(\Hy@pstringD)%
8138      \fi
8139      >>%
8140      }%
8141      \relax
8142      \Hy@colorlink\@filecolor#1%
8143      \close@pdflink
8144      \endgroup
8145      }
8146      \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
8147      \begingroup
8148      \Hy@pstringdef\Hy@pstringF{#1}%
8149      \Hy@pstringdef\Hy@pstringP{#3}%
8150      \leavevmode
8151      \pdfstartlink
8152      attr{%
8153      \Hy@setpdfborder
8154      \ifx\@pdfhighlight\@empty
8155      \else
8156      /H\@pdfhighlight
8157      \fi
8158      \ifx\@runbordercolor\relax
8159      \else
8160      /C[\@runbordercolor]%
8161      \fi
8162      }%
8163      user {%
8164      /Subtype/Link%
8165      \ifHy@pdfa /F 4\fi
8166      /A<<%
8167      /F(\Hy@pstringF)%
8168      /S/Launch%
8169      \Hy@SetNewWindow
8170      \ifx\|#3\|%
8171      \else
8172      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8173      \fi
8174      >>%
8175      }%
8176      \relax
8177      \Hy@colorlink\@runcolor#2%
8178      \close@pdflink
8179      \endgroup
8180      }

```

\@pdfproducer

```

8181 \ifx\@pdfproducer\relax
8182 \begingroup\expandafter\expandafter\expandafter\endgroup
8183 \expandafter\ifx\csname luatexversion\endcsname\relax
8184 \def\@pdfproducer{pdfTeX}%

```

```

8185 \ifx\TeXversion\@undefined
8186 \else
8187 \ifx\TeXversion\relax
8188 \else
8189 \ifnum\TeXversion>0 %
8190 \def\@pdfproducer{pdfTeX}%
8191 \fi
8192 \fi
8193 \fi
8194 \ifx\pdfTeXversion\@undefined
8195 \else
8196 \ifnum\pdfTeXversion<100 %
8197 \edef\@pdfproducer{%
8198 \@pdfproducer
8199 \the\pdfTeXversion.\pdfTeXrevision
8200 }%
8201 \else
8202 \ifnum\pdfTeXversion<130 %
8203 \edef\@pdfproducer{%
8204 \@pdfproducer-%
8205 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8206 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8207 \pdfTeXrevision
8208 }%
8209 \else
8210 \ifnum\pdfTeXversion<140 %
8211 \else
8212 \def\@pdfproducer{pdfTeX}%
8213 \fi
8214 \edef\@pdfproducer{%
8215 \@pdfproducer-%
8216 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8217 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8218 \pdfTeXrevision
8219 }%
8220 \fi
8221 \fi
8222 \fi
8223 \else
8224 \begingroup
8225 \count@=\luaTeXversion
8226 \divide\count@ by 100 %
8227 \edef\x{\the\count@}%
8228 \count@=-\x\relax
8229 \multiply\count@ by 100 %
8230 \advance\count@ by \luaTeXversion
8231 \edef\x{\endgroup
8232 \def\noexpand\@pdfproducer{%
8233 LuaTeX-\x.\the\count@.\luaTeXrevision
8234 }%
8235 }%
8236 \x
8237 \fi
8238 \fi

```

\PDF@SetupDox

```

8239 \def\PDF@SetupDoc{%

```

```

8240 \ifx\@pdfpagescrop\@empty
8241 \else
8242 \edef\process@me{%
8243 \pdfpagesattr={%
8244 /CropBox[\@pdfpagescrop]%
8245 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8246 \else
8247 ^^J\the\pdfpagesattr
8248 \fi
8249 }%
8250 }%
8251 \process@me
8252 \fi
8253 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8254 \pdfcatalog{%
8255 /PageMode/\@pdfpagemode
8256 \ifx\@baseurl\@empty
8257 \else
8258 /URI<</Base(\Hy@pstringB)>>%
8259 \fi
8260 }%
8261 \ifx\@pdfstartpage\@empty
8262 \else
8263 \ifx\@pdfstartview\@empty
8264 \else
8265 openaction goto page\@pdfstartpage{\@pdfstartview}%
8266 \fi
8267 \fi
8268 \edef\Hy@temp{%
8269 \ifHy@toolbar\else /HideToolbar true\fi
8270 \ifHy@menubar\else /HideMenubar true\fi
8271 \ifHy>windowui\else /HideWindowUI true\fi
8272 \ifHy@fitwindow /FitWindow true\fi
8273 \ifHy@centerwindow /CenterWindow true\fi
8274 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8275 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8276 \Hy@UseNameKey{Direction}\@pdfdirection
8277 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8278 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8279 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8280 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8281 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8282 \Hy@UseNameKey{Duplex}\@pdfduplex
8283 \ifx\@pdfpicktraybypdfsize\@empty
8284 \else
8285 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8286 \fi
8287 \ifx\@pdfprintpagerange\@empty
8288 \else
8289 /PrintPageRange[\@pdfprintpagerange]%
8290 \fi
8291 \ifx\@pdfnumcopies\@empty
8292 \else
8293 /NumCopies \@pdfnumcopies
8294 \fi
8295 }%
8296 \pdfcatalog{%

```

```

8297 \ifx\Hy@temp\@empty
8298 \else
8299 /ViewerPreferences<<\Hy@temp>>%
8300 \fi
8301 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8302 \ifx\@pdflang\@empty
8303 \else
8304 /Lang(\@pdflang)%
8305 \fi
8306 }%
8307 }

```

\PDF@FinishDoc

```

8308 \def\PDF@FinishDoc{%
8309 \Hy@UseMaketitleInfos
8310 \HyInfo@GenerateAddons
8311 \pdfinfo{%
8312 /Author(\@pdfauthor)%
8313 /Title(\@pdftitle)%
8314 /Subject(\@pdfsubject)%
8315 /Creator(\@pdfcreator)%
8316 \ifx\@pdfcreationdate\@empty
8317 \else
8318 /CreationDate(\@pdfcreationdate)%
8319 \fi
8320 \ifx\@pdfmoddate\@empty
8321 \else
8322 /ModDate(\@pdfmoddate)%
8323 \fi
8324 \ifx\@pdfproducer\relax
8325 \else
8326 /Producer(\@pdfproducer)%
8327 \fi
8328 /Keywords(\@pdfkeywords)%
8329 \ifx\@pdftrapped\@empty
8330 \else
8331 /Trapped/\@pdftrapped
8332 \fi
8333 \HyInfo@Addons
8334 }%
8335 \Hy@DisableOption{pdfauthor}%
8336 \Hy@DisableOption{pdftitle}%
8337 \Hy@DisableOption{pdfsubject}%
8338 \Hy@DisableOption{pdfcreator}%
8339 \Hy@DisableOption{pdfcreationdate}%
8340 \Hy@DisableOption{pdfmoddate}%
8341 \Hy@DisableOption{pdfproducer}%
8342 \Hy@DisableOption{pdfkeywords}%
8343 \Hy@DisableOption{pdftrapped}%
8344 \Hy@DisableOption{pdfinfo}%
8345 }

```

\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.

```

8346 \def\hyper@pagetransition{%
8347 \ifx\@pdfpagetransition\relax

```

```

8348 \else
8349 \expandafter\Hy@RemoveTransPageAttr
8350 \the\pdfpageattr^^J/Trans{>>\END
8351 \ifx\@pdfpagetransition\@empty
8352 \else
8353 \edef\@processme{%
8354 \global\pdfpageattr{%
8355 \the\pdfpageattr
8356 ^^J/Trans << /S /\@pdfpagetransition\space >>%
8357 }%
8358 }%
8359 \@processme
8360 \fi
8361 \fi
8362 }

```

\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.

```

8363 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8364 \ifx\#2\%
8365 \global\pdfpageattr{#1}%
8366 \else
8367 \Hy@RemoveTransPageAttr#1#4\END
8368 \fi
8369 }

```

\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**.

```

8370 \def\hyper@pageduration{%
8371 \ifx\@pdfpageduration\relax
8372 \else
8373 \expandafter
8374 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
8375 \ifx\@pdfpageduration\@empty
8376 \else
8377 \edef\@processme{%
8378 \global\pdfpageattr{%
8379 \the\pdfpageattr
8380 ^^J/Dur \@pdfpageduration\space
8381 }%
8382 }%
8383 \@processme
8384 \fi
8385 \fi
8386 }

```

\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.

```

8387 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8388 \ifx\#2\%
8389 \global\pdfpageattr{#1}%

```

```

8390 \else
8391 \Hy@RemoveDurPageAttr#1#4\END
8392 \fi
8393 }

```

`\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).

```

8394 \def\hyper@pagehidden{%
8395 \ifHy@useHidKey
8396 \expandafter
8397 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
8398 \ifHy@pdfpagehidden
8399 \edef\@processme{%
8400 \global\pdfpageattr{%
8401 \the\pdfpageattr
8402 ^^J/Hid true % SPACE
8403 }%
8404 }%
8405 \@processme
8406 \fi
8407 \fi
8408 }

```

`\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.

```

8409 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8410 \ifx\#2\%
8411 \global\pdfpageattr{#1}%
8412 \else
8413 \Hy@RemoveHidPageAttr#1#4\END
8414 \fi
8415 }

8416 \g@addto@macro\Hy@EveryPageHook{%
8417 \hyper@pagetransition
8418 \hyper@pageduration
8419 \hyper@pagehidden
8420 }

```

Also Xe_{La}TeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

8421 </pdfTeX>
8422 <*pdfTeX | xetex>
8423 \Hy@AtBeginDocument{%
8424 \ifHy@setpagesize
8425 \expandafter\@firstofone
8426 \else
8427 \expandafter\@gobble
8428 \fi
8429 {%
8430 \@ifclassloaded{seminar}{%
8431 <*pdfTeX>
8432 \setlength{\pdfhorigin}{1truein}%
8433 \setlength{\pdfvorigin}{1truein}%

```

```

8434 </pdfTeX>
8435   \ifportrait
8436     \ifdim\paperwidth=\z@
8437     \else
8438       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8439     \fi
8440     \ifdim\paperheight=\z@
8441     \else
8442       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8443     \fi
8444   \else
8445     \ifdim\paperheight=\z@
8446     \else
8447       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8448     \fi
8449     \ifdim\paperwidth=\z@
8450     \else
8451       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8452     \fi
8453   \fi
8454 }{%
8455   \ltx@ifundefined{stockwidth}{%
8456     \ifdim\paperwidth>\z@
8457       \setlength{\pdfpagewidth}{\paperwidth}%
8458     \fi
8459     \ifdim\paperheight>\z@
8460       \setlength{\pdfpageheight}{\paperheight}%
8461     \fi
8462   }{%
8463     \ifdim\stockwidth>\z@
8464       \setlength{\pdfpagewidth}{\stockwidth}%
8465     \fi
8466     \ifdim\stockheight>\z@
8467       \setlength{\pdfpageheight}{\stockheight}%
8468     \fi
8469   }%
8470 }%
8471 }%
8472 \Hy@DisableOption{setpagesize}%
8473 }
8474 </pdfTeX | xetex>
8475 <*pdfTeX>
8476 \def\Acrobatmenu#1#2{%
8477   \Hy@Acrobatmenu{#1}{#2}{%
8478     \pdfstartlink
8479     attr{%
8480       \Hy@setpdfborder
8481       \ifx\@pdfhighlight\@empty
8482       \else
8483         /H\@pdfhighlight
8484       \fi
8485       \ifx\@menubordercolor\relax
8486       \else
8487         /C[\@menubordercolor]%
8488       \fi
8489     }%
8490   user{%

```

```

8491      /Subtype/Link%
8492      \ifHy@pdfa /F 4\fi
8493      /A<<%
8494      /S/Named/N/#1%
8495      >>%
8496    }%
8497    \relax
8498    \Hy@colorlink\@menucolor#2%
8499    \close@pdflink
8500  }%
8501 }

```

46.2.1 Fix for problem with different nesting levels

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

```

8502 \def\Hy@FixNotFirstPage{%
8503   \gdef\Hy@FixNotFirstPage{%
8504     \setbox\AtBeginShipoutBox=\hbox{%
8505       \copy\AtBeginShipoutBox
8506     }%
8507   }%
8508 }
8509 \AtBeginShipout{\Hy@FixNotFirstPage}
8510 </pdfTeX>

```

46.3 hypertex

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

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

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

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

```

8511 \*hypertext
8512 \providecommand*\XR@ext}{dvi}
8513 \def\PDF@FinishDoc{}
8514 \def\PDF@SetupDoc{%
8515   \ifx\@baseurl\@empty
8516   \else
8517     \special{html:<base href="\@baseurl">}%
8518   \fi
8519 }
8520 \def\hyper@anchor#1{%
8521   \Hy@SaveLastskip
8522   \Hy@VerboseAnchor{#1}%
8523   \begingroup
8524     \let\protect=\string
8525     \hyper@chars
8526     \special{html:<a name=%
8527       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8528   \endgroup
8529   \Hy@activeanchortrue
8530   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8531   \special{html:</a>}%
8532   \Hy@activeanchorfalse
8533   \Hy@RestoreLastskip
8534 }
8535 \def\hyper@anchorstart#1{%
8536   \Hy@SaveLastskip
8537   \Hy@VerboseAnchor{#1}%
8538   \begingroup
8539     \hyper@chars
8540     \special{html:<a name=%
8541       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8542   \endgroup
8543   \Hy@activeanchortrue
8544 }
8545 \def\hyper@anchorend{%
8546   \special{html:</a>}%
8547   \Hy@activeanchorfalse
8548   \Hy@RestoreLastskip
8549 }
8550 \def\@urltype{url}
8551 \def\hyper@linkstart#1#2{%
8552   \Hy@VerboseLinkStart{#1}{#2}%
8553   \expandafter\Hy@colorlink\csname @#1color\endcsname
8554   \def\Hy@tempa{#1}%
8555   \ifx\Hy@tempa\@urltype
8556     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8557   \else
8558     \begingroup
8559       \hyper@chars
8560       \special{html:<a href=%

```

```

8561      \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
8562    \endgroup
8563  \fi
8564 }
8565 \def\hyper@linkend{%
8566   \special{html:</a>}%
8567   \Hy@endcolorlink
8568 }
8569 \def\hyper@linkfile#1#2#3{%
8570   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
8571 }
8572 \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.

```

8573   \leavevmode
8574   \ifHy@raiselinks
8575     \setbox\@tempboxa=\color@hbox #1\color@endbox
8576     \@linkdim\dp\@tempboxa
8577     \lower\@linkdim\hbox{%
8578       \hyper@chars
8579       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8580     }%
8581     \Hy@colorlink\@urlcolor#1%
8582     \@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).

```

8583   \advance\@linkdim by -6.5\p@
8584   \raise\@linkdim\hbox{\special{html:</a>}}%
8585   \Hy@endcolorlink
8586 \else
8587   \begingroup
8588     \hyper@chars
8589     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8590     \Hy@colorlink\@urlcolor#1%
8591     \special{html:</a>}%
8592     \Hy@endcolorlink
8593   \endgroup
8594 \fi
8595 }

```

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

```

8596 \def\hyper@link#1#2#3{%
8597   \Hy@VerboseLinkStart{#1}{#2}%
8598   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
8599 }
8600 \def\hyper@image#1#2{%
8601   \begingroup
8602     \hyper@chars
8603     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8604   \endgroup
8605 }
8606 </hypertex>
8607 <*dviwindo>

```

46.4 dviwindo

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

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

```
8608 \providecommand*\XR@ext}{dvi}
8609 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8610 \def\hyper@anchor#1{%
8611   \Hy@SaveLastskip
8612   \Hy@VerboseAnchor{#1}%
8613   \begingroup
8614     \let\protect=\string
8615     \special{mark: #1}%
8616   \endgroup
8617   \Hy@activeanchortrue
8618   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8619   \Hy@activeanchorfalse
8620   \Hy@RestoreLastskip
8621 }
8622 \def\hyper@anchorstart#1{%
8623   \Hy@SaveLastskip
8624   \Hy@VerboseAnchor{#1}%
8625   \special{mark: #1}%
8626   \Hy@activeanchortrue
8627 }
8628 \def\hyper@anchorend{%
8629   \Hy@activeanchorfalse
8630   \Hy@RestoreLastskip
8631 }
8632 \def\hyper@linkstart#1#2{%
8633   \Hy@VerboseLinkStart{#1}{#2}%
8634   \expandafter\Hy@colorlink\csname @#1color\endcsname
8635   \special{button: %
8636     10000000 %
8637     \number\baselineskip\space
8638     #2%
8639   }%
8640 }
8641 \def\hyper@linkend{%
8642   \Hy@endcolorlink
8643 }
8644 \def\hyper@link#1#2#3{%
8645   \Hy@VerboseLinkStart{#1}{#2}%
8646   \setbox\@tempboxa=\color@hbox #3\color@endbox
8647   \leavevmode
8648   \ifHy@raiselinks
8649     \@linkdim\dp\@tempboxa
8650     \lower\@linkdim\hbox{%
8651       \special{button: %
8652         \number\wd\@tempboxa\space
```

```

8653     \number\ht\@tempboxa\space
8654     #2%
8655   }%
8656   \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8657   \Hy@endcolorlink
8658 }%
8659 \@linkdim\ht\@tempboxa
8660 \advance\@linkdim by -6.5\p@
8661 \raise\@linkdim\hbox{}%
8662 \else
8663   \special{button: %
8664     \number\wd\@tempboxa\space
8665     \number\ht\@tempboxa\space
8666     #2%
8667   }%
8668   \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8669   \Hy@endcolorlink
8670 \fi
8671 }
8672 \def\hyper@linkurl#1#2{%
8673   \begingroup
8674   \hyper@chars
8675   \leavevmode
8676   \setbox\@tempboxa=\color@hbox #1\color@endbox
8677   \ifHy@raiselinks
8678     \@linkdim\dp\@tempboxa
8679     \lower\@linkdim\hbox{%
8680       \special{button: %
8681         \number\wd\@tempboxa\space
8682         \number\ht\@tempboxa\space
8683         launch: \wwwbrowser\space
8684         #2%
8685       }%
8686       \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8687     }%
8688     \@linkdim\ht\@tempboxa
8689     \advance\@linkdim by -6.5\p@
8690     \raise\@linkdim\hbox{}%
8691   \else
8692     \special{button: %
8693       \number\wd\@tempboxa\space
8694       \number\ht\@tempboxa\space
8695       launch: \wwwbrowser\space
8696       #2%
8697     }%
8698     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8699   \fi
8700 \endgroup
8701 }
8702 \def\hyper@linkfile#1#2#3{%
8703   \begingroup
8704   \hyper@chars
8705   \leavevmode
8706   \setbox\@tempboxa=\color@hbox #1\color@endbox
8707   \ifHy@raiselinks
8708     \@linkdim\dp\@tempboxa
8709     \lower\@linkdim\hbox{%

```

```

8710     \special{button: %
8711     \number\wd\@tempboxa\space
8712     \number\ht\@tempboxa\space
8713     #3,%
8714     file: #2%
8715     }%
8716     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8717     }%
8718     \@linkdim\ht\@tempboxa
8719     \advance\@linkdim by -6.5\p@
8720     \raise\@linkdim\hbox{}%
8721     \else
8722     \special{button: %
8723     \number\wd\@tempboxa\space
8724     \number\ht\@tempboxa\space
8725     #3,%
8726     file: #2%
8727     }%
8728     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8729     \fi
8730 \endgroup
8731 }
8732 \ifx\@pdfproducer\relax
8733 \def\@pdfproducer{dviwindo + Distiller}%
8734 \fi
8735 \HyInfo@AddonUnsupportedtrue
8736 \def\PDF@FinishDoc{%
8737 \Hy@UseMaketitleInfos
8738 \HyInfo@TrappedUnsupported
8739 \special{PDF: Keywords \@pdfkeywords}%
8740 \special{PDF: Title \@pdftitle}%
8741 \special{PDF: Creator \@pdfcreator}%
8742 \ifx\@pdfcreationdate\@empty
8743 \else
8744 \special{PDF: CreationDate \@pdfcreationdate}%
8745 \fi
8746 \ifx\@pdfmoddate\@empty
8747 \else
8748 \special{PDF: ModDate \@pdfmoddate}%
8749 \fi
8750 \special{PDF: Author \@pdfauthor}%
8751 \ifx\@pdfproducer\relax
8752 \else
8753 \special{PDF: Producer \@pdfproducer}%
8754 \fi
8755 \special{PDF: Subject \@pdfsubject}%
8756 \Hy@DisableOption{pdfauthor}%
8757 \Hy@DisableOption{pdftitle}%
8758 \Hy@DisableOption{pdfsubject}%
8759 \Hy@DisableOption{pdfcreator}%
8760 \Hy@DisableOption{pdfcreationdate}%
8761 \Hy@DisableOption{pdfmoddate}%
8762 \Hy@DisableOption{pdfproducer}%
8763 \Hy@DisableOption{pdfkeywords}%
8764 \Hy@DisableOption{pdftrapped}%
8765 \Hy@DisableOption{pdfinfo}%
8766 }

```

```

8767 \def\PDF@SetupDoc{%
8768   \ifx\@baseurl\@empty
8769   \else
8770     \special{PDF: Base \@baseurl}%
8771   \fi
8772   \ifx\@pdfpagescrop\@empty\else
8773     \special{PDF: BBox \@pdfpagescrop}%
8774   \fi
8775   \def\Hy@temp{%
8776     \ifx\@pdfstartpage\@empty
8777     \else
8778       \ifx\@pdfstartview\@empty
8779       \else
8780         \edef\Hy@temp{%
8781           ,Page=\@pdfstartpage
8782           ,View=\@pdfstartview
8783         }%
8784       \fi
8785     \fi
8786     \edef\Hy@temp{%
8787       \noexpand\pdfmark{%
8788         pdfmark=/DOCVIEW,%
8789         PageMode=/\@pdfpagemode
8790         \Hy@temp
8791       }%
8792     }%
8793     \Hy@temp
8794     \ifx\@pdfpagescrop\@empty
8795     \else
8796       \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8797     \fi
8798     \edef\Hy@temp{%
8799       \ifHy@toolbar\else /HideToolbar true\fi
8800       \ifHy@menubar\else /HideMenubar true\fi
8801       \ifHy>windowui\else /HideWindowUI true\fi
8802       \ifHy@fitwindow /FitWindow true\fi
8803       \ifHy@centerwindow /CenterWindow true\fi
8804       \ifHy@displaydoctitle /DisplayDocTitle true\fi
8805       \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8806       \Hy@UseNameKey{Direction}\@pdfdirection
8807       \Hy@UseNameKey{ViewArea}\@pdfviewarea
8808       \Hy@UseNameKey{ViewClip}\@pdfviewclip
8809       \Hy@UseNameKey{PrintArea}\@pdfprintarea
8810       \Hy@UseNameKey{PrintClip}\@pdfprintclip
8811       \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8812       \Hy@UseNameKey{Duplex}\@pdfduplex
8813       \ifx\@pdfpicktraybypdfsize\@empty
8814       \else
8815         /PickTrayByPDFSize \@pdfpicktraybypdfsize
8816       \fi
8817       \ifx\@pdfprintpagerange\@empty
8818       \else
8819         /PrintPageRange[\@pdfprintpagerange]%
8820       \fi
8821       \ifx\@pdfnumcopies\@empty
8822       \else
8823         /NumCopies \@pdfnumcopies

```

```

8824   \fi
8825 }%
8826 \pdfmark{pdfmark=/PUT,%
8827   Raw={%
8828   \string{Catalog\string}<<%
8829   \ifx\Hy@temp\@empty
8830   \else
8831     /ViewerPreferences<<\Hy@temp>>%
8832   \fi
8833   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8834   \ifx\@pdflang\@empty
8835   \else
8836     /Lang(\@pdflang)%
8837   \fi
8838   >>%
8839 }%
8840 }%
8841 }
8842 </dviwindo>
8843 <*dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8844 \providecommand*{\XR@ext}{pdf}
8845 \Hy@setbreaklinks{true}
8846 \newsavebox{\pdfm@box}
8847 \def\@pdfm@mark#1{\special{pdf:#1}}
8848 \def\@pdfm@dest#1{%
8849   \Hy@SaveLastskip
8850   \Hy@VerboseAnchor{#1}%
8851   \begingroup
8852     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8853   \def\x{XYZ}%
8854   \ifx\x\@pdfview
8855     \def\x{XYZ @xpos @ypos null}%
8856   \else
8857     \def\x{FitH}%
8858     \ifx\x\@pdfview
8859       \def\x{FitH @ypos}%
8860     \else
8861       \def\x{FitBH}%
8862       \ifx\x\@pdfview
8863         \def\x{FitBH @ypos}%
8864       \else
8865         \def\x{FitV}%
8866         \ifx\x\@pdfview
8867           \def\x{FitV @xpos}%
8868         \else
8869           \def\x{FitBV}%
8870           \ifx\x\@pdfview
8871             \def\x{FitBV @xpos}%
8872           \else
8873             \def\x{Fit}%
8874             \ifx\x\@pdfview
8875               \let\x\@pdfview
8876             \else

```

```

8877         \def\x{FitB}%
8878         \ifx\x\@pdfview
8879             \let\x\@pdfview
8880         \else
8881             \def\x{FitR}%
8882             \ifx\x\@pdfview
8883                 \Hy@Warning{'pdfview=FitR' is not supported}%
8884                 \def\x{XYZ @xpos @ypos null}%
8885             \else
8886                 \@onelevel@sanitize\@pdfview
8887                 \Hy@Warning{%
8888                     Unknown value '\@pdfview' for pdfview%
8889                 }%
8890                 \def\x{XYZ @xpos @ypos null}%
8891             \fi
8892         \fi
8893     \fi
8894 \fi
8895 \fi
8896 \fi
8897 \fi
8898 \fi
8899 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8900 \endgroup
8901 \Hy@RestoreLastskip
8902 }
8903 \providecommand*\@pdfview{XYZ}
8904 \providecommand*\@pdfborder{0 0 1}
8905 \providecommand*\@pdfborderstyle{}
8906 \def\hyper@anchor#1{%
8907     \@pdfm@dest{#1}%
8908 }
8909 \def\hyper@anchorstart#1{%
8910     \Hy@activeanchortrue
8911     \@pdfm@dest{#1}%
8912 }
8913 \def\hyper@anchorend{%
8914     \Hy@activeanchorfalse
8915 }
8916 \newcounter{Hy@AnnotLevel}
8917 \ifHy@ocgcolorlinks
8918     \def\OBJ@OCG@view{@OCG@view}%
8919     \@pdfm@mark{%
8920         obj \OBJ@OCG@view <<%
8921             /Type/OCG%
8922             /Name(View)%
8923             /Usage<<%
8924             /Print<<%
8925             /PrintState/OFF%
8926             >>%
8927             /View<<%
8928             /ViewState/ON%
8929             >>%
8930         >>%
8931     }%
8932 }%
8933 \@pdfm@mark{close \OBJ@OCG@view}%

```



```

8934 \def\OBJ@OCG@print{@OCG@print}%
8935 \@pdfm@mark{%
8936   obj \OBJ@OCG@print <<%
8937     /Type/OCG%
8938     /Name(Print)%
8939     /Usage<<%
8940     /Print<<%
8941     /PrintState/ON%
8942     >>%
8943     /View<<%
8944     /ViewState/OFF%
8945     >>%
8946     >>%
8947   >>%
8948 }%
8949 \@pdfm@mark{close \OBJ@OCG@print}%
8950 \def\OBJ@OCGs{@OCGs}%
8951 \@pdfm@mark{%
8952   obj \OBJ@OCGs [%
8953     \OBJ@OCG@view\space\OBJ@OCG@print
8954   ]%
8955 }%
8956 \@pdfm@mark{close \OBJ@OCGs}%
8957 \@pdfm@mark{%
8958   put @catalog <<%
8959     /OCProperties<<%
8960     /OCGs \OBJ@OCGs
8961     /D<<%
8962     /OFF[\OBJ@OCG@print]%
8963     /AS[%
8964       <<%
8965         /Event/View%
8966         /OCGs \OBJ@OCGs
8967         /Category[/View]%
8968       >>%
8969       <<%
8970         /Event/Print%
8971         /OCGs \OBJ@OCGs
8972         /Category[/Print]%
8973       >>%
8974       <<%
8975         /Event/Export%
8976         /OCGs \OBJ@OCGs
8977         /Category[/Print]%
8978       >>%
8979     ]%
8980   >>%
8981   >>%
8982   >>%
8983 }%
8984 \AtBeginShipout{%
8985   \setbox\AtBeginShipoutBox=\hbox{%
8986     \copy\AtBeginShipoutBox
8987     \@pdfm@mark{%
8988       put @resources <<%
8989       /Properties<<%
8990       /OCView \OBJ@OCG@view

```

```

8991      /OCPrint \OBJ@OCG@print
8992      >>%
8993      >>%
8994      }%
8995      }%
8996      }%
8997      \Hy@AtBeginDocument{%
8998      \def\Hy@colorlink#1{%
8999      \begingroup
9000      \ifHy@ocgcolorlinks
9001      \def\Hy@ocgcolor{#1}%
9002      \setbox0=\color@hbox
9003      \else
9004      \HyColor@UseColor#1%
9005      \fi
9006      }%
9007      \def\Hy@endcolorlink{%
9008      \ifHy@ocgcolorlinks
9009      \color@endbox
9010      \mbox{%
9011      \@pdfm@mark{content /OC/OCPrint BDC}%
9012      \rlap{\copy0}%
9013      \@pdfm@mark{content EMC/OC/OCView BDC}%
9014      \begingroup
9015      \expandafter\HyColor@UseColor\Hy@ocgcolor
9016      \box0 %
9017      \endgroup
9018      \@pdfm@mark{content EMC}%
9019      }%
9020      \fi
9021      \endgroup
9022      }%
9023      }%
9024      \else
9025      \Hy@DisableOption{ocgcolorlinks}%
9026      \fi
9027      \def\Hy@BeginAnnot#1{%
9028      \stepcounter{Hy@AnnotLevel}%
9029      \ifnum\value{Hy@AnnotLevel}=\@ne
9030      #1%
9031      \fi
9032      }
9033      \def\Hy@endAnnot{%
9034      \ifnum\value{Hy@AnnotLevel}=\@ne
9035      \Hy@endcolorlink
9036      \@pdfm@mark{eann}%
9037      \fi
9038      \addtocounter{Hy@AnnotLevel}\m@ne
9039      }
9040      \def\Hy@undefinedname{UNDEFINED}
9041      \def\hyper@linkstart#1#2{%
9042      \Hy@VerboseLinkStart{#1}{#2}%
9043      \Hy@BeginAnnot{%
9044      \protected@edef\Hy@testname{#2}%
9045      \ifx\Hy@testname\@empty
9046      \Hy@Warning{%
9047      Empty destination name,\MessageBreak

```

```

9048     using '\Hy@undefinedname'%
9049   }%
9050   \let\Hy@testname\Hy@undefinedname
9051 \else
9052   \Hy@pstringdef\Hy@testname{%
9053     \expandafter\HyperDestNameFilter\expandafter{%
9054       \Hy@testname
9055     }%
9056   }%
9057 \fi
9058 \@pdfm@mark{%
9059   bann<<%
9060     /Type/Annot%
9061     /Subtype/Link%
9062     \ifHy@pdfa /F 4\fi
9063     \Hy@setpdfborder
9064     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9065     \else
9066       /C[\csname @#1bordercolor\endcsname]%
9067     \fi
9068     /A<<%
9069     /S/GoTo%
9070     /D(\Hy@testname)%
9071     >>%
9072   >>%
9073 }%
9074 \expandafter\Hy@colorlink\csname @#1color\endcsname
9075 }%
9076 }
9077 \def\hyper@linkend{\Hy@EndAnnot}%
9078 \def\hyper@link#1#2#3{%
9079   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9080 }
9081 \def\hyper@linkfile#1#2#3{%
9082   \leavevmode
9083   \Hy@BeginAnnot{%
9084     \Hy@pstringdef\Hy@pstringF{#2}%
9085     \Hy@pstringdef\Hy@pstringD{#3}%
9086     \@pdfm@mark{%
9087       bann<<%
9088         /Type/Annot%
9089         /Subtype/Link%
9090         \ifHy@pdfa /F 4\fi
9091         \Hy@setpdfborder
9092         \ifx\@filebordercolor\relax
9093         \else
9094           /C[\@filebordercolor]%
9095         \fi
9096         /A<<%
9097         /S/GoToR%
9098         /F(\Hy@pstringF)%
9099         /D\ifx\@#3\@0\@pdfstartview\else(\Hy@pstringD)\fi
9100         \Hy@SetNewWindow
9101       >>%
9102     >>%
9103   }%
9104   \Hy@colorlink\@filecolor

```

```

9105 }%
9106 #1%
9107 \Hy@EndAnnot
9108 }
9109 \def\hyper@linkurl#1#2{%
9110 \leavevmode
9111 \Hy@BeginAnnot{%
9112 \Hy@pstringdef\Hy@pstringURI{#2}%
9113 \@pdfm@mark{%
9114 bann<<%
9115 /Type/Annot%
9116 /Subtype/Link%
9117 \ifHy@pdfa /F 4\fi
9118 \Hy@setpdfborder
9119 \ifx\@urlbordercolor\relax
9120 \else
9121 /C[\@urlbordercolor]%
9122 \fi
9123 /A<<%
9124 /S/URI%
9125 /URI(\Hy@pstringURI)%
9126 >>%
9127 >>%
9128 }%
9129 \Hy@colorlink\@urlcolor
9130 }%
9131 #1%
9132 \Hy@EndAnnot
9133 }
9134 \def\Acrobatmenu#1#2{%
9135 \Hy@Acrobatmenu{#1}{#2}{%
9136 \Hy@BeginAnnot{%
9137 \@pdfm@mark{%
9138 bann<<%
9139 /Type/Annot%
9140 /Subtype/Link%
9141 \ifHy@pdfa /F 4\fi
9142 /A<<%
9143 /S/Named%
9144 /N/#1%
9145 >>%
9146 \Hy@setpdfborder
9147 \ifx\@menubordercolor\relax
9148 \relax
9149 /C[\@menubordercolor]%
9150 \fi
9151 >>%
9152 }%
9153 \Hy@colorlink\@menucolor
9154 }%
9155 #2%
9156 \Hy@EndAnnot
9157 }%
9158 }
9159 \ifx\@pdfproducer\relax
9160 \def\@pdfproducer{dvi}

```

Detect Xe_{TeX}. However, but xdvipdfmx will overwrite it in the final PDF file.

```

9161 \begingroup\expandafter\expandafter\expandafter\endgroup
9162 \expandafter\ifx\csname XeTeXversion\endcsname\relax
9163 \else
9164 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9165 \fi
9166 \fi
9167 \def\PDF@FinishDoc{%
9168 \Hy@UseMaketitleInfos
9169 \HyInfo@GenerateAddons
9170 \@pdfm@mark{%
9171 docinfo<<%
9172 /Title(\@pdftitle)%
9173 /Subject(\@pdfsubject)%
9174 /Creator(\@pdfcreator)%
9175 \ifx\@pdfcreationdate\@empty
9176 \else
9177 /CreationDate(\@pdfcreationdate)%
9178 \fi
9179 \ifx\@pdfmoddate\@empty
9180 \else
9181 /ModDate(\@pdfmoddate)%
9182 \fi
9183 /Author(\@pdfauthor)%
9184 \ifx\@pdfproducer\relax
9185 \else
9186 /Producer(\@pdfproducer)%
9187 \fi
9188 /Keywords(\@pdfkeywords)%
9189 \ifx\@pdftrapped\@empty
9190 \else
9191 /Trapped/\@pdftrapped
9192 \fi
9193 \HyInfo@Addons
9194 >>%
9195 }%
9196 \Hy@DisableOption{pdfauthor}%
9197 \Hy@DisableOption{pdftitle}%
9198 \Hy@DisableOption{pdfsubject}%
9199 \Hy@DisableOption{pdfcreator}%
9200 \Hy@DisableOption{pdfcreationdate}%
9201 \Hy@DisableOption{pdfmoddate}%
9202 \Hy@DisableOption{pdfproducer}%
9203 \Hy@DisableOption{pdfkeywords}%
9204 \Hy@DisableOption{pdftrapped}%
9205 \Hy@DisableOption{pdfinfo}%
9206 }
9207 \def\PDF@SetupDoc{%
9208 \edef\Hy@temp{%
9209 \ifHy@toolbar\else /HideToolbar true\fi
9210 \ifHy@menubar\else /HideMenubar true\fi
9211 \ifHy>windowui\else /HideWindowUI true\fi
9212 \ifHy@fitwindow /FitWindow true\fi
9213 \ifHy@centerwindow /CenterWindow true\fi
9214 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9215 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9216 \Hy@UseNameKey{Direction}\@pdfdirection
9217 \Hy@UseNameKey{ViewArea}\@pdfviewarea

```

```

9218 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9219 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9220 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9221 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9222 \Hy@UseNameKey{Duplex}\@pdfduplex
9223 \ifx\@pdfpicktraybypdfsize\@empty
9224 \else
9225   /PickTrayByPDFSize \@pdfpicktraybypdfsize
9226 \fi
9227 \ifx\@pdfprintpagerange\@empty
9228 \else
9229   /PrintPageRange\@pdfprintpagerange]%
9230 \fi
9231 \ifx\@pdfnumcopies\@empty
9232 \else
9233   /NumCopies \@pdfnumcopies
9234 \fi
9235 }%
9236 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9237 \@pdfm@mark{%
9238   docview<<%
9239     \ifx\@pdfstartpage\@empty
9240     \else
9241       \ifx\@pdfstartview\@empty
9242       \else
9243         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9244       \fi
9245     \fi
9246     \ifx\@baseurl\@empty
9247     \else
9248       /URI<</Base(\Hy@pstringB)>>%
9249     \fi
9250     /PageMode/\@pdfpagemode
9251     \ifx\Hy@temp\@empty
9252     \else
9253       /ViewerPreferences<<\Hy@temp>>%
9254     \fi
9255     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9256     \ifx\@pdflang\@empty
9257     \else
9258       /Lang(\@pdflang)%
9259     \fi
9260   >>%
9261 }%
9262 \ifx\@pdfpagescrop\@empty
9263 \else
9264   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9265 \fi
9266 }
9267 </dvi pdfm | xetex>

```

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

```

9268 <*dvi pdfm>
9269 \AtBeginShipoutFirst{%
9270   \ifHy@setpagesize
9271   \begingroup
9272     \@ifundefined{stockwidth}{%

```

```

9273 \ifdim\paperwidth>\z@
9274 \ifdim\paperheight>\z@
9275 \special{papersize=\the\paperwidth,\the\paperheight}%
9276 \fi
9277 \fi
9278 }{%
9279 \ifdim\stockwidth>\z@
9280 \ifdim\stockheight>\z@
9281 \special{papersize=\the\stockwidth,\the\stockheight}%
9282 \fi
9283 \fi
9284 }%
9285 \endgroup
9286 \fi
9287 \Hy@DisableOption{setpagesize}%
9288 }
9289 </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.

```

9290 <*vtexhtml>
9291 \providecommand*{\XR@ext}{htm}
9292 \RequirePackage{vtexhtml}
9293 \newif\if@Localurl
9294 \def\PDF@FinishDoc{}
9295 \def\PDF@SetupDoc{%
9296 \ifx\@baseurl\@empty
9297 \else
9298 \special{!direct <base href="\@baseurl">}%
9299 \fi
9300 }
9301 \def\@urltype{url}
9302 \def\hyper@link#1#2#3{%
9303 \Hy@VerboseLinkStart{#1}{#2}%
9304 \leavevmode
9305 \special{!direct <a href=%
9306 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9307 #3%
9308 \special{!direct </a>}%
9309 }
9310 \def\hyper@linkurl#1#2{%
9311 \begingroup
9312 \hyper@chars
9313 \leavevmode
9314 \MathBSuppress=1\relax
9315 \special{!direct <a href=%
9316 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9317 #1%
9318 \MathBSuppress=0\relax
9319 \special{!direct </a>}%
9320 \endgroup
9321 }
9322 \def\hyper@linkfile#1#2#3{%
9323 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9324 }

```

```

9325 \def\hyper@linkstart#1#2{%
9326   \Hy@VerboseLinkStart{#1}{#2}%
9327   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
9328     \@Localurltrue
9329     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9330   \else
9331     \@Localurlfalse
9332     \begingroup
9333       \hyper@chars
9334       \special{!aref \HyperDestNameFilter{#2}}%
9335     \endgroup
9336   \fi
9337 }
9338 \def\hyper@linkend{%
9339   \if@Localurl
9340     \special{!endaref}%
9341   \else
9342     \special{!direct </a>}%
9343   \fi
9344 }
9345 \def\hyper@anchorstart#1{%
9346   \Hy@SaveLastskip
9347   \Hy@VerboseAnchor{#1}%
9348   \begingroup
9349     \hyper@chars
9350     \special{!aname #1}%
9351     \special{!direct <a name=%
9352       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9353   \endgroup
9354   \Hy@activeanchortrue
9355 }
9356 \def\hyper@anchorend{%
9357   \special{!direct </a>}%
9358   \Hy@activeanchorfalse
9359   \Hy@RestoreLastskip
9360 }
9361 \def\hyper@anchor#1{%
9362   \Hy@SaveLastskip
9363   \Hy@VerboseAnchor{#1}%
9364   \begingroup
9365     \let\protect=\string
9366     \hyper@chars
9367     \leavevmode
9368     \special{!aname #1}%
9369     \special{!direct <a name=%
9370       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9371   \endgroup
9372   \Hy@activeanchortrue
9373   \bgroup\anchor@spot\egroup
9374   \special{!direct </a>}%
9375   \Hy@activeanchorfalse
9376   \Hy@RestoreLastskip
9377 }
9378 \def\@Form[#1]{%
9379   \typeout{Sorry, TeXpider does not yet support FORMs}%
9380 }
9381 \def\@endForm{}

```



```

9382 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9383 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9384 }
9385 \def\@TextField[#1]#2{% parameters, label
9386 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9387 }
9388 \def\@CheckBox[#1]#2{% parameters, label
9389 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9390 }
9391 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
9392 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9393 }
9394 \def\@PushButton[#1]#2{% parameters, label
9395 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9396 }
9397 \def\@Reset[#1]#2{%
9398 \typeout{Sorry, TeXpider does not yet support FORMs}%
9399 }
9400 \def\@Submit[#1]#2{%
9401 \typeout{Sorry, TeXpider does not yet support FORMs}%
9402 }
9403 </vtexhtml>
9404 <*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.

```

9405 \ifx\mediaheight\@undefined
9406 \else
9407 \ifx\mediaheight\relax
9408 \else
9409 \ifHy@setpagesize
9410 \providecommand*\VTeXInitMediaSize{%
9411 \ltx@ifundefined{stockwidth}{%
9412 \ifdim\paperheight>0pt %
9413 \setlength\mediaheight\paperheight
9414 \fi
9415 \ifdim\paperheight>0pt %
9416 \setlength\mediawidth\paperwidth
9417 \fi
9418 }{%
9419 \ifdim\stockheight>0pt %
9420 \setlength\mediaheight\stockheight
9421 \fi
9422 \ifdim\stockwidth>0pt %
9423 \setlength\mediawidth\stockwidth
9424 \fi
9425 }%
9426 }%
9427 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9428 \fi
9429 \Hy@DisableOption{setpagesize}%
9430 \fi
9431 \fi

```

Older versions of VTeX require xyz in lower case.

```

9432 \providecommand*\@pdfview{xyz}
9433 \providecommand*\@pdfborder{0 0 1}

```

```

9434 \providecommand*\@pdfborderstyle{}
9435 \let\CurrentBorderColor\@linkbordercolor
9436 \def\hyper@anchor#1{%
9437   \Hy@SaveLastskip
9438   \Hy@VerboseAnchor{#1}%
9439   \begingroup
9440     \let\protect=\string
9441     \hyper@chars
9442     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9443   \endgroup
9444   \Hy@activeanchortrue
9445   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9446   \Hy@activeanchorfalse
9447   \Hy@RestoreLastskip
9448 }
9449 \def\hyper@anchorstart#1{%
9450   \Hy@SaveLastskip
9451   \Hy@VerboseAnchor{#1}%
9452   \begingroup
9453     \hyper@chars
9454     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9455   \endgroup
9456   \Hy@activeanchortrue
9457 }
9458 \def\hyper@anchorend{%
9459   \Hy@activeanchorfalse
9460   \Hy@RestoreLastskip
9461 }
9462 \def\@urltype{url}
9463 \def\Hy@undefinedname{UNDEFINED}
9464 \def\hyper@linkstart#1#2{%
9465   \Hy@VerboseLinkStart{#1}{#2}%
9466   \Hy@pstringdef\Hy@pstringURI{#2}%
9467   \expandafter\Hy@colorlink\csname @#1color\endcsname
9468   \ltx@ifundefined{@#1bordercolor}{%
9469     \let\CurrentBorderColor\relax
9470   }{%
9471     \edef\CurrentBorderColor{%
9472       \csname @#1bordercolor\endcsname
9473     }%
9474   }%
9475   \def\Hy@tempa{#1}%
9476   \ifx\Hy@tempa\@urltype
9477     \special{!%
9478       aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9479       a=<%
9480         \ifHy@pdfa /F 4\fi
9481         \Hy@setpdfborder
9482         \ifx\CurrentBorderColor\relax
9483           \else
9484             /C [\CurrentBorderColor]%
9485           \fi
9486         >%
9487       }%
9488     \else
9489       \protected@edef\Hy@testname{#2}%
9490       \ifx\Hy@testname\@empty

```

```

9491 \Hy@Warning{%
9492   Empty destination name,\MessageBreak
9493   using '\Hy@undefinedname'%
9494 }%
9495 \let\Hy@testname\Hy@undefinedname
9496 \fi
9497 \special{!%
9498   aref \expandafter\HyperDestNameFilter
9499   \expandafter{\Hy@testname};%
9500   a=<%
9501     \ifHy@pdfa /F 4\fi
9502     \Hy@setpdfborder
9503     \ifx\CurrentBorderColor\relax
9504       \else
9505         /C [\CurrentBorderColor]%
9506     \fi
9507   >%
9508 }%
9509 \fi
9510 }
9511 \def\hyper@linkend{%
9512   \special{!endaref}%
9513   \Hy@endcolorlink
9514 }
9515 \def\hyper@linkfile#1#2#3{%
9516   \leavevmode
9517   \special{!%
9518     aref <%
9519     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi
9520     f=#2>#3;%
9521     a=<%
9522       \ifHy@pdfa /F 4\fi
9523       \Hy@setpdfborder
9524       \ifx\@filebordercolor\relax
9525         \else
9526           /C [\@filebordercolor]%
9527       \fi
9528     >%
9529   }%
9530   \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9531   \special{!endaref}%
9532 }
9533 \def\hyper@linkurl#1#2{%
9534   \begingroup
9535   \Hy@pstringdef\Hy@pstringURI{#2}%
9536   \hyper@chars
9537   \leavevmode
9538   \special{!%
9539     aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9540     a=<%
9541       \ifHy@pdfa /F 4\fi
9542       \Hy@setpdfborder
9543       \ifx\@urlbordercolor\relax
9544         \else
9545           /C [\@urlbordercolor]%
9546       \fi
9547     >%

```

```

9548 }%
9549 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9550 \special{!endaref}%
9551 \endgroup
9552 }
9553 \def\hyper@link#1#2#3{%
9554 \Hy@VerboseLinkStart{#1}{#2}%
9555 \ltx@ifundefined{#1bordercolor}{%
9556 \let\CurrentBorderColor\relax
9557 }{%
9558 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9559 }%
9560 \leavevmode
9561 \protected@edef\Hy@testname{#2}%
9562 \ifx\Hy@testname\@empty
9563 \Hy@Warning{%
9564 Empty destination name,\MessageBreak
9565 using '\Hy@undefinedname'%
9566 }%
9567 \let\Hy@testname\Hy@undefinedname
9568 \fi
9569 \special{!%
9570 aref \expandafter\HyperDestNameFilter
9571 \expandafter{\Hy@testname};%
9572 a=<%
9573 \ifHy@pdfa /F 4\fi
9574 \Hy@setpdfborder
9575 \ifx\CurrentBorderColor\relax
9576 \else
9577 /C [\CurrentBorderColor]%
9578 \fi
9579 >%
9580 }%
9581 \expandafter
9582 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9583 \special{!endaref}%
9584 }
9585 \def\hyper@image#1#2{%
9586 \hyper@linkurl{#2}{#1}%
9587 }
9588 \def\@hyper@launch run:#1\#2#3{%
9589 \Hy@pstringdef\Hy@pstringF{#1}%
9590 \Hy@pstringdef\Hy@pstringP{#3}%
9591 \leavevmode
9592 \special{!aref %
9593 <u=%
9594 /Type/Action%
9595 /S/Launch%
9596 /F(\Hy@pstringF)%
9597 \Hy@SetNewWindow
9598 \ifx\#3\%
9599 \else
9600 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9601 \fi%
9602 >;%
9603 a=<%
9604 \ifHy@pdfa /F 4\fi

```

```

9605 \Hy@setpdfborder
9606 \ifx\@runbordercolor\relax
9607 \else
9608 /C[\@runbordercolor]%
9609 \fi
9610 >%
9611 }%
9612 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9613 \special{!endaref}%
9614 }
9615 \def\Acrobatmenu#1#2{%
9616 \Hy@Acrobatmenu{#1}{#2}{%
9617 \special{!%
9618   aref <u=/S /Named /N /#1>;%
9619   a=<%
9620     \ifHy@pdfa /F 4\fi
9621     \Hy@setpdfborder
9622     \ifx\@menubordercolor\relax
9623     \else
9624     /C[\@menubordercolor]%
9625     \fi
9626     >%
9627     }%
9628     \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9629     \special{!endaref}%
9630     }%
9631 }

```

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*.

```

9632 \ifnum\Hy@VTeXversion<702 %
9633 \else
9634 \def\hyper@pagetransition{%
9635 \ifx\@pdfpagetransition\relax
9636 \else
9637 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9638 \else
9639 \hvtex@parse@trans\@pdfpagetransition
9640 \fi
9641 \fi
9642 }%

```

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:

```

9643 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9644 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9645 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9646 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9647 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9648 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9649 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

9650 \def\hvtex@par@dimension{/Dm}%
9651 \def\hvtex@par@direction{/Di}%
9652 \def\hvtex@par@duration{/D}%
9653 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9654 \def\hvtex@gettoken{%
9655   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9656 }%

```

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

```

9657 \def\hvtex@gettoken@#1 #2\@nil{%
9658   \edef\hvtex@token{#1}%
9659   \edef\hvtex@buffer{#2}%
9660 }%
9661 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9662 \let\hvtex@trans@code\@empty
9663 \let\hvtex@param@dimension\@empty
9664 \let\hvtex@param@direction\@empty
9665 \let\hvtex@param@duration\@empty
9666 \let\hvtex@param@motion\@empty
9667 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9668 \hvtex@gettoken
9669 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9670   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9671     \else
9672       \hvtex@gettoken
9673     \fi
9674   \fi
9675   \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9676   \hvtex@trans@params
9677 }%

```

Reentrant macro to parse optional parameters.

```

9678 \def\hvtex@trans@params{%
9679   \ifx\hvtex@buffer\@empty
9680   \else
9681     \hvtex@gettoken
9682     \let\hvtex@trans@par\hvtex@token
9683     \ifx\hvtex@buffer\@empty
9684     \else
9685       \hvtex@gettoken
9686       \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

9687       \let\hvtex@param@duration\hvtex@token
9688     \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

9689       \expandafter\edef\expandafter\hvtex@param@motion
9690       \expandafter{\expandafter\@gobble\hvtex@token}%
9691     \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

9692       \expandafter\edef\expandafter\hvtex@param@dimension
9693       \expandafter{\expandafter\@gobble\hvtex@token}%
9694     \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).

```

9695       \let\hvtex@param@direction\hvtex@token
9696       \fi\fi\fi
9697     \fi
9698   \fi
9699   \ifx\hvtex@buffer\@empty
9700     \let\next\hvtex@produce@trans
9701   \else
9702     \let\next\hvtex@trans@params
9703   \fi
9704   \next
9705 }%

```

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

```

9706 \def\hvtex@produce@trans{%
9707   \let\vtex@trans@special\@empty
9708   \if S\hvtex@trans@code
9709     \edef\vtex@trans@special{\hvtex@trans@code
9710       \hvtex@param@dimension\hvtex@param@motion}%
9711   \else\if B\hvtex@trans@code
9712     \edef\vtex@trans@special{%
9713       \hvtex@trans@code\hvtex@param@dimension
9714     }%
9715   \else\if X\hvtex@trans@code
9716     \edef\vtex@trans@special{%
9717       \hvtex@trans@code\hvtex@param@motion
9718     }%
9719   \else\if W\hvtex@trans@code
9720     \edef\vtex@trans@special{%
9721       \hvtex@trans@code\hvtex@param@direction
9722     }%
9723   \else\if D\hvtex@trans@code

```

```

9724 \let\vtex@trans@special\hvtex@trans@code
9725 \else\if R\hvtex@trans@code
9726 \let\vtex@trans@special\hvtex@trans@code
9727 \else\if G\hvtex@trans@code
9728 \edef\vtex@trans@special{%
9729 \hvtex@trans@code\hvtex@param@direction
9730 }%
9731 \fi\fi\fi\fi\fi\fi
9732 \ifx\vtex@trans@special\@empty
9733 \else
9734 \ifx\hvtex@param@duration\@empty
9735 \else
9736 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9737 \multiply\dimen@\@m
9738 \edef\vtex@trans@special{%
9739 \vtex@trans@special,\strip@pt\dimen@
9740 }%
9741 \fi

```

And all the mess is just for this.

```

9742 \special{!trans \vtex@trans@special}%
9743 \fi
9744 }%
9745 \def\hyper@pageduration{%
9746 \ifx\@pdfpageduration\relax
9747 \else
9748 \ifx\@pdfpageduration\@empty
9749 \special{!duration-}%
9750 \else
9751 \special{!duration \@pdfpageduration}%
9752 \fi
9753 \fi
9754 }%
9755 \def\hyper@pagehidden{%
9756 \ifHy@useHidKey
9757 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9758 \fi
9759 }%
9760 \g@addto@macro\Hy@EveryPageBoxHook{%
9761 \hyper@pagetransition
9762 \hyper@pageduration
9763 \hyper@pagehidden
9764 }%
9765 \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

```

9766 \ifx\@pdfproducer\relax

```



```

9767 \def\@pdfproducer{VTeX}%
9768 \ifnum\Hy@VTeXversion>\z@
9769 \count@\VTeXversion
9770 \divide\count@ 100 %
9771 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9772 \multiply\count@ -100 %
9773 \advance\count@\VTeXversion
9774 \edef\@pdfproducer{%
9775   \@pdfproducer
9776   .\ifnum\count@<10 0\fi\the\count@
9777   \ifx\VTeXOS\@undefined\else
9778     \ifnum\VTeXOS>0 %
9779       \ifnum\VTeXOS<6 %
9780         \space(%
9781         \ifcase\VTeXOS
9782           \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9783         \fi
9784         )%
9785       \fi
9786     \fi
9787   \fi
9788   ,\space
9789   \ifnum\OpMode=\@ne PDF\else PS\fi
9790   \space backend%
9791   \ifx\gexmode\@undefined\else
9792     \ifnum\gexmode>\z@\space with GeX\fi
9793   \fi
9794 }%
9795 \fi
9796 \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).

```

9797 \def\PDF@SetupDoc{%
9798   \ifx\@pdfpagescrop\@empty
9799   \else
9800     \special{!pdfinfo b=<\@pdfpagescrop>}%
9801   \fi
9802   \ifx\@pdfstartpage\@empty
9803   \else
9804     \ifx\@pdfstartview\@empty
9805     \else
9806       \special{!onopen Page\@pdfstartpage}%
9807     \fi
9808   \fi

```

```

9809 \special{!pdfinfo p=</\@pdfpagemode>}%
9810 \ifx\@baseurl\@empty
9811 \else
9812 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9813 \fi
9814 \special{!pdfinfo v=<<<%
9815 \ifHy@toolbar\else /HideToolbar true\fi
9816 \ifHy@menubar\else /HideMenubar true\fi
9817 \ifHy>windowui\else /HideWindowUI true\fi
9818 \ifHy@fitwindow /FitWindow true\fi
9819 \ifHy@centerwindow /CenterWindow true\fi
9820 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9821 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9822 \Hy@UseNameKey{Direction}\@pdfdirection
9823 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9824 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9825 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9826 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9827 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9828 \Hy@UseNameKey{Duplex}\@pdfduplex
9829 \ifx\@pdfpicktraybypdfsize\@empty
9830 \else
9831 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9832 \fi
9833 \ifx\@pdfprintpagerange\@empty
9834 \else
9835 /PrintPageRange[\@pdfprintpagerange]%
9836 \fi
9837 \ifx\@pdfnumcopies\@empty
9838 \else
9839 /NumCopies \@pdfnumcopies
9840 \fi
9841 >>>}%
9842 \ifx\@pdfpagelayout\@empty
9843 \else
9844 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9845 \fi
9846 }%
9847 \HyInfo@AddonUnsupportedtrue
9848 \def\PDF@FinishDoc{%
9849 \Hy@UseMaketitleInfos
9850 \HyInfo@TrappedUnsupported
9851 \special{!pdfinfo a=<\@pdfauthor>}%
9852 \special{!pdfinfo t=<\@pdftitle>}%
9853 \special{!pdfinfo s=<\@pdfsubject>}%
9854 \special{!pdfinfo c=<\@pdfcreator>}%
9855 \ifx\@pdfproducer\relax
9856 \else
9857 \special{!pdfinfo r=<\@pdfproducer>}%
9858 \fi
9859 \special{!pdfinfo k=<\@pdfkeywords>}%
9860 \Hy@DisableOption{pdfauthor}%
9861 \Hy@DisableOption{pdftitle}%
9862 \Hy@DisableOption{pdfsubject}%
9863 \Hy@DisableOption{pdfcreator}%
9864 \Hy@DisableOption{pdfcreationdate}%
9865 \Hy@DisableOption{pdfmoddate}%

```

```

9866 \Hy@DisableOption{pdfproducer}%
9867 \Hy@DisableOption{pdfkeywords}%
9868 \Hy@DisableOption{pdftrapped}%
9869 \Hy@DisableOption{pdfinfo}%
9870 }
9871 </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.

```

9872 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
9873 <package>\providecommand*{\Hy@DistillerDestFix}{%
9874 <*pdfmark | dviwindo>
9875 \def\Hy@DistillerDestFix{%
9876 \begingroup
9877 \let\x\literalps@out

```

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

```

9878 \ifnum \@ifundefined{OpMode}{0}{%
9879 \@ifundefined{gexmode}{0}{%
9880 \ifnum\gexmode>0 \OpMode\else 0\fi
9881 }>1 %
9882 \def\x##1{%
9883 \immediate\special{!=##1}%
9884 }%
9885 \fi
9886 \x{%
9887 /product where{%
9888 pop %
9889 product(Distiller)search{%
9890 pop pop pop %
9891 version(.)search{%
9892 exch pop exch pop%
9893 (3011)eq{%
9894 gsave %
9895 newpath 0 0 moveto closepath clip%
9896 /Courier findfont 10 scalefont setfont %
9897 72 72 moveto(.)show %
9898 grestore%
9899 }if%
9900 }{pop}ifelse%
9901 }{pop}ifelse%
9902 }if%
9903 }%
9904 \endgroup
9905 }
9906 </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

```
9907 <*pdfmark>
9908 \Hy@breaklinks@unsupported
9909 \def\hyper@anchor#1{%
9910   \Hy@SaveLastskip
9911   \Hy@VerboseAnchor{#1}%
9912   \begingroup
9913     \pdfmark[\anchor@spot]{%
9914       pdfmark=/DEST,%
9915       linktype=anchor,%
9916       View=/\@pdfview \@pdfviewparams,%
9917       DestAnchor={#1}%
9918     }%
9919   \endgroup
9920   \Hy@RestoreLastskip
9921 }
9922 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
9923 \def\hyper@anchorstart#1{%
9924   \Hy@SaveLastskip
9925   \Hy@VerboseAnchor{#1}%
9926   \literalps@out{H.S}%
9927   \Hy@AllowHyphens
9928   \xdef\hyper@currentanchor{#1}%
9929   \Hy@activeanchortrue
9930 }
9931 \def\hyper@anchorend{%
9932   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9933   \pdfmark{%
9934     pdfmark=/DEST,%
9935     linktype=anchor,%
9936     View=/\@pdfview \@pdfviewparams,%
9937     DestAnchor=\hyper@currentanchor,%
9938   }%
9939   \Hy@activeanchorfalse
9940   \Hy@RestoreLastskip
9941 }
9942 \def\hyper@linkstart#1#2{%
9943   \Hy@VerboseLinkStart{#1}{#2}%
9944   \ifHy@breaklinks
9945     \else
9946     \leavevmode\hbox\bgroup
9947     \fi
9948   \expandafter\Hy@colorlink\csname @#1color\endcsname
```

```

9949 \literalps@out{H.S}%
9950 \Hy@AllowHyphens
9951 \xdef\hyper@currentanchor{#2}%
9952 \gdef\hyper@currentlinktype{#1}%
9953 }
9954 \def\hyper@linkend{%
9955 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9956 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
9957 \let\Hy@tempcolor\relax
9958 }{%
9959 \edef\Hy@tempcolor{%
9960 \csname @\hyper@currentlinktype bordercolor\endcsname
9961 }%
9962 }%
9963 \pdfmark{%
9964 pdfmark=/ANN,%
9965 linktype=link,%
9966 Subtype=/Link,%
9967 PDFAMark=4,%
9968 Dest=\hyper@currentanchor,%
9969 AcroHighlight=\@pdfhighlight,%
9970 Border=\@pdfborder,%
9971 BorderStyle=\@pdfborderstyle,%
9972 Color=\Hy@tempcolor,%
9973 Raw=H.B%
9974 }%
9975 \Hy@endcolorlink
9976 \ifHy@breaklinks
9977 \else
9978 \egroup
9979 \fi
9980 }

```

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.

```

9981 \begingroup
9982 \catcode'P=12 %
9983 \catcode'T=12 %
9984 \lowercase{\endgroup
9985 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
9986 }
9987 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

9988 \def\hyper@pagetransition{%
9989 \ifx\@pdfpagetransition\relax
9990 \else
9991 \ifx\@pdfpagetransition\empty
9992 % 1. Does an old entry have to be deleted?
9993 % 2. If 1=yes, how to delete?
9994 \else
9995 \pdfmark{%
9996 pdfmark=/PUT,%
9997 Raw={%
9998 \string{ThisPage\string}%
9999 <</Trans << /S /\@pdfpagetransition\space >> >>%

```

```

10000    }%
10001    }%
10002    \fi
10003    \fi
10004 }

```

\hyper@pageduration

```

10005 \def\hyper@pageduration{%
10006   \ifx\@pdfpageduration\relax
10007   \else
10008     \ifx\@pdfpageduration\@empty
10009       % 1. Does an old entry have to be deleted?
10010       % 2. If 1=yes, how to delete?
10011     \else
10012       \pdfmark{%
10013         pdfmark=/PUT,%
10014         Raw={%
10015           \string{ThisPage\string}%
10016           <</Dur \@pdfpageduration>>%
10017         }%
10018       }%
10019     \fi
10020   \fi
10021 }

```

\hyper@pagehidden

```

10022 \def\hyper@pagehidden{%
10023   \ifHy@useHidKey
10024     \pdfmark{%
10025       pdfmark=/PUT,%
10026       Raw={%
10027         \string{ThisPage\string}%
10028         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10029       }%
10030     }%
10031   \fi
10032 }

10033 \g@addto@macro\Hy@EveryPageBoxHook{%
10034   \hyper@pagetransition
10035   \hyper@pageduration
10036   \hyper@pagehidden
10037 }

10038 \def\hyper@image#1#2{%
10039   \hyper@linkurl{#2}{#1}%
10040 }

10041 \def\Hy@undefinedname{UNDEFINED}
10042 \def\hyper@link#1#2#3{%
10043   \Hy@VerboseLinkStart{#1}{#2}%
10044   \ltx@ifundefined{@#1bordercolor}{%
10045     \let\Hy@tempcolor\relax
10046   }{%
10047     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10048   }%
10049   \begingroup
10050     \protected@edef\Hy@testname{#2}%
10051     \ifx\Hy@testname\@empty

```

```

10052 \Hy@Warning{%
10053   Empty destination name,\MessageBreak
10054   using '\Hy@undefinedname'%
10055 }%
10056 \let\Hy@testname\Hy@undefinedname
10057 \fi
10058 \pdfmark[{#3}]{%
10059   Color=\Hy@tempcolor,%
10060   linktype={#1},%
10061   AcroHighlight=\@pdfhighlight,%
10062   Border=\@pdfborder,%
10063   BorderStyle=\@pdfborderstyle,%
10064   pdfmark=/ANN,%
10065   Subtype=/Link,%
10066   PDFAFlags=4,%
10067   Dest=\Hy@testname
10068 }%
10069 \endgroup
10070 }
10071 \newtoks\pdf@docset
10072 \def\PDF@FinishDoc{%
10073   \Hy@UseMaketitleInfos
10074   \HyInfo@GenerateAddons
10075   \let\Hy@temp\@empty
10076   \ifx\@pdfcreationdate\@empty
10077   \else
10078     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10079   \fi
10080   \ifx\@pdfmoddate\@empty
10081   \else
10082     \expandafter\def\expandafter\Hy@temp\expandafter{%
10083       \Hy@temp
10084       ModDate=\@pdfmoddate,%
10085     }%
10086   \fi
10087   \ifx\@pdfproducer\relax
10088   \else
10089     \expandafter\def\expandafter\Hy@temp\expandafter{%
10090       \Hy@temp
10091       Producer=\@pdfproducer,%
10092     }%
10093   \fi
10094   \expandafter
10095   \pdfmark\expandafter{%
10096     \Hy@temp
10097     pdfmark=/DOCINFO,%
10098     Title=\@pdftitle,%
10099     Subject=\@pdfsubject,%
10100     Creator=\@pdfcreator,%
10101     Author=\@pdfauthor,%
10102     Keywords=\@pdfkeywords,%
10103     Trapped=\@pdftrapped
10104   }%
10105   \ifx\HyInfo@Addons\@empty
10106   \else
10107     \pdfmark{%
10108       pdfmark=/DOCINFO,%

```

```

10109     Raw={\HyInfo@Addons}%
10110   }%
10111 \fi
10112 \Hy@DisableOption{pdfauthor}%
10113 \Hy@DisableOption{pdftitle}%
10114 \Hy@DisableOption{pdfsubject}%
10115 \Hy@DisableOption{pdfcreator}%
10116 \Hy@DisableOption{pdfcreationdate}%
10117 \Hy@DisableOption{pdfmoddate}%
10118 \Hy@DisableOption{pdfproducer}%
10119 \Hy@DisableOption{pdfkeywords}%
10120 \Hy@DisableOption{pdftrapped}%
10121 \Hy@DisableOption{pdfinfo}%
10122 }
10123 \def\PDF@SetupDoc{%
10124   \def\Hy@temp{}%
10125   \ifx\@pdfstartpage\@empty
10126   \else
10127     \ifx\@pdfstartview\@empty
10128     \else
10129       \edef\Hy@temp{%
10130         ,Page=\@pdfstartpage
10131         ,View=\@pdfstartview
10132       }%
10133     \fi
10134   \fi
10135   \edef\Hy@temp{%
10136     \noexpand\pdfmark{%
10137       pdfmark=/DOCVIEW,%
10138       PageMode=/\@pdfpagemode
10139     }\Hy@temp
10140   }%
10141 }%
10142 \Hy@temp
10143 \ifx\@pdfpagescrop\@empty
10144 \else
10145   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10146 \fi
10147 \edef\Hy@temp{%
10148   \ifHy@toolbar\else /HideToolbar true\fi
10149   \ifHy@menubar\else /HideMenubar true\fi
10150   \ifHy>windowui\else /HideWindowUI true\fi
10151   \ifHy@fitwindow /FitWindow true\fi
10152   \ifHy@centerwindow /CenterWindow true\fi
10153   \ifHy@displaydoctitle /DisplayDocTitle true\fi
10154   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
10155   \Hy@UseNameKey{Direction}\@pdfdirection
10156   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10157   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10158   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10159   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10160   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10161   \Hy@UseNameKey{Duplex}\@pdfduplex
10162   \ifx\@pdfpicktraybypdfsize\@empty
10163   \else
10164     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10165   \fi

```



```

10166 \ifx\@pdfprintpagerange\@empty
10167 \else
10168 /PrintPageRange[\@pdfprintpagerange]%
10169 \fi
10170 \ifx\@pdfnumcopies\@empty
10171 \else
10172 /NumCopies \@pdfnumcopies
10173 \fi
10174 }%
10175 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10176 \pdfmark{%
10177 pdfmark=/PUT,%
10178 Raw={%
10179 \string{Catalog\string}<<%
10180 \ifx\Hy@temp\@empty
10181 \else
10182 /ViewerPreferences<<\Hy@temp>>%
10183 \fi
10184 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10185 \ifx\@pdflang\@empty
10186 \else
10187 /Lang(\@pdflang)%
10188 \fi
10189 \ifx\@baseurl\@empty
10190 \else
10191 /URI<</Base(\Hy@pstringB)>>%
10192 \fi
10193 >>%
10194 }%
10195 }%
10196 }
10197 </pdfmark>
10198 <*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.

```

10199 \newif\ifHy@pdfmarkerror
10200 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
10201 \def\pdfmark@[#1]#2{%
10202 \Hy@pdfmarkerrorfalse
10203 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10204 \@processme
10205 \let\pdf@type\relax
10206 \setkeys{PDF}{#2}%
10207 \ifHy@pdfmarkerror
10208 \else
10209 \ifx\pdf@type\relax
10210 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10211 \ifx\#1\%
10212 \else
10213 \pdf@rect{#1}%
10214 \fi
10215 \else
10216 \ifx\#1\%

```

```

10217 \literalps@out{%
10218 [\the\pdf@toks\space\pdf@type\space pdfmark%
10219 }%
10220 \else
10221 \ltx@ifundefined{@\pdf@linktype color}{%
10222 \Hy@colorlink\@linkcolor
10223 }{%
10224 \expandafter\Hy@colorlink
10225 \csname @\pdf@linktype color\endcsname
10226 }%
10227 \pdf@rect{#1}%
10228 \literalps@out{%
10229 [\the\pdf@toks\space\pdf@type\space pdfmark%
10230 }%
10231 \Hy@endcolorlink
10232 \fi
10233 \fi
10234 \fi
10235 }

```

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}

```

```

10236 \newsavebox{\pdf@box}
10237 \providecommand*{\Hy@setouterhbox}{\sbox}
10238 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10239 \def\Hy@DEST{/DEST}
10240 \def\pdf@rect#1{%
10241 \leavevmode
10242 \ifHy@breaklinks
10243 \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10244 \else
10245 \sbox\pdf@box{#1}%
10246 \fi
10247 \dimen@ht\pdf@box
10248 \ifdim\dp\pdf@box=\z@
10249 \literalps@out{H.S}%
10250 \else
10251 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10252 \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...).

```

10253 \ifHy@breaklinks
10254 \expandafter\Hy@breaklinksunhbox
10255 \else
10256 \expandafter\box
10257 \fi
10258 \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

10259 \ifdim\dimen@=\z@
10260 \literalps@out{H.R}%
10261 \else
10262 \raise\dimen@\hbox{\literalps@out{H.R}}%
10263 \fi
10264 \ifx\pdf@type\Hy@DEST
10265 \else
10266 \pdf@addtoksx{H.B}%
10267 \fi
10268 }

```

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.

```

10269 \newtoks\pdf@toks
10270 \newtoks\pdf@defaulttoks
10271 \pdf@defaulttoks={}
10272 \def\pdf@addtoks#1#2{%
10273 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10274 \@processme
10275 }
10276 \def\pdf@addtoksx#1{%
10277 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10278 \@processme
10279 }
10280 \def\PDFdefaults#1{%
10281 \pdf@defaulttoks={#1}%
10282 }

```

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

```

10283 % what is the type of pdfmark?
10284 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10285 % what is the link type?
10286 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10287 \def\pdf@linktype{link}
10288 % parameter is a stream of PDF
10289 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10290 % parameter is a name
10291 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10292 % parameter is a array
10293 \define@key{PDF}{Border}{%
10294 \edef\Hy@temp{#1}%
10295 \ifx\Hy@temp\@empty
10296 \else
10297 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10298 \fi
10299 }
10300 \let\Hy@BorderArrayPatch\@empty
10301 % parameter is a dictionary
10302 \define@key{PDF}{BorderStyle}{%
10303 \edef\Hy@temp{#1}%
10304 \ifx\Hy@temp\@empty
10305 \else
10306 \pdf@addtoks{<<#1>>}{BS}%

```

```

10307 \fi
10308 }
10309 % parameter is a array
10310 \define@key{PDF}{Color}{%
10311 \ifx\relax#1\relax
10312 \else
10313 \pdf@addtoks{[#1]}{Color}% hash-ok
10314 \fi
10315 }
10316 % parameter is a string
10317 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10318 % parameter is a integer
10319 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10320 % parameter is a array
10321 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10322 % parameter is a string
10323 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10324 % parameter is a string or file
10325 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10326 % parameter is a destination
10327 \define@key{PDF}{Dest}{%
10328 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10329 \ifx\Hy@pstringDest\@empty
10330 \Hy@pdfmarkerrortrue
10331 \Hy@Warning{Destination with empty name ignored}%
10332 \else
10333 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10334 \fi
10335 }
10336 \define@key{PDF}{DestAnchor}{%
10337 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10338 \ifx\Hy@pstringDest\@empty
10339 \Hy@pdfmarkerrortrue
10340 \Hy@Warning{Destination with empty name ignored}%
10341 \else
10342 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10343 \fi
10344 }
10345 % parameter is a string
10346 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10347 % parameter is a string
10348 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10349 % parameter is a int
10350 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10351 \define@key{PDF}{PDFAFFlags}{%
10352 \ifHy@pdfa
10353 \pdf@addtoks{#1}{F}%
10354 \fi
10355 }
10356 % parameter is a name
10357 \define@key{PDF}{AcroHighlight}{%
10358 \begingroup
10359 \edef\x{#1}%
10360 \expandafter\endgroup\ifx\x\@empty
10361 \else
10362 \pdf@addtoks{#1}{H}%
10363 \fi

```

```

10364 }
10365 % parameter is a string
10366 \define@key{PDF}{ID}{\pdf@addtoks{(#1)}{ID}}% hash-ok
10367 % parameter is a string
10368 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10369 % parameter is a string
10370 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10371 % parameter is a string
10372 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10373 % parameter is a Boolean
10374 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10375 % parameter is a integer or name
10376 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10377 % parameter is a name
10378 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10379 % parameter is a string
10380 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10381 % parameter is a array
10382 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10383 % parameter is a integer
10384 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10385 % parameter is a name
10386 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10387 % parameter is a string
10388 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10389 % parameter is a string
10390 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10391 % parameter is a string
10392 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10393 % parameter is an array
10394 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10395 % parameter is a string
10396 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10397 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10398 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10399 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10400 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10401 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10402 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10403 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10404 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10405 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10406 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10407 \define@key{PDF}{Trapped}{%
10408   \edef\Hy@temp{#1}%
10409   \ifx\Hy@temp\@empty
10410     \else
10411       \pdf@addtoks{/#1}{Trapped}%
10412     \fi
10413 }
10414
10415 </pdfmarkbase>
10416 <*pdfmark>
10417 \def\Acrobatmenu#1#2{%
10418   \Hy@Acrobatmenu{#1}{#2}{%
10419     \pdfmark[{#2]}{%

```

```

10420     linktype=menu,%
10421     pdfmark=/ANN,%
10422     AcroHighlight=\@pdfhighlight,%
10423     Border=\@pdfborder,%
10424     BorderStyle=\@pdfborderstyle,%
10425     Action={<< /Subtype /Named /N /#1 >>},%
10426     Subtype=/Link,%
10427     PDFAFlags=4%
10428   }%
10429 }%
10430 }

```

And now for some useful examples:

```

10431 \def\PDFNextPage{\@ifnextchar[\PDFNextPage@]{\PDFNextPage@[]}}
10432 \def\PDFNextPage@[#1]#2{%
10433   \pdfmark[{#2}]{%
10434     #1,%
10435     Border=\@pdfborder,%
10436     BorderStyle=\@pdfborderstyle,%
10437     Color=.2 .1 .5,%
10438     pdfmark=/ANN,%
10439     Subtype=/Link,%
10440     PDFAFlags=4,%
10441     Page=/Next%
10442   }%
10443 }
10444 \def\PDFPreviousPage{%
10445   \@ifnextchar[\PDFPreviousPage@]{\PDFPreviousPage@[]}%
10446 }
10447 \def\PDFPreviousPage@[#1]#2{%
10448   \pdfmark[{#2}]{%
10449     #1,%
10450     Border=\@pdfborder,%
10451     BorderStyle=\@pdfborderstyle,%
10452     Color=.4 .4 .1,%
10453     pdfmark=/ANN,%
10454     Subtype=/Link,%
10455     PDFAFlags=4,%
10456     Page=/Prev%
10457   }%
10458 }
10459 \def\PDFOpen#1{%
10460   \pdfmark{#1,pdfmark=/DOCVIEW}%
10461 }

```

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

```

10462 \def\hyper@linkurl#1#2{%
10463   \begingroup
10464     \Hy@pstringdef\Hy@pstringURI{#2}%
10465     \hyper@chars
10466     \leavevmode
10467     \pdfmark[{#1}]{%
10468       pdfmark=/ANN,%
10469       linktype=url,%
10470       AcroHighlight=\@pdfhighlight,%
10471       Border=\@pdfborder,%
10472       BorderStyle=\@pdfborderstyle,%
10473       Color=\@urlbordercolor,%

```

```

10474     Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10475     Subtype=/Link,%
10476     PDFAFlags=4%
10477   }%
10478 \endgroup
10479 }
10480 \def\hyper@linkfile#1#2#3{%
10481   \begingroup
10482     \Hy@pstringdef\Hy@pstringF{#2}%
10483     \Hy@pstringdef\Hy@pstringD{#3}%
10484     \leavevmode
10485     \pdfmark[{#1}]{%
10486       pdfmark=/ANN,%
10487       Subtype=/Link,%
10488       PDFAFlags=4,%
10489       AcroHighlight=\@pdfhighlight,%
10490       Border=\@pdfborder,%
10491       BorderStyle=\@pdfborderstyle,%
10492       linktype=file,%
10493       Color=\@filebordercolor,%
10494       Action={%
10495         <<%
10496           /S/GoToR%
10497           \Hy@SetNewWindow
10498           /F(\Hy@pstringF)%
10499           /D\ifx\#3\[\[0 \@pdfstartview]\else(\Hy@pstringD)cvn\fi
10500         >>%
10501       }%
10502     }%
10503   \endgroup
10504 }
10505 \def\@hyper@launch run:#1\#2#3{%
10506   \begingroup
10507     \Hy@pstringdef\Hy@pstringF{#1}%
10508     \Hy@pstringdef\Hy@pstringP{#3}%
10509     \leavevmode
10510     \pdfmark[{#2}]{%
10511       pdfmark=/ANN,%
10512       Subtype=/Link,%
10513       PDFAFlags=4,%
10514       AcroHighlight=\@pdfhighlight,%
10515       Border=\@pdfborder,%
10516       BorderStyle=\@pdfborderstyle,%
10517       linktype=run,%
10518       Color=\@runbordercolor,%
10519       Action={%
10520         <<%
10521           /S/Launch%
10522           \Hy@SetNewWindow
10523           /F(\Hy@pstringF)%
10524           \ifx\#3\[%
10525             \else
10526             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10527           \fi
10528         >>%
10529       }%
10530     }%

```

```

10531 \endgroup
10532 }
10533 </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.

```

10534 <*dvips>
10535 \providecommand*\XR@ext>{pdf}
10536 \def\Hy@raisedlink{}
10537 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10538 \def\headerps@out#1{\special{! #1}}%
10539 \input{pdfmark.def}%
10540 \ifx\@pdfproducer\relax
10541 \def\@pdfproducer{dvips + Distiller}%
10542 \fi
10543 \providecommand*\@pdfborder{0 0 1}
10544 \providecommand*\@pdfborderstyle{}
10545 \providecommand*\@pdfview{XYZ}
10546 \providecommand*\@pdfviewparams{ H.V}
10547 \def\Hy@BorderArrayPatch{BorderArrayPatch}
10548 \g@addto@macro\Hy@FirstPageHook{%
10549 \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.

```

10550 /DvipsToPDF{72.27 mul Resolution div} def%
10551 /PDFToDvips{72.27 div Resolution mul} def%
10552 /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.

```

10553 /BorderArrayPatch{%
10554 [exch{%
10555 dup dup type/integertype eq exch type/realtype eq or%
10556 {BPToDvips}if%
10557 }forall]%
10558 }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.


```

10559 /HyperBorder {1 PDFToDvips} def%
10560 /H.V {pdf@hoff pdf@voff null} def%
10561 /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

```

10562 /H.S {%
10563   currentpoint %
10564   HyperBorder add /pdf@lly exch def %
10565   dup DvipsToPDF 72 add /pdf@hoff exch def %
10566   HyperBorder sub /pdf@llx exch def%
10567 } 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`

```

10568 /H.L {%
10569   2 sub dup%
10570   /HyperBasePt exch def %
10571   PDFToDvips /HyperBaseDvips exch def %
10572   currentpoint %
10573   HyperBaseDvips sub /pdf@ury exch def%
10574   /pdf@urx exch def%
10575 } def%
10576 /H.A {%
10577   H.L %
10578 % |pdf@voff| = the distance from the top of the page to a point
10579 % |\baselineskip| above the current point in PDF coordinates
10580   currentpoint exch pop %
10581   vsize 72 sub exch DvipsToPDF %
10582   HyperBasePt sub % baseline skip
10583   sub /pdf@voff exch def%
10584 } def%
10585 /H.R {%
10586   currentpoint %
10587   HyperBorder sub /pdf@ury exch def %
10588   HyperBorder add /pdf@urx exch def %
10589 % |pdf@voff| = the distance from the top of the page to the current point, in
10590 % PDF coordinates
10591   currentpoint exch pop vsize 72 sub %
10592   exch DvipsToPDF sub /pdf@voff exch def%
10593 } def%
10594 }%
10595 }
10596 \AtBeginShipoutFirst{%
10597   \ifHy@setpagesize
10598     \begingroup
10599     \@ifundefined{stockwidth}{%
10600       \ifdim\paperwidth>\z@
10601         \ifdim\paperheight>\z@
10602           \special{papersize=\the\paperwidth,\the\paperheight}%
10603         \fi
10604       \fi
10605     }{%

```

```

10606     \ifdim\stockwidth>\z@
10607     \ifdim\stockheight>\z@
10608     \special{papersize=\the\stockwidth,\the\stockheight}%
10609     \fi
10610     \fi
10611   }%
10612 \endgroup
10613 \fi
10614 \Hy@DisableOption{setpagesize}%
10615 }
10616 </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.

```

10617 < *vtexpdfmark >
10618 \providecommand*{\XR@ext}{pdf}
10619 \def\Hy@raisedlink{}
10620 \def\literals@out#1{\special{pS:#1}}%
10621 \def\headerps@out#1{\immediate\special{pS:#1}}%
10622 \input{pdfmark.def}%
10623 \ifx\@pdfproducer\relax
10624   \ifnum\OpMode=\@ne
10625     \def\@pdfproducer{VTeX}%
10626   \else
10627     \def\@pdfproducer{VTeX + Distiller}%
10628   \fi
10629 \fi
10630 \providecommand*\@pdfborder{0 0 1}
10631 \providecommand*\@pdfborderstyle{}
10632 \providecommand*\@pdfview{XYZ}
10633 \providecommand*\@pdfviewparams{ H.V}

10634 \g@addto@macro\Hy@FirstPageHook{%
10635   \headerps@out{%
10636     /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.

```

10637   /HyperBorder {1} def%
10638   /H.V {pdf@hoff pdf@voff null} def%
10639   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10640   /H.S {%
10641     currentpoint %
10642     HyperBorder sub%
10643     /pdf@lly exch def %
10644     dup 72 add /pdf@hoff exch def %
10645     HyperBorder sub%
10646     /pdf@llx exch def%
10647   } def%

```

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

```

10648 /H.L {%
10649 2 sub%
10650 /HyperBasePt exch def %
10651 currentpoint %
10652 HyperBasePt add HyperBorder add%
10653 /pdf@ury exch def %
10654 HyperBorder add%
10655 /pdf@urx exch def%
10656 } def%
10657 /H.A {%
10658 H.L %
10659 currentpoint exch pop %
10660 vsize 72 sub exch %
10661 HyperBasePt add add%
10662 /pdf@voff exch def%
10663 } def%

```

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

```

10664 /H.R {%
10665 currentpoint %
10666 HyperBorder add%
10667 /pdf@ury exch def %
10668 HyperBorder add%
10669 /pdf@urx exch def %
10670 currentpoint exch pop vsize 72 sub add%
10671 /pdf@voff exch def%
10672 } def%
10673 }%
10674 }
10675 </vtexpdfmark>

```

46.11 Textures

```

10676 <*textures>
10677 \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.

```

10678 \begingroup
10679 \obeylines %
10680 \gdef\Hy@ps@CR{\noexpand
10681 }%
10682 \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`.

```
10683 \def\literalps@out#1{%
10684   \special{postscript 0 0 transform}%
10685   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10686 }%
10687 %
```

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.

```
10688 \def\headerps@out#1{%
10689   \special{%
10690     prepostscript TeXdict begin\Hy@ps@CR
10691       #1\Hy@ps@CR
10692     end%
10693   }%
10694 }%
10695 %
```

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.

```
10696 \g@addto@macro\Hy@FirstPageHook{%
10697   \headerps@out{%
10698     /betterpdfmark {%
10699       systemdict begin %
10700         dup /BP eq%
10701         {cleartomark gsave nulldevice []%
10702         {dup /EP eq%
10703           {cleartomark cleartomark grestore}%
10704           {cleartomark}%
10705           ifelse%
10706         }ifelse %
10707       end%
10708     }def\Hy@ps@CR
10709     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10710   }% end of \headerps@out
10711 }% end of \AtBeginShipoutFirst
10712 %
10713 \input{pdfmark.def}%
10714 %
10715 \ifx\@pdfproducer\relax
10716   \def\@pdfproducer{Textures + Distiller}%
10717 \fi
10718 \providecommand*\@pdfborder{0 0 1}
10719 \providecommand*\@pdfborderstyle{}
10720 \providecommand*\@pdfview{XYZ}
10721 \providecommand*\@pdfviewparams{ H.V}
10722 %
```

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 .

```
10723 \Hy@AtBeginDocument{%
```

10724 \headerps@out{%

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

```
10725 /vsize {\Hy@pageheight} def%
10726 /DvipsToPDF {} def%
10727 /PDFToDvips {} def%
10728 /BPToDvips {} def%
10729 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10730 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10731 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10732 /H.S {%
10733   currentpoint %
10734   HyperBorder add /pdf@lly exch def %
10735   dup DvipsToPDF 72 add /pdf@hoff exch def %
10736   HyperBorder sub /pdf@llx exch def%
10737 } def\Hy@ps@CR
10738 /H.L {%
10739   2 sub %
10740   PDFToDvips /HyperBase exch def %
10741   currentpoint %
10742   HyperBase sub /pdf@ury exch def%
10743   /pdf@urx exch def%
10744 } def\Hy@ps@CR
10745 /H.A {%
10746   H.L %
10747   currentpoint exch pop %
10748   vsize 72 sub exch DvipsToPDF %
10749   HyperBase sub % baseline skip
10750   sub /pdf@voff exch def%
10751 } def\Hy@ps@CR
10752 /H.R {%
10753   currentpoint %
10754   HyperBorder sub /pdf@ury exch def %
10755   HyperBorder add /pdf@urx exch def %
10756   currentpoint exch pop vsize 72 sub %
10757   exch DvipsToPDF sub /pdf@voff exch def%
10758 } def\Hy@ps@CR
10759 }%
10760 }

10761 \Hy@AtBeginDocument{%
10762   \ifHy@colorlinks
10763     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10764   \fi
10765 }
```

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.

```
10766 \expandafter\let\expandafter\keepPDF@SetupDoc
10767   \csname PDF@SetupDoc\endcsname
10768 \def\PDF@SetupDoc{%
10769   \ifx\@baseurl\@empty
10770     \else
10771       \special{html:<base href="\@baseurl">}%
10772     \fi
10773   \keepPDF@SetupDoc
10774 }
```

```

10775 \def\hyper@anchor#1{%
10776   \Hy@SaveLastskip
10777   \Hy@VerboseAnchor{#1}%
10778   \begingroup
10779     \let\protect=\string
10780     \special{html:<a name=%
10781       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10782   \endgroup
10783   \Hy@activeanchortrue
10784   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10785   \special{html:</a>}%
10786   \Hy@activeanchorfalse
10787   \Hy@RestoreLastskip
10788 }
10789 \def\hyper@anchorstart#1{%
10790   \Hy@SaveLastskip
10791   \Hy@VerboseAnchor{#1}%
10792   \begingroup
10793     \hyper@chars
10794     \special{html:<a name=%
10795       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10796   \endgroup
10797   \Hy@activeanchortrue
10798 }
10799 \def\hyper@anchorend{%
10800   \special{html:</a>}%
10801   \Hy@activeanchorfalse
10802   \Hy@RestoreLastskip
10803 }
10804 \def\@urlltype{url}
10805 \def\hyper@linkstart#1#2{%
10806   \Hy@VerboseLinkStart{#1}{#2}%
10807   \expandafter\Hy@colorlink\csname @#1color\endcsname
10808   \def\Hy@tempa{#1}%
10809   \ifx\Hy@tempa\@urlltype
10810     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10811   \else
10812     \begingroup
10813       \hyper@chars
10814       \special{%
10815         html:<a href=%
10816           \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
10817       }%
10818     \endgroup
10819   \fi
10820 }
10821 \def\hyper@linkend{%
10822   \special{html:</a>}%
10823   \Hy@endcolorlink
10824 }
10825 \def\hyper@linkfile#1#2#3{%
10826   \hyper@linkurl{#1}%
10827   \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10828 }%
10829 }
10830 \def\hyper@linkurl#1#2{%
10831   \leavevmode

```

```

10832 \ifHy@raiselinks
10833   \setbox\@tempboxa=\color@hbox #1\color@endbox
10834   \@linkdim\dp\@tempboxa
10835   \lower\@linkdim\hbox{%
10836     \hyper@chars
10837     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10838   }%
10839   \Hy@colorlink\@urlcolor#1%
10840   \@linkdim\ht\@tempboxa
10841   \advance\@linkdim by -6.5\p@
10842   \raise\@linkdim\hbox{\special{html:</a>}}%
10843   \Hy@endcolorlink
10844 \else
10845   \begingroup
10846     \hyper@chars
10847     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10848     \Hy@colorlink\@urlcolor#1%
10849     \special{html:</a>}%
10850     \Hy@endcolorlink
10851   \endgroup
10852 \fi
10853 }

```

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

```

10854 \def\hyper@link#1#2#3{%
10855   \Hy@VerboseLinkStart{#1}{#2}%
10856   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
10857 }
10858 \def\hyper@image#1#2{%
10859   \begingroup
10860     \hyper@chars
10861     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10862   \endgroup
10863 }
10864 </textures>

```

46.12 dvipsone

```

10865 % \subsection{dvipsone driver}
10866 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10867 % |\special| commands.
10868 <*dvipsone>
10869 \providecommand*\XR@ext}{pdf}
10870 \def\Hy@raisedlink{}
10871 \providecommand*\@pdfborder{0 0 1}
10872 \providecommand*\@pdfborderstyle{}
10873 \def\literalps@out#1{\special{ps:#1}}%
10874 \def\headerps@out#1{\special{headertext=#1}}%
10875 \input{pdfmark.def}%
10876 \ifx\@pdfproducer\relax
10877   \def\@pdfproducer{dvipsone + Distiller}%
10878 \fi
10879 \HyInfo@AddonUnsupportedtrue
10880 \def\PDF@FinishDoc{%
10881   \Hy@UseMaketitleInfos
10882   \HyInfo@TrappedUnsupported
10883   \special{PDF: Keywords \@pdfkeywords}%
10884   \special{PDF: Title \@pdftitle}%

```

```

10885 \special{PDF: Creator \@pdfcreator}%
10886 \ifx\@pdfcreationdate\@empty
10887 \else
10888 \special{PDF: CreationDate \@pdfcreationdate}%
10889 \fi
10890 \ifx\@pdfmoddate\@empty
10891 \else
10892 \special{PDF: ModDate \@pdfmoddate}%
10893 \fi
10894 \special{PDF: Author \@pdfauthor}%
10895 \ifx\@pdfproducer\relax
10896 \else
10897 \special{PDF: Producer \@pdfproducer}%
10898 \fi
10899 \special{PDF: Subject \@pdfsubject}%
10900 \Hy@DisableOption{pdfauthor}%
10901 \Hy@DisableOption{pdftitle}%
10902 \Hy@DisableOption{pdfsubject}%
10903 \Hy@DisableOption{pdfcreator}%
10904 \Hy@DisableOption{pdfcreationdate}%
10905 \Hy@DisableOption{pdfmoddate}%
10906 \Hy@DisableOption{pdfproducer}%
10907 \Hy@DisableOption{pdfkeywords}%
10908 \Hy@DisableOption{pdftrapped}%
10909 \Hy@DisableOption{pdfinfo}%
10910 }
10911 \def\PDF@SetupDoc{%
10912 \def\Hy@temp{}%
10913 \ifx\@pdfstartpage\@empty
10914 \else
10915 \ifx\@pdfstartview\@empty
10916 \else
10917 \edef\Hy@temp{%
10918 ,Page=\@pdfstartpage
10919 ,View=\@pdfstartview
10920 }%
10921 \fi
10922 \fi
10923 \edef\Hy@temp{%
10924 \noexpand\pdfmark{%
10925 pdfmark=/DOCVIEW,%
10926 PageMode=/\@pdfpagemode
10927 \Hy@temp
10928 }%
10929 }%
10930 \Hy@temp
10931 \ifx\@pdfpagescrop\@empty
10932 \else
10933 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10934 \fi
10935 \edef\Hy@temp{%
10936 \ifHy@toolbar\else /HideToolbar true\fi
10937 \ifHy@menubar\else /HideMenubar true\fi
10938 \ifHy>windowui\else /HideWindowUI true\fi
10939 \ifHy@fitwindow /FitWindow true\fi
10940 \ifHy@centerwindow /CenterWindow true\fi
10941 \ifHy@displaydoctitle /DisplayDocTitle true\fi

```



```

10942 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10943 \Hy@UseNameKey{Direction}\@pdfdirection
10944 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10945 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10946 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10947 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10948 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10949 \Hy@UseNameKey{Duplex}\@pdfduplex
10950 \ifx\@pdfpicktraybypdfsize\@empty
10951 \else
10952 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10953 \fi
10954 \ifx\@pdfprintpagerange\@empty
10955 \else
10956 /PrintPageRange[\@pdfprintpagerange]%
10957 \fi
10958 \ifx\@pdfnumcopies\@empty
10959 \else
10960 /NumCopies \@pdfnumcopies
10961 \fi
10962 }%
10963 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10964 \pdfmark{%
10965 pdfmark=/PUT,%
10966 Raw={%
10967 \string{Catalog\string}<<%
10968 \ifx\Hy@temp\@empty
10969 \else
10970 /ViewerPreferences<<\Hy@temp>>%
10971 \fi
10972 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10973 \ifx\@pdflang\@empty
10974 \else
10975 /Lang(\@pdflang)%
10976 \fi
10977 \ifx\@baseurl\@empty
10978 \else
10979 /URI<</Base(\Hy@pstringB)>>%
10980 \fi
10981 >>%
10982 }%
10983 }%
10984 }
10985 \providecommand*\@pdfview{XYZ}
10986 \providecommand*\@pdfviewparams{ %
10987 gsave revscl currentpoint grestore %
10988 72 add exch pop null exch null%
10989 }
10990 \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 T_EX.

```

10991 \g@addto@macro\Hy@FirstPageHook{%
10992 \headerps@out{%

```

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

```

10993 /DvipsToPDF { 65781 div } def%
10994 /PDFToDvips { 65781 mul } def%
10995 /BPToDvips{65781 mul}def%
10996 /HyperBorder { 1 PDFToDvips } def%
10997 /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.

```

10998 /BorderArrayPatch{%
10999   [exch{%
11000     dup dup type/integertype eq exch type/realtype eq or%
11001     {BPToDvips}if%
11002   }forall]%
11003 }def%

11004 /H.S {%
11005   currentpoint %
11006   HyperBorder add /pdf@lly exch def %
11007   dup DvipsToPDF 72 add /pdf@hoff exch def %
11008   HyperBorder sub /pdf@llx exch def%
11009 } def%

11010 /H.L {%
11011   2 sub %
11012   PDFToDvips /HyperBase exch def %
11013   currentpoint %
11014   HyperBase sub /pdf@ury exch def%
11015   /pdf@urx exch def%
11016 } def%

11017 /H.A {%
11018   H.L %
11019   currentpoint exch pop %
11020   HyperBase sub % baseline skip
11021   DvipsToPDF /pdf@voff exch def%
11022 } def%

11023 /H.R {%
11024   currentpoint %
11025   HyperBorder sub /pdf@ury exch def %
11026   HyperBorder add /pdf@urx exch def %
11027   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11028 } def%
11029 }%
11030 }
11031 </dvipsone>

```

46.13 TeX4ht

```

11032 <*tex4ht>
11033 \providecommand*{\XR@ext}{html}
11034 \def\Hy@raisedlink{}
11035 \@ifpackageloaded{tex4ht}{%
11036   \typeout{hyperref tex4ht: tex4ht already loaded}%
11037 }{%
11038   \RequirePackage[hx4ht]{tex4ht}%
11039 }
11040 \hyperlinkfileprefix{}
11041 \def\PDF@FinishDoc{}
11042 \def\PDF@SetupDoc{%

```

```

11043 \ifx\@baseurl\@empty
11044 \else
11045   \special{t4ht=<base href="\@baseurl">}%
11046 \fi
11047 }
11048 \def\hyper@anchor#1{%
11049   \Hy@SaveLastskip
11050   \Hy@VerboseAnchor{#1}%
11051   \begingroup
11052     \let\protect=\string
11053     \special{t4ht=<a name=%
11054       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11055   \endgroup
11056   \Hy@activeanchortrue
11057   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11058   \special{t4ht=</a>}%
11059   \Hy@activeanchorfalse
11060   \Hy@RestoreLastskip
11061 }
11062 \def\hyper@anchorstart#1{%
11063   \Hy@SaveLastskip
11064   \Hy@VerboseAnchor{#1}%
11065   \begingroup
11066     \hyper@chars\special{t4ht=<a name=%
11067       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11068   \endgroup
11069   \Hy@activeanchortrue
11070 }
11071 \def\hyper@anchorend{%
11072   \special{t4ht=</a>}%
11073   \Hy@activeanchorfalse
11074   \Hy@RestoreLastskip
11075 }
11076 \def\@urltype{url}
11077 \def\hyper@linkstart#1#2{%
11078   \Hy@VerboseLinkStart{#1}{#2}%
11079   \expandafter\Hy@colorlink\csname @#1color\endcsname
11080   \def\Hy@tempa{#1}%
11081   \ifx\Hy@tempa\@urltype
11082     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11083   \else
11084     \begingroup
11085       \hyper@chars
11086       \special{t4ht=<a href=%
11087         \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
11088     \endgroup
11089   \fi
11090 }
11091 \def\hyper@linkend{%
11092   \special{t4ht=</a>}%
11093   \Hy@endcolorlink
11094 }
11095 \def\hyper@linkfile#1#2#3{%
11096   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
11097 }
11098 \def\hyper@linkurl#1#2{%
11099   \leavevmode

```

```

11100 \ifHy@raiselinks
11101   \setbox\@tempboxa=\color@hbox #1\color@endbox
11102   \@linkdim\dp\@tempboxa
11103   \lower\@linkdim\hbox{%
11104     \begingroup
11105     \hyper@chars
11106     \special{%
11107       t4ht=<a href=\hyper@quote#2\hyper@quote>%
11108     }%
11109   \endgroup
11110 }%
11111 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11112 \@linkdim\ht\@tempboxa
11113 \advance\@linkdim by -6.5\p@
11114 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11115 \else
11116 \begingroup
11117   \hyper@chars
11118   \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11119   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11120   \special{t4ht=</a>}%
11121 \endgroup
11122 \fi
11123 }

```

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

```

11124 \def\hyper@link#1#2#3{%
11125   \Hy@VerboseLinkStart{#1}{#2}%
11126   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
11127 }
11128 \def\hyper@image#1#2{%
11129   \begingroup
11130   \hyper@chars
11131   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11132 \endgroup
11133 }
11134 \let\autoref\ref
11135 \ifx \rEfLiNK \UnDef
11136   \def\rEfLiNK #1#2{#2}%
11137 \fi
11138 \def\backref#1{}
11139 </tex4ht>
11140 <*tex4htcfg>
11141 \IfFileExists{\jobname.cfg}{\endinput}{}
11142 \Preamble{html}
11143   \begin{document}%
11144 \EndPreamble
11145 \def\TeX{\TeX}
11146 \def\OMEGA{\Omega}
11147 \def\LaTeX{\LaTeX}
11148 \def\LaTeXe{\LaTeX2e}
11149 \def\eTeX{e-TeX}
11150 \def\MF{Metafont}
11151 \def\MP{MetaPost}
11152 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```
11153 <*pdfmark>
11154 \long\def\@Form[#1]{%
11155 \g@addto@macro\Hy@FirstPageHook{%
11156 \headerps@out{%
11157 [%
11158 /__objdef{pdfDocEncoding}%
11159 /type/dict%
11160 /OBJ pdfmark%
11161 [%
11162 {pdfDocEncoding}%
11163 <<%
11164 /Type/Encoding%
11165 /Differences%
11166 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11167 /tilde %
11168 39/quotesingle %
11169 96/grave %
11170 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11171 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11172 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11173 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11174 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11175 164/currency %
11176 166/brokenbar %
11177 168/dieresis/copyright/ordfeminine %
11178 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11179 /twosuperior/threesuperior/acute/mu %
11180 183/periodcentered/cedilla/onesuperior/ordmasculine %
11181 188/onequarter/onehalf/threequarters %
11182 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11183 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11184 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11185 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11186 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11187 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11188 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11189 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11190 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11191 /ucircumflex/udieresis/yacute/thorn/ydieresis%
11192 ]%
11193 >>%
11194 /PUT pdfmark%
11195 [%
11196 /__objdef{ZaDb}%
11197 /type/dict%
11198 /OBJ pdfmark%
11199 [%
11200 {ZaDb}%
11201 <<%
11202 /Type/Font%
11203 /Subtype/Type1%
11204 /Name/ZaDb%
11205 /BaseFont/ZapfDingbats%
```

```

11206 >>%
11207 /PUT pdfmark%
11208 [%
11209   /__objdef{Helv}%
11210   /type/dict%
11211 /OBJ pdfmark%
11212 [%
11213   {Helv}%
11214   <<%
11215     /Type/Font%
11216     /Subtype/Type1%
11217     /Name/Helv%
11218     /BaseFont/Helvetica%
11219     /Encoding{pdfDocEncoding}%
11220   >>%
11221 /PUT pdfmark%
11222 [%
11223   /__objdef{aform}%
11224   /type/dict%
11225 /OBJ pdfmark%
11226 [%
11227   /__objdef{afields}%
11228   /type/array%
11229 /OBJ pdfmark%
11230 {%
11231   [%
11232     /BBox[0 0 100 100]%
11233     /__objdef{Check}%
11234   /BP pdfmark %
11235   1 0 0 setrgbcolor%
11236   /ZapfDingbats 80 selectfont %
11237   20 20 moveto%
11238   (4)show%
11239 [/EP pdfmark%
11240 [%
11241   /BBox[0 0 100 100]%
11242   /__objdef{Cross}%
11243 /BP pdfmark %
11244   1 0 0 setrgbcolor%
11245   /ZapfDingbats 80 selectfont %
11246   20 20 moveto%
11247   (8)show%
11248 [/EP pdfmark%
11249 [%
11250   /BBox[0 0 250 100]%
11251   /__objdef{Submit}%
11252 /BP pdfmark %
11253   0.6 setgray %
11254   0 0 250 100 rectfill %
11255   1 setgray %
11256   2 2 moveto %
11257   2 98 lineto %
11258   248 98 lineto %
11259   246 96 lineto %
11260   4 96 lineto %
11261   4 4 lineto %
11262   fill %

```

```

11263 0.34 setgray %
11264 248 98 moveto %
11265 248 2 lineto %
11266 2 2 lineto %
11267 4 4 lineto %
11268 246 4 lineto %
11269 246 96 lineto %
11270 fill%
11271 /Helvetica 76 selectfont %
11272 0 setgray %
11273 8 22.5 moveto%
11274 (Submit)show%
11275 [/EP pdfmark%
11276 [%
11277 /BBox[0 0 250 100]%
11278 /_objdef{SubmitP}%
11279 /BP pdfmark %
11280 0.6 setgray %
11281 0 0 250 100 rectfill %
11282 0.34 setgray %
11283 2 2 moveto %
11284 2 98 lineto %
11285 248 98 lineto %
11286 246 96 lineto %
11287 4 96 lineto %
11288 4 4 lineto %
11289 fill %
11290 1 setgray %
11291 248 98 moveto %
11292 248 2 lineto %
11293 2 2 lineto %
11294 4 4 lineto %
11295 246 4 lineto %
11296 246 96 lineto %
11297 fill%
11298 /Helvetica 76 selectfont %
11299 0 setgray %
11300 10 20.5 moveto%
11301 (Submit)show%
11302 [/EP pdfmark%
11303 } ?pdfmark%
11304 [%
11305 {aform}%
11306 <<%
11307 /Fields{afields}%
11308 /DR<<%
11309 /Font<<%
11310 /ZaDb{ZaDb}%
11311 /Helv{Helv}%
11312 >>%
11313 >>%
11314 /DA(/Helv 10 Tf 0 g)%
11315 /CO{corder}%
11316 \ifHy@pdfa
11317 \else
11318 /NeedAppearances true%
11319 \fi

```

```

11320 >>%
11321 /PUT pdfmark%
11322 [%
11323 {Catalog}%
11324 <<%
11325   /AcroForm{aform}%
11326 >>%
11327 /PUT pdfmark%
11328 [%
11329   /__objdef{corder}%
11330   /type/array%
11331 /OBJ pdfmark% dps
11332 }}%
11333   \setkeys{Form}{#1}%
11334 }
11335 \def\@endForm{}
11336 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11337   \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11338 }
11339 \def\@TextField[#1]#2{% parameters, label
11340   \def\Fld@name{#2}%
11341   \def\Fld@default{}%
11342   \let\Fld@value\@empty
11343   \def\Fld@width{\DefaultWidthofText}%
11344   \def\Fld@height{%
11345     \ifFld@multiline
11346       \DefaultHeightofTextMultiline
11347     \else
11348       \DefaultHeightofText
11349     \fi
11350   }%
11351   \begingroup
11352     \Field@toks={ }%
11353     \expandafter\HyField@SetKeys\expandafter{%
11354       \DefaultOptionsofText,#1%
11355     }%
11356     \HyField@FlagsText
11357     \ifFld@hidden\def\Fld@width{1sp}\fi
11358     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11359     \LayoutTextField{#2}{%
11360       \Hy@escapeform\PDFForm@Text
11361       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11362         pdfmark=/ANN,Raw={\PDFForm@Text}%
11363       }%
11364     }%
11365   \endgroup
11366 }
11367 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11368   \def\Fld@name{#2}%
11369   \let\Fld@default\relax
11370   \let\Fld@value\relax
11371   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11372   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11373   \begingroup
11374     \Fld@menulength=0 %
11375     \@tempdima\z@
11376     \@for\@curropt:=#3\do{%

```



```

11377 \expandafter\Fld@checkequals\@curropt==\\%
11378 \Hy@StepCount\Fld@menulength
11379 \settowidth{\@tempdimb}{\@currDisplay}%
11380 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11381 }%
11382 \advance\@tempdima by 15\p@
11383 \Field@toks={ }%
11384 \begingroup
11385 \HyField@SetKeys{#1}%
11386 \edef\x{\endgroup
11387 \noexpand\expandafter
11388 \noexpand\HyField@SetKeys
11389 \noexpand\expandafter{%
11390 \expandafter\noexpand\csname DefaultOptionsof%
11391 \ifFld@radio
11392 Radio%
11393 \else
11394 \ifFld@combo
11395 \ifFld@popdown
11396 PopdownBox%
11397 \else
11398 ComboBox%
11399 \fi
11400 \else
11401 ListBox%
11402 \fi
11403 \fi
11404 \endcsname
11405 }%
11406 }\x
11407 \HyField@SetKeys{#1}%
11408 \ifFld@hidden\def\Fld@width{1sp}\fi
11409 \ifx\Fld@value\relax
11410 \let\Fld@value\Fld@default
11411 \fi
11412 \LayoutChoiceField{#2}{%
11413 \ifFld@radio
11414 \HyField@FlagsRadioButton
11415 \@@Radio{#3}%
11416 \else
11417 \begingroup
11418 \HyField@FlagsChoice
11419 \ifdim\Fld@width<\@tempdima
11420 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11421 \edef\Fld@width{\the\@tempdima}%
11422 \fi
11423 \ifFld@combo
11424 \else
11425 \@tempdima=\the\Fld@menulength\Fld@charsize
11426 \advance\@tempdima by \Fld@borderwidth bp %
11427 \advance\@tempdima by \Fld@borderwidth bp %
11428 \edef\Fld@height{\the\@tempdima}%
11429 \fi
11430 \@@ListBox{#3}%
11431 \endgroup
11432 \fi
11433 }%

```

```

11434 \endgroup
11435 }
11436 \def\@@Radio#1{%
11437   \Fld@listcount=0 %
11438   \@for\@curropt:=#1\do{%
11439     \expandafter\Fld@checkequals\@curropt==\%
11440     \Hy@StepCount\Fld@listcount
11441     \@currDisplay\space
11442     \Hy@escapeform\PDFForm@Radio
11443     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11444       pdfmark=/ANN,%
11445       Raw={%
11446         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11447       }%
11448     } % deliberate space between radio buttons
11449   }%
11450 }
11451 \newcount\Fld@listcount
11452 \def\@@ListBox#1{%
11453   \HyField@PDFChoices{#1}%
11454   \Hy@escapeform\PDFForm@List
11455   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11456     pdfmark=/ANN,Raw={\PDFForm@List}%
11457   }%
11458 }
11459 \def\@PushButton[#1]#2{% parameters, label
11460   \def\Fld@name{#2}%
11461   \begingroup
11462     \Field@toks={ }%
11463     \expandafter\HyField@SetKeys\expandafter{%
11464       \DefaultOptionsofPushButton,#1%
11465     }%
11466     \ifHy@pdfa
11467       \PackageError{hyperref}{%
11468         PDF/A: Push button with JavaScript is prohibited%
11469       }\@ehc
11470       \LayoutPushButtonField{%
11471         \leavevmode
11472         \MakeButtonField{#2}%
11473       }%
11474     \else
11475       \HyField@FlagsPushButton
11476       \ifFld@hidden\def\Fld@width{1sp}\fi
11477       \LayoutPushButtonField{%
11478         \leavevmode
11479         \Hy@escapeform\PDFForm@Push
11480         \pdfmark[\MakeButtonField{#2}]{%
11481           pdfmark=/ANN,Raw={\PDFForm@Push}%
11482         }%
11483       }%
11484     \fi
11485   \endgroup
11486 }
11487 \def\@Submit[#1]#2{%
11488   \Field@toks={ }%
11489   \def\Fld@width{\DefaultWidthofSubmit}%
11490   \def\Fld@height{\DefaultHeightofSubmit}%

```

```

11491 \begingroup
11492 \expandafter\HyField@SetKeys\expandafter{%
11493   \DefaultOptionsofSubmit,#1%
11494 }%
11495 \HyField@FlagsPushButton
11496 \HyField@FlagsSubmit
11497 \ifFld@hidden\def\Fld@width{1sp}\fi
11498 \Hy@escapeform\PDFForm@Submit
11499 \pdfmark[\MakeButtonField{#2}]{%
11500   pdfmark=/ANN,%
11501   Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11502 }%
11503 \endgroup
11504 }
11505 \def\@Reset[#1]#2{%
11506   \Field@toks={ }%
11507   \def\Fld@width{\DefaultWidthofReset}%
11508   \def\Fld@height{\DefaultHeightofReset}%
11509   \begingroup
11510     \expandafter\HyField@SetKeys\expandafter{%
11511       \DefaultOptionsofReset,#1%
11512     }%
11513     \leavevmode
11514     \ifHy@pdfa
11515       \PackageError{hyperref}{%
11516         PDF/A: Reset action is prohibited%
11517       }\@ehc
11518       \MakeButtonField{#2}%
11519     \else
11520       \HyField@FlagsPushButton
11521       \ifFld@hidden\def\Fld@width{1sp}\fi
11522       \Hy@escapeform\PDFForm@Reset
11523       \pdfmark[\MakeButtonField{#2}]{%
11524         pdfmark=/ANN,Raw={\PDFForm@Reset}%
11525       }%
11526     \fi
11527   \endgroup
11528 }%
11529 \def\@CheckBox[#1]#2{% parameters, label
11530   \def\Fld@name{#2}%
11531   \def\Fld@default{0}%
11532   \begingroup
11533     \def\Fld@width{\DefaultWidthofCheckBox}%
11534     \def\Fld@height{\DefaultHeightofCheckBox}%
11535     \Field@toks={ }%
11536     \expandafter\HyField@SetKeys\expandafter{%
11537       \DefaultOptionsofCheckBox,#1%
11538     }%
11539     \HyField@FlagsCheckBox
11540     \ifFld@hidden\def\Fld@width{1sp}\fi
11541     \LayoutCheckField{#2}{%
11542       \Hy@escapeform\PDFForm@Check
11543       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11544         pdfmark=/ANN,Raw={\PDFForm@Check}%
11545       }%
11546     }%
11547   \endgroup

```

```

11548 }
11549 </pdfmark>

```

47.2 HyperTeX

```

11550 <*hypertex>
11551 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11552 \def\@endForm{}
11553 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11554 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11555 }
11556 \def\@TextField[#1]#2{% parameters, label
11557 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11558 }
11559 \def\@CheckBox[#1]#2{% parameters, label
11560 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11561 }
11562 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11563 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11564 }
11565 \def\@PushButton[#1]#2{% parameters, label
11566 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11567 }
11568 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11569 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11570 </hypertex>

```

47.3 TeX4ht

```

11571 <*tex4ht>
11572 \def\@Form[#1]{%
11573 \setkeys{Form}{#1}%
11574 \HCode{<form action="\Form@action" method="\Form@method">}%
11575 }
11576 \def\@endForm{\HCode{</form>}}
11577 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11578 \typeout{Sorry, TeX4ht does not support gauges}%
11579 }
11580 \def\@TextField[#1]#2{% parameters, label
11581 \let\Hy@reserved@a\@empty
11582 \def\Fld@name{#2}%
11583 \def\Fld@default{}%
11584 \bgroup
11585 \Field@toks={ }%
11586 \setkeys{Field}{#1}%
11587 \HCode{<label for="\Fld@name">#2</label>}%
11588 \ifFld@password
11589 \@@PasswordField
11590 \else
11591 \@@TextField
11592 \fi
11593 \egroup
11594 }
11595 \def\@@PasswordField{%
11596 \HCode{%
11597 <input type="password" %
11598 id="\Fld@name" %
11599 name="\Fld@name" %
11600 \ifFld@hidden type="hidden" \fi

```

```

11601     value="\Fld@default" %
11602     \the\Field@toks
11603     >%
11604 }%
11605 }
11606 \def\@@TextField{%
11607   \ifFld@multiline
11608     \HCode{<textarea %
11609       \ifFld@readonly readonly \fi
11610       id="\Fld@name" %
11611       name="\Fld@name" %
11612       \ifFld@hidden type="hidden" \fi
11613       \the\Field@toks>%
11614     }%
11615     \Fld@default
11616     \HCode{</textarea>}%
11617   \else
11618     \HCode{<input type="text" %
11619       \ifFld@readonly readonly \fi
11620       id="\Fld@name" %
11621       name="\Fld@name" %
11622       \ifFld@hidden type="hidden" \fi
11623       value="\Fld@default" %
11624       \the\Field@toks>%
11625     }%
11626   \fi
11627 }
11628 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11629   \def\Fld@name{#2}%
11630   \def\Fld@default{#3}%
11631   \let\Hy@reserved@a\relax
11632   \begingroup
11633     \expandafter\Fld@findlength#3\\%
11634     \Field@toks={ }%
11635     \setkeys{Field}{#1}%
11636     #2%
11637     \ifFld@radio
11638       \expandafter\@@Radio#3\\%
11639     \else
11640       \expandafter\@@Menu#3\\%
11641     \fi
11642   \endgroup
11643 }
11644 \def\Fld@findlength#1\\{%
11645   \Fld@menulength=0 %
11646   \@for\@currupt:=#1\do{\Hy@StepCount\Fld@menulength}%
11647 }
11648 \def\@@Menu#1\\{%
11649   \HCode{<select size="\the\Fld@menulength" %
11650     name="\Fld@name" %
11651     \the\Field@toks>%
11652   }%
11653   \@for\@currupt:=#1\do{%
11654     \expandafter\Fld@checkequals\@currupt==\\%
11655     \HCode{<option %
11656       \ifx\@currupt\Fld@default selected \fi
11657       value="\@currValue">\@currDisplay</option>%

```

```

11658 }%
11659 }%
11660 \HCode{</select>}%
11661 }
11662 \def\@@Radio#1\{%
11663 \@for\@curropt:=#1\do{%
11664 \expandafter\Fld@checkequals\@curropt==\%
11665 \HCode{<input type="radio" %
11666 \ifx\@curropt\Fld@default checked \fi
11667 name="\Fld@name" %
11668 value="\@currValue" %
11669 \the\Field@toks}%
11670 }%
11671 \@currDisplay
11672 }%
11673 }
11674 \def\@PushButton[#1]#2{% parameters, label
11675 \def\Fld@name{#2}%
11676 \bgroup
11677 \Field@toks={}%
11678 \setkeys{Field}{#1}%
11679 \HCode{<input type="button" %
11680 name="\Fld@name" %
11681 value="#2" %
11682 \the\Field@toks}%
11683 }%
11684 \HCode{</button>}}%
11685 \egroup
11686 }
11687 \def\@Submit[#1]#2{%
11688 \HCode{<button type="submit">#2</button>}}%
11689 }
11690 \def\@Reset[#1]#2{%
11691 \HCode{<button type="reset">#2</button>}}%
11692 }
11693 \def\@CheckBox[#1]#2{% parameters, label
11694 \let\Hy@reserved@a\@empty
11695 \def\Fld@name{#2}%
11696 \def\Fld@default{0}%
11697 \bgroup
11698 \Field@toks={}%
11699 \setkeys{Field}{#1}%
11700 \HCode{<input type="checkbox" %
11701 \ifFld@checked checked \fi
11702 \ifFld@disabled disabled \fi
11703 \ifFld@readonly readonly \fi
11704 name="\Fld@name" %
11705 \ifFld@hidden type="hidden" \fi
11706 value="\Fld@default" %
11707 \the\Field@toks}%
11708 #2%
11709 }%
11710 \egroup
11711 }
11712 </tex4ht>

```

47.4 pdfTeX

```

11713 <*pdfTeX>
11714 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11715 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11716 }
11717 \def\MakeFieldObject#1#2{\sbox0{#1}%
11718 \immediate\pdfxform0 %
11719 \expandafter\edef\csname #2Object\endcsname{%
11720 \the\pdfastxform\space 0 R%
11721 }%
11722 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
11723 }%
11724 \def\HyField@afields{}
11725 \begingroup\expandafter\expandafter\expandafter\endgroup
11726 \expandafter\ifx\csname pdfastlink\endcsname\relax
11727 \let\HyField@AddToFields\relax
11728 \PackageInfo{hyperref}{%
11729 You need pdfTeX 1.40.0 for setting the /Fields entry.%
11730 \MessageBreak
11731 Adobe Reader/Acrobat accepts an empty /Field array,%
11732 \MessageBreak
11733 but other PDF viewers might complain%
11734 }%
11735 \else
11736 \def\HyField@AuxAddToFields#1{%
11737 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11738 \Hy@AtBeginDocument{%
11739 \if@filesw
11740 \immediate\write\@mainaux{%
11741 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11742 }%
11743 \fi
11744 \let\HyField@AfterAuxOpen\@firstofone
11745 \def\HyField@AuxAddToFields#1{%
11746 \xdef\HyField@afields{%
11747 \ifx\HyField@afields\@empty
11748 \else
11749 \HyField@afields
11750 \space
11751 \fi
11752 #1 0 R%
11753 }%
11754 }%
11755 }%
11756 \def\HyField@AddToFields{%
11757 \expandafter\HyField@@AddToFields\expandafter{%
11758 \the\pdfastlink
11759 }%
11760 }%
11761 \def\HyField@@AddToFields#1{%
11762 \HyField@AfterAuxOpen{%
11763 \if@filesw
11764 \write\@mainaux{%
11765 \string\HyField@AuxAddToFields{#1}%
11766 }%
11767 \fi
11768 }%
11769 }%

```

```

11770 \fi
11771 \def\@Form[#1]{%
11772   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11773   \setkeys{Form}{#1}%
11774   \Hy@FormObjects
11775   \ifnum\pdfTeXversion>13 %
11776     \pdfrefobj\OBJ@pdfdocencoding
11777     \pdfrefobj\OBJ@ZaDb
11778     \pdfrefobj\OBJ@Helv
11779   \fi
11780   \AtVeryEndDocument{%
11781     \immediate\pdfobj{%
11782       <<%
11783         /Fields[\HyField@afields]%
11784         /DR<<%
11785         /Font<<%
11786           /ZaDb \OBJ@ZaDb\space 0 R%
11787           /Helv \OBJ@Helv\space 0 R%
11788         >>%
11789       >>%
11790       /DA(/Helv 10 Tf 0 g)%
11791       \ifHy@pdfa
11792       \else
11793       /NeedAppearances true%
11794     \fi
11795     >>%
11796   }%
11797   \edef\OBJ@acroform{\the\pdfastobj}%
11798   \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11799 }%
11800 \MakeFieldObject{%

Same as \ding{123} of package pifont.
11801   \begingroup
11802     \fontfamily{pzd}%
11803     \fontencoding{U}%
11804     \fontseries{m}%
11805     \fontshape{n}%
11806     \selectfont
11807     \char123 %
11808   \endgroup
11809 }{Ding}%
11810 \MakeFieldObject{%
11811   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11812 }{Submit}%
11813 \MakeFieldObject{%
11814   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11815 }{SubmitP}%
11816 }
11817 \def\@endForm{}
11818 \def\@TextField[#1]#2{% parameters, label
11819   \def\Fld@name{#2}%
11820   \def\Fld@default{}%
11821   \let\Fld@value\@empty
11822   \def\Fld@width{\DefaultWidthofText}%
11823   \def\Fld@height{%
11824     \ifFld@multiline
11825       \DefaultHeightofTextMultiline

```



```

11826 \else
11827 \DefaultHeightofText
11828 \fi
11829 }%
11830 \begingroup
11831 \Field@toks={ }%
11832 \expandafter\HyField@SetKeys\expandafter{%
11833 \DefaultOptionsofText,#1%
11834 }%
11835 \PDFForm@Name
11836 \HyField@FlagsText
11837 \ifFld@hidden\def\Fld@width{1sp}\fi
11838 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11839 \LayoutTextField{#2}{%
11840 \Hy@escapeform\PDFForm@Text
11841 \pdfstartlink user {\PDFForm@Text}\relax
11842 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11843 \HyField@AddToFields
11844 }%
11845 \endgroup
11846 }
11847 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11848 \def\Fld@name{#2}%
11849 \let\Fld@default\relax
11850 \let\Fld@value\relax
11851 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11852 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11853 \begingroup
11854 \Fld@menulength=0 %
11855 \@tempdima\z@
11856 \@for\@curropt:=#3\do{%
11857 \expandafter\Fld@checkequals\@curropt==\\%
11858 \Hy@StepCount\Fld@menulength
11859 \settowidth{\@tempdimb}{\@currDisplay}%
11860 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11861 }%
11862 \advance\@tempdima by 15\p@
11863 \Field@toks={ }%
11864 \begingroup
11865 \HyField@SetKeys{#1}%
11866 \edef\x{\endgroup
11867 \noexpand\expandafter
11868 \noexpand\HyField@SetKeys
11869 \noexpand\expandafter{%
11870 \expandafter\noexpand\curname DefaultOptionsof%
11871 \ifFld@radio
11872 Radio%
11873 \else
11874 \ifFld@combo
11875 \ifFld@popdown
11876 PopdownBox%
11877 \else
11878 ComboBox%
11879 \fi
11880 \else
11881 ListBox%
11882 \fi

```

```

11883     \fi
11884     \endcsname
11885   }%
11886 } \x
11887 \HyField@SetKeys{#1}%
11888 \PDFForm@Name
11889 \ifFld@hidden\def\Fld@width{1sp}\fi
11890 \ifx\Fld@value\relax
11891   \let\Fld@value\Fld@default
11892 \fi
11893 \LayoutChoiceField{#2}{%
11894   \ifFld@radio
11895     \HyField@FlagsRadioButton
11896     \@@Radio{#3}%
11897   \else
11898     \begingroup
11899     \HyField@FlagsChoice
11900     \ifdim\Fld@width<\@tempdima
11901       \ifdim\@tempdima<1cm\@tempdima1cm\fi
11902       \edef\Fld@width{\the\@tempdima}%
11903     \fi
11904     \ifFld@combo
11905     \else
11906       \@tempdima=\the\Fld@menulength\Fld@charsize
11907       \advance\@tempdima by \Fld@borderwidth bp %
11908       \advance\@tempdima by \Fld@borderwidth bp %
11909       \edef\Fld@height{\the\@tempdima}%
11910     \fi
11911     \@@ListBox{#3}%
11912   \endgroup
11913 \fi
11914 }%
11915 \endgroup
11916 }
11917 \def\@@Radio#1{%
11918   \Fld@listcount=0 %
11919   \@for\@curropt=#1\do{%
11920     \expandafter\Fld@checkequals\@curropt==\%
11921     \Hy@StepCount\Fld@listcount
11922     \@currDisplay\space
11923     \leavevmode
11924     \Hy@escapeform\PDFForm@Radio
11925     \pdfstartlink user {%
11926       \PDFForm@Radio
11927       /AP<<%
11928       /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.

```

11929     /\@currValue\space \DingObject
11930     >>%
11931     >>%
11932   }%
11933   \relax
11934   \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11935   \ifnum\Fld@listcount=1 %
11936     \HyField@AddToFields

```

```

11937 \fi
11938 \space % deliberate space between radio buttons
11939 }%
11940 }
11941 \newcount\Fld@listcount
11942 \def\@@ListBox#1{%
11943 \HyField@PDFChoices{#1}%
11944 \leavevmode
11945 \Hy@escapeform\PDFForm@List
11946 \pdfstartlink user {\PDFForm@List}\relax
11947 \MakeChoiceField{\Fld@width}{\Fld@height}%
11948 \pdfendlink
11949 \HyField@AddToFields
11950 }
11951 \def\@PushButton[#1]#2{% parameters, label
11952 \def\Fld@name{#2}%
11953 \begingroup
11954 \Field@toks={ }%
11955 \expandafter\HyField@SetKeys\expandafter{%
11956 \DefaultOptionsofPushButton,#1%
11957 }%
11958 \PDFForm@Name
11959 \ifHy@pdfa
11960 \PackageError{hyperref}{%
11961 PDF/A: Push button with JavaScript is prohibited%
11962 }{\@ehc
11963 \LayoutPushButtonField{%
11964 \leavevmode
11965 \MakeButtonField{#2}%
11966 }%
11967 \else
11968 \HyField@FlagsPushButton
11969 \ifFld@hidden\def\Fld@width{1sp}\fi
11970 \LayoutPushButtonField{%
11971 \leavevmode
11972 \Hy@escapeform\PDFForm@Push
11973 \pdfstartlink user {\PDFForm@Push}\relax
11974 \MakeButtonField{#2}%
11975 \pdfendlink
11976 \HyField@AddToFields
11977 }%
11978 \fi
11979 \endgroup
11980 }
11981 \def\@Submit[#1]#2{%
11982 \Field@toks={ }%
11983 \def\Fld@width{\DefaultWidthofSubmit}%
11984 \def\Fld@height{\DefaultHeightofSubmit}%
11985 \begingroup
11986 \expandafter\HyField@SetKeys\expandafter{%
11987 \DefaultOptionsofSubmit,#1%
11988 }%
11989 \HyField@FlagsPushButton
11990 \HyField@FlagsSubmit
11991 \ifFld@hidden\def\Fld@width{1sp}\fi
11992 \leavevmode
11993 \Hy@escapeform\PDFForm@Submit

```

```

11994 \pdfstartlink user {%
11995 \PDFForm@Submit
11996 /AP<</N \SubmitObject/D \SubmitPObject>>%
11997 }%
11998 \relax
11999 \MakeButtonField{#2}%
12000 \pdfendlink
12001 \HyField@AddToFields
12002 \endgroup
12003 }
12004 \def\@Reset[#1]#2{%
12005 \Field@toks={ }%
12006 \def\Fld@width{\DefaultWidthofReset}%
12007 \def\Fld@height{\DefaultHeightofReset}%
12008 \begingroup
12009 \expandafter\HyField@SetKeys\expandafter{%
12010 \DefaultOptionsofReset,#1%
12011 }%
12012 \leavevmode
12013 \ifHy@pdfa
12014 \PackageError{hyperref}{%
12015 PDF/A: Reset action is prohibited%
12016 }{\@ehc
12017 \MakeButtonField{#2}%
12018 \else
12019 \HyField@FlagsPushButton
12020 \ifFld@hidden\def\Fld@width{1sp}\fi
12021 \Hy@escapeform\PDFForm@Reset
12022 \pdfstartlink user {\PDFForm@Reset}\relax
12023 \MakeButtonField{#2}%
12024 \pdfendlink
12025 \HyField@AddToFields
12026 \fi
12027 \endgroup
12028 }
12029 \def\@CheckBox[#1]#2{% parameters, label
12030 \def\Fld@name{#2}%
12031 \def\Fld@default{0}%
12032 \begingroup
12033 \def\Fld@width{\DefaultWidthofCheckBox}%
12034 \def\Fld@height{\DefaultHeightofCheckBox}%
12035 \Field@toks={ }%
12036 \expandafter\HyField@SetKeys\expandafter{%
12037 \DefaultOptionsofCheckBox,#1%
12038 }%
12039 \PDFForm@Name
12040 \HyField@FlagsCheckBox
12041 \ifFld@hidden\def\Fld@width{1sp}\fi
12042 \LayoutCheckField{#2}{%
12043 \Hy@escapeform\PDFForm@Check
12044 \pdfstartlink user {\PDFForm@Check}\relax
12045 \MakeCheckField{\Fld@width}{\Fld@height}%
12046 \pdfendlink
12047 \HyField@AddToFields
12048 }%
12049 \endgroup
12050 }

```

```

12051 \def\Hy@FormObjects{%
12052   \pdfobj {%
12053     <<%
12054       /Type/Encoding%
12055       /Differences[%
12056         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12057         /ring/tilde %
12058         39/quotesingle %
12059         96/grave %
12060         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12061         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12062         /quotedblbase/quotedblleft/quotedblright/quoteleft%
12063         /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12064         /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12065         164/currency %
12066         166/brokenbar %
12067         168/dieresis/copyright/ordfeminine %
12068         172/logicalnot/.notdef/registered/macron/degree/plusminus%
12069         /twosuperior/threesuperior/acute/mu %
12070         183/periodcentered/cedilla/onesuperior/ordmasculine %
12071         188/onequarter/onehalf/threequarters %
12072         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12073         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12074         /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12075         /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12076         /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12077         /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12078         /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12079         /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12080         /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12081         /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12082       ]%
12083     >>%
12084   }%
12085   \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
12086   \pdfobj{%
12087     <<%
12088       /Type/Font%
12089       /Subtype/Type1%
12090       /Name/ZaDb%
12091       /BaseFont/ZapfDingbats%
12092     >>%
12093   }%
12094   \xdef\OBJ@ZaDb{\the\pdfastobj}%
12095   \pdfobj{%
12096     <<%
12097       /Type/Font%
12098       /Subtype/Type1%
12099       /Name/Helv%
12100       /BaseFont/Helvetica%
12101       /Encoding \OBJ@pdfdocencoding\space 0 R%
12102     >>%
12103   }%
12104   \xdef\OBJ@Helv{\the\pdfastobj}%
12105   \global\let\Hy@FormObjects\relax
12106 }
12107 </pdftex>

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdfTeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
12108 \langle *dvipdfm | xetex \rangle
```

\@Gauge

```
12109 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12110 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12111 }
```

\@Form

```
12112 \def\@Form[#1]{%
12113 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12114 \setkeys{Form}{#1}%
12115 \Hy@FormObjects
12116 \@pdfm@mark{obj @afields []}%
12117 \@pdfm@mark{obj @corder []}%
12118 \@pdfm@mark{%
12119   obj @aform <<%
12120     /Fields @afields%
12121     /DR<<%
12122     /Font<<%
12123     /ZaDb @OBJZaDb%
12124     /Helv @OBJHelv%
12125     >>%
12126     >>%
12127     /DA(/Helv 10 Tf 0 g)%
12128     /CO @corder%
12129     \ifHy@pdfa
12130     \else
12131     /NeedAppearances true%
12132     \fi
12133     >>%
12134   }%
12135 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
12136 }
```

\@endForm

```
12137 \def\@endForm{}
```

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

```
12138 \def\dvipdfm@setdim{%
12139   height \the\ht\pdfm@box\space
12140   width \the\wd\pdfm@box\space
12141   depth \the\dp\pdfm@box\space
12142 }
```

\HyField@AnnotCount

```
12143 \newcount\HyField@AnnotCount
12144 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
12145 \def\HyField@AdvanceAnnotCount{%
12146   \global\advance\HyField@AnnotCount\@ne
12147 }
```

\HyField@TheAnnotCount

```
12148 \def\HyField@TheAnnotCount{%  
12149   \the\HyField@AnnotCount  
12150 }
```

\@TextField

```
12151 \def\@TextField[#1]#2{% parameters, label  
12152   \def\Fld@name{#2}%  
12153   \def\Fld@default{ }%  
12154   \let\Fld@value\@empty  
12155   \def\Fld@width{\DefaultWidthofText}%  
12156   \def\Fld@height{%  
12157     \ifFld@multiline  
12158       \DefaultHeightofTextMultiline  
12159     \else  
12160       \DefaultHeightofText  
12161     \fi  
12162   }%  
12163   \begingroup  
12164     \Field@toks={ }%  
12165     \expandafter\HyField@SetKeys\expandafter{%  
12166       \DefaultOptionsofText,#1%  
12167     }%  
12168     \PDFForm@Name  
12169     \HyField@FlagsText  
12170     \ifFld@hidden\def\Fld@width{1sp}\fi  
12171     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi  
12172     \setbox\pdfm@box=\hbox{%  
12173       \MakeTextField{\Fld@width}{\Fld@height}%  
12174     }%  
12175     \HyField@AdvanceAnnotCount  
12176     \LayoutTextField{#2}{%  
12177       \Hy@escapeform\PDFForm@Text  
12178       \@pdfm@mark{%  
12179         ann @text\HyField@TheAnnotCount\space  
12180         \dvipdfm@setdim << \PDFForm@Text >>%  
12181       }%  
12182     }%  
12183     \unhbox\pdfm@box  
12184     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%  
12185     % record in @afields array  
12186   \endgroup  
12187 }
```

\@ChoiceMenu

```
12188 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices  
12189   \def\Fld@name{#2}%  
12190   \let\Fld@default\relax  
12191   \let\Fld@value\relax  
12192   \def\Fld@width{\DefaultWidthofChoiceMenu}%  
12193   \def\Fld@height{\DefaultHeightofChoiceMenu}%  
12194   \begingroup  
12195     \Fld@menulength=0 %  
12196     \@tempdima\z@  
12197     \@for\@curropt:=#3\do{%  
12198       \expandafter\Fld@checkequals\@curropt==\\%  
12199       \Hy@StepCount\Fld@menulength
```

```

12200 \settowidth{\@tempdimb}{\@currDisplay}%
12201 \ifdim \@tempdimb > \@tempdima \@tempdima \@tempdimb \fi
12202 }%
12203 \advance \@tempdima by 15\p@
12204 \Field@toks={ }%
12205 \begingroup
12206 \HyField@SetKeys{#1}%
12207 \edef\x{\endgroup
12208 \noexpand\expandafter
12209 \noexpand\HyField@SetKeys
12210 \noexpand\expandafter{%
12211 \expandafter\noexpand\csname DefaultOptionsof%
12212 \ifFld@radio
12213 Radio%
12214 \else
12215 \ifFld@combo
12216 \ifFld@popdown
12217 PopdownBox%
12218 \else
12219 ComboBox%
12220 \fi
12221 \else
12222 ListBox%
12223 \fi
12224 \fi
12225 \endcsname
12226 }%
12227 }\x
12228 \HyField@SetKeys{#1}%
12229 \PDFForm@Name
12230 \ifFld@hidden\def\Fld@width{1sp}\fi
12231 \ifx\Fld@value\relax
12232 \let\Fld@value\Fld@default
12233 \fi
12234 \LayoutChoiceField{#2}{%
12235 \ifFld@radio
12236 \HyField@FlagsRadioButton
12237 \@@Radio{#3}%
12238 \else
12239 \begingroup
12240 \HyField@FlagsChoice
12241 \ifdim\Fld@width < \@tempdima
12242 \ifdim \@tempdima < 1cm\@tempdima 1cm\fi
12243 \edef\Fld@width{\the\@tempdima}%
12244 \fi
12245 \ifFld@combo
12246 \else
12247 \@tempdima=\the\Fld@menulength\Fld@charsize
12248 \advance\@tempdima by \Fld@borderwidth bp %
12249 \advance\@tempdima by \Fld@borderwidth bp %
12250 \edef\Fld@height{\the\@tempdima}%
12251 \fi
12252 \@@ListBox{#3}%
12253 \endgroup
12254 \fi
12255 }%
12256 \endgroup

```



```

12257 }

\@@Radio
12258 \def\@@Radio#1{%
12259   \Fld@listcount=0 %
12260   \setbox\pdfm@box=\hbox{%
12261     \MakeRadioField{\Fld@width}{\Fld@height}%
12262   }%
12263   \@for\@curropt:=#1\do{%
12264     \expandafter\Fld@checkequals\@curropt==\%
12265     \Hy@StepCount\Fld@listcount
12266     \@currDisplay\space
12267     \leavevmode
12268     \Hy@escapeform\PDFForm@Radio
12269     \ifnum\Fld@listcount=1 %
12270       \HyField@AdvanceAnnotCount
12271     \fi
12272     \@pdfm@mark{%
12273       ann %
12274       \ifnum\Fld@listcount=1 %
12275         @radio\HyField@TheAnnotCount%
12276       \space
12277     \fi
12278     \dvipdfm@setdim
12279     <<%
12280     \PDFForm@Radio
12281     /AP<</N<</\@currValue /null>>>>%
12282     >>%
12283   }%
12284   \unhcopy\pdfm@box\space% deliberate space between radio buttons
12285   \ifnum\Fld@listcount=1 %
12286     \@pdfm@mark{%
12287       put @afields @radio\HyField@TheAnnotCount
12288     }%
12289   \fi
12290 }%
12291 }

\Fld@listcount
12292 \newcount\Fld@listcount

\@@Listbox
12293 \def\@@Listbox#1{%
12294   \HyField@PDFChoices{#1}%
12295   \setbox\pdfm@box=\hbox{%
12296     \MakeChoiceField{\Fld@width}{\Fld@height}%
12297   }%
12298   \leavevmode
12299   \Hy@escapeform\PDFForm@List
12300   \HyField@AdvanceAnnotCount
12301   \@pdfm@mark{%
12302     ann @list\HyField@TheAnnotCount\space
12303     \dvipdfm@setdim
12304     <<\PDFForm@List>>%
12305   }%
12306   \unhbox\pdfm@box
12307   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%

```

12308 }

\@PushButton

```
12309 \def\@PushButton[#1]#2{% parameters, label
12310   \def\Fld@name{#2}%
12311   \begingroup
12312     \Field@toks={ }%
12313     \expandafter\HyField@SetKeys\expandafter{%
12314       \DefaultOptionsofPushButton,#1%
12315     }%
12316     \PDFForm@Name
12317     \ifHy@pdfa
12318       \PackageError{hyperref}{%
12319         PDF/A: Push button with JavaScript is prohibited%
12320       }\@ehc
12321       \LayoutPushButtonField{%
12322         \leavevmode
12323         \MakeButtonField{#2}%
12324       }%
12325     \else
12326       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12327       \HyField@FlagsPushButton
12328       \ifFld@hidden\def\Fld@width{1sp}\fi
12329       \HyField@AdvanceAnnotCount
12330       \LayoutPushButtonField{%
12331         \leavevmode
12332         \Hy@escapeform\PDFForm@Push
12333         \@pdfm@mark{%
12334           ann @push\HyField@TheAnnotCount\space
12335           \dvipdfm@setdim
12336           <<\PDFForm@Push>>%
12337         }%
12338       }%
12339       \unhbox\pdfm@box
12340       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12341     \fi
12342   \endgroup
12343 }
```

\@Submit

```
12344 \def\@Submit[#1]#2{%
12345   \Field@toks={ }%
12346   \def\Fld@width{\DefaultWidthofSubmit}%
12347   \def\Fld@height{\DefaultHeightofSubmit}%
12348   \begingroup
12349     \expandafter\HyField@SetKeys\expandafter{%
12350       \DefaultOptionsofSubmit,#1%
12351     }%
12352     \HyField@FlagsPushButton
12353     \HyField@FlagsSubmit
12354     \ifFld@hidden\def\Fld@width{1sp}\fi
12355     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12356     \leavevmode
12357     \Hy@escapeform\PDFForm@Submit
12358     \HyField@AdvanceAnnotCount
12359     \@pdfm@mark{%
12360       ann @submit\HyField@TheAnnotCount\space
```

```

12361 \dvi pdfm@setdim
12362 <<\PDFForm@Submit>>%
12363 }%
12364 \unhbox\pdfm@box%
12365 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12366 \endgroup
12367 }

\@Reset
12368 \def\@Reset[#1]#2{%
12369 \Field@toks={ }%
12370 \def\Fld@width{\DefaultWidthofReset}%
12371 \def\Fld@height{\DefaultHeightofReset}%
12372 \begingroup
12373 \expandafter\HyField@SetKeys\expandafter{%
12374 \DefaultOptionsofReset,#1%
12375 }%
12376 \leavevmode
12377 \ifHy@pdfa
12378 \PackageError{hyperref}{%
12379 PDF/A: Reset action is prohibited%
12380 }\@ehc
12381 \MakeButtonField{#2}%
12382 \else
12383 \HyField@FlagsPushButton
12384 \ifFld@hidden\def\Fld@width{1sp}\fi
12385 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12386 \Hy@escapeform\PDFForm@Reset
12387 \HyField@AdvanceAnnotCount
12388 \@pdfm@mark{%
12389 ann @reset\HyField@TheAnnotCount\space
12390 \dvi pdfm@setdim
12391 <<\PDFForm@Reset>>%
12392 }%
12393 \unhbox\pdfm@box
12394 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12395 \fi
12396 \endgroup
12397 }

\@CheckBox
12398 \def\@CheckBox[#1]#2{% parameters, label
12399 \def\Fld@name{#2}%
12400 \def\Fld@default{0}%
12401 \begingroup
12402 \def\Fld@width{\DefaultWidthofCheckBox}%
12403 \def\Fld@height{\DefaultHeightofCheckBox}%
12404 \Field@toks={ }%
12405 \expandafter\HyField@SetKeys\expandafter{%
12406 \DefaultOptionsofCheckBox,#1%
12407 }%
12408 \PDFForm@Name
12409 \HyField@FlagsCheckBox
12410 \ifFld@hidden\def\Fld@width{1sp}\fi
12411 \setbox\pdfm@box=\hbox{%
12412 \MakeCheckField{\Fld@width}{\Fld@height}%
12413 }%

```

```

12414 \HyField@AdvanceAnnotCount
12415 \LayoutCheckField{#2}{%
12416 \Hy@escapeform\PDFForm@Check
12417 \@pdfm@mark{%
12418 ann @check\HyField@TheAnnotCount\space
12419 \dvipdfm@setdim
12420 <<\PDFForm@Check>>%
12421 }%
12422 \unhbox\pdfm@box
12423 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12424 }%
12425 \endgroup
12426 }

12427 \def\Hy@FormObjects{%
12428 \@pdfm@mark{obj @OBJpdfdocencoding%
12429 <<%
12430 /Type/Encoding%
12431 /Differences[%
12432 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12433 39/quotesingle %
12434 96/grave %
12435 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12436 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12437 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12438 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12439 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12440 164/currency %
12441 166/brokenbar %
12442 168/dieresis/copyright/ordfeminine %
12443 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12444 /twosuperior/threesuperior/acute/mu %
12445 183/periodcentered/cedilla/onesuperior/ordmasculine %
12446 188/onequarter/onehalf/threequarters %
12447 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12448 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12449 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12450 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12451 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12452 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12453 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12454 /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12455 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12456 /thorn/ydieresis%
12457 ]%
12458 >>%
12459 }%
12460 \@pdfm@mark{obj @OBJZaDb%
12461 <<%
12462 /Type/Font%
12463 /Subtype/Type1%
12464 /Name/ZaDb%
12465 /BaseFont/ZapfDingbats%
12466 >>%
12467 }%
12468 \@pdfm@mark{obj @OBJHelv%
12469 <<%
12470 /Type/Font%

```

```

12471 /Subtype/Type1%
12472 /Name/Helv%
12473 /BaseFont/Helvetica%
12474 /Encoding @OBJpdfdocencoding%
12475 >>%
12476 }%
12477 \global\let\Hy@FormObjects\relax
12478 }
12479 </dvipdfm | xetex>

```

47.6 Common forms part

```
12480 <*pdfform>
```

\Hy@escapestring

```

12481 \begingroup\expandafter\expandafter\expandafter\endgroup
12482 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12483 \let\Hy@escapestring\@firstofone
12484 \def\Hy@escapeform#1{%
12485   \ifHy@escapeform
12486     \def\Hy@escapestring##1{%
12487       \noexpand\Hy@escapestring{\noexpand##1}%
12488     }%
12489     \edef\Hy@temp{#1}%
12490     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
12491     \def\Hy@escapestring##1{%
12492       \@ifundefined{Hy@esc@\string##1}{%
12493         ##1%
12494         \ThisShouldNotHappen
12495       }{%
12496         \csname Hy@esc@\string##1\endcsname
12497       }%
12498     }%
12499   \else
12500     \let\Hy@escapestring\@firstofone
12501   \fi
12502 }%
12503 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
12504   \ifx\#3\%
12505   \else
12506     \expandafter
12507     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12508     \Hy@ReturnAfterFi{%
12509       \Hy@@@escapeform#3\@nil
12510     }%
12511   \fi
12512 }%
12513 \else
12514   \def\Hy@escapeform#1{%
12515     \ifHy@escapeform
12516       \let\Hy@escapestring\pdfescapestring
12517     \else
12518       \let\Hy@escapestring\@firstofone
12519     \fi
12520   }%
12521   \Hy@escapeform{}%
12522 \fi

```

\PDFForm@Name

```
12523 \def\PDFForm@Name{%
12524   \begingroup
12525   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12526     \ifHy@unicode
12527       \Hy@unicodedefalse
12528     \fi
12529   \fi
12530   \HyPsd@XeTeXBigCharstrue
12531   \pdfstringdef\Hy@gtemp\Fld@name
12532 \endgroup
12533 \let\Fld@name\Hy@gtemp
12534 }
```

\PDFForm@Check

```
12535 \def\PDFForm@Check{%
12536   /Subtype/Widget%
12537   \Fld@annotflags
12538   /T(\Fld@name)%
12539   /FT/Btn%
12540   \Fld@flags
12541   /Q \Fld@align
12542   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12543   /MK<<%
12544     \ifnum\Fld@rotation=\z@
12545     \else
12546       /R \Fld@rotation
12547     \fi
12548     \ifx\Fld@bordercolor\relax
12549     \else
12550       /BC[\Fld@bordercolor]%
12551     \fi
12552     \ifx\Fld@bcolor\relax
12553     \else
12554       /BG[\Fld@bcolor]%
12555     \fi
12556     /CA(\Hy@escapestring{\Fld@cbsymbol})%
12557   >>%
12558   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12559     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12560   /H/P%
12561   \ifFld@checked /V/Yes\else /V/Off\fi
12562 }
```

\PDFForm@Push

```
12563 \ifHy@pdfa
12564 \else
12565   \def\PDFForm@Push{%
12566     /Subtype/Widget%
12567     \Fld@annotflags
12568     /T(\Fld@name)%
12569     /FT/Btn%
12570     \Fld@flags
12571     /H/P%
12572     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12573     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12574       \ifx\Fld@bordercolor\relax\else 1\fi
```

```

12575         \space
12576     \else
12577         /MK<<%
12578         \ifnum\Fld@rotation=\z@
12579         \else
12580         /R \Fld@rotation
12581         \fi
12582         \ifx\Fld@bordercolor\relax
12583         \else
12584         /BC[\Fld@bordercolor]%
12585         \fi
12586         >>%
12587     \fi
12588     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12589 }%
12590 \fi

```

\Fld@additionalactions

```

12591 \def\Fld@@additionalactions{%
K input (keystroke) format
12592 \ifx\Fld@keystroke@code\@empty
12593 \else
12594 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12595 \fi
F display format
12596 \ifx\Fld@format@code\@empty
12597 \else
12598 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12599 \fi
V validation
12600 \ifx\Fld@validate@code\@empty
12601 \else
12602 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12603 \fi
C calculation
12604 \ifx\Fld@calculate@code\@empty
12605 \else
12606 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12607 \fi
Fo receiving the input focus
12608 \ifx\Fld@onfocus@code\@empty
12609 \else
12610 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12611 \fi
Bl loosing the input focus (blurred)
12612 \ifx\Fld@onblur@code\@empty
12613 \else
12614 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12615 \fi
D pressing the mouse button (down)
12616 \ifx\Fld@onmousedown@code\@empty
12617 \else
12618 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12619 \fi

```

U releasing the mouse button (up)

```
12620 \ifx\Fld@onmouseup@code\@empty
12621 \else
12622 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12623 \fi
```

E cursor enters the annotation's active area.

```
12624 \ifx\Fld@onenter@code\@empty
12625 \else
12626 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12627 \fi
```

X cursor exits the annotation's active area.

```
12628 \ifx\Fld@onexit@code\@empty
12629 \else
12630 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12631 \fi
12632 }
12633 \def\Fld@additionalactions{%
12634 \if\Fld@@additionalactions-%
12635 \else
12636 \ifHy@pdfa
12637 \else
12638 /AA<<\Fld@@additionalactions>>%
12639 \fi
12640 \fi
12641 }
```

\PDFForm@List

```
12642 \def\PDFForm@List{%
12643 /Subtype/Widget%
12644 \Fld@annotflags
12645 /T(\Fld@name)%
12646 /FT/Ch%
12647 \Fld@flags
12648 /Q \Fld@align
12649 /BS<</W \Fld@borderwidth/S\Fld@borderstyle>>%
12650 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12651 \ifx\Fld@bordercolor\relax\else 1\fi
12652 \ifx\Fld@bcolor\relax \else 1\fi
12653 \space
12654 \else
12655 /MK<<%
12656 \ifnum\Fld@rotation=\z@
12657 \else
12658 /R \Fld@rotation
12659 \fi
12660 \ifx\Fld@bordercolor\relax
12661 \else
12662 /BC[\Fld@bordercolor]%
12663 \fi
12664 \ifx\Fld@bcolor\relax
12665 \else
12666 /BG[\Fld@bcolor]%
12667 \fi
12668 >>%
12669 \fi
12670 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
```



```

12671     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12672   \Fld@choices
12673   \Fld@additionalactions
12674 }

```

\PDFForm@Radio

```

12675 \def\PDFForm@Radio{%
12676   /Subtype/Widget%
12677   \Fld@annotflags
12678   /T(\Fld@name)%
12679   /FT/Btn%
12680   \Fld@flags
12681   /H/P%
12682   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12683   /MK<<%
12684     \ifnum\Fld@rotation=\z@
12685       \else
12686         /R \Fld@rotation
12687       \fi
12688     \ifx\Fld@bordercolor\relax
12689       \else
12690         /BC[\Fld@bordercolor]%
12691       \fi
12692     \ifx\Fld@bcolor\relax
12693       \else
12694         /BG[\Fld@bcolor]%
12695       \fi
12696     /CA(\Fld@radiosymbol)%
12697   >>%
12698   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12699     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12700   \ifx\@currValue\Fld@default
12701     /V/\Fld@default
12702   \else
12703     /V/Off%
12704   \fi
12705   \Fld@additionalactions
12706 }

```

\PDFForm@Text

```

12707 \def\PDFForm@Text{%
12708   /Subtype/Widget%
12709   \Fld@annotflags
12710   /T(\Fld@name)%
12711   /FT/Tx%
12712   \Fld@flags
12713   /Q \Fld@align
12714   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12715   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12716     \ifx\Fld@bordercolor\relax\else 1\fi
12717     \ifx\Fld@bcolor\relax \else 1\fi
12718     \space
12719   \else
12720     /MK<<%
12721     \ifnum\Fld@rotation=\z@
12722     \else
12723       /R \Fld@rotation

```

```

12724 \fi
12725 \ifx\Fld@bordercolor\relax
12726 \else
12727 /BC[\Fld@bordercolor]%
12728 \fi
12729 \ifx\Fld@bcolor\relax
12730 \else
12731 /BG[\Fld@bcolor]%
12732 \fi
12733 >>%
12734 \fi
12735 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12736 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12737 /DV(\Hy@escapestring{\Fld@default})%
12738 /V(\Hy@escapestring{\Fld@value})%
12739 \Fld@additionalactions
12740 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12741 }

```

\PDFForm@Submit

```

12742 \def\PDFForm@Submit{%
12743 /Subtype/Widget%
12744 \Fld@annotflags
12745 /T(\Fld@name)%
12746 /FT/Btn%
12747 \Fld@flags
12748 /H/P%
12749 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12750 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12751 \ifx\Fld@bordercolor\relax\else 1\fi
12752 \space
12753 \else
12754 /MK<<%
12755 \ifnum\Fld@rotation=\z@
12756 \else
12757 /R \Fld@rotation
12758 \fi
12759 \ifx\Fld@bordercolor\relax
12760 \else
12761 /BC[\Fld@bordercolor]%
12762 \fi
12763 >>%
12764 \fi
12765 /A<<%
12766 /S/SubmitForm%
12767 /F<<%
12768 /FS/URL%
12769 /F(\Hy@escapestring{\Form@action})%
12770 >>%
12771 \Fld@submitflags
12772 >>%
12773 }

```

\PDFForm@Reset

```

12774 \ifHy@pdfa
12775 \else
12776 \def\PDFForm@Reset{%

```

```

12777 /Subtype/Widget%
12778 \Fld@annotflags
12779 /T(\Fld@name)%
12780 /FT/Btn%
12781 \Fld@flags
12782 /H/P%
12783 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12784 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12785 \ifx\Fld@bordercolor\relax\else 1\fi
12786 \space
12787 \else
12788 /MK<<%
12789 \ifnum\Fld@rotation=\z@
12790 \else
12791 /R \Fld@rotation
12792 \fi
12793 \ifx\Fld@bordercolor\relax
12794 \else
12795 /BC[\Fld@bordercolor]%
12796 \fi
12797 % /CA (Clear)
12798 % /AC (Done)
12799 >>%
12800 \fi
12801 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12802 /A<</S/ResetForm>>%
12803 }%
12804 \fi

12805 </pdfform>
12806 <*package>

```

48 Bookmarks in the PDF file

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

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

```

12807 \def\phantomsection{%
12808 \Hy@MakeCurrentHrefAuto{section*}%
12809 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12810 }
12811 </package>

```

48.1 Bookmarks

```
12812 <*outlines>
```

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

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

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

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

```

12813 \def\Hy@writebookmark#1#2#3#4#5{%
12814   % section number, text, label, level, file
12815   \ifx\WriteBookmarks\relax%
12816   \else
12817     \ifnum#4>\Hy@bookmarksdepth\relax
12818     \else
12819       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12820     \fi
12821   \fi
12822 }
12823 \def\Hy@currentbookmarklevel{0}
12824 \def\Hy@numberline#1{#1 }
12825 \def\@@writetorep#1#2#3#4#5{%
12826   \begingroup
12827     \edef\Hy@tempa{#5}%
12828     \ifx\Hy@tempa\Hy@bookmarkstype
12829       \edef\Hy@level{#4}%
12830       \ifx\Hy@levelcheck Y%
12831         \@tempcnta\Hy@level\relax
12832         \advance\@tempcnta by -1 %
12833         \ifnum\Hy@currentbookmarklevel<\@tempcnta
12834           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12835           \advance\@tempcnta by 1 %
12836           \Hy@Warning{%
12837             Difference (\the\@tempcnta) between bookmark levels is %
12838             greater \MessageBreak than one, level fixed%
12839           }%
12840           \@tempcnta\Hy@currentbookmarklevel
12841           \advance\@tempcnta by 1 %
12842           \edef\Hy@level{\the\@tempcnta}%
12843         \fi
12844       \else
12845         \global\let\Hy@levelcheck Y%
12846       \fi
12847       \global\let\Hy@currentbookmarklevel\Hy@level
12848       \@tempcnta\Hy@level\relax
12849       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12850       \advance\@tempcnta by -1 %
12851       \edef\Hy@tempa{#3}%
12852       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12853       \ifx\Hy@tempa\Hy@tempb
12854         \Hy@Warning{%
12855           The anchor of a bookmark and its parent's must not%
12856           \MessageBreak be the same. Added a new anchor%
12857         }%
12858       \phantomsection
12859     \fi
12860     \ifHy@bookmarksnumbered

```

```

12861 \let\numberline\Hy@numberline
12862 \let\partnumberline\Hy@numberline
12863 \let\chapternumberline\Hy@numberline
12864 \else
12865 \let\numberline\@gobble
12866 \let\partnumberline\@gobble
12867 \let\chapternumberline\@gobble
12868 \fi
12869 \HyPsd@XeTeXBigCharstrue
12870 \pdfstringdef\Hy@tempa{#2}%
12871 \HyPsd@SanitizeForOutFile\Hy@tempa
12872 \if@filesw
12873 \stepcounter{bookmark@seq@number}%
12874 \@ifundefined{@outlinefile}{%
12875 }{%
12876 \protected@write\@outlinefile{}{%
12877 \protect\BOOKMARK
12878 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12879 {\Hy@tempa}{\Hy@tempb}%
12880 \@percentchar\space\thebookmark@seq@number
12881 }%
12882 }%
12883 \fi
12884 \fi
12885 \endgroup
12886 }
12887 \newcounter{bookmark@seq@number}

12888 \begingroup
12889 \lccode'=''{%
12890 \lccode'=''}%
12891 \lccode'1=\z@
12892 \lccode'2=\z@
12893 \lccode'3=\z@
12894 \lccode'5=\z@
12895 \lccode'7=\z@
12896 \lccode'#= \z@
12897 \lccode'\=' \z@
12898 \lccode'\{=\z@
12899 \lccode'\}=\z@
12900 \lowercase{%
12901 \endgroup
12902 \def\HyPsd@SanitizeForOutFile#1{%
12903 \@onelevel@sanitize\Hy@tempa
12904 \escapechar'\%
12905 \edef\Hy@tempa{%
12906 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
12907 }%
12908 \edef\Hy@tempa{%
12909 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
12910 }%
12911 }%
12912 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
12913 #1%
12914 \ifx\#2\%
12915 \expandafter\ltx@gobble
12916 \else
12917 \expandafter\ltx@firstofone

```

```

12918 \fi
12919 {%
12920 \string\173%
12921 \HyPsd@SanitizeOut@BraceLeft#2\@nil
12922 }%
12923 }%
12924 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
12925 #1%
12926 \ifx\#2\%
12927 \expandafter\ltx@gobble
12928 \else
12929 \expandafter\ltx@firstofone
12930 \fi
12931 {%
12932 \string\175%
12933 \HyPsd@SanitizeOut@BraceRight#2\@nil
12934 }%
12935 }%
12936 }

```

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

```

12937 \newcommand{\currentpdfbookmark}{%
12938 \pdfbookmark[\Hy@currentbookmarklevel]%
12939 }
12940 \newcommand{\subpdfbookmark}{%
12941 \@tempcnta\Hy@currentbookmarklevel
12942 \Hy@StepCount\@tempcnta
12943 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12944 }
12945 \newcommand{\belowpdfbookmark}[2]{%
12946 \@tempcnta\Hy@currentbookmarklevel
12947 \Hy@StepCount\@tempcnta
12948 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12949 \advance\@tempcnta by -1 %
12950 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12951 }

```

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.

```

12952 \renewcommand\pdfbookmark[3][0]{%
12953 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
12954 \hyper@anchorstart{#3.#1}\hyper@anchorend
12955 }
12956 \def\BOOKMARK{%
12957 \@ifnextchar[\@BOOKMARK]{\@@BOOKMARK[1][-]}%
12958 }
12959 \def\@BOOKMARK[#1]{%
12960 \@ifnextchar[\@@BOOKMARK[{#1}]{\@@BOOKMARK[{#1}][-]}%
12961 }

```

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

48.1.1 Rerun warning

```
\Hy@OutlineRerunCheck
```

```

12962 \RequirePackage{rerunfilecheck}[2009/12/10]
12963 \def\Hy@OutlineRerunCheck{%

```

```

12964 \RerunFileCheck{\jobname.out}{}%
12965 \immediate\closeout\@outlinefile
12966 }{%
12967 Rerun to get outlines right\MessageBreak
12968 or use package 'bookmark'%
12969 }%
12970 }

```

48.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping \ and the like.

```

12971 <*vtex>
12972 \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.

```

12973 \begingroup
12974 \catcode'\'=12 %
12975 \ifnum\Hy@VTeXversion<650 %
12976 \catcode'\ "=12 %
12977 \gdef\hv@pdf@char#1#2#3{%
12978 \char
12979 \ifcase'#1#2#3 %
12980 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
12981 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12982 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12983 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12984 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12985 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12986 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12987 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12988 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
12989 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
12990 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12991 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12992 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12993 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12994 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12995 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12996 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
12997 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12998 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12999 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13000 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13001 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13002 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
13003 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13004 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13005 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13006 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13007 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13008 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%

```

```

13009 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13010 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13011 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13012 \fi
13013 }%
13014 \else
13015 \gdef\hv@pdf@char{\char'}%
13016 \fi
13017 \endgroup

```

\@@BOOKMARK

```

13018 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13019 \expandafter\edef\csname @count@#3\endcsname{%
13020 \the\@serial@counter
13021 }%
13022 \edef\@mycount{\the\@serial@counter}%
13023 \Hy@StepCount\@serial@counter
13024 \edef\@parcount{%
13025 \expandafter\ifx\csname @count@#5\endcsname\relax
13026 0%
13027 \else
13028 \csname @count@#5\endcsname
13029 \fi
13030 }%
13031 \immediate\special{%
13032 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13033 s=\ifx#2-c\else o\fi,t=#4%
13034 }%
13035 }%

```

\ReadBookmarks

```

13036 \def\ReadBookmarks{%
13037 \begingroup
13038 \def\0{\hv@pdf@char 0}%
13039 \def\1{\hv@pdf@char 1}%
13040 \def\2{\hv@pdf@char 2}%
13041 \def\3{\hv@pdf@char 3}%
13042 \def\({}%
13043 \def\)}%
13044 \def\do##1{%
13045 \ifnum\catcode'##1=\active
13046 \@makeother##1%
13047 \else
13048 \ifnum\catcode'##1=6 %
13049 \@makeother##1%
13050 \fi
13051 \fi
13052 }%
13053 \dospecials
13054 \Hy@safe@activetrue
13055 \InputIfFileExists{\jobname.out}{-}{-}%
13056 \endgroup
13057 \ifx\WriteBookmarks\relax
13058 \else
13059 \if@filesw
13060 \newwrite\@outlinefile
13061 \Hy@OutlineRerunCheck

```



```

13062 \immediate\openout\@outlinefile=\jobname.out\relax
13063 \ifHy@typexml
13064 \immediate\write\@outlinefile{<relaxxml>\relax}%
13065 \fi
13066 \fi
13067 \fi
13068 }

13069 </vtx>
13070 <*\vtx>
13071 \def\ReadBookmarks{%
13072 \begingroup
13073 \def\do##1{%
13074 \ifnum\catcode'##1=\active
13075 \@makeother##1%
13076 \else
13077 \ifnum\catcode'##1=6 %
13078 \@makeother##1%
13079 \fi
13080 \fi
13081 }%
13082 \dospecials
13083 \Hy@safe@activetrue
13084 \escapechar='\%
13085 \let\escapechar\@gobble %
13086 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13087 \calc@bm@number{##5}%
13088 }%
13089 \InputIfFileExists{\jobname.out}{-}{-}%
13090 \ifx\WriteBookmarks\relax
13091 \global\let\WriteBookmarks\relax
13092 \fi
13093 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13094 \def\Hy@temp{##4}%
13095 <*pdftex>
13096 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13097 \Hy@OutlineName{\Hy@pstringName{%
13098 ##2\check@bm@number{##3}}%
13099 }{%
13100 \expandafter\strip@prefix\meaning\Hy@temp
13101 }%
13102 </pdftex>
13103 <*pdfmark>
13104 \pdfmark{%
13105 pdfmark=/OUT,%
13106 Count={##2\check@bm@number{##3}},%
13107 Dest={##3},%
13108 Title=\expandafter\strip@prefix\meaning\Hy@temp
13109 }%
13110 </pdfmark>
13111 <*dvipdfm|xetex>
13112 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13113 \@pdfm@mark{%
13114 outline \ifHy@DvipdfmxOutlineOpen
13115 [%
13116 \ifnum##21>\z@
13117 \else
13118 -%

```

```

13119         \fi
13120     ] %
13121     \fi
13122     ##1<<%
13123     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13124     /A<<%
13125     /S/GoTo%
13126     /D(\Hy@pstringName)%
13127     >>%
13128     >>%
13129     }%
13130 </dvi pdfm | xetex>
13131 }%
13132 {%
13133     \def\WriteBookmarks{0}%
13134     \InputIfFileExists{\jobname.out}{\relax}%
13135 }%
13136 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}%
13137 \ifx\WriteBookmarks\relax
13138 \else
13139     \if@files
13140         \newwrite\@outlinefile
13141         \Hy@OutlineRerunCheck
13142         \immediate\openout\@outlinefile=\jobname.out\relax
13143         \ifHy@typexml
13144             \immediate\write\@outlinefile{<relaxxml>\relax}%
13145         \fi
13146     \fi
13147 \fi
13148 \endgroup
13149 }
13150 <*pdf tex>
13151 \def\Hy@OutlineName#1#2#3#4{%
13152     \pdfoutline goto name{#2}count#3{#4}%
13153 }
13154 </pdf tex>
13155 \def\check@bm@number#1{%
13156     \expandafter\ifx\csname B_#1\endcsname\relax
13157         0%
13158     \else
13159         \csname B_#1\endcsname
13160     \fi
13161 }
13162 \def\calc@bm@number#1{%
13163     \@tempcnta=\check@bm@number{#1}\relax
13164     \advance\@tempcnta by 1 %
13165     \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13166 }
13167 </!vtex>
13168 \ifHy@implicit
13169 \else
13170     \expandafter\endinput
13171 \fi
13172 </outlines>
13173 <*outlines | hypertex>
13174 \newlength\Hy@SectionHShift

```

```

13175 \def\Hy@SectionAnchorHref#1{%
13176   \ifx\protect\@typeset@protect
13177     \Hy@@@SectionAnchor{#1}%
13178   \fi
13179 }
13180 \DeclareRobustCommand*\Hy@@@SectionAnchor}[1]{%
13181   \leavevmode
13182   \hbox to 0pt{%
13183     \kern-\Hy@SectionHShift
13184     \Hy@raisedlink{%
13185       \hyper@anchorstart{#1}\hyper@anchorend
13186     }%
13187     \hss
13188   }%
13189 }
13190 \let\H@old@ssect\@ssect
13191 \def\@ssect#1#2#3#4#5{%
13192   \Hy@MakeCurrentHrefAuto{section*}%
13193   \setlength{\Hy@SectionHShift}{#1}%
13194   \begingroup
13195     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13196     \toks\tw@\expandafter{%
13197       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13198       #5%
13199     }%
13200   \edef\x{\endgroup
13201     \the\toks@{\the\toks\tw@}%
13202   }\x
13203 }
13204 \let\H@old@schapter\@schapter
13205 \def\@schapter#1{%
13206   \begingroup
13207     \let\@mkboth\@gobbletwo
13208     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13209     \Hy@raisedlink{%
13210       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13211     }%
13212   \endgroup
13213   \H@old@schapter{#1}%
13214 }

```

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:

```

13215 \ltx@ifundefined{chapter}{-}{%
13216   \let\Hy@org@chapter\@chapter
13217   \def\@chapter{%
13218     \def\Hy@next{%
13219       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13220       \Hy@raisedlink{%
13221         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13222       }%
13223     }%
13224     \ifnum\c@secnumdepth>\m@ne
13225       \ltx@ifundefined{if@mainmatter}%
13226       \iftrue{\csname if@mainmatter\endcsname}%
13227       \let\Hy@next\relax
13228     \fi

```

```

13229 \fi
13230 \Hy@next
13231 \Hy@org@chapter
13232 }%
13233 }

13234 \let\H@old@part\@part
13235 \begingroup\expandafter\expandafter\expandafter\endgroup
13236 \expandafter\ifx\csname chapter\endcsname\relax
13237 \let\Hy@secnum@part\z@
13238 \else
13239 \let\Hy@secnum@part\m@ne
13240 \fi
13241 \def\@part{%
13242 \ifnum\Hy@secnum@part>\c@secnumdepth
13243 \phantomsection
13244 \fi
13245 \H@old@part
13246 }

13247 \let\H@old@spart\@spart
13248 \def\@spart#1{%
13249 \Hy@MakeCurrentHrefAuto{part*}%
13250 \Hy@raisedlink{%
13251 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13252 }%
13253 \H@old@spart{#1}%
13254 }

13255 \let\H@old@sect\@sect
13256 \def\@sect#1#2#3#4#5#6[#7]#8{%
13257 \ifnum #2>\c@secnumdepth
13258 \expandafter\@firstoftwo
13259 \else
13260 \expandafter\@secondoftwo
13261 \fi
13262 {%
13263 \Hy@MakeCurrentHrefAuto{section*}%
13264 \setlength{\Hy@SectionHShift}{#3}%
13265 \begingroup
13266 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13267 \toks\tw@\expandafter{%
13268 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13269 #8%
13270 }%
13271 \edef\x{\endgroup
13272 \the\toks@{\the\toks\tw@}}%
13273 }\x
13274 }{%
13275 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13276 }%
13277 }

13278 </outlines | hypertex>
13279 <*outlines>

13280 \expandafter\def\csname Parent-4\endcsname{}
13281 \expandafter\def\csname Parent-3\endcsname{}
13282 \expandafter\def\csname Parent-2\endcsname{}
13283 \expandafter\def\csname Parent-1\endcsname{}
13284 \expandafter\def\csname Parent0\endcsname{}

```

```

13285 \expandafter\def\csname Parent1\endcsname{}
13286 \expandafter\def\csname Parent2\endcsname{}
13287 \expandafter\def\csname Parent3\endcsname{}
13288 \expandafter\def\csname Parent4\endcsname{}
13289 </outlines>

```

49 Compatibility with koma-script classes

```
13290 <*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.

```

13291 \def\Hy@tempa{%
13292   \def\@addchap{##1}##2{%
13293     \typeout{##2}%
13294     \if@twoside
13295       \@mkboth{##1}{}%
13296     \else
13297       \@mkboth{}{##1}%
13298     \fi
13299     \addtocontents{lof}{\protect\addvspace{10\p@}}%
13300     \addtocontents{lot}{\protect\addvspace{10\p@}}%
13301     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13302     \Hy@raisedlink{%
13303       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13304     }%
13305     \if@twocolumn
13306       \@topnewpage[\@makeschapterhead{##2}]%
13307     \else
13308       \@makeschapterhead{##2}%
13309       \@afterheading
13310     \fi
13311     \addcontentsline{toc}{chapter}{##1}%
13312   }%
13313 }
13314 \@ifclassloaded{scrbook}{%
13315   \@ifclasslater{scrbook}{2001/01/01}{%
13316     \let\Hy@tempa\@empty
13317   }{}%
13318 }{%
13319   \@ifclassloaded{scrreprt}{%
13320     \@ifclasslater{scrreprt}{2001/01/01}{%
13321       \let\Hy@tempa\@empty
13322     }{}%
13323   }{%
13324     \let\Hy@tempa\@empty
13325   }%
13326 }%
13327 \Hy@tempa
13328 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```
13329 (*pdlenc)
13330 \DeclareFontEncoding{PD1}{-}{-}
```

Accents

```
13331 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
13332 \DeclareTextAccent{\'}{PD1}{\textacute}
13333 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
13334 \DeclareTextAccent{\~}{PD1}{\texttilde}
13335 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
13336 \DeclareTextAccent{\r}{PD1}{\textring}
13337 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
13338 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
13339 \DeclareTextAccent{\c}{PD1}{\textcedilla}
13340 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
13341 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
13342 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
13343 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
13344 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
13345 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
13346 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
13347 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
13348 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
13349 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
13350 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
13351 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
13352 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
13353 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
13354 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
13355 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
13356 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
13357 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
13358 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
13359 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
13360 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13361 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13362 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13363 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13364 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13365 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13366 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
13367 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}}{#1}
13368 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}}{#1}
13369 \DeclareTextCommand{\newtie}{PD1}[1]{%
13370 \TextSymbolUnavailable{\newtie{#1}}}{#1}%
13371 }
```

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

```
13372 % U+0009 (CHARACTER TABULATION)
13373 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
13374 % U+000A (LINE FEED)
13375 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
13376 % U+000D (CARRIAGE RETURN)
13377 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D
```

Accent glyph names

```
13378 % U+02D8 BREVE; breve
13379 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
13380 % U+02C7 CARON; caron
```

13381 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13382 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13383 \DeclareTextCommand{\textcirc{}}{PD1}{\032}% U+02C6
13384 % U+02D9 DOT ABOVE; dotaccent
13385 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13386 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13387 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13388 % U+02DB OGONEK; ogonek
13389 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13390 % U+02DA RING ABOVE; ring
13391 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13392 % U+02DC SMALL TILDE; ilde, *tilde
13393 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
13394 % U+0022 QUOTATION MARK; quotedbl
13395 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
13396 % U+0023 NUMBER SIGN; numbersign
13397 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
13398 % U+0024 DOLLAR SIGN; dollar
13399 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
13400 % U+0025 PERCENT SIGN; percent
13401 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
13402 % U+0026 AMPERSAND; ampersand
13403 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

\047: U+0027 APOSTROPHE; quotesingle

13404 % U+0028 LEFT PARENTHESIS; parenleft
13405 \DeclareTextCommand{\textparenleft}{PD1}{\string\{ }% \050 U+0028
13406 % U+0029 RIGHT PARENTHESIS; parenright
13407 \DeclareTextCommand{\textparenright}{PD1}{\string\} }% \051 U+0029

\052: U+002A ASTERISK; asterisk
\053: U+002B PLUS SIGN; plus
\054: U+002C COMMA; comma
\055: U+002D HYPHEN-MINUS; hyphen
\056: U+002E FULL STOP; period
13408 % U+002E FULL STOP; period
13409 \DeclareTextCommand{\textdotbelow}{PD1}{\string\.`}% \056 U+002E

\057: U+002F SOLIDUS; slash
\060: U+0030 DIGIT ZERO; zero
...
\071: U+0039 DIGIT NINE; nine
\072: U+003A COLON; colon
\073: U+003B SEMICOLON; semicolon
13410 % U+003C LESS-THAN SIGN; less
13411 \DeclareTextCommand{\textless}{PD1}{\string< }% \074 U+003C

\075: U+003D EQUALS SIGN; equal
13412 % U+003E GREATER-THAN SIGN; greater
13413 \DeclareTextCommand{\textgreater}{PD1}{\string> }% \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
 13414 % U+005C REVERSE SOLIDUS; backslash
 13415 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13416 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13417 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13418 % U+005F LOW LINE; underscore
 13419 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13420 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13421 % U+0060 GRAVE ACCENT; grave
 13422 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13423 % U+0069 LATIN SMALL LETTER I; i
 13424 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13425 % U+007B LEFT CURLY BRACKET; braceleft
 13426 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13427 % U+007C VERTICAL LINE; *bar, verticalbar
 13428 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13429 % U+007D RIGHT CURLY BRACKET; braceright
 13430 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13431 % U+007E TILDE; asciitilde
 13432 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13433 % U+2022 BULLET; bullet
 13434 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13435 % U+2020 DAGGER; dagger
 13436 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13437 % U+2021 DOUBLE DAGGER; daggerdbl
 13438 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13439 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13440 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13441 % U+2014 EM DASH; emdash
 13442 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 13443 % U+2013 EN DASH; endash
 13444 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 13445 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13446 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 13447 % U+2044 FRACTION SLASH; fraction
 13448 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 13449 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 13450 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 13451 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 13452 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
 13453 % U+2212 MINUS SIGN; minus
 13454 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 13455 % U+2030 PER MILLE SIGN; perthousand
 13456 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 13457 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase

13458 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 13459 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13460 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 13461 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13462 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 13463 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13464 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 13465 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13466 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 13467 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13468 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 13469 % U+2122 TRADE MARK SIGN; trademark
 13470 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 13471 % U+FB01 LATIN SMALL LIGATURE FI; fi
 13472 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 13473 % U+FB02 LATIN SMALL LIGATURE FL; fl
 13474 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 13475 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 13476 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 13477 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 13478 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 13479 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 13480 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 13481 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 13482 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 13483 \DeclareTextCommand{\IJ}{PD1}{\230}
 13484 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13485 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 13486 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 13487 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 13488 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 13489 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 13490 % U+0153 LATIN SMALL LIGATURE OE; oe
 13491 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 13492 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 13493 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 13494 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13495 \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.

13496 % U+20AC EURO SIGN; *Euro, euro
 13497 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 13498 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13499 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 13500 % U+00A2 CENT SIGN; cent
 13501 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 13502 % U+00A3 POUND SIGN; sterling
 13503 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 13504 % U+00A4 CURRENCY SIGN; currency
 13505 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 13506 % U+00A5 YEN SIGN; yen
 13507 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 13508 % U+00A6 BROKEN BAR; brokenbar
 13509 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 13510 % U+00A7 SECTION SIGN; section
 13511 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 13512 % U+00A8 DIAERESIS; dieresis

13513 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
13514 % U+00A9 COPYRIGHT SIGN; copyright
13515 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
13516 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
13517 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
13518 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
13519 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
13520 % U+00AC NOT SIGN; logicalnot
13521 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
13522 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
13523 % U+00AE REGISTERED SIGN; registered
13524 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
13525 % U+00AF MACRON; *macron, overscore
13526 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
13527 % U+00B0 DEGREE SIGN; degree
13528 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
13529 % U+00B1 PLUS-MINUS SIGN; plusminus
13530 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
13531 % U+00B2 SUPERSCRIFT TWO; twosuperior
13532 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
13533 % U+00B3 SUPERSCRIFT THREE; threesuperior
13534 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
13535 % U+00B4 ACUTE ACCENT; acute
13536 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
13537 % U+00B5 MICRO SIGN; mu, mul
13538 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
13539 % U+00B6 PILCROW SIGN; paragraph
13540 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
13541 % U+00B7 MIDDLE DOT; middot, *periodcentered
13542 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
13543 % U+00B8 CEDILLA; cedilla
13544 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
13545 % U+00B9 SUPERSCRIFT ONE; onesuperior
13546 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
13547 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13548 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
13549 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13550 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13551 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13552 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13553 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13554 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13555 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13556 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13557 % U+00BF INVERTED QUESTION MARK; questiondown
13558 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13559 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13560 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13561 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13562 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13563 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13564 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13565 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13566 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3

13567 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13568 \DeclareTextCompositeCommand{"}{PD1}{A}{\304}% U+00C4
13569 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13570 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13571 % U+00C6 LATIN CAPITAL LETTER AE; AE
13572 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13573 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13574 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13575 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13576 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13577 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13578 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13579 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13580 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13581 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13582 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
13583 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13584 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13585 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13586 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13587 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13588 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13589 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13590 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
13591 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13592 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13593 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13594 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13595 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13596 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13597 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13598 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13599 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13600 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13601 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13602 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13603 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13604 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13605 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
13606 % U+00D7 MULTIPLICATION SIGN; multiply
13607 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13608 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13609 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13610 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13611 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13612 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13613 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13614 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13615 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13616 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13617 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
13618 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13619 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13620 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13621 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13622 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13623 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF

13624 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13625 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13626 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13627 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13628 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13629 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13630 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13631 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13632 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13633 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13634 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13635 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13636 % U+00E6 LATIN SMALL LETTER AE; ae
13637 \DeclareTextCompositeCommand{\ae}{PD1}{\346}% U+00E6
13638 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13639 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13640 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13641 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13642 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13643 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13644 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13645 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13646 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13647 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13648 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13649 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13650 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13651 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13652 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13653 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
13654 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13655 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13656 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13657 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13658 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13659 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13660 % U+00F0 LATIN SMALL LETTER ETH; eth
13661 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13662 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13663 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
13664 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13665 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
13666 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13667 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
13668 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13669 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
13670 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13671 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
13672 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13673 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
13674 % U+00F7 DIVISION SIGN; divide
13675 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
13676 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13677 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
13678 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13679 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
13680 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute

```

13681 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
13682 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13683 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
13684 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13685 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
13686 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13687 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
13688 % U+00FE LATIN SMALL LETTER THORN; thorn
13689 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
13690 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13691 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
13692 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

13693 \DeclareTextCommand{\SS}{PD1}{SS}
13694 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

13695 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
13696 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
13697 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
13698 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
13699 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
13700 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
13701 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
13702 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

13703 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
13704 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
13705 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
13706 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
13707 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
13708 \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).

```

13709 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13710 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13711 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13712 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13713 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13714 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13715 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13716 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13717 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13718 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13719 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13720 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13721 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13722 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

13723 </pd1enc>

```

50.2 PU encoding

```

13724 <*puenc>
13725 \DeclareFontEncoding{PU}{-}{-}

```

50.2.1 NFSS2 accents

13726 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
 13727 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
 13728 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
 13729 \DeclareTextCommand{\~}{PU}[1]{#1\83\001}% U+0301
 13730 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
 13731 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
 13732 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
 13733 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
 13734 % U+0304 COMBINING MACRON; macroncmb
 13735 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
 13736 % U+0306 COMBINING BREVE; brevecmb
 13737 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
 13738 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
 13739 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 13740 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 13741 % U+0308 COMBINING DIAERESIS; dieresiscmb
 13742 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 13743 % U+030A COMBINING RING ABOVE; ringcmb
 13744 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 13745 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 13746 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 13747 % U+030C COMBINING CARON; caroncmb
 13748 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 13749 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13750 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 13751 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 13752 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13753 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 13754 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 13755 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 13756 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13757 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 13758 % U+0327 COMBINING CEDILLA; cedillacmb
 13759 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 13760 % U+0328 COMBINING OGONEK; ogonekcmb
 13761 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 13762 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13763 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 13764 % U+20DD COMBINING ENCLOSING CIRCLE
 13765 \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.

13766 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
 13767 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textacute}
 13768 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
 13769 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
 13770 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
 13771 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
 13772 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
 13773 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
 13774 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
 13775 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
 13776 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
 13777 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
 13778 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
 13779 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
 13780 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}

```

13781 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13782 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13783 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13784 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
13785 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13786 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13787 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
13788 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13789 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13790 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13791 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13792 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13793 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13794 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13795 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13796 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13797 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13798 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13799 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13800 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13801 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13802 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13803 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13804 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13805 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13806 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
13807 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
13808 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13809 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13810 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{#1}}
13811 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13812 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13813 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13814 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13815 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13816 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13817 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13818 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

13819 % U+0009 (CHARACTER TABULATION)
13820 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13821 % U+000A (LINE FEED)
13822 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13823 % U+000D (CARRIAGE RETURN)
13824 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
13825 % U+0022 QUOTATION MARK; quotedbl
13826 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13827 % U+0023 NUMBER SIGN; numbersign
13828 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13829 % U+0024 DOLLAR SIGN; dollar
13830 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024

```

13831 % U+0025 PERCENT SIGN; percent
13832 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
13833 % U+0026 AMPERSAND; ampersand
13834 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
13835 % U+0027 APOSTROPHE; quotesingle
13836 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
13837 % U+0028 LEFT PARENTHESIS; parenleft
13838 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
13839 % U+0029 RIGHT PARENTHESIS; parenright
13840 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
13841 % U+002A ASTERISK; asterisk
13842 \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

13843 % U+003C LESS-THAN SIGN; less
13844 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

13845 % U+003E GREATER-THAN SIGN; greater
13846 \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

13847 % U+005C REVERSE SOLIDUS; backslash
13848 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C

\80\135: U+005D RIGHT SQUARE BRACKET; bracketright

13849 % U+005E CIRCUMFLEX ACCENT; asciicircum
13850 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
13851 % U+005F LOW LINE; underscore
13852 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
13853 % U+0060 GRAVE ACCENT; grave
13854 \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

13855 % U+0069 LATIN SMALL LETTER I; i
13856 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
13857 \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

13858 % U+007B LEFT CURLY BRACKET; braceleft

13859 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13860 % U+007C VERTICAL LINE; *bar, verticalbar
 13861 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13862 % U+007D RIGHT CURLY BRACKET; braceright
 13863 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13864 % U+007E TILDE; asciitilde
 13865 \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
 13866 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13867 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13868 % U+00A2 CENT SIGN; cent
 13869 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13870 % U+00A3 POUND SIGN; sterling
 13871 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13872 % U+00A4 CURRENCY SIGN; currency
 13873 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13874 % U+00A5 YEN SIGN; yen
 13875 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13876 % U+00A6 BROKEN BAR; brokenbar
 13877 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13878 % U+00A7 SECTION SIGN; section
 13879 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13880 % U+00A8 DIAERESIS; dieresis
 13881 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13882 % U+00A9 COPYRIGHT SIGN; copyright
 13883 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13884 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13885 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13886 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13887 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 13888 % U+00AC NOT SIGN; logicalnot
 13889 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13890 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13891 % U+00AE REGISTERED SIGN; registered
 13892 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13893 % U+00AF MACRON; *macron, overscore
 13894 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13895 % U+00B0 DEGREE SIGN; degree
 13896 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13897 % U+00B1 PLUS-MINUS SIGN; plusminus
 13898 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13899 % U+00B2 SUPERScript TWO; twosuperior
 13900 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13901 % U+00B3 SUPERScript THREE; threesuperior
 13902 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 13903 % U+00B4 ACUTE ACCENT; acute
 13904 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 13905 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 13906 % U+00B5 MICRO SIGN; mu, mu1
 13907 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 13908 % U+00B6 PILCROW SIGN; paragraph
 13909 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6

13910 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13911 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 13912 % U+00B8 CEDILLA; cedilla
 13913 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 13914 % U+00B9 SUPERSCRIPT ONE; onesuperior
 13915 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 13916 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13917 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 13918 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 13919 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 13920 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13921 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 13922 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13923 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 13924 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13925 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 13926 % U+00BF INVERTED QUESTION MARK; questiondown
 13927 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 13928 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13929 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 13930 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13931 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 13932 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13933 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 13934 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13935 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 13936 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 13937 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 13938 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 13939 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 13940 % U+00C6 LATIN CAPITAL LETTER AE; AE
 13941 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 13942 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 13943 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 13944 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 13945 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 13946 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 13947 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 13948 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 13949 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 13950 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 13951 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 13952 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 13953 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 13954 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 13955 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 13956 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 13957 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
 13958 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 13959 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
 13960 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 13961 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
 13962 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
 13963 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
 13964 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
 13965 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2

13966 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13967 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
13968 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13969 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
13970 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13971 \DeclareTextCompositeCommand{\-}{PU}{O}{\80\325}% U+00D5
13972 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13973 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
13974 % U+00D7 MULTIPLICATION SIGN; multiply
13975 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
13976 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13977 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
13978 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13979 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
13980 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13981 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
13982 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13983 \DeclareTextCompositeCommand{\~}{PU}{U}{\80\333}% U+00DB
13984 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13985 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
13986 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13987 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
13988 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13989 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
13990 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13991 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
13992 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13993 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
13994 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13995 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
13996 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13997 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\342}% U+00E2
13998 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13999 \DeclareTextCompositeCommand{\-}{PU}{a}{\80\343}% U+00E3
14000 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14001 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
14002 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14003 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14004 % U+00E6 LATIN SMALL LETTER AE; ae
14005 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
14006 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14007 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14008 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14009 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
14010 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14011 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14012 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14013 \DeclareTextCompositeCommand{\~}{PU}{e}{\80\352}% U+00EA
14014 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14015 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
14016 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14017 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14018 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14019 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14020 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14021 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14022 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex

14023 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
14024 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14025 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14026 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
14027 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
14028 % U+00F0 LATIN SMALL LETTER ETH; eth
14029 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
14030 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14031 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
14032 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14033 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
14034 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14035 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\363}% U+00F3
14036 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14037 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
14038 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14039 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
14040 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14041 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
14042 % U+00F7 DIVISION SIGN; divide
14043 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
14044 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14045 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
14046 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14047 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
14048 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14049 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\372}% U+00FA
14050 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14051 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
14052 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14053 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
14054 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14055 \DeclareTextCompositeCommand{\`}{PU}{y}{\80\375}% U+00FD
14056 % U+00FE LATIN SMALL LETTER THORN; thorn
14057 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
14058 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14059 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

14060 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
14061 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
14062 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
14063 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
14064 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
14065 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
14066 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
14067 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
14068 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
14069 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
14070 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
14071 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
14072 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
14073 \DeclareTextCompositeCommand{\`}{PU}{C}{\81\006}% U+0106
14074 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
14075 \DeclareTextCompositeCommand{\`}{PU}{c}{\81\007}% U+0107
14076 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex

14077 \DeclareTextCompositeCommand{\~}{PU}{C}{\81\010}% U+0108
14078 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
14079 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
14080 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
14081 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
14082 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
14083 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
14084 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
14085 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
14086 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
14087 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
14088 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
14089 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
14090 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
14091 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
14092 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
14093 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
14094 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
14095 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
14096 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
14097 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
14098 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
14099 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
14100 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
14101 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
14102 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
14103 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
14104 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
14105 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
14106 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
14107 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
14108 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14109 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14110 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14111 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14112 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14113 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14114 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14115 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14116 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14117 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14118 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14119 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14120 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14121 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14122 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14123 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14124 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14125 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14126 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14127 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14128 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
14129 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14130 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14131 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14132 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex

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14133 \DeclareTextCompositeCommand{\~}{PU}{H}{\81\044}% U+0124
14134 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14135 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14136 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14137 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14138 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14139 \DeclareTextCommand{\textthslash}{PU}{\81\047}% U+0127
14140 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14141 \DeclareTextCompositeCommand{\-}{PU}{I}{\81\050}% U+0128
14142 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14143 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14144 \DeclareTextCompositeCommand{\-}{PU}{i}{\81\051}% U+0129
14145 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14146 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14147 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14148 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14149 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14150 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14151 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14152 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14153 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14154 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14155 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14156 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14157 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14158 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14159 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14160 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14161 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14162 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14163 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
14164 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14165 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14166 % U+0133 LATIN SMALL LIGATURE IJ; ij
14167 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
14168 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
14169 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
14170 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
14171 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14172 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14173 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
14174 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
14175 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
14176 \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`.

```

14177 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
14178 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
14179 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
14180 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
14181 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
14182 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
14183 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
14184 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B

```

14185 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 14186 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 14187 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 14188 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 14189 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 14190 \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.
 14191 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 14192 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 14193 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 14194 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 14195 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14196 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 14197 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14198 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 14199 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 14200 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 14201 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 14202 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 14203 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 14204 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 14205 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 14206 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 14207 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 14208 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 14209 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 14210 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 14211 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 14212 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 14213 % U+014A LATIN CAPITAL LETTER ENG; Eng
 14214 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 14215 % U+014B LATIN SMALL LETTER ENG; eng
 14216 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 14217 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 14218 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 14219 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 14220 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 14221 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 14222 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 14223 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 14224 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 14225 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 14226 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 14227 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 14228 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 14229 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14230 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 14231 % U+0153 LATIN SMALL LIGATURE OE; oe
 14232 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 14233 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 14234 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 14235 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute

14236 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14237 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14238 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14239 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14240 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14241 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14242 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14243 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14244 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14245 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14246 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
14247 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14248 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
14249 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14250 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14251 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14252 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14253 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14254 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14255 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14256 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14257 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14258 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14259 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14260 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14261 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14262 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14263 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14264 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14265 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14266 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14267 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14268 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14269 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14270 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14271 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14272 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14273 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14274 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14275 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14276 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14277 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14278 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14279 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14280 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14281 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14282 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14283 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14284 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14285 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14286 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14287 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14288 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14289 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut

14290 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 14291 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhun-
 garumlaut
 14292 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 14293 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 14294 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 14295 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 14296 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 14297 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 14298 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 14299 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 14300 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 14301 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 14302 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 14303 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14304 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 14305 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14306 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14307 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14308 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14309 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14310 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14311 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14312 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14313 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14314 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14315 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14316 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14317 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14318 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14319 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14320 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

14321 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14322 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 14323 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 14324 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 14325 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 14326 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 14327 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 14328 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 14329 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 14330 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14331 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14332 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 14333 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 14334 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 14335 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 14336 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 14337 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 14338 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 14339 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 14340 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 14341 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 14342 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 14343 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5

14344 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14345 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14346 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14347 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14348 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14349 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14350 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14351 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14352 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14353 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14354 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14355 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14356 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14357 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14358 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14359 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14360 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14361 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14362 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14363 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14364 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
14365 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14366 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
14367 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14368 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
14369 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14370 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
14371 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14372 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
14373 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14374 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
14375 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14376 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14377 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14378 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14379 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
14380 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
14381 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
14382 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
14383 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
14384 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
14385 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
14386 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14387 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14388 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
14389 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
14390 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
14391 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
14392 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
14393 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
14394 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
14395 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
14396 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
14397 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
14398 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave

14399 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14400 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14401 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14402 % U+021F LATIN SMALL LETTER H WITH CARON
 14403 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14404 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14405 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14406 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14407 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14408 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14409 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14410 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14411 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14412 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14413 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14414 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14415 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14416 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14417 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14418 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14419 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14420 % U+0237 LATIN SMALL LETTER DOTLESS J
 14421 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

14422 % U+02C7 CARON; caron
 14423 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14424 % U+02D8 BREVE; breve
 14425 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14426 % U+02D9 DOT ABOVE; dotaccent
 14427 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14428 % U+02DA RING ABOVE; ring
 14429 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14430 % U+02DB OGONEK; ogonek
 14431 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14432 % U+02DC SMALL TILDE; ilde, *tilde
 14433 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14434 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14435 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14436 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14437 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14438 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14439 % U+02F7 MODIFIER LETTER LOW TILDE
 14440 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

14441 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14442 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14443 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14444 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14445 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14446 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14447 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14448 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14449 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14450 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

14451 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
14452 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
14453 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
14454 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
14455 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphonos
14456 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
14457 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
14458 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
14459 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
14460 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
14461 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
14462 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
14463 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicronos
14464 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
14465 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonos
14466 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
14467 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
14468 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
14469 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; Iotadieresis
14470 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
14471 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
14472 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
14473 % U+0392 GREEK CAPITAL LETTER BETA; Beta
14474 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
14475 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
14476 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
14477 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
14478 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
14479 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
14480 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
14481 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
14482 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
14483 % U+0397 GREEK CAPITAL LETTER ETA; Eta
14484 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
14485 % U+0398 GREEK CAPITAL LETTER THETA; Theta
14486 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14487 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14488 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14489 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14490 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14491 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14492 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14493 % U+039C GREEK CAPITAL LETTER MU; Mu
14494 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14495 % U+039D GREEK CAPITAL LETTER NU; Nu
14496 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14497 % U+039E GREEK CAPITAL LETTER XI; Xi
14498 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14499 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14500 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14501 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14502 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14503 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14504 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1

14505 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
14506 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
14507 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
14508 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
14509 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
14510 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
14511 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
14512 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
14513 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
14514 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
14515 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
14516 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
14517 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
14518 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14519 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14520 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14521 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14522 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
14523 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14524 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
14525 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14526 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
14527 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14528 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
14529 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14530 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotonos
14531 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
14532 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilonondieresis
14533 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
14534 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
14535 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
14536 % U+03B2 GREEK SMALL LETTER BETA; beta
14537 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
14538 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
14539 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
14540 % U+03B4 GREEK SMALL LETTER DELTA; delta
14541 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
14542 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
14543 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
14544 % U+03B6 GREEK SMALL LETTER ZETA; zeta
14545 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
14546 % U+03B7 GREEK SMALL LETTER ETA; eta
14547 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
14548 % U+03B8 GREEK SMALL LETTER THETA; theta
14549 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
14550 % U+03B9 GREEK SMALL LETTER IOTA; iota
14551 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
14552 % U+03BA GREEK SMALL LETTER KAPPA; kappa
14553 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
14554 % U+03BB GREEK SMALL LETTER LAMDA; lambda
14555 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
14556 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
14557 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
14558 % U+03BD GREEK SMALL LETTER NU; nu
14559 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD

14560 % U+03BE GREEK SMALL LETTER XI; xi
14561 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
14562 % U+03BF GREEK SMALL LETTER OMICRON; omicron
14563 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
14564 % U+03C0 GREEK SMALL LETTER PI; pi
14565 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
14566 % U+03C1 GREEK SMALL LETTER RHO; rho
14567 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
14568 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
14569 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
14570 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
14571 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
14572 % U+03C4 GREEK SMALL LETTER TAU; tau
14573 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
14574 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
14575 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
14576 % U+03C6 GREEK SMALL LETTER PHI; phi
14577 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
14578 % U+03C7 GREEK SMALL LETTER CHI; chi
14579 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
14580 % U+03C8 GREEK SMALL LETTER PSI; psi
14581 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
14582 % U+03C9 GREEK SMALL LETTER OMEGA; omega
14583 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
14584 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
14585 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
14586 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
14587 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
14588 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
14589 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
14590 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
14591 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
14592 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
14593 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
14594 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
14595 % U+03DA GREEK LETTER STIGMA; Stigmagreek
14596 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
14597 % U+03DB GREEK SMALL LETTER STIGMA
14598 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
14599 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
14600 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
14601 % U+03DD GREEK SMALL LETTER DIGAMMA
14602 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
14603 % U+03DE GREEK LETTER KOPPA; Koppagreek
14604 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
14605 % U+03DF GREEK SMALL LETTER KOPPA
14606 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
14607 % U+03E0 GREEK LETTER SAMPI; Sampigreek
14608 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
14609 % U+03E1 GREEK SMALL LETTER SAMPI
14610 \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.

14611 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE

14612 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
14613 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
14614 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
14615 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
14616 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
14617 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
14618 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
14619 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
14620 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
14621 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
14622 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
14623 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
14624 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
14625 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14626 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
14627 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14628 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
14629 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14630 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14631 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14632 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14633 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14634 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14635 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14636 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14637 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14638 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14639 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14640 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
14641 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
14642 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14643 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14644 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrrillic, *afii10145
14645 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14646 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrrillic, *afii10017
14647 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14648 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14649 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14650 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14651 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14652 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14653 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14654 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14655 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14656 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14657 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14658 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14659 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14660 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14661 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14662 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrillic, *afii10026
14663 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14664 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrrillic, *afii10027
14665 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14666 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14667 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrrillic, *afii10028

14668 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14669 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14670 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14671 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14672 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14673 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14674 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14675 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14676 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14677 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14678 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14679 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14680 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14681 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14682 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14683 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14684 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14685 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14686 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14687 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14688 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14689 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14690 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14691 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14692 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14693 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14694 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14695 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14696 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14697 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14698 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14699 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14700 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14701 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14702 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14703 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14704 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14705 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14706 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14707 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14708 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14709 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14710 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14711 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14712 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14713 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14714 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14715 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14716 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14717 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14718 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14719 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14720 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14721 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14722 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14723 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14724 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436

14725 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14726 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
14727 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14728 \DeclareTextCommand{\cyrj}{PU}{\84\070}% U+0438
14729 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14730 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14731 \DeclareTextCompositeCommand{\U}{PU}{\cyrj}{\84\071}% U+0439
14732 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14733 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
14734 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14735 \DeclareTextCommand{\cyrj}{PU}{\84\073}% U+043B
14736 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14737 \DeclareTextCommand{\cyrn}{PU}{\84\074}% U+043C
14738 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14739 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
14740 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14741 \DeclareTextCommand{\cyrj}{PU}{\84\076}% U+043E
14742 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14743 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
14744 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14745 \DeclareTextCommand{\cyrj}{PU}{\84\100}% U+0440
14746 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14747 \DeclareTextCommand{\cyrj}{PU}{\84\101}% U+0441
14748 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14749 \DeclareTextCommand{\cyrj}{PU}{\84\102}% U+0442
14750 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14751 \DeclareTextCommand{\cyrj}{PU}{\84\103}% U+0443
14752 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14753 \DeclareTextCommand{\cyrj}{PU}{\84\104}% U+0444
14754 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14755 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
14756 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14757 \DeclareTextCommand{\cyrj}{PU}{\84\106}% U+0446
14758 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14759 \DeclareTextCommand{\cyrj}{PU}{\84\107}% U+0447
14760 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14761 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14762 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14763 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14764 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14765 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14766 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14767 \DeclareTextCommand{\cyrj}{PU}{\84\113}% U+044B
14768 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14769 \DeclareTextCommand{\cyrj}{PU}{\84\114}% U+044C
14770 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14771 \DeclareTextCommand{\cyrj}{PU}{\84\115}% U+044D
14772 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14773 \DeclareTextCommand{\cyrj}{PU}{\84\116}% U+044E
14774 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14775 \DeclareTextCommand{\cyrj}{PU}{\84\117}% U+044F
14776 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14777 \DeclareTextCompositeCommand{\'}{PU}{\cyrj}{\84\120}% U+0450
14778 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14779 \DeclareTextCommand{\cyrj}{PU}{\84\121}% U+0451
14780 \DeclareTextCompositeCommand{\'}{PU}{\cyrj}{\84\121}% U+0451
14781 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic

14782 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14783 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14784 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14785 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14786 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14787 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14788 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14789 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyril-
lic
14790 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14791 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14792 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14793 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
14794 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14795 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14796 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14797 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14798 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14799 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14800 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14801 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14802 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14803 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14804 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14805 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
14806 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14807 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14808 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14809 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14810 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14811 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14812 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14813 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14814 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14815 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14816 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14817 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14818 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14819 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14820 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14821 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14822 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14823 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
14824 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14825 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
14826 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14827 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
14828 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14829 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
fiedcyrillic
14830 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14831 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14832 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14833 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14834 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B

14835 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-cyrillic
 14836 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 14837 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
 14838 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 14839 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 14840 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 14841 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 14842 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 14843 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 14844 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 14845 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 14846 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 14847 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 14848 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 14849 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 14850 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 14851 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 14852 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 14853 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 14854 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 14855 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 14856 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 14857 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 14858 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 14859 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 14860 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 14861 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 14862 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 14863 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 14864 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14865 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14866 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14867 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 14868 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14869 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 14870 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14871 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14872 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14873 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14874 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14875 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14876 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14877 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14878 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14879 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14880 \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; dasiapneumata-

cyrilliccmb
 \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
 14881 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14882 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14883 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14884 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14885 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14886 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14887 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14888 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14889 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14890 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14891 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14892 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14893 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afi10050
 14894 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14895 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afi10098, gheupturncyrillic
 14896 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14897 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 14898 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14899 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14900 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 14901 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14902 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 14903 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 14904 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14905 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 14906 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14907 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 14908 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14909 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 14910 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14911 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14912 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 14913 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 14914 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14915 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 14916 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14917 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 14918 \DeclareTextCommand{\cyrkds}{PU}{\84\233}% U+049B
 14919 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic

14920 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
14921 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
verticalstrokecyrillic
14922 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
14923 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
14924 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
14925 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
14926 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
14927 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
14928 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
14929 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
14930 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
14931 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
14932 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
14933 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
cyrillic
14934 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
14935 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
14936 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
14937 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
14938 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
14939 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic
14940 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
14941 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
hookcyrillic
14942 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
14943 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
lic
14944 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
14945 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
14946 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
14947 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
dercyrillic
14948 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
14949 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
14950 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
cyrillic
14951 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
14952 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
14953 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
dercyrillic
14954 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
14955 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-
cyrillic
14956 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
14957 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
14958 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
14959 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
14960 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
14961 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
traightstrokecyrillic
14962 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
14963 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
traightstrokecyrillic
14964 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1

14965 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hades-
 dencyrillic
 14966 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 14967 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
 dencyrillic
 14968 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 14969 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 14970 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 14971 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 14972 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 14973 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescen-
 dencyrillic
 14974 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 14975 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dencyrillic
 14976 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 14977 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 erticalstrokecyrillic
 14978 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 14979 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 erticalstrokecyrillic
 14980 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 14981 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 14982 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 14983 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 14984 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 14985 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 14986 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 14987 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 14988 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 14989 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 14990 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 14991 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 14992 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 14993 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 14994 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 14995 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 14996 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 14997 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 14998 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 14999 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 15000 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 15001 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 15002 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 15003 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 15004 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 15005 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 15006 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 15007 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 15008 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 15009 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 15010 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 15011 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic

15012 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15013 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
 15014 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15015 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 15016 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15017 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15018 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15019 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15020 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15021 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15022 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15023 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15024 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 15025 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 15026 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 15027 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 15028 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 15029 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 15030 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 15031 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 15032 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 15033 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 15034 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 15035 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 15036 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 15037 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 15038 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 15039 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 15040 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 15041 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
 15042 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 15043 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic
 15044 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
 15045 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic
 15046 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 15047 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-cyrillic
 15048 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
 15049 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-cyrillic
 15050 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 15051 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresis-cyrillic
 15052 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 15053 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 15054 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 15055 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 15056 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 15057 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 15058 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2

15059 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
15060 \DeclareTextCompositeCommand{\=} {PU}{\cyri}{\84\343}% U+04E3
15061 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
15062 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
15063 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
15064 \DeclareTextCompositeCommand{\'} {PU}{\cyri}{\84\345}% U+04E5
15065 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
15066 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
15067 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
15068 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
15069 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
15070 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
15071 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
15072 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
15073 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
15074 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
15075 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
15076 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
15077 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
15078 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
15079 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
15080 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
15081 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
15082 \DeclareTextCompositeCommand{\=} {PU}{\CYRU}{\84\356}% U+04EE
15083 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
15084 \DeclareTextCompositeCommand{\=} {PU}{\cyru}{\84\357}% U+04EF
15085 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
15086 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
15087 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
15088 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
15089 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
15090 \DeclareTextCompositeCommand{\H} {PU}{\CYRU}{\84\362}% U+04F2
15091 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
15092 \DeclareTextCompositeCommand{\H} {PU}{\cyru}{\84\363}% U+04F3
15093 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
15094 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
15095 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
15096 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
15097 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
15098 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
15099 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
15100 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
15101 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
15102 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
15103 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
15104 \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

15105 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15106 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15107 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15108 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

15109 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15110 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

15111 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15112 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 15113 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15114 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 15115 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15116 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15117 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15118 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15119 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15120 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 15121 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15122 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 15123 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15124 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 15125 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 15126 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 15127 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 15128 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 15129 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 15130 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 15131 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 15132 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 15133 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 15134 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 15135 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 15136 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 15137 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 15138 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 15139 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 15140 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 15141 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 15142 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 15143 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 15144 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
 15145 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 15146 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
 15147 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 15148 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
 15149 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
 15150 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
 15151 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
 15152 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
 15153 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
 15154 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31

15155 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15156 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15157 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15158 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15159 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15160 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15161 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15162 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15163 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15164 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15165 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15166 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15167 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15168 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15169 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15170 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15171 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15172 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15173 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15174 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15175 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15176 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15177 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15178 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15179 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15180 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15181 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15182 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15183 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15184 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15185 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15186 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15187 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15188 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15189 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15190 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15191 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15192 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15193 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15194 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15195 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15196 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15197 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15198 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15199 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15200 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15201 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15202 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15203 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15204 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15205 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15206 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15207 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15208 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\200}% U+1E80
15209 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15210 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\201}% U+1E81
15211 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute

15212 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 15213 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 15214 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 15215 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 15216 \DeclareTextCompositeCommand{"}{PU}{W}{\9036\204}% U+1E84
 15217 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 15218 \DeclareTextCompositeCommand{"}{PU}{w}{\9036\205}% U+1E85
 15219 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 15220 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
 15221 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 15222 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
 15223 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 15224 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 15225 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 15226 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 15227 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 15228 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 15229 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 15230 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 15231 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 15232 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
 15233 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 15234 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
 15235 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 15236 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
 15237 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 15238 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
 15239 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 15240 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 15241 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 15242 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 15243 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15244 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 15245 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15246 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 15247 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15248 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15249 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15250 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15251 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15252 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15253 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15254 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15255 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15256 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15257 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15258 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 15259 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15260 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 15261 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15262 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15263 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15264 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15265 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner

15266 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15267 % U+2013 EN DASH; endash
 15268 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15269 % U+2014 EM DASH; emdash
 15270 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15271 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15272 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15273 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15274 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15275 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15276 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15277 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15278 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15279 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15280 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 15281 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15282 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 15283 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15284 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15285 % U+2020 DAGGER; dagger
 15286 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15287 % U+2021 DOUBLE DAGGER; daggerdbl
 15288 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15289 % U+2022 BULLET; bullet
 15290 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15291 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15292 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15293 % U+2030 PER MILLE SIGN; perthousand
 15294 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15295 % U+2031 PER TEN THOUSAND SIGN
 15296 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15297 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15298 \DeclareTextCommand{\guillemotleft}{PU}{\9040\071}% U+2039
 15299 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 15300 \DeclareTextCommand{\guillemotright}{PU}{\9040\072}% U+203A
 15301 % U+203B REFERENCE MARK; referencemark
 15302 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15303 % U+203D INTERROBANG
 15304 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15305 % U+2044 FRACTION SLASH; fraction
 15306 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15307 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15308 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15309 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15310 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15311 % U+2052 COMMERCIAL MINUS SIGN
 15312 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

15313 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 15314 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 15315 % U+2074 SUPERSCRIPT FOUR; foursuperior
 15316 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 15317 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 15318 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075

15319 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15320 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15321 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15322 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15323 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15324 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15325 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15326 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15327 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15328 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15329 % U+207B SUPERSCRIPT MINUS
 15330 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 15331 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15332 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
 15333 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15334 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15335 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15336 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15337 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15338 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 15339 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15340 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15341 % U+2081 SUBSCRIPT ONE; oneinferior
 15342 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15343 % U+2082 SUBSCRIPT TWO; twoinferior
 15344 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15345 % U+2083 SUBSCRIPT THREE; threeinferior
 15346 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 15347 % U+2084 SUBSCRIPT FOUR; fourinferior
 15348 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15349 % U+2085 SUBSCRIPT FIVE; fiveinferior
 15350 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15351 % U+2086 SUBSCRIPT SIX; sixinferior
 15352 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15353 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15354 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15355 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15356 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15357 % U+2089 SUBSCRIPT NINE; nineinferior
 15358 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15359 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15360 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15361 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15362 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

15363 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15364 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15365 % U+20A4 LIRA SIGN; afi08941, *lira
 15366 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15367 % U+20A6 NAIRA SIGN
 15368 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15369 % U+20A7 PESETA SIGN; peseta
 15370 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15371 % U+20A9 WON SIGN; won
 15372 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15373 % U+20AB DONG SIGN; dong

15374 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15375 % U+20AC EURO SIGN; *Euro, euro
 15376 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15377 % U+20B1 PESO SIGN
 15378 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15379 % U+20B2 GUARANI SIGN
 15380 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

15381 % U+2103 DEGREE CELSIUS; centigrade
 15382 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15383 % U+2116 NUMERO SIGN; *afi61352, numero
 15384 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15385 % U+2117 SOUND RECORDING COPYRIGHT
 15386 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15387 % U+211E PRESCRIPTION TAKE; prescription
 15388 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15389 % U+2120 SERVICE MARK
 15390 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15391 % U+2122 TRADE MARK SIGN; trademark
 15392 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15393 % U+2126 OHM SIGN; Ohm, Omega
 15394 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15395 % U+2127 INVERTED OHM SIGN
 15396 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15397 % U+212B ANGSTROM SIGN; angstrom
 15398 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15399 % U+212E ESTIMATED SYMBOL; estimated
 15400 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15401 % U+2135 ALEF SYMBOL; aleph
 15402 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15403 % U+2190 LEFTWARDS ARROW; arrowleft
 15404 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15405 % U+2191 UPWARDS ARROW; arrowup
 15406 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15407 % U+2192 RIGHTWARDS ARROW; arrowright
 15408 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15409 % U+2193 DOWNWARDS ARROW; arrowdown
 15410 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

15411 % U+2212 MINUS SIGN; minus
 15412 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15413 % U+221A SQUARE ROOT; radical
 15414 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

15415 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 15416 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 15417 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 15418 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

15419 % U+2422 BLANK SYMBOL
 15420 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422

15421 % U+2423 OPEN BOX; blank
 15422 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

15423 % U+2460 CIRCLED DIGIT ONE; onecircle
 15424 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 15425 % U+2461 CIRCLED DIGIT TWO; twocircle
 15426 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 15427 % U+2462 CIRCLED DIGIT THREE; threecircle
 15428 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 15429 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 15430 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 15431 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 15432 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 15433 % U+2465 CIRCLED DIGIT SIX; sixcircle
 15434 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 15435 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
 15436 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 15437 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 15438 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 15439 % U+2468 CIRCLED DIGIT NINE; ninecircle
 15440 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 15441 % U+2469 CIRCLED NUMBER TEN; tencircle
 15442 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 15443 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 15444 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 15445 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 15446 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 15447 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 15448 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 15449 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 15450 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15451 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15452 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 15453 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 15454 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 15455 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 15456 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 15457 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 15458 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 15459 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 15460 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 15461 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 15462 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 15463 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 15464 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 15465 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 15466 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 15467 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15468 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15469 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15470 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15471 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15472 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15473 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15474 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15475 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

15476 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
15477 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
15478 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
15479 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
15480 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
15481 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
15482 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
15483 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
15484 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
15485 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
15486 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
15487 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
15488 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
15489 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
15490 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
15491 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
15492 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
15493 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
15494 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
15495 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
15496 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
15497 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
15498 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
15499 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
15500 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
15501 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
15502 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
15503 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
15504 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
15505 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
15506 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
15507 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
15508 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
15509 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
15510 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15511 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15512 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15513 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15514 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15515 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15516 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15517 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15518 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15519 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15520 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15521 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15522 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15523 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15524 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15525 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15526 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15527 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15528 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15529 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15530 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15531 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15532 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8

15533 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 15534 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 15535 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 15536 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 15537 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 15538 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 15539 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 15540 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 15541 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 15542 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 15543 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 15544 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 15545 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 15546 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 15547 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 15548 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 15549 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 15550 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 15551 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 15552 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 15553 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 15554 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 15555 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 15556 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 15557 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 15558 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 15559 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 15560 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15561 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15562 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15563 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 15564 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15565 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15566 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15567 % U+24EA CIRCLED DIGIT ZERO
 15568 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15569 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15570 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15571 % U+25EF LARGE CIRCLE; largecircle
 15572 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15573 % U+266A EIGHTH NOTE; musicalnote
 15574 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15575 % U+26AD MARRIAGE SYMBOL
 15576 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15577 % U+26AE DIVORCE SYMBOL
 15578 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15579 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15580 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15581 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15582 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```
15583 % U+FB01 LATIN SMALL LIGATURE FI; fi
15584 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
15585 % U+FB02 LATIN SMALL LIGATURE FL; fl
15586 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

50.2.25 Miscellaneous

```
15587 \DeclareTextCommand{\SS}{PU}{SS}
```

50.2.26 Aliases

Aliases (german.sty)

```
15588 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
15589 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
15590 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
15591 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
15592 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
15593 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
15594 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
15595 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}
```

Aliases (math names)

```
15596 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
15597 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
15598 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
15599 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
15600 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
15601 </puenc>
```

50.3 PU encoding, additions for VnT_EX

This file is provided by Han The Thanh.

```
15602 <*puvnenc>
15603 \DeclareTextCommand{\abreve}{PU}{\81\003}
15604 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15605 \DeclareTextCommand{\dj}{PU}{\81\021}
15606 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15607 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15608 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15609 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15610 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15611 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15612 \DeclareTextCommand{\DJ}{PU}{\81\020}
15613 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15614 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15615 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15616 \DeclareTextCommand{\UHORN}{PU}{\81\257}
15617 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15618 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15619 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15620 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15621 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15622 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15623 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15624 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15625 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
```

15626 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15627 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15628 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15629 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15630 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15631 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15632 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15633 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15634 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15635 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15636 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15637 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15638 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15639 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15640 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15641 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15642 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15643 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15644 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15645 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15646 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15647 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15648 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15649 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15650 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15651 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15652 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15653 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15654 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15655 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
15656 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15657 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15658 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15659 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
15660 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15661 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
15662 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15663 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15664 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15665 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15666 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
15667 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15668 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15669 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15670 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15671 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
15672 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15673 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15674 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15675 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15676 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
15677 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15678 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15679 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15680 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15681 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15682 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}

15683 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15684 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15685 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15686 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
15687 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15688 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15689 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15690 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15691 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
15692 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15693 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15694 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15695 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15696 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
15697 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15698 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15699 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15700 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15701 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
15702 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15703 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15704 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15705 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15706 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
15707 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15708 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15709 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15710 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15711 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
15712 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
15713 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
15714 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
15715 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
15716 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
15717 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
15718 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
15719 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
15720 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
15721 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
15722 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
15723 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
15724 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
15725 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
15726 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
15727 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
15728 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
15729 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
15730 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
15731 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
15732 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
15733 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
15734 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15735 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15736 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15737 </puvnenc>

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```
15738 (*puarenc)
15739 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LET-
TER HAMZA
15740 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15741 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15742 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15743 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15744 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15745 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
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15792 \puarenc

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15797 \check)

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