

Hypertext marks in \LaTeX

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1 Documentation overview for `hyperref`

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

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

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

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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

`backref.dtx` “Back referencing from bibliographical citations”

`nameref.dtx` “Section name references in \LaTeX ”

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3 File hycheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

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

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

```

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

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

```

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

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

```

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

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

```

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

`\HyC@noValue`

```

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

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


```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

`\HyC@meaning`

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

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

```

```
231 \Hy@SetCatcodes
```

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

```

232 \RequirePackage{keyval}[1997/11/10]
233 \RequirePackage{ifpdf}[2006/02/20]
234 \RequirePackage{ifvtex}
235 \RequirePackage{ifxetex}[2006/08/21]
236 \RequirePackage{hycolor}
237 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
238 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
239 \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`.

```

240 \@ifundefined{AfterBeginDocument}{%
241   \def\AfterBeginDocument{\AtBeginDocument}%
242 }{}%

```

4.3 Switches

```

243 \newif\ifHy@typexml
244 \newif\ifHy@activeanchor
245 \newif\ifHy@backref
246 \newif\ifHy@bookmarks
247 \newif\ifHy@bookmarksnumbered
248 \newif\ifHy@bookmarksopen
249 \newif\ifHy@breaklinks
250 \newif\ifHy@centerwindow
251 \newif\ifHy@CJKbookmarks
252 \newif\ifHy@colorlinks
253 \newif\ifHy@draft
254 \let\Hy@finaltrue\Hy@draftfalse
255 \let\Hy@finalfalse\Hy@drafttrue

```

```

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

```

Defaults for the switches are now set.

```

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

```

```

312 \Hy@plainpagesfalse
313 \Hy@raiselinksfalse
314 \Hy@setpagesizetrue
315 \Hy@texhtfalse
316 \Hy@toolbartrue
317 \Hy@typexmlfalse
318 \Hy@unicodetrue
319 \Hy@usetitlefalse
320 \Hy@verbosefalse
321 \Hy@windowuitrue
322 \Hy@displaydoctitlefalse
323 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

326 \newdimen\@linkdim
327 \let\Hy@driver\@empty
328 \let\MaybeStopEarly\relax
329 \newcount\Hy@linkcounter
330 \newcount\Hy@pagecounter
331 \Hy@linkcounter0
332 \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.

```

333 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
334 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

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

```

5.2 Babel's protection of shorthand characters

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

```

338 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
339 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

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

\hypercaltcbp The user macro \hypercaltcbp can be used, for example, inside option values:
 pdfstartview={FitBH \hypercaltcbp{\paperheight-\topmargin-1in}}

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

Example (T_EX):

```

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

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

```

```

374 }%
375 \else
376 \def\hypercalcbp#1{%
377 \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
378 }%
379 \def\hypercalcbpdef{\def}%
380 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

- They are surrounded by parentheses. The hexadecimal form is not supported.
- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- Strings are stored either in `PDFDocEncoding`, which is a superset of `ISOLatin1` and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
382 \begingroup
```

6.2.1 Preprocessing

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

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

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

```
383 \escapechar'\%
```

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

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

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

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

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

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

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

```
388 \ifHy@unicode
```

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

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

```
391 \fontencoding{PU}%
```

```
392 \HyPsd@UTFviii
```

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

```
394 \else
```

```
395 \fontencoding{PD1}%
```

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

```
397 \fi
```

```
398 \enc@update
```

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

```
399 \@inmathwarn\pdfstringdef
```

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

```
400 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
401 \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.

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

```
414 \def\{\pdfstringdefWarn\\}%
415 \def\newline{\pdfstringdefWarn\newline}%
```

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

```
416 \def\TeX{\TeX}%
417 \def\LaTeX{La\TeX}%
418 \def\LaTeXe{LaTeX2e}%
419 \def\eTeX{e-\TeX}%
420 \def\SliTeX{Sli\TeX}%
421 \def\MF{Metafont}%
422 \def\MP{Metapost}%
```

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

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

461 \def\MakeUppercase{\MakeUppercaseIsNotSupportedInPdfStrings}%
462 \def\MakeLowercase{\MakeLowercaseIsNotSupportedInPdfStrings}%

```

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

```

463 \let\textlatin\@firstofone
464 \@ifundefined{language@group}{\}%
465 \csname HyPsd@babel@language@group\endcsname
466 }%
467 \HyPsd@GreekPatch

```

```

468 \let\@safe@activetrue\relax
469 \let\@safe@activesfalse\relax
    Disable \cyr, used in russianb.ldf.
470 \let\cyr\relax
    Redefine \es@roman, used in spanish.ldf.
471 \let\es@roman\@Roman

```

Package german.

```

472 \let\glqq\textglqq
473 \let\grqq\textgrqq
474 \let\glq\textglq
475 \let\grq\textgrq
476 \let\flqq\textflqq
477 \let\frqq\textfrqq
478 \let\flq\textflq
479 \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}
480 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

481 \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.

```

482 \let\hspace\HyPsd@hspace

```

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

```

483 \let\label\@gobble
484 \let\index\@gobble
485 \let\glossary\@gobble
486 \let\href\@secondoftwo
487 \let\@mkboth\@gobbletwo

```

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

```

488 \let\ref\HyPsd@ref
489 \let\pageref\HyPsd@pageref
490 \let\nameref\HyPsd@nameref
491 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

492 \let\leavevmode\@empty
493 \let\mbox\@empty

```

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

```

494 \def\halign{\pdfstringdefWarn\halign\@gobble}%
495 \let\ignorespaces\HyPsd@ignorespaces

```

Patch for cjk bookmarks.

```
496 \ifHy@CJKbookmarks
497 \HyPsd@CJKhook
498 \fi
```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typeset 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`).

```
499 \Hy@pdfstringtrue
500 \pdfstringdefPreHook
```

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

```
501 \HyPsd@LetUnexpandableSpace\space
502 \HyPsd@LetUnexpandableSpace\ %
503 \HyPsd@LetUnexpandableSpace~%
504 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
505 \@ifundefined{@xspace}{%
506 \let\xspace\HyPsd@ITALCORR
507 }{%
508 \let\xspace\HyPsd@XSPACE
509 }%
510 \let\/\HyPsd@ITALCORR
511 \let\bgroup\/%
512 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
513 \let\discretionary\@gobbletwo
\@ifstar is defined in  $\text{\LaTeX}$  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:

```
514 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
515 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
516 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
517 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
518 \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 be 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).

```
519 \begingroup
520 \let\GenericError\@gobblefour
521 \let\GenericWarning\@gobbletwo
522 \let\GenericInfo\@gobbletwo
```

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

```
523 \ifx\nofrenchguillemets\@undefined
524 \else
525 \nofrenchguillemets
526 \fi
```

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

```
527 \let\Hy@temp\xdef
528 \let\def\HyPsd@DefCommand
529 \let\gdef\HyPsd@DefCommand
```

```

530      \let\edef\HyPsd@DefCommand
531      \let\xdef\HyPsd@DefCommand
532      \let\futurelet\HyPsd@LetCommand
533      \let\let\HyPsd@LetCommand
534      \Hy@temp#1{#2}%
535      \endgroup

```

6.2.3 Postprocessing

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

```

536      \ifx#1\@empty
537      \else

```

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

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

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

```

538      \HyPsd@ProtectSpaces#1%
539      \let\HyPsd@String\@empty
540      \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
541      \global\let#1\HyPsd@String

```

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

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

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

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

```

542 \let\HyPsd@SPACEOPTI\relax
543 {%
544 \let\HyPsd@String\@empty
545 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
546 \global\let#1\HyPsd@String
547 }%
548 \expandafter\HyPsd@RemoveMask\expandafter
549 |\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.

```

550 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
551 \let\HyPsd@String\@empty
552 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
553 \global\let#1\HyPsd@String

```

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

```
554 \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.1df can produce an additional space before \guillemotright, because \lastskip and \unskip do not work. Therefore it is removed here.

```

555 \ifHy@unicode
556 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
557 \HyPsd@SPACEOPTI#1%
558 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
559 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
560 {\HyPsd@SPACEOPTI\80\273}#1%
561 \else
562 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
563 \expandafter\HyPsd@Subst\expandafter{%
564 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
565 \string\273}{\HyPsd@SPACEOPTI\273}#1%
566 \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.


```

567 \ifHy@unicode
568 \HyPsd@StringSubst{\}){\80\051}#1%
569 \HyPsd@Subst){\80\051}#1%
570 \let\HyPsd@empty\relax
571 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
572 {\HyPsd@empty\80\051}#1%
573 \else
574 \HyPsd@StringSubst{\}){\051}#1%
575 \HyPsd@Subst){\051}#1%
576 \let\HyPsd@empty\relax
577 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\})#1%
578 \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`.

```

579 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
580 \@ifundefined{@xspace}{%
581 }{%
582 \let\HyPsd@xspace\relax
583 \expandafter\HyPsd@Subst\expandafter
584 {\HyPsd@XSPACE}\HyPsd@xspace#1%
585 \let\HyPsd@xspace\HyPsd@doxspace
586 }%
587 \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.

```

588 \HyPsd@Subst{---}\textemdash#1%
589 \HyPsd@Subst{--}\textendash#1%
590 % \HyPsd@Subst{fi}\textfi#1%
591 % \HyPsd@Subst{fl}\textfl#1%
592 \HyPsd@Subst{!'}\texttexclamdown#1%
593 \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

594 \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.

```
595     \ifHy@unicode
596     \HyPsd@StringSubst\(\textparenleft#1%
597     \HyPsd@Subst(\textparenleft#1%
598     \else
599     \HyPsd@StringSubst\({\050}#1%
600     \HyPsd@Subst({\050}#1%
601     \HyPsd@StringSubst{\050}{\string\()}#1%
602     \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.

```
603     \ifHy@unicode
604     \edef\HyPsd@SPACEOPTI{\80\040}%
605     \else
606     \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
607     \fi
608     \xdef#1{#1\@empty}%
609     \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.

```
610 \endgroup
611 \begingroup
612 \ifHy@unicode
613 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```
614 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
615 \ifundefined{StringEncodingConvertTest}{%
616 }{%
617 \EdefUnescapeString\HyPsd@temp#1%
618 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
619 {utf16be}{pdfdoc}{%
620 \EdefEscapeString\HyPsd@temp\HyPsd@temp
621 \global\let#1\HyPsd@temp
622 \Hy@unicodedefalse
623 }{}%
624 }%
625 \fi
626 \fi
```

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

```
627 \pdfstringdefPostHook#1%
628 \endgroup
629 }
```

`\Hy@pdfstringdef`

```
630 \def\Hy@pdfstringdef#1#2{%
631   \pdfstringdef\Hy@gtemp{#2}%
632   \let#1\Hy@gtemp
633 }
```

6.3 Encodings

6.3.1 Workaround for package linguex

```
634 \@ifpackageloaded{linguex}{%
635   \let\HyLinguex@OrgB\b
636   \let\HyLinguex@OrgC\c
637   \let\HyLinguex@OrgD\d
638   \def\HyLinguex@Restore{%
639     \let\b\HyLinguex@OrgB
640     \let\c\HyLinguex@OrgC
641     \let\d\HyLinguex@OrgD
642   }%
643   \AtEndOfPackage{%
644     \pdfstringdefDisableCommands{%
645       \@ifundefined{oldb}{\let\b\oldb}%
646       \@ifundefined{oldc}{\let\c\oldc}%
647       \@ifundefined{oldd}{\let\d\oldd}%
648     }%
649   }%
650 }{%
651   \let\HyLinguex@Restore\relax
652 }%
```

6.3.2 PD1 encoding

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

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

```
653 \@ifundefined{T@PD1}{%
654   \input{pd1enc.def}%
655   \HyLinguex@Restore
656 }{}
657 \DeclareFontFamily{PD1}{pdf}{}
658 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
659 \DeclareFontSubstitution{PD1}{pdf}{m}{n}
```

6.3.3 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.

```
660 \def\HyPsd@InitUnicode{%
661   \@ifundefined{T@PU}{%
```

```

662 \input{puenc.def}%
663 \HyLinguex@Restore
664 }{}%
665 \DeclareFontFamily{PU}{pdf}{}%
666 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
667 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
668 \let\HyPsd@InitUnicode\relax
669 }

```

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.

```

670 \def\texorpdfstring{%
671   \ifHy@pdfstring
672     \expandafter\@secondoftwo
673   \else
674     \expandafter\@firstoftwo
675   \fi
676 }

```

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`.

```

677 \@ifundefined{pdfstringdefPreHook}{%
678   \let\pdfstringdefPreHook\@empty
679 }{}
680 \@ifundefined{pdfstringdefPostHook}{%
681   \let\pdfstringdefPostHook\@gobble
682 }{}

```

`\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`.

```

683 \def\pdfstringdefDisableCommands{%
684   \begingroup
685     \makeatletter
686     \HyPsd@DisableCommands
687 }

```

`\HyPsd@DisableCommands`

```
688 \long\def\HyPsd@DisableCommands#1{%
689   \toks0=\expandafter\pdfstringdefPreHook}%
690   \toks1={#1}%
691   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
692 \endgroup
693 }
```

`\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`.

```
694 \def\pdfstringdefWarn#1{%
695   \expandafter\noexpand\csname\<>-string#1\endcsname
696 }
```

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.

```
697 \begingroup
698   \catcode0=12 %
699   \def\x{\endgroup
700     \def\HyPsd@ignorespaces{%
701       \romannumeral\expandafter'\expandafter^^@%
702       \romannumeral'^^@%
703     }%
704   }%
705 \x
```

6.5.2 Babel languages

```
706 \newif\ifHy@next

Nothing to do for english.
707 \@ifundefined{danish@sh@"@sel}{-}{%
708   \def\HyPsd@babel@danish{%
709     \declare@shorthand{danish}{-}{-}%
710     \declare@shorthand{danish}{-}{-}%
711   }%
712 }
713 \@ifundefined{dutch@sh@"@sel}{-}{%
714   \def\HyPsd@babel@dutch{%
715     \declare@shorthand{dutch}{-}{-}%
716     \declare@shorthand{dutch}{-}{-}%
717   }%
718 }
```

```

719 \@ifundefined{finnish@sh@"@sel}{-}{%
720   \def\HyPsd@babel@finnish{%
721     \declare@shorthand{finnish}{-}{-}%
722   }%
723 }
724 \@ifundefined{french@sh@"@sel}{-}{%
725   \def\HyPsd@babel@frenchb{%
726     \def\guill@spacing{ }%
727   }%
728 }
729 \@ifundefined{german@sh@"@sel}{-}{%
730   \def\HyPsd@babel@german{%
731     \declare@shorthand{german}{f}{f}%
732     \declare@shorthand{german}{-}{-}%
733     \declare@shorthand{german}{~}{-}%
734   }%
735 }
736 \@ifundefined{macedonian@sh@"@sel}{-}{%
737   \def\HyPsd@babel@macedonian{%
738     \declare@shorthand{macedonian}{-}{-}%
739     \declare@shorthand{macedonian}{~}{-}%
740   }%
741 }{-}
742 \@ifundefined{ngerman@sh@"@sel}{-}{%
743   \def\HyPsd@babel@ngerman{%
744     \declare@shorthand{ngerman}{-}{-}%
745     \declare@shorthand{ngerman}{~}{-}%
746   }%
747 }
748 \@ifundefined{portuges@sh@"@sel}{-}{%
749   \def\HyPsd@babel@portuges{%
750     \declare@shorthand{portuges}{-}{-}%
751   }%
752 }
753 \@ifundefined{russian@sh@"@sel}{-}{%
754   \def\HyPsd@babel@russian{%
755     \declare@shorthand{russian}{-}{-}%
756     \declare@shorthand{russian}{~}{-}%
757   }%
758 }
759 \@ifundefined{slovene@sh@"@sel}{-}{%
760   \def\HyPsd@babel@slovene{%
761     \declare@shorthand{slovene}{-}{-}%
762   }%
763 }

```

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

```

764 \@ifundefined{spanish@sh@>@sel}{-}{%
765   \def\HyPsd@babel@spanish{%
766     \declare@shorthand{spanish}{<<}{\guillemotleft}%
767     \declare@shorthand{spanish}{>>}{\guillemotright}%
768     \declare@shorthand{spanish}{=}{-}%
769     \declare@shorthand{spanish}{~}{-}%
770     \declare@shorthand{spanish}{!}{\textexclamdown}%
771     \declare@shorthand{spanish}{?}{\textquestiondown}%
772   }%
773 }
774 \@ifundefined{swedish@sh@"@sel}{-}{%

```

```

775 \def\HyPsd@babel@swedish{%
776   \declare@shorthand{swedish}{"}{|}%
777   \declare@shorthand{swedish}{"}{|}%
778 }%
779 }
780 \@ifundefined{ukrainian@sh@"@sel}{|}%
781 \def\HyPsd@babel@ukrainian{%
782   \declare@shorthand{ukrainian}{"}{|}%
783   \declare@shorthand{ukrainian}{"}{|}%
784 }%
785 }
786 \@ifundefined{usorbian@sh@"@sel}{|}%
787 \def\HyPsd@babel@usorbian{%
788   \declare@shorthand{usorbian}{"}{|}%
789   \declare@shorthand{usorbian}{"}{|}%
790 }%
791 }
792 \@ifundefined{greek@sh@\string~@sel}{|}%
793 \let\HyPsd@GreekPatch\empty
794 }{|}%
795 \def\HyPsd@GreekPatch{%
796   \let\greeknumeral\HyPsd@greeknumeral
797   \let\Greeknumeral\HyPsd@Greeknumeral
798 }%
799 }
800 \def\HyPsd@greeknumeral#1{%
801   \HyPsd@GreekNum\@firstoftwo{#1}%
802 }
803 \def\HyPsd@Greeknumeral#1{%
804   \HyPsd@GreekNum\@secondoftwo{#1}%
805 }
806 \def\HyPsd@GreekNum#1#2{%
807   \ifHy@unicode
808     \ifnum#2<\@one
809       \@arabic{#2}%
810     \else
811       \ifnum#2<1000000 %
812         \HyPsd@@GreekNum#1{#2}%
813       \else
814         \@arabic{#2}%
815       \fi
816     \fi
817   \else
818     \@arabic{#2}%
819   \fi
820 }
821 \def\HyPsd@@GreekNum#1#2{%
822   \ifnum#2<\@m
823     \ifnum#2<10 %
824       \expandafter\HyPsd@GreekNumI
825       \expandafter\@gobble\expandafter#1\number#2%
826     \else
827       \ifnum#2<100 %
828         \expandafter\HyPsd@GreekNumII
829         \expandafter\@gobble\expandafter#1\number#2%
830       \else
831         \expandafter\HyPsd@GreekNumIII

```

```

832         \expandafter\@gobble\expandafter#1\number#2%
833     \fi
834 \fi
835 \ifnum#2>\z@
836     \textnumeralsigngreek
837 \fi
838 \else
839     \ifnum#2<\@M
840         \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
841     \else
842         \ifnum#2<100000 %
843             \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
844         \else
845             \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
846         \fi
847     \fi
848 \fi
849 }
850 \def\HyPsd@GreekNumI#1#2#3{%
851     #1{%
852         \ifnum#3>\z@
853             \textnumeralsignlowergreek
854         \fi
855     }%
856     \expandafter#2%
857     \ifcase#3 %
858         {}{}%
859     \or\textalpha\textAlpha
860     \or\textbeta\textBeta
861     \or\textgamma\textGamma
862     \or\textdelta\textDelta
863     \or\textepsilon\textEpsilon
864     \or\textstigmagreek\textStigmagreek
865     \or\textzeta\textZeta
866     \or\texteta\textEta
867     \or\texttheta\textTheta
868     \else
869         {}{}%
870     \fi
871 }
872 \def\HyPsd@GreekNumII#1#2#3#4{%
873     #1{%
874         \ifnum#3>\z@
875             \textnumeralsignlowergreek
876         \fi
877     }%
878     \expandafter#2%
879     \ifcase#3 %
880         {}{}%
881     \or\textiota\textIota
882     \or\textkappa\textKappa
883     \or\textlambda\textLambda
884     \or\textmu\textMu
885     \or\textnu\textNu
886     \or\textxi\textXi
887     \or\textomicron\textOmicron
888     \or\textpi\textPi

```



```

889 \or\textkoppagreek\textKoppagreek
890 \else
891   {}{}%
892 \fi
893 \HyPsd@GreekNumI#1#2#4%
894 }
895 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
896   #1{%
897     \ifnum#3>\z@
898       \textnumeralsignlowergreek
899     \fi
900   }%
901   \expandafter#2%
902   \ifcase#3 %
903     {}{}%
904   \or\textrho\textRho
905   \or\textsigma\textSigma
906   \or\texttau\textTau
907   \or\textupsilon\textUpsilon
908   \or\textphi\textPhi
909   \or\textchi\textChi
910   \or\textpsi\textPsi
911   \or\textomega\textOmega
912   \or\textsampigreek\textSampigreek
913   \else
914     {}{}%
915   \fi
916   \HyPsd@GreekNumII#1#2#4#5%
917 }
918 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
919   \HyPsd@GreekNumI\@firstofone#1#2%
920   \HyPsd@GreekNum#1{#3#4#5}%
921 }
922 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
923   \HyPsd@GreekNumII\@firstofone#1#2#3%
924   \HyPsd@GreekNum#1{#4#5#6}%
925 }
926 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
927   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
928   \HyPsd@GreekNum#1{#5#6#7}%
929 }

```

6.5.3 CJK bookmarks

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

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

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

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

```

930 \begingroup
931   \catcode"7F=\active
932   \toks@{%
933     \let\CJK@ignorespaces\empty

```

```

934 \def\CJK@char#1{\@gobbletwo}%
935 \let\CJK@charx\@gobblefour
936 \let\CJK@punctchar\@gobblefour
937 \def\CJK@punctcharx#1{\@gobblefour}%
938 \catcode"7F=\active
939 \def^^7f#1^^7f#2^^7f{%
940   \string #1\HyPsd@DecimalToOctal{#2}%
941 }%
942 % ... ?
943 \ifHy@unicode
944   \def\Hy@cjkpu{\80}%
945   \else
946     \let\Hy@cjkpu\@empty
947   \fi
948   \HyPsd@CJKActiveChars
949 }%
950 \count@=127 %
951 \@whilenum\count@<255 \do{%
952   \advance\count@ by 1 %
953   \lccode'\~=\count@
954   \lowercase{%
955     \toks@\expandafter{\the\toks@ ~}%
956   }%
957 }%
958 \toks@\expandafter{\the\toks@ !}%
959 \xdef\HyPsd@CJKhook{\the\toks@}%
960 \endgroup

```

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

```

961 \def\HyPsd@CJKActiveChars#1{%
962   \ifx#1!%
963     \let\HyPsd@CJKActiveChars\relax
964   \else
965     \edef#1{\noexpand\Hy@cjkpu\string#1}%
966   \fi
967   \HyPsd@CJKActiveChars
968 }

```

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

```

969 \def\HyPsd@DecimalToOctal#1{%
970   \ifcase #1 %
971     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
972     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
973     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
974     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
975     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
976     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
977     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
978     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
979     \or @\or A\or B\or C\or D\or E\or F\or G%
980     \or H\or I\or J\or K\or L\or M\or N\or O%
981     \or P\or Q\or R\or S\or T\or U\or V\or W%
982     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
983     \or \140\or a\or b\or c\or d\or e\or f\or g%
984     \or h\or i\or j\or k\or l\or m\or n\or o%
985     \or p\or q\or r\or s\or t\or u\or v\or w%

```

```

986 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
987 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
988 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
989 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
990 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
991 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
992 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
993 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
994 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
995 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
996 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
997 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
998 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
999 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1000 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1001 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1002 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1003 \fi
1004 }

```

6.5.4 \@inmathwarn-Patch

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

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

1005 \def\HyPsd@inmathwarn#1#2{%
1006   \ifx#2\expandafter
1007     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1008       \HyPsd@GLYPHERR
1009       \expandafter\@gobble\string#1%
1010       >%
1011       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1012     \else
1013       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1014     \fi
1015   \else
1016     \expandafter#2%
1017   \fi
1018 }
1019 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1020 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1021 \def\HyPsd@add@accent#1#2{%
1022   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1023   #2%
1024 }%

```

6.5.5 Unexpandable spaces

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

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

These properties are used in \HyPsd@CheckCatcodes.

```

1025 \def\HyPsd@LetUnexpandableSpace#1{%
1026   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1027 }

```

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

```

1028 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.6 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.

\HyPsd@ITALCORR
\HyPsd@GLYPHERR

```

1029 \edef\HyPsd@XSPACE{\string#\string X}
1030 \edef\HyPsd@ITALCORR{\string#\string I}
1031 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.7 \hspace fix

`\HyPsd@hspace` 1032 `\def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}`

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

1033 `\def\HyPsd@@hspace#1*#2\END{%`
1034 `\ifx\#2\%`
1035 `\HyPsd@hspacetest{#1}%`
1036 `\else`
1037 `\expandafter\HyPsd@hspacetest`
1038 `\fi`
1039 `}`

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

1040 `\def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}`

6.5.8 Fix for AMS classes

1041 `\@ifundefined{tocsection}{%`
1042 `\let\HyPsd@AMSclassfix\relax`
1043 `}{%`
1044 `\def\HyPsd@AMSclassfix{%`
1045 `\let\tocpart\HyPsd@tocsection`
1046 `\let\tocchapter\HyPsd@tocsection`
1047 `\let\tocappendix\HyPsd@tocsection`
1048 `\let\tocsection\HyPsd@tocsection`
1049 `\let\tocsubsection\HyPsd@tocsection`
1050 `\let\tocsubsubsection\HyPsd@tocsection`
1051 `\let\tocparagraph\HyPsd@tocsection`
1052 `}%`
1053 `\def\HyPsd@tocsection#1#2#3{%`
1054 `\if @#2@ \else \if @#1@ \else #1 \fi #2. \fi`
1055 `#3%`
1056 `}%`
1057 `}`

6.5.9 Reference commands

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

1058 `\def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%`

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

1059 `\def\HyPsd@@ref#1*#2\END{%`
1060 `\ifx\#2\%`
1061 `\HyPsd@@@ref{#1}%`
1062 `\else`
1063 `\expandafter\HyPsd@@@ref`
1064 `\fi`
1065 `}%`

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

1066 `\def\HyPsd@@@ref#1{%`
1067 `\expandafter\ifx\csname r@#1\endcsname\relax`
1068 `??%`

```

1069 \else
1070   \expandafter\expandafter\expandafter
1071   \@car\csname r@#1\endcsname\@nil
1072 \fi
1073 }

\HyPsd@pageref Macro \HyPsd@pageref calls the macro \HyPsd@@pageref for star checking. The same
methods like in \HyPsd@hspace is used.
1074 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

\HyPsd@@pageref Macro \HyPsd@@pageref checks if a star is present.
1075 \def\HyPsd@@pageref#1*#2\END{%
1076   \ifx\#2\%
1077     \HyPsd@@pageref{#1}%
1078   \else
1079     \expandafter\HyPsd@@pageref
1080   \fi
1081 }

\HyPsd@@@pageref \HyPsd@@@pageref does the work and extracts the second argument.
1082 \def\HyPsd@@@pageref#1{%
1083   \expandafter\ifx\csname r@#1\endcsname\relax
1084     ??%
1085   \else
1086     \expandafter\expandafter\expandafter\expandafter
1087     \expandafter\expandafter\expandafter\@car
1088     \expandafter\expandafter\expandafter\@gobble
1089     \csname r@#1\endcsname{}\@nil
1090   \fi
1091 }

\HyPsd@nameref Macro \HyPsd@nameref calls the macro \HyPsd@@nameref for star checking. The same
methods like in \HyPsd@hspace is used.
1092 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

\HyPsd@@nameref Macro \HyPsd@@nameref checks if a star is present.
1093 \def\HyPsd@@nameref#1*#2\END{%
1094   \ifx\#2\%
1095     \HyPsd@@nameref{#1}%
1096   \else
1097     \expandafter\HyPsd@@nameref
1098   \fi
1099 }

\HyPsd@@@nameref \HyPsd@@@nameref does the work and extracts the third argument.
1100 \def\HyPsd@@@nameref#1{%
1101   \expandafter\ifx\csname r@#1\endcsname\relax
1102     ??%
1103   \else
1104     \expandafter\expandafter\expandafter\expandafter
1105     \expandafter\expandafter\expandafter\@car
1106     \expandafter\expandafter\expandafter\@gobbletwo
1107     \csname r@#1\endcsname{}\@nil
1108   \fi
1109 }

```

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

```
1110 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1111 \def\HyPsd@@autoref#1*#2\END{%
1112   \ifx\#2\%
1113     \HyPsd@@@autoref{#1}%
1114   \else
1115     \expandafter\HyPsd@@@autoref
1116   \fi
1117 }
```

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

```
1118 \def\HyPsd@@@autoref#1{%
1119   \expandafter\ifx\csname r@#1\endcsname\relax
1120     ??%
1121   \else
1122     \expandafter\expandafter\expandafter\HyPsd@autorefname
1123       \csname r@#1\endcsname{}{}{}{}\@nil
1124     \expandafter\expandafter\expandafter
1125       \@car\csname r@#1\endcsname\@nil
1126   \fi
1127 }
```

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

```
1128 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1129   \ifx\#4\%
1130   \else
1131     \HyPsd@@autorefname#4.\@nil
1132   \fi
1133 }
```

`\HyPsd@@autorefname`

```
1134 \def\HyPsd@@autorefname#1.#2\@nil{%
1135   \@ifundefined{#1autorefname}{%
1136     \@ifundefined{#1name}{%
1137       }{%
1138         \csname#1name\endcsname\space
1139       }%
1140     }{%
1141       \csname#1autorefname\endcsname\space
1142     }%
1143 }
```

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand 1144 \begingroup
1145   \def\x#1#2{%
1146     \endgroup
1147     \let#1\def
1148     \def\HyPsd@DefCommand##1##2##{%
1149       #1%
1150       \expandafter\noexpand
1151       \csname\expandafter@gobble\string##1\@empty\endcsname
1152       \@gobble
1153     }%
1154     \let#2\let
1155     \def\HyPsd@@LetCommand##1{%
1156       \expandafter\ifx\csname##1\expandafter\endcsname
1157         \csname iftrue\endcsname
1158         \pdfstringdefWarn\let
1159         \expandafter@gobble
1160       \else
1161         \expandafter\ifx\csname##1\expandafter\endcsname
1162           \csname iffalse\endcsname
1163           \pdfstringdefWarn\let
1164           \expandafter\expandafter\expandafter@gobble
1165         \else
1166           #2%
1167           \expandafter\noexpand
1168           \csname##1\expandafter\expandafter\expandafter\endcsname
1169         \fi
1170       \fi
1171     }%
1172   }%
1173   \expandafter\x\csname <def>-command\expandafter\endcsname
1174     \csname <let>-command\endcsname
1175   \def\HyPsd@LetCommand#1{%
1176     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1177     \expandafter\expandafter\expandafter{%
1178     \expandafter@gobble\string#1\@empty

```



```

1179 }%
1180 }

```

6.5.11 \ifnextchar

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

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

```

1181 \def\HyPsd@ifnextchar#1{%
1182   \pdfstringdefWarn#1%
1183   \expandafter\@gobbletwo\@gobble
1184 }

```

6.5.12 \@protected@testoptifnextchar

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

```

1185 \def\HyPsd@protected@testopt#1{%
1186   \pdfstringdefWarn#1%
1187   \@gobbletwo
1188 }

```

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:

```

1189 \def\HyPsd@Warning#1{%
1190   \begingroup
1191     \def\space{ }%
1192     \Hy@Warning{#1}%
1193   \endgroup
1194 }

```

6.6.2 Protecting spaces

```

1195 \RequirePackage{etexcmds}[2007/09/09]
1196 \ifetex@unexpanded
1197   \expandafter\@secondoftwo
1198 \else
1199   \expandafter\@firstoftwo
1200 \fi
1201 {%

```

`\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`.

```

1202 \def\HyPsd@ProtectSpaces#1{%
1203   \iftrue
1204     \expandafter\HyPsd@@ProtectSpacesFi
1205     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1206   \fi
1207 }%

```

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

```

1208 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1209   \fi
1210   \ifx\scrollmode#2\scrollmode
1211     \HyPsd@RemoveMask#1\HyPsd@End#3%
1212   \else
1213     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1214     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1215   \fi
1216 }%

```

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.

```

1217 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1218   \toks@{\expandafter{#1}}%
1219   \xdef#2{\the\toks@}%
1220 }%

1221 }{%
1222 \let\HyPsd@fi\fi
1223 \def\HyPsd@ProtectSpaces#1{%
1224   \xdef#1{%
1225     \iftrue
1226       \expandafter\HyPsd@@ProtectSpacesFi
1227       \expandafter|\expandafter\@empty#1| %
1228     \HyPsd@fi
1229   }%
1230   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1231 }%
1232 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1233   \fi
1234   \etex@unexpanded{#1}%
1235   \ifx\scrollmode#2\scrollmode
1236   \else
1237     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1238   \HyPsd@fi
1239 }%
1240 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1241   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1242 }%
1243 }

```

6.6.3 Remove grouping braces

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

```

1244 \def\HyPsd@RemoveBraces#1{%
1245   \ifx\scrollmode#1\scrollmode
1246   \else
1247     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1248   \fi
1249 }

```

`\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`.

```

1250 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1251   \fi
1252   \def\Hy@temp@A{#1#2}%
1253   \def\Hy@temp@B{#3}%
1254   \ifx\Hy@temp@A\Hy@temp@B
1255     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1256       \HyPsd@String#1%
1257     }%
1258     \ifx\scrollmode#2\scrollmode
1259     \else
1260       \Hy@ReturnAfterFiFiEnd{%
1261         \HyPsd@RemoveBraces{#2}%
1262       }%
1263     \fi
1264   \else
1265     \def\Hy@temp@A{#1}%
1266     \HyPsd@AppendItalcorr\HyPsd@String
1267     \ifx\Hy@temp@A\@empty
1268       \Hy@ReturnAfterElseFiFiEnd{%
1269         \HyPsd@RemoveBraces{#2}%
1270       }%
1271     \else
1272       \HyPsd@ProtectSpaces\Hy@temp@A
1273       \HyPsd@AppendItalcorr\Hy@temp@A
1274       \Hy@ReturnAfterFiFiEnd{%
1275         \expandafter\HyPsd@RemoveBraces\expandafter
1276           {\Hy@temp@A#2}%
1277       }%
1278     \fi
1279   \fi
1280   \Hy@ReturnEnd
1281 }

```

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

```

1282 \def\HyPsd@AppendItalcorr#1{%
1283   \expandafter\HyPsd@@AppendItalcorr\expandafter{/}\#1%
1284 }
1285 \def\HyPsd@@AppendItalcorr#1#2{%
1286   \expandafter\def\expandafter#2\expandafter{#2#1}%
1287 }

```

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`).

```
1288 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1289   \global\let\HyPsd@Rest\relax
1290   \ifcat\relax\noexpand#1\relax
1291     \ifx#1\protect
1292     \else
1293       \ifx#1\penalty
1294         \setbox\z@=\hbox{%
1295           \afterassignment\HyPsd@AfterCountRemove
1296           \count@=#2\HyPsd@end
1297         }%
1298       \else
1299         \ifx#1\kern
1300         \setbox\z@=\hbox{%
1301           \afterassignment\HyPsd@AfterDimenRemove
1302           \dimen@=#2\HyPsd@end
1303         }%
1304       \else
1305         \ifx#1\hskip
1306         \setbox\z@=\hbox{%
1307           \afterassignment\HyPsd@AfterSkipRemove
1308           \skip@=#2\HyPsd@end
1309         }%
1310       \else
1311         \HyPsd@CatcodeWarning{#1}%
1312       \fi
1313     \fi
1314   \fi
1315 \fi
1316 \else
1317   \ifcat#1A% letter
1318   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1319     \HyPsd@String#1%
1320   }%
1321 \else
1322   \ifcat#1 % SPACE
1323   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1324     \HyPsd@String\HyPsd@SPACEOPTI
1325   }%
1326 \else
1327   \ifcat$#1%
1328   \HyPsd@CatcodeWarning{math shift}%
1329 \else
1330   \ifcat&#1%
1331   \HyPsd@CatcodeWarning{alignment tab}%
```

```

1332         \else
1333             \ifcat~#1%
1334                 \HyPsd@CatcodeWarning{superscript}%
1335             \else
1336                 \ifcat_#1%
1337                     \HyPsd@CatcodeWarning{subscript}%
1338                 \else
1339                     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1340                         \HyPsd@String#1%
1341                     }%
1342                 \fi
1343             \fi
1344         \fi
1345     \fi
1346 \fi
1347 \fi
1348 \fi
1349 \ifx\HyPsd@Rest\relax
1350     \ifx\scrollmode#2\scrollmode
1351     \else
1352         \Hy@ReturnAfterFiFiEnd{%
1353             \HyPsd@CheckCatcodes#2\HyPsd@End
1354         }%
1355     \fi
1356 \else
1357     \ifx\HyPsd@Rest\@empty
1358     \else
1359         \Hy@ReturnAfterFiFiEnd{%
1360             \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1361         }%
1362     \fi
1363 \fi
1364 \Hy@ReturnEnd
1365 }

```

Remove counts, dimens, skips.

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

```

1366 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1367     \gdef\HyPsd@Rest{#1}%
1368 }

```

\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.

```

1369 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1370     \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@ \fi>1ex %
1371         \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1372         \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1373     \else
1374         \ifdim\dimen@=\z@
1375         \else
1376             \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1377         \fi
1378         \gdef\HyPsd@Rest{#1}%
1379     \fi

```

1380 }

`\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).

```
1381 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1382   \ifdim\ifx\HyPsd@String\@empty\z@else\skip@fi>1ex %
1383     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1384     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1385   \else
1386     \ifdim\skip@=\z@
1387     \else
1388       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1389     \fi
1390     \gdef\HyPsd@Rest{#1}%
1391   \fi
1392 }
```

Catcode warnings.

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

```
1393 \def\HyPsd@CatcodeWarning#1{%
1394   \HyPsd@Warning{%
1395     Token not allowed in a PDF string (%
1396     \ifHy@unicode
1397       Unicode%
1398     \else
1399       PDFDocEncoding%
1400     \fi
1401     ):%
1402     \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1403   }%
1404 }
1405 \begingroup
1406   \catcode'\|=0 %
1407   \catcode'\|=12 %
1408   \gdef\HyPsd@RemoveCmdPrefix#1{%
1409     \expandafter\HyPsd@@RemoveCmdPrefix
1410     \string#1\@empty\<>-|@empty|@empty
1411   }%
1412   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1413 \endgroup
```

`\HyPsd@RemoveSpaceWarning`

```
1414 \def\HyPsd@RemoveSpaceWarning#1{%
1415   \HyPsd@Warning{%
1416     Token not allowed in a PDF string (%
1417     \ifHy@unicode
1418       Unicode%
1419     \else
1420       PDFDocEncoding%
1421     \fi
1422     ):%
1423     \MessageBreak #1\MessageBreak
1424     removed%
1425   }%
1426 }
```

\HyPsd@ReplaceSpaceWarning

```
1427 \def\HyPsd@ReplaceSpaceWarning#1{%
1428   \HyPsd@Warning{%
1429     Token not allowed in a PDF string (%)
1430     \ifHy@unicode
1431       Unicode%
1432     \else
1433       PDFDocEncoding%
1434     \fi
1435   }:%
1436   \MessageBreak #1\MessageBreak
1437   replaced by space%
1438 }%
1439 }
```

6.6.5 Check for wrong glyphs

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

```
1440 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1441   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1442     \HyPsd@String#1%
1443   }%
1444   \ifx\#2\%
1445   \else
1446     \Hy@ReturnAfterFi{%
1447       \HyPsd@GlyphProcessWarning#2\@empty
1448     }%
1449   \fi
1450 }
1451 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1452   \HyPsd@@GlyphProcessWarning#1++>%
1453   \HyPsd@GlyphProcess#2\@empty
1454 }
1455 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1456   \ifx\#2\%
1457     \HyPsd@Warning{%
1458       Glyph not defined in %
1459       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1460       removing ‘\@backslashchar#1’%
1461     }%
1462   \else
1463     \HyPsd@Warning{%
1464       Composite letter ‘\@backslashchar#1+#2’\MessageBreak
1465       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1466       \MessageBreak
1467       removing ‘\@backslashchar#1’%
1468     }%
1469   \fi
1470 }
```

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.

```

1471 \def\HyPsd@spaceopti#1{ % first space
1472   \ifx\HyPsd@spaceopti#1%
1473     \040%
1474   \else
1475     #1%
1476   \fi
1477 }%

```

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.

```

1478 \def\HyPsd@Subst#1#2#3{%
1479   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1480     \fi
1481     ##1%
1482     \ifx\scrollmode##2\scrollmode
1483     \else
1484       #2%
1485       \HyPsd@@ReplaceFi##2\END
1486     \fi
1487   }%
1488   \xdef#3{%
1489     \iftrue
1490       \expandafter\HyPsd@@ReplaceFi#3#1\END
1491     \fi
1492   }%
1493 }

```

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

```

1494 \def\HyPsd@StringSubst#1{%
1495   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1496 }

```

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.

```

1497 \def\HyPsd@doxspace#1{%
1498   \ifx#1\relax\else
1499   \ifx#1.\else
1500   \ifx#1:\else
1501   \ifx#1,\else
1502   \ifx#1;\else
1503   \ifx#1!\else
1504   \ifx#1?\else
1505   \ifx#1/\else
1506   \ifx#1-\else
1507   \ifx#1'\else
1508     \HyPsd@SPACEOPTI
1509   \fi

```



```

1510         \fi
1511         \fi
1512         \fi
1513         \fi
1514         \fi
1515         \fi
1516         \fi
1517         \fi
1518         \fi
1519         #1%
1520 }%

```

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.

```

1521 \begingroup
1522   \catcode'\|=0 %
1523   \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1524 |gdef|HyPsd@ConvertToUnicode#1{%
1525   |xdef#1{%
1526     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1527   }%
1528   |ifx#1|@empty
1529   |else
1530     |xdef#1{%
1531       \376\377%
1532       #1%
1533     }%
1534   |fi
1535 }%

```

\HyPsd@DoConvert

```

1536 |gdef|HyPsd@DoConvert#1{%
1537   |ifx#1|@empty
1538   |else
1539     |Hy@ReturnAfterFi{%
1540       |ifx#1\%%
1541       \%%
1542       |expandafter|HyPsd@DoEscape
1543     |else
1544       \000#1%
1545       |expandafter|HyPsd@DoConvert
1546     |fi
1547   }%
1548   |fi
1549 }%

```

\HyPsd@DoEscape

```

1550 |gdef|HyPsd@DoEscape#1{%
1551   |ifx#19%
1552   |expandafter|HyPsd@GetTwoBytes
1553   |else

```

```

1554 |Hy@ReturnAfterFi{%
1555 |ifx#18%
1556 00%
1557 |expandafter|HyPsd@GetTwoBytes
1558 |else
1559 #1%
1560 |expandafter|HyPsd@GetOneByte
1561 |fi
1562 }%
1563 |fi
1564 }%

```

`\HyPsd@GetTwoBytes`

```

1565 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1566 #1\#2#3#4%
1567 |HyPsd@DoConvert
1568 }%

```

`\HyPsd@GetOneByte`

```

1569 |gdef|HyPsd@GetOneByte#1#2{%
1570 #1#2%
1571 |HyPsd@DoConvert
1572 }%
1573 |endgroup

```

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

```

1574 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1575 \xdef#4{#4#1#2}%
1576 \HyPsd@@ConvertToUnicode#3\END#4%
1577 }

```

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 `e \TeX 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`

```

1578 \begingroup\expandafter\expandafter\expandafter\endgroup
1579 \expandafter\ifx\cename numexpr\endcename\relax
1580 \let\HyPsd@UTFviii\relax
1581 \else
1582 \begingroup
1583 \lccode'\~='^^f4\relax
1584 \lowercase{\endgroup
1585 \def\HyPsd@UTFviii{%
1586 \let\UTFviii@two@octets\HyPsd@UTFviii@two
1587 \let\UTFviii@three@octets\HyPsd@UTFviii@three
1588 \let\UTFviii@four@octets\HyPsd@UTFviii@four
1589 \ifx~\HyPsd@UTFviii@ccxliv@undef
1590 \let~\HyPsd@UTFviii@ccxliv@def

```

```

1591 \fi
1592 \let\unichar\HyPsd@unichar
1593 }%
1594 }%
1595 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1596 \edef\HyPsd@UTFviii@ccxliv@def{%
1597 \noexpand\UTFviii@four@octets\string ^f4%
1598 }%

```

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

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

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

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

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

$$(5)$$

```

1599 \def\HyPsd@UTFviii@two#1#2{%
1600 \expandafter\HyPsd@UTFviii@@two
1601 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1602 \number'#1\expandafter|
1603 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|
1604 \number'#2 \@nil
1605 }%
1606 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1607 \expandafter\8%
1608 \number\numexpr #1-48\expandafter\relax
1609 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1610 \number\numexpr #3-8*%
1611 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1612 \number\numexpr #4-8*#3\relax
1613 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

1614 \def\HyPsd@UTFviii@three#1#2#3{%
1615 \expandafter\HyPsd@UTFviii@@three
1616 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1617 \number'#1\expandafter|
1618 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
1619 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
1620 \number'#2\expandafter|
1621 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
1622 \number'#3 \@nil

```

```

1623 }%
1624 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1625   \expandafter\9%
1626   \number\numexpr #1-56\expandafter\relax
1627   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1628   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1629   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1630   \number\numexpr #6-16\expandafter\relax
1631   \number\numexpr #7-8*#6\relax
1632 }%

```

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

```

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

```

```

1633 \def\HyPsd@UTFviii@four#1#2{%
1634   \expandafter\HyPsd@UTFviii@four\number
1635   \numexpr-1+(' #1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1636   \expandafter|\number
1637   \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|%
1638 }%
1639 \def\HyPsd@UTFviii@four#1|#2|#3{%
1640   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1641   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1642   \ifodd#2 %
1643     \number\numexpr(#2-1)/2\relax
1644   \else
1645     \number\numexpr#2/2\relax
1646   \fi
1647   \number\numexpr\ifodd#2 4+\fi
1648   \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1649   \933%
1650   \expandafter\HyPsd@UTFviii@four\number
1651   \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp|%
1652 }%
1653 \def\HyPsd@UTFviii@four#1|#2{%
1654   \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1655   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1656   \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1657   \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1658 }%

```

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

```

1659 \def\HyPsd@unichar#1{%
1660   \ifHy@unicode
1661     \ifnum#1>"10FFFF %
1662       \HyPsd@UnicodeReplacementCharacter % illegal
1663     \else
1664       \ifnum#1>"FFFF %

```

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

```

1665   \expandafter\HyPsd@unichar\expandafter{%
1666     \number\numexpr 55296+%
1667     \dimexpr.0009765625\dimexpr\number#1sp-\p@

```

```

1668             \relax\relax\relax
1669         }%
Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)
1670         \expandafter\HyPsd@unichar\expandafter{%
1671             \number\numexpr#1-9216%
1672             -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1673             \relax\relax\relax
1674         }%
1675         \else
1676             \ifnum#1>"7FF %
1677                 \9%
1678                 \expandafter\HyPsd@unichar@first@byte\expandafter{%
1679                     \number
1680                     \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1681                 }%
1682             \else
1683                 \8%
1684                 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1685             \fi
1686             \expandafter\HyPsd@unichar@second@byte\expandafter{%
1687                 \number
1688                 \numexpr#1-256*\number
1689                 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1690             }%
1691         \fi
1692     \fi
1693 \else
1694     .% unsupported (Unicode -> PDF Doc Encoding)
1695 \fi
1696 }%
1697 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1698 \def\HyPsd@unichar@first@byte#1{%
1699     \number\dimexpr.015625\dimexpr#1sp\relax\relax
1700     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1701         \number
1702         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1703         \relax\relax\relax
1704     }%
1705 }%
1706 \def\HyPsd@unichar@second@byte#1{%
1707     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1708     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1709         \number
1710         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1711         \relax\relax\relax
1712     }%
1713 }%
1714 \def\HyPsd@unichar@octtwo#1{%
1715     \number\dimexpr.125\dimexpr#1sp\relax\relax
1716     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1717     \relax\relax\relax
1718 }%
1719 \fi

```

7 Support of other packages

7.1 Class memoir

```
1720 \@ifclassloaded{memoir}{%
1721   \AtEndOfPackage{\RequirePackage{memhfixc}}%
1722 }{}
```

7.2 Package subfigure

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

```
1723 \@ifpackageloaded{subfigure}{%
1724   \@ifundefined{sub@label}{%
1725     \Hy@hypertextnamesfalse
1726   }{%
1727     \renewcommand*{\sub@label}[1]{%
1728       \@bsphack
1729       \subfig@oldlabel{#1}%
1730       \if@filesw
1731         \begin{group}
1732           \edef\@currentlabstr{%
1733             \expandafter\strip@prefix\meaning\@currentlabelname
1734           }%
1735           \protected@write\@auxout{}{%
1736             \string\newlabel{sub@#1}{%
1737               {\@nameuse{@@thesub\@capttype}}%
1738               {\thepage}%
1739             }%
1740             \expandafter\strip@period\@currentlabstr
1741             \relax.\relax\@@%
1742           }%
1743           {\@currentHref}%
1744           {}%
1745         }%
1746       }%
1747     \end{group}
1748     \fi
1749     \@esphack
1750   }%
1751   \@ifpackagelater{subfigure}{2002/03/26}{%
1752     \providecommand*{\toclevel@subfigure}{1}%
1753     \providecommand*{\toclevel@subtable}{1}%
1754   }%
1755 }%
1756 }
```

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:

```
1757 \@ifundefined{XR@addURL}{%
1758 }
```

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.

```
1759 \def\xr@addURL#1{\xr@dURL#1{}{}{}{}\\}%
1760 \def\xr@dURL#1#2#3#4#5\\{%
1761   {#1}{#2}%
1762 }
```

```

1762     \if!#4!%
1763     \else
1764         {#3}{#4}{\XR@URL}%
1765     \fi
1766 }%
1767 }

1768 \def\Hy@true{true}
1769 \def\Hy@false{false}

    Providing dummy definitions.
1770 \let\literalps@out\@gobble
1771 \newcommand\pdfbookmark[3][]{ }
1772 \def\Acrobatmenu#1#2{\leavevmode#2}
1773 \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

```

1774 \let\HyperRaiseLinkHook\@empty
1775 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

1776 \def\Hy@raisedlink#1{%
1777     \ifvmode
1778         #1%
1779     \else
1780         \penalty\@M
1781         \smash{%
1782             \begingroup
1783                 \let\HyperRaiseLinkLength\@tempdima
1784                 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
1785                 \HyperRaiseLinkHook
1786             \expandafter\endgroup
1787             \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
1788         }%
1789     \fi
1790 }

```

```

\Hy@SaveLastskip    Inserting a \special command to set a destination destroys the \lastskip value.
\Hy@RestoreLastskip
1791 \def\Hy@SaveLastskip{%
1792     \let\Hy@RestoreLastskip\relax
1793     \ifvmode
1794         \ifdim\lastskip=\z@
1795             \let\Hy@RestoreLastskip\nobreak
1796         \else

```

```

1797     \begingroup
1798     \skip@=-\lastskip
1799     \edef\x{%
1800     \endgroup
1801     \def\noexpand\Hy@RestoreLastskip{%
1802     \noexpand\ifvmode
1803     \noexpand\nobreak
1804     \vskip\the\skip@
1805     \vskip\the\lastskip\relax
1806     \noexpand\fi
1807     }%
1808     }%
1809     \x
1810     \fi
1811 \else
1812   \ifhmode
1813     \ifdim\lastskip=\z@
1814       \let\Hy@RestoreLastskip\nobreak
1815     \else
1816       \begingroup
1817       \skip@=-\lastskip
1818       \edef\x{%
1819       \endgroup
1820       \def\noexpand\Hy@RestoreLastskip{%
1821       \noexpand\ifhmode
1822       \noexpand\nobreak
1823       \hskip\the\skip@
1824       \hskip\the\lastskip\relax
1825       \noexpand\fi
1826       }%
1827       }%
1828       \x
1829       \fi
1830     \fi
1831 \fi
1832 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

1833 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
1834 \def\Hy@@boolkey[#1]#2#3{%
1835   \edef\Hy@tempa{#3}%
1836   \lowercase\expandafter{%
1837     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
1838   }%
1839   \ifx\Hy@tempa\@empty
1840     \let\Hy@tempa\Hy@true
1841   \fi
1842   \ifx\Hy@tempa\Hy@true
1843   \else
1844     \ifx\Hy@tempa\Hy@false
1845     \else
1846       \let\Hy@tempa\relax

```



```

1847   \fi
1848 \fi
1849 \ifx\Hy@tempa\relax
1850   \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
1851 \else
1852   \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
1853   \csname Hy@#2\Hy@tempa\endcsname
1854 \fi
1855 }

```

\Hy@WarnOptionValue

```

1856 \def\Hy@WarnOptionValue#1#2#3{%
1857   \Hy@Warning{%
1858     Unexpected value ‘#1’\MessageBreak
1859     of option ‘#2’ instead of\MessageBreak
1860     #3%
1861   }%
1862 }

```

\Hy@DisableOption

```

1863 \def\Hy@DisableOption#1{%
1864   \@ifundefined{KV@Hyp@#1@default}{%
1865     \define@key{Hyp}{#1}%
1866   }{%
1867     \define@key{Hyp}{#1}[]%
1868   }%
1869   {\Hy@WarnOptionDisabled{#1}}%
1870 }

```

\Hy@WarnOptionDisabled

```

1871 \def\Hy@WarnOptionDisabled#1{%
1872   \Hy@Warning{%
1873     Option ‘#1’ has already been used,\MessageBreak
1874     setting the option has no effect%
1875   }%
1876 }

```

\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.

```

1877 \def\Hy@CheckOptionValue#1#2#3{%
1878   \begingroup
1879   \edef\x{#1}%
1880   \@onelevel@sanitize\x
1881   \let\y=y%
1882   \def\do##1##2{%
1883     \def\z{##1}%
1884     \@onelevel@sanitize\z
1885     \ifx\x\z
1886       \let\y=n%
1887       \let\do\@gobbletwo
1888     \fi
1889   }%
1890   #3%
1891   \ifx\y y%
1892     \def\do##1##2{%
1893       * ‘##1’%
1894     \ifx\\##2\\\else\space(##2)\fi

```

```

1895         \MessageBreak
1896     }%
1897     \Hy@Warning{%
1898         Values of option '#2':\MessageBreak
1899         #3%
1900         * An empty value disables the option.\MessageBreak
1901         Unknown value '\x'%
1902     }%
1903     \fi
1904 \endgroup
1905 }

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument is a
comment.
1906 \def\Hy@DefNameKey#1{%
1907     \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
1908 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
1909 \def\Hy@@DefNameKey#1#2#3{%
1910     \define@key{Hyp}{#2}{%
1911         \edef#1{##1}%
1912         \ifx#1\@empty
1913             \else
1914                 \Hy@CheckOptionValue{##1}{#2}{#3}%
1915             \fi
1916     }%
1917     \let#1\@empty
1918 }

\Hy@UseNameKey
1919 \def\Hy@UseNameKey#1#2{%
1920     \ifx#2\@empty
1921     \else
1922         /#1/#2%
1923     \fi
1924 }

```

9.2 Defining the options

```

1925 \define@key{Hyp}{implicit}[true]{%
1926     \Hy@boolkey{implicit}{#1}%
1927 }
1928 \define@key{Hyp}{draft}[true]{%
1929     \Hy@boolkey{draft}{#1}%
1930 }
1931 \define@key{Hyp}{final}[true]{%
1932     \Hy@boolkey{final}{#1}%
1933 }
1934 \let\KV@Hyp@nolinks\KV@Hyp@draft
1935 \define@key{Hyp}{a4paper}[true]{%
1936     \def\special@paper{210mm,297mm}%
1937     \def\Hy@pageheight{842}%

```

```

1938 }
1939 \define@key{Hyp}{a5paper}[true]{%
1940   \def\special@paper{148mm,210mm}%
1941   \def\Hy@pageheight{595}%
1942 }
1943 \define@key{Hyp}{b5paper}[true]{%
1944   \def\special@paper{176mm,250mm}%
1945   \def\Hy@pageheight{709}%
1946 }
1947 \define@key{Hyp}{letterpaper}[true]{%
1948   \def\special@paper{8.5in,11in}%
1949   \def\Hy@pageheight{792}%
1950 }
1951 \define@key{Hyp}{legalpaper}[true]{%
1952   \def\special@paper{8.5in,14in}%
1953   \def\Hy@pageheight{1008}%
1954 }
1955 \define@key{Hyp}{executivepaper}[true]{%
1956   \def\special@paper{7.25in,10.5in}%
1957   \def\Hy@pageheight{720}%
1958 }
1959 \define@key{Hyp}{setpagesize}[true]{%
1960   \Hy@boolkey{setpagesize}{#1}%
1961 }
1962 \define@key{Hyp}{debug}[true]{%
1963   \Hy@boolkey[debug]{verbose}{#1}%
1964 }
1965 \define@key{Hyp}{linktocpage}[true]{%
1966   \Hy@boolkey{linktocpage}{#1}%
1967   \ifHy@linktocpage
1968     \let\Hy@linktoc\Hy@linktoc@page
1969   \else
1970     \let\Hy@linktoc\Hy@linktoc@section
1971   \fi
1972 }
1973 \chardef\Hy@linktoc@none=0 %
1974 \chardef\Hy@linktoc@section=1 %
1975 \chardef\Hy@linktoc@page=2 %
1976 \chardef\Hy@linktoc@all=3 %
1977 \ifHy@linktocpage
1978   \let\Hy@linktoc\Hy@linktoc@page
1979 \else
1980   \let\Hy@linktoc\Hy@linktoc@section
1981 \fi
1982 \define@key{Hyp}{linktoc}{%
1983   \@ifundefined{Hy@linktoc@#1}{%
1984     \Hy@Warning{%
1985       Unexpected value ‘#1’ of\MessageBreak
1986       option ‘linktoc’ instead of ‘none’,\MessageBreak
1987       ‘section’, ‘page’ or ‘all’%
1988     }%
1989   }{%
1990     \expandafter\let\expandafter\Hy@linktoc
1991     \csname Hy@linktoc@#1\endcsname
1992   }%
1993 }
1994 \define@key{Hyp}{extension}{\def\XR@ext{#1}}

```

```

1995 \let\XR@ext\relax
1996 \define@key{Hyp}{verbose}[true]{%
1997   \Hy@boolkey{verbose}{#1}%
1998 }
1999 \define@key{Hyp}{typexml}[true]{%
2000   \Hy@boolkey{typexml}{#1}%
2001 }

```

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.

```

2002 \define@key{Hyp}{raiselinks}[true]{%
2003   \Hy@boolkey{raiselinks}{#1}%
2004 }

```

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

```

2005 \def\Hy@setbreaklinks#1{%
2006   \csname breaklinks#1\endcsname
2007 }

2008 \def\Hy@breaklinks@unsupported{%
2009   \ifx\Hy@setbreaklinks\@gobble
2010     \ifHy@breaklinks
2011       \Hy@WarningNoLine{%
2012         You have enabled option 'breaklinks'.\MessageBreak
2013         But driver '\Hy@driver.def' does not support this.\MessageBreak
2014         Expect trouble with the link areas of broken links%
2015       }%
2016     \fi
2017   \fi
2018 }

2019 \define@key{Hyp}{breaklinks}[true]{%
2020   \Hy@boolkey{breaklinks}{#1}%
2021   \let\Hy@setbreaklinks\@gobble
2022 }

```

Determines whether an automatic anchor is put on each page

```

2023 \define@key{Hyp}{pageanchor}[true]{%
2024   \Hy@boolkey{pageanchor}{#1}%
2025 }

```

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.

```

2026 \define@key{Hyp}{plainpages}[true]{%
2027   \Hy@boolkey{plainpages}{#1}%
2028 }

```

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

```

2029 \define@key{Hyp}{naturalnames}[true]{%
2030   \Hy@boolkey{naturalnames}{#1}%
2031 }

```

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

```

2032 \define@key{Hyp}{hypertextnames}[true]{%
2033   \Hy@boolkey{hypertextnames}{#1}%
2034 }

```

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

```

2035 \define@key{Hyp}{nesting}[true]{%
2036   \Hy@boolkey{nesting}{#1}%
2037 }

2038 \define@key{Hyp}{unicode}[true]{%
2039   \Hy@boolkey{unicode}{#1}%
2040   \ifHy@unicode
2041     \def\HyPsd@pdfencoding{unicode}%
2042   \else
2043     \def\HyPsd@pdfencoding{pdfdoc}%
2044   \fi
2045   \HyPsd@LoadUnicode
2046 }

2047 \def\HyPsd@LoadUnicode{%
2048   \@ifundefined{T@PU}{%
2049     \input{puenc.def}%
2050     \HyLinguex@Restore
2051   }{}%
2052   \DeclareFontFamily{PU}{pdf}{}%
2053   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2054   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2055   \global\let\HyPsd@LoadUnicode\relax
2056 }

2057 \AtBeginDocument{%
2058   \ifx\HyPsd@LoadUnicode\relax
2059   \else
2060     \def\HyPsd@LoadUnicode{%
2061       \PackageError{hyperref}{%
2062         Unicode support for bookmarks is not available.\MessageBreak
2063         Activate unicode support by using one of the options\MessageBreak
2064         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2065         in the preamble%
2066       }{\@ehc
2067         \global\let\HyPsd@LoadUnicode\relax
2068         \global\Hy@unicodetrue
2069         \global\let\Hy@unicodetrue\Hy@unicodetrue
2070       }%
2071     \fi
2072 }

2073 \define@key{Hyp}{pdfencoding}{%
2074   \edef\HyPsd@temp{#1}%
2075   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2076     \let\HyPsd@pdfencoding\HyPsd@temp
2077     \Hy@unicodetrue
2078   \else
2079     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2080       \z@
2081     \else
2082       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2083         \z@
2084       \else
2085         \@ne
2086       \fi
2087     \fi
2088     \let\HyPsd@pdfencoding\HyPsd@temp
2089     \hypersetup{unicode}%
2090     \ifHy@unicode
2091       \def\HyPsd@pdfencoding{#1}%

```

```

2092         \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2093         \HyPsd@LoadStringEnc
2094     \fi
2095     \else
2096         \Hy@Warning{Cannot switch to unicode bookmarks}%
2097         \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2098     \fi
2099     \else
2100         \@onelevel@sanitize\HyPsd@temp
2101         \Hy@Warning{%
2102             Values of option 'pdfencoding':\MessageBreak
2103             'pdfdoc', 'unicode', 'auto'.\MessageBreak
2104             Ignoring unknown value '\HyPsd@temp'%
2105         }%
2106     \fi
2107 \fi
2108 }
2109 \def\HyPsd@pdfencoding@auto{auto}
2110 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2111 \def\HyPsd@pdfencoding@unicode{unicode}
2112 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2113 \def\HyPsd@LoadStringEnc{%
2114     \RequirePackage{stringenc}[2007/06/14]%
2115     \let\HyPsd@LoadStringEnc\relax
2116 }
2117 \AtBeginDocument{%
2118     \@ifpackageloaded{stringenc}{%
2119         \let\HyPsd@LoadStringEnc\relax
2120     }{%
2121         \def\HyPsd@LoadStringEnc{%
2122             \Hy@WarningNoLine{%
2123                 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2124                 in the preamble or load the package there%
2125             }%
2126         }%
2127     }%
2128 }
2129 \newif\ifHy@setpdfversion
2130 \define@key{Hyp}{pdfversion}{%
2131     \@ifundefined{Hy@pdfversion@#1}{%
2132         \PackageWarning{hyperref}{%
2133             Unsupported PDF version '#1'.\MessageBreak
2134             Valid values: 1.2 until 1.9%
2135         }%
2136     }{%
2137         \Hy@setpdfversiontrue
2138         \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2139     }%
2140 }
2141 \@namedef{Hy@pdfversion@1.2}{2}%
2142 \@namedef{Hy@pdfversion@1.3}{3}%
2143 \@namedef{Hy@pdfversion@1.4}{4}%
2144 \@namedef{Hy@pdfversion@1.5}{5}%
2145 \@namedef{Hy@pdfversion@1.6}{6}%
2146 \@namedef{Hy@pdfversion@1.7}{7}%
2147 \@namedef{Hy@pdfversion@1.8}{8}%
2148 \@namedef{Hy@pdfversion@1.9}{9}%

```

```
2149 \def\Hy@pdfversion{2}
```

10 Options for different drivers

```
2150 \define@key{Hyp}{hyperref}[true]{}
2151 \define@key{Hyp}{tex4ht}[true]{%
2152   \Hy@texhttrue
2153   \setkeys{Hyp}{colorlinks=true}%
2154   \def\BeforeTeXIVht{\usepackage{color}}%
2155   \def\Hy@driver{htex4ht}%
2156   \def\MaybeStopEarly{%
2157     \typeout{Hyperref stopped early}%
2158     \AfterBeginDocument{%
2159       \PDF@FinishDoc
2160       \gdef\PDF@FinishDoc{}%
2161     }%
2162   \endinput
2163 }%
2164 }
2165 \define@key{Hyp}{pdftex}[true]{%
2166   \def\Hy@driver{hpdftex}%
2167 }
2168 \define@key{Hyp}{nativepdf}[true]{%
2169   \def\Hy@driver{hdvips}%
2170 }
2171 \define@key{Hyp}{dvipdfm}[true]{%
2172   \def\Hy@driver{hdvipdfm}%
2173 }
2174 \define@key{Hyp}{dvipdfmx}[true]{%
2175   \def\Hy@driver{hdvipdfm}%
2176 }
2177 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2178   \expandafter\ifx\csname if#1\expandafter\endcsname
2179     \csname iftrue\endcsname
2180     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2181   \else
2182     \chardef\SpecialDvipdfmxOutlineOpen\z@
2183   \fi
2184 }
2185 \define@key{Hyp}{xetex}[true]{%
2186   \def\Hy@driver{hdvipdfm}%
2187 }
2188 \define@key{Hyp}{pdfmark}[true]{%
2189   \def\Hy@driver{hdvips}%
2190 }
2191 \define@key{Hyp}{dvips}[true]{%
2192   \def\Hy@driver{hdvips}%
2193 }
2194 \define@key{Hyp}{hypertex}[true]{%
2195   \def\Hy@driver{hypertex}%
2196 }
2197 \let\Hy@MaybeStopNow\relax
2198 \define@key{Hyp}{vtex}[true]{%
2199   \begingroup\expandafter\expandafter\expandafter\endgroup
2200   \expandafter\ifx\csname OpMode\endcsname\relax
2201     \@latex@error{Non-VTeX processor}{}%
2202     \global\let\Hy@MaybeStopNow\endinput
```

```

2203 \endinput
2204 \else
2205 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2206 \def\Hy@driver{hvtex}%
2207 \else
2208 \ifnum\OpMode=10\relax
2209 \def\Hy@driver{hvtexhtm}%
2210 \def\MaybeStopEarly{%
2211 \typeout{Hyperref stopped early}%
2212 \AfterBeginDocument{%
2213 \PDF@FinishDoc
2214 \gdef\PDF@FinishDoc{}}%
2215 }%
2216 \endinput
2217 }%
2218 \else
2219 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2220 \global\let\Hy@MaybeStopNow\endinput
2221 \endinput
2222 \fi
2223 \fi
2224 \fi
2225 }
2226 \define@key{Hyp}{vtexpdfmark}[true]{%
2227 \begingroup\expandafter\expandafter\expandafter\endgroup
2228 \expandafter\ifx\cscname OpMode\endcscname\relax
2229 \@latex@error{Non-VTeX processor}{}%
2230 \let\Hy@MaybeStopNow\endinput
2231 \endinput
2232 \else
2233 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2234 \def\Hy@driver{hvtexmrk}%
2235 \else
2236 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2237 \let\Hy@MaybeStopNow\endinput
2238 \endinput
2239 \fi
2240 \fi
2241 }
2242 \define@key{Hyp}{dviwindo}[true]{%
2243 \def\Hy@driver{hdviwind}%
2244 \setkeys{Hyp}{colorlinks}%
2245 \PassOptionsToPackage{dviwindo}{color}%
2246 }
2247 \define@key{Hyp}{dvipsone}[true]{%
2248 \def\Hy@driver{hdvipson}%
2249 }
2250 \define@key{Hyp}{textures}[true]{%
2251 \def\Hy@driver{htexture}%
2252 }
2253 \define@key{Hyp}{latex2html}[true]{%
2254 \AtBeginDocument{\@@latextohtmlX}%
2255 }

```

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

```

2256 \define@key{Hyp}{ps2pdf}[true]{%
2257 \def\Hy@driver{hdvips}%
2258 \providecommand*\@pdfborder{0 0 1}%

```


2259 }

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.

```
2260 \define@key{Hyp}{hyperfigures}[true]{%
2261   \Hy@boolkey[hyperfigures]{figures}{#1}%
2262 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2263 \define@key{Hyp}{hyperfootnotes}[true]{%
2264   \Hy@boolkey{hyperfootnotes}{#1}%
2265 }
```

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

```
2266 \def\back@none{none}
2267 \def\back@section{section}
2268 \def\back@page{page}
2269 \def\back@slide{slide}
2270 \define@key{Hyp}{backref}[section]{%
2271   \lowercase{\def\Hy@tempa{#1}}%
2272   \ifx\Hy@tempa\@empty
2273     \let\Hy@tempa\back@section
2274   \fi
2275   \ifx\Hy@tempa\Hy@false
2276     \let\Hy@tempa\back@none
2277   \fi
2278   \ifx\Hy@tempa\back@slide
2279     \let\Hy@tempa\back@section
2280   \fi
2281   \ifx\Hy@tempa\back@page
2282     \PassOptionsToPackage{hyperpageref}{backref}%
2283     \Hy@backreftrue
2284   \else
2285     \ifx\Hy@tempa\back@section
2286       \PassOptionsToPackage{hyperref}{backref}%
2287       \Hy@backreftrue
2288     \else
2289       \ifx\Hy@tempa\back@none
2290         \Hy@backreffalse
2291       \else
2292         \Hy@WarnOptionValue{#1}{backref}{%
2293           'section', 'slide', 'page', 'none', \MessageBreak
2294           or 'false'}%
2295       \fi
2296     \fi
2297   \fi
2298 }
2299 \define@key{Hyp}{pagebackref}[true]{%
2300   \edef\Hy@tempa{#1}%
2301   \lowercase\expandafter{%
2302     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2303   }%
2304   \ifx\Hy@tempa\@empty
2305     \let\Hy@tempa\Hy@true
2306   \fi
2307   \ifx\Hy@tempa\Hy@true
```

```

2308 \PassOptionsToPackage{hyperpageref}{backref}%
2309 \Hy@backreftrue
2310 \else
2311 \ifx\Hy@tempa\Hy@false
2312 \Hy@backreffalse
2313 \else
2314 \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
2315 \fi
2316 \fi
2317 }

```

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

```

2318 \define@key{Hyp}{hyperindex}[true]{%
2319 \Hy@boolkey{hyperindex}{#1}%
2320 }

```

Configuration of encap char.

```

2321 \define@key{Hyp}{encap}[\l]{%
2322 \def\HyInd@EncapChar{#1}%
2323 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2324 \def\HyLang@afrikaans{%
2325 \def\equationautorefname{Vergelyking}%
2326 \def\footnoteautorefname{Voetnota}%
2327 \def\itemautorefname{Item}%
2328 \def\figureautorefname{Figuur}%
2329 \def\tableautorefname{Tabel}%
2330 \def\partautorefname{Deel}%
2331 \def\appendixautorefname{Bylae}%
2332 \def\chapterautorefname{Hoofstuk}%
2333 \def\sectionautorefname{Afdeling}%
2334 \def\subsectionautorefname{Subafdeling}%
2335 \def\subsubsectionautorefname{Subsubafdeling}%
2336 \def\paragraphautorefname{Paragraaf}%
2337 \def\subparagraphautorefname{Subparagraaf}%
2338 \def\FancyVerbLineautorefname{Lyn}%
2339 \def\theoremautorefname{Teorema}%
2340 \def\pageautorefname{Bladsy}%
2341 }
2342 \def\HyLang@english{%
2343 \def\equationautorefname{Equation}%
2344 \def\footnoteautorefname{footnote}%
2345 \def\itemautorefname{item}%
2346 \def\figureautorefname{Figure}%
2347 \def\tableautorefname{Table}%
2348 \def\partautorefname{Part}%
2349 \def\appendixautorefname{Appendix}%
2350 \def\chapterautorefname{chapter}%
2351 \def\sectionautorefname{section}%
2352 \def\subsectionautorefname{subsection}%
2353 \def\subsubsectionautorefname{subsubsection}%
2354 \def\paragraphautorefname{paragraph}%
2355 \def\subparagraphautorefname{subparagraph}%

```

```

2356 \def\FancyVerbLineautorefname{line}%
2357 \def\theoremautorefname{Theorem}%
2358 \def\pageautorefname{page}%
2359 }
2360 \def\HyLang@french{%
2361 \def\equationautorefname{'Equation}%
2362 \def\footnoteautorefname{note}%
2363 \def\itemautorefname{item}%
2364 \def\figureautorefname{Figure}%
2365 \def\tableautorefname{Tableau}%
2366 \def\partautorefname{Partie}%
2367 \def\appendixautorefname{Appendice}%
2368 \def\chapterautorefname{chapitre}%
2369 \def\sectionautorefname{section}%
2370 \def\subsectionautorefname{sous-section}%
2371 \def\subsubsectionautorefname{sous-sous-section}%
2372 \def\paragraphautorefname{paragraphe}%
2373 \def\subparagraphautorefname{sous-paragraphe}%
2374 \def\FancyVerbLineautorefname{ligne}%
2375 \def\theoremautorefname{Th\'eor\'eme}%
2376 \def\pageautorefname{page}%
2377 }
2378 \def\HyLang@german{%
2379 \def\equationautorefname{Gleichung}%
2380 \def\footnoteautorefname{Fu\ss note}%
2381 \def\itemautorefname{Punkt}%
2382 \def\figureautorefname{Abbildung}%
2383 \def\tableautorefname{Tabelle}%
2384 \def\partautorefname{Teil}%
2385 \def\appendixautorefname{Anhang}%
2386 \def\chapterautorefname{Kapitel}%
2387 \def\sectionautorefname{Abschnitt}%
2388 \def\subsectionautorefname{Unterabschnitt}%
2389 \def\subsubsectionautorefname{Unterunterabschnitt}%
2390 \def\paragraphautorefname{Absatz}%
2391 \def\subparagraphautorefname{Unterabsatz}%
2392 \def\FancyVerbLineautorefname{Zeile}%
2393 \def\theoremautorefname{Theorem}%
2394 \def\pageautorefname{Seite}%
2395 }
2396 \def\HyLang@italian{%
2397 \def\equationautorefname{Equazione}%
2398 \def\footnoteautorefname{nota}%
2399 \def\itemautorefname{punto}%
2400 \def\figureautorefname{Figura}%
2401 \def\tableautorefname{Tabella}%
2402 \def\partautorefname{Parte}%
2403 \def\appendixautorefname{Appendice}%
2404 \def\chapterautorefname{Capitolo}%
2405 \def\sectionautorefname{sezione}%
2406 \def\subsectionautorefname{sottosezione}%
2407 \def\subsubsectionautorefname{sottosottosezione}%
2408 \def\paragraphautorefname{paragrafo}%
2409 \def\subparagraphautorefname{sottoparagrafo}%
2410 \def\FancyVerbLineautorefname{linea}%
2411 \def\theoremautorefname{Teorema}%
2412 \def\pageautorefname{Pag.\@}%

```

```

2413 }
2414 \def\HyLang@magyar{%
2415   \def\equationautorefname{Egyenlet}%
2416   \def\footnoteautorefname{l\'abjegyzet}%
2417   \def\itemautorefname{Elem}%
2418   \def\figureautorefname{\'Abra}%
2419   \def\tableautorefname{T\'abl\'azat}%
2420   \def\partautorefname{R\'esz}%
2421   \def\appendixautorefname{F\'uggel\'ek}%
2422   \def\chapterautorefname{fejezet}%
2423   \def\sectionautorefname{szakasz}%
2424   \def\subsectionautorefname{alszakasz}%
2425   \def\subsubsectionautorefname{alalszakasz}%
2426   \def\paragraphautorefname{bekezd\'es}%
2427   \def\subparagraphautorefname{albekezd\'es}%
2428   \def\FancyVerbLineautorefname{sor}%
2429   \def\theoremautorefname{T\'etel}%
2430   \def\pageautorefname{oldal}%
2431 }
2432 \def\HyLang@portuges{%
2433   \def\equationautorefname{Equa\c c\~ao}%
2434   \def\footnoteautorefname{Nota de rodap\'e}%
2435   \def\itemautorefname{Item}%
2436   \def\figureautorefname{Figura}%
2437   \def\tableautorefname{Tabela}%
2438   \def\partautorefname{Parte}%
2439   \def\appendixautorefname{Ap\~endice}%
2440   \def\chapterautorefname{Cap\'itulo}%
2441   \def\sectionautorefname{Se\c c\~ao}%
2442   \def\subsectionautorefname{Subse\c c\~ao}%
2443   \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2444   \def\paragraphautorefname{par\'agrafo}%
2445   \def\subparagraphautorefname{subpar\'agrafo}%
2446   \def\FancyVerbLineautorefname{linha}%
2447   \def\theoremautorefname{Teorema}%
2448   \def\pageautorefname{P\'agina}%
2449 }

```

Next commented section for Russian is provided by Olga Lapko.

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

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

```

2450 \def\HyLang@russian{%

```

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

```

2451   \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

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

```

2452 %   \def\equationautorefname{%
2453 %     \cyr\cyrv\cyrery\cyr\cyrzh\cyre\cyrn\cyri\cyre
2454 %   }%

```

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

```
2455 \def\footnoteautorefname{%
2456   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
2457 }%
```

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

```
2458 % \def\footnoteautorefname{%
2459 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
2460 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2461 % }%
```

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

```
2462 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2463 % \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.

```
2464 \def\itemautorefname{\cyr\cyrp.}%
2465 % \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.

```
2466 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2467 \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.

```
2468 \def\partautorefname{\cyr\cyrch.}%
2469 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2470 \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.

```
2471 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2472 % \def\appendixautorefname{%
2473 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrzh\cyre\cyrn\cyri\cyre
2474 % }%
```

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.

```
2475 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2476 \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.

```
2477 \def\paragraphautorefname{\cyr\cyrp.}%
2478 \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.

```
2479 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2480 % \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.

```
2481 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2482 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
```

```
2483 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2484 % \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 ...

```
2485 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2486 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
2487 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2488 \def\pageautorefname{\cyr\cyrs.}%
```

```
2489 }
```

```
2490 \def\HyLang@spanish{%
```

```
2491 \def\equationautorefname{Ecuaci\'}on}%
```

```
2492 \def\footnoteautorefname{Nota a pie de p\'}agina}%
```

```
2493 \def\itemautorefname{Elemento}%
```

```
2494 \def\figureautorefname{Figura}%
```

```
2495 \def\tableautorefname{Tabla}%
```

```
2496 \def\partautorefname{Parte}%
```

```
2497 \def\appendixautorefname{Ap\'}endice}%
```

```
2498 \def\chapterautorefname{Cap\'}itulo}%
```

```
2499 \def\sectionautorefname{Secci\'}on}%
```

```
2500 \def\subsectionautorefname{Subsecci\'}on}%
```

```
2501 \def\subsubsectionautorefname{Subsubsecci\'}on}%
```

```
2502 \def\paragraphautorefname{P\'}arrafo}%
```

```
2503 \def\subparagraphautorefname{Subp\'}arrafo}%
```

```
2504 \def\FancyVerbLineautorefname{L\'}inea}%
```

```
2505 \def\theoremautorefname{Teorema}%
```

```
2506 \def\pageautorefname{P\'}agina}%
```

```
2507 }
```

```
2508 \def\HyLang@vietnamese{%
```

```
2509 \def\equationautorefname{Ph\}uhorn{\}ohorn{\}ng tr\'}inh}%
```

```
2510 \def\footnoteautorefname{Ch\'}u th\'}ich}%
```

```
2511 \def\itemautorefname{m\}d\}u\}c}%
```

```
2512 \def\figureautorefname{H\'}inh}%
```

```
2513 \def\tableautorefname{B\}h\}a\}ng}%
```

```
2514 \def\partautorefname{Ph\'}acircumflex{\}n}%
```

```
2515 \def\appendixautorefname{Ph\}d\}u\} l\}d\}u\}c}%
```

```
2516 \def\chapterautorefname{ch\}uhorn{\}ohorn{\}ng}%
```

```
2517 \def\sectionautorefname{m\}d\}u\}c}%
```

```
2518 \def\subsectionautorefname{m\}d\}u\}c}%
```

```
2519 \def\subsubsectionautorefname{m\}d\}u\}c}%
```

```
2520 \def\paragraphautorefname{\}d\}j\}o\}d\}a\}n}%
```

```

2521 \def\subparagraphautorefname{\dj{ }o{d}{a}{n}}%
2522 \def\FancyVerbLineautorefname{d\'ong}%
2523 \def\theoremautorefname{\DJ{ }\d{i}{nh} 1\'y}%
2524 \def\pageautorefname{Trang}%
2525 }

```

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

```

2526 \def\HyLang@addto#1#2{%
2527   #2%
2528   \@temptokena{#2}%
2529   \ifx#1\relax
2530     \let#1\@empty
2531   \fi
2532   \ifx#1\undefined
2533     \edef#1{\the\@temptokena}%
2534   \else
2535     \toks@\expandafter{#1}%
2536     \edef#1{\the\toks@\the\@temptokena}%
2537   \fi
2538   \@temptokena{}\toks@\@temptokena
2539 }

2540 \def\HyLang@DeclareLang#1#2#3{%
2541   \begingroup
2542     \edef\x##1##2{%
2543       \noexpand\ifx##2\relax
2544         \errmessage{No definitions for language #2' found!}%
2545       \noexpand\fi
2546     \endgroup
2547     \noexpand\define@key{Hyp}{#1}[]{%
2548       \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2549       #3%
2550     }%
2551   }%
2552   \expandafter\x\csname extras#1\expandafter\endcsname
2553     \csname HyLang@#2\endcsname
2554 }

2555 \HyLang@DeclareLang{english}{english}{}
2556 \HyLang@DeclareLang{UKenglish}{english}{}
2557 \HyLang@DeclareLang{british}{english}{}
2558 \HyLang@DeclareLang{USenglish}{english}{}
2559 \HyLang@DeclareLang{american}{english}{}
2560 \HyLang@DeclareLang{german}{german}{}
2561 \HyLang@DeclareLang{austrian}{german}{}
2562 \HyLang@DeclareLang{ngerman}{german}{}
2563 \HyLang@DeclareLang{naustrian}{german}{}
2564 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2565 \HyLang@DeclareLang{brazil}{portuges}{}
2566 \HyLang@DeclareLang{brazilian}{portuges}{}
2567 \HyLang@DeclareLang{portuguese}{portuges}{}
2568 \HyLang@DeclareLang{spanish}{spanish}{}
2569 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2570 \HyLang@DeclareLang{french}{french}{}
2571 \HyLang@DeclareLang{frenchb}{french}{}
2572 \HyLang@DeclareLang{francais}{french}{}
2573 \HyLang@DeclareLang{acadian}{french}{}
2574 \HyLang@DeclareLang{canadien}{french}{}

```

```

2575 \HyLang@DeclareLang{italian}{italian}{%
2576 \HyLang@DeclareLang{magyar}{magyar}{%
2577 \HyLang@DeclareLang{hungarian}{magyar}{%

```

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

```

2578 \define@key{Hyp}{vietnamese}[]{%
2579 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
2580 \AtEndOfPackage{%
2581 \ifundefined{T@PU}{%
2582 \input{puvnenc.def}%
2583 }%
2584 }%
2585 }
2586 \define@key{Hyp}{vietnam}[]{%
2587 \HyLang@addto\extravietnam\HyLang@vietnamese
2588 \AtEndOfPackage{%
2589 \ifundefined{T@PU}{%
2590 \input{puvnenc.def}%
2591 }%
2592 }%
2593 }

```

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

```

2594 \define@key{Hyp}{arabic}[]{%
2595 \AtEndOfPackage{%
2596 \ifundefined{T@PU}{%
2597 \input{puarenc.def}%
2598 }%
2599 }%
2600 }

```

13 Options to change appearance of links

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

```

2601 \define@key{Hyp}{colorlinks}[true]{%
2602 \Hy@boolkey{colorlinks}{#1}%
2603 }
2604 \define@key{Hyp}{ocgcolorlinks}[true]{%
2605 \Hy@boolkey{ocgcolorlinks}{#1}%
2606 }
2607 \AtBeginDocument{%
2608 \begingroup
2609 \ifundefined{OBJ@OCG@view}{%
2610 \ifHy@ocgcolorlinks
2611 \Hy@Warning{%
2612 Driver does not support ‘ocgcolorlinks’,\MessageBreak
2613 using ‘colorlinks’ instead%
2614 }%
2615 \fi
2616 }{}%
2617 \endgroup
2618 }
2619 \define@key{Hyp}{frenchlinks}[true]{%
2620 \Hy@boolkey{frenchlinks}{#1}%
2621 }

```


14 Bookmarking

```

2622 \begingroup\expandafter\expandafter\expandafter\endgroup
2623 \expandafter\ifx\csname chapter\endcsname\relax
2624   \def\toclevel@part{0}%
2625 \else
2626   \def\toclevel@part{-1}%
2627 \fi
2628 \def\toclevel@chapter{0}
2629 \def\toclevel@section{1}
2630 \def\toclevel@subsection{2}
2631 \def\toclevel@subsubsection{3}
2632 \def\toclevel@paragraph{4}
2633 \def\toclevel@subparagraph{5}
2634 \def\toclevel@figure{0}
2635 \def\toclevel@table{0}
2636 \@ifpackageloaded{listings}{%
2637   \providecommand*\theHlstlisting{\thelstlisting}%
2638   \providecommand*\toclevel@lstlisting{0}%
2639 }{}
2640 \@ifpackageloaded{listing}{%
2641   \providecommand*\theHlisting{\thelisting}%
2642   \providecommand*\toclevel@listing{0}%
2643 }{}

2644 \define@key{Hyp}{bookmarks}[true]{%
2645   \Hy@boolkey{bookmarks}{#1}%
2646 }

2647 \define@key{Hyp}{bookmarksopen}[true]{%
2648   \Hy@boolkey{bookmarksopen}{#1}%
2649 }

```

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.

```

2650 \let\Hy@bookmarksdepth\c@tocdepth
2651 \define@key{Hyp}{bookmarksdepth}[]{%
2652   \begingroup
2653     \edef\x{#1}%
2654     \ifx\x\empty
2655       \global\let\Hy@bookmarksdepth\c@tocdepth
2656     \else
2657       \@ifundefined{toclevel@\x}{%
2658         \@onelevel@sanitize\x
2659         \edef\y{\expandafter\@car\x\@nil}%
2660         \ifcase 0\expandafter\ifx\y-1\fi
2661           \expandafter\ifnum\expandafter\y>47 %
2662             \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
2663           \Hy@Warning{Unknown document division name (\x)}%
2664         \else
2665           \setbox\z@=\hbox{%

```

```

2666         \count@=\x
2667         \xdef\Hy@bookmarksdepth{\the\count@}%
2668     }%
2669     \fi
2670 }{%
2671     \setbox\z@=\hbox{%
2672         \count@=\csname toclevel@\x\endcsname
2673         \xdef\Hy@bookmarksdepth{\the\count@}%
2674     }%
2675 }%
2676 \fi
2677 \endgroup
2678 }

```

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

```

2679 \define@key{Hyp}{bookmarksopenlevel}{%
2680   \def\@bookmarksopenlevel{#1}%
2681 }
2682 \def\@bookmarksopenlevel{\maxdimen}
2683 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2684 \define@key{Hyp}{bookmarkstype}{%
2685   \def\Hy@bookmarkstype{#1}%
2686 }
2687 \def\Hy@bookmarkstype{toc}

```

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

```

2688 \define@key{Hyp}{bookmarksnumbered}[true]{%
2689   \Hy@boolkey{bookmarksnumbered}{#1}%
2690 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2691 \define@key{Hyp}{CJKbookmarks}[true]{%
2692   \Hy@boolkey{CJKbookmarks}{#1}%
2693 }

2694 \def\Hy@temp#1{%
2695   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2696 }
2697 \def\Hy@@temp#1#2#3{%
2698   \define@key{Hyp}{#2color}{%
2699     \HyColor@HyperrefColor{##1}{#1}%
2700   }%
2701   \def#1{#3}%
2702 }

2703 \Hy@temp{link}{red}
2704 \Hy@temp{anchor}{black}
2705 \Hy@temp{cite}{green}
2706 \Hy@temp{file}{cyan}
2707 \Hy@temp{url}{magenta}
2708 \Hy@temp{menu}{red}
2709 \Hy@temp{run}{\@filecolor}
2710 \define@key{Hyp}{pagecolor}{%
2711   \Hy@WarningPageColor
2712 }
2713 \def\Hy@WarningPageColor{%
2714   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
2715   \global\let\Hy@WarningPageColor\relax
2716 }

```

```

2717 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2718 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2719 \let\@baseurl\@empty
2720 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
2721 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2722 \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.

```

2723 \let\@pdfpagetransition\relax
2724 \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.

```

2725 \let\@pdfpageduration\relax
2726 \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.

```

2727 \newif\ifHy@useHidKey
2728 \Hy@useHidKeyfalse
2729 \define@key{Hyp}{pdfpagehidden}[true]{%
2730   \Hy@boolkey{pdfpagehidden}{#1}%
2731   \ifHy@pdfpagehidden
2732     \global\Hy@useHidKeytrue
2733   \fi
2734 }

```

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).

```

2735 \def\Hy@ColorList{cite,file,link,menu,run,url}
2736 \@for\Hy@temp:=\Hy@ColorList\do{%
2737   \edef\Hy@temp{%
2738     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2739       \noexpand\HyColor@HyperrefBorderColor
2740       {##1}%
2741       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2742       {hyperref}%
2743       {\Hy@temp bordercolor}%
2744     }%
2745   }%
2746   \Hy@temp
2747 }
2748 \define@key{Hyp}{pagebordercolor}{%
2749   \Hy@WarningPageBorderColor

```

```

2750 }
2751 \def\Hy@WarningPageBorderColor{%
2752   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2753   \global\let\Hy@WarningPageBorderColor\relax
2754 }

2755 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2756 \Hy@DefNameKey{pdfhighlight}{%
2757   \do{/I}{Invert}%
2758   \do{/N}{None}%
2759   \do{/O}{Outline}%
2760   \do{/P}{Push}%
2761 }
2762 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2763 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2764 \def\Hy@setpdfborder{%
2765   \ifx\@pdfborder\@empty
2766   \else
2767     /Border[\@pdfborder]%
2768     \fi
2769   \ifx\@pdfborderstyle\@empty
2770   \else
2771     /BS<<\@pdfborderstyle>>%
2772     \fi
2773 }
2774 \Hy@DefNameKey{pdfpagemode}{%
2775   \do{UseNone}{}%
2776   \do{UseOutlines}{}%
2777   \do{UseThumbs}{}%
2778   \do{FullScreen}{}%
2779   \do{UseOC}{PDF 1.5}%
2780   \do{UseAttachments}{PDF 1.6}%
2781 }
2782 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2783   \do{UseNone}{}%
2784   \do{UseOutlines}{}%
2785   \do{UseThumbs}{}%
2786   \do{FullScreen}{}%
2787   \do{UseOC}{PDF 1.5}%
2788   \do{UseAttachments}{PDF 1.6}%
2789 }
2790 \Hy@DefNameKey{pdfdirection}{%
2791   \do{L2R}{Left to right}%
2792   \do{R2L}{Right to left}%
2793 }
2794 \Hy@DefNameKey{pdfviewarea}{%
2795   \do{MediaBox}{}%
2796   \do{CropBox}{}%
2797   \do{BleedBox}{}%
2798   \do{TrimBox}{}%
2799   \do{ArtBox}{}%
2800 }
2801 \Hy@DefNameKey{pdfviewclip}{%
2802   \do{MediaBox}{}%
2803   \do{CropBox}{}%
2804   \do{BleedBox}{}%
2805   \do{TrimBox}{}%
2806   \do{ArtBox}{}%

```

```

2807 }
2808 \Hy@DefNameKey{pdfprintarea}{%
2809   \do{MediaBox}{}%
2810   \do{CropBox}{}%
2811   \do{BleedBox}{}%
2812   \do{TrimBox}{}%
2813   \do{ArtBox}{}%
2814 }
2815 \Hy@DefNameKey{pdfprintclip}{%
2816   \do{MediaBox}{}%
2817   \do{CropBox}{}%
2818   \do{BleedBox}{}%
2819   \do{TrimBox}{}%
2820   \do{ArtBox}{}%
2821 }
2822 \Hy@DefNameKey{pdfprintscaling}{%
2823   \do{AppDefault}{}%
2824   \do{None}{}%
2825 }
2826 \Hy@DefNameKey{pdfduplex}{%
2827   \do{Simplex}{}%
2828   \do{DuplexFlipShortEdge}{}%
2829   \do{DuplexFlipLongEdge}{}%
2830 }
2831 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
2832   \do{true}{}%
2833   \do{false}{}%
2834 }
2835 \define@key{Hyp}{pdfprintpagerange}{%
2836   \def\@pdfprintpagerange{#1}%
2837 }
2838 \Hy@DefNameKey{pdfnumcopies}{%
2839   \do{2}{two copies}%
2840   \do{3}{three copies}%
2841   \do{4}{four copies}%
2842   \do{5}{five copies}%
2843 }
2844 \define@key{Hyp}{pdfusetitle}[true]{%
2845   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
2846 }
2847 \define@key{Hyp}{pdftitle}{\pdfstringdef\@pdftitle{#1}}
2848 \define@key{Hyp}{pdfauthor}{\pdfstringdef\@pdfauthor{#1}}
2849 \define@key{Hyp}{pdfproducer}{\pdfstringdef\@pdfproducer{#1}}
2850 \define@key{Hyp}{pdfcreator}{\pdfstringdef\@pdfcreator{#1}}
2851 \define@key{Hyp}{pdfcreationdate}{%
2852   \begingroup
2853     \Hy@unicodetofalse
2854     \pdfstringdef\@pdfcreationdate{#1}%
2855   \endgroup
2856 }
2857 \define@key{Hyp}{pdfmoddate}{%
2858   \begingroup
2859     \Hy@unicodetofalse
2860     \pdfstringdef\@pdfmoddate{#1}%
2861   \endgroup
2862 }
2863 \define@key{Hyp}{pdfsubject}{\pdfstringdef\@pdfsubject{#1}}

```

```

2864 \define@key{Hyp}{pdfkeywords}{\pdfstringdef\@pdfkeywords{#1}}
2865 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
2866 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
2867 \let\setpdflinkmargin\@gobble
2868 \def\calculate@pdfview#1 #2\{%
2869   \def\@pdfview{#1}%
2870   \ifx\#2\%
2871     \def\@pdfviewparams{ -32768}%
2872   \else
2873     \def\@pdfviewparams{ #2}%
2874   \fi
2875 }
2876 \begingroup\expandafter\expandafter\expandafter\endgroup
2877 \expandafter\ifx\csname numexpr\endcsname\relax
2878   \def\Hy@number#1{%
2879     \expandafter\@firstofone\expandafter{\number#1}%
2880   }%
2881 \else
2882   \def\Hy@number#1{%
2883     \the\numexpr#1\relax
2884   }%
2885 \fi
2886 \define@key{Hyp}{pdfstartpage}{%
2887   \ifx\#1\%
2888     \def\@pdfstartpage{%
2889       \edef\@pdfstartpage{\Hy@number{#1}}%
2890     }%
2891   \fi
2892 }%
2893 \define@key{Hyp}{pdfstartview}{%
2894   \ifx\#1\%
2895     \def\@pdfstartview{%
2896       \hypercalcbpdef\@pdfstartview{ /#1 }%
2897     }%
2898   \fi
2899 }
2900 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
2901 \define@key{Hyp}{pdftoolbar}[true]{%
2902   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
2903 }
2904 \define@key{Hyp}{pdfmenubar}[true]{%
2905   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
2906 }
2907 \define@key{Hyp}{pdfwindowui}[true]{%
2908   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
2909 }
2910 \define@key{Hyp}{pdffitwindow}[true]{%
2911   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
2912 }
2913 \define@key{Hyp}{pdfcenterwindow}[true]{%
2914   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
2915 }
2916 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
2917   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
2918 }
2919 \define@key{Hyp}{pdfa}[true]{%
2920   \Hy@boolkey[pdfa]{#1}%

```

```

2921 }
2922 \define@key{Hyp}{pdfnewwindow}[true]{%
2923   \def\Hy@temp{#1}%
2924   \ifx\Hy@temp\@empty
2925     \Hy@newwindowsetfalse
2926   \else
2927     \Hy@newwindowsettrue
2928     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
2929   \fi
2930 }
2931 \def\Hy@SetNewWindow{%
2932   \ifHy@newwindowset
2933     /NewWindow %
2934     \ifHy@newwindow true\else false\fi
2935   \fi
2936 }
2937 \Hy@DefNameKey{pdfpagelayout}{%
2938   \do{SinglePage}{}%
2939   \do{OneColumn}{}%
2940   \do{TwoColumnLeft}{}%
2941   \do{TwoColumnRight}{}%
2942   \do{TwoPageLeft}{PDF 1.5}%
2943   \do{TwoPageRight}{PDF 1.5}%
2944 }
2945 \define@key{Hyp}{pdflang}{%
2946   \def\@pdflang{#1}%
2947 }
2948 \define@key{Hyp}{pdfpagelabels}[true]{%
2949   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
2950 }
2951 \define@key{Hyp}{pdfescapeform}[true]{%
2952   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
2953 }

```

Default values:

```

2954 \def\@linkbordercolor{1 0 0}
2955 \def\@urlbordercolor{0 1 1}
2956 \def\@menubordercolor{1 0 0}
2957 \def\@filebordercolor{0 .5 .5}
2958 \def\@runbordercolor{0 .7 .7}
2959 \def\@citebordercolor{0 1 0}
2960 \def\@pdfhighlight{/I}
2961 \def\@pdftitle{}
2962 \def\@pdfauthor{}
2963 \let\@pdfproducer\relax
2964 \def\@pdfcreator{LaTeX with hyperref package}
2965 \def\@pdfcreationdate{}
2966 \def\@pdfmoddate{}
2967 \def\@pdfsubject{}
2968 \def\@pdfkeywords{}
2969 \def\@pdfpagescrop{}
2970 \def\@pdfstartview{ /Fit }
2971 \def\@pdfstartpage{1}
2972 \def\@pdfprintpagerange{}
2973 \def\@pdflang{}
2974 \let\PDF@SetupDoc\@empty
2975 \let\PDF@FinishDoc\@empty
2976 \let\phantomsection\@empty

```

```

2977 \let\special@paper\@empty
2978 \def\HyperDestNameFilter#1{#1}
2979 \@ifundefined{stockwidth}{%
2980   \ifdim\paperwidth>\z@
2981     \ifdim\paperheight>\z@
2982       \edef\special@paper{\the\paperwidth,\the\paperheight}%
2983     \fi
2984   \fi
2985 }{%
2986   \ifdim\stockwidth>\z@
2987     \ifdim\stockheight>\z@
2988       \edef\special@paper{\the\stockwidth,\the\stockheight}%
2989     \fi
2990   \fi
2991 }
2992 \begingroup
2993   \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
2994   \dimen@=\x\relax
2995   \ifdim\dimen@>\z@
2996   \else
2997     \dimen@=11in\relax
2998     \Hy@WarningNoLine{%
2999       Height of page (\expandafter\string\x) %
3000       is invalid (\the\x),\MessageBreak
3001       using 11in%
3002     }%
3003   \fi
3004   \dimen@=0.99626401\dimen@
3005   \xdef\Hy@pageheight{\strip@pt\dimen@}%
3006 \endgroup
3007 \def\HyInd@EncapChar{||}
3008 \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.

```

3009 \let\hyper@normalise\ExecuteOptions
3010 \let\ExecuteOptions\hypersetup
3011 \Hy@RestoreCatcodes
3012 \InputIfFileExists{hyperref.cfg}{-}{-}
3013 \Hy@SetCatcodes
3014 \let\ExecuteOptions\hyper@normalise
3015 \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`.

```

3016 \RequirePackage{kvoptions}[2006/08/17]
3017 \AddOption{tex4ht}{Add option tex4ht if package tex4ht is loaded.}
3018 \@ifpackageloaded{tex4ht}{%
3019   \ifpackagewith{hyperref}{tex4ht}{-}{-}%
3020   \PassOptionsToPackage{tex4ht}{hyperref}%
3021 }{}
3022 \let\ReadBookmarks\relax
3023 \ProcessKeyvalOptions{Hyp}

```


After processing options.

```
3024 \AtBeginDocument{%
3025   \ifHy@draft
3026     \let\hyper@@anchor\@gobble
3027     \gdef\hyper@link#1#2#3{#3}%
3028     \let\hyper@anchorstart\@gobble
3029     \let\hyper@anchorend\@empty
3030     \let\hyper@linkstart\@gobbletwo
3031     \let\hyper@linkend\@empty
3032     \def\hyper@linkurl#1#2{#1}%
3033     \def\hyper@linkfile#1#2#3{#1}%
3034     \def\hyper@link@[#1]#2#3{#1}%
3035     \def\Acrobatmenu#1#2{\leavevmode#2}%
3036     \let\PDF@SetupDoc\@empty
3037     \let\PDF@FinishDoc\@empty
3038     \let\@fifthoffive\@secondoftwo
3039     \let\@secondoffive\@secondoftwo
3040     \let\ReadBookmarks\relax
3041     \let\WriteBookmarks\relax
3042     \Hy@WarningNoLine{ draft mode on}%
3043   \fi
3044   \Hy@DisableOption{draft}%
3045   \Hy@DisableOption{nolinks}%
3046   \Hy@DisableOption{final}%
3047 }
```

15.1 PDF/A

```
3048 \Hy@DisableOption{pdfa}
3049 \ifHy@pdfa
3050   \setkeys{Hyp}{pdfversion=1.4}%
3051   \def\Hy@Acrobatmenu#1#2{%
3052     \leavevmode
3053     \begingroup
3054       \edef\x{#1}%
3055       \@onelevel@sanitize\x
3056       \ifx\x\Hy@NextPage
3057         \let\y=Y%
3058       \else
3059         \ifx\x\Hy@PrevPage
3060           \let\y=Y%
3061         \else
3062           \ifx\x\Hy@FirstPage
3063             \let\y=Y%
3064           \else
3065             \ifx\x\Hy@LastPage
3066               \let\y=Y%
3067             \else
3068               \let\y=N%
3069             \fi
3070           \fi
3071         \fi
3072       \fi
3073     \expandafter\endgroup
3074     \ifx\y Y%
3075     \else
```

```

3076 \PackageError{hyperref}{%
3077 PDF/A: Named action ‘#1’ is not permitted%
3078 }\@ehc
3079 {#2}%
3080 \expandafter\@gobble
3081 \fi
3082 }%
3083 \def\Hy@temp#1{%
3084 \expandafter\def\csname Hy@#1\endcsname{#1}%
3085 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3086 }%
3087 \Hy@temp{NextPage}%
3088 \Hy@temp{PrevPage}%
3089 \Hy@temp{FirstPage}%
3090 \Hy@temp{LastPage}%
3091 \else
3092 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3093 \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.

```

3094 \Hy@nextfalse
3095 \@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3096 \@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3097 \@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3098 \ifHy@next
3099 \let\texttilde\~%
3100 \fi

```

15.3 Patch for babel 3.8j

Babel 2008/03/16 v3.8j adds a patch to disable shorthands for bookmarks. That reduces warnings, but the bookmarks are ugly. Therefore the following patch tries to undo this.

```

3101 \@ifpackageloaded{babel}{%
3102 \ifpackagelater{babel}{2008/03/16}{%
3103 \def\Hy@PatchLanguageShorthands#1{%
3104 \begingroup
3105 \edef\x{#1}%
3106 \@onelevel@sanitize\x
3107 \def\y{system}%
3108 \@onelevel@sanitize\y
3109 \expandafter\endgroup
3110 \ifx\x\y
3111 \else
3112 \HyOrg@languageshorthands{#1}%
3113 \fi
3114 }%
3115 \AtBeginDocument{%
3116 \begingroup
3117 \toks0=\expandafter{\pdfstringdefPreHook}%
3118 \xdef\pdfstringdefPreHook{%
3119 \let\noexpand\HyOrg@languageshorthands
3120 \noexpand\languageshorthands
3121 \let\noexpand\languageshorthands
3122 \noexpand\Hy@PatchLanguageShorthands

```

```

3123         \the\toks0 %
3124         \let\noexpand\languageshorthands
3125         \noexpand\HyOrg@languageshorthands
3126     }%
3127 \endgroup
3128 }%
3129 }{}%
3130 }{}

3131 \ifHy@figures
3132   \Hy@Info{Hyper figures ON}%
3133 \else
3134   \Hy@Info{Hyper figures OFF}%
3135 \fi
3136 \ifHy@nesting
3137   \Hy@Info{Link nesting ON}%
3138 \else
3139   \Hy@Info{Link nesting OFF}%
3140 \fi
3141 \ifHy@hyperindex
3142   \Hy@Info{Hyper index ON}%
3143 \else
3144   \Hy@Info{Hyper index OFF}%
3145 \fi
3146 \ifHy@plainpages
3147   \Hy@Info{Plain pages ON}%
3148 \else
3149   \Hy@Info{Plain pages OFF}%
3150 \fi
3151 \ifHy@backref
3152   \Hy@Info{Backreferencing ON}%
3153 \else
3154   \Hy@Info{Backreferencing OFF}%
3155 \fi
3156 \ifHy@typexml
3157   \AtEndOfPackage{%
3158     \RequirePackage{color}%
3159     \RequirePackage{nameref}%
3160   }%
3161 \fi
3162 \Hy@DisableOption{typexml}
3163 \ifHy@implicit
3164   \typeout{Implicit mode ON; LaTeX internals redefined}%
3165 \else
3166   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3167   \def\MaybeStopEarly{%
3168     \typeout{Hyperref stopped early}%
3169     \AfterBeginDocument{%
3170       \PDF@FinishDoc
3171       \gdef\PDF@FinishDoc{}}%
3172   }%
3173   \endinput
3174 }%
3175 \AtBeginDocument{%
3176   \let\autoref\ref
3177   \let\autopageref\pageref
3178   \ifx\@pdfpagemode\@empty
3179     \gdef\@pdfpagemode{UseNone}%

```

```

3180 \fi
3181 \global\Hy@backreffalse
3182 }%
3183 \AtEndOfPackage{%
3184 \global\let\ReadBookmarks\relax
3185 \global\let\WriteBookmarks\relax
3186 }%
3187 \fi
3188 \Hy@DisableOption{implicit}

```

15.3.1 Driver loading

```

3189 \AtEndOfPackage{%
3190 \ifpackageloaded{tex4ht}{%
3191 \def\Hy@driver{htex4ht}%
3192 \Hy@texhttrue
3193 }{}%

```

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.

```

3194 \ifx\Hy@driver\@empty
3195 \else
3196 \def\Hy@temp{hpdftex}%
3197 \ifpdf
3198 \ifx\Hy@driver\Hy@temp
3199 \else
3200 \Hy@WarningNoLine{%
3201 Wrong driver '\Hy@driver.def';\MessageBreak
3202 pdfTeX is running in PDF mode.\MessageBreak
3203 Forcing driver '\Hy@temp.def'%
3204 }%
3205 \let\Hy@driver\Hy@temp
3206 \fi
3207 \else
3208 \ifx\Hy@driver\Hy@temp
3209 \Hy@WarningNoLine{%
3210 Wrong driver '\Hy@driver.def';\MessageBreak
3211 pdfTeX is not running in PDF mode.\MessageBreak
3212 Using default driver%
3213 }%
3214 \let\Hy@driver\@empty
3215 \fi
3216 \fi
3217 \fi
3218 \ifx\Hy@driver\@empty
3219 \else
3220 \def\Hy@temp{hdvipdfm}%
3221 \ifxetex
3222 \ifx\Hy@driver\Hy@temp
3223 \else
3224 \Hy@WarningNoLine{%
3225 Wrong driver '\Hy@driver.def';\MessageBreak
3226 XeTeX is running.\MessageBreak
3227 Forcing driver '\Hy@temp.def' for XeTeX%
3228 }%
3229 \let\Hy@driver\Hy@temp
3230 \fi
3231 \fi

```

```

3232 \fi
3233 \ifx\Hy@driver\@empty
3234 \else
3235   \def\Hy@temp{hvtexhtm}%
3236   \ifvtexhtml
3237     \ifx\Hy@driver\Hy@temp
3238     \else
3239       \Hy@WarningNoLine{%
3240         Wrong driver '\Hy@driver.def';\MessageBreak
3241         VTeX is running in HTML mode.\MessageBreak
3242         Forcing driver '\Hy@temp.def'%
3243       }%
3244     \let\Hy@driver\Hy@temp
3245   \fi
3246 \else
3247   \ifx\Hy@driver\Hy@temp
3248   \Hy@WarningNoLine{%
3249     Wrong driver '\Hy@driver.def';\MessageBreak
3250     VTeX is not running in HTML mode.\MessageBreak
3251     Using default driver%
3252   }%
3253   \let\Hy@driver\@empty
3254 \fi
3255 \fi
3256 \fi

```

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

```

3257 \ifx\Hy@driver\@empty
3258   \providecommand*{\Hy@defaultdriver}{hypertex}%
3259   \ifpdf
3260     \def\Hy@driver{hpdftex}%
3261   \else
3262     \ifxetex
3263       \def\Hy@driver{hdvipdfm}%
3264     \else
3265       \ifvtexhtml
3266         \def\Hy@driver{hvtexhtm}%
3267         \def\MaybeStopEarly{%
3268           \typeout{Hyperref stopped early}%
3269           \AfterBeginDocument{%
3270             \PDF@FinishDoc
3271             \gdef\PDF@FinishDoc{}}%
3272         }%
3273       \endinput
3274     }%
3275   \else
3276     \ifvtexpdf
3277       \def\Hy@driver{hvtex}%
3278     \else
3279       \ifvtexps
3280         \def\Hy@driver{hvtex}%
3281       \else
3282         \let\Hy@driver\Hy@defaultdriver
3283       \fi
3284     \fi
3285   \fi
3286 \fi
3287 \fi

```

```

3288 \ifx\Hy@driver\Hy@defaultdriver
3289 \def\Hy@temp{hdvwind}%
3290 \ifx\Hy@temp\Hy@driver
3291 \setkeys{Hyp}{colorlinks}%
3292 \PassOptionsToPackage{dviwindo}{color}%
3293 \fi
3294 \fi
3295 \typeout{*hyperref using default driver \Hy@driver*}%
3296 \else
3297 \typeout{*hyperref using driver \Hy@driver*}%
3298 \fi
3299 \input{\Hy@driver.def}%
3300 \let\@unprocessedoptions\relax
3301 \Hy@RestoreCatcodes
3302 }

```

Support for open outlines is enabled for XeTeX $\zeta = 0.9995$. 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.

```

3303 \newif\ifHy@DvipdfmxOutlineOpen
3304 \ifxetex
3305 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3306 \else
3307 \Hy@DvipdfmxOutlineOpentrue
3308 \fi
3309 \fi
3310 \begingroup\expandafter\expandafter\expandafter\endgroup
3311 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3312 \else
3313 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3314 \Hy@DvipdfmxOutlineOpentrue
3315 \fi
3316 \fi
3317 \Hy@DisableOption{tex4ht}
3318 \Hy@DisableOption{pdftex}
3319 \Hy@DisableOption{nativepdf}
3320 \Hy@DisableOption{dvipdfm}
3321 \Hy@DisableOption{dvipdfmx}
3322 \Hy@DisableOption{dvipdfmx-outline-open}
3323 \Hy@DisableOption{pdfmark}
3324 \Hy@DisableOption{dvips}
3325 \Hy@DisableOption{hypertex}
3326 \Hy@DisableOption{vtex}
3327 \Hy@DisableOption{vtexpdfmark}
3328 \Hy@DisableOption{dviwindo}
3329 \Hy@DisableOption{dvipsone}
3330 \Hy@DisableOption{textures}
3331 \Hy@DisableOption{latex2html}
3332 \Hy@DisableOption{ps2pdf}
3333 \Hy@DisableOption{xetex}
3334 \AtEndOfPackage{%
3335 \Hy@DisableOption{pdfversion}%
3336 }

```

15.3.2 Bookmarks

```

3337 \def\WriteBookmarks{0}
3338 \def\@bookmarkopenstatus#1{%
3339 \ifHy@bookmarksopen

```

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

```

3340 \ifnum#1<\expandafter\@firstofone\expandafter
3341      {\number\@bookmarksoopenlevel} % explicit space
3342 \else
3343     -%
3344 \fi
3345 \else
3346     -%
3347 \fi
3348 }
3349 \ifHy@bookmarks
3350 \Hy@Info{Bookmarks ON}%
3351 \ifx\@pdfpagemode\@empty
3352 \def\@pdfpagemode{UseOutlines}%
3353 \fi
3354 \else
3355 \def\@bookmarksoopenstatus#1{%
3356 \Hy@Info{Bookmarks OFF}%
3357 \AtEndOfPackage{%
3358 \global\let\ReadBookmarks\relax
3359 \global\let\WriteBookmarks\relax
3360 }%
3361 \ifx\@pdfpagemode\@empty
3362 \def\@pdfpagemode{UseNone}%
3363 \fi
3364 \fi
3365 \Hy@DisableOption{bookmarks}

```

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

```

3366 \def\Hy@CatcodeWrapper#1{%
3367 \def\Hy@EndWrap{}%
3368 \def\TMP@EnsureCode##1##2{%
3369 \edef\Hy@EndWrap{%
3370 \Hy@EndWrap
3371 \catcode##1 \the\catcode##1\relax
3372 }%
3373 \catcode##1 ##2\relax
3374 }%
3375 \TMP@EnsureCode{10}{12}% ^^J
3376 \TMP@EnsureCode{33}{12}% !
3377 \TMP@EnsureCode{34}{12}% "
3378 \TMP@EnsureCode{36}{3}% $ (math)
3379 \TMP@EnsureCode{38}{4}% & (alignment)
3380 \TMP@EnsureCode{39}{12}% '
3381 \TMP@EnsureCode{40}{12}% (
3382 \TMP@EnsureCode{41}{12}% )
3383 \TMP@EnsureCode{42}{12}% *
3384 \TMP@EnsureCode{43}{12}% +
3385 \TMP@EnsureCode{44}{12}% ,
3386 \TMP@EnsureCode{45}{12}% -
3387 \TMP@EnsureCode{46}{12}% .
3388 \TMP@EnsureCode{47}{12}% /
3389 \TMP@EnsureCode{58}{12}% :
3390 \TMP@EnsureCode{59}{12}% ;
3391 \TMP@EnsureCode{60}{12}% <
3392 \TMP@EnsureCode{61}{12}% =
3393 \TMP@EnsureCode{62}{12}% >

```

```

3394 \TMP@EnsureCode{63}{12}% ?
3395 \TMP@EnsureCode{91}{12}% [
3396 \TMP@EnsureCode{93}{12}% ]
3397 \TMP@EnsureCode{94}{7}% ^ (superscript)
3398 \TMP@EnsureCode{95}{8}% _ (subscript)
3399 \TMP@EnsureCode{96}{12}% '
3400 \TMP@EnsureCode{124}{12}% |
3401 \TMP@EnsureCode{126}{13}% ~ (active)
3402 #1\relax
3403 \Hy@endWrap
3404 }

```

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

```

3405 \AtBeginDocument{%
3406   \ifHy@ocgcolorlinks
3407     \setkeys{Hyp}{colorlinks}%
3408     \ifHy@pdfa
3409       \Hy@Warning{%
3410         PDF/A: Optional Content Groups are prohibited,\MessageBreak
3411         using 'colorlinks' instead of 'ocgcolorlinks'%
3412       }%
3413       \Hy@ocgcolorlinksfalse
3414     \fi
3415   \fi
3416   \ifHy@ocgcolorlinks
3417   \else
3418     \Hy@DisableOption{ocgcolorlinks}%
3419   \fi
3420   \ifHy@colorlinks
3421     \def\@pdfborder{0 0 0}%
3422     \let\@pdfborderstyle\@empty
3423     \ifHy@typexml
3424     \else
3425       \Hy@CatcodeWrapper{%
3426         \RequirePackage{color}%
3427       }%
3428     \fi
3429     \def\Hy@colorlink#1{%
3430       \begingroup
3431       \HyColor@UseColor#1%
3432     }%
3433     \def\Hy@endcolorlink{\endgroup}%
3434     \Hy@Info{Link coloring ON}%
3435   \else
3436     \ifHy@frenchlinks
3437       \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3438       \def\Hy@endcolorlink{\endgroup}%
3439       \Hy@Info{French linking ON}%
3440     \else

```

for grouping consistency:

```

3441     \def\Hy@colorlink#1{\begingroup}%
3442     \def\Hy@endcolorlink{\endgroup}%
3443     \Hy@Info{Link coloring OFF}%
3444   \fi
3445 \fi
3446 \Hy@DisableOption{colorlinks}%
3447 \Hy@DisableOption{frenchlinks}%

```



```

3448 \ifHy@texht
3449   \long\def\@firstoffive#1#2#3#4#5{#1}%
3450   \long\def\@secondoffive#1#2#3#4#5{#2}%
3451   \long\def\@thirdoffive#1#2#3#4#5{#3}%
3452   \long\def\@fourthoffive#1#2#3#4#5{#4}%
3453   \long\def\@fifthoffive#1#2#3#4#5{#5}%
3454   \providecommand*\@safe@activestruet{}%
3455   \providecommand*\@safe@activesfalse{}%
3456   \def\T@ref#1{%
3457     \Hy@safe@activestruet
3458     \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3459     \Hy@safe@activesfalse
3460   }%
3461   \def\T@pageref#1{%
3462     \Hy@safe@activestruet
3463     \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3464     \Hy@safe@activesfalse
3465   }%
3466 \else
3467   \ifHy@typexml
3468   \else
3469     \Hy@CatcodeWrapper{%
3470       \RequirePackage{nameref}%
3471     }%
3472   \fi
3473 \fi
3474 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3475 \DeclareRobustCommand\pageref{%
3476   \@ifstar\@pagerefstar\T@pageref
3477 }%
3478 }
3479 \AfterBeginDocument{%
3480   \ifHy@texht
3481   \else
3482     \Hy@CatcodeWrapper{%
3483       \ReadBookmarks
3484     }%
3485   \fi
3486 }
3487 \ifHy@backref
3488   \RequirePackage{backref}%
3489 \else
3490   \let\Hy@backout\@gobble
3491 \fi
3492 \Hy@DisableOption{backref}
3493 \Hy@DisableOption{pagebackref}
3494 \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`.

```

3495 \begingroup
3496 \endlinechar=-1 %
3497 \catcode'\^^A=14 %
3498 \catcode'\^^M\active
3499 \catcode'\%\active
3500 \catcode'\#\active
3501 \catcode'\_\active
3502 \catcode'\$\active
3503 \catcode'\&\active
3504 \gdef\hyper@normalise{^^A
3505   \begingroup
3506   \catcode'\^^M\active
3507   \def^^M{ }^^A
3508   \catcode'\%\active
3509   \let%\@percentchar
3510   \let%\@percentchar
3511   \catcode'\#\active
3512   \def#{\hyper@hash}^^A
3513   \def\#{\hyper@hash}^^A
3514   \@makeother\&^^A
3515   \edef&{\string&}^^A
3516   \edef\&{\string&}^^A
3517   \edef\textunderscore{\string_}^^A
3518   \let_\textunderscore
3519   \catcode'\_\active
3520   \let_\textunderscore
3521   \let~\hyper@tilde
3522   \let~\hyper@tilde
3523   \let\textasciitilde\hyper@tilde
3524   \let\\\@backslashchar
3525   \edef$\string$}^^A
3526   \Hy@safe@activestrue
3527   \hyper@n@rmalise
3528 }^^A
3529 \catcode'\#=6 ^^A
3530 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
3531 \gdef\hyper@n@rmalise#1#2{^^A
3532   \def\Hy@tempa{#2}^^A
3533   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3534     \Hy@ReturnAfterElseFi{^^A
3535       \hyper@@normalise{#1}^^A
3536     }^^A
3537   \else
3538     \Hy@ReturnAfterFi{^^A
3539       \hyper@@normalise{#1}{#2}^^A
3540     }^^A
3541   \fi
3542 }^^A
3543 \gdef\hyper@@normalise#1#2{^^A
3544   \edef\Hy@tempa{^^A
3545     \endgroup
3546     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
3547   }^^A
3548   \Hy@tempa
3549 }^^A
3550 \gdef\Hy@RemovePercentCr#1%\^^M#2\@nil{^^A
3551   #1^^A

```

```

3552 \ifx\limits#2\limits
3553 \else
3554 \Hy@ReturnAfterFi{^^A
3555 \Hy@RemovePercentCr #2\@nil
3556 }^^A
3557 \fi
3558 }^^A
3559 \endgroup
3560 \providecommand*\hyper@chars{%
3561 \let#\hyper@hash
3562 \let%\@percentchar
3563 \Hy@safe@activetrue
3564 }

3565 \def\hyperlink#1#2{%
3566 \hyper@@link{#1}{#2}%
3567 }

3568 \DeclareRobustCommand*\href{%
3569 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
3570 }
3571 \def\Hy@href#{%
3572 \hyper@normalise\href@
3573 }
3574 \begingroup
3575 \catcode'\$=6 %
3576 \catcode'\#=12 %
3577 \gdef\href@#1{\expandafter\href@split$1##\\}%
3578 \gdef\href@split$1#$2#$3\\{%
3579 \hyper@@link{$1}{$2}%
3580 }%
3581 \endgroup

```

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

```

3582 \RequirePackage{url}
3583 \let\HyOrg@url\url
3584 \def\Hurl{\begingroup \Url}
3585 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3586 \def\nolinkurl@#1{\Hurl{#1}}
3587 \DeclareRobustCommand*\url{\hyper@normalise\url@}
3588 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

3589 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3590 \providecommand\hyper@image[2]{#2}

3591 \def\hypertarget#1#2{%
3592 \ifHy@nesting
3593 \hyper@@anchor{#1}{#2}%
3594 \else
3595 \hyper@@anchor{#1}{\relax}#2%
3596 \fi
3597 }

```

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

```

3598 \DeclareRobustCommand*\hyperref{%

```

```

3599 \@@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
3600 }
3601 \def\Hy@babelnormalise#1[#2]{%
3602   \begingroup
3603     \Hy@safe@activestrue
3604     \edef\Hy@tempa{%
3605       \endgroup
3606       \noexpand#1[#2]}%
3607   }%
3608   \Hy@tempa
3609 }
3610 \def\@hyperref{\hyper@normalise\@@hyperref}
3611 \def\@@hyperref#1#2#3{%
3612   \edef\ref@one{\ifx\\#2\\\else#2.\fi#3}%
3613   \expandafter\tryhyper@link\ref@one\\{#1}%
3614 }
3615 \def\tryhyper@link#1\\#2{%
3616   \hyper@@link{#2}{#1}%
3617 }
3618 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef]}
3619 \def\@hyperdef#1#2#3{%, category, name, text
3620   \ifHy@nesting
3621     \hyper@@anchor{#1.#2}{#3}%
3622   \else
3623     \hyper@@anchor{#1.#2}{\relax}#3%
3624   \fi
3625 }

```

```

3626 \def\label@hyperref[#1]{%
3627   \expandafter\label@@hyperref\cename r@#1\endcsname{#1}%
3628 }%
3629 \def\label@@hyperref#1#2#3{%
3630   \ifx#1\relax
3631     \protect\G@refundefinedtrue
3632     \@latex@warning{%
3633       Hyper reference ‘#2’ on page \thepage \space undefined%
3634     }%
3635     \hyper@@link{}{??}{#3}%
3636   \else
3637     \hyper@@link{\expandafter\@fifthoffive#1}%
3638       {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3639   \fi
3640 }
3641 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3642                                % anchor text
3643   \@bsphack
3644   \if@filesw
3645     \protected@write\@auxout{%
3646       {\string\newlabel{#1}{\{ }\{ }\@##2.#3}}%
3647   \fi
3648   \@esphack
3649   \ifHy@nesting
3650     \hyper@@anchor{#2.#3}{#4}%
3651   \else
3652     \hyper@@anchor{#2.#3}{\relax}#4%

```

```

3653 \fi
3654 }

```

17 Underlying basic hypertext macros

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

```

3655 \def\hyper@@link{\let\Hy@reserved@a\relax
3656 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
3657 }
3658 \def\hyper@link@[#1]#2#3#4{%
3659 \begingroup
3660 \protected@edef\Hy@tempa{#2}%
3661 \Hy@safe@activestrue
3662 \edef\x{#3}%
3663 \ifx\Hy@tempa\@empty
3664 \toks0{\hyper@link{#1}}%
3665 \else
3666 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
3667 \fi
3668 \toks2{%
3669 \Hy@safe@activesfalse
3670 #4%
3671 }%
3672 \edef\Hy@tempa{\the\toks2}%
3673 \edef\x{\endgroup
3674 \ifx\Hy@tempa\@empty
3675 \noexpand\Hy@Warning{Suppressing empty link}%
3676 \else
3677 \the\toks0 {\x}{\the\toks2}}%
3678 \fi
3679 }%
3680 \x
3681 }

```

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.

```

3682 \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.

```

3683 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
3684 }

```

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

```
3685 \def\@pdftempwordfile{file}%
3686 \def\@pdftempwordrun{run}%
3687 \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 :

```
3688 \ifx\\#6\\%
3689 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
3690 \else
3691 \ifx\\#4\\%
3692 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
3693 \else
```

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

```
3694 \def\@pdftempa{#4}%
3695 \ifx\@pdftempa\@pdftempwordfile
3696 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
3697 \else
```

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

```
3698 \ifx\@pdftempa\@pdftempwordrun
3699 \ifHy@pdfa
3700 \PackageError{hyperref}{%
3701 PDF/A: Launch action is prohibited%
3702 }\@ehc
3703 \begingroup
3704 \leavevmode
3705 #2%
3706 \endgroup
3707 \else
3708 \expandafter\@hyper@launch#7\\{#3}{#2}%
3709 \fi
3710 \else
```

otherwise its a URL

```
3711 \hyper@linkurl{#3}{#7\ifx\\#2\\#3\\#4\\#5\\#6\\#7\\#8\\#9\\#10\\#11\\#12\\#13\\#14\\#15\\#16\\#17\\#18\\#19\\#20\\#21\\#22\\#23\\#24\\#25\\#26\\#27\\#28\\#29\\#30\\#31\\#32\\#33\\#34\\#35\\#36\\#37\\#38\\#39\\#40\\#41\\#42\\#43\\#44\\#45\\#46\\#47\\#48\\#49\\#50\\#51\\#52\\#53\\#54\\#55\\#56\\#57\\#58\\#59\\#60\\#61\\#62\\#63\\#64\\#65\\#66\\#67\\#68\\#69\\#70\\#71\\#72\\#73\\#74\\#75\\#76\\#77\\#78\\#79\\#80\\#81\\#82\\#83\\#84\\#85\\#86\\#87\\#88\\#89\\#90\\#91\\#92\\#93\\#94\\#95\\#96\\#97\\#98\\#99\\#100\\#101\\#102\\#103\\#104\\#105\\#106\\#107\\#108\\#109\\#110\\#111\\#112\\#113\\#114\\#115\\#116\\#117\\#118\\#119\\#120\\#121\\#122\\#123\\#124\\#125\\#126\\#127\\#128\\#129\\#130\\#131\\#132\\#133\\#134\\#135\\#136\\#137\\#138\\#139\\#140\\#141\\#142\\#143\\#144\\#145\\#146\\#147\\#148\\#149\\#150\\#151\\#152\\#153\\#154\\#155\\#156\\#157\\#158\\#159\\#160\\#161\\#162\\#163\\#164\\#165\\#166\\#167\\#168\\#169\\#170\\#171\\#172\\#173\\#174\\#175\\#176\\#177\\#178\\#179\\#180\\#181\\#182\\#183\\#184\\#185\\#186\\#187\\#188\\#189\\#190\\#191\\#192\\#193\\#194\\#195\\#196\\#197\\#198\\#199\\#200\\#201\\#202\\#203\\#204\\#205\\#206\\#207\\#208\\#209\\#210\\#211\\#212\\#213\\#214\\#215\\#216\\#217\\#218\\#219\\#220\\#221\\#222\\#223\\#224\\#225\\#226\\#227\\#228\\#229\\#230\\#231\\#232\\#233\\#234\\#235\\#236\\#237\\#238\\#239\\#240\\#241\\#242\\#243\\#244\\#245\\#246\\#247\\#248\\#249\\#250\\#251\\#252\\#253\\#254\\#255\\#256\\#257\\#258\\#259\\#260\\#261\\#262\\#263\\#264\\#265\\#266\\#267\\#268\\#269\\#270\\#271\\#272\\#273\\#274\\#275\\#276\\#277\\#278\\#279\\#280\\#281\\#282\\#283\\#284\\#285\\#286\\#287\\#288\\#289\\#290\\#291\\#292\\#293\\#294\\#295\\#296\\#297\\#298\\#299\\#300\\#301\\#302\\#303\\#304\\#305\\#306\\#307\\#308\\#309\\#310\\#311\\#312\\#313\\#314\\#315\\#316\\#317\\#318\\#319\\#320\\#321\\#322\\#323\\#324\\#325\\#326\\#327\\#328\\#329\\#330\\#331\\#332\\#333\\#334\\#335\\#336\\#337\\#338\\#339\\#340\\#341\\#342\\#343\\#344\\#345\\#346\\#347\\#348\\#349\\#350\\#351\\#352\\#353\\#354\\#355\\#356\\#357\\#358\\#359\\#360\\#361\\#362\\#363\\#364\\#365\\#366\\#367\\#368\\#369\\#370\\#371\\#372\\#373\\#374\\#375\\#376\\#377\\#378\\#379\\#380\\#381\\#382\\#383\\#384\\#385\\#386\\#387\\#388\\#389\\#390\\#391\\#392\\#393\\#394\\#395\\#396\\#397\\#398\\#399\\#400\\#401\\#402\\#403\\#404\\#405\\#406\\#407\\#408\\#409\\#410\\#411\\#412\\#413\\#414\\#415\\#416\\#417\\#418\\#419\\#420\\#421\\#422\\#423\\#424\\#425\\#426\\#427\\#428\\#429\\#430\\#431\\#432\\#433\\#434\\#435\\#436\\#437\\#438\\#439\\#440\\#441\\#442\\#443\\#444\\#445\\#446\\#447\\#448\\#449\\#450\\#451\\#452\\#453\\#454\\#455\\#456\\#457\\#458\\#459\\#460\\#461\\#462\\#463\\#464\\#465\\#466\\#467\\#468\\#469\\#470\\#471\\#472\\#473\\#474\\#475\\#476\\#477\\#478\\#479\\#480\\#481\\#482\\#483\\#484\\#485\\#486\\#487\\#488\\#489\\#490\\#491\\#492\\#493\\#494\\#495\\#496\\#497\\#498\\#499\\#500\\#501\\#502\\#503\\#504\\#505\\#506\\#507\\#508\\#509\\#510\\#511\\#512\\#513\\#514\\#515\\#516\\#517\\#518\\#519\\#520\\#521\\#522\\#523\\#524\\#525\\#526\\#527\\#528\\#529\\#530\\#531\\#532\\#533\\#534\\#535\\#536\\#537\\#538\\#539\\#540\\#541\\#542\\#543\\#544\\#545\\#546\\#547\\#548\\#549\\#550\\#551\\#552\\#553\\#554\\#555\\#556\\#557\\#558\\#559\\#560\\#561\\#562\\#563\\#564\\#565\\#566\\#567\\#568\\#569\\#570\\#571\\#572\\#573\\#574\\#575\\#576\\#577\\#578\\#579\\#580\\#581\\#582\\#583\\#584\\#585\\#586\\#587\\#588\\#589\\#590\\#591\\#592\\#593\\#594\\#595\\#596\\#597\\#598\\#599\\#600\\#601\\#602\\#603\\#604\\#605\\#606\\#607\\#608\\#609\\#610\\#611\\#612\\#613\\#614\\#615\\#616\\#617\\#618\\#619\\#620\\#621\\#622\\#623\\#624\\#625\\#626\\#627\\#628\\#629\\#630\\#631\\#632\\#633\\#634\\#635\\#636\\#637\\#638\\#639\\#640\\#641\\#642\\#643\\#644\\#645\\#646\\#647\\#648\\#649\\#650\\#651\\#652\\#653\\#654\\#655\\#656\\#657\\#658\\#659\\#660\\#661\\#662\\#663\\#664\\#665\\#666\\#667\\#668\\#669\\#670\\#671\\#672\\#673\\#674\\#675\\#676\\#677\\#678\\#679\\#680\\#681\\#682\\#683\\#684\\#685\\#686\\#687\\#688\\#689\\#690\\#691\\#692\\#693\\#694\\#695\\#696\\#697\\#698\\#699\\#700\\#701\\#702\\#703\\#704\\#705\\#706\\#707\\#708\\#709\\#710\\#711\\#712\\#713\\#714\\#715\\#716\\#717\\#718\\#719\\#720\\#721\\#722\\#723\\#724\\#725\\#726\\#727\\#728\\#729\\#730\\#731\\#732\\#733\\#734\\#735\\#736\\#737\\#738\\#739\\#740\\#741\\#742\\#743\\#744\\#745\\#746\\#747\\#748\\#749\\#750\\#751\\#752\\#753\\#754\\#755\\#756\\#757\\#758\\#759\\#760\\#761\\#762\\#763\\#764\\#765\\#766\\#767\\#768\\#769\\#770\\#771\\#772\\#773\\#774\\#775\\#776\\#777\\#778\\#779\\#780\\#781\\#782\\#783\\#784\\#785\\#786\\#787\\#788\\#789\\#790\\#791\\#792\\#793\\#794\\#795\\#796\\#797\\#798\\#799\\#800\\#801\\#802\\#803\\#804\\#805\\#806\\#807\\#808\\#809\\#810\\#811\\#812\\#813\\#814\\#815\\#816\\#817\\#818\\#819\\#820\\#821\\#822\\#823\\#824\\#825\\#826\\#827\\#828\\#829\\#830\\#831\\#832\\#833\\#834\\#835\\#836\\#837\\#838\\#839\\#840\\#841\\#842\\#843\\#844\\#845\\#846\\#847\\#848\\#849\\#850\\#851\\#852\\#853\\#854\\#855\\#856\\#857\\#858\\#859\\#860\\#861\\#862\\#863\\#864\\#865\\#866\\#867\\#868\\#869\\#870\\#871\\#872\\#873\\#874\\#875\\#876\\#877\\#878\\#879\\#880\\#881\\#882\\#883\\#884\\#885\\#886\\#887\\#888\\#889\\#890\\#891\\#892\\#893\\#894\\#895\\#896\\#897\\#898\\#899\\#900\\#901\\#902\\#903\\#904\\#905\\#906\\#907\\#908\\#909\\#910\\#911\\#912\\#913\\#914\\#915\\#916\\#917\\#918\\#919\\#920\\#921\\#922\\#923\\#924\\#925\\#926\\#927\\#928\\#929\\#930\\#931\\#932\\#933\\#934\\#935\\#936\\#937\\#938\\#939\\#940\\#941\\#942\\#943\\#944\\#945\\#946\\#947\\#948\\#949\\#950\\#951\\#952\\#953\\#954\\#955\\#956\\#957\\#958\\#959\\#960\\#961\\#962\\#963\\#964\\#965\\#966\\#967\\#968\\#969\\#970\\#971\\#972\\#973\\#974\\#975\\#976\\#977\\#978\\#979\\#980\\#981\\#982\\#983\\#984\\#985\\#986\\#987\\#988\\#989\\#990\\#991\\#992\\#993\\#994\\#995\\#996\\#997\\#998\\#999\\#1000\\#1001\\#1002\\#1003\\#1004\\#1005\\#1006\\#1007\\#1008\\#1009\\#1010\\#1011\\#1012\\#1013\\#1014\\#1015\\#1016\\#1017\\#1018\\#1019\\#1020\\#1021\\#1022\\#1023\\#1024\\#1025\\#1026\\#1027\\#1028\\#1029\\#1030\\#1031\\#1032\\#1033\\#1034\\#1035\\#1036\\#1037\\#1038\\#1039\\#1040\\#1041\\#1042\\#1043\\#1044\\#1045\\#1046\\#1047\\#1048\\#1049\\#1050\\#1051\\#1052\\#1053\\#1054\\#1055\\#1056\\#1057\\#1058\\#1059\\#1060\\#1061\\#1062\\#1063\\#1064\\#1065\\#1066\\#1067\\#1068\\#1069\\#1070\\#1071\\#1072\\#1073\\#1074\\#1075\\#1076\\#1077\\#1078\\#1079\\#1080\\#1081\\#1082\\#1083\\#1084\\#1085\\#1086\\#1087\\#1088\\#1089\\#1090\\#1091\\#1092\\#1093\\#1094\\#1095\\#1096\\#1097\\#1098\\#1099\\#1100\\#1101\\#1102\\#1103\\#1104\\#1105\\#1106\\#1107\\#1108\\#1109\\#1110\\#1111\\#1112\\#1113\\#1114\\#1115\\#1116\\#1117\\#1118\\#1119\\#1120\\#1121\\#1122\\#1123\\#1124\\#1125\\#1126\\#1127\\#1128\\#1129\\#1130\\#1131\\#1132\\#1133\\#1134\\#1135\\#1136\\#1137\\#1138\\#1139\\#1140\\#1141\\#1142\\#1143\\#1144\\#1145\\#1146\\#1147\\#1148\\#1149\\#1150\\#1151\\#1152\\#1153\\#1154\\#1155\\#1156\\#1157\\#1158\\#1159\\#1160\\#1161\\#1162\\#1163\\#1164\\#1165\\#1166\\#1167\\#1168\\#1169\\#1170\\#1171\\#1172\\#1173\\#1174\\#1175\\#1176\\#1177\\#1178\\#1179\\#1180\\#1181\\#1182\\#1183\\#1184\\#1185\\#1186\\#1187\\#1188\\#1189\\#1190\\#1191\\#1192\\#1193\\#1194\\#1195\\#1196\\#1197\\#1198\\#1199\\#1200\\#1201\\#1202\\#1203\\#1204\\#1205\\#1206\\#1207\\#1208\\#1209\\#1210\\#1211\\#1212\\#1213\\#1214\\#1215\\#1216\\#1217\\#1218\\#1219\\#1220\\#1221\\#1222\\#1223\\#1224\\#1225\\#1226\\#1227\\#1228\\#1229\\#1230\\#1231\\#1232\\#1233\\#1234\\#1235\\#1236\\#1237\\#1238\\#1239\\#1240\\#1241\\#1242\\#1243\\#1244\\#1245\\#1246\\#1247\\#1248\\#1249\\#1250\\#1251\\#1252\\#1253\\#1254\\#1255\\#1256\\#1257\\#1258\\#1259\\#1260\\#1261\\#1262\\#1263\\#1264\\#1265\\#1266\\#1267\\#1268\\#1269\\#1270\\#1271\\#1272\\#1273\\#1274\\#1275\\#1276\\#1277\\#1278\\#1279\\#1280\\#1281\\#1282\\#1283\\#1284\\#1285\\#1286\\#1287\\#1288\\#1289\\#1290\\#1291\\#1292\\#1293\\#1294\\#1295\\#1296\\#1297\\#1298\\#1299\\#1300\\#1301\\#1302\\#1303\\#1304\\#1305\\#1306\\#1307\\#1308\\#1309\\#1310\\#1311\\#1312\\#1313\\#1314\\#1315\\#1316\\#1317\\#1318\\#1319\\#1320\\#1321\\#1322\\#1323\\#1324\\#1325\\#1326\\#1327\\#1328\\#1329\\#1330\\#1331\\#1332\\#1333\\#1334\\#1335\\#1336\\#1337\\#1338\\#1339\\#1340\\#1341\\#1342\\#1343\\#1344\\#1345\\#1346\\#1347\\#1348\\#1349\\#1350\\#1351\\#1352\\#1353\\#1354\\#1355\\#1356\\#1357\\#1358\\#1359\\#1360\\#1361\\#1362\\#1363\\#1364\\#1365\\#1366\\#1367\\#1368\\#1369\\#1370\\#1371\\#1372\\#1373\\#1374\\#1375\\#1376\\#1377\\#1378\\#1379\\#1380\\#1381\\#1382\\#1383\\#1384\\#1385\\#1386\\#1387\\#1388\\#1389\\#1390\\#1391\\#1392\\#1393\\#1394\\#1395\\#1396\\#1397\\#1398\\#1399\\#1400\\#1401\\#1402\\#1403\\#1404\\#1405\\#1406\\#1407\\#1408\\#1409\\#1410\\#1411\\#1412\\#1413\\#1414\\#1415\\#1416\\#1417\\#1418\\#1419\\#1420\\#1421\\#1422\\#1423\\#1424\\#1425\\#1426\\#1427\\#1428\\#1429\\#1430\\#1431\\#1432\\#1433\\#1434\\#1435\\#1436\\#1437\\#1438\\#1439\\#1440\\#1441\\#1442\\#1443\\#1444\\#1445\\#1446\\#1447\\#1448\\#1449\\#1450\\#1451\\#1452\\#1453\\#1454\\#1455\\#1456\\#1457\\#1458\\#1459\\#1460\\#1461\\#1462\\#1463\\#1464\\#1465\\#1466\\#1467\\#1468\\#1469\\#1470\\#1471\\#1472\\#1473\\#1474\\#1475\\#1476\\#1477\\#1478\\#1479\\#1480\\#1481\\#1482\\#1483\\#1484\\#1485\\#1486\\#1487\\#1488\\#1489\\#1490\\#1491\\#1492\\#1493\\#1494\\#1495\\#1496\\#1497\\#1498\\#1499\\#1500\\#1501\\#1502\\#1503\\#1504\\#1505\\#1506\\#1507\\#1508\\#1509\\#1510\\#1511\\#1512\\#1513\\#1514\\#1515\\#1516\\#1517\\#1518\\#1519\\#1520\\#1521\\#1522\\#1523\\#1524\\#1525\\#1526\\#1527\\#1528\\#1529\\#1530\\#1531\\#1532\\#1533\\#1534\\#1535\\#1536\\#1537\\#1538\\#1539\\#1540\\#1541\\#1542\\#1543\\#1544\\#1545\\#1546\\#1547\\#1548\\#1549\\#1550\\#1551\\#1552\\#1553\\#1554\\#1555\\#1556\\#1557\\#1558\\#1559\\#1560\\#1561\\#1562\\#1563\\#1564\\#1565\\#1566\\#1567\\#1568\\#1569\\#1570\\#1571\\#1572\\#1573\\#1574\\#1575\\#1576\\#1577\\#1578\\#1579\\#1580\\#1581\\#1582\\#1583\\#1584\\#1585\\#1586\\#1587\\#1588\\#1589\\#1590\\#1591\\#1592\\#1593\\#1594\\#1595\\#1596\\#1597\\#1598\\#1599\\#1600\\#1601\\#1602\\#1603\\#1604\\#1605\\#1606\\#1607\\#1608\\#1609\\#1610\\#1611\\#1612\\#1613\\#1614\\#1615\\#1616\\#1617\\#1618\\#1619\\#1620\\#1621\\#1622\\#1623\\#1624\\#1625\\#1626\\#1627\\#1628\\#1629\\#1630\\#1631\\#1632\\#1633\\#1634\\#1635\\#1636\\#1637\\#1638\\#1639\\#1640\\#1641\\#1642\\#1643\\#1644\\#1645\\#1646\\#1647\\#1648\\#1649\\#1650\\#1651\\#1652\\#1653\\#1654\\#1655\\#1656\\#1657\\#1658\\#1659\\#1660\\#1661\\#1662\\#1663\\#1664\\#1665\\#1666\\#1667\\#1668\\#1669\\#1670\\#1671\\#1672\\#1673\\#1674\\#1675\\#1676\\#1677\\#1678\\#1679\\#1680\\#1681\\#1682\\#1683\\#1684\\#1685\\#1686\\#1687\\#1688\\#1689\\#1690\\#1691\\#1692\\#1693\\#1694\\#1695\\#1696\\#1697\\#1698\\#1699\\#1700\\#1701\\#1702\\#1703\\#1704\\#1705\\#1706\\#1707\\#1708\\#1709\\#1710\\#1711\\#1712\\#1713\\#1714\\#1715\\#1716\\#1717\\#1718\\#1719\\#1720\\#1721\\#1722\\#1723\\#1724\\#1725\\#1726\\#1727\\#1728\\#1729\\#1730\\#1731\\#1732\\#1733\\#1734\\#1735\\#1736\\#1737\\#1738\\#1739\\#1740\\#1741\\#1742\\#1743\\#1744\\#1745\\#1746\\#1747\\#1748\\#1749\\#1750\\#1751\\#1752\\#1753\\#1754\\#1755\\#1756\\#1757\\#1758\\#1759\\#1760\\#1761\\#1762\\#1763\\#1764\\#1765\\#1766\\#1767\\#1768\\#1769\\#1770\\#1771\\#1772\\#1773\\#1774\\#1775\\#1776\\#1777\\#1778\\#1779\\#1780\\#1781\\#1782\\#1783\\#1784\\#1785\\#1786\\#1787\\#1788\\#1789\\#1790\\#1791\\#1792\\#1793\\#1794\\#1795\\#1796\\#1797\\#1798\\#1799\\#1800\\#1801\\#1802\\#1803\\#1804\\#1805\\#1806\\#1807\\#1808\\#1809\\#1810\\#1811\\#1812\\#1813\\#1814\\#1815\\#1816\\#1817\\#1818\\#1819\\#1820\\#1821\\#1822\\#1823\\#1824\\#1825\\#1826\\#1827\\#1828\\#1829\\#1830\\#1831\\#1832\\#1833\\#1834\\#1835\\#1836\\#1837\\#1838\\#1839\\#1840\\#1841\\#1842\\#1843\\#1844\\#1845\\#1846\\#1847\\#1848\\#1849\\#1850\\#1851\\#1852\\#1853\\#1854\\#1855\\#1856\\#1857\\#1858\\#1859\\#1860\\#1861\\#1862\\#1863\\#1864\\#1865\\#1866\\#1867\\#1868\\#1869\\#1870\\#1871\\#1872\\#1873\\#1874\\#1875\\#1876\\#1877\\#1878\\#1879\\#1880\\#1881\\#1882\\#1883\\#1884\\#1885\\#1886\\#1887\\#1888\\#1889\\#1890\\#1891\\#1892\\#1893\\#1894\\#1895\\#1896\\#1897\\#1898\\#1899\\#1900\\#1901\\#1902\\#1903\\#1904\\#1905\\#1906\\#1907\\#1908\\#1909\\#1910\\#1911\\#1912\\#1913\\#1914\\#1915\\#1916\\#1917\\#1918\\#1919\\#1920\\#1921\\#1922\\#1923\\#1924\\#1925\\#1926\\#1927\\#1928\\#1929\\#1930\\#1931\\#1932\\#1933\\#1934\\#1935\\#1936\\#1937\\#1938\\#1939\\#1940\\#1941\\#1942\\#1943\\#1944\\#1945\\#1946\\#1947\\#1948\\#1949\\#1950\\#1951\\#1952\\#1953\\#1954\\#1955\\#1956\\#1957\\#1958\\#1959\\#1960\\#1961\\#1962\\#1963\\#1964\\#1965\\#1966\\#1967\\#1968\\#1969\\#1970\\#1971\\#1972\\#1973\\#1974\\#1975\\#1976\\#1977\\#1978\\#1979\\#1980\\#1981\\#1982\\#1983\\#1984\\#1985\\#1986\\#1987\\#1988\\#1989\\#1990\\#1991\\#1992\\#1993\\#1994\\#1995\\#1996\\#1997\\#1998\\#1999\\#2000\\#2001\\#2002\\#2003\\#2004\\#2005\\#2006\\#2007\\#2008\\#2009\\#2010\\#2011\\#2012\\#2013\\#2014\\#2015\\#2016\\#2017\\#2018\\#2019\\#2020\\#2021\\#2022\\#2023\\#2024\\#2025\\#2026\\#2027\\#2028\\#2029\\#2030\\#2031\\#2032\\#2033\\#2034\\#2035\\#2036\\#2037\\#2038\\#2039\\#2040\\#2041\\#2042\\#2043\\#2044\\#2045\\#2046\\#2047\\#2048\\#2049\\#2050\\#2051\\#2052\\#2053\\#2054\\#2055\\#2056\\#2057\\#2058\\#2059\\#2060\\#2061\\#2062\\#2063\\#2064\\#2065\\#2066\\#2067\\#2068\\#2069\\#2070\\#2071\\#2072\\#2073\\#2074\\#2075\\#2076\\#2077\\#2078\\#2079\\#2080\\#2081\\#2082\\#2083\\#2084\\#2085\\#2086\\#2087\\#2088\\#2089\\#2090\\#2091\\#2092\\#2093\\#2094\\#2095\\#2096\\#2097\\#2
```

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

```

3728 \def\@hyper@linkfile file:#1\#2#3{%
3729     %file url,link string, name
3730     \filename@parse{#1}%
3731     \ifx\filename@ext\relax
3732         \edef\filename@ext{\XR@ext}%
3733     \fi
3734     \def\use@file{\filename@area\filename@base.\filename@ext}%
3735     \ifx\filename@ext\XR@ext
3736         \hyper@linkfile{#2}{\use@file}{#3}%
3737     \else
3738         \ifx\@baseurl\@empty
3739             \hyper@linkurl{#2}{%
3740                 \Hy@linkfileprefix\use@file\ifx\\#3\\#3\\else\hyper@hash#3\fi}%
3741             }%
3742         \else
3743             \hyper@linkurl{#2}{\use@file\ifx\\#3\\#3\\else\hyper@hash#3\fi}%
3744         \fi
3745     \fi
3746 }

```

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.

```

3747 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
3748 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
3749     \ifx\\#1\\%
3750         #2\Hy@WarningNoLine{empty link? #1: #2#3}%
3751     \else
3752         \def\anchor@spot{#2#3}%
3753         \let\put@me@back\@empty
3754         \ifx\relax#2\relax
3755             \else
3756                 \ifHy@nesting
3757                 \else
3758                     \ifcat a\noexpand#2\relax
3759                     \else
3760                         \ifcat 0\noexpand#2 \relax
3761                         \else
3762 %                 \typeout{Anchor start is not alphanumeric %
3763 %                 on input line\the\inputlineno%
3764 %                 }%
3765                         \let\anchor@spot\@empty
3766                         \def\put@me@back{#2#3}%
3767                     \fi
3768                 \fi
3769             \fi
3770         \fi
3771         \ifHy@activeanchor
3772             \anchor@spot
3773         \else
3774             \hyper@anchor{#1}%

```

```

3775 \fi
3776 \expandafter\put@me@back
3777 \fi
3778 \let\anchor@spot@empty
3779 }

```

18 Compatibility with the *LT_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.

```

3780 \let\htmladding\hyperimage
3781 \def\htmladdnormallink#1#2{\href{#2}{#1}}
3782 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
3783 \def\htmlref#1#2{% anchor text, label
3784 \label@hyperref[{#2}]{#1}%
3785 }

```

This is really too much. The *LT_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.

```

3786 \def\@@latextohtmlX{%
3787 \let\hhyperref\hyperref
3788 \def\hyperref##1##2##3##4{% anchor text for HTML
3789 % text to print before label in print
3790 % label
3791 % post-label text in print
3792 ##2\ref{##4}##3%
3793 }%
3794 }

```

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.

```

3795 \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

```



```

3796 \def\HyField@NewFlag#1#2{%
3797   \lowercase{\HyField@NewOption{#2}}%
3798   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3799 }

```

\HyField@NewFlagOnly

```

3800 \def\HyField@NewFlagOnly#1#2{%
3801   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3802 }

```

\HyField@NewOption #1: option name

```

3803 \def\HyField@NewOption#1{%
3804   \expandafter\newif\csname ifFld@#1\endcsname
3805   \define@key{Field}{#1}[true]{%
3806     \lowercase{\Field@boolkey{##1}}{#1}%
3807   }%
3808 }

```

\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

```

3809 \def\HyField@NewBitsetFlag#1#2#3#4{%
3810   \begingroup
3811     \count@=#4\relax
3812     \advance\count@\m@ne
3813     \def\x##1{%
3814       \endgroup
3815       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
3816       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
3817         \expandafter\edef\csname HyField@#3@#1\endcsname{%
3818           (\number#4) #2%
3819         }%
3820       \else
3821         \expandafter\edef\csname HyField@#3@#1\endcsname{%
3822           \csname HyField@#3@#1\endcsname
3823           /#2%
3824         }%
3825       \fi
3826     }%
3827   \expandafter\x\expandafter{\the\count@}%
3828 }

```

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

```

3829 \def\HyField@UseFlag#1#2{%
3830   \lowercase{\HyField@@UseFlag{#2}}{#1}%
3831 }

```

\HyField@@UseFlag

```

3832 \def\HyField@@UseFlag#1#2{%
3833   \bitsetSetValue{HyField@#2}{%
3834     \csname HyField@#2@#1\endcsname
3835   }{%
3836     \csname ifFld@#1\endcsname 1\else 0\fi
3837   }%
3838 }

```

```

\HyField@SetFlag The bit set is HyField@#1
3839 \def\HyField@SetFlag#1#2{%
3840   \lowercase{\HyField@@SetFlag{#2}}{#1}%
3841 }

\HyField@@SetFlag
3842 \def\HyField@@SetFlag#1#2{%
3843   \bitsetSetValue{HyField@#2}{%
3844     \csname HyField@#2@#1\endcsname
3845   }{1}%
3846 }

\HyField@PrintFlags
3847 \def\HyField@PrintFlags#1#2{%
3848   \ifHy@verbose
3849     \begingroup
3850     \let\Hy@temp\@empty
3851     \let\MessageBreak\relax
3852     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
3853     \bitsetGetSetBitList{HyField@#1}\do{%
3854       \edef\Hy@temp{%
3855         \Hy@temp
3856         \csname HyField@#1@\x\endcsname\MessageBreak
3857       }%
3858     }%
3859   \edef\x{\endgroup
3860     \noexpand\Hy@Info{%
3861       Field flags: %
3862       \expandafter\ifx\@car#1\@nil S\else/\fi
3863       #1 %
3864       \bitsetGetDec{HyField@#1} %
3865       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
3866       \Hy@temp
3867       for #2%
3868     }%
3869   }\x
3870 \fi
3871 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

3872 \HyField@NewFlag{Ff}{ReadOnly}{1}
3873 \HyField@NewFlag{Ff}{Required}{2}
3874 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

3875 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
3876 \HyField@NewFlag{Ff}{Radio}{16}
3877 \HyField@NewFlag{Ff}{Pushbutton}{17}
3878 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

3879 \HyField@NewFlag{Ff}{Multiline}{13}
3880 \HyField@NewFlag{Ff}{Password}{14}
3881 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
3882 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4

```

```

3883 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
3884 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
3885 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

3886 \HyField@NewFlag{Ff}{Combo}{18}
3887 \HyField@NewFlag{Ff}{Edit}{19}
3888 \HyField@NewFlag{Ff}{Sort}{20}
3889 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
3890 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3891 \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.

```

3892 \newif\ifFld@popdown
3893 \define@key{Field}{popdown}[true]{%
3894   \lowercase{\Field@boolkey{#1}}{popdown}%
3895 }

```

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.

```

3896 \HyField@NewFlag{F}{Invisible}{1}
3897 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
3898 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
3899 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
3900 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
3901 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
3902 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
3903 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
3904 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

3905 \ifHy@pdfa
3906   \def\HyField@PDFAFflagWarning#1#2{%
3907     \Hy@Warning{%
3908       PDF/A: Annotation flag ‘#1’ must\MessageBreak
3909       be set to ‘#2’%
3910     }%
3911   }%
3912   \Fld@invisiblefalse
3913   \def\Fld@invisibletrue{%
3914     \HyField@PDFAFflagWarning{invisible}{false}%
3915   }%
3916   \Fld@hiddenfalse
3917   \def\Fld@hiddentrue{%
3918     \HyField@PDFAFflagWarning{hidden}{false}%
3919   }%
3920   \Fld@printtrue
3921   \def\Fld@printfalse{%
3922     \HyField@PDFAFflagWarning{print}{true}%
3923   }%
3924   \Fld@nozoomtrue
3925   \def\Fld@nozoomfalse{%
3926     \HyField@PDFAFflagWarning{nozoom}{true}%
3927   }%
3928   \Fld@norotatetrue

```

```

3929 \def\Fld@norotatefalse{%
3930   \HyField@PDFAFIWarning{norotate}{true}%
3931 }%
3932 \Fld@noviewfalse
3933 \def\Fld@noviewtrue{%
3934   \HyField@PDFAFIWarning{noview}{false}%
3935 }%
3936 \fi

```

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

```

3937 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
3938 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
3939 \HyField@NewFlag{Submit}{GetMethod}{4}
3940 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
3941 \HyField@NewFlagOnly{Submit}{XFDF}{6}
3942 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
3943 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
3944 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
3945 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
3946 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
3947 \HyField@NewFlag{Submit}{ExclFKey}{12}
3948 \HyField@NewFlag{Submit}{EmbedForm}{14}

3949 \define@key{Field}{export}{%
3950   \lowercase{\def\Hy@temp{#1}}%
3951   \@ifundefined{Fld@export@Hy@temp}{%
3952     \@onelevel@sanitize\Hy@temp
3953     \PackageError{hyperref}{%
3954       Unknown export format '\Hy@temp'.\MessageBreak
3955       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
3956     }\@ehc
3957   }{%
3958     \let\Fld@export\Hy@temp
3959   }%
3960 }
3961 \def\Fld@export{fdf}
3962 \@namedef{Fld@export@fdf}{0}%
3963 \@namedef{Fld@export@html}{1}%
3964 \@namedef{Fld@export@xfdf}{2}%
3965 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

3966 \def\HyField@FlagsSubmit{%
3967   \bitsetReset{HyField@Submit}%
3968   \ifcase\@nameuse{Fld@export@Fld@export} %
3969     % FDF
3970     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3971     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3972     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
3973     \HyField@UseFlag{Submit}{IncludeAnnotations}%
3974     \HyField@UseFlag{Submit}{CanonicalFormat}%
3975     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
3976     \HyField@UseFlag{Submit}{ExclFKey}%
3977     \HyField@UseFlag{Submit}{EmbedForm}%
3978   \or % HTML
3979     \HyField@SetFlag{Submit}{ExportFormat}%

```

```

3980 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3981 \HyField@UseFlag{Submit}{GetMethod}%
3982 \HyField@UseFlag{Submit}{SubmitCoordinates}%
3983 \HyField@UseFlag{Submit}{CanonicalFormat}%
3984 \or % XFDF
3985 \HyField@SetFlag{Submit}{XFDF}%
3986 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3987 \HyField@UseFlag{Submit}{SubmitCoordinates}%
3988 \HyField@UseFlag{Submit}{CanonicalFormat}%
3989 \or % PDF
3990 \HyField@SetFlag{Submit}{SubmitPDF}%
3991 \HyField@UseFlag{Submit}{GetMethod}%
3992 \fi
3993 \HyField@PrintFlags{Submit}{submit button field}%
3994 \bitsetIsEmpty{HyField@Submit}{%
3995 \def\Fld@submitflags{%
3996 }{%
3997 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
3998 }%
3999 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4000 \def\HyField@FlagsAnnot#1{%
4001 \bitsetReset{HyField@F}%
4002 \HyField@UseFlag{F}{Invisible}%
4003 \HyField@UseFlag{F}{Hidden}%
4004 \HyField@UseFlag{F}{Print}%
4005 \HyField@UseFlag{F}{NoZoom}%
4006 \HyField@UseFlag{F}{NoRotate}%
4007 \HyField@UseFlag{F}{NoView}%
4008 \HyField@UseFlag{F}{Locked}%
4009 \HyField@UseFlag{F}{ToggleNoView}%
4010 \HyField@UseFlag{F}{LockedContents}%
4011 \HyField@PrintFlags{F}{#1}%
4012 \bitsetIsEmpty{HyField@F}{%
4013 \def\Fld@annotflags{%
4014 }{%
4015 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4016 }%
4017 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4018 \def\HyField@FlagsPushButton{%
4019 \HyField@FlagsAnnot{push button field}%
4020 \bitsetReset{HyField@Ff}%
4021 \HyField@UseFlag{Ff}{ReadOnly}%
4022 \HyField@UseFlag{Ff}{Required}%
4023 \HyField@UseFlag{Ff}{NoExport}%
4024 \HyField@SetFlag{Ff}{PushButton}%
4025 \HyField@PrintFlags{Ff}{push button field}%
4026 \bitsetIsEmpty{HyField@Ff}{%
4027 \def\Fld@flags{%

```

```

4028 }{%
4029     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4030 }%
4031 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4032 \def\HyField@FlagsCheckBox{%
4033     \HyField@FlagsAnnot{check box field}%
4034     \bitsetReset{HyField@Ff}%
4035     \HyField@UseFlag{Ff}{ReadOnly}%
4036     \HyField@UseFlag{Ff}{Required}%
4037     \HyField@UseFlag{Ff}{NoExport}%
4038     \HyField@PrintFlags{Ff}{check box field}%
4039     \bitsetIsEmpty{HyField@Ff}{%
4040         \def\Fld@flags{%
4041             }{%
4042                 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4043             }%
4044         }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4045 \def\HyField@FlagsRadioButton{%
4046     \HyField@FlagsAnnot{radio button field}%
4047     \bitsetReset{HyField@Ff}%
4048     \HyField@UseFlag{Ff}{ReadOnly}%
4049     \HyField@UseFlag{Ff}{Required}%
4050     \HyField@UseFlag{Ff}{NoExport}%
4051     \HyField@UseFlag{Ff}{NoToggleToOff}%
4052     \HyField@SetFlag{Ff}{Radio}%
4053     \HyField@UseFlag{Ff}{RadiosInUnison}%
4054     \HyField@PrintFlags{Ff}{radio button field}%
4055     \bitsetIsEmpty{HyField@Ff}{%
4056         \def\Fld@flags{%
4057             }{%
4058                 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4059             }%
4060         }

```

19.1.7 Text fields

\HyField@FlagsText

```

4061 \def\HyField@FlagsText{%
4062     \HyField@FlagsAnnot{text field}%
4063     \bitsetReset{HyField@Ff}%
4064     \HyField@UseFlag{Ff}{ReadOnly}%
4065     \HyField@UseFlag{Ff}{Required}%
4066     \HyField@UseFlag{Ff}{NoExport}%
4067     \HyField@UseFlag{Ff}{Multiline}%
4068     \HyField@UseFlag{Ff}{Password}%
4069     \HyField@UseFlag{Ff}{FileSelect}%
4070     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4071     \HyField@UseFlag{Ff}{DoNotScroll}%

```

```

4072 \ifFld@comb
4073   \ifcase0\ifFld@multiline
4074       \else\ifFld@password
4075       \else\ifFld@fileselect
4076       \else 1\fi\fi\fi\relax
4077   \PackageError{hyperref}{%
4078     Field option 'comb' cannot used together with\MessageBreak
4079     'multiline', 'password', or 'fileselect'%
4080   }\@ehc
4081   \else
4082     \HyField@UseFlag{Ff}{Comb}%
4083   \fi
4084 \fi
4085 \HyField@UseFlag{Ff}{RichText}%
4086 \HyField@PrintFlags{Ff}{text field}%
4087 \bitsetIsEmpty{HyField@Ff}{%
4088   \def\Fld@flags{%
4089 }{%
4090   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4091 }%
4092 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4093 \def\HyField@FlagsChoice{%
4094   \HyField@FlagsAnnot{choice field}%
4095   \bitsetReset{HyField@Ff}%
4096   \HyField@UseFlag{Ff}{ReadOnly}%
4097   \HyField@UseFlag{Ff}{Required}%
4098   \HyField@UseFlag{Ff}{NoExport}%
4099   \HyField@UseFlag{Ff}{Combo}%
4100   \ifFld@combo
4101     \HyField@UseFlag{Ff}{Edit}%
4102   \fi
4103   \HyField@UseFlag{Ff}{Sort}%
4104   \HyField@UseFlag{Ff}{MultiSelect}%
4105   \ifFld@combo
4106     \ifFld@edit
4107       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4108     \fi
4109   \fi
4110   \HyField@UseFlag{Ff}{CommitOnSelChange}%
4111   \HyField@PrintFlags{Ff}{choice field}%
4112   \bitsetIsEmpty{HyField@Ff}{%
4113     \def\Fld@flags{%
4114 }{%
4115   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4116 }%
4117 }

```

19.2 Choice field

4118 \RequirePackage{kvsetkeys}[2007/09/29]

\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.

```

4119 \def\HyField@PDFChoices#1{%
4120   \begingroup
4121     \gdef\Fld@choices{}%
4122     \def\HyTmp@optlist{}%
4123     \let\HyTmp@optitem\relax
4124     \count@=0 %
4125     \kv@parse{#1}{%
4126       \Hy@pdfstringdef\kv@key\kv@key
4127       \ifx\kv@value\relax
4128         \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4129           \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4130         \else
4131           \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4132         \fi
4133       \else
4134         \Hy@pdfstringdef\kv@value\kv@value
4135         \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@value)]}%
4136       \fi
4137     \edef\HyTmp@optlist{%
4138       \HyTmp@optlist
4139       \HyTmp@optitem{the\count@}{\kv@key}0%
4140     }%
4141     \advance\count@ by 1 %
4142     \@gobbletwo
4143   }%
4144   \xdef\Fld@choices{/Opt[\Fld@choices]}%
4145   \ifFld@multiselect
4146     \HyField@@PDFChoices{DV}\Fld@default
4147     \HyField@@PDFChoices{V}\Fld@value
4148   \else
4149     \ifx\Fld@default\relax
4150     \else
4151       \pdfstringdef\Hy@gtemp\Fld@default
4152       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4153     \fi
4154     \ifx\Fld@value\relax
4155     \else
4156       \pdfstringdef\Hy@gtemp\Fld@value
4157       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4158     \fi
4159   \fi
4160 \endgroup
4161 }

```

\HyField@@PDFChoices

```

4162 \def\HyField@@PDFChoices#1#2{%
4163   \ifx#2\relax
4164   \else
4165     \count@=0 %
4166     \def\HyTmp@optitem##1##2##3{%
4167       \def\HyTmp@key{##2}%
4168       \ifx\HyTmp@key\Hy@gtemp
4169         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4170           \HyTmp@optlist
4171           \HyTmp@optitem{##1}{##2}1%
4172         }%

```



```

4173     \let\HyTmp@found=Y%
4174   \else
4175     \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4176       \HyTmp@optlist
4177       \HyTmp@optitem{##1}{##2}##3%
4178     }%
4179   \fi
4180 }%
4181 \expandafter\comma@parse\expandafter{#2}{%
4182   \pdfstringdef\Hy@gtemp\comma@entry
4183   \let\HyTmp@found=N %
4184   \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4185   \HyTmp@optlist
4186   \ifx\HyTmp@found Y%
4187     \advance\count@ by 1 %
4188   \else
4189     \@onelevel@sanitize\comma@entry
4190     \PackageWarning{hyperref}{%
4191       \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
4192       \MessageBreak
4193       it cannot be found in the choices%
4194     }%
4195   \fi
4196   \@gobble
4197 }%
4198 \def\HyTmp@optitem##1##2##3{%
4199   \ifnum##3=1 %
4200     (##2)%
4201   \fi
4202 }%
4203 \ifcase\count@
4204 \or
4205   \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4206 \else
4207   \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4208   \ifx#1V%
4209     \def\HyTmp@optitem##1##2##3{%
4210       \ifnum##3=1 %
4211         \@firstofone{ ##1}%
4212       \fi
4213     }%
4214     \edef\HyTmp@optlist{\HyTmp@optlist}%
4215     \xdef\Fld@choices{%
4216       \Fld@choices
4217       /I[\expandafter\@firstofone\HyTmp@optlist]%
4218     }%
4219   \fi
4220 \fi
4221 \fi
4222 }

```

19.3 Forms

\HyField@SetKeys

```

4223 \def\HyField@SetKeys{%
4224   \setkeys{Field}%
4225 }

```

```

4226 \newif\ifFld@checked
4227 \newif\ifFld@disabled
4228 \Fld@checkedfalse
4229 \Fld@disabledfalse
4230 \newcount\Fld@menulength
4231 \newdimen\Fld@Width
4232 \newdimen\Fld@charsize
4233 \Fld@charsize=10\p@
4234 \def\Fld@maxlen{0}
4235 \def\Fld@align{0}
4236 \def\Fld@color{0 0 0 rg}
4237 \def\Fld@bcolor{1 1 1}
4238 \def\Fld@bordercolor{1 0 0}
4239 \def\Fld@bordersep{1\p@}
4240 \def\Fld@borderwidth{1}
4241 \def\Fld@borderstyle{S}
4242 \def\Fld@cbsymbol{4}
4243 \def\Fld@rotation{0}
4244 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4245 \def\endForm{\@endForm}
4246 \newif\ifForm@html
4247 \Form@htmlfalse
4248 \def\Form@boolkey#1#2{%
4249   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4250 }
4251 \define@key{Form}{action}{%
4252   \hyper@normalise\Hy@DefFormAction{#1}%
4253 }
4254 \def\Hy@DefFormAction{\def\Form@action}
4255 \def\enc@html{html}
4256 \define@key{Form}{encoding}{%
4257   \def\Hy@tempa{#1}%
4258   \ifx\Hy@tempa\enc@html
4259     \Form@htmltrue
4260     \def\Fld@export{html}%
4261   \else
4262     \typeout{hyperref: form 'encoding' key set to #1 %
4263     -- unknown type%
4264   }%
4265   \Form@htmlfalse
4266   \fi
4267 }
4268 \define@key{Form}{method}{%
4269   \lowercase{\def\Hy@temp{#1}}%
4270   \@ifundefined{Form@method@Hy@temp}{%
4271     \@onelevel@sanitize\Hy@temp
4272     \PackageError{hyperref}{%
4273       Unknown method '\Hy@temp'.\MessageBreak
4274       Known values are 'post' and 'get'%
4275     }\@ehc
4276   }{%
4277     \let\Form@method\Hy@temp
4278     \ifcase\@nameuse{Form@method@Hy@temp} %
4279       \Fld@getmethodfalse
4280     \else
4281       \Fld@getmethodtrue
4282     \fi

```

```

4283 }%
4284 }
4285 \def\Form@method{}
4286 \@namedef{Form@method@post}{0}
4287 \@namedef{Form@method@get}{1}
4288 \def\Field@boolkey#1#2{%
4289   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4290 }
4291 \newtoks\Field@toks
4292 \Field@toks={ }%
4293 \def\Field@addtoks#1#2{%
4294   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4295   \@processme
4296 }
4297 \def\Fld@checkequals#1=#2=#3\{%
4298   \def\@currDisplay{#1}%
4299   \ifx\#2\%
4300     \def\@currValue{#1}%
4301   \else
4302     \def\@currValue{#2}%
4303   \fi
4304 }
4305 \define@key{Field}{loc}{%
4306   \def\Fld@loc{#1}%
4307 }
4308 \define@key{Field}{checked}[true]{%
4309   \lowercase{\Field@boolkey{#1}}{checked}%
4310 }
4311 \define@key{Field}{disabled}[true]{%
4312   \lowercase{\Field@boolkey{#1}}{disabled}%
4313 }
4314 \define@key{Field}{accesskey}{%
4315   \Field@addtoks{accesskey}{#1}%
4316 }
4317 \define@key{Field}{tabkey}{%
4318   \Field@addtoks{tabkey}{#1}%
4319 }
4320 \define@key{Field}{name}{%
4321   \def\Fld@name{#1}%
4322 }
4323 \define@key{Field}{width}{%
4324   \def\Fld@width{#1}%
4325   \Field@Width#1\setbox0=\hbox{m}%
4326 }
4327 \define@key{Field}{maxlen}{%
4328   \def\Fld@maxlen{#1}%
4329 }
4330 \define@key{Field}{menulength}{%
4331   \Fld@menulength=#1\relax
4332 }
4333 \define@key{Field}{height}{%
4334   \def\Fld@height{#1}%
4335 }
4336 \define@key{Field}{charsize}{%
4337   \Fld@charsize#1%
4338 }
4339 \define@key{Field}{borderwidth}{%

```

```

4340 \def\Fld@borderwidth{#1}%
4341 }
4342 \define@key{Field}{borderstyle}{%
4343 \def\Fld@borderstyle{#1}%
4344 }
4345 \define@key{Field}{bordersep}{%
4346 \def\Fld@bordersep{#1}%
4347 }
4348 \define@key{Field}{default}{%
4349 \def\Fld@default{#1}%
4350 }
4351 \define@key{Field}{align}{%
4352 \def\Fld@align{#1}%
4353 }
4354 \define@key{Field}{value}{%
4355 \def\Fld@value{#1}%
4356 }
4357 \define@key{Field}{checkboxsymbol}{%
4358 \def\Fld@cbsymbol{#1}%
4359 }

4360 \define@key{Field}{rotation}{%
4361 \def\Fld@rotation{#1}%
4362 }

4363 \define@key{Field}{backgroundcolor}{%
4364 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4365 }
4366 \define@key{Field}{bordercolor}{%
4367 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4368 }
4369 \define@key{Field}{color}{%
4370 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4371 }

4372 \def\Fld@onclick@code{}
4373 \def\Fld@format@code{}
4374 \def\Fld@validate@code{}
4375 \def\Fld@calculate@code{}
4376 \def\Fld@keystroke@code{}
4377 \def\Fld@onfocus@code{}
4378 \def\Fld@onblur@code{}
4379 \def\Fld@onmousedown@code{}
4380 \def\Fld@onmouseup@code{}
4381 \def\Fld@onenter@code{}
4382 \def\Fld@onexit@code{}
4383 \def\Hy@temp#1{%
4384 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4385 }
4386 \def\Hy@@temp#1#2{%
4387 \ifHy@pdfa
4388 \define@key{Field}{#2}{%
4389 \PackageError{hyperref}{%
4390 PDF/A: Additional action ‘#2’ is prohibited%
4391 }\@ehc
4392 }%
4393 \else
4394 \define@key{Field}{#2}{%
4395 \def#1{##1}%

```

```

4396     }%
4397   \fi
4398 }
4399 \Hy@temp{keystroke}
4400 \Hy@temp{format}
4401 \Hy@temp{validate}
4402 \Hy@temp{calculate}
4403 \Hy@temp{onfocus}
4404 \Hy@temp{onblur}
4405 \Hy@temp{onenter}
4406 \Hy@temp{onexit}
4407 \def\Hy@temp#1{%
4408   \define@key{Field}{#1}{%
4409     \Field@addtoks{#1}{##1}%
4410   }%
4411 }
4412 \Hy@temp{onselect}
4413 \Hy@temp{onchange}
4414 \Hy@temp{ondblclick}
4415 \Hy@temp{onmousedown}
4416 \Hy@temp{onmouseup}
4417 \Hy@temp{onmouseover}
4418 \Hy@temp{onmousemove}
4419 \Hy@temp{onmouseout}
4420 \Hy@temp{onkeypress}
4421 \Hy@temp{onkeydown}
4422 \Hy@temp{onkeyup}
4423 \ifHy@pdfa
4424   \define@key{Field}{onclick}{%
4425     \PackageError{hyperref}{%
4426       PDF/A: Action 'onclick' is prohibited%
4427     }\@ehc
4428   }%
4429 \else
4430   \define@key{Field}{onclick}{%
4431     \def\Fld@onclick@code{#1}%
4432     \Field@addtoks{onclick}{#1}%
4433   }%
4434 \fi
4435 \DeclareRobustCommand\TextField{%
4436   \@ifnextchar[{\@TextField}{\@TextField[]}%
4437 }
4438 \DeclareRobustCommand\ChoiceMenu{%
4439   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4440 }
4441 \DeclareRobustCommand\CheckBox{%
4442   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4443 }
4444 \DeclareRobustCommand\PushButton{%
4445   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4446 }
4447 \DeclareRobustCommand\Gauge{%
4448   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4449 }
4450 \DeclareRobustCommand\Submit{%
4451   \@ifnextchar[{\@Submit}{\@Submit[]}%
4452 }

```

```

4453 \DeclareRobustCommand\Reset{%
4454   \@ifnextchar[{\@Reset}{\@Reset[]}%
4455 }
4456 \def\LayoutTextField#1#2{% label, field
4457   #1 #2%
4458 }
4459 \def\LayoutChoiceField#1#2{% label, field
4460   #1 #2%
4461 }
4462 \def\LayoutCheckField#1#2{% label, field
4463   #1 #2%
4464 }
4465 \def\LayoutPushButtonField#1{% button
4466   #1%
4467 }
4468 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4469 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4470 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4471 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4472 \def\MakeButtonField#1{%
4473   \sbox0{%
4474     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4475   }%
4476   \@tempdima\ht0 %
4477   \advance\@tempdima by \Fld@borderwidth bp %
4478   \advance\@tempdima by \Fld@borderwidth bp %
4479   \ht0\@tempdima
4480   \@tempdima\dp0 %
4481   \advance\@tempdima by \Fld@borderwidth bp %
4482   \advance\@tempdima by \Fld@borderwidth bp %
4483   \dp0\@tempdima
4484   \box0\relax
4485 }
4486 \def\DefaultHeightofSubmit{14pt}
4487 \def\DefaultWidthofSubmit{2cm}
4488 \def\DefaultHeightofReset{14pt}
4489 \def\DefaultWidthofReset{2cm}
4490 \def\DefaultHeightofCheckBox{\baselineskip}
4491 \def\DefaultWidthofCheckBox{\baselineskip}
4492 \def\DefaultHeightofChoiceMenu{\baselineskip}
4493 \def\DefaultWidthofChoiceMenu{\baselineskip}
4494 \def\DefaultHeightofText{\baselineskip}
4495 \def\DefaultHeightofTextMultiline{4\baselineskip}
4496 \def\DefaultWidthofText{3cm}
4497 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4498 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4499 \def\DefaultOptionsofPushButton{print}
4500 \def\DefaultOptionsofCheckBox{print}
4501 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4502 \def\DefaultOptionsofListBox{print}
4503 \def\DefaultOptionsofComboBox{print,edit,sort}
4504 \def\DefaultOptionsofPopdownBox{print}
4505 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```
4506 \ifHy@figures
4507   \Hy@Info{Hyper figures ON}%
4508 \else
4509   \Hy@Info{Hyper figures OFF}%
4510 \fi
4511 \ifHy@nesting
4512   \Hy@Info{Link nesting ON}%
4513 \else
4514   \Hy@Info{Link nesting OFF}%
4515 \fi
4516 \ifHy@hyperindex
4517   \Hy@Info{Hyper index ON}%
4518 \else
4519   \Hy@Info{Hyper index OFF}%
4520 \fi
4521 \ifHy@backref
4522   \Hy@Info{backreferencing ON}%
4523 \else
4524   \Hy@Info{backreferencing OFF}%
4525 \fi
4526 \ifHy@colorlinks
4527   \Hy@Info{Link coloring ON}%
4528 \else
4529   \Hy@Info{Link coloring OFF}%
4530 \fi
4531 \ifHy@ocgcolorlinks
4532   \Hy@Info{Link coloring with OCG ON}%
4533 \else
4534   \Hy@Info{Link coloring with OCG OFF}%
4535 \fi
4536 \ifHy@pdfa
4537   \Hy@Info{PDF/A mode ON}%
4538 \else
4539   \Hy@Info{PDF/A mode OFF}%
4540 \fi
```

21 Low-level utility macros

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

```
4541 \edef\hyper@hash{\string#}
4542 \edef\hyper@tilde{\string~}
4543 \edef\hyper@quote{\string"}
4544 \let\@currentHref\@empty
4545 \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.

```
4546 \AfterBeginDocument{%
4547   \Hy@pdfstringtrue
4548   \PDF@SetupDoc
4549   \let\PDF@SetupDoc\@empty
4550   \Hy@DisableOption{pdfpagescrop}%
4551   \Hy@DisableOption{pdfpagemode}%
4552   \Hy@DisableOption{pdfnonfullscreenpagemode}%
4553   \Hy@DisableOption{pdfdirection}%
4554   \Hy@DisableOption{pdfviewarea}%

```

```

4555 \Hy@DisableOption{pdfviewclip}%
4556 \Hy@DisableOption{pdfprintarea}%
4557 \Hy@DisableOption{pdfprintclip}%
4558 \Hy@DisableOption{pdfprintscaling}%
4559 \Hy@DisableOption{pdfduplex}%
4560 \Hy@DisableOption{pdfpicktraybypdfsize}%
4561 \Hy@DisableOption{pdfprintpagerange}%
4562 \Hy@DisableOption{pdfnumcopies}%
4563 \Hy@DisableOption{pdfstartview}%
4564 \Hy@DisableOption{pdfstartpage}%
4565 \Hy@DisableOption{pdftoolbar}%
4566 \Hy@DisableOption{pdfmenubar}%
4567 \Hy@DisableOption{pdfwindowui}%
4568 \Hy@DisableOption{pdffitwindow}%
4569 \Hy@DisableOption{pdfcenterwindow}%
4570 \Hy@DisableOption{pdfdisplaydoctitle}%
4571 \Hy@DisableOption{pdfpagelayout}%
4572 \Hy@DisableOption{pdflang}%
4573 \Hy@DisableOption{baseurl}%
4574 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4575 \Hy@pdfstringfalse
4576 }

```

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.

```

4577 \def\NoHyper{%
4578   \def\hyper@link@{##1}##2##3##4{##4}%
4579   \def\hyper@@anchor##1{%
4580     \global\let\hyper@livelink\hyper@link
4581     \gdef\hyper@link##1##2##3{##3}%
4582     \def\hyper@anchorstart##1{%
4583       \let\hyper@anchorend\@empty
4584       \def\hyper@linkstart##1##2{%
4585         \let\hyper@linkend\@empty
4586         \def\hyper@linkurl##1##2{##1}%
4587         \def\hyper@linkfile##1##2##3{##1}%
4588         \def\hyper@link@{##1}##2##3{%
4589           \let\Hy@backout\@gobble
4590         }
4591       \def\stop@hyper{%
4592         \def\hyper@link@{##1}##2##3##4{##4}%
4593         \let\Hy@backout\@gobble
4594         \def\hyper@@anchor##1{%
4595           \def\hyper@link##1##2##3{##3}%
4596           \def\hyper@anchorstart##1{%
4597             \let\hyper@anchorend\@empty
4598             \def\hyper@linkstart##1##2{%
4599               \let\hyper@linkend\@empty
4600               \def\hyper@linkurl##1##2{##1}%
4601               \def\hyper@linkfile##1##2##3{##1}%
4602               \def\hyper@link@{##1}##2##3{%
4603                 \let\Hy@backout\@gobble

```



```

4604 \def\endNoHyper{%
4605   \global\let\hyper@link\hyper@livelink
4606 }
4607 \</package>

```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package nohyperref is a dummy package that defines some low level and some top-level commands. It is done for jadetex, which calls hyperref low-level commands, but it would also be useful with people using normal hyperref, who really do not want the package loaded at all.

Some low-level commands:

```

4608 \<*nohyperref>
4609 \let\hyper@@anchor\@gobble
4610 \def\hyper@link#1#2#3{#3}%
4611 \let\hyper@anchorstart\@gobble
4612 \let\hyper@anchorend\@empty
4613 \let\hyper@linkstart\@gobbletwo
4614 \let\hyper@linkend\@empty
4615 \def\hyper@linkurl#1#2{#1}%
4616 \def\hyper@linkfile#1#2#3{#1}%
4617 \def\hyper@link@{#1}#2#3{#3}%
4618 \let\PDF@SetupDoc\@empty
4619 \let\PDF@FinishDoc\@empty
4620 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

4621 \def\Acrobatmenu#1#2{\leavevmode#2}
4622 \let\pdfstringdefDisableCommands\@gobbletwo
4623 \let\texorpdfstring\@firstoftwo
4624 \let\pdfbookmark\@undefined
4625 \newcommand\pdfbookmark[3][]{\@empty}
4626 \let\phantomsection\@empty
4627 \let\hypersetup\@gobble
4628 \let\hyperbaseurl\@gobble
4629 \let\href\@gobble
4630 \let\hyperdef\@gobbletwo
4631 \let\hyperlink\@gobble
4632 \let\hypertarget\@gobble
4633 \def\hyperref{%
4634   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
4635 }
4636 \long\def\@gobbleopt[#1]{\@empty}
4637 \let\hyperpage\@empty
4638 \</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}

```

4639 \<*package>
4640 \AfterBeginDocument{%

```

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

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

```

4641 \if@files
4642 \ifHy@typexml
4643 \immediate\closeout\@mainaux
4644 \immediate\openout\@mainaux\jobname.aux\relax
4645 \immediate\write\@auxout{<relaxxml>\relax}%
4646 \fi
4647 \immediate\write\@auxout{%
4648 \string\ifx\string\hyper@anchor\string\@undefined^^J%
4649 \global\let\string\oldcontentsline\string\contentsline^^J%
4650 \gdef\string\contentsline%
4651 \string#1\string#2\string#3\string#4{%
4652 \string\oldcontentsline%
4653 {\string#1}{\string#2}{\string#3}}^^J%
4654 \global\let\string\oldnewlabel\string\newlabel^^J%
4655 \gdef\string\newlabel\string#1\string#2{%
4656 \string\newlabelxx{\string#1}\string#2^^J%
4657 \gdef\string\newlabelxx%
4658 \string#1\string#2\string#3\string#4\string#5\string#6{%
4659 \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.

```

4660 \string\AtEndDocument{%
4661 \let\string\contentsline\string\oldcontentsline^^J%
4662 \let\string\newlabel\string\oldnewlabel^^J%

```

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

```

4663 \string\else^^J%
4664 \global\let\string\hyper@last\relax^^J%
4665 \string\fi^^J%
4666 }%
4667 \fi

```

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

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

```

4668 \ifx\hyper@last\@undefined
4669 \def\@starttoc#1{%
4670 \begingroup
4671 \makeatletter
4672 \IfFileExists{\jobname.#1}{%
4673 \Hy@WarningNoLine{%
4674 old #1 file detected, not used; run LaTeX again%
4675 }%
4676 }{%
4677 \if@files
4678 \expandafter\newwrite\csname tf@#1\endcsname
4679 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
4680 \fi
4681 \@nobreakfalse
4682 \endgroup

```

```

4683 }%
4684 \def\newlabel#1#2{\@newlabel{#1}{#2}{-}{-}{-}}%
4685 \fi
4686 }

```

25 Title strings

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

```

4687 \ifHy@usetitle
4688 \let\HyOrg@title\title
4689 \let\HyOrg@author\author
4690 \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
4691 \def\Hy@scanopttitle[#1]{%
4692 \gdef\Hy@title{#1}%
4693 \HyOrg@title[#1]}%
4694 }%
4695 \def\Hy@scantitle#1{%
4696 \gdef\Hy@title{#1}%
4697 \HyOrg@title{#1}%
4698 }%
4699 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
4700 \def\Hy@scanoptauthor[#1]{%
4701 \gdef\Hy@author{#1}%
4702 \HyOrg@author[#1]}%
4703 }%
4704 \def\Hy@scanauthor#1{%
4705 \gdef\Hy@author{#1}%
4706 \HyOrg@author{#1}%
4707 }%

```

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

```

4708 \begingroup
4709 \def\process@me#1\@nil#2{%
4710 \expandafter\let\expandafter\x\csname @#2\endcsname
4711 \edef\y{\expandafter\strip@prefix\meaning\x}%
4712 \def\c##1##2\@nil{%
4713 \ifx\\##1\\%
4714 \else
4715 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
4716 \expandafter{\x}%
4717 \fi
4718 }%
4719 \expandafter\c\y\relax#1\@nil
4720 }%
4721 \expandafter\process@me\string\@latex@\@nil{title}%
4722 \expandafter\process@me\string\@latex@\@nil{author}%
4723 \endgroup
4724 \fi
4725 \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.

```

4726 \def\Hy@UseMaketitleString#1{%
4727   \@ifundefined{Hy@#1}{}{%
4728     \begingroup
4729     \let\Hy@saved@hook\pdfstringdefPreHook
4730     \pdfstringdefDisableCommands{%
4731       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
4732       \let\newline\\%
4733     }%
4734     \expandafter\ifx\csname @pdf#1\endcsname\@empty
4735       \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
4736         \csname Hy@#1\endcsname\@empty
4737       }%
4738     \fi
4739     \global\let\pdfstringdefPreHook\Hy@saved@hook
4740   \endgroup
4741 }%
4742 }
4743 \def\Hy@newline@title#1{ #1}
4744 \def\Hy@newline@author#1{, #1}
4745 \def\Hy@UseMaketitleInfos{%
4746   \Hy@UseMaketitleString{title}%
4747   \Hy@UseMaketitleString{author}%
4748 }

```

26 Page numbers

This stuff is done by Heiko Oberdick.

27 Every page

```

4749 \RequirePackage{atbegshi}[2007/09/09]
4750 \def\Hy@EveryPageHook{}
4751 \def\Hy@EveryPageBoxHook{}
4752 \def\Hy@FirstPageHook{}
4753 \AtBeginShipout{%
4754   \Hy@EveryPageHook
4755   \ifx\Hy@EveryPageBoxHook\@empty
4756   \else
4757     \setbox\AtBeginShipoutBox=\vbox{%
4758       \offinterlineskip
4759       \Hy@EveryPageBoxHook
4760       \box\AtBeginShipoutBox
4761     }%
4762   \fi
4763 }
4764 \AtBeginShipoutFirst{%
4765   \Hy@FirstPageHook
4766 }
4767 \g@addto@macro\Hy@FirstPageHook{%
4768   \PDF@FinishDoc
4769   \gdef\PDF@FinishDoc{}%

```

4770 }

27.1 PDF /PageLabels

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

```
4771 \ifHy@pagelabels
4772   \begingroup\expandafter\expandafter\expandafter\endgroup
4773   \expandafter\ifx\csname thepage\endcsname\relax
4774     \Hy@pagelabelsfalse
4775     \Hy@WarningNoLine{%
4776       Option 'pdfpagelabels' is turned off\MessageBreak
4777       because \string\thepage\space is undefined%
4778     }%
4779     \csname fi\endcsname
4780     \csname iffalse\expandafter\endcsname
4781   \fi
```

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

```
4782   \def\thispdfpagelabel#1{%
4783     \gdef\HyPL@thisLabel{#1}%
4784   }%
4785   \global\let\HyPL@thisLabel\relax
```

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

```
4786   \def\HyPL@Labels{}%
```

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

```
4787   \newcount\Hy@abspage
4788   \Hy@abspage=0 %
```

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

```
4789   \def\HyPL@LastType{init}%
4790   \def\HyPL@LastNumber{0}%
4791   \def\HyPL@LastPrefix{}%
```

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

```
4792   \def\HyPL@arabic{D}%
4793   \def\HyPL@Roman{R}%
4794   \def\HyPL@roman{r}%
4795   \def\HyPL@Alph{A}%
4796   \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.

```
4797   \def\HyPL@EveryPage{%
4798     \begingroup
4799     \ifx\HyPL@thisLabel\relax
4800       \let\HyPL@page\thepage
4801     \else
4802       \let\HyPL@page\HyPL@thisLabel
4803       \global\let\HyPL@thisLabel\relax
4804     \fi
4805     \let\HyPL@Type\relax
4806     \ifnum\the\c@page>0 %
4807       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
4808     \fi
```

```

4809 \let\Hy@temp Y%
4810 \ifx\HyPL@Type\HyPL@LastType
4811 \else
4812 \let\Hy@temp N%
4813 \fi
4814 \ifx\HyPL@Type\relax
4815 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
4816 \else
4817 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
4818 \fi
4819 \ifx\HyPL@Prefix\HyPL@LastPrefix
4820 \else
4821 \let\Hy@temp N%
4822 \fi
4823 \if Y\Hy@temp
4824 \advance\c@page by -1 %
4825 \ifnum\HyPL@LastNumber=\the\c@page\relax
4826 \else
4827 \let\Hy@temp N%
4828 \fi
4829 \Hy@StepCount\c@page
4830 \fi
4831 \if N\Hy@temp
4832 \ifx\HyPL@Type\relax
4833 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
4834 \else
4835 \HyPL@StorePageLabel{%
4836 \ifx\HyPL@Prefix\@empty
4837 \else
4838 /P(\HyPL@Prefix)%
4839 \fi
4840 /S/\csname HyPL\HyPL@Type\endcsname
4841 \ifnum\the\c@page=1 %
4842 \else
4843 \space/St \the\c@page
4844 \fi
4845 }%
4846 \fi
4847 \fi
4848 \xdef\HyPL@LastNumber{\the\c@page}%
4849 \global\let\HyPL@LastType\HyPL@Type
4850 \global\let\HyPL@LastPrefix\HyPL@Prefix
4851 \endgroup
4852 \Hy@GlobalStepCount\Hy@abspage
4853 }%

```

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

```

4854 \def\HyPL@CheckThePage#1\@nil{%
4855 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
4856 }%

```

`\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`.

```

4857 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
4858 \def\Hy@tempa{#4}%

```

```

4859 \def\Hy@tempb{\csname\endcsname\c@page}%
4860 \ifx\Hy@tempa\Hy@tempb
4861 \expandafter\ifx\csname HyPL#3\endcsname\relax
4862 \else
4863 \def\HyPL@Type{#3}%
4864 \def\HyPL@Prefix{#2}%
4865 \fi
4866 \else
4867 \begingroup
4868 \let\Hy@next\endgroup
4869 \let\HyPL@found\@undefined
4870 \def\arabic{\HyPL@Format{arabic}}%
4871 \def\Roman{\HyPL@Format{Roman}}%
4872 \def\roman{\HyPL@Format{roman}}%
4873 \def\Alph{\HyPL@Format{Alph}}%
4874 \def\alph{\HyPL@Format{alph}}%
4875 \protected@edef\Hy@temp{#1}%
4876 \ifx\HyPL@found\relax
4877 \toks@\expandafter{\Hy@temp}%
4878 \edef\Hy@next{\endgroup
4879 \noexpand\HyPL@@@CheckThePage\the\toks@
4880 \noexpand\HyPL@found\relax\noexpand\@nil
4881 }%
4882 \fi
4883 \Hy@next
4884 \fi
4885 }%

```

\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`.

```

4886 \def\HyPL@Format#1#2{%
4887 \ifx\HyPL@found\@undefined
4888 \expandafter\ifx\csname c@#2\endcsname\c@page
4889 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
4890 \else
4891 \expandafter\noexpand\csname#1\endcsname{#2}%
4892 \fi
4893 \else
4894 \expandafter\noexpand\csname#1\endcsname{#2}%
4895 \fi
4896 }%

```

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

```

4897 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
4898 \def\Hy@tempa{#3}%
4899 \def\Hy@tempb{\HyPL@found\relax}%
4900 \ifx\Hy@tempa\Hy@tempb
4901 \def\HyPL@Type{#2}%
4902 \def\HyPL@Prefix{#1}%
4903 \fi
4904 }%

```

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

```

4905 \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`.

```
4906 \def\HyPL@Useless{0<</S/D>>}%
4907 \@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.

```
4908 \def\HyPL@SetPageLabels{%
4909   \@onelevel@sanitize\HyPL@Labels
4910   \ifx\HyPL@Labels\@empty
4911   \else
4912     \ifx\HyPL@Labels\HyPL@Useless
4913     \else
4914       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
4915     \fi
4916   \fi
4917 }%
```

```
4918 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
4919 \fi
```

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

```
4920 \Hy@DisableOption{pdfpagelabels}
4921 </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`

```
4922 <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.

```
4923 <vtex>
4924 \providecommand*{\XR@ext}{pdf}
4925 \edef\Hy@VTeXversion{%
4926   \ifx\VTeXversion\@undefined
4927     \z@
4928   \else
4929     \ifx\VTeXversion\relax
4930       \z@
4931     \else
4932       \VTeXversion
4933     \fi
4934   \fi
4935 }
4936 \begingroup
4937 \ifnum\Hy@VTeXversion<660 %
4938   \gdef\Hy@PutCatalog#1{%
4939     \Hy@WarningNoLine{%
4940       VTeX 6.59g or above required for pdfpagelabels%
4941     }%
4942   }%
```



```

4943 \else
4944   \gdef\Hy@PutCatalog#1{%
4945     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
4946   }%
4947   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
4948     \ifx\#2\%
4949       \else
4950         \immediate\special{!pdfpagelabels #2}%
4951       \fi
4952     }%
4953   \fi
4954 \endgroup
4955 \</vtex>

4956 \<*pdfTeX | vtex>

```

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

```

4957 \ifHy@pagelabels
4958   \def\HyPL@StorePageLabel#1{%
4959     \toks@{\expandafter{\HyPL@Labels}}%
4960     \xdef\HyPL@Labels{%
4961       \the\toks@
4962       \the\Hy@abspage<<#1>>%
4963     }%
4964   }%

```

At the end of the document, `\clearpage` tries to make sure, that no further pages will follow. Then the PDF catalog entry for `\PageLabels` is set.

```

4965 \@ifclassloaded{revtex4}{%
4966   \g@addto@macro\clear@document{\HyPL@SetPageLabels}%
4967 }{%
4968   \AtEndDocument{\clearpage\HyPL@SetPageLabels}%
4969 }%

4970 \fi
4971 \</pdfTeX | vtex>

```

27.1.2 pdfmarkbase, dvipdfm

```

4972 \<*pdfmarkbase>
4973 \begingroup
4974   \toks@{\expandafter{\Hy@FirstPageHook}}%
4975   \xdef\Hy@FirstPageHook{%
4976     \noexpand\headerps@out{%
4977       systemdict /pdfmark known%
4978       {%
4979         userdict /?pdfmark systemdict /exec get put%
4980       }{%
4981         userdict /?pdfmark systemdict /pop get put %
4982         userdict /pdfmark systemdict /cleartomark get put%
4983       }%
4984     }%
4985   }%
4986   \the\toks@
4987 }%
4988 \endgroup
4989 \</pdfmarkbase>

```

\Hy@PutCatalog

```

4990 <dvipdfm>\def\Hy@PutCatalog#1{\@pdfmark{docview << #1 >>}}
4991 <*pdfmarkbase>
4992 \def\Hy@PutCatalog#1{%
4993   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
4994 }
4995 </pdfmarkbase>

4996 <*pdfmarkbase | dvipdfm>
4997 \ifHy@pagelabels

```

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

```

4998   \def\HyPL@StorePageLabel#1{%
4999     \if@filesw
5000       \begingroup
5001         \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5002         \immediate\write\@mainaux{%
5003           \string\HyPL@Entry{\Hy@tempa}%
5004         }%
5005       \endgroup
5006     \fi
5007   }%

```

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.

```

5008   \AfterBeginDocument{%
5009     \if@filesw
5010       \immediate\write\@mainaux{%
5011         \string\providecommand\string*\string\HyPL@Entry[1]{}%
5012       }%
5013     \fi
5014     \ifx\HyPL@Labels\@empty
5015       \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5016     \else
5017       \HyPL@SetPageLabels
5018     \fi
5019     \let\HyPL@Entry\@gobble
5020   }%

```

\HyPL@Entry

```

5021   \def\HyPL@Entry#1{%
5022     \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5023       \HyPL@Labels
5024       #1%
5025     }%
5026   }%

5027 \fi
5028 </pdfmarkbase | dvipdfm>
5029 <*package>
5030 \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

```

5031 \def\Hy@CounterExists#1{%
5032   \begingroup\expandafter\expandafter\expandafter\endgroup
5033   \expandafter\ifx\csname c@#1\endcsname\relax
5034     \expandafter\@gobble
5035   \else
5036     \begingroup\expandafter\expandafter\expandafter\endgroup
5037     \expandafter\ifx\csname the#1\endcsname\relax
5038       \expandafter\expandafter\expandafter\@gobble
5039     \else
5040       \expandafter\expandafter\expandafter\@firstofone
5041     \fi
5042   \fi
5043 }
5044 \Hy@CounterExists{section}{%
5045   \newcommand\theHequation{\theHsection.\arabic{equation}}%
5046 }
5047 \Hy@CounterExists{part}{%
5048   \newcommand\theHpart{\arabic{part}}%
5049 }
5050 \@ifundefined{thechapter}{%
5051   \newcommand\theHsection    {\arabic{section}}%
5052   \newcommand\theHfigure     {\arabic{figure}}%
5053   \newcommand\theHtable      {\arabic{table}}%
5054 }{%
5055   \newcommand\theHchapter    {\arabic{chapter}}%
5056   \newcommand\theHfigure     {\theHchapter.\arabic{figure}}%
5057   \newcommand\theHtable      {\theHchapter.\arabic{table}}%
5058   \newcommand\theHsection    {\theHchapter.\arabic{section}}%
5059 }
5060 \newcommand\theHsubsection   {\theHsection.\arabic{subsection}}
5061 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5062 \newcommand\theHparagraph    {\theHsubsubsection.\arabic{paragraph}}
5063 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5064 \newcommand\theHtheorem      {\theHsection.\arabic{theorem}}
5065 \newcommand\theHthm          {\theHsection.\arabic{thm}}

```

Thanks to Greta Meyer (gbd@pop.cwru.edu) for making me realize that enumeration starts at 0 for every list! But `\item` occurs inside `\trivlist`, so check if its a real `\item` before incrementing counters.

```

5066 \let\H@item\item
5067 \newcounter{Item}
5068 \def\theHItem{\arabic{Item}}

```

```

5069 \def\item{%
5070   \@hyper@itemfalse
5071   \if@nmbrlist\@hyper@itemtrue\fi
5072   \H@item
5073 }

5074 \newcommand\theHenumi    {\theHItem}
5075 \newcommand\theHenumii   {\theHItem}
5076 \newcommand\theHenumiii  {\theHItem}
5077 \newcommand\theHenumiv   {\theHItem}
5078 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5079 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5080 \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.

```

5081 \let\H@refstepcounter\refstepcounter
5082 \edef\name@of@eq{equation}%
5083 \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.

```

5084 \newif\if@hyper@item
5085 \newif\if@skiphyperref
5086 \@hyper@itemfalse
5087 \@skiphyperreffalse
5088 \def\refstepcounter#1{%
5089   \ifHy@pdfstring
5090   \else
5091     \H@refstepcounter{#1}%
5092     \edef\This@name{#1}%
5093     \ifx\This@name\name@of@slide
5094     \else
5095       \if@skiphyperref
5096       \else
5097         \if@hyper@item
5098           \stepcounter{Item}%
5099           \hyper@refstepcounter{Item}%
5100           \@hyper@itemfalse
5101         \else
5102           \hyper@refstepcounter{#1}%
5103         \fi
5104       \fi
5105     \fi
5106   \fi
5107 }

```

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.

```

5108 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5109 \def\hyper@refstepcounter#1{%
5110   \edef\This@name{#1}%
5111   \ifx\This@name\name@of@eq

```

```

5112 \ifundefined{theHequation}{%
5113 \make@stripped@name{theequation}%
5114 \let\theHequation\newname
5115 }{}%
5116 \fi
5117 \ifundefined{theH#1}{%
5118 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5119 }{}%
5120 \hyper@makecurrent{#1}%
5121 \ifmeasuring@
5122 \else
5123 \Hy@raisedlink{%
5124 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5125 }%
5126 \fi
5127 }

```

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`.

```

5128 \begingroup\expandafter\expandafter\expandafter\endgroup
5129 \expandafter\ifx\csname chapter\endcsname\relax
5130 \def\Hy@chapterstring{section}%
5131 \else
5132 \def\Hy@chapterstring{chapter}%
5133 \fi
5134 \def\Hy@appendixstring{appendix}
5135 \def\Hy@chapapp{\Hy@chapterstring}
5136 \let\HyOrg@appendix\appendix
5137 \def\appendix{%
5138 \ifundefined{chapter}%
5139 {\gdef\theHsection{\Alph{section}}}%
5140 {\gdef\theHchapter{\Alph{chapter}}}%
5141 \xdef\Hy@chapapp{\Hy@appendixstring}%
5142 \HyOrg@appendix
5143 }

```

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

```

5144 \def\hyper@makecurrent#1{%
5145 \begingroup
5146 \edef\Hy@param{#1}%
5147 \ifx\Hy@param\Hy@chapterstring
5148 \let\Hy@param\Hy@chapapp
5149 \fi
5150 \ifHy@hypertextnames
5151 \let\@number\@firstofone
5152 \ifundefined{latin@Alph}{%
5153 \ifx\@Alph@greek@Alph
5154 \def\@Alph{Alph\@arabic}%
5155 \fi
5156 }%
5157 \ifx\@Alph\@Alph@bul
5158 \def\@Alph{Alph\@arabic}%

```

```

5159 \fi
5160 \ifx\@alph\@alph@bul
5161 \def\@alph{alph\@arabic}%
5162 \fi
5163 \ifHy@naturalnames
5164 \let\textlatin\@firstofone
5165 \xdef\@currentHlabel{\csname the#1\endcsname}%
5166 \else
5167 \xdef\@currentHlabel{%
5168 \csname
5169 the%
5170 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5171 #1%
5172 \endcsname
5173 }%
5174 \fi
5175 \xdef\@currentHref{%
5176 \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5177 }%
5178 \else
5179 \Hy@GlobalStepCount\Hy@linkcounter
5180 \xdef\@currentHref{\Hy@param.\the\Hy@linkcounter}%
5181 \fi
5182 \endgroup
5183 }

5184 \@ifpackageloaded{fancyvrb}{%
5185 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
5186 \def\FV@StepLineNo{%
5187 \FV@SetLineNo
5188 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5189 \FV@SetLineNo
5190 }%
5191 }%
5192 }{-}

```

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`

```

5193 \AtBeginDocument{%
5194 \@ifclassloaded{revtex4}{%
5195 \@namedef{ver@lastpage.sty}{1994/06/25}%
5196 }{-}%
5197 \@ifpackageloaded{lastpage}{%
5198 \ifHy@pageanchor
5199 \else
5200 \Hy@WarningNoLine{%
5201 The \string\pageref{LastPage} link doesn't work\MessageBreak
5202 with disabled option 'pageanchor'%

```

```

5203     }%
5204     \fi
5205     \def\lastpage@putlabel{%
5206       \addtocounter{page}{-1}%
5207       \if@filesw
5208         \begingroup
5209           \let\@number\@firstofone
5210           \ifHy@pageanchor
5211             \ifHy@hypertexnames
5212               \ifHy@plainpages
5213                 \def\Hy@temp{\arabic{page}}%
5214               \else
5215                 \Hy@unicodedefalse
5216                 \pdfstringdef\Hy@temp{\thepage}%
5217             \fi
5218           \else
5219             \def\Hy@temp{\the\Hy@pagecounter}%
5220           \fi
5221         \fi
5222         \immediate\write\@auxout{%
5223           \string\newlabel
5224             {LastPage}{\the\Hy@temp}{\thepage}}%
5225           \ifHy@pageanchor page.\Hy@temp\fi}}}%
5226     }%
5227     \endgroup
5228     \fi
5229     \addtocounter{page}{1}%
5230   }%
5231   \@ifclassloaded{revtex4}{%
5232     \begingroup
5233       \toks@{\expandafter{\lastpage@putlabel}}%
5234       \edef\x{\endgroup
5235         \def\noexpand\lastpage@putlabel{%
5236           \noexpand\stepcounter{page}%
5237           \the\toks@
5238           \noexpand\addtocounter{page}\noexpand\m@ne
5239         }%
5240       }%
5241       \x
5242     }{}%
5243   }{}%
5244 }
5245 </package>
5246 <*check>
5247 \checkpackage{lastpage}[1994/06/25]
5248 \checkcommand\def\lastpage@putlabel{%
5249   \addtocounter{page}{-1}%
5250   \immediate\write\@auxout{%
5251     \string\newlabel{LastPage}{\the\Hy@temp}{\thepage}}%
5252   }%
5253   \addtocounter{page}{1}%
5254 }
5255 </check>
5256 <*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.

```
5257 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
5258 \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:

```
5259 \@ifpackageloaded{titlesec}{%
5260   \def\ttl@Hy@steplink#1{%
5261     \Hy@GlobalStepCount\Hy@linkcounter
5262     \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5263     \def\ttl@Hy@saveanchor{%
5264       \Hy@raisedlink{%
5265         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5266       }%
5267     }%
5268   }%
5269   \def\ttl@Hy@refstepcounter#1{%
5270     \let\ttl@b\Hy@raisedlink
5271     \def\Hy@raisedlink##1{%
5272       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5273     }%
5274     \refstepcounter{#1}%
5275     \let\Hy@raisedlink\ttl@b
5276   }%
5277 }{}
```

Package titletoc support:

```
5278 \@ifpackageloaded{titletoc}{%
5279   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5280 }{}
```

32 Package varioref support

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

```
5281 \def\Hy@varioref@undefined{??}{??}{-}{-}}
5282 \@ifpackageloaded{varioref}{%
5283   \def\vref@pagenum#1#2{%
5284     \@ifundefined{r@#2}{%
5285       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5286     }{}%
5287     \edef#1{\getpagerefnumber{#2}}%
5288   }%
5289 }{}
```


33 Package longtable support

Sometimes the anchor of the longtable goes to the previous page. Thus the following patch separates the anchor setting and counter incrementation by hyperref's `\refstepcounter` and the anchor setting is moved after `\vskip\LTpre`.

Patch of `\LT@array`: replace `\refstepcounter` by the original `\H@refstepcounter` without anchor generation

```

5290 \ifpackageloaded{longtable}{%
5291   \begingroup
5292     \def\y{\LT@array}%
5293     \ifundefined{scr@LT@array}{\def\y{\scr@LT@array}}%
5294     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5295       \expandafter\endgroup
5296       \expandafter\def\y[##1]##2{%
5297         \H@refstepcounter{#1}%
5298         \hyper@makecurrent{table}%
5299         \let\Hy@LT@currentHlabel\@currentHlabel
5300         \let\Hy@LT@currentHref\@currentHref
5301         #2\@sharp####4%
5302       }%
5303     }%
5304   \expandafter\expandafter\expandafter\x\y[##1][##2]\@nil

```

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

```

5305   \begingroup
5306     \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5307     \endgroup
5308     \def\LT@start{%
5309       #1%
5310       \let\@currentHlabel\Hy@LT@currentHlabel
5311       \let\@currentHref\Hy@LT@currentHref
5312       \Hy@raisedlink{%
5313         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5314       }%
5315       \ifvoid\LT@firsthead\copy
5316       #2%
5317     }%
5318   }%
5319   \expandafter\x\LT@start\@nil
5320 }{}

```

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.

```

5321 \let\new@refstepcounter\refstepcounter
5322 \let\H@equation\equation
5323 \let\H@endequation\endequation

5324 \ifpackageloaded{amsmath}{%
5325   \long\def\Hy@temp{%
5326     \incr@eqnum
5327     \mathdisplay@push

```

```

5328 \st@rredfalse \global\@eqnswtrue
5329 \mathdisplay{equation}%
5330 }%
5331 \ifx\Hy@temp\equation
5332 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5333 \csname iftrue\endcsname
5334 \else
5335 \long\def\equation{%
5336 \mathdisplay@push
5337 \st@rredfalse \global\@eqnswtrue
5338 \mathdisplay{equation}%
5339 \incr@eqnum
5340 }%
5341 \fi
5342 \fi
5343 }{%
5344 \def\equation{%
5345 \let\refstepcounter\H@refstepcounter
5346 \H@equation
5347 \@ifundefined{theHequation}{%
5348 \make@stripped@name{\theequation}%
5349 \let\theHequation\newname
5350 }{}%
5351 \hyper@makecurrent{equation}%
5352 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5353 \let\refstepcounter\new@refstepcounter
5354 }%
5355 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5356 }

```

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

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

```

5357 \newif\if@eqnstar
5358 \@eqnstarfalse
5359 \let\H@eqnarray\eqnarray
5360 \let\H@endeqnarray\endeqnarray
5361 \def\eqnarray{%
5362 \let\Hy@reserved@a\relax
5363 \def\@currentHref{}%
5364 \H@eqnarray
5365 \if@eqnstar
5366 \else
5367 \ifx\\\@currentHref\\%
5368 \else
5369 \@ifundefined{theHequation}{%
5370 \make@stripped@name{\theequation}%
5371 \let\theHequation\newname
5372 }{}%
5373 \hyper@makecurrent{equation}%
5374 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5375 \fi
5376 \fi
5377 }
5378 \def\endeqnarray{%

```

```

5379 \H@endeqnarray
5380 }

```

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.

```

5381 \@namedef{eqnarray*}{%
5382   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
5383 }
5384 \@namedef{endeqnarray*}{%
5385   \nonumber\endeqnarray\@eqnstarfalse
5386 }

```

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

```

5387 \@ifundefined{subeqnarray}{}{%
5388   \let\H@subeqnarray\subeqnarray
5389   \let\H@endsubeqnarray\endsubeqnarray
5390   \def\subeqnarray{%
5391     \let\Hy@reserved@a\relax
5392     \H@subeqnarray
5393     \@ifundefined{theHequation}{%
5394       \make@stripped@name{\theequation}%
5395       \let\theHequation\newname
5396     }{}%
5397     \hyper@makecurrent{equation}%
5398     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5399   }%
5400   \def\endsubeqnarray{%
5401     \H@endsubeqnarray
5402   }%
5403   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5404 }

```

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

```

5405 \def\make@stripped@name#1{%
5406   \begingroup
5407     \escapechar\m@ne
5408     \global\let\newname\@empty
5409     \protected@edef\Hy@tempa{#1}%
5410     \edef\@tempb{%
5411       \noexpand\@tfor\noexpand\Hy@tempa:=%
5412       \expandafter\strip@prefix\meaning\Hy@tempa
5413     }%
5414     \@tempb\do{%
5415       \if\Hy@tempa\else
5416         \if}\Hy@tempa\else
5417           \xdef\newname{\newname\Hy@tempa}%
5418         \fi
5419       \fi
5420     }%
5421   \endgroup
5422 }

```

Support for amsmath's subequations:

```

5423 \begingroup\expandafter\expandafter\expandafter\endgroup
5424 \expandafter\ifx\csname subequations\endcsname\relax
5425 \else
5426   \let\HyOrg@subequations\subequations
5427   \def\subequations{%

```

```

5428 \stepcounter{equation}%
5429 \protected@edef\theHparentequation{%
5430 \ifundefined{theHequation}\theequation\theHequation
5431 }%
5432 \addtocounter{equation}{-1}%
5433 \HyOrg@subequations
5434 \def\theHequation{\theHparentequation\alph{equation}}%
5435 \ignorespaces
5436 }%
5437 \fi

Support for package amsthm (Daniel Müllner):
5438 \@ifpackageloaded{amsthm}{%
5439 \def\@thm#1#2#3{%
5440 \ifhmode
5441 \unskip\unskip\par
5442 \fi
5443 \normalfont
5444 \trivlist
5445 \let\thmheadnl\relax
5446 \let\thm@swap\@gobble
5447 \thm@notefont{\fontseries\mddefault\upshape}%
5448 \thm@headpunct{.}% add period after heading
5449 \thm@headsep 5\p@ plus\p@ minus\p@\relax
5450 \thm@space@setup
5451 #1% style overrides
5452 \@topsep \thm@preskip % used by thm head
5453 \@topsepadd \thm@postskip % used by \@endparenv
5454 \def\dth@counter{#2}%
5455 \ifx\@empty\dth@counter
5456 \def\@tempa{%
5457 \oparg{\@begintheorem{#3}{}}[]%
5458 }%
5459 \else
5460 \H@refstepcounter{#2}%
5461 \hyper@makecurrent{#2}%
5462 \def\@tempa{%
5463 \oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
5464 }%
5465 \fi
5466 \@tempa
5467 }%
5468 \dth@everypar={%
5469 \@minipagefalse
5470 \global\@newlistfalse
5471 \@nparitemfalse
5472 \if@inlabel
5473 \global\@inlabelfalse
5474 \begingroup
5475 \setbox\z@\lastbox
5476 \ifvoid\z@
5477 \kern-\itemindent
5478 \fi
5479 \endgroup
5480 \ifx\@empty\dth@counter
5481 \else
5482 \Hy@raisedlink{%
5483 \hyper@anchorstart{\@currentHref}\hyper@anchorend

```

```

5484     }%
5485     \fi
5486     \unhbox\@labels
5487   \fi
5488   \if@nobreak
5489     \@nobreakfalse \clubpenalty\@M
5490   \else
5491     \clubpenalty\@clubpenalty \everypar{}%
5492   \fi
5493 }%
5494 }{}

```

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.

```

5495 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5496 \ifHy@hyperfootnotes
5497   \newcounter{Hfootnote}%
5498   \let\H@@footnotetext\@footnotetext
5499   \let\H@@footnotemark\@footnotemark
5500   \def\@xfootnotenext[#1]{%
5501     \begingroup
5502       \csname c@\@mpfn\endcsname #1\relax
5503       \unrestored@protected@xdef\@thefnmark{\thempfn}%
5504     \endgroup
5505     \ifx\@footnotetext\@mpfootnotetext
5506       \expandafter\H@@mpfootnotetext
5507     \else
5508       \expandafter\H@@footnotetext
5509     \fi
5510   }%
5511   \def\@xfootnotemark[#1]{%
5512     \begingroup
5513       \c@footnote #1\relax
5514       \unrestored@protected@xdef\@thefnmark{\thefnmark}%
5515     \endgroup
5516     \H@@footnotemark
5517   }%
5518   \let\H@@mpfootnotetext\@mpfootnotetext
5519   \long\def\@mpfootnotetext#1{%
5520     \H@@mpfootnotetext{%
5521       \ifHy@nesting
5522         \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5523       \else
5524         \Hy@raisedlink{%
5525           \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5526         }#1%
5527       \fi
5528     }%
5529   }%
5530   \long\def\@footnotetext#1{%
5531     \H@@footnotetext{%

```

```

5532 \ifHy@nesting
5533 \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5534 \else
5535 \Hy@raisedlink{%
5536 \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5537 }%
5538 \let\@currentHlabel\Hy@footnote@currentHlabel
5539 \let\@currentHref\Hy@footnote@currentHref
5540 \let\@currentlabelname\@empty
5541 #1%
5542 \fi
5543 }%
5544 }%

```

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.

```

5545 \def\@footnotemark{%
5546 \leavevmode
5547 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5548 \stepcounter{Hfootnote}%
5549 \global\let\Hy@saved@currentHlabel\@currentHlabel
5550 \global\let\Hy@saved@currentHref\@currentHref
5551 \hyper@makecurrent{Hfootnote}%
5552 \global\let\Hy@footnote@currentHlabel\@currentHlabel
5553 \global\let\Hy@footnote@currentHref\@currentHref
5554 \global\let\@currentHlabel\Hy@saved@currentHlabel
5555 \global\let\@currentHref\Hy@saved@currentHref
5556 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5557 \@makefnmark
5558 \hyper@linkend
5559 \ifhmode\spacefactor\x@sf\fi
5560 \relax
5561 }%

```

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

```

5562 \@ifpackageloaded{longtable}{%
5563 \CheckCommand*{\LT@p@ftntext}[1]{%
5564 \edef\@tempa{%
5565 \the\LT@p@ftn
5566 \noexpand\footnotetext[\the\c@footnote]%
5567 }%
5568 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
5569 }%
5570 \long\def\LT@p@ftntext#1{%
5571 \edef\@tempa{%
5572 \the\LT@p@ftn
5573 \begingroup
5574 \noexpand\c@footnote=\the\c@footnote\relax
5575 \noexpand\protected@xdef
5576 \noexpand\@thefnmark{\noexpand\thempfn}%
5577 \noexpand\protected@xdef\noexpand\@thefnmark{%
5578 \noexpand\thempfn
5579 }%

```

```

5580         \expandafter\expandafter\expandafter\noexpand
5581         \expandafter\expandafter\expandafter\Hy@LT@footnotetext
5582         \expandafter\expandafter\expandafter{%
5583             \expandafter\Hy@footnote@currentHref\expandafter
5584             }\expandafter{\Hy@footnote@currentHlabel}%
5585     }%
5586     \global\LT@p@ftn\expandafter{%
5587         \@tempa{#1}%
5588     \endgroup
5589     }%
5590 }%
5591 \long\def\Hy@LT@footnotetext#1#2#3{%
5592     \H@@footnotetext{%
5593         \ifHy@nesting
5594             \hyper@@anchor{#1}{#3}%
5595         \else
5596             \Hy@raisedlink{%
5597                 \hyper@@anchor{#1}{\relax}%
5598             }%
5599             \def\@currentHlabel{#2}%
5600             \def\@currentHref{#1}%
5601             \let\@currentlabelname\@empty
5602             #3%
5603         \fi
5604     }%
5605 }%
5606 }{}%

```

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

```

5607 \ifpackageloaded{fancyvrb}{%
5608     \def\V@@footnotetext{%
5609         \insert\footins\bgroup
5610         \csname reset@font\endcsname
5611         \footnotesize
5612         \interlinepenalty\interfootnotelinepenalty
5613         \splittopskip\footnotesep
5614         \splitmaxdepth\dp\strutbox
5615         \floatingpenalty \@MM
5616         \hsize\columnwidth
5617         \@parboxrestore
5618         \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
5619         \@makefntext{}%
5620         \rule{\z@}{\footnotesep}%
5621         \bgroup
5622         \aftergroup\V@@@footnotetext
5623         \Hy@raisedlink{%
5624             \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5625         }%
5626         \let\@currentHlabel\Hy@footnote@currentHlabel
5627         \let\@currentHref\Hy@footnote@currentHref
5628         \let\@currentlabelname\@empty
5629         \ignorespaces
5630     }%
5631 }{}%

```

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.

```

5632 \let\HyOrg@maketitle\maketitle

```

```

5633 \def\maketitle{%
5634   \let\Hy@saved@footnotemark\@footnotemark
5635   \let\Hy@saved@footnotetext\@footnotetext
5636   \let\@footnotemark\H@@footnotemark
5637   \let\@footnotetext\H@@footnotetext
5638   \@ifnextchar[\Hy@maketitle@optarg{% ]
5639     \HyOrg@maketitle
5640     \Hy@maketitle@end
5641   }%
5642 }%
5643 \def\Hy@maketitle@optarg[#1]{%
5644   \HyOrg@maketitle[#{#1}]%
5645   \Hy@maketitle@end
5646 }%
5647 \def\Hy@maketitle@end{%
5648   \ifx\@footnotemark\H@@footnotemark
5649     \let\@footnotemark\Hy@saved@footnotemark
5650   \fi
5651   \ifx\@footnotetext\H@@footnotetext
5652     \let\@footnotetext\Hy@saved@footnotetext
5653   \fi
5654 }%

```

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

```

5655 \def\realfootnote{%
5656   \@ifnextchar[\@xfootnote{%
5657     \stepcounter{\@mpfn}%
5658     \protected@xdef\@thefnmark{\thempfn}%
5659     \H@@footnotemark\H@@footnotetext
5660   }%
5661 }%

5662 \fi
5663 \Hy@DisableOption{hyperfootnotes}

5664 </package>
5665 <*check>
5666 \checklatex
5667 \checkcommand\def\@xfootnotenext[#1]{%
5668   \begingroup
5669     \csname c@\@mpfn\endcsname #1\relax
5670     \unrestored@protected@xdef\@thefnmark{\thempfn}%
5671   \endgroup
5672   \@footnotetext
5673 }
5674 \checkcommand\def\@xfootnotemark[#1]{%
5675   \begingroup
5676     \c@footnote #1\relax
5677     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5678   \endgroup
5679   \@footnotemark
5680 }
5681 \checkcommand\def\@footnotemark{%
5682   \leavevmode
5683   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
5684   \@makefnmark
5685   \ifhmode\spacefactor\@x@sf\fi
5686   \relax

```



```

5687 }
5688 </check>
5689 <*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.

```

5690 \def\caption{%
5691   \ifx\@captype\@undefined
5692     \latex@error{\noexpand\caption outside float}\@ehd
5693     \expandafter\@gobble
5694   \else
5695     \H@refstepcounter\@captype
5696     \let\Hy@tempa\@caption
5697     \@ifundefined{float@caption}{%
5698       {%
5699         \expandafter\ifx\csname @float@c@\@captype\endcsname
5700           \float@caption
5701         \let\Hy@tempa\Hy@float@caption
5702       \fi
5703     }%
5704     \expandafter\@firstofone
5705   \fi
5706   {\@dblarg{\Hy@tempa\@captype}}}%
5707 }
5708 \long\def\@caption#1[#2]#3{%
5709   \expandafter\ifx\csname if@capstart\expandafter\endcsname
5710     \csname iftrue\endcsname
5711     \global\let\@currentHref\hc@currentHref
5712   \else
5713     \hyper@makecurrent{\@captype}%
5714   \fi
5715   \def\@currentlabelname{#2}%
5716   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
5717     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
5718   }%
5719   \begingroup
5720     \@parboxrestore
5721     \if@minipage
5722       \setminipage
5723     \fi
5724     \normalsize
5725     \expandafter\ifx\csname if@capstart\expandafter\endcsname
5726       \csname iftrue\endcsname
5727       \global\@capstartfalse
5728       \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
5729     \else
5730       \@makecaption{\csname fnum@#1\endcsname}{%
5731         \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

5732     \ifHy@nesting
5733       \hyper@@anchor{\@currentHref}{#3}%
5734     \else
5735       \Hy@raisedlink{\hyper@@anchor{\@currentHref}{\relax}}#3%

```

```

5736     \fi
5737   }%
5738   \fi
5739   \par
5740 \endgroup
5741 }

```

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.

```

5742 \let\Hy@float@caption\@caption
5743 \@ifpackageloaded{float}{%
5744   \def\Hy@float@caption{%
5745     \ifx\Hy@float@currentHref\@undefined
5746       \hyper@makecurrent{\@capttype}%
5747       \global\let\Hy@float@currentHref\@currentHref
5748     \else
5749       \let\@currentHref\Hy@float@currentHref
5750     \fi
5751     \float@caption
5752   }%
5753   \let\HyOrg@float@makebox\float@makebox
5754   \renewcommand{\float@makebox}[1]{%
5755     \HyOrg@float@makebox{%
5756       #1\relax
5757       \ifx\Hy@float@currentHref\@undefined
5758       \else
5759         \hyper@@anchor{\Hy@float@currentHref}{\relax}%
5760       \global\let\Hy@float@currentHref\@undefined
5761     \fi
5762   }%
5763 }%
5764 }{}

5765 \</package>
5766 \<*check>
5767 \checklatex[1999/06/01 - 2000/06/01]
5768 \checkcommand\def\caption{%
5769   \ifx\@capttype\@undefined
5770     \@latex@error{\noexpand\caption outside float}\@ehd
5771     \expandafter\@gobble
5772   \else
5773     \refstepcounter\@capttype
5774     \expandafter\@firstofone
5775     \fi
5776   {\@dblarg{\@caption\@capttype}}%
5777 }
5778 \checkcommand\long\def\@caption#1[#2]#3{%
5779   \par
5780   \addcontentsline{\csname ext@#1\endcsname}{#1}%
5781     {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
5782   \begingroup
5783     \@parboxrestore
5784     \if@minipage
5785       \setminipage
5786     \fi
5787     \normalsize
5788     \makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
5789   \endgroup

```

```

5790 }
5791 </check>
5792 <*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 *drfcite* may break.

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

```

5793 \def\hyper@natlinkstart#1{%
5794   \Hy@backout{#1}%
5795   \hyper@linkstart{cite}{cite.#1}%
5796   \def\hyper@nat@current{#1}%
5797 }
5798 \def\hyper@natlinkend{%
5799   \hyper@linkend
5800 }
5801 \def\hyper@natlinkbreak#1#2{%
5802   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
5803 }
5804 \def\hyper@natanchorstart#1{%
5805   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
5806 }
5807 \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.

```

5808 \@ifundefined{NAT@parse}{%
5809   \providecommand*\@extra@binfo{}%
5810   \providecommand*\@extra@b@citeb{}%
5811   \def\bibcite#1#2{%
5812     \newl@bel{b}{#1\@extra@binfo}{%
5813       \hyper@@link[cite]{}{cite.#1\@extra@b@citeb}{#2}%
5814     }%
5815   }%
5816   \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.”.

```

5817 \let\Hy@bibcite\bibcite
5818 \begingroup
5819   \@ifundefined{bbl@cite@choice}{-}{%
5820     \g@addto@macro\bbl@cite@choice{%
5821       \let\bibcite\Hy@bibcite
5822     }%
5823   }%
5824 \endgroup

```

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

```

5825 \providecommand*\@BIBLABEL{\@biblabel}%
5826 \def\@lbibitem[#1]#2{%
5827   \@skiphyperreftrue
5828   \H@item[%
5829     \ifx\Hy@raisedlink\@empty
5830       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
5831       \@BIBLABEL{#1}%
5832       \hyper@anchorend
5833     \else
5834       \Hy@raisedlink{%
5835         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
5836       }%
5837       \@BIBLABEL{#1}%
5838     \fi
5839     \hfill
5840   ]%
5841   \@skiphyperreffalse
5842   \if@filesw
5843     \begingroup
5844       \let\protect\noexpand
5845       \immediate\write\@auxout{%
5846         \string\bibcite{#2}{#1}%
5847       }%
5848     \endgroup
5849   \fi
5850   \ignorespaces
5851 }%

```

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

```

5852 \def\@bibitem#1{%
5853   \@skiphyperreftrue\H@item\@skiphyperreffalse
5854   \Hy@raisedlink{%
5855     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
5856   }%
5857   \if@filesw
5858     \begingroup
5859       \let\protect\noexpand
5860       \immediate\write\@auxout{%
5861         \string\bibcite{#1}{\the\value{\@listctr}}%
5862       }%
5863     \endgroup
5864   \fi
5865   \ignorespaces
5866 }%
5867 }{}

5868 \</package>
5869 \<check>
5870 \checklatex
5871 \checkcommand\def\@lbibitem[#1]#2{%
5872   \item[\@biblabel{#1}\hfill]%
5873   \if@filesw
5874     {%
5875       \let\protect\noexpand
5876       \immediate\write\@auxout{%
5877         \string\bibcite{#2}{#1}%
5878       }%

```

```

5879 }%
5880 \fi
5881 \ignorespaces
5882 }
5883 \checkcommand\def\bibitem#1{%
5884 \item
5885 \if@filesw
5886 \immediate\write\@auxout{%
5887 \string\bibcite{#1}{\the\value{\@listctr}}}%
5888 }%
5889 \fi
5890 \ignorespaces
5891 }
5892 \end{check}
5893 \end{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.

```

5894 \ifclassloaded{revtex}{%
5895 \Hy@Info{*** compatibility with revtex **** }%
5896 \def\revtex@checking#1#2{%
5897 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
5898 \expandafter\def\csname b@#1\endcsname{#2}%
5899 \SetMaxRnhefLabel{#1}%
5900 \expandafter\let\csname b@#1\endcsname\T@temp
5901 }%

```

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

```

5902 \ifundefined{CITE}{\def\CITE{\@cite}}}%
5903 \providecommand*{\extra@b@citeb}{}%
5904 \def\CITE[#1]#2{%
5905 \let\@citea\@empty
5906 \leavevmode
5907 \unskip
5908 $^{}%
5909 \scriptstyle
5910 \CITE{%
5911 \for\@citeb:=#2\do{%
5912 \@citea
5913 \def\@citea{\penalty\@m }%
5914 \edef\@citeb{\expandafter\@firstofone\@citeb}%
5915 \if@filesw
5916 \immediate\write\@auxout{\string\citation{\@citeb}}%
5917 \fi
5918 \ifundefined{b@\@citeb\extra@b@citeb}{%
5919 \mbox{\reset@font\bfseries ?}%
5920 \G@refundefinedtrue
5921 \latex@warning{%
5922 Citation ‘\@citeb’ on page \thepage \space undefined%
5923 }%
5924 }{%
5925 {\csname b@\@citeb\extra@b@citeb\endcsname}%
5926 }%
5927 }%
5928 }{#1}%
5929 }$%

```

5930 }%

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.

```

5931 \def\@citex[#1]#2{%
5932   \let\@citea\@empty
5933   \@cite{%
5934     \@for\@citeb:=#2\do{%
5935       \@citea
5936       \def\@citea{\penalty\@m\ }%
5937       \edef\@citeb{\expandafter\@firstofone\@citeb}%
5938       \if@filesw
5939         \immediate\write\@auxout{\string\citation{\@citeb}}%
5940       \fi
5941       \ifundefined{b@\@citeb\@extra@b@citeb}{%
5942         \mbox{\reset@font\bfseries ?}%
5943         \G@refundefinedtrue
5944         \@latex@warning{%
5945           Citation '\@citeb' on page \thepage \space undefined%
5946         }%
5947       }{%
5948         \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
5949       }%
5950     }%
5951   }{#1}%
5952 }%
5953 }{}

```

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 pdfTEX, then hyperref is already loaded at the begin of harvard.sty, and the \newcommand macros causes error messages.

```

5954 \@ifpackageloaded{harvard}{%
5955   \AtBeginDocument{%
5956     \Hy@Info{*** compatibility with harvard ***}%
5957     \Hy@raiselinksfalse
5958     \def\harvardcite#1#2#3#4{%
5959       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
5960       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
5961       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
5962       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
5963     }%
5964     \def\HAR@citetoaux#1{%
5965       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
5966       \ifHy@backref
5967         \ifx\@empty\@currentlabel
5968         \else
5969           \@bsphack
5970           \if@filesw
5971             \protected@write\@auxout{}{%
5972               \string\writefile{brf}{%
5973                 \string\backcite{#1}{%
5974                   {\thepage}{\@currentlabel}{\@currentHref}%

```

```

5975         }%
5976     }%
5977 }%
5978 \fi
5979 \@esphack
5980 \fi
5981 \fi
5982 }%
5983 \def\harvarditem{%
5984     \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}}%
5985 }%
5986 \def\@harvarditem[#1]#2#3#4#5\par{%
5987     \item[]%
5988     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
5989     \if@filesw
5990         \begingroup
5991             \def\protect##1{\string ##1\space}%
5992             \ifthenelse{\equal{#1}{\null}}%
5993                 {\def\next{{#4}{#2}{#2}{#3}}}%
5994                 {\def\next{{#4}{#2}{#1}{#3}}}%
5995             \immediate\write\@auxout{\string\harvardcite\codeof\next}%
5996         \endgroup
5997     \fi
5998     \protect\hspace*{-\labelwidth}%
5999     \protect\hspace*{-\labelsep}%
6000     \ignorespaces
6001     #5%
6002     \ifHy@backref
6003         \newblock
6004         \backref{\csname br@#4\endcsname}%
6005     \fi
6006     \par
6007 }%

```

\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:

```

6008 \long\def\HAR@checkcitations#1#2#3#4{%
6009     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
6010     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6011         \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
6012         \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6013             \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
6014             \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6015                 \else
6016                     \@tempswatruue
6017                 \fi
6018             \else
6019                 \@tempswatruue
6020             \fi
6021         \else
6022             \@tempswatruue
6023         \fi
6024     }%
6025 }%
6026 }{}

```

37.2 Package chicago

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

```
6027 \@ifpackageloaded{chicago}{%  
  
  \citeN  
  
    6028 \def\citeN{%  
    6029   \def\@citesep{--1000}%  
    6030   \def\@cite##1##2{##1}%  
    6031   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%  
    6032   \@citedata@opt  
    6033 }%  
  
  \shortciteN  
  
    6034 \def\shortciteN{%  
    6035   \def\@citesep{--1000}%  
    6036   \def\@cite##1##2{##1}%  
    6037   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%  
    6038   \@citedata@opt  
    6039 }%  
  
  \@citedata@opt  
  
    6040 \def\@citedata@opt{%  
    6041   \let\@cite@opt\@empty  
    6042   \@ifnextchar [{%  
    6043     \@tempswatrue  
    6044     \@citedatax@opt  
    6045   }{%  
    6046     \@tempswafalse  
    6047     \@citedatax[]%  
    6048   }%  
    6049 }%  
  
  \@citedatax@opt  
  
    6050 \def\@citedatax@opt[#1]{%  
    6051   \def\@cite@opt{, #1}%  
    6052   \@citedatax[{#1}]%  
    6053 }%  
  
    6054 }{}
```

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.

```
6055 \def\Hy@EveryPageAnchor{%  
6056   \Hy@DistillerDestFix  
6057   \ifHy@pageanchor  
6058     \ifHy@hypertextnames  
6059     \ifHy@plainpages  
6060       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
```



```

6061     \else
6062     \beginingroup
6063     \let\@number\@firstofone
6064     \Hy@unicodedefalse
6065     \pdfstringdef\@the@H@page{\thepage}%
6066     \endgroup
6067     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6068     \fi
6069     \else
6070     \Hy@GlobalStepCount\Hy@pagecounter
6071     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\Hy@pagecounter}}%
6072     \fi
6073     \vbox to 0pt{%
6074     \kern\voffset
6075     \kern\topmargin
6076     \kern-1bp\relax
6077     \hbox to 0pt{%
6078     \kern\hoffset
6079     \kern\ifodd\value{page}%
6080     \oddsidemargin
6081     \else
6082     \evensidemargin
6083     \fi
6084     \kern-1bp\relax
6085     \Hy@TempPageAnchor
6086     \hss
6087     }%
6088     \vss
6089     }%
6090     \fi
6091 }
6092 \g@addto@macro\Hy@EveryPageBoxHook{%
6093   \Hy@EveryPageAnchor
6094 }

```

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.

```

6095 \def\addcontentsline#1#2#3{% toc extension, type, tag
6096   \beginingroup
6097   \let\label\@gobble
6098   \ifx\@currentHref\@empty
6099     \Hy@Warning{%
6100       No destination for bookmark of \string\addcontentsline,%
6101       \MessageBreak destination is added%
6102     }%
6103     \phantomsection
6104   \fi
6105   \expandafter\ifx\csname toplevel@#2\endcsname\relax
6106   \beginingroup
6107     \def\Hy@tempa{#1}%
6108     \ifx\Hy@tempa\Hy@bookmarkstype
6109       \Hy@WarningNoLine{%
6110         bookmark level for unknown #2 defaults to 0%

```

```

6111         }%
6112     \else
6113         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6114     \fi
6115 \endgroup
6116 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6117 \fi
6118 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
6119 \Hy@writebookmark{\csname the#2\endcsname}%
6120     {#3}%
6121     {\@currentHref}%
6122     {\Hy@toplevel}%
6123     {#1}%
6124 \ifHy@verbose
6125     \def\Hy@tempa{#3}%
6126     \@onelevel@sanitize\Hy@tempa
6127     \typeout{pdfTeX: bookmark at \the\inputlineno: %
6128         {\csname the#2\endcsname}%
6129         {\Hy@tempa}%
6130         {\@currentHref}%
6131         {\Hy@toplevel}%
6132         {#1}%
6133     }%
6134 \fi
6135 \addtocontents{#1}{%
6136     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6137 }%
6138 \endgroup
6139 }
6140 \def\contentsline#1#2#3#4{%
6141     \ifx\#4\%
6142         \csname l@#1\endcsname{#2}{#3}%
6143     \else
6144         \ifcase\Hy@linktoc % none
6145             \csname l@#1\endcsname{#2}{#3}%
6146         \or % section
6147             \csname l@#1\endcsname{%
6148                 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6149             }{#3}%
6150         \or % page
6151             \csname l@#1\endcsname{#2}{#3}%
6152             \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6153         }%
6154         \else % all
6155             \csname l@#1\endcsname{%
6156                 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6157             }{%
6158                 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6159             }%
6160         \fi
6161     \fi
6162 }
6163 </package>
6164 <*check>
6165 \checklatex
6166 \checkcommand\def\addcontentsline#1#2#3{%
6167     \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%

```

```

6168 }
6169 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6170 \end{check}
6171 \end{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.

```

6172 \let\H@definecounter\@definecounter
6173 \def\@definecounter#1{%
6174   \H@definecounter{#1}%
6175   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6176 }

```

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.

```

6177 \let\H@newctr\@newctr
6178 \def\@newctr#1[#2]{%
6179   \H@newctr#1[#2]%
6180   \expandafter\def\csname theH#1\endcsname{%
6181     \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}}%
6182   }%
6183 }

```

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.

```

6184 \@ifpackageloaded{amsmath}{%
6185   \def\Hy@make@anchor{%
6186     \Hy@GlobalStepCount\Hy@linkcounter
6187     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6188     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6189   }%
6190   \def\Hy@make@df@tag@@#1{%
6191     \gdef\df@tag{%
6192       \maketag@@@{\Hy@make@anchor#1}%
6193       \def\@currentlabel{#1}%
6194     }%
6195   }%
6196   \def\Hy@make@df@tag@@@#1{%
6197     \gdef\df@tag{%
6198       \tagform@{\Hy@make@anchor#1}%
6199       \toks@{\xp{\p@equation{#1}}}%
6200       \edef\@currentlabel{\the\toks@}%
6201     }%
6202   }%
6203   \let\HyOrg@make@df@tag@@\make@df@tag@@
6204   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
6205   \let\make@df@tag@@\Hy@make@df@tag@@

```

```

6206 \let\make@df@tag@@@Hy@make@df@tag@@@
6207 }{}

```

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

```

6208 \ifpackagewith{hyperref}{pdftex}{%
6209   \let\H@seteqlabel\@seteqlabel
6210   \def\@seteqlabel#1{%
6211     \H@seteqlabel{#1}%
6212     \xdef\@currentHref{AMS.\theHy@linkcounter}%
6213     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6214   }%
6215 }{}

```

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.

```

6216 \let\HyOrg@addtoreset\@addtoreset
6217 \def\@addtoreset#1#2{%
6218   \HyOrg@addtoreset{#1}{#2}%
6219   \expandafter\xdef\csname theH#1\endcsname{%
6220     \expandafter\noexpand
6221     \csname the\@ifundefined{theH#2}{}H#2\endcsname
6222     .\noexpand\the\noexpand\value{#1}%
6223   }%
6224 }

```

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

```

6225 </package>
6226 <*check>
6227 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6228 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6229   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6230     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6231       \@addtoreset{#2}{#3}%
6232       \xp\xdef\csname the#2\endcsname{%
6233         \xp\xnx\csname the#3\endcsname .\nx#1{#2}%
6234       }%
6235     }%
6236   }%
6237 }%
6238 </check>
6239 <*package>
6240 \ifpackageloaded{amsmath}{%
6241   \@ifpackagelater{amsmath}{1999/12/14}{%

```

```

6242 \renewcommand*{\numberwithin}[3][\arabic]{%
6243 \ifundefined{c#2}{\@nocounterr{#2}}{%
6244 \ifundefined{c#3}{\@nocnterr{#3}}{%
6245 \HyOrg@addtoreset{#2}{#3}%
6246 \xp\xdef\csname the#2\endcsname{%
6247 \xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6248 }%
6249 \xp\xdef\csname theH#2\endcsname{%
6250 \xp\@nx
6251 \csname the\ifundefined{theH#3}{H#3\endcsname
6252 .\@nx#1{#2}%
6253 }%
6254 }%
6255 }%
6256 }%
6257 }{%
6258 \Hy@WarningNoLine{%
6259 \string\numberwithin\space of package ‘amsmath’ %
6260 only fixed\MessageBreak
6261 for version 2000/06/06 v2.12 or newer%
6262 }%
6263 }%
6264 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

6265 \ifHy@figures
6266 \let\Hy@Gin@setfile\Gin@setfile
6267 \def\Gin@setfile#1#2#3{%
6268 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6269 }%
6270 \fi
6271 \Hy@DisableOption{hyperfigures}

```

43 hyperindex entries

Internal command names are prefixed with \HyInd@.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the | feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the | specifier for something like boldening entries. That would make Makeindex fail (cannot have two | specifiers). The solution is for the author to use generic coding, and put in the requisite \hyperpage in his/her own macros along with the boldness.

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

```

6272 \ifHy@hyperindex
6273 \def\HyInd@ParenLeft{(%}
6274 \def\HyInd@ParenRight{)%}
6275 \Hy@nextfalse
6276 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6277 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6278 \begingroup
6279 \lccode‘\|=\expandafter‘\HyInd@EncapChar\relax

```

```

6280 \lowercase{\endgroup
6281 \ifHy@next
6282 \let\HyInd@org@wrindex\@wrindex
6283 \def\@wrindex#1#2{\HyInd@wrindex{#1}#2||\}%
6284 \def\HyInd@wrindex#1#2|#3|#4\{\%
6285 \ifx\|#3\%
6286 \HyInd@org@wrindex{#1}{#2|hyperpage}%
6287 \else
6288 \def\Hy@temp@A{#3}%
6289 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6290 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6291 \relax
6292 \HyInd@org@wrindex{#1}{#2|#3}%
6293 \else
6294 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
6295 \fi
6296 \fi
6297 }%
6298 \else
6299 \def\@wrindex#1{\@wrindex#1||\}%
6300 \def\@wrindex#1|#2|#3\{\%
6301 \if@files
6302 \ifx\|#2\%
6303 \protected@write\@indexfile{\%
6304 \string\indexentry{#1|hyperpage}{\thepage}%
6305 }%
6306 \else
6307 \def\Hy@temp@A{#2}%
6308 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6309 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6310 \relax
6311 \protected@write\@indexfile{\%
6312 \string\indexentry{#1|#2}{\thepage}%
6313 }%
6314 \else
6315 \protected@write\@indexfile{\%
6316 \string\indexentry{#1|#2hyperpage}{\thepage}%
6317 }%
6318 \fi
6319 \fi
6320 \fi
6321 \endgroup
6322 \@esphack
6323 }%
6324 \fi
6325 }%
6326 \fi
6327 \Hy@DisableOption{hyperindex}
6328 \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.

```
6329 \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.

```
6330 \def\hyperpage#1{\%
```

```

6331 \HyInd@hyperpage#1\nohyperpage{}\@nil
6332 }
6333 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
6334 \HyInd@hyperpage{#1}%
6335 #2%
6336 \def\Hy@temp{#3}%
6337 \ifx\Hy@temp\@empty
6338 \else
6339 \Hy@ReturnAfterFi{%
6340 \HyInd@hyperpage#3\@nil
6341 }%
6342 \fi
6343 }
6344 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
6345 \def\@hyperpage#1--#2--#3\{%
6346 \ifx\#2\%
6347 \@commahyperpage{#1}%
6348 \else
6349 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6350 \fi
6351 }
6352 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6353 \def\@commahyperpage#1, #2,#3\{%
6354 \ifx\#2\%
6355 \HyInd@pagelink{#1}%
6356 \else
6357 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6358 \fi
6359 }

```

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

```

6360 \def\HyInd@pagelink#1{%
6361 \begingroup
6362 \toks@={}%
6363 \HyInd@removespaces#1 \@nil
6364 \endgroup
6365 }
6366 \def\HyInd@removespaces#1 #2\@nil{%
6367 \toks@=\expandafter{\the\toks@#1}%
6368 \ifx\#2\%
6369 \edef\x{\the\toks@}%
6370 \ifx\x\@empty
6371 \else
6372 \hyperlink{page.\the\toks@}{\the\toks@}%
6373 \fi
6374 \else
6375 \Hy@ReturnAfterFi{%
6376 \HyInd@removespaces#2\@nil
6377 }%
6378 \fi
6379 }

```

44 Compatibility with foiltex

```

6380 \@ifclassloaded{foils}{%
6381 \providecommand*\ext@table{lot}%

```

```

6382 \providecommand*{\ext@figure{lof}}%
6383 }{}

```

45 Compatibility with seminar slide package

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

```

6384 \@ifclassloaded{seminar}{%
6385   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
6386 }{%
6387   \Hy@seminarslidesfalse
6388 }
6389 \@ifpackageloaded{slidesec}{%
6390   \newcommand\theHslidesection {\arabic{slidesection}}}%
6391   \newcommand\theHslidesubsection{%
6392     \theHslidesection.\arabic{slidesubsection}}%
6393 }%
6394 \def\slide@heading[#1]#2{%
6395   \H@refstepcounter{slidesection}%
6396   \@addtoreset{slidesubsection}{slidesection}%
6397   \addtocontents{los}{%
6398     \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6399     {\@SCTR}{slideheading.\theslidesection}}%
6400   }%
6401   \def\Hy@tempa{#2}%
6402   \ifx\Hy@tempa\@empty
6403   \else
6404     {%
6405       \edef\@currentlabel{%
6406         \csname p@slidesection\endcsname\theslidesection
6407       }%
6408       \makeslideheading{#2}%
6409     }%
6410   \fi
6411   \gdef\theslideheading{#1}%
6412   \gdef\theslidesubheading{}%
6413   \ifHy@bookmarksnumbered
6414     \def\Hy@slidetitle{\theslidesection\space #1}%
6415   \else
6416     \def\Hy@slidetitle{#1}%
6417   \fi
6418   \ifHy@hypertextnames
6419     \ifHy@naturalnames
6420       \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6421       \Hy@writebookmark
6422         {\theslidesection}%
6423         {\Hy@slidetitle}%
6424         {slideheading.\theslidesection}%
6425         {1}%
6426         {toc}%
6427     \else
6428       \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6429       \Hy@writebookmark
6430         {\theslidesection}%
6431         {\Hy@slidetitle}%
6432         {slideheading.\theHslidesection}%
6433         {1}%

```



```

6434         {toc}%
6435     \fi
6436 \else
6437     \Hy@GlobalStepCount\Hy@linkcounter
6438     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6439     \Hy@writebookmark
6440         {\theslidesubsection}%
6441         {\Hy@slidetitle}%
6442         {slideheading.\the\Hy@linkcounter}%
6443         {1}%
6444     {toc}%
6445 \fi
6446 }%
6447 \def\slide@subheading[#1]#2{%
6448     \H@refstepcounter{slidesubsection}%
6449     \addtocontents{los}{%
6450         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6451         {\@SCTR}{slideheading.\theslidesubsection}%
6452     }%
6453     \def\Hy@tempa{#2}%
6454     \ifx\Hy@tempa\@empty
6455     \else
6456         {%
6457             \edef\@currentlabel{%
6458                 \csname p@slidesubsection\endcsname\theslidesubsection
6459             }%
6460             \makeslidesubheading{#2}%
6461         }%
6462     \fi
6463     \gdef\theslidesubheading{#1}%
6464     \ifHy@bookmarksnumbered
6465         \def\Hy@slidetitle{\theslidesubsection\space #1}%
6466     \else
6467         \def\Hy@slidetitle{#1}%
6468     \fi
6469     \ifHy@hypertextnames
6470         \ifHy@naturalnames
6471             \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
6472             \Hy@writebookmark
6473                 {\theslidesubsection}%
6474                 {\Hy@slidetitle}%
6475                 {slideheading.\theslidesubsection}%
6476                 {2}%
6477             {toc}%
6478         \else
6479             \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
6480             \Hy@writebookmark
6481                 {\theslidesubsection}%
6482                 {\Hy@slidetitle}%
6483                 {slideheading.\theHslidesubsection}%
6484                 {2}%
6485             {toc}%
6486         \fi
6487     \else
6488         \Hy@GlobalStepCount\Hy@linkcounter
6489         \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6490         \Hy@writebookmark

```

```

6491         {\theslidesubsection}%
6492         {\Hy@slidetitle}%
6493         {slideheading.\the\Hy@linkcounter}%
6494         {1}%
6495         {toc}%
6496     \fi
6497 }%
6498 \providecommand*{\listslidenam}{List of Slides}%
6499 \def\listofslides{%
6500     \section*{%
6501         \listslidenam
6502         \@mkboth{%
6503             \expandafter\MakeUppercase\listslidenam
6504         }{%
6505             \expandafter\MakeUppercase\listslidenam
6506         }%
6507     }%
6508     \def\l@slide##1##2##3##4{%
6509         \slide@undottedcline{%
6510             \slidenumberline{##3}{\hyperlink{##4}{##2}}%
6511         }%
6512     }%
6513     \let\l@subslide\l@slide
6514     \@startlos
6515 }%
6516 \def\slide@contents{%
6517     \def\l@slide##1##2##3##4{%
6518         \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
6519     }%
6520     \let\l@subslide\@gobblefour
6521     \@startlos
6522 }%
6523 \def\Slide@contents{%
6524     \def\l@slide##1##2##3##4{%
6525         \ifcase\lslide@flag
6526             \message{##1 ** \the\c@slidesection}%
6527             \ifnum##1>\c@slidesection
6528                 \def\lslide@flag{1}%
6529                 {%
6530                     \large
6531                     \slide@ccline{%
6532                         \slidenumberline{$\rightarrow\bullet$}%
6533                         {\hyperlink{##4}{##2}}%
6534                     }{##3}%
6535                 }%
6536             \else
6537                 {%
6538                     \large
6539                     \slide@ccline{%
6540                         \slidenumberline{$\surd\;\bullet$}%
6541                         {\hyperlink{##4}{##2}}%
6542                     }{##3}%
6543                 }%
6544             \fi
6545         \or
6546             \def\lslide@flag{2}%
6547             {%

```

```

6548         \large
6549         \slide@cline{%
6550             \slidenumberline{$\bullet$}%
6551             {\hyperlink{##4}{##2}}%
6552         }{##3}%
6553     }%
6554     \or
6555     {%
6556         \large
6557         \slide@cline{%
6558             \slidenumberline{$\bullet$}%
6559             {\hyperlink{##4}{##2}}%
6560         }{##3}%
6561     }%
6562     \fi
6563 }%
6564 \def\l@subslide##1##2##3##4{%
6565     \ifnum\lslide@flag=1 %
6566         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
6567     \fi
6568 }%
6569 \def\lslide@flag{0}%
6570 \@startlos
6571 }%
6572 }{}

```

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.)

```

6573 \ifHy@texht
6574     \expandafter\endinput
6575 \fi
6576 \let\real@setref\@setref
6577 \def\@setref#1#2#3{% csname, extract group, refname
6578     \ifx#1\relax
6579         \protect\G@refundefinedtrue
6580         \nfss@text{\reset@font\bfseries ??}%
6581         \@latex@warning{%
6582             Reference ‘#3’ on page \thepage \space undefined%
6583         }%
6584     \else
6585         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
6586     \fi
6587 }

```

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

```

6588 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
6589     \begingroup
6590     \toks0={\hyper@@link{#5}{#4}}%
6591     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
6592     \edef\x{\endgroup
6593         \the\toks0 {\the\toks1 }%
6594     }%
6595     \x
6596 }
6597 \def\@pagesetref#1#2#3{% csname, extract macro, ref
6598     \ifx#1\relax

```

```

6599 \protect\G@refundefinedtrue
6600 \nfss@text{\reset@font\bfseries ??}%
6601 \@latex@warning{%
6602     Reference '#3' on page \thepage \space undefined%
6603 }%
6604 \else
6605 \protect\hyper@@link
6606 {\expandafter\@fifthoffive#1}%
6607 {page.\expandafter\@secondoffive#1}%
6608 {\expandafter\@secondoffive#1}%
6609 \fi
6610 }

6611 </package>
6612 <*check>
6613 \checklatex
6614 \checkcommand\def\@setref#1#2#3{%
6615 \ifx#1\relax
6616 \protect\G@refundefinedtrue
6617 \nfss@text{\reset@font\bfseries ??}%
6618 \@latex@warning{%
6619     Reference '#3' on page \thepage\space undefined%
6620 }%
6621 \else
6622 \expandafter#2#1\relax
6623 \fi
6624 }
6625 </check>
6626 <*package>

```

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

```

6627 \def\HyRef@StarSetRef#1{%
6628 \begingroup
6629 \Hy@safe@activetrue
6630 \edef\x{#1}%
6631 \@onelevel@sanitize\x
6632 \edef\x{\endgroup
6633 \noexpand\HyRef@StarSetRef
6634 \expandafter\noexpand\csname r@\x\endcsname{\x}%
6635 }%
6636 \x
6637 }

6638 \def\HyRef@StarSetRef#1#2#3{%
6639 \ifx#1\@undefined
6640 \let#1\relax
6641 \fi
6642 \real@setref#1#3{#2}%
6643 }

6644 \def\@refstar#1{%
6645 \HyRef@StarSetRef{#1}\@firstoffive
6646 }

6647 \def\@pagerefstar#1{%
6648 \HyRef@StarSetRef{#1}\@secondoffive
6649 }

6650 \AtBeginDocument{%
6651 \ifpackageloaded{varioref}{%
6652 \def\@Refstar#1{%

```

```

6653     \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
6654   }%
6655   \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
6656     \MakeUppercase#1%
6657   }%
6658   \DeclareRobustCommand*\Ref{%
6659     \@ifstar\@Refstar\HyRef@Ref
6660   }%
6661   \def\HyRef@Ref#1{%
6662     \hyperref[#{1}]{\Ref*{#1}}%
6663   }%
6664   \def\Vr@f#1{%
6665     \leavevmode\unskip\vref@space
6666     \hyperref[#{1}]{%
6667       \Ref*{#1}%
6668       \let\vref@space\nobreakspace
6669       \@vpageref[\unskip]{#1}%
6670     }%
6671   }%
6672   \def\vr@f#1{%
6673     \leavevmode\unskip\vref@space
6674     \begingroup
6675       \let\T@pageref\@pagerefstar
6676       \hyperref[#{1}]{%
6677         \ref*{#1}%
6678         \vpageref[\unskip]{#1}%
6679       }%
6680     \endgroup
6681   }%
6682 }{}%
6683 }
6684 \DeclareRobustCommand*\autopageref{%
6685   \@ifstar{%
6686     \HyRef@autopagerefname\pageref*%
6687   }\HyRef@autopageref
6688 }
6689 \def\HyRef@autopageref#1{%
6690   \hyperref[#{1}]{\HyRef@autopagerefname\pageref*{#1}}%
6691 }
6692 \def\HyRef@autopagerefname{%
6693   \@ifundefined{pageautorefname}{%
6694     \@ifundefined{pagename}{%
6695       \Hy@Warning{No autoref name for 'page'}%
6696     }{%
6697       \pagename\nobreakspace
6698     }%
6699   }{%
6700     \pageautorefname\nobreakspace
6701   }%
6702 }
6703 \DeclareRobustCommand*\autoref{%
6704   \@ifstar{\HyRef@autoref\@gobbletwo}{\HyRef@autoref\hyper@link}%
6705 }
6706 \def\HyRef@autoref#1#2{%
6707   \begingroup
6708     \Hy@safe@activetrue
6709     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%

```

```

6710 \endgroup
6711 }
6712 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
6713 \HyRef@showkeysref{#2}%
6714 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
6715 \edef\HyRef@thisref{%
6716 \expandafter\@fourthoffive#1\@empty\@empty\@empty
6717 }%
6718 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
6719 \Hy@safe@activesfalse
6720 #3{%
6721 \expandafter\@fifthoffive#1\@empty\@empty\@empty
6722 }{%
6723 \expandafter\@fourthoffive#1\@empty\@empty\@empty
6724 }{%
6725 \HyRef@currentHtag
6726 \expandafter\@firstoffive#1\@empty\@empty\@empty
6727 \null
6728 }%
6729 \else
6730 \protect\G@refundefinedtrue
6731 \nfss@text{\reset@font\bfseries ??}%
6732 \@latex@warning{%
6733 Reference ‘#2’ on page \thepage\space undefined%
6734 }%
6735 \fi
6736 }
6737 \def\HyRef@testreftype#1.#2\{%
6738 \@ifundefined{#1autorefname}{%
6739 \@ifundefined{#1name}{%
6740 \HyRef@StripStar#1\*\@nil{#1}%
6741 \@ifundefined{\HyRef@name autorefname}{%
6742 \@ifundefined{\HyRef@name name}{%
6743 \def\HyRef@currentHtag{%
6744 \Hy@Warning{No autoref name for ‘#1’}%
6745 }{%
6746 \edef\HyRef@currentHtag{%
6747 \expandafter\noexpand\csname\HyRef@name name\endcsname
6748 \noexpand~%
6749 }%
6750 }%
6751 }{%
6752 \edef\HyRef@currentHtag{%
6753 \expandafter\noexpand\csname\HyRef@name autorefname\endcsname
6754 \noexpand~%
6755 }%
6756 }%
6757 }{%
6758 \edef\HyRef@currentHtag{%
6759 \expandafter\noexpand\csname#1name\endcsname
6760 \noexpand~%
6761 }%
6762 }%
6763 }{%
6764 \edef\HyRef@currentHtag{%
6765 \expandafter\noexpand\csname#1autorefname\endcsname
6766 \noexpand~%

```

```

6767 }%
6768 }%
6769 }
6770 \def\HyRef@StripStar#1*\#2\@nil#3{%
6771   \def\HyRef@name{#2}%
6772   \ifx\HyRef@name\HyRef@CaseStar
6773     \def\HyRef@name{#1}%
6774   \else
6775     \def\HyRef@name{#3}%
6776   \fi
6777 }
6778 \def\HyRef@CaseStar{*\\}
6779 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

6780 \let\HyRef@ShowKeysRef\@gobble
6781 \def\HyRef@ShowKeysInit{%
6782   \begingroup\expandafter\expandafter\expandafter\endgroup
6783   \expandafter\ifx\csname SK@@label\endcsname\relax
6784   \else
6785     \ifx\SK@ref\@empty
6786     \else
6787       \def\HyRef@ShowKeysRef{%
6788         \SK@\SK@@ref
6789       }%
6790     \fi
6791   \fi
6792 }
6793 \@ifpackageloaded{showkeys}{%
6794   \HyRef@ShowKeysInit
6795 }{%
6796   \AtBeginDocument{%
6797     \@ifpackageloaded{showkeys}{%
6798       \HyRef@ShowKeysInit
6799     }{}%
6800   }%
6801 }

```

Defaults for the names that \autoref uses.

```

6802 \providecommand*\AMSautorefname{\equationautorefname}
6803 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
6804 \providecommand*\Itemautorefname{\itemautorefname}
6805 \providecommand*\itemautorefname{item}
6806 \providecommand*\equationautorefname{Equation}
6807 \providecommand*\footnoteautorefname{footnote}
6808 \providecommand*\itemautorefname{item}
6809 \providecommand*\figureautorefname{Figure}
6810 \providecommand*\tableautorefname{Table}
6811 \providecommand*\partautorefname{Part}
6812 \providecommand*\appendixautorefname{Appendix}
6813 \providecommand*\chapterautorefname{chapter}
6814 \providecommand*\sectionautorefname{section}
6815 \providecommand*\subsectionautorefname{subsection}
6816 \providecommand*\subsubsectionautorefname{subsubsection}
6817 \providecommand*\paragraphautorefname{paragraph}
6818 \providecommand*\subparagraphautorefname{subparagraph}

```

```

6819 \providecommand*\FancyVerbLineautorefname{line}
6820 \providecommand*\theoremautorefname{Theorem}
6821 \providecommand*\pageautorefname{page}
6822 \endpackage

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

6823 <*pdftex | dvipdfm | vtex | pdfmarkbase | dviwindo>
6824 \RequirePackage{pdfdoccmds}[2007/11/11]
6825 \begingroup\expandafter\expandafter\expandafter\endgroup
6826 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
6827   \begingroup
6828     \catcode'\|=0 %
6829     \@makeother\| %
6830     \@firstofone{\endgroup
6831       |def|Hy@pstringdef#1#2{%
6832         |begingroup
6833         |edef~{|string~}%
6834         |xdef|Hy@gtemp{#2}%
6835         |endgroup
6836         |let#1|Hy@gtemp
6837         |@onelevel@sanitize#1%
6838         |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
6839         |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
6840         |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1|@nil}%
6841       }%
6842       |def|Hy@ExchangeBackslash#1\#2|@nil{%
6843         #1%
6844         |ifx|\#2\| %
6845         |else
6846         \| %
6847         |Hy@ReturnAfterFi{%
6848         |Hy@ExchangeBackslash#2|@nil
6849         }%
6850       |fi
6851     }%
6852   }%
6853 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
6854   #1%
6855   \ifx\#2\| %
6856   \else
6857     \@backslashchar(%
6858     \Hy@ReturnAfterFi{%
6859     \Hy@ExchangeLeftParenthesis#2\@nil
6860   }%
6861   \fi
6862 }%

```



```

6863 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
6864     #1%
6865     \ifx\#2\%
6866     \else
6867         \@backslashchar)%
6868         \Hy@ReturnAfterFi{%
6869         \Hy@ExchangeRightParenthesis#2\@nil
6870     }%
6871     \fi
6872 }%
6873 \else
6874 \def\Hy@pstringdef#1#2{%
6875     \begingroup
6876     \edef~{\string~}%
6877     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
6878     \endgroup
6879     \let#1\Hy@gtemp
6880 }%
6881 \fi
6882 \pdfTeX | dvipdfm | vtex | pdfmarkbase | dviwindo)

```

46.2 pdftex

```

6883 \pdfTeX
6884 \providecommand*\XR@ext}{pdf}
6885 \Hy@setbreaklinks{true}

```

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

Set PDF version if requested by option `pdfversion`.

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

```

6886 \let\Hy@pdfminorversion\relax
6887 \begingroup\expandafter\expandafter\expandafter\endgroup
6888 \expandafter\ifx\csname pdfminorversion\endcsname\relax
6889     \begingroup\expandafter\expandafter\expandafter\endgroup
6890     \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
6891     \else
6892         \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
6893     \fi
6894 \else
6895     \def\Hy@pdfminorversion{\pdfminorversion}%
6896 \fi
6897 \ifundefined{Hy@pdfminorversion}{%
6898     \PackageInfo{hyperref}{%
6899         PDF version is not set, because pdfTeX is too old (<1.10a)%
6900     }%
6901 }%
6902 \ifHy@ocgcolorlinks
6903     \ifnum\Hy@pdfminorversion<5 %
6904         \setkeys{Hyp}{pdfversion=1.5}%
6905     \fi
6906 \fi
6907 \ifHy@setpdfversion
6908     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax

```

```

6909 \else
6910 \Hy@pdfminorversion=\Hy@pdfversion\relax
6911 \fi
6912 \PackageInfo{hyperref}{%
6913 \expandafter\string\Hy@pdfminorversion
6914 :=\number\Hy@pdfversion\space
6915 }%
6916 \fi
6917 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
6918 }
6919 \Hy@DisableOption{pdfversion}%

6920 \ifHy@ocgcolorlinks
6921 \immediate\pdfobj{%
6922 <<%
6923 /Type/OCG%
6924 /Name(View)%
6925 /Usage<<%
6926 /Print<<%
6927 /PrintState/OFF%
6928 >>%
6929 /View<<%
6930 /ViewState/ON%
6931 >>%
6932 >>%
6933 >>%
6934 }%
6935 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
6936 \immediate\pdfobj{%
6937 <<%
6938 /Type/OCG%
6939 /Name(Print)%
6940 /Usage<<%
6941 /Print<<%
6942 /PrintState/ON%
6943 >>%
6944 /View<<%
6945 /ViewState/OFF%
6946 >>%
6947 >>%
6948 >>%
6949 }%
6950 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
6951 \immediate\pdfobj{%
6952 [%
6953 \OBJ@OCG@view\space\OBJ@OCG@print
6954 ]%
6955 }%
6956 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
6957 \pdfcatalog{%
6958 /OCProperties<<%
6959 /OCGs \OBJ@OCGs
6960 /D<<%
6961 /OFF[\OBJ@OCG@print]%
6962 /AS[%
6963 <<%
6964 /Event/View%
6965 /OCGs \OBJ@OCGs

```

```

6966         /Category[/View]%
6967     >>%
6968     <<%
6969         /Event/Print%
6970         /OCGs \OBJ@OCGs
6971         /Category[/Print]%
6972     >>%
6973     <<%
6974         /Event/Export%
6975         /OCGs \OBJ@OCGs
6976         /Category[/Print]%
6977     >>%
6978     ]%
6979 >>%
6980 >>%
6981 }%
6982 \begingroup
6983     \edef\x{\endgroup
6984         \pdfpageresources{%
6985             /Properties<<%
6986                 /OCView \OBJ@OCG@view
6987                 /OCPrint \OBJ@OCG@print
6988             >>%
6989         }%
6990     }%
6991 \x
6992 \AtBeginDocument{%
6993     \def\Hy@colorlink#1{%
6994         \begingroup
6995             \ifHy@ocgcolorlinks
6996                 \def\Hy@ocgcolor{#1}%
6997                 \setbox0=\color@hbox
6998             \else
6999                 \HyColor@UseColor#1%
7000             \fi
7001         }%
7002     \def\Hy@endcolorlink{%
7003         \ifHy@ocgcolorlinks
7004             \color@endbox
7005             \mbox{%
7006                 \pdfliteral page{/OC/OCPrint BDC}%
7007                 \rlap{\copy0}%
7008                 \pdfliteral page{EMC/OC/OCView BDC}%
7009                 \begingroup
7010                     \expandafter\HyColor@UseColor\Hy@ocgcolor
7011                     \box0 %
7012                 \endgroup
7013                 \pdfliteral page{EMC}%
7014             }%
7015         \fi
7016     \endgroup
7017 }%
7018 }%
7019 \else
7020 \Hy@DisableOption{ocgcolorlinks}%
7021 \fi

```

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

```

7022 \def\setpdflinkmargin#1{\pdflinkmargin#1}
7023 \ifx\pdfstartlink\undefined% less than version 14
7024   \let\pdfstartlink\pdfannotlink
7025   \let\pdflinkmargin\@tempdima
7026   \let\pdfxform\pdfform
7027   \let\pdflastxform\pdflastform
7028   \let\pdfrefxform\pdfrefform
7029 \else
7030   \pdflinkmargin1pt %
7031 \fi

```

First set up the default linking

```
7032 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7033 \def\new@pdflink#1{%
7034   \ifHy@verbose
7035     \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
7036   \fi
7037   \Hy@SaveLastskip
7038   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7039   \Hy@DestName\Hy@pstringDest\@pdfview
7040   \Hy@RestoreLastskip
7041 }
7042 \let\pdf@endanchor\@empty

```

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

```

7043 \def\Hy@DestName#1#2{%
7044   \pdfdest name{#1}#2\relax
7045 }

```

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.

```

7046 \providecommand*\@pdfborder{0 0 1}
7047 \providecommand*\@pdfborderstyle{}
7048 \def\Hy@undefinedname{UNDEFINED}
7049 \def\find@pdflink#1#2{%
7050   \leavevmode
7051   \protected@edef\Hy@testname{#2}%
7052   \ifx\Hy@testname\@empty
7053     \Hy@Warning{%
7054       Empty destination name,\MessageBreak
7055       using '\Hy@undefinedname'%
7056     }%
7057     \let\Hy@testname\Hy@undefinedname
7058   \else
7059     \Hy@pstringdef\Hy@testname{%
7060       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7061     }%
7062   \fi
7063   \Hy@StartlinkName{%
7064     \ifHy@pdfa /F 4\fi
7065     \Hy@setpdfborder
7066     \ifx\@pdfhighlight\@empty
7067       \else

```

```

7068      /H\@pdfhighlight
7069      \fi
7070      \ifx\CurrentBorderColor\relax
7071      \else
7072      /C[\CurrentBorderColor]%
7073      \fi
7074  }\Hy@testname
7075  \expandafter\Hy@colorlink\csname @#1color\endcsname
7076 }
7077 \def\Hy@StartlinkName#1#2{%
7078   \pdfstartlink attr{#1}goto name{#2}\relax
7079 }
7080 \def\close@pdflink{\Hy@endcolorlink\pdfendlink}
7081 \def\hyper@anchor#1{\new@pdflink{#1}\anchor@spot\pdf@endanchor}
7082 \def\hyper@anchorstart#1{\new@pdflink{#1}\Hy@activeanchortrue}
7083 \def\hyper@anchorend{\pdf@endanchor\Hy@activeanchorfalse}
7084 \def\hyper@linkstart#1#2{%
7085   \@ifundefined{@#1bordercolor}{%
7086     \let\CurrentBorderColor\relax
7087   }{%
7088     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7089   }%
7090   \find@pdflink{#1}{#2}%
7091 }
7092 \def\hyper@linkend{\close@pdflink}
7093 \def\hyper@link#1#2#3{%
7094   \@ifundefined{@#1bordercolor}{%
7095     \let\CurrentBorderColor\relax
7096   }{%
7097     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7098   }%
7099   \find@pdflink{#1}{#2}#3%
7100   \close@pdflink
7101 }
7102 \let\CurrentBorderColor\@linkbordercolor
7103 \def\hyper@linkurl#1#2{%
7104   \begingroup
7105     \Hy@pstringdef\Hy@pstringURI{#2}%
7106     \hyper@chars
7107     \leavevmode
7108     \pdfstartlink
7109       attr{%
7110         \Hy@setpdfborder
7111         \ifx\@pdfhighlight\@empty
7112         \else
7113         /H\@pdfhighlight
7114         \fi
7115         \ifx\@urlbordercolor\relax
7116         \else
7117         /C[\@urlbordercolor]%
7118         \fi
7119       }%
7120     user{%
7121       /Subtype/Link%
7122       \ifHy@pdfa /F 4\fi
7123       /A<<%
7124       /Type/Action%

```

```

7125         /S/URI%
7126         /URI(\Hy@pstringURI)%
7127         >>%
7128     }%
7129     \relax
7130     \Hy@colorlink\@urlcolor#1%
7131     \close@pdflink
7132 \endgroup
7133 }
7134 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7135     \begingroup
7136     \Hy@pstringdef\Hy@pstringF{#2}%
7137     \Hy@pstringdef\Hy@pstringD{#3}%
7138     \leavevmode
7139     \pdfstartlink
7140     attr{%
7141         \Hy@setpdfborder
7142         \ifx\@pdfhighlight\@empty
7143         \else
7144             /H\@pdfhighlight
7145         \fi
7146         \ifx\@filebordercolor\relax
7147         \else
7148             /C[\@filebordercolor]%
7149         \fi
7150     }%
7151     user {%
7152         /Subtype/Link%
7153         \ifHy@pdfa /F 4\fi
7154         /A<<%
7155         /F(\Hy@pstringF)%
7156         /S/GoToR%
7157         \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}

```

```

7158         \ifx\#3\%
7159         /D[0 \@pdfstartview]%
7160         \else
7161         /D(\Hy@pstringD)%
7162         \fi
7163         >>%
7164     }%
7165     \relax
7166     \Hy@colorlink\@filecolor#1%
7167     \close@pdflink
7168 \endgroup
7169 }
7170 \def\hyper@launch run:#1\#2#3{% filename, anchor text linkname

```

```

7171 \beginpgroup
7172   \Hy@pstringdef\Hy@pstringF{#1}%
7173   \Hy@pstringdef\Hy@pstringP{#3}%
7174   \leavevmode
7175   \pdfstartlink
7176     attr{%
7177       \Hy@setpdfborder
7178       \ifx\@pdfhighlight\@empty
7179       \else
7180         /H\@pdfhighlight
7181       \fi
7182       \ifx\@runbordercolor\relax
7183       \else
7184         /C[\@runbordercolor]%
7185       \fi
7186     }%
7187     user {%
7188       /Subtype/Link%
7189       \ifHy@pdfa /F 4\fi
7190       /A<<%
7191         /F(\Hy@pstringF)%
7192         /S/Launch%
7193         \Hy@SetNewWindow
7194         \ifx\@#3\%
7195         \else
7196           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7197         \fi
7198       >>%
7199     }%
7200     \relax
7201     \Hy@colorlink\@runcolor#2%
7202     \close@pdflink
7203   \endpgroup
7204 }

```

\@pdfproducer

```

7205 \ifx\@pdfproducer\relax
7206   \beginpgroup\expandafter\expandafter\expandafter\endpgroup
7207   \expandafter\ifx\cename luatexversion\endcename\relax
7208     \def\@pdfproducer{pdfTeX}%
7209     \ifx\@eTeXversion\@undefined
7210     \else
7211       \ifx\@eTeXversion\relax
7212       \else
7213         \ifnum\@eTeXversion>0 %
7214           \def\@pdfproducer{pdfTeX}%
7215         \fi
7216       \fi
7217     \fi
7218     \ifx\pdftexversion\@undefined
7219     \else
7220       \ifnum\pdftexversion<100 %
7221         \edef\@pdfproducer{%
7222           \@pdfproducer
7223           \the\pdftexversion.\pdftexrevision
7224         }%
7225       \else

```

```

7226     \ifnum\pdfTeXversion<130 %
7227     \edef\@pdfproducer{%
7228     \pdfproducer-%
7229     \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7230     \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
7231     \pdfTeXrevision
7232     }%
7233     \else
7234     \ifnum\pdfTeXversion<140 %
7235     \else
7236     \def\@pdfproducer{pdfTeX}%
7237     \fi
7238     \edef\@pdfproducer{%
7239     \pdfproducer-%
7240     \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7241     \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7242     \pdfTeXrevision
7243     }%
7244     \fi
7245     \fi
7246     \fi
7247     \else
7248     \begingroup
7249     \count@=\luatexversion
7250     \divide\count@ by 100 %
7251     \edef\x{\the\count@}%
7252     \count@=-\x\relax
7253     \multiply\count@ by 100 %
7254     \advance\count@ by \luatexversion
7255     \edef\x{\endgroup
7256     \def\noexpand\@pdfproducer{%
7257     LuaTeX-\x.\the\count@.\luatexrevision
7258     }%
7259     }%
7260     \x
7261     \fi
7262     \fi

```

\PDF@SetupDox

```

7263 \def\PDF@SetupDoc{%
7264 \ifx\@pdfpagescrop\@empty
7265 \else
7266 \edef\process@me{%
7267 \pdfpagesattr={%
7268 /CropBox[\@pdfpagescrop]%
7269 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
7270 \else
7271 ^~J\the\pdfpagesattr
7272 \fi
7273 }%
7274 }%
7275 \process@me
7276 \fi
7277 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7278 \pdfcatalog{%
7279 /PageMode/\@pdfpagemode
7280 \ifx\@baseurl\@empty

```



```

7281     \else
7282         /URI<</Base(\Hy@pstringB)>>%
7283     \fi
7284 }%
7285 \ifx\@pdfstartpage\@empty
7286 \else
7287     \ifx\@pdfstartview\@empty
7288     \else
7289         openaction goto page\@pdfstartpage{\@pdfstartview}%
7290     \fi
7291 \fi
7292 \edef\Hy@temp{%
7293     \ifHy@toolbar\else /HideToolbar true\fi
7294     \ifHy@menubar\else /HideMenubar true\fi
7295     \ifHy>windowui\else /HideWindowUI true\fi
7296     \ifHy@fitwindow /FitWindow true\fi
7297     \ifHy@centerwindow /CenterWindow true\fi
7298     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7299     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7300     \Hy@UseNameKey{Direction}\@pdfdirection
7301     \Hy@UseNameKey{ViewArea}\@pdfviewarea
7302     \Hy@UseNameKey{ViewClip}\@pdfviewclip
7303     \Hy@UseNameKey{PrintArea}\@pdfprintarea
7304     \Hy@UseNameKey{PrintClip}\@pdfprintclip
7305     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7306     \Hy@UseNameKey{Duplex}\@pdfduplex
7307     \ifx\@pdfpicktraybypdfsize\@empty
7308     \else
7309         /PickTrayByPDFSize \@pdfpicktraybypdfsize
7310     \fi
7311     \ifx\@pdfprintpagerange\@empty
7312     \else
7313         /PrintPageRange[\@pdfprintpagerange]%
7314     \fi
7315     \ifx\@pdfnumcopies\@empty
7316     \else
7317         /NumCopies \@pdfnumcopies
7318     \fi
7319 }%
7320 \pdfcatalog{%
7321     \ifx\Hy@temp\@empty
7322     \else
7323         /ViewerPreferences<<\Hy@temp>>%
7324     \fi
7325     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7326     \ifx\@pdflang\@empty
7327     \else
7328         /Lang(\@pdflang)%
7329     \fi
7330 }%
7331 }

```

\PDF@FinishDoc

```

7332 \def\PDF@FinishDoc{%
7333     \Hy@UseMaketitleInfos
7334     \pdfinfo{%
7335         /Author(\@pdfauthor)%

```

```

7336 /Title(\@pdftitle)%
7337 /Subject(\@pdfsubject)%
7338 /Creator(\@pdfcreator)%
7339 \ifx\@pdfcreationdate\@empty
7340 \else
7341 /CreationDate(\@pdfcreationdate)%
7342 \fi
7343 \ifx\@pdfmoddate\@empty
7344 \else
7345 /ModDate(\@pdfmoddate)%
7346 \fi
7347 \ifx\@pdfproducer\relax
7348 \else
7349 /Producer(\@pdfproducer)%
7350 \fi
7351 /Keywords(\@pdfkeywords)%
7352 }%
7353 \Hy@DisableOption{pdfauthor}%
7354 \Hy@DisableOption{pdftitle}%
7355 \Hy@DisableOption{pdfsubject}%
7356 \Hy@DisableOption{pdfcreator}%
7357 \Hy@DisableOption{pdfcreationdate}%
7358 \Hy@DisableOption{pdfmoddate}%
7359 \Hy@DisableOption{pdfproducer}%
7360 \Hy@DisableOption{pdfkeywords}%
7361 }

```

`\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`.

```

7362 \def\hyper@pagetransition{%
7363 \ifx\@pdfpagetransition\relax
7364 \else
7365 \expandafter\Hy@RemoveTransPageAttr
7366 \the\pdfpageattr^^J/Trans{}}>>\END
7367 \ifx\@pdfpagetransition\@empty
7368 \else
7369 \edef\@processme{%
7370 \global\pdfpageattr{%
7371 \the\pdfpageattr
7372 ^^J/Trans << /S /\@pdfpagetransition\space >>%
7373 }%
7374 }%
7375 \@processme
7376 \fi
7377 \fi
7378 }

```

`\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.

```

7379 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7380 \ifx\#2\%
7381 \global\pdfpageattr{#1}%
7382 \else
7383 \Hy@RemoveTransPageAttr#1#4\END

```

```

7384 \fi
7385 }

```

`\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`.

```

7386 \def\hyper@pageduration{%
7387   \ifx\@pdfpageduration\relax
7388   \else
7389     \expandafter\Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
7390     \ifx\@pdfpageduration\@empty
7391     \else
7392       \edef\@processme{%
7393         \global\pdfpageattr{%
7394           \the\pdfpageattr
7395             ^^J/Dur \@pdfpageduration\space
7396         }%
7397       }%
7398       \@processme
7399   \fi
7400 \fi
7401 }

```

`\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.

```

7402 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
7403   \ifx\#2\%
7404     \global\pdfpageattr{#1}%
7405   \else
7406     \Hy@RemoveDurPageAttr#1#4\END
7407   \fi
7408 }

```

`\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).

```

7409 \def\hyper@pagehidden{%
7410   \ifHy@useHidKey
7411     \expandafter\Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7412     \ifHy@pdfpagehidden
7413     \edef\@processme{%
7414       \global\pdfpageattr{%
7415         \the\pdfpageattr
7416           ^^J/Hid true % SPACE
7417       }%
7418     }%
7419     \@processme
7420   \fi
7421 \fi
7422 }

```

`\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.

```

7423 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7424   \ifx\#2\%
7425     \global\pdfpageattr{#1}%
7426   \else
7427     \Hy@RemoveHidPageAttr#1#4\END
7428   \fi
7429 }

7430 \g@addto@macro\Hy@EveryPageHook{%
7431   \hyper@pagetransition
7432   \hyper@pageduration
7433   \hyper@pagehidden
7434 }

7435 \AtBeginDocument{%
7436   \ifHy@setpagesize
7437     \expandafter\@firstofone
7438   \else
7439     \expandafter\@gobble
7440   \fi
7441   {%
7442     \@ifclassloaded{seminar}{%
7443       \setlength{\pdfhorigin}{1truein}%
7444       \setlength{\pdfvorigin}{1truein}%
7445       \ifportrait
7446         \ifdim\paperwidth=\z@
7447         \else
7448           \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7449         \fi
7450         \ifdim\paperheight=\z@
7451         \else
7452           \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7453         \fi
7454       \else
7455         \ifdim\paperheight=\z@
7456         \else
7457           \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7458         \fi
7459         \ifdim\paperwidth=\z@
7460         \else
7461           \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7462         \fi
7463       \fi
7464     }{%
7465       \@ifundefined{stockwidth}{%
7466         \ifdim\paperwidth=\z@
7467         \else
7468           \setlength{\pdfpagewidth}{\paperwidth}%
7469         \fi
7470         \ifdim\paperheight=\z@
7471         \else
7472           \setlength{\pdfpageheight}{\paperheight}%
7473         \fi
7474       }{%
7475         \ifdim\stockwidth=\z@
7476         \else
7477           \setlength{\pdfpagewidth}{\stockwidth}%
7478         \fi
7479         \ifdim\stockheight=\z@

```

```

7480         \else
7481         \setlength{\pdfpageheight}{\stockheight}%
7482         \fi
7483     }%
7484 }%
7485 }%
7486 \Hy@DisableOption{setpagesize}%
7487 }
7488 \def\Acrobatmenu#1#2{%
7489 \Hy@Acrobatmenu{#1}{#2}{%
7490 \pdfstartlink
7491 attr{%
7492 \Hy@setpdfborder
7493 \ifx\@pdfhighlight\@empty
7494 \else
7495 /H\@pdfhighlight
7496 \fi
7497 \ifx\@menubordercolor\relax
7498 \else
7499 /C[\@menubordercolor]%
7500 \fi
7501 }%
7502 user{%
7503 /Subtype/Link%
7504 \ifHy@pdfa /F 4\fi
7505 /A<<%
7506 /S/Named/N/#1%
7507 >>%
7508 }%
7509 \relax
7510 \Hy@colorlink\@menucolor#2%
7511 \close@pdflink
7512 }%
7513 }

```

46.2.1 Fix for problem with different nesting levels

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

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

```

7514 \def\Hy@FixNotFirstPage{%
7515 \gdef\Hy@FixNotFirstPage{%
7516 \setbox\AtBeginShipoutBox=\hbox{%
7517 \copy\AtBeginShipoutBox
7518 }%
7519 }%
7520 }
7521 \AtBeginShipout{\Hy@FixNotFirstPage}
7522 </pdfTeX>

```

46.3 hypertext

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

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

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

```
7523 \*hypertext
7524 \providecommand*\XR@ext}{dvi}
7525 \def\PDF@FinishDoc{}
7526 \def\PDF@SetupDoc{%
7527   \ifx\@baseurl\@empty
7528   \else
7529     \special{html:<base href="\@baseurl">}%
7530   \fi
7531 }
7532 \def\hyper@anchor#1{%
7533   \Hy@SaveLastskip
7534   \begingroup
7535     \let\protect=\string
7536     \hyper@chars
7537     \special{html:<a name=%
7538       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7539   \endgroup
7540   \Hy@activeanchortrue
7541   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7542   \special{html:</a>}%
7543   \Hy@activeanchorfalse
7544   \Hy@RestoreLastskip
7545 }
7546 \def\hyper@anchorstart#1{%
```

```

7547 \Hy@SaveLastskip
7548 \begingroup
7549   \hyper@chars
7550   \special{html:<a name=%
7551     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7552 \endgroup
7553 \Hy@activeanchortrue
7554 }
7555 \def\hyper@anchorend{%
7556   \special{html:</a>}%
7557   \Hy@activeanchorfalse
7558   \Hy@RestoreLastskip
7559 }
7560 \def\@urlltype{url}
7561 \def\hyper@linkstart#1#2{%
7562   \expandafter\Hy@colorlink\csname @#1color\endcsname
7563   \def\Hy@tempa{#1}%
7564   \ifx\Hy@tempa\@urlltype
7565     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7566   \else
7567     \begingroup
7568       \hyper@chars
7569       \special{html:<a href=%
7570         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
7571     \endgroup
7572   \fi
7573 }
7574 \def\hyper@linkend{%
7575   \special{html:</a>}%
7576   \Hy@endcolorlink
7577 }
7578 \def\hyper@linkfile#1#2#3{%
7579   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
7580 }
7581 \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.

```

7582 \leavevmode
7583 \ifHy@raiselinks
7584   \setbox\@tempboxa=\color@hbox #1\color@endbox
7585   \@linkdim\dp\@tempboxa
7586   \lower\@linkdim\hbox{%
7587     \hyper@chars
7588     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7589   }%
7590   \Hy@colorlink\@urlcolor#1%
7591   \@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).

```

7592   \advance\@linkdim by -6.5\p@
7593   \raise\@linkdim\hbox{\special{html:</a>}}%
7594   \Hy@endcolorlink
7595 \else
7596   \begingroup

```

```

7597     \hyper@chars
7598     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7599     \Hy@colorlink\@urlcolor#1%
7600     \special{html:</a>}}%
7601     \Hy@endcolorlink
7602   \endgroup
7603 \fi
7604 }

```

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

```

7605 \def\hyper@link#1#2#3{%
7606   \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}}%
7607 }

7608 \def\hyper@image#1#2{%
7609   \begingroup
7610     \hyper@chars
7611     \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
7612   \endgroup
7613 }
7614 \</hypertex>
7615 \<*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.

```

7616 \providecommand*\XR@ext{dvi}
7617 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
7618 \def\hyper@anchor#1{%
7619   \Hy@SaveLastskip
7620   \begingroup
7621     \let\protect=\string
7622     \special{mark: #1}%
7623   \endgroup
7624   \Hy@activeanchortrue
7625   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7626   \Hy@activeanchorfalse
7627   \Hy@RestoreLastskip
7628 }
7629 \def\hyper@anchorstart#1{%
7630   \Hy@SaveLastskip
7631   \special{mark: #1}%
7632   \Hy@activeanchortrue
7633 }
7634 \def\hyper@anchorend{%
7635   \Hy@activeanchorfalse
7636   \Hy@RestoreLastskip
7637 }

```



```

7638 \def\hyper@linkstart#1#2{%
7639   \expandafter\Hy@colorlink\csname @#1color\endcsname
7640   \special{button: %
7641     10000000 %
7642     \number\baselineskip\space
7643     #2%
7644   }%
7645 }
7646 \def\hyper@linkend{%
7647   \Hy@endcolorlink
7648 }
7649 \def\hyper@link#1#2#3{%
7650   \setbox\@tempboxa=\color@hbox #3\color@endbox
7651   \leavevmode
7652   \ifHy@raiselinks
7653     \@linkdim\dp\@tempboxa
7654     \lower\@linkdim\hbox{%
7655       \special{button: %
7656         \number\wd\@tempboxa\space
7657         \number\ht\@tempboxa\space
7658         #2%
7659       }%
7660       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7661       \Hy@endcolorlink
7662     }%
7663     \@linkdim\ht\@tempboxa
7664     \advance\@linkdim by -6.5\p@
7665     \raise\@linkdim\hbox{}%
7666   \else
7667     \special{button: %
7668       \number\wd\@tempboxa\space
7669       \number\ht\@tempboxa\space
7670       #2%
7671     }%
7672     \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7673     \Hy@endcolorlink
7674   \fi
7675 }
7676 \def\hyper@linkurl#1#2{%
7677   \begingroup
7678   \hyper@chars
7679   \leavevmode
7680   \setbox\@tempboxa=\color@hbox #1\color@endbox
7681   \ifHy@raiselinks
7682     \@linkdim\dp\@tempboxa
7683     \lower\@linkdim\hbox{%
7684       \special{button: %
7685         \number\wd\@tempboxa\space
7686         \number\ht\@tempboxa\space
7687         launch: \wwwbrowser\space
7688         #2%
7689       }%
7690       \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7691     }%
7692     \@linkdim\ht\@tempboxa
7693     \advance\@linkdim by -6.5\p@
7694     \raise\@linkdim\hbox{}%

```

```

7695 \else
7696 \special{button: %
7697 \number\wd\@tempboxa\space
7698 \number\ht\@tempboxa\space
7699 launch: \wwwbrowser\space
7700 #2%
7701 }%
7702 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7703 \fi
7704 \endgroup
7705 }
7706 \def\hyper@linkfile#1#2#3{%
7707 \begingroup
7708 \hyper@chars
7709 \leavevmode
7710 \setbox\@tempboxa=\color@hbox #1\color@endbox
7711 \ifHy@raiselinks
7712 \@linkdim\dp\@tempboxa
7713 \lower\@linkdim\hbox{%
7714 \special{button: %
7715 \number\wd\@tempboxa\space
7716 \number\ht\@tempboxa\space
7717 #3,%
7718 file: #2%
7719 }%
7720 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7721 }%
7722 \@linkdim\ht\@tempboxa
7723 \advance\@linkdim by -6.5\p@
7724 \raise\@linkdim\hbox{}}%
7725 \else
7726 \special{button: %
7727 \number\wd\@tempboxa\space
7728 \number\ht\@tempboxa\space
7729 #3,%
7730 file: #2%
7731 }%
7732 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7733 \fi
7734 \endgroup
7735 }
7736 \ifx\@pdfproducer\relax
7737 \def\@pdfproducer{dviwindo + Distiller}%
7738 \fi
7739 \def\PDF@FinishDoc{%
7740 \Hy@UseMaketitleInfos
7741 \special{PDF: Keywords \@pdfkeywords}%
7742 \special{PDF: Title \@pdftitle}%
7743 \special{PDF: Creator \@pdfcreator}%
7744 \ifx\@pdfcreationdate\@empty
7745 \else
7746 \special{PDF: CreationDate \@pdfcreationdate}%
7747 \fi
7748 \ifx\@pdfmoddate\@empty
7749 \else
7750 \special{PDF: ModDate \@pdfmoddate}%
7751 \fi

```

```

7752 \special{PDF: Author \@pdfauthor}%
7753 \ifx\@pdfproducer\relax
7754 \else
7755   \special{PDF: Producer \@pdfproducer}%
7756 \fi
7757 \special{PDF: Subject \@pdfsubject}%
7758 \Hy@DisableOption{pdfauthor}%
7759 \Hy@DisableOption{pdftitle}%
7760 \Hy@DisableOption{pdfsubject}%
7761 \Hy@DisableOption{pdfcreator}%
7762 \Hy@DisableOption{pdfcreationdate}%
7763 \Hy@DisableOption{pdfmoddate}%
7764 \Hy@DisableOption{pdfproducer}%
7765 \Hy@DisableOption{pdfkeywords}%
7766 }
7767 \def\PDF@SetupDoc{%
7768   \ifx\@baseurl\@empty
7769   \else
7770     \special{PDF: Base \@baseurl}%
7771   \fi
7772   \ifx\@pdfpagescrop\@empty\else
7773     \special{PDF: BBox \@pdfpagescrop}%
7774   \fi
7775   \def\Hy@temp{%
7776     \ifx\@pdfstartpage\@empty
7777     \else
7778       \ifx\@pdfstartview\@empty
7779       \else
7780         \edef\Hy@temp{%
7781           ,Page=\@pdfstartpage
7782           ,View=\@pdfstartview
7783         }%
7784       \fi
7785     \fi
7786     \edef\Hy@temp{%
7787       \noexpand\pdfmark{%
7788         pdfmark=/DOCVIEW,%
7789         PageMode=/\@pdfpagemode
7790       }\Hy@temp
7791     }%
7792   }%
7793   \Hy@temp
7794   \ifx\@pdfpagescrop\@empty
7795   \else
7796     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
7797   \fi
7798   \edef\Hy@temp{%
7799     \ifHy@toolbar\else /HideToolbar true\fi
7800     \ifHy@menubar\else /HideMenubar true\fi
7801     \ifHy>windowui\else /HideWindowUI true\fi
7802     \ifHy@fitwindow /FitWindow true\fi
7803     \ifHy@centerwindow /CenterWindow true\fi
7804     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7805     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7806     \Hy@UseNameKey{Direction}\@pdfdirection
7807     \Hy@UseNameKey{ViewArea}\@pdfviewarea
7808     \Hy@UseNameKey{ViewClip}\@pdfviewclip

```

```

7809 \Hy@UseNameKey{PrintArea}\@pdfprintarea
7810 \Hy@UseNameKey{PrintClip}\@pdfprintclip
7811 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7812 \Hy@UseNameKey{Duplex}\@pdfduplex
7813 \ifx\@pdfpicktraybypdfsize\@empty
7814 \else
7815 /PickTrayByPDFSize \@pdfpicktraybypdfsize
7816 \fi
7817 \ifx\@pdfprintpagerange\@empty
7818 \else
7819 /PrintPageRange[\@pdfprintpagerange]%
7820 \fi
7821 \ifx\@pdfnumcopies\@empty
7822 \else
7823 /NumCopies \@pdfnumcopies
7824 \fi
7825 }%
7826 \pdfmark{pdfmark=/PUT,%
7827 Raw={%
7828 \string{Catalog\string}<<%
7829 \ifx\Hy@temp\@empty
7830 \else
7831 /ViewerPreferences<<\Hy@temp>>%
7832 \fi
7833 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7834 \ifx\@pdflang\@empty
7835 \else
7836 /Lang(\@pdflang)%
7837 \fi
7838 >>%
7839 }%
7840 }%
7841 }
7842 </dviwindo>
7843 <*dviPDFm>

```

46.5 dvipdfm dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

7844 \providecommand*\XR@ext}{pdf}
7845 \Hy@setbreaklinks{true}
7846 \newsavebox{\pdfm@box}
7847 \def\@pdfm@mark#1{\special{pdf:#1}}
7848 \def\@pdfm@dest#1{%
7849 \Hy@SaveLastskip
7850 \beginingroup
7851 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7852 \def\x{XYZ}%
7853 \ifx\x\@pdfview
7854 \def\x{XYZ @xpos @ypos null}%
7855 \else
7856 \def\x{FitH}%
7857 \ifx\x\@pdfview
7858 \def\x{FitH @ypos}%
7859 \else
7860 \def\x{FitBH}%
7861 \ifx\x\@pdfview

```

```

7862         \def\x{FitBH @ypos}%
7863     \else
7864         \def\x{FitV}%
7865         \ifx\x\@pdfview
7866             \def\x{FitV @xpos}%
7867         \else
7868             \def\x{FitBV}%
7869             \ifx\x\@pdfview
7870                 \def\x{FitBV @xpos}%
7871             \else
7872                 \def\x{Fit}%
7873                 \ifx\x\@pdfview
7874                     \let\x\@pdfview
7875                 \else
7876                     \def\x{FitB}%
7877                     \ifx\x\@pdfview
7878                         \let\x\@pdfview
7879                     \else
7880                         \def\x{FitR}%
7881                         \ifx\x\@pdfview
7882                             \Hy@Warning{'pdfview=FitR' is not supported}%
7883                             \def\x{XYZ @xpos @ypos null}%
7884                         \else
7885                             \@onelevel@sanitize\@pdfview
7886                             \Hy@Warning{Unknown value '\@pdfview' for pdfview}%
7887                             \def\x{XYZ @xpos @ypos null}%
7888                         \fi
7889                     \fi
7890                 \fi
7891             \fi
7892         \fi
7893     \fi
7894 \fi
7895 \fi
7896 \pdfmark{dest (\Hy@pstringDest) [@thispage /\x]}%
7897 \endgroup
7898 \Hy@RestoreLastskip
7899 }
7900 \providecommand*\@pdfview{XYZ}
7901 \providecommand*\@pdfborder{0 0 1}
7902 \providecommand*\@pdfborderstyle{}
7903 \def\hyper@anchor#1{%
7904     \pdfmark{dest{#1}}%
7905 }
7906 \def\hyper@anchorstart#1{%
7907     \Hy@activeanchortrue
7908     \pdfmark{dest{#1}}%
7909 }
7910 \def\hyper@anchorend{%
7911     \Hy@activeanchorfalse
7912 }
7913 \newcounter{Hy@AnnotLevel}
7914 \ifHy@ocgcolorlinks
7915     \def\OBJ@OCG@view{\OCG@view}%
7916     \pdfmark{%
7917         obj \OBJ@OCG@view <<%
7918         /Type/OCG%

```

```

7919     /Name(View)%
7920     /Usage<<%
7921     /Print<<%
7922         /PrintState/OFF%
7923     >>%
7924     /View<<%
7925         /ViewState/ON%
7926     >>%
7927 >>%
7928 >>%
7929 }%
7930 \@pdfmark{close \OBJ@OCG@view}%
7931 \def\OBJ@OCG@print{@OCG@print}%
7932 \@pdfmark{%
7933     obj \OBJ@OCG@print <<%
7934         /Type/OCG%
7935         /Name(Print)%
7936         /Usage<<%
7937         /Print<<%
7938         /PrintState/ON%
7939     >>%
7940     /View<<%
7941         /ViewState/OFF%
7942     >>%
7943 >>%
7944 >>%
7945 }%
7946 \@pdfmark{close \OBJ@OCG@print}%
7947 \def\OBJ@OCGs{@OCGs}%
7948 \@pdfmark{%
7949     obj \OBJ@OCGs [%
7950         \OBJ@OCG@view\space\OBJ@OCG@print
7951     ]%
7952 }%
7953 \@pdfmark{close \OBJ@OCGs}%
7954 \@pdfmark{%
7955     put @catalog <<%
7956         /OCProperties<<%
7957         /OCGs \OBJ@OCGs
7958         /D<<%
7959             /OFF[\OBJ@OCG@print]%
7960             /AS[%
7961                 <<%
7962                     /Event/View%
7963                     /OCGs \OBJ@OCGs
7964                     /Category[/View]%
7965                 >>%
7966                 <<%
7967                     /Event/Print%
7968                     /OCGs \OBJ@OCGs
7969                     /Category[/Print]%
7970                 >>%
7971                 <<%
7972                     /Event/Export%
7973                     /OCGs \OBJ@OCGs
7974                     /Category[/Print]%
7975                 >>%

```

```

7976         ]%
7977         >>%
7978         >>%
7979         >>%
7980     }%
7981     \AtBeginShipout{%
7982         \setbox\AtBeginShipoutBox=\hbox{%
7983             \copy\AtBeginShipoutBox
7984             \@pdfm@mark{%
7985                 put @resources <<%
7986                 /Properties<<%
7987                 /OCView \OBJ@OCG@view
7988                 /OCPrint \OBJ@OCG@print
7989                 >>%
7990                 >>%
7991             }%
7992         }%
7993     }%
7994     \AtBeginDocument{%
7995         \def\Hy@colorlink#1{%
7996             \begingroup
7997             \ifHy@ocgcolorlinks
7998                 \def\Hy@ocgcolor{#1}%
7999                 \setbox0=\color@hbox
8000             \else
8001                 \HyColor@UseColor#1%
8002             \fi
8003         }%
8004         \def\Hy@endcolorlink{%
8005             \ifHy@ocgcolorlinks
8006                 \color@endbox
8007                 \mbox{%
8008                     \@pdfm@mark{content /OC/OCPrint BDC}%
8009                     \rlap{\copy0}%
8010                     \@pdfm@mark{content EMC/OC/OCView BDC}%
8011                     \begingroup
8012                         \expandafter\HyColor@UseColor\Hy@ocgcolor
8013                         \box0 %
8014                     \endgroup
8015                     \@pdfm@mark{content EMC}%
8016                 }%
8017             \fi
8018         \endgroup
8019     }%
8020 }%
8021 \else
8022     \Hy@DisableOption{ocgcolorlinks}%
8023 \fi
8024 \def\Hy@BeginAnnot#1{%
8025     \stepcounter{Hy@AnnotLevel}%
8026     \ifnum\value{Hy@AnnotLevel}=\@ne
8027         #1%
8028     \fi
8029 }
8030 \def\Hy@EndAnnot{%
8031     \ifnum\value{Hy@AnnotLevel}=\@ne
8032         \Hy@endcolorlink

```

```

8033 \pdfmark{eann}%
8034 \fi
8035 \addtocounter{Hy@AnnotLevel}\m@ne
8036 }

8037 \def\Hy@undefinedname{UNDEFINED}
8038 \def\hyper@linkstart#1#2{%
8039 \Hy@BeginAnnot{%
8040 \protected@edef\Hy@testname{#2}%
8041 \ifx\Hy@testname\@empty
8042 \Hy@Warning{%
8043 Empty destination name,\MessageBreak
8044 using '\Hy@undefinedname'%
8045 }%
8046 \let\Hy@testname\Hy@undefinedname
8047 \else
8048 \Hy@pstringdef\Hy@testname{%
8049 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8050 }%
8051 \fi
8052 \pdfmark{%
8053 bann<<%
8054 /Type/Annot%
8055 /Subtype/Link%
8056 \ifHy@pdfa /F 4\fi
8057 \Hy@setpdfborder
8058 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8059 \else
8060 /C[\csname @#1bordercolor\endcsname]%
8061 \fi
8062 /A<<%
8063 /S/GoTo%
8064 /D(\Hy@testname)%
8065 >>%
8066 >>%
8067 }%
8068 \expandafter\Hy@colorlink\csname @#1color\endcsname
8069 }%
8070 }

8071 \def\hyper@linkend{\Hy@EndAnnot}%
8072 \def\hyper@link#1#2#3{%
8073 \hyper@linkstart{#1}{#2}#3\hyper@linkend
8074 }

8075 \def\hyper@linkfile#1#2#3{%
8076 \leavevmode
8077 \Hy@BeginAnnot{%
8078 \Hy@pstringdef\Hy@pstringF{#2}%
8079 \Hy@pstringdef\Hy@pstringD{#3}%
8080 \pdfmark{%
8081 bann<<%
8082 /Type/Annot%
8083 /Subtype/Link%
8084 \ifHy@pdfa /F 4\fi
8085 \Hy@setpdfborder
8086 \ifx\@filebordercolor\relax
8087 \else
8088 /C[\@filebordercolor]%
8089 \fi

```



```

8090      /A<<%
8091      /S/GoToR%
8092      /F(\Hy@pstringF)%
8093      /D\ifx\#3\[/O \pdfstartview]\else(\Hy@pstringD)\fi
8094      \Hy@SetNewWindow
8095      >>%
8096      >>%
8097      }%
8098      \Hy@colorlink\@filecolor
8099      }%
8100      #1%
8101      \Hy@endAnnot
8102  }
8103  \def\hyper@linkurl#1#2{%
8104    \leavevmode
8105    \Hy@BeginAnnot{%
8106      \Hy@pstringdef\Hy@pstringURI{#2}%
8107      \@pdfm@mark{%
8108        bann<<%
8109        /Type/Annot%
8110        /Subtype/Link%
8111        \ifHy@pdfa /F 4\fi
8112        \Hy@setpdfborder
8113        \ifx\@urlbordercolor\relax
8114          \else
8115            /C[\@urlbordercolor]%
8116          \fi
8117        /A<<%
8118        /S/URI%
8119        /URI(\Hy@pstringURI)%
8120        >>%
8121        >>%
8122        }%
8123        \Hy@colorlink\@urlcolor
8124      }%
8125      #1%
8126      \Hy@endAnnot
8127  }
8128  \def\Acrobatmenu#1#2{%
8129    \Hy@Acrobatmenu{#1}{#2}{%
8130      \Hy@BeginAnnot{%
8131        \@pdfm@mark{%
8132          bann<<%
8133          /Type/Annot%
8134          /Subtype/Link%
8135          \ifHy@pdfa /F 4\fi
8136          /A<<%
8137          /S/Named%
8138          /N/#1%
8139          >>%
8140          \Hy@setpdfborder
8141          \ifx\@menubordercolor\relax
8142            \relax
8143            /C[\@menubordercolor]%
8144          \fi
8145          >>%
8146          }%

```

```

8147      \Hy@colorlink\@menucolor
8148    }%
8149    #2%
8150    \Hy@EndAnnot
8151  }%
8152 }
8153 \ifx\@pdfproducer\relax
8154   \def\@pdfproducer{dvipdfm}%

```

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

```

8155 \begingroup\expandafter\expandafter\expandafter\endgroup
8156 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8157   \else
8158     \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8159   \fi
8160 \fi
8161 \def\PDF@FinishDoc{%
8162   \Hy@UseMaketitleInfos
8163   \@pdfm@mark{%
8164     docinfo<<%
8165       /Title(\@pdftitle)%
8166       /Subject(\@pdfsubject)%
8167       /Creator(\@pdfcreator)%
8168       \ifx\@pdfcreationdate\@empty
8169       \else
8170         /CreationDate(\@pdfcreationdate)%
8171       \fi
8172       \ifx\@pdfmoddate\@empty
8173       \else
8174         /ModDate(\@pdfmoddate)%
8175       \fi
8176       /Author(\@pdfauthor)%
8177       \ifx\@pdfproducer\relax
8178       \else
8179         /Producer(\@pdfproducer)%
8180       \fi
8181       /Keywords(\@pdfkeywords)%
8182     >>%
8183   }%
8184   \Hy@DisableOption{pdfauthor}%
8185   \Hy@DisableOption{pdftitle}%
8186   \Hy@DisableOption{pdfsubject}%
8187   \Hy@DisableOption{pdfcreator}%
8188   \Hy@DisableOption{pdfcreationdate}%
8189   \Hy@DisableOption{pdfmoddate}%
8190   \Hy@DisableOption{pdfproducer}%
8191   \Hy@DisableOption{pdfkeywords}%
8192 }
8193 \def\PDF@SetupDoc{%
8194   \edef\Hy@temp{%
8195     \ifHy@toolbar\else /HideToolbar true\fi
8196     \ifHy@menubar\else /HideMenubar true\fi
8197     \ifHy>windowui\else /HideWindowUI true\fi
8198     \ifHy@fitwindow /FitWindow true\fi
8199     \ifHy@centerwindow /CenterWindow true\fi
8200     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8201     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode

```

```

8202 \Hy@UseNameKey{Direction}\@pdfdirection
8203 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8204 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8205 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8206 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8207 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8208 \Hy@UseNameKey{Duplex}\@pdfduplex
8209 \ifx\@pdfpicktraybypdfsize\@empty
8210 \else
8211 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8212 \fi
8213 \ifx\@pdfprintpagerange\@empty
8214 \else
8215 /PrintPageRange[\@pdfprintpagerange]%
8216 \fi
8217 \ifx\@pdfnumcopies\@empty
8218 \else
8219 /NumCopies \@pdfnumcopies
8220 \fi
8221 }%
8222 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8223 \@pdfm@mark{%
8224 docview<<%
8225 \ifx\@pdfstartpage\@empty
8226 \else
8227 \ifx\@pdfstartview\@empty
8228 \else
8229 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8230 \fi
8231 \fi
8232 \ifx\@baseurl\@empty
8233 \else
8234 /URI<</Base(\Hy@pstringB)>>%
8235 \fi
8236 /PageMode/\@pdfpagemode
8237 \ifx\Hy@temp\@empty
8238 \else
8239 /ViewerPreferences<<\Hy@temp>>%
8240 \fi
8241 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8242 \ifx\@pdflang\@empty
8243 \else
8244 /Lang(\@pdflang)%
8245 \fi
8246 >>%
8247 }%
8248 \ifx\@pdfpagescrop\@empty
8249 \else
8250 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8251 \fi
8252 }

8253 \AtBeginShipoutFirst{%
8254 \ifx\special@paper\@empty
8255 \else
8256 \ifHy@setpagesize
8257 \special{papersize=\special@paper}%
8258 \fi

```

```

8259 \fi
8260 \Hy@DisableOption{setpagesize}%
8261 }
8262 </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.

```

8263 <*vtexhtml>
8264 \providecommand*{\XR@ext}{htm}
8265 \RequirePackage{vtexhtml}
8266 \newif\if@Localurl
8267 \def\PDF@FinishDoc{}
8268 \def\PDF@SetupDoc{%
8269   \ifx\@baseurl\@empty
8270   \else
8271     \special{!direct <base href="\@baseurl">}%
8272   \fi
8273 }
8274 \def\@urltype{url}
8275 \def\hyper@link#1#2#3{%
8276   \leavevmode
8277   \special{!direct <a href=%
8278     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8279   #3%
8280   \special{!direct </a>}%
8281 }
8282 \def\hyper@linkurl#1#2{%
8283   \begingroup
8284     \hyper@chars
8285     \leavevmode
8286     \MathBSuppress=1\relax
8287     \special{!direct <a href=%
8288       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8289     #1%
8290     \MathBSuppress=0\relax
8291     \special{!direct </a>}%
8292   \endgroup
8293 }
8294 \def\hyper@linkfile#1#2#3{%
8295   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
8296 }
8297 \def\hyper@linkstart#1#2{%
8298   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8299     \@Localurltrue
8300     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8301   \else
8302     \@Localurlfalse
8303     \begingroup
8304       \hyper@chars
8305       \special{!aref \HyperDestNameFilter{#2}}%
8306     \endgroup
8307   \fi
8308 }
8309 \def\hyper@linkend{%
8310   \if@Localurl

```

```

8311 \special{!endaref}%
8312 \else
8313 \special{!direct </a>}%
8314 \fi
8315 }
8316 \def\hyper@anchorstart#1{%
8317 \Hy@SaveLastskip
8318 \begingroup
8319 \hyper@chars
8320 \special{!aname #1}%
8321 \special{!direct <a name=%
8322 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8323 \endgroup
8324 \Hy@activeanchortrue
8325 }
8326 \def\hyper@anchorend{%
8327 \special{!direct </a>}%
8328 \Hy@activeanchorfalse
8329 \Hy@RestoreLastskip
8330 }
8331 \def\hyper@anchor#1{%
8332 \Hy@SaveLastskip
8333 \begingroup
8334 \let\protect=\string
8335 \hyper@chars
8336 \leavevmode
8337 \special{!aname #1}%
8338 \special{!direct <a name=%
8339 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8340 \endgroup
8341 \Hy@activeanchortrue
8342 \bgroup\anchor@spot\egroup
8343 \special{!direct </a>}%
8344 \Hy@activeanchorfalse
8345 \Hy@RestoreLastskip
8346 }
8347 \def\@Form[#1]{\typeout{Sorry, TeXpider does not yet support FORMs}}
8348 \def\@endForm{}
8349 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8350 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8351 }
8352 \def\@TextField[#1]#2{% parameters, label
8353 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
8354 }
8355 \def\@CheckBox[#1]#2{% parameters, label
8356 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8357 }
8358 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
8359 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8360 }
8361 \def\@PushButton[#1]#2{% parameters, label
8362 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8363 }
8364 \def\@Reset[#1]#2{%
8365 \typeout{Sorry, TeXpider does not yet support FORMs}%
8366 }
8367 \def\@Submit[#1]#2{%

```

```

8368 \typeout{Sorry, TeXpider does not yet support FORMs}%
8369 }
8370 \</vtexhtml>
8371 \<*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.

```

8372 \ifx\mediaheight\@undefined
8373 \else
8374 \ifx\mediaheight\relax
8375 \else
8376 \ifHy@setpagesize
8377 \providecommand*\VTeXInitMediaSize{%
8378 \ifundefined{stockwidth}{%
8379 \ifdim\paperheight>0pt %
8380 \setlength\mediaheight\paperheight
8381 \fi
8382 \ifdim\paperheight>0pt %
8383 \setlength\mediawidth\paperwidth
8384 \fi
8385 }{%
8386 \ifdim\stockheight>0pt %
8387 \setlength\mediaheight\stockheight
8388 \fi
8389 \ifdim\stockwidth>0pt %
8390 \setlength\mediawidth\stockwidth
8391 \fi
8392 }%
8393 }%
8394 \AtBeginDocument{\VTeXInitMediaSize}%
8395 \fi
8396 \Hy@DisableOption{setpagesize}%
8397 \fi
8398 \fi

```

Older versions of VTeX require xyz in lower case.

```

8399 \providecommand*\@pdfview{xyz}
8400 \providecommand*\@pdfborder{0 0 1}
8401 \providecommand*\@pdfborderstyle{}
8402 \let\CurrentBorderColor\@linkbordercolor
8403 \def\hyper@anchor#1{%
8404 \Hy@SaveLastskip
8405 \begingroup
8406 \let\protect=\string
8407 \hyper@chars
8408 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8409 \endgroup
8410 \Hy@activeanchortrue
8411 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8412 \Hy@activeanchorfalse
8413 \Hy@RestoreLastskip
8414 }
8415 \def\hyper@anchorstart#1{%
8416 \Hy@SaveLastskip
8417 \begingroup
8418 \hyper@chars
8419 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%

```

```

8420 \endgroup
8421 \Hy@activeanchortrue
8422 }
8423 \def\hyper@anchorend{%
8424 \Hy@activeanchorfalse
8425 \Hy@RestoreLastskip
8426 }
8427 \def\@urltype{url}
8428 \def\Hy@undefinedname{UNDEFINED}
8429 \def\hyper@linkstart#1#2{%
8430 \Hy@pstringdef\Hy@pstringURI{#2}%
8431 \expandafter\Hy@colorlink\csname @#1color\endcsname
8432 \@ifundefined{#@#1bordercolor}{%
8433 \let\CurrentBorderColor\relax
8434 }{%
8435 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8436 }%
8437 \def\Hy@tempa{#1}%
8438 \ifx\Hy@tempa\@urltype
8439 \special{!%
8440 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8441 a=<%
8442 \ifHy@pdfa /F 4\fi
8443 \Hy@setpdfborder
8444 \ifx\CurrentBorderColor\relax
8445 \else
8446 /C [\CurrentBorderColor]%
8447 \fi
8448 >%
8449 }%
8450 \else
8451 \protected@edef\Hy@testname{#2}%
8452 \ifx\Hy@testname\@empty
8453 \Hy@Warning{%
8454 Empty destination name,\MessageBreak
8455 using '\Hy@undefinedname'%
8456 }%
8457 \let\Hy@testname\Hy@undefinedname
8458 \fi
8459 \special{!%
8460 aref \expandafter\HyperDestNameFilter
8461 \expandafter{\Hy@testname};%
8462 a=<%
8463 \ifHy@pdfa /F 4\fi
8464 \Hy@setpdfborder
8465 \ifx\CurrentBorderColor\relax
8466 \else
8467 /C [\CurrentBorderColor]%
8468 \fi
8469 >%
8470 }%
8471 \fi
8472 }
8473 \def\hyper@linkend{%
8474 \special{!endaref}%
8475 \Hy@endcolorlink
8476 }

```

```

8477 \def\hyper@linkfile#1#2#3{%
8478   \leavevmode
8479   \special{!%
8480     aref <%
8481       \ifnum\Hy@TeXversion>753 \ifHy@newwindow n\fi\fi
8482       f=#2>#3;%
8483       a=<%
8484         \ifHy@pdfa /F 4\fi
8485         \Hy@setpdfborder
8486         \ifx\@filebordercolor\relax
8487         \else
8488           /C [\@filebordercolor]%
8489         \fi
8490       >%
8491     }%
8492     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8493     \special{!endaref}%
8494 }
8495 \def\hyper@linkurl#1#2{%
8496   \begingroup
8497   \Hy@pstringdef\Hy@pstringURI{#2}%
8498   \hyper@chars
8499   \leavevmode
8500   \special{!%
8501     aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8502     a=<%
8503       \ifHy@pdfa /F 4\fi
8504       \Hy@setpdfborder
8505       \ifx\@urlbordercolor\relax
8506       \else
8507         /C [\@urlbordercolor]%
8508       \fi
8509     >%
8510   }%
8511   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8512   \special{!endaref}%
8513   \endgroup
8514 }
8515 \def\hyper@link#1#2#3{%
8516   \@ifundefined{@#1bordercolor}{%
8517     \let\CurrentBordercolor\relax
8518   }{%
8519     \edef\CurrentBordercolor{\csname @#1bordercolor\endcsname}%
8520   }%
8521   \leavevmode
8522   \protected@edef\Hy@testname{#2}%
8523   \ifx\Hy@testname\@empty
8524     \Hy@Warning{%
8525       Empty destination name,\MessageBreak
8526       using '\Hy@undefinedname'%
8527     }%
8528     \let\Hy@testname\Hy@undefinedname
8529   \fi
8530   \special{!%
8531     aref \expandafter\HyperDestNameFilter
8532     \expandafter{\Hy@testname};%
8533     a=<%

```



```

8534 \ifHy@pdfa /F 4\fi
8535 \Hy@setpdfborder
8536 \ifx\CurrentBorderColor\relax
8537 \else
8538 /C [\CurrentBorderColor]%
8539 \fi
8540 >%
8541 }%
8542 \expandafter\Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
8543 \special{!endaref}%
8544 }
8545 \def\hyper@image#1#2{%
8546 \hyper@linkurl{#2}{#1}%
8547 }
8548 \def\@hyper@launch run:#1\#2#3{%
8549 \Hy@pstringdef\Hy@pstringF{#1}%
8550 \Hy@pstringdef\Hy@pstringP{#3}%
8551 \leavevmode
8552 \special{!aref %
8553 <u=%
8554 /Type/Action%
8555 /S/Launch%
8556 /F(\Hy@pstringF)%
8557 \Hy@SetNewWindow
8558 \ifx\#3\else /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>\fi%
8559 >;%
8560 a=<%
8561 \ifHy@pdfa /F 4\fi
8562 \Hy@setpdfborder
8563 \ifx\@runbordercolor\relax
8564 \else
8565 /C[\@runbordercolor]%
8566 \fi
8567 >%
8568 }%
8569 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
8570 \special{!endaref}%
8571 }
8572 \def\Acrobatmenu#1#2{%
8573 \Hy@Acrobatmenu{#1}{#2}{%
8574 \special{!%
8575 aref <u=/S /Named /N /#1>;%
8576 a=<%
8577 \ifHy@pdfa /F 4\fi
8578 \Hy@setpdfborder
8579 \ifx\@menubordercolor\relax
8580 \else
8581 /C[\@menubordercolor]%
8582 \fi
8583 >%
8584 }%
8585 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
8586 \special{!endaref}%
8587 }%
8588 }

```

The following code (transition effects) is made by Alex Kostin.
The code below makes sense for VT_EX 7.02 or later.

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

```
8589 \ifnum\Hy@VTeXversion<702 %
8590 \else
8591   \def\hyper@pagetransition{%
8592     \ifx\@pdfpagetransition\relax
8593     \else
8594     \ifx\@pdfpagetransition\@empty
```

Standard incantation.

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

```
8595   \else
8596   \hvtex@parse@trans\@pdfpagetransition
8597   \fi
8598 \fi
8599 }%
```

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

Syntax of \TeX `\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:

```
8600 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
8601 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
8602 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
8603 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
8604 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
8605 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
8606 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
8607 \def\hvtex@par@dimension{/Dm}%
8608 \def\hvtex@par@direction{/Di}%
8609 \def\hvtex@par@duration{/D}%
8610 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
8611 \def\hvtex@gettoken{\expandafter\hvtex@gettoken\hvtex@buffer\@nil}%
```

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

```
8612 \def\hvtex@gettoken@#1 #2\@nil{%
8613   \edef\hvtex@token{#1}%
8614   \edef\hvtex@buffer{#2}%
8615 }%
8616 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
8617 \let\hvtex@trans@code\@empty
8618 \let\hvtex@param@dimension\@empty
8619 \let\hvtex@param@direction\@empty
8620 \let\hvtex@param@duration\@empty
8621 \let\hvtex@param@motion\@empty
8622 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
8623 \hvtex@gettoken
8624 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
8625 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
8626 \else
8627 \hvtex@gettoken
8628 \fi
8629 \fi
8630 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
8631 \hvtex@trans@params
8632 }%
```

Reentrant macro to parse optional parameters.

```
8633 \def\hvtex@trans@params{%
8634 \ifx\hvtex@buffer\@empty
8635 \else
8636 \hvtex@gettoken
8637 \let\hvtex@trans@par\hvtex@token
8638 \ifx\hvtex@buffer\@empty
8639 \else
8640 \hvtex@gettoken
8641 \ifx\hvtex@trans@par\hvtex@par@duration
```

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

```
8642 \let\hvtex@param@duration\hvtex@token
8643 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
8644 \expandafter\edef\expandafter\hvtex@param@motion
8645 \expandafter{\expandafter\@gobble\hvtex@token}%
8646 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
8647 \expandafter\edef\expandafter\hvtex@param@dimension
8648 \expandafter{\expandafter\@gobble\hvtex@token}%
8649 \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).

```
8650 \let\hvtex@param@direction\hvtex@token
8651 \fi\fi\fi\fi
8652 \fi
8653 \fi
8654 \ifx\hvtex@buffer\@empty
8655 \let\next\hvtex@produce@trans
8656 \else
8657 \let\next\hvtex@trans@params
```

```

8658 \fi
8659 \next
8660 }%

```

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

```

8661 \def\hvtex@produce@trans{%
8662 \let\vtex@trans@special\@empty
8663 \if S\hvtex@trans@code
8664 \edef\vtex@trans@special{\hvtex@trans@code
8665 \hvtex@param@dimension\hvtex@param@motion}%
8666 \else\if B\hvtex@trans@code
8667 \edef\vtex@trans@special{%
8668 \hvtex@trans@code\hvtex@param@dimension
8669 }%
8670 \else\if X\hvtex@trans@code
8671 \edef\vtex@trans@special{%
8672 \hvtex@trans@code\hvtex@param@motion
8673 }%
8674 \else\if W\hvtex@trans@code
8675 \edef\vtex@trans@special{%
8676 \hvtex@trans@code\hvtex@param@direction
8677 }%
8678 \else\if D\hvtex@trans@code
8679 \let\vtex@trans@special\hvtex@trans@code
8680 \else\if R\hvtex@trans@code
8681 \let\vtex@trans@special\hvtex@trans@code
8682 \else\if G\hvtex@trans@code
8683 \edef\vtex@trans@special{%
8684 \hvtex@trans@code\hvtex@param@direction
8685 }%
8686 \fi\fi\fi\fi\fi\fi\fi
8687 \ifx\vtex@trans@special\@empty
8688 \else
8689 \ifx\hvtex@param@duration\@empty
8690 \else
8691 \setlength{\dimen@}{\hvtex@param@duration\p}%

```

I'm not guilty of possible overflow.

```

8692 \multiply\dimen@\@m
8693 \edef\vtex@trans@special{%
8694 \vtex@trans@special,\strip@pt\dimen@
8695 }%
8696 \fi

```

And all the mess is just for this.

```

8697 \special{!trans \vtex@trans@special}%
8698 \fi
8699 }%

8700 \def\hyper@pageduration{%
8701 \ifx\@pdfpageduration\relax
8702 \else
8703 \ifx\@pdfpageduration\@empty
8704 \special{!duration-}%
8705 \else
8706 \special{!duration \@pdfpageduration}%
8707 \fi
8708 \fi

```

```

8709 }%
8710 \def\hyper@pagehidden{%
8711   \ifHy@useHidKey
8712     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
8713   \fi
8714 }%
8715 \g@addto@macro\Hy@EveryPageBoxHook{%
8716   \hyper@pagetransition
8717   \hyper@pageduration
8718   \hyper@pagehidden
8719 }%
8720 \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

```

8721 \ifx\@pdfproducer\relax
8722 \def\@pdfproducer{VTeX}%
8723 \ifnum\Hy@VTeXversion>\z@
8724   \count@\VTeXversion
8725   \divide\count@ 100 %
8726   \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
8727   \multiply\count@ -100 %
8728   \advance\count@\VTeXversion
8729   \edef\@pdfproducer{%
8730     \@pdfproducer
8731     .\ifnum\count@<10 0\fi\the\count@
8732     \ifx\VTeXOS\@undefined\else
8733       \ifnum\VTeXOS>0 %
8734         \ifnum\VTeXOS<6 %
8735           \space(
8736           \ifcase\VTeXOS
8737             \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
8738           \fi
8739         )%
8740       \fi
8741     \fi
8742   \fi
8743   ,\space
8744   \ifnum\OpMode=\@ne PDF\else PS\fi
8745   \space backend%
8746   \ifx\gexmode\@undefined\else
8747     \ifnum\gexmode>\z@\space with GeX\fi
8748   \fi
8749 }%
8750 \fi
8751 \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).

```

8752 \def\PDF@SetupDoc{%
8753   \ifx\@pdfpagescrop\@empty
8754   \else
8755     \special{!pdfinfo b=<\@pdfpagescrop>}%
8756   \fi
8757   \ifx\@pdfstartpage\@empty
8758   \else
8759     \ifx\@pdfstartview\@empty
8760     \else
8761       \special{!onopen Page\@pdfstartpage}%
8762     \fi
8763   \fi
8764   \special{!pdfinfo p=</\@pdfpagemode>}%
8765   \ifx\@baseurl\@empty
8766   \else
8767     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
8768   \fi
8769   \special{!pdfinfo v=<<<%
8770     \ifHy@toolbar\else /HideToolbar true\fi
8771     \ifHy@menubar\else /HideMenubar true\fi
8772     \ifHy@windowui\else /HideWindowUI true\fi
8773     \ifHy@fitwindow /FitWindow true\fi
8774     \ifHy@centerwindow /CenterWindow true\fi
8775     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8776     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8777     \Hy@UseNameKey{Direction}\@pdfdirection
8778     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8779     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8780     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8781     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8782     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8783     \Hy@UseNameKey{Duplex}\@pdfduplex
8784     \ifx\@pdfpicktraybypdfsize\@empty
8785     \else
8786       /PickTrayByPDFSize \@pdfpicktraybypdfsize
8787     \fi
8788     \ifx\@pdfprintpagerange\@empty
8789     \else
8790       /PrintPageRange[\@pdfprintpagerange]%
8791     \fi
8792     \ifx\@pdfnumcopies\@empty
8793     \else
8794       /NumCopies \@pdfnumcopies

```

```

8795 \fi
8796 >>>}%
8797 \ifx\@pdfpagelayout\@empty
8798 \else
8799 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
8800 \fi
8801 }%
8802 \def\PDF@FinishDoc{%
8803 \Hy@UseMaketitleInfos
8804 \special{!pdfinfo a=<\@pdfauthor>}%
8805 \special{!pdfinfo t=<\@pdftitle>}%
8806 \special{!pdfinfo s=<\@pdfsubject>}%
8807 \special{!pdfinfo c=<\@pdfcreator>}%
8808 \ifx\@pdfproducer\relax
8809 \else
8810 \special{!pdfinfo r=<\@pdfproducer>}%
8811 \fi
8812 \special{!pdfinfo k=<\@pdfkeywords>}%
8813 \Hy@DisableOption{pdfauthor}%
8814 \Hy@DisableOption{pdftitle}%
8815 \Hy@DisableOption{pdfsubject}%
8816 \Hy@DisableOption{pdfcreator}%
8817 \Hy@DisableOption{pdfcreationdate}%
8818 \Hy@DisableOption{pdfmoddate}%
8819 \Hy@DisableOption{pdfproducer}%
8820 \Hy@DisableOption{pdfkeywords}%
8821 }
8822 </vtx>

```

46.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

8823 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
8824 <package>\providecommand*\Hy@DistillerDestFix{}
8825 <*pdfmark | dviwindo>
8826 \def\Hy@DistillerDestFix{%
8827 \begingroup
8828 \let\x\literalps@out

```

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

```

8829 \ifnum \@ifundefined{OpMode}{0}{}%
8830 \@ifundefined{gexmode}{0}{%
8831 \ifnum\gexmode>0 \OpMode\else 0\fi
8832 }}>1 %
8833 \def\x##1{%
8834 \immediate\special{!=##1}%
8835 }%
8836 \fi

```

```

8837 \x{%
8838 /product where{%
8839   pop %
8840   product(Distiller)search{%
8841     pop pop pop %
8842     version(.)search{%
8843       exch pop exch pop%
8844       (3011)eq{%
8845         gsave %
8846         newpath 0 0 moveto closepath clip%
8847         /Courier findfont 10 scalefont setfont %
8848         72 72 moveto(.)show %
8849         grestore%
8850       }if%
8851     }{pop}ifelse%
8852   }{pop}ifelse%
8853 }if%
8854 }%
8855 \endgroup
8856 }
8857 </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

```

```

8858 <*pdfmark>
8859 \Hy@breaklinks@unsupported
8860 \def\hyper@anchor#1{%
8861   \Hy@SaveLastskip
8862   \begingroup
8863     \pdfmark[\anchor@spot]{%
8864       pdfmark=/DEST,%
8865       linktype=anchor,%
8866       View=/\pdfview \pdfviewparams,%
8867       DestAnchor={#1}%
8868     }%
8869   \endgroup
8870   \Hy@RestoreLastskip
8871 }
8872 \@ifundefined{hyper@anchorstart}{-}{\endinput}
8873 \def\hyper@anchorstart#1{%
8874   \Hy@SaveLastskip
8875   \literalps@out{H.S}%
8876   \xdef\hyper@currentanchor{#1}%
8877   \Hy@activeanchortrue

```



```

8878 }
8879 \def\hyper@anchorend{%
8880   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
8881   \pdfmark{%
8882     pdfmark=/DEST,%
8883     linktype=anchor,%
8884     View=/\@pdfview \@pdfviewparams,%
8885     DestAnchor=\hyper@currentanchor,%
8886   }%
8887   \Hy@activeanchorfalse
8888   \Hy@RestoreLastskip
8889 }
8890 \def\hyper@linkstart#1#2{%
8891   \ifHy@breaklinks
8892   \else
8893     \leavevmode\hbox\bgroup
8894     \fi
8895     \expandafter\Hy@colorlink\csname @#1color\endcsname
8896     \literalps@out{H.S}%
8897     \xdef\hyper@currentanchor{#2}%
8898     \gdef\hyper@currentlinktype{#1}%
8899 }
8900 \def\hyper@linkend{%
8901   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
8902   \@ifundefined{@\hyper@currentlinktype bordercolor}{%
8903     \let\Hy@tempcolor\relax
8904   }{%
8905     \edef\Hy@tempcolor{%
8906       \csname @\hyper@currentlinktype bordercolor\endcsname
8907     }%
8908   }%
8909   \pdfmark{%
8910     pdfmark=/ANN,%
8911     linktype=link,%
8912     Subtype=/Link,%
8913     PDFAFlags=4,%
8914     Dest=\hyper@currentanchor,%
8915     AcroHighlight=\@pdfhighlight,%
8916     Border=\@pdfborder,%
8917     BorderStyle=\@pdfborderstyle,%
8918     Color=\Hy@tempcolor,%
8919     Raw=H.B%
8920   }%
8921   \Hy@endcolorlink
8922   \ifHy@breaklinks
8923   \else
8924     \egroup
8925   \fi
8926 }

```

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.

```

8927 \begingroup
8928   \catcode'P=12 %
8929   \catcode'T=12 %
8930   \lowercase{\endgroup
8931   \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%

```

```

8932 }
8933 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

8934 \def\hyper@pagetransition{%
8935   \ifx\@pdfpagetransition\relax
8936   \else
8937     \ifx\@pdfpagetransition\@empty
8938       % 1. Does an old entry have to be deleted?
8939       % 2. If 1=yes, how to delete?
8940     \else
8941       \pdfmark{%
8942         pdfmark=/PUT,%
8943         Raw={%
8944           \string{ThisPage\string}%
8945           <</Trans << /S /\@pdfpagetransition\space >> >>%
8946         }%
8947       }%
8948     \fi
8949   \fi
8950 }

```

\hyper@pageduration

```

8951 \def\hyper@pageduration{%
8952   \ifx\@pdfpageduration\relax
8953   \else
8954     \ifx\@pdfpageduration\@empty
8955       % 1. Does an old entry have to be deleted?
8956       % 2. If 1=yes, how to delete?
8957     \else
8958       \pdfmark{%
8959         pdfmark=/PUT,%
8960         Raw={%
8961           \string{ThisPage\string}%
8962           <</Dur \@pdfpageduration>>%
8963         }%
8964       }%
8965     \fi
8966   \fi
8967 }

```

\hyper@pagehidden

```

8968 \def\hyper@pagehidden{%
8969   \ifHy@useHidKey
8970     \pdfmark{%
8971       pdfmark=/PUT,%
8972       Raw={%
8973         \string{ThisPage\string}%
8974         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
8975       }%
8976     }%
8977   \fi
8978 }

8979 \g@addto@macro\Hy@EveryPageBoxHook{%
8980   \hyper@pagetransition
8981   \hyper@pageduration

```

```

8982 \hyper@pagehidden
8983 }

8984 \def\hyper@image#1#2{%
8985 \hyper@linkurl{#2}{#1}%
8986 }

8987 \def\Hy@undefinedname{UNDEFINED}
8988 \def\hyper@link#1#2#3{%
8989 \@ifundefined{@#1bordercolor}{%
8990 \let\Hy@tempcolor\relax
8991 }{%
8992 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
8993 }%
8994 \begingroup
8995 \protected@edef\Hy@testname{#2}%
8996 \ifx\Hy@testname\@empty
8997 \Hy@Warning{%
8998 Empty destination name,\MessageBreak
8999 using '\Hy@undefinedname'%
9000 }%
9001 \let\Hy@testname\Hy@undefinedname
9002 \fi
9003 \pdfmark[{#3}]{%
9004 Color=\Hy@tempcolor,%
9005 linktype={#1},%
9006 AcroHighlight=\@pdfhighlight,%
9007 Border=\@pdfborder,%
9008 BorderStyle=\@pdfborderstyle,%
9009 pdfmark=/ANN,%
9010 Subtype=/Link,%
9011 PDFAFlags=4,%
9012 Dest=\Hy@testname
9013 }%
9014 \endgroup
9015 }

9016 \newtoks\pdf@docset
9017 \def\PDF@FinishDoc{%
9018 \Hy@UseMaketitleInfos
9019 \let\Hy@temp\@empty
9020 \ifx\@pdfcreationdate\@empty
9021 \else
9022 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9023 \fi
9024 \ifx\@pdfmoddate\@empty
9025 \else
9026 \expandafter\def\expandafter\Hy@temp\expandafter{%
9027 \Hy@temp
9028 ModDate=\@pdfmoddate,%
9029 }%
9030 \fi
9031 \ifx\@pdfproducer\relax
9032 \else
9033 \expandafter\def\expandafter\Hy@temp\expandafter{%
9034 \Hy@temp
9035 Producer=\@pdfproducer,%
9036 }%
9037 \fi
9038 \expandafter

```

```

9039 \pdfmark\expandafter{%
9040   \Hy@temp
9041   pdfmark=/DOCINFO,%
9042   Title=\@pdftitle,%
9043   Subject=\@pdfsubject,%
9044   Creator=\@pdfcreator,%
9045   Author=\@pdfauthor,%
9046   Keywords=\@pdfkeywords
9047 }%
9048 \Hy@DisableOption{pdfauthor}%
9049 \Hy@DisableOption{pdftitle}%
9050 \Hy@DisableOption{pdfsubject}%
9051 \Hy@DisableOption{pdfcreator}%
9052 \Hy@DisableOption{pdfcreationdate}%
9053 \Hy@DisableOption{pdfmoddate}%
9054 \Hy@DisableOption{pdfproducer}%
9055 \Hy@DisableOption{pdfkeywords}%
9056 }
9057 \def\PDF@SetupDoc{%
9058   \def\Hy@temp{%
9059     \ifx\@pdfstartpage\@empty
9060     \else
9061       \ifx\@pdfstartview\@empty
9062       \else
9063         \edef\Hy@temp{%
9064           ,Page=\@pdfstartpage
9065           ,View=\@pdfstartview
9066         }%
9067       \fi
9068     \fi
9069     \edef\Hy@temp{%
9070       \noexpand\pdfmark{%
9071         pdfmark=/DOCVIEW,%
9072         PageMode=/\@pdfpagemode
9073       }\Hy@temp
9074     }%
9075   }%
9076   \Hy@temp
9077   \ifx\@pdfpagescrop\@empty
9078   \else
9079     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9080   \fi
9081   \edef\Hy@temp{%
9082     \ifHy@toolbar\else /HideToolbar true\fi
9083     \ifHy@menubar\else /HideMenubar true\fi
9084     \ifHy>windowui\else /HideWindowUI true\fi
9085     \ifHy@fitwindow /FitWindow true\fi
9086     \ifHy@centerwindow /CenterWindow true\fi
9087     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9088     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9089     \Hy@UseNameKey{Direction}\@pdfdirection
9090     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9091     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9092     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9093     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9094     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9095     \Hy@UseNameKey{Duplex}\@pdfduplex

```

```

9096 \ifx\@pdfpicktraybypdfsize\@empty
9097 \else
9098 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9099 \fi
9100 \ifx\@pdfprintpagerange\@empty
9101 \else
9102 /PrintPageRange[\@pdfprintpagerange]%
9103 \fi
9104 \ifx\@pdfnumcopies\@empty
9105 \else
9106 /NumCopies \@pdfnumcopies
9107 \fi
9108 }%
9109 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9110 \pdfmark{%
9111 pdfmark=/PUT,%
9112 Raw={%
9113 \string{Catalog\string}<<%
9114 \ifx\Hy@temp\@empty
9115 \else
9116 /ViewerPreferences<<\Hy@temp>>%
9117 \fi
9118 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9119 \ifx\@pdflang\@empty
9120 \else
9121 /Lang(\@pdflang)%
9122 \fi
9123 \ifx\@baseurl\@empty
9124 \else
9125 /URI<</Base(\Hy@pstringB)>>%
9126 \fi
9127 >>%
9128 }%
9129 }%
9130 }
9131 </pdfmark>
9132 <*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.

```

9133 \newif\ifHy@pdfmarkerror
9134 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
9135 \def\pdfmark@[#1]#2{%
9136 \Hy@pdfmarkerrorfalse
9137 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9138 \@processme
9139 \let\pdf@type\relax
9140 \setkeys{PDF}{#2}%
9141 \ifHy@pdfmarkerror
9142 \else
9143 \ifx\pdf@type\relax
9144 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9145 \ifx\#1\%
9146 \else

```

```

9147         \pdf@rect{#1}%
9148     \fi
9149 \else
9150     \ifx\#1\%
9151         \literalps@out{%
9152             [\the\pdf@toks\space\pdf@type\space pdfmark%
9153         ]%
9154     \else
9155         \@ifundefined{@\pdf@linktype color}{%
9156             \Hy@colorlink\@linkcolor
9157         }{%
9158             \expandafter\Hy@colorlink
9159                 \csname @\pdf@linktype color\endcsname
9160         }%
9161         \pdf@rect{#1}%
9162         \literalps@out{%
9163             [\the\pdf@toks\space\pdf@type\space pdfmark%
9164         ]%
9165         \Hy@endcolorlink
9166     \fi
9167 \fi
9168 \fi
9169 }

```

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}

```

```

9170 \newsavebox{\pdf@box}
9171 \providecommand*{\Hy@setouterhbox}{\sbox}
9172 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9173 \def\Hy@DEST{/DEST}
9174 \def\pdf@rect#1{%
9175     \leavevmode
9176     \ifHy@breaklinks
9177         \Hy@setouterhbox\pdf@box{#1}%
9178     \else
9179         \sbox\pdf@box{#1}%
9180     \fi
9181     \dimen@ht\pdf@box
9182     \ifdim\dp\pdf@box=\z@
9183         \literalps@out{H.S}%
9184     \else
9185         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9186     \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...).

```

9187 \ifHy@breaklinks
9188     \expandafter\Hy@breaklinksunhbox
9189 \else

```

```

9190 \expandafter\box
9191 \fi
9192 \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

9193 \ifdim\dimen@=\z@
9194 \literalps@out{H.R}%
9195 \else
9196 \raise\dimen@ \hbox{\literalps@out{H.R}}%
9197 \fi
9198 \ifx\pdf@type\Hy@DEST
9199 \else
9200 \pdf@addtoksx{H.B}%
9201 \fi
9202 }

```

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.

```

9203 \newtoks\pdf@toks
9204 \newtoks\pdf@defaulttoks
9205 \pdf@defaulttoks={}%
9206 \def\pdf@addtoks#1#2{%
9207 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9208 \@processme
9209 }
9210 \def\pdf@addtoksx#1{%
9211 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9212 \@processme
9213 }
9214 \def\PDFdefaults#1{%
9215 \pdf@defaulttoks={#1}%
9216 }

```

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

```

9217 % what is the type of pdfmark?
9218 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9219 % what is the link type?
9220 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9221 \def\pdf@linktype{link}
9222 % parameter is a stream of PDF
9223 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
9224 % parameter is a name
9225 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9226 % parameter is a array
9227 \define@key{PDF}{Border}{%
9228 \edef\Hy@temp{#1}%
9229 \ifx\Hy@temp\@empty
9230 \else
9231 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9232 \fi
9233 }
9234 \let\Hy@BorderArrayPatch\@empty
9235 % parameter is a dictionary
9236 \define@key{PDF}{BorderStyle}{%

```

```

9237 \edef\Hy@temp{#1}%
9238 \ifx\Hy@temp\@empty
9239 \else
9240 \pdf@addtoks{<<#1>>}{BS}%
9241 \fi
9242 }
9243 % parameter is a array
9244 \define@key{PDF}{Color}{%
9245 \ifx\relax#1\relax
9246 \else
9247 \pdf@addtoks{[#1]}{Color}% hash-ok
9248 \fi
9249 }
9250 % parameter is a string
9251 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
9252 % parameter is a integer
9253 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9254 % parameter is a array
9255 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9256 % parameter is a string
9257 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9258 % parameter is a string or file
9259 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9260 % parameter is a destination
9261 \define@key{PDF}{Dest}{%
9262 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9263 \ifx\Hy@pstringDest\@empty
9264 \Hy@pdfmarkerrortrue
9265 \Hy@Warning{Destination with empty name ignored}%
9266 \else
9267 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9268 \fi
9269 }
9270 \define@key{PDF}{DestAnchor}{%
9271 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9272 \ifx\Hy@pstringDest\@empty
9273 \Hy@pdfmarkerrortrue
9274 \Hy@Warning{Destination with empty name ignored}%
9275 \else
9276 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9277 \fi
9278 }
9279 % parameter is a string
9280 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9281 % parameter is a string
9282 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9283 % parameter is a int
9284 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9285 \define@key{PDF}{PDFAFlags}{%
9286 \ifHy@pdfa
9287 \pdf@addtoks{#1}{F}%
9288 \fi
9289 }
9290 % parameter is a name
9291 \define@key{PDF}{AcroHighlight}{%
9292 \begingroup
9293 \edef\x{#1}%

```



```

9294 \expandafter\endgroup\ifx\x\@empty
9295 \else
9296 \pdf@addtoks{#1}{H}%
9297 \fi
9298 }
9299 % parameter is a string
9300 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9301 % parameter is a string
9302 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9303 % parameter is a string
9304 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9305 % parameter is a string
9306 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9307 % parameter is a Boolean
9308 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
9309 % parameter is a integer or name
9310 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9311 % parameter is a name
9312 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9313 % parameter is a string
9314 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
9315 % parameter is a array
9316 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
9317 % parameter is a integer
9318 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9319 % parameter is a name
9320 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9321 % parameter is a string
9322 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
9323 % parameter is a string
9324 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
9325 % parameter is a string
9326 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
9327 % parameter is an array
9328 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
9329 % parameter is a string
9330 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9331 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
9332 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
9333 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
9334 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9335 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
9336 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
9337 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
9338 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9339 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
9340 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
9341 </pdfmarkbase>
9342 <*pdfmark>
9343 \def\Acrobatmenu#1#2{%
9344 \Hy@Acrobatmenu{#1}{#2}{%
9345 \pdfmark[{#2}]{%
9346 linktype=menu,%
9347 pdfmark=/ANN,%
9348 AcroHighlight=\@pdfhighlight,%
9349 Border=\@pdfborder,%

```

```

9350     BorderStyle=\@pdfborderstyle,%
9351     Action={<< /Subtype /Named /N /#1 >>},%
9352     Subtype=/Link,%
9353     PDFAFlags=4%
9354 }%
9355 }%
9356 }

```

And now for some useful examples:

```

9357 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9358 \def\PDFNextPage@[#1]#2{%
9359   \pdfmark[{#2}] {%
9360     #1,%
9361     Border=\@pdfborder,%
9362     BorderStyle=\@pdfborderstyle,%
9363     Color=.2 .1 .5,%
9364     pdfmark=/ANN,%
9365     Subtype=/Link,%
9366     PDFAFlags=4,%
9367     Page=/Next%
9368   }%
9369 }
9370 \def\PDFPreviousPage{%
9371   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}]%
9372 }
9373 \def\PDFPreviousPage@[#1]#2{%
9374   \pdfmark[{#2}] {%
9375     #1,%
9376     Border=\@pdfborder,%
9377     BorderStyle=\@pdfborderstyle,%
9378     Color=.4 .4 .1,%
9379     pdfmark=/ANN,%
9380     Subtype=/Link,%
9381     PDFAFlags=4,%
9382     Page=/Prev%
9383   }%
9384 }
9385 \def\PDFOpen#1{%
9386   \pdfmark{#1,pdfmark=/DOCVIEW}%
9387 }

```

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

```

9388 \def\hyper@linkurl#1#2{%
9389   \begingroup
9390     \Hy@pstringdef\Hy@pstringURI{#2}%
9391     \hyper@chars
9392     \leavevmode
9393     \pdfmark[{#1}] {%
9394       pdfmark=/ANN,%
9395       linktype=url,%
9396       AcroHighlight=\@pdfhighlight,%
9397       Border=\@pdfborder,%
9398       BorderStyle=\@pdfborderstyle,%
9399       Color=\@urlbordercolor,%
9400       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9401       Subtype=/Link,%
9402       PDFAFlags=4%
9403     }%

```

```

9404 \endgroup
9405 }
9406 \def\hyper@linkfile#1#2#3{%
9407 \begingroup
9408 \Hy@pstringdef\Hy@pstringF{#2}%
9409 \Hy@pstringdef\Hy@pstringD{#3}%
9410 \leavevmode
9411 \pdfmark[{#1}]{%
9412 pdfmark=/ANN,%
9413 Subtype=/Link,%
9414 PDFAFlags=4,%
9415 AcroHighlight=\@pdfhighlight,%
9416 Border=\@pdfborder,%
9417 BorderStyle=\@pdfborderstyle,%
9418 linktype=file,%
9419 Color=\@filebordercolor,%
9420 Action={%
9421 <<%
9422 /S/GoToR%
9423 \Hy@SetNewWindow
9424 /F(\Hy@pstringF)%
9425 /D\ifx\#3\@pdfstartview\else(\Hy@pstringD)cvn\fi
9426 >>%
9427 }%
9428 }%
9429 \endgroup
9430 }
9431 \def\hyper@launch run:#1\#2#3{%
9432 \begingroup
9433 \Hy@pstringdef\Hy@pstringF{#1}%
9434 \Hy@pstringdef\Hy@pstringP{#3}%
9435 \leavevmode
9436 \pdfmark[{#2}]{%
9437 pdfmark=/ANN,%
9438 Subtype=/Link,%
9439 PDFAFlags=4,%
9440 AcroHighlight=\@pdfhighlight,%
9441 Border=\@pdfborder,%
9442 BorderStyle=\@pdfborderstyle,%
9443 linktype=run,%
9444 Color=\@runbordercolor,%
9445 Action={%
9446 <<%
9447 /S/Launch%
9448 \Hy@SetNewWindow
9449 /F(\Hy@pstringF)%
9450 \ifx\#3\%
9451 \else
9452 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9453 \fi
9454 >>%
9455 }%
9456 }%
9457 \endgroup
9458 }
9459 </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.

```

9460 <*dvips>
9461 \providecommand*{\XR@ext}{pdf}
9462 \def\Hy@raisedlink{}
9463 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
9464 \def\headerps@out#1{\special{! #1}}%
9465 \input{pdfmark.def}%
9466 \ifx\pdfproducer\relax
9467   \def\pdfproducer{dvips + Distiller}%
9468 \fi
9469 \providecommand*\pdfborder{0 0 1}
9470 \providecommand*\pdfborderstyle{}
9471 \providecommand*\pdfview{XYZ}
9472 \providecommand*\pdfviewparams{ H.V}
9473 \def\Hy@BorderArrayPatch{BorderArrayPatch}
9474 \g@addto@macro\Hy@FirstPageHook{%
9475   \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.

```

9476   /DvipsToPDF{72.27 mul Resolution div} def%
9477   /PDFToDvips{72.27 div Resolution mul} def%
9478   /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.

```

9479   /BorderArrayPatch{%
9480     [exch{%
9481       dup dup type/integertype eq exch type/realtype eq or%
9482       {BPToDvips}if%
9483     }forall]%
9484   }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.

```

9485   /HyperBorder {1 PDFToDvips} def%
9486   /H.V {pdf@hoff pdf@voff null} def%
9487   /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

```

9488   /H.S {%
9489     currentpoint %
9490     HyperBorder add /pdf@lly exch def %
9491     dup DvipsToPDF 72 add /pdf@hoff exch def %
9492     HyperBorder sub /pdf@llx exch def%
9493   } 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`

```

9494   /H.L {%
9495     2 sub dup%
9496     /HyperBasePt exch def %
9497     PDFToDvips /HyperBaseDvips exch def %
9498     currentpoint %
9499     HyperBaseDvips sub /pdf@ury exch def%
9500     /pdf@urx exch def%
9501   } def%
9502   /H.A {%
9503     H.L %
9504     % | /pdf@voff| = the distance from the top of the page to a point
9505     % | \baselineskip| above the current point in PDF coordinates
9506     currentpoint exch pop %
9507     vsize 72 sub exch DvipsToPDF %
9508     HyperBasePt sub % baseline skip
9509     sub /pdf@voff exch def%
9510   } def%
9511   /H.R {%
9512     currentpoint %
9513     HyperBorder sub /pdf@ury exch def %
9514     HyperBorder add /pdf@urx exch def %
9515     % | /pdf@voff| = the distance from the top of the page to the current point, in
9516     % PDF coordinates
9517     currentpoint exch pop vsize 72 sub %
9518     exch DvipsToPDF sub /pdf@voff exch def%
9519   } def%
9520 }%
9521 }
9522 \AfterBeginDocument{%
9523   \ifx\special@paper\@empty\else
9524     \ifHy@setpagesize
9525       \special{papersize=\special@paper}%
9526     \fi
9527   \fi
9528   \Hy@DisableOption{setpagesize}%
9529 }
9530 \>/dvips>

```

46.10 \TeX '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.

```

9531 \<vtxpdfmark>
9532 \providecommand*\XR@ext\{pdf}
9533 \def\Hy@raisedlink{
9534 \def\literalps@out#1\{special{pS:#1}}%
9535 \def\headerps@out#1\{immediate\special{pS:#1}}%
9536 \input{pdfmark.def}%
9537 \ifx\@pdfproducer\relax
9538   \ifnum\OpMode=\@ne
9539     \def\@pdfproducer{VTeX}%
9540   \else
9541     \def\@pdfproducer{VTeX + Distiller}%
9542   \fi
9543 \fi
9544 \providecommand*\@pdfborder{0 0 1}
9545 \providecommand*\@pdfborderstyle{
9546 \providecommand*\@pdfview{XYZ}
9547 \providecommand*\@pdfviewparams{ H.V}

9548 \g@addto@macro\Hy@FirstPageHook{%
9549   \headerps@out{%
9550     /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.

```

9551   /HyperBorder {1} def%
9552   /H.V {pdf@hoff pdf@voff null} def%
9553   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

9554   /H.S {%
9555     currentpoint %
9556     HyperBorder sub%
9557     /pdf@lly exch def %
9558     dup 72 add /pdf@hoff exch def %
9559     HyperBorder sub%
9560     /pdf@llx exch def%
9561   } def%

```

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

```

9562   /H.L {%
9563     2 sub%
9564     /HyperBasePt exch def %
9565     currentpoint %
9566     HyperBasePt add HyperBorder add%
9567     /pdf@ury exch def %
9568     HyperBorder add%
9569     /pdf@urx exch def%
9570   } def%
9571   /H.A {%
9572     H.L %
9573     currentpoint exch pop %
9574     vsize 72 sub exch %

```

```

9575      HyperBasePt add add%
9576      /pdf@voff exch def%
9577  } def%
pdf@ury =  $Y_c + \text{HyperBorder}$ , pdf@urx =  $X_c + \text{HyperBorder}$ 
9578      /H.R {%
9579          currentpoint %
9580          HyperBorder add%
9581          /pdf@ury exch def %
9582          HyperBorder add%
9583          /pdf@urx exch def %
9584          currentpoint exch pop vsize 72 sub add%
9585          /pdf@voff exch def%
9586      } def%
9587  }%
9588 }
9589 </vtexpdfmark>

```

46.11 Textures

```

9590 <*textures>
9591 \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.

```

9592 \begingroup
9593   \obeylines %
9594   \gdef\Hy@ps@CR{\noexpand
9595     }%
9596 \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`.

```

9597 \def\literalps@out#1{%
9598   \special{postscript 0 0 transform}%
9599   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
9600 }%
9601 %

```

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.

```

9602 \def\headerps@out#1{%
9603   \special{%

```

```

9604     prepostscript TeXdict begin\Hy@ps@CR
9605         #1\Hy@ps@CR
9606     end%
9607 }%
9608 }%
9609 %

```

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.

```

9610 \g@addto@macro\Hy@FirstPageHook{%
9611     \headerps@out{%
9612         /betterpdfmark {%
9613             systemdict begin %
9614                 dup /BP eq%
9615                 {cleartomark gsave nulldevice []%
9616                 {dup /EP eq%
9617                     {cleartomark cleartomark grestore}%
9618                     {cleartomark}%
9619                     ifelse%
9620                 }ifelse %
9621             end%
9622         }def\Hy@ps@CR
9623     __pdfmark__ not{/pdfmark /betterpdfmark load def}if%
9624 }% end of \headerps@out
9625 }% end of \AtBeginShipoutFirst
9626 %
9627 \input{pdfmark.def}%
9628 %
9629 \ifx\@pdfproducer\relax
9630     \def\@pdfproducer{Textures + Distiller}%
9631 \fi
9632 \providecommand*\@pdfborder{0 0 1}
9633 \providecommand*\@pdfborderstyle{}
9634 \providecommand*\@pdfview{XYZ}
9635 \providecommand*\@pdfviewparams{ H.V}
9636 %

```

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 T_EX.

```

9637 \headerps@out{%

```

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

```

9638     /vsize {\Hy@pageheight} def%
9639     /DvipsToPDF {} def%
9640     /PDFToDvips {} def%
9641     /BPTToDvips {} def%
9642     /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
9643     /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
9644     /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
9645     /H.S {%
9646         currentpoint %
9647         HyperBorder add /pdf@lly exch def %
9648         dup DvipsToPDF 72 add /pdf@hoff exch def %
9649         HyperBorder sub /pdf@llx exch def%

```



```

9650 } def\Hy@ps@CR
9651 /H.L {%
9652   2 sub %
9653   PDFToDvips /HyperBase exch def %
9654   currentpoint %
9655   HyperBase sub /pdf@ury exch def%
9656   /pdf@urx exch def%
9657 } def\Hy@ps@CR
9658 /H.A {%
9659   H.L %
9660   currentpoint exch pop %
9661   vsize 72 sub exch DvipsToPDF %
9662   HyperBase sub % baseline skip
9663   sub /pdf@voff exch def%
9664 } def\Hy@ps@CR
9665 /H.R {%
9666   currentpoint %
9667   HyperBorder sub /pdf@ury exch def %
9668   HyperBorder add /pdf@urx exch def %
9669   currentpoint exch pop vsize 72 sub %
9670   exch DvipsToPDF sub /pdf@voff exch def%
9671 } def\Hy@ps@CR
9672 }

9673 \AfterBeginDocument{%
9674   \ifHy@colorlinks
9675     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
9676   \fi
9677 }

```

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.

```

9678 \expandafter\let\expandafter\keepPDF@SetupDoc
9679 \csname PDF@SetupDoc\endcsname
9680 \def\PDF@SetupDoc{%
9681   \ifx\@baseurl\@empty
9682   \else
9683     \special{html:<base href="\@baseurl">}%
9684   \fi
9685   \keepPDF@SetupDoc
9686 }
9687 \def\hyper@anchor#1{%
9688   \Hy@SaveLastskip
9689   \begingroup
9690     \let\protect=\string
9691     \special{html:<a name=%
9692       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9693   \endgroup
9694   \Hy@activeanchortrue
9695   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9696   \special{html:</a>}%
9697   \Hy@activeanchorfalse
9698   \Hy@RestoreLastskip
9699 }
9700 \def\hyper@anchorstart#1{%
9701   \Hy@SaveLastskip
9702   \begingroup
9703     \hyper@chars

```

```

9704 \special{html:<a name=%
9705 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9706 \endgroup
9707 \Hy@activeanchortrue
9708 }
9709 \def\hyper@anchorend{%
9710 \special{html:</a>}%
9711 \Hy@activeanchorfalse
9712 \Hy@RestoreLastskip
9713 }
9714 \def\@urlltype{url}
9715 \def\hyper@linkstart#1#2{%
9716 \expandafter\Hy@colorlink\csname @#1color\endcsname
9717 \def\Hy@tempa{#1}%
9718 \ifx\Hy@tempa\@urlltype
9719 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9720 \else
9721 \begingroup
9722 \hyper@chars
9723 \special{html:<a href=%
9724 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9725 \endgroup
9726 \fi
9727 }
9728 \def\hyper@linkend{%
9729 \special{html:</a>}%
9730 \Hy@endcolorlink
9731 }
9732 \def\hyper@linkfile#1#2#3{%
9733 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
9734 }
9735 \def\hyper@linkurl#1#2{%
9736 \leavevmode
9737 \ifHy@raiselinks
9738 \setbox\@tempboxa=\color@hbox #1\color@endbox
9739 \@linkdim\dp\@tempboxa
9740 \lower\@linkdim\hbox{%
9741 \hyper@chars
9742 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9743 }%
9744 \Hy@colorlink\@urlcolor#1%
9745 \@linkdim\ht\@tempboxa
9746 \advance\@linkdim by -6.5\p@
9747 \raise\@linkdim\hbox{\special{html:</a>}}%
9748 \Hy@endcolorlink
9749 \else
9750 \begingroup
9751 \hyper@chars
9752 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9753 \Hy@colorlink\@urlcolor#1%
9754 \special{html:</a>}%
9755 \Hy@endcolorlink
9756 \endgroup
9757 \fi
9758 }

```

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

```

9759 \def\hyper@link#1#2#3{%

```

```

9760 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
9761 }
9762 \def\hyper@image#1#2{%
9763   \begin{group}
9764     \hyper@chars
9765     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9766   \endgroup
9767 }
9768 </textures>

```

46.12 dvipsone

```

9769 % \subsection{dvipsone driver}
9770 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
9771 % |\special| commands.
9772 <*dvipsone>
9773 \providecommand*\XR@ext}{pdf}
9774 \def\Hy@raisedlink{}
9775 \providecommand*\@pdfborder{0 0 1}
9776 \providecommand*\@pdfborderstyle{}
9777 \def\literalps@out#1{\special{ps:#1}}%
9778 \def\headerps@out#1{\special{headertext=#1}}%
9779 \input{pdfmark.def}%
9780 \ifx\@pdfproducer\relax
9781   \def\@pdfproducer{dvipsone + Distiller}%
9782 \fi
9783 \def\PDF@FinishDoc{%
9784   \Hy@UseMaketitleInfos
9785   \special{PDF: Keywords \@pdfkeywords}%
9786   \special{PDF: Title \@pdftitle}%
9787   \special{PDF: Creator \@pdfcreator}%
9788   \ifx\@pdfcreationdate\@empty
9789   \else
9790     \special{PDF: CreationDate \@pdfcreationdate}%
9791   \fi
9792   \ifx\@pdfmoddate\@empty
9793   \else
9794     \special{PDF: ModDate \@pdfmoddate}%
9795   \fi
9796   \special{PDF: Author \@pdfauthor}%
9797   \ifx\@pdfproducer\relax
9798   \else
9799     \special{PDF: Producer \@pdfproducer}%
9800   \fi
9801   \special{PDF: Subject \@pdfsubject}%
9802   \Hy@DisableOption{pdfauthor}%
9803   \Hy@DisableOption{pdftitle}%
9804   \Hy@DisableOption{pdfsubject}%
9805   \Hy@DisableOption{pdfcreator}%
9806   \Hy@DisableOption{pdfcreationdate}%
9807   \Hy@DisableOption{pdfmoddate}%
9808   \Hy@DisableOption{pdfproducer}%
9809   \Hy@DisableOption{pdfkeywords}%
9810 }
9811 \def\PDF@SetupDoc{%
9812   \def\Hy@temp{}%
9813   \ifx\@pdfstartpage\@empty

```

```

9814 \else
9815 \ifx\@pdfstartview\@empty
9816 \else
9817 \edef\Hy@temp{%
9818 ,Page=\@pdfstartpage
9819 ,View=\@pdfstartview
9820 }%
9821 \fi
9822 \fi
9823 \edef\Hy@temp{%
9824 \noexpand\pdfmark{%
9825 pdfmark=/DOCVIEW,%
9826 PageMode=/\@pdfpagemode
9827 \Hy@temp
9828 }%
9829 }%
9830 \Hy@temp
9831 \ifx\@pdfpagescrop\@empty
9832 \else
9833 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9834 \fi
9835 \edef\Hy@temp{%
9836 \ifHy@toolbar\else /HideToolbar true\fi
9837 \ifHy@menubar\else /HideMenubar true\fi
9838 \ifHy@windowui\else /HideWindowUI true\fi
9839 \ifHy@fitwindow /FitWindow true\fi
9840 \ifHy@centerwindow /CenterWindow true\fi
9841 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9842 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9843 \Hy@UseNameKey{Direction}\@pdfdirection
9844 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9845 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9846 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9847 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9848 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9849 \Hy@UseNameKey{Duplex}\@pdfduplex
9850 \ifx\@pdfpicktraybypdfsize\@empty
9851 \else
9852 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9853 \fi
9854 \ifx\@pdfprintpagerange\@empty
9855 \else
9856 /PrintPageRange[\@pdfprintpagerange]%
9857 \fi
9858 \ifx\@pdfnumcopies\@empty
9859 \else
9860 /NumCopies \@pdfnumcopies
9861 \fi
9862 }%
9863 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9864 \pdfmark{%
9865 pdfmark=/PUT,%
9866 Raw={%
9867 \string{Catalog\string}<<%
9868 \ifx\Hy@temp\@empty
9869 \else
9870 /ViewerPreferences<<\Hy@temp>>%

```

```

9871      \fi
9872      \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9873      \ifx\@pdflang\@empty
9874      \else
9875        /Lang(\@pdflang)%
9876      \fi
9877      \ifx\@baseurl\@empty
9878      \else
9879        /URI<</Base(\Hy@pstringB)>>%
9880      \fi
9881      >>%
9882    }%
9883  }%
9884 }
9885 \providecommand*\@pdfview{XYZ}
9886 \providecommand*\@pdfviewparams{ %
9887   gsave revscl currentpoint grestore %
9888   72 add exch pop null exch null%
9889 }
9890 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

9891 \g@addto@macro\Hy@FirstPageHook{%
9892   \headerps@out{%

```

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

```

9893   /DvipsToPDF { 65781 div } def%
9894   /PDFToDvips { 65781 mul } def%
9895   /BPToDvips{65781 mul}def%
9896   /HyperBorder { 1 PDFToDvips } def%
9897   /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.

```

9898   /BorderArrayPatch{%
9899     [exch{%
9900       dup dup type/integertype eq exch type/realtype eq or%
9901       {BPToDvips}if%
9902     }forall]%
9903   }def%
9904   /H.S {%
9905     currentpoint %
9906     HyperBorder add /pdf@lly exch def %
9907     dup DvipsToPDF 72 add /pdf@hoff exch def %
9908     HyperBorder sub /pdf@llx exch def%
9909   } def%
9910   /H.L {%
9911     2 sub %
9912     PDFToDvips /HyperBase exch def %
9913     currentpoint %
9914     HyperBase sub /pdf@ury exch def%
9915     /pdf@urx exch def%
9916   } def%
9917   /H.A {%

```

```

9918      H.L %
9919      currentpoint exch pop %
9920      HyperBase sub % baseline skip
9921      DvipsToPDF /pdf@voff exch def%
9922    } def%
9923    /H.R {%
9924      currentpoint %
9925      HyperBorder sub /pdf@ury exch def %
9926      HyperBorder add /pdf@urx exch def %
9927      currentpoint exch pop DvipsToPDF /pdf@voff exch def%
9928    } def%
9929  }%
9930 }
9931 </dvipsone>

```

46.13 TeX4ht

```

9932 < *tex4ht>
9933 \providecommand*{\XR@ext}{html}
9934 \def\Hy@raisedlink{}
9935 \@ifpackageloaded{tex4ht}{%
9936   \typeout{hyperref tex4ht: tex4ht already loaded}%
9937 }{%
9938   \RequirePackage[htex4ht]{tex4ht}%
9939 }
9940 \hyperlinkfileprefix{}
9941 \def\PDF@FinishDoc{}
9942 \def\PDF@SetupDoc{%
9943   \ifx\@baseurl\@empty
9944     \else
9945       \special{t4ht=<base href="\@baseurl">}%
9946     \fi
9947 }
9948 \def\hyper@anchor#1{%
9949   \Hy@SaveLastskip
9950   \begingroup
9951     \let\protect=\string
9952     \special{t4ht=<a name=%
9953       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9954   \endgroup
9955   \Hy@activeanchortrue
9956   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9957   \special{t4ht=</a>}%
9958   \Hy@activeanchorfalse
9959   \Hy@RestoreLastskip
9960 }
9961 \def\hyper@anchorstart#1{%
9962   \Hy@SaveLastskip
9963   \begingroup
9964     \hyper@chars\special{t4ht=<a name=%
9965       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9966   \endgroup
9967   \Hy@activeanchortrue
9968 }
9969 \def\hyper@anchorend{%
9970   \special{t4ht=</a>}%
9971   \Hy@activeanchorfalse
9972   \Hy@RestoreLastskip

```

```

9973 }
9974 \def\@urltype{url}
9975 \def\hyper@linkstart#1#2{%
9976   \expandafter\Hy@colorlink\csname @#1color\endcsname
9977   \def\Hy@tempa{#1}%
9978   \ifx\Hy@tempa\@urltype
9979     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9980   \else
9981     \begingroup
9982       \hyper@chars
9983       \special{t4ht=<a href=
9984         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9985     \endgroup
9986   \fi
9987 }
9988 \def\hyper@linkend{%
9989   \special{t4ht=</a>}%
9990   \Hy@endcolorlink
9991 }
9992 \def\hyper@linkfile#1#2#3{%
9993   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9994 }
9995 \def\hyper@linkurl#1#2{%
9996   \leavevmode
9997   \ifHy@raiselinks
9998     \setbox\@tempboxa=\color@hbox #1\color@endbox
9999     \@linkdim\dp\@tempboxa
10000     \lower\@linkdim\hbox{%
10001       \begingroup
10002         \hyper@chars\special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10003       \endgroup
10004     }%
10005     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10006     \@linkdim\ht\@tempboxa
10007     \advance\@linkdim by -6.5\p@
10008     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
10009   \else
10010     \begingroup
10011       \hyper@chars
10012       \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10013       \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10014       \special{t4ht=</a>}%
10015     \endgroup
10016   \fi
10017 }

```

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

```

10018 \def\hyper@link#1#2#3{%
10019   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
10020 }
10021 \def\hyper@image#1#2{%
10022   \begingroup
10023     \hyper@chars
10024     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
10025   \endgroup
10026 }
10027 \let\autoref\ref
10028 \ifx \rEfLiNK \UnDef

```

```

10029 \def\rEfLiNK #1#2{#2}%
10030 \fi
10031 \def\backref#1{}
10032 </tex4ht>
10033 <*tex4htcfg>
10034 \IfFileExists{\jobname.cfg}{\endinput}{}
10035 \Preamble{html}
10036 \begin{document}%
10037 \EndPreamble
10038 \def\TeX{TeX}
10039 \def\OMEGA{\Omega}
10040 \def\LaTeX{LaTeX}
10041 \def\LaTeXe{\LaTeX2e}
10042 \def\eTeX{e-TeX}
10043 \def\MF{Metafont}
10044 \def\MP{MetaPost}
10045 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

10046 <*pdfmark>
10047 \long\def\@Form[#1]{%
10048 \g@addto@macro\Hy@FirstPageHook{%
10049 \headerps@out{%
10050 [%
10051 /_objdef{pdfDocEncoding}%
10052 /type/dict%
10053 /OBJ pdfmark%
10054 [%
10055 {pdfDocEncoding}%
10056 <<%
10057 /Type/Encoding%
10058 /Differences[%
10059 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10060 /tilde %
10061 39/quotesingle %
10062 96/grave %
10063 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10064 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10065 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10066 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
10067 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10068 164/currency %
10069 166/brokenbar %
10070 168/dieresis/copyright/ordfeminine %
10071 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10072 /twosuperior/threesuperior/acute/mu %
10073 183/periodcentered/cedilla/onesuperior/ordmasculine %
10074 188/onequarter/onehalf/threequarters %
10075 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10076 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10077 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10078 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10079 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10080 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10081 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%

```



```

10082      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
10083      /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10084      /ucircumflex/udieresis/yacute/thorn/ydieresis%
10085    ]%
10086  >>%
10087 /PUT pdfmark%
10088 [%
10089   /_objdef{ZaDb}%
10090   /type/dict%
10091 /OBJ pdfmark%
10092 [%
10093   {ZaDb}%
10094   <<%
10095     /Type/Font%
10096     /Subtype/Type1%
10097     /Name/ZaDb%
10098     /BaseFont/ZapfDingbats%
10099   >>%
10100 /PUT pdfmark%
10101 [%
10102   /_objdef{Helv}%
10103   /type/dict%
10104 /OBJ pdfmark%
10105 [%
10106   {Helv}%
10107   <<%
10108     /Type/Font%
10109     /Subtype/Type1%
10110     /Name/Helv%
10111     /BaseFont/Helvetica%
10112     /Encoding{pdfDocEncoding}%
10113   >>%
10114 /PUT pdfmark%
10115 [%
10116   /_objdef{aform}%
10117   /type/dict%
10118 /OBJ pdfmark%
10119 [%
10120   /_objdef{afields}%
10121   /type/array%
10122 /OBJ pdfmark%
10123 {%
10124   [%
10125     /BBox[0 0 100 100]%
10126     /_objdef{Check}%
10127   /BP pdfmark %
10128   1 0 0 setrgbcolor%
10129   /ZapfDingbats 80 selectfont %
10130   20 20 moveto%
10131   (4)show%
10132   [/EP pdfmark%
10133   [%
10134     /BBox[0 0 100 100]%
10135     /_objdef{Cross}%
10136   /BP pdfmark %
10137   1 0 0 setrgbcolor%
10138   /ZapfDingbats 80 selectfont %

```

```

10139 20 20 moveto%
10140 (8)show%
10141 [/EP pdfmark%
10142 [%
10143   /BBox[0 0 250 100]%
10144   /_objdef{Submit}%
10145 /BP pdfmark %
10146 0.6 setgray %
10147 0 0 250 100 rectfill %
10148 1 setgray %
10149 2 2 moveto %
10150 2 98 lineto %
10151 248 98 lineto %
10152 246 96 lineto %
10153 4 96 lineto %
10154 4 4 lineto %
10155 fill %
10156 0.34 setgray %
10157 248 98 moveto %
10158 248 2 lineto %
10159 2 2 lineto %
10160 4 4 lineto %
10161 246 4 lineto %
10162 246 96 lineto %
10163 fill%
10164 /Helvetica 76 selectfont %
10165 0 setgray %
10166 8 22.5 moveto%
10167 (Submit)show%
10168 [/EP pdfmark%
10169 [%
10170   /BBox[0 0 250 100]%
10171   /_objdef{SubmitP}%
10172 /BP pdfmark %
10173 0.6 setgray %
10174 0 0 250 100 rectfill %
10175 0.34 setgray %
10176 2 2 moveto %
10177 2 98 lineto %
10178 248 98 lineto %
10179 246 96 lineto %
10180 4 96 lineto %
10181 4 4 lineto %
10182 fill %
10183 1 setgray %
10184 248 98 moveto %
10185 248 2 lineto %
10186 2 2 lineto %
10187 4 4 lineto %
10188 246 4 lineto %
10189 246 96 lineto %
10190 fill%
10191 /Helvetica 76 selectfont %
10192 0 setgray %
10193 10 20.5 moveto%
10194 (Submit)show%
10195 [/EP pdfmark%

```

```

10196 } ?pdfmark%
10197 [%
10198   {aform}%
10199   <<%
10200     /Fields{afields}%
10201     /DR<<%
10202       /Font<<%
10203         /ZaDb{ZaDb}%
10204         /Helv{Helv}%
10205       >>%
10206     >>%
10207     /DA(/Helv 10 Tf 0 g)%
10208     /CO{corder}%
10209     \ifHy@pdfa
10210     \else
10211       /NeedAppearances true%
10212     \fi
10213   >>%
10214 /PUT pdfmark%
10215 [%
10216   {Catalog}%
10217   <<%
10218     /AcroForm{aform}%
10219   >>%
10220 /PUT pdfmark%
10221 [%
10222   /_objdef{corder}%
10223   /type/array%
10224 /OBJ pdfmark% dps
10225 }}%
10226 \setkeys{Form}{#1}%
10227 }
10228 \def\@endForm{}
10229 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10230 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10231 }
10232 \def\@TextField[#1]#2{% parameters, label
10233   \def\Fld@name{#2}%
10234   \def\Fld@default{}%
10235   \let\Fld@value\@empty
10236   \def\Fld@width{\DefaultWidthofText}%
10237   \def\Fld@height{%
10238     \ifFld@multiline
10239       \DefaultHeightofTextMultiline
10240     \else
10241       \DefaultHeightofText
10242     \fi
10243   }%
10244   \begingroup
10245     \Field@toks={ }%
10246     \expandafter\HyField@SetKeys\expandafter{%
10247       \DefaultOptionsofText,#1%
10248     }%
10249     \HyField@FlagsText
10250     \ifFld@hidden\def\Fld@width{1sp}\fi
10251     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10252     \LayoutTextField{#2}{%

```

```

10253     \Hy@escapeform\PDFForm@Text
10254     \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10255         pdfmark=/ANN,Raw={\PDFForm@Text}%
10256     }%
10257 }%
10258 \endgroup
10259 }
10260 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10261     \def\Fld@name{#2}%
10262     \let\Fld@default\relax
10263     \let\Fld@value\relax
10264     \def\Fld@width{\DefaultWidthofChoiceMenu}%
10265     \def\Fld@height{\DefaultHeightofChoiceMenu}%
10266     \begingroup
10267         \Fld@menulength=0 %
10268         \@tempdima\z@
10269         \@for\@curropt:=#3\do{%
10270             \expandafter\Fld@checkequals\@curropt==\%
10271             \Hy@StepCount\Fld@menulength
10272             \settowidth{\@tempdimb}{\@currDisplay}%
10273             \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10274         }%
10275         \advance\@tempdima by 15\p@
10276         \Field@toks={ }%
10277         \begingroup
10278             \HyField@SetKeys{#1}%
10279         \edef\x{\endgroup
10280             \noexpand\expandafter
10281             \noexpand\HyField@SetKeys
10282             \noexpand\expandafter{%
10283                 \expandafter\noexpand\cname DefaultOptionsof%
10284                 \ifFld@radio
10285                     Radio%
10286                 \else
10287                     \ifFld@combo
10288                         \ifFld@popdown
10289                             PopdownBox%
10290                         \else
10291                             ComboBox%
10292                     \fi
10293                 \else
10294                     ListBox%
10295                 \fi
10296             \fi
10297             \endcsname
10298         }%
10299     }\x
10300     \HyField@SetKeys{#1}%
10301     \ifFld@hidden\def\Fld@width{1sp}\fi
10302     \ifx\Fld@value\relax
10303         \let\Fld@value\Fld@default
10304     \fi
10305     \LayoutChoiceField{#2}{%
10306         \ifFld@radio
10307             \HyField@FlagsRadioButton
10308             \@@Radio{#3}%
10309         \else

```

```

10310      \beginngroup
10311      \HyField@FlagsChoice
10312      \ifdim\Fld@width<\@tempdima
10313      \ifdim\@tempdima<1cm\@tempdima1cm\fi
10314      \edef\Fld@width{\the\@tempdima}%
10315      \fi
10316      \ifFld@combo
10317      \else
10318      \@tempdima=\the\Fld@menulength\Fld@charsize
10319      \advance\@tempdima by \Fld@borderwidth bp %
10320      \advance\@tempdima by \Fld@borderwidth bp %
10321      \edef\Fld@height{\the\@tempdima}%
10322      \fi
10323      \@@ListBox{#3}%
10324      \endgroup
10325      \fi
10326      }%
10327      \endgroup
10328 }
10329 \def\@@Radio#1{%
10330   \Fld@listcount=0 %
10331   \@for\@curropt:=#1\do{%
10332     \expandafter\Fld@checkequals\@curropt==\%
10333     \Hy@StepCount\Fld@listcount
10334     \@currDisplay\space
10335     \Hy@escapeform\PDFForm@Radio
10336     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
10337       pdfmark=/ANN,%
10338       Raw={\PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>}%
10339     } % deliberate space between radio buttons
10340   }%
10341 }
10342 \newcount\Fld@listcount
10343 \def\@@ListBox#1{%
10344   \HyField@PDFChoices{#1}%
10345   \Hy@escapeform\PDFForm@List
10346   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10347     pdfmark=/ANN,Raw={\PDFForm@List}%
10348   }%
10349 }
10350 \def\@PushButton[#1]#2{% parameters, label
10351   \def\Fld@name{#2}%
10352   \beginngroup
10353     \Fld@tokens={ }%
10354     \expandafter\HyField@SetKeys\expandafter{%
10355       \DefaultOptionsofPushButton,#1%
10356     }%
10357     \ifHy@pdfa
10358       \PackageError{hyperref}{%
10359         PDF/A: Push button with JavaScript is prohibited%
10360       }\@ehc
10361       \LayoutPushButtonField{%
10362         \leavevmode
10363         \MakeButtonField{#2}%
10364       }%
10365     \else
10366       \HyField@FlagsPushButton

```

```

10367     \ifFld@hidden\def\Fld@width{1sp}\fi
10368     \LayoutPushButtonField{%
10369         \leavevmode
10370         \Hy@escapeform\PDFForm@Push
10371         \pdfmark[\MakeButtonField{#2}]{%
10372             pdfmark=/ANN,Raw={\PDFForm@Push}%
10373         }%
10374     }%
10375     \fi
10376 \endgroup
10377 }
10378 \def\@Submit[#1]#2{%
10379     \Field@toks={ }%
10380     \def\Fld@width{\DefaultWidthofSubmit}%
10381     \def\Fld@height{\DefaultHeightofSubmit}%
10382     \begingroup
10383         \expandafter\HyField@SetKeys\expandafter{%
10384             \DefaultOptionsofSubmit,#1%
10385         }%
10386         \HyField@FlagsPushButton
10387         \HyField@FlagsSubmit
10388         \ifFld@hidden\def\Fld@width{1sp}\fi
10389         \Hy@escapeform\PDFForm@Submit
10390         \pdfmark[\MakeButtonField{#2}]{%
10391             pdfmark=/ANN,%
10392             Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10393         }%
10394     \endgroup
10395 }
10396 \def\@Reset[#1]#2{%
10397     \Field@toks={ }%
10398     \def\Fld@width{\DefaultWidthofReset}%
10399     \def\Fld@height{\DefaultHeightofReset}%
10400     \begingroup
10401         \expandafter\HyField@SetKeys\expandafter{%
10402             \DefaultOptionsofReset,#1%
10403         }%
10404         \leavevmode
10405         \ifHy@pdfa
10406             \PackageError{hyperref}{%
10407                 PDF/A: Reset action is prohibited%
10408             }\@ehc
10409             \MakeButtonField{#2}%
10410         \else
10411             \HyField@FlagsPushButton
10412             \ifFld@hidden\def\Fld@width{1sp}\fi
10413             \Hy@escapeform\PDFForm@Reset
10414             \pdfmark[\MakeButtonField{#2}]{%
10415                 pdfmark=/ANN,Raw={\PDFForm@Reset}%
10416             }%
10417         \fi
10418     \endgroup
10419 }%
10420 \def\@CheckBox[#1]#2{% parameters, label
10421     \def\Fld@name{#2}%
10422     \def\Fld@default{0}%
10423     \begingroup

```

```

10424 \def\Fld@width{\DefaultWidthofCheckBox}%
10425 \def\Fld@height{\DefaultHeightofCheckBox}%
10426 \Field@toks={ }%
10427 \expandafter\HyField@SetKeys\expandafter{%
10428 \DefaultOptionsofCheckBox,#1%
10429 }%
10430 \HyField@FlagsCheckBox
10431 \ifFld@hidden\def\Fld@width{1sp}\fi
10432 \LayoutCheckField{#2}{%
10433 \Hy@escapeform\PDFForm@Check
10434 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
10435 pdfmark=/ANN,Raw={\PDFForm@Check}%
10436 }%
10437 }%
10438 \endgroup
10439 }
10440 \pdfmark>

```

47.2 HyperTeX

```

10441 \hypertex>
10442 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
10443 \def\@endForm{}
10444 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10445 \typeout{Sorry, HyperTeX does not support FORM gauges}%
10446 }
10447 \def\@TextField[#1]#2{% parameters, label
10448 \typeout{Sorry, HyperTeX does not support FORM text fields}%
10449 }
10450 \def\@CheckBox[#1]#2{% parameters, label
10451 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
10452 }
10453 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10454 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
10455 }
10456 \def\@PushButton[#1]#2{% parameters, label
10457 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
10458 }
10459 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10460 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10461 \hypertex>

```

47.3 TeX4ht

```

10462 \tex4ht>
10463 \def\@Form[#1]{%
10464 \setkeys{Form}{#1}%
10465 \HCode{<form action="\Form@action" method="\Form@method">}%
10466 }
10467 \def\@endForm{\HCode{</form>}}
10468 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10469 \typeout{Sorry, TeX4ht does not support gauges}%
10470 }
10471 \def\@TextField[#1]#2{% parameters, label
10472 \let\Hy@reserved@a\@empty
10473 \def\Fld@name{#2}%
10474 \def\Fld@default{}%
10475 \bgroup
10476 \Field@toks={ }%

```

```

10477 \setkeys{Field}{#1}%
10478 \HCode{<label for="\Fld@name">#2</label>}%
10479 \ifFld@password
10480 \@@PasswordField
10481 \else
10482 \@@TextField
10483 \fi
10484 \egroup
10485 }
10486 \def\@@PasswordField{%
10487 \HCode{%
10488 <input type="password" %
10489 id="\Fld@name" %
10490 name="\Fld@name" %
10491 \ifFld@hidden type="hidden" \fi
10492 value="\Fld@default" %
10493 \the\Field@toks
10494 >%
10495 }%
10496 }
10497 \def\@@TextField{%
10498 \ifFld@multiline
10499 \HCode{<textarea %
10500 \ifFld@readonly readonly \fi
10501 id="\Fld@name" %
10502 name="\Fld@name" %
10503 \ifFld@hidden type="hidden" \fi
10504 \the\Field@toks>%
10505 }%
10506 \Fld@default
10507 \HCode{</textarea>}%
10508 \else
10509 \HCode{<input type="text" %
10510 \ifFld@readonly readonly \fi
10511 id="\Fld@name" %
10512 name="\Fld@name" %
10513 \ifFld@hidden type="hidden" \fi
10514 value="\Fld@default" %
10515 \the\Field@toks>%
10516 }%
10517 \fi
10518 }
10519 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10520 \def\Fld@name{#2}%
10521 \def\Fld@default{}%
10522 \let\Hy@reserved@a\relax
10523 \begin{group}
10524 \expandafter\Fld@findlength#3\\%
10525 \Field@toks={ }%
10526 \setkeys{Field}{#1}%
10527 #2%
10528 \ifFld@radio
10529 \expandafter\@@Radio#3\\%
10530 \else
10531 \expandafter\@@Menu#3\\%
10532 \fi
10533 \end{group}

```



```

10534 }
10535 \def\Fld@findlength#1\{%
10536   \Fld@menulength=0 %
10537   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
10538 }
10539 \def\@@Menu#1\{%
10540   \HCode{<select size="\the\Fld@menulength" %
10541     name="\Fld@name" %
10542     \the\Field@toks>%
10543   }%
10544   \@for\@curropt:=#1\do{%
10545     \expandafter\Fld@checkequals\@curropt==\\%
10546     \HCode{<option %
10547       \ifx\@curropt\Fld@default selected \fi
10548       value="\@currValue">\@currDisplay</option>%
10549     }%
10550   }%
10551   \HCode{</select>}%
10552 }
10553 \def\@@Radio#1\{%
10554   \@for\@curropt:=#1\do{%
10555     \expandafter\Fld@checkequals\@curropt==\\%
10556     \HCode{<input type="radio" %
10557       \ifx\@curropt\Fld@default checked \fi
10558       name="\Fld@name" %
10559       value="\@currValue" %
10560       \the\Field@toks>%
10561     }%
10562     \@currDisplay
10563   }%
10564 }
10565 \def\@PushButton[#1]#2{% parameters, label
10566   \def\Fld@name{#2}%
10567   \bgroup
10568     \Field@toks={ }%
10569     \setkeys{Field}{#1}%
10570     \HCode{<input type="button" %
10571       name="\Fld@name" %
10572       value="#2" %
10573       \the\Field@toks>%
10574     }%
10575     \HCode{</button>}%
10576   \egroup
10577 }
10578 \def\@Submit[#1]#2{%
10579   \HCode{<button type="submit">#2</button>}%
10580 }
10581 \def\@Reset[#1]#2{%
10582   \HCode{<button type="reset">#2</button>}%
10583 }
10584 \def\@CheckBox[#1]#2{% parameters, label
10585   \let\Hy@reserved@a\@empty
10586   \def\Fld@name{#2}%
10587   \def\Fld@default{0}%
10588   \bgroup
10589     \Field@toks={ }%
10590     \setkeys{Field}{#1}%

```

```

10591 \HCode{<input type="checkbox" %
10592 \ifFld@checked checked \fi
10593 \ifFld@disabled disabled \fi
10594 \ifFld@readonly readonly \fi
10595 name="\Fld@name" %
10596 \ifFld@hidden type="hidden" \fi
10597 value="\Fld@default" %
10598 \the\Field@toks>%
10599 #2%
10600 }%
10601 \egroup
10602 }
10603 </tex4ht>

```

47.4 pdfTeX

```

10604 <*pdfTeX>
10605 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10606 \typeout{Sorry, pdfTeX does not support FORM gauges}%
10607 }
10608 \def\MakeFieldObject#1#2{\sbox0{#1}%
10609 \immediate\pdfxform0 %
10610 \expandafter\edef\csname #2Object\endcsname{%
10611 \the\pdflastxform\space 0 R%
10612 }%
10613 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
10614 }%
10615 \def\HyField@afields{}
10616 \begingroup\expandafter\expandafter\expandafter\endgroup
10617 \expandafter\ifx\csname pdflastlink\endcsname\relax
10618 \let\HyField@AddToFields\relax
10619 \PackageInfo{hyperref}{%
10620 You need pdfTeX 1.40.0 for setting the /Fields entry.\MessageBreak
10621 Adobe Reader/Acrobat accepts an empty /Field array,\MessageBreak
10622 but other PDF viewers might complain%
10623 }%
10624 \else
10625 \def\HyField@AddToFields{%
10626 \xdef\HyField@afields{%
10627 \ifx\HyField@afields\@empty
10628 \else
10629 \HyField@afields
10630 \space
10631 \fi
10632 \the\pdflastlink\space 0 R%
10633 }%
10634 }%
10635 \fi
10636 \def\@Form[#1]{%
10637 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
10638 \setkeys{Form}{#1}%
10639 \Hy@FormObjects
10640 \ifnum\pdftexversion>13 %
10641 \pdfrefobj\OBJ@pdfdocencoding
10642 \pdfrefobj\OBJ@ZaDb
10643 \pdfrefobj\OBJ@Helv
10644 \fi
10645 \AtEndDocument{%

```

```

10646 \immediate\pdfobj{%
10647   <<%
10648     /Fields[\HyField@afields]%
10649     /DR<<%
10650     /Font<<%
10651       /ZaDb \OBJ@ZaDb\space 0 R%
10652       /Helv \OBJ@Helv\space 0 R%
10653     >>%
10654   >>%
10655   /DA(/Helv 10 Tf 0 g)%
10656   \ifHy@pdfa
10657   \else
10658     /NeedAppearances true%
10659   \fi
10660 >>%
10661 }%
10662 \edef\OBJ@acroform{\the\pdflastobj}%
10663 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
10664 }%
10665 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

10666 \begingroup
10667   \fontfamily{pzd}%
10668   \fontencoding{U}%
10669   \fontseries{m}%
10670   \fontshape{n}%
10671   \selectfont
10672   \char123 %
10673 \endgroup
10674 }{Ding}%
10675 \MakeFieldObject{%
10676   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
10677 }{Submit}%
10678 \MakeFieldObject{%
10679   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
10680 }{SubmitP}%
10681 }
10682 \def\@endForm{}
10683 \def\@TextField[#1]#2{% parameters, label
10684   \def\Fld@name{#2}%
10685   \def\Fld@default{}%
10686   \let\Fld@value\@empty
10687   \def\Fld@width{\DefaultWidthofText}%
10688   \def\Fld@height{%
10689     \ifFld@multiline
10690       \DefaultHeightofTextMultiline
10691     \else
10692       \DefaultHeightofText
10693     \fi
10694   }%
10695 \begingroup
10696   \Field@toks={ }%
10697   \expandafter\HyField@SetKeys\expandafter{%
10698     \DefaultOptionsofText,#1%
10699   }%
10700   \PDFForm@Name
10701   \HyField@FlagsText

```

```

10702 \ifFld@hidden\def\Fld@width{1sp}\fi
10703 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10704 \LayoutTextField{#2}{%
10705   \Hy@escapeform\PDFForm@Text
10706   \pdfstartlink user {\PDFForm@Text}\relax
10707   \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
10708   \HyField@AddToFields
10709 }%
10710 \endgroup
10711 }
10712 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10713   \def\Fld@name{#2}%
10714   \let\Fld@default\relax
10715   \let\Fld@value\relax
10716   \def\Fld@width{\DefaultWidthofChoiceMenu}%
10717   \def\Fld@height{\DefaultHeightofChoiceMenu}%
10718   \begingroup
10719     \Fld@menulength=0 %
10720     \@tempdima\z@
10721     \for\@curropt:=#3\do{%
10722       \expandafter\Fld@checkequals\@curropt==\%
10723       \Hy@StepCount\Fld@menulength
10724       \settowidth{\@tempdimb}{\@currDisplay}%
10725       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10726     }%
10727     \advance\@tempdima by 15\p@
10728     \Field@toks={ }%
10729     \begingroup
10730       \HyField@SetKeys{#1}%
10731     \edef\x{\endgroup
10732       \noexpand\expandafter
10733       \noexpand\HyField@SetKeys
10734       \noexpand\expandafter{%
10735         \expandafter\noexpand\csname DefaultOptionsof%
10736         \ifFld@radio
10737           Radio%
10738         \else
10739           \ifFld@combo
10740             \ifFld@popdown
10741               PopdownBox%
10742             \else
10743               ComboBox%
10744             \fi
10745           \else
10746             ListBox%
10747           \fi
10748         \fi
10749       \endcsname
10750     }%
10751   }\x
10752   \HyField@SetKeys{#1}%
10753   \PDFForm@Name
10754   \ifFld@hidden\def\Fld@width{1sp}\fi
10755   \ifx\Fld@value\relax
10756     \let\Fld@value\Fld@default
10757   \fi
10758   \LayoutChoiceField{#2}{%

```

```

10759 \ifFld@radio
10760 \HyField@FlagsRadioButton
10761 \@@Radio{#3}%
10762 \else
10763 \beginngroup
10764 \HyField@FlagsChoice
10765 \ifdim\Fld@width<\@tempdima
10766 \ifdim\@tempdima<1cm\@tempdima1cm\fi
10767 \edef\Fld@width{\the\@tempdima}%
10768 \fi
10769 \ifFld@combo
10770 \else
10771 \@tempdima=\the\Fld@menulength\Fld@charsize
10772 \advance\@tempdima by \Fld@borderwidth bp %
10773 \advance\@tempdima by \Fld@borderwidth bp %
10774 \edef\Fld@height{\the\@tempdima}%
10775 \fi
10776 \@@ListBox{#3}%
10777 \endgroup
10778 \fi
10779 }%
10780 \endgroup
10781 }
10782 \def\@@Radio#1{%
10783 \Fld@listcount=0 %
10784 \@for\@curropt:=#1\do{%
10785 \expandafter\Fld@checkequals\@curropt==\%
10786 \Hy@StepCount\Fld@listcount
10787 \currDisplay\space
10788 \leavevmode
10789 \Hy@escapeform\PDFForm@Radio
10790 \pdfstartlink user {%
10791 \PDFForm@Radio
10792 /AP<<%
10793 /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.

```

10794 /\@currValue\space \DingObject
10795 >>%
10796 >>%
10797 }%
10798 \relax
10799 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
10800 \ifnum\Fld@listcount=1 %
10801 \HyField@AddToFields
10802 \fi
10803 \space % deliberate space between radio buttons
10804 }%
10805 }
10806 \newcount\Fld@listcount
10807 \def\@@ListBox#1{%
10808 \HyField@PDFChoices{#1}%
10809 \leavevmode
10810 \Hy@escapeform\PDFForm@List
10811 \pdfstartlink user {\PDFForm@List}\relax
10812 \MakeChoiceField{\Fld@width}{\Fld@height}%

```

```

10813 \pdfendlink
10814 \HyField@AddToFields
10815 }
10816 \def\@PushButton[#1]#2{% parameters, label
10817 \def\Fld@name{#2}%
10818 \begingroup
10819 \Field@toks={ }%
10820 \expandafter\HyField@SetKeys\expandafter{%
10821 \DefaultOptionsofPushButton,#1%
10822 }%
10823 \PDFForm@Name
10824 \ifHy@pdfa
10825 \PackageError{hyperref}{%
10826 PDF/A: Push button with JavaScript is prohibited%
10827 }{\@ehc
10828 \LayoutPushButtonField{%
10829 \leavevmode
10830 \MakeButtonField{#2}%
10831 }%
10832 \else
10833 \HyField@FlagsPushButton
10834 \ifFld@hidden\def\Fld@width{1sp}\fi
10835 \LayoutPushButtonField{%
10836 \leavevmode
10837 \Hy@escapeform\PDFForm@Push
10838 \pdfstartlink user {\PDFForm@Push}\relax
10839 \MakeButtonField{#2}%
10840 \pdfendlink
10841 \HyField@AddToFields
10842 }%
10843 \fi
10844 \endgroup
10845 }
10846 \def\@Submit[#1]#2{%
10847 \Field@toks={ }%
10848 \def\Fld@width{\DefaultWidthofSubmit}%
10849 \def\Fld@height{\DefaultHeightofSubmit}%
10850 \begingroup
10851 \expandafter\HyField@SetKeys\expandafter{%
10852 \DefaultOptionsofSubmit,#1%
10853 }%
10854 \HyField@FlagsPushButton
10855 \HyField@FlagsSubmit
10856 \ifFld@hidden\def\Fld@width{1sp}\fi
10857 \leavevmode
10858 \Hy@escapeform\PDFForm@Submit
10859 \pdfstartlink user {%
10860 \PDFForm@Submit
10861 /AP<</N \SubmitObject/D \SubmitPObject>>%
10862 }%
10863 \relax
10864 \MakeButtonField{#2}%
10865 \pdfendlink
10866 \HyField@AddToFields
10867 \endgroup
10868 }
10869 \def\@Reset[#1]#2{%

```

```

10870 \Field@toks={ }%
10871 \def\Fld@width{\DefaultWidthofReset}%
10872 \def\Fld@height{\DefaultHeightofReset}%
10873 \begingroup
10874 \expandafter\HyField@SetKeys\expandafter{%
10875 \DefaultOptionsofReset,#1%
10876 }%
10877 \leavevmode
10878 \ifHy@pdfa
10879 \PackageError{hyperref}{%
10880 PDF/A: Reset action is prohibited%
10881 }{@ehc
10882 \MakeButtonField{#2}%
10883 \else
10884 \HyField@FlagsPushButton
10885 \ifFld@hidden\def\Fld@width{1sp}\fi
10886 \Hy@escapeform\PDFForm@Reset
10887 \pdfstartlink user {\PDFForm@Reset}\relax
10888 \MakeButtonField{#2}%
10889 \pdfendlink
10890 \HyField@AddToFields
10891 \fi
10892 \endgroup
10893 }
10894 \def\@CheckBox[#1]#2{% parameters, label
10895 \def\Fld@name{#2}%
10896 \def\Fld@default{0}%
10897 \begingroup
10898 \def\Fld@width{\DefaultWidthofCheckBox}%
10899 \def\Fld@height{\DefaultHeightofCheckBox}%
10900 \Field@toks={ }%
10901 \expandafter\HyField@SetKeys\expandafter{%
10902 \DefaultOptionsofCheckBox,#1%
10903 }%
10904 \PDFForm@Name
10905 \HyField@FlagsCheckBox
10906 \ifFld@hidden\def\Fld@width{1sp}\fi
10907 \LayoutCheckField{#2}{%
10908 \Hy@escapeform\PDFForm@Check
10909 \pdfstartlink user {\PDFForm@Check}\relax
10910 \MakeCheckField{\Fld@width}{\Fld@height}%
10911 \pdfendlink
10912 \HyField@AddToFields
10913 }%
10914 \endgroup
10915 }
10916 \def\Hy@FormObjects{%
10917 \pdfobj {%
10918 <<%
10919 /Type/Encoding%
10920 /Differences[%
10921 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
10922 /ring/tilde %
10923 39/quotesingle %
10924 96/grave %
10925 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10926 /fraction/guilsinglleft/guilsinglright/minus/perthousand%

```

```

10927      /quotedblbase/quotedblleft/quotedblright/quoteleft%
10928      /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
10929      /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10930      164/currency %
10931      166/brokenbar %
10932      168/dieresis/copyright/ordfeminine %
10933      172/logicalnot/.notdef/registered/macron/degree/plusminus%
10934      /twosuperior/threesuperior/acute/mu %
10935      183/periodcentered/cedilla/onesuperior/ordmasculine %
10936      188/onequarter/onehalf/threequarters %
10937      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10938      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10939      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10940      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10941      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10942      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10943      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10944      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10945      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
10946      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
10947      ]%
10948      >>%
10949      }%
10950      \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
10951      \pdfobj{%
10952      <<%
10953      /Type/Font%
10954      /Subtype/Type1%
10955      /Name/ZaDb%
10956      /BaseFont/ZapfDingbats%
10957      >>%
10958      }%
10959      \xdef\OBJ@ZaDb{\the\pdflastobj}%
10960      \pdfobj{%
10961      <<%
10962      /Type/Font%
10963      /Subtype/Type1%
10964      /Name/Helv%
10965      /BaseFont/Helvetica%
10966      /Encoding \OBJ@pdfdocencoding\space 0 R%
10967      >>%
10968      }%
10969      \xdef\OBJ@Helv{\the\pdflastobj}%
10970      \global\let\Hy@FormObjects\relax
10971      }
10972      </pdftex>

```

47.5 dvipdfm

D. P. Story adapted the pdf_T_EX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
10973 < *dvipdfm >
```

\@Gauge

```

10974 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10975   \typeout{Sorry, dvipdfm does not support FORM gauges}%
10976 }

```


\@Form

```
10977 \def \@Form[#1]{%
10978   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
10979   \setkeys{Form}{#1}%
10980   \Hy@FormObjects
10981   \@pdfm@mark{obj @afields []}%
10982   \@pdfm@mark{obj @corder []}%
10983   \@pdfm@mark{%
10984     obj @aform <<%
10985       /Fields @afields%
10986       /DR<<%
10987       /Font<<%
10988       /ZaDb @OBJZaDb%
10989       /Helv @OBJHelv%
10990       >>%
10991       >>%
10992       /DA(/Helv 10 Tf 0 g)%
10993       /CO @corder%
10994       \ifHy@pdfa
10995       \else
10996       /NeedAppearances true%
10997       \fi
10998       >>%
10999   }%
11000   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
11001 }
```

\@endForm

```
11002 \def \@endForm{}
```

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

```
11003 \def \dvipdfm@setdim{%
11004   height \the\ht\pdfm@box\space
11005   width \the\wd\pdfm@box\space
11006   depth \the\dp\pdfm@box\space
11007 }
```

\HyField@AnnotCount

```
11008 \newcount\HyField@AnnotCount
11009 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
11010 \def \HyField@AdvanceAnnotCount{%
11011   \global\advance\HyField@AnnotCount\@ne
11012 }
```

\HyField@TheAnnotCount

```
11013 \def \HyField@TheAnnotCount{%
11014   \the\HyField@AnnotCount
11015 }
```

\@TextField

```
11016 \def \@TextField[#1]#2{% parameters, label
11017   \def \Fld@name{#2}%
11018   \def \Fld@default{}}%
```

```

11019 \let\Fld@value\@empty
11020 \def\Fld@width{\DefaultWidthofText}%
11021 \def\Fld@height{%
11022   \ifFld@multiline
11023     \DefaultHeightofTextMultiline
11024   \else
11025     \DefaultHeightofText
11026   \fi
11027 }%
11028 \beginngroup
11029   \Field@toks={ }%
11030   \expandafter\HyField@SetKeys\expandafter{%
11031     \DefaultOptionsofText,#1%
11032   }%
11033   \PDFForm@Name
11034   \HyField@FlagsText
11035   \ifFld@hidden\def\Fld@width{1sp}\fi
11036   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11037   \setbox\pdfm@box=\hbox{%
11038     \MakeTextField{\Fld@width}{\Fld@height}%
11039   }%
11040   \HyField@AdvanceAnnotCount
11041   \LayoutTextField{#2}{%
11042     \Hy@escapeform\PDFForm@Text
11043     \@pdfm@mark{%
11044       ann @text\HyField@TheAnnotCount\space
11045       \dvipdfm@setdim << \PDFForm@Text >>%
11046     }%
11047   }%
11048   \unhbox\pdfm@box
11049   \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
11050   % record in @afields array
11051 \endgroup
11052 }

```

\@ChoiceMenu

```

11053 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11054   \def\Fld@name{#2}%
11055   \let\Fld@default\relax
11056   \let\Fld@value\relax
11057   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11058   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11059   \beginngroup
11060     \Fld@menulength=0 %
11061     \@tempdima\z@
11062     \@for\@curropt:=#3\do{%
11063       \expandafter\Fld@checkequals\@curropt==\%
11064       \Hy@StepCount\Fld@menulength
11065       \settowidth{\@tempdimb}{\@currDisplay}%
11066       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11067     }%
11068     \advance\@tempdima by 15\p@
11069     \Field@toks={ }%
11070     \beginngroup
11071       \HyField@SetKeys{#1}%
11072     \edef\x{\endgroup
11073       \noexpand\expandafter

```

```

11074 \noexpand\HyField@SetKeys
11075 \noexpand\expandafter{%
11076 \expandafter\noexpand\csname DefaultOptionsof%
11077 \ifFld@radio
11078 Radio%
11079 \else
11080 \ifFld@combo
11081 \ifFld@popdown
11082 PopdownBox%
11083 \else
11084 ComboBox%
11085 \fi
11086 \else
11087 ListBox%
11088 \fi
11089 \fi
11090 \endcsname
11091 }%
11092 }\x
11093 \HyField@SetKeys{#1}%
11094 \PDFForm@Name
11095 \ifFld@hidden\def\Fld@width{1sp}\fi
11096 \ifx\Fld@value\relax
11097 \let\Fld@value\Fld@default
11098 \fi
11099 \LayoutChoiceField{#2}{%
11100 \ifFld@radio
11101 \HyField@FlagsRadioButton
11102 \@@Radio{#3}%
11103 \else
11104 \begingroup
11105 \HyField@FlagsChoice
11106 \ifdim\Fld@width<\@tempdima
11107 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11108 \edef\Fld@width{\the\@tempdima}%
11109 \fi
11110 \ifFld@combo
11111 \else
11112 \@tempdima=\the\Fld@menulength\Fld@charsize
11113 \advance\@tempdima by \Fld@borderwidth bp %
11114 \advance\@tempdima by \Fld@borderwidth bp %
11115 \edef\Fld@height{\the\@tempdima}%
11116 \fi
11117 \@@ListBox{#3}%
11118 \endgroup
11119 \fi
11120 }%
11121 \endgroup
11122 }

```

\@@Radio

```

11123 \def\@@Radio#1{%
11124 \Fld@listcount=0 %
11125 \setbox\pdfm@box=\hbox{\MakeRadioField{\Fld@width}{\Fld@height}}%
11126 \@for\@curropt:=#1\do{%
11127 \expandafter\Fld@checkequals\@curropt==\%
11128 \Hy@StepCount\Fld@listcount

```

```

11129 \currDisplay\space
11130 \leavevmode
11131 \Hy@escapeform\PDFForm@Radio
11132 \ifnum\Fld@listcount=1 %
11133 \HyField@AdvanceAnnotCount
11134 \fi
11135 \@pdfm@mark{%
11136 ann \ifnum\Fld@listcount=1 @radio\HyField@TheAnnotCount\space\fi
11137 \dvipdfm@setdim
11138 <<%
11139 \PDFForm@Radio
11140 /AP<</N<</\@currValue /null>>>>%
11141 >>%
11142 }%
11143 \unhcopy\pdfm@box\space% deliberate space between radio buttons
11144 \ifnum\Fld@listcount=1 %
11145 \@pdfm@mark{put @afields @radio\HyField@TheAnnotCount}%
11146 \fi
11147 }%
11148 }

\Fld@listcount

11149 \newcount\Fld@listcount

@@@Listbox

11150 \def\@@Listbox#1{%
11151 \HyField@PDFChoices{#1}%
11152 \setbox\pdfm@box=\hbox{\MakeChoiceField{\Fld@width}{\Fld@height}}%
11153 \leavevmode
11154 \Hy@escapeform\PDFForm@List
11155 \HyField@AdvanceAnnotCount
11156 \@pdfm@mark{%
11157 ann @list\HyField@TheAnnotCount\space
11158 \dvipdfm@setdim
11159 <<\PDFForm@List>>%
11160 }%
11161 \unhbox\pdfm@box
11162 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
11163 }

@@@PushButton

11164 \def\@PushButton[#1]#2{% parameters, label
11165 \def\Fld@name{#2}%
11166 \begingroup
11167 \Field@toks={ }%
11168 \expandafter\HyField@SetKeys\expandafter{%
11169 \DefaultOptionsofPushButton,#1%
11170 }%
11171 \PDFForm@Name
11172 \ifHy@pdfa
11173 \PackageError{hyperref}{%
11174 PDF/A: Push button with JavaScript is prohibited%
11175 }\@ehc
11176 \LayoutPushButtonField{%
11177 \leavevmode
11178 \MakeButtonField{#2}%
11179 }%

```

```

11180 \else
11181 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11182 \HyField@FlagsPushButton
11183 \ifFld@hidden\def\Fld@width{1sp}\fi
11184 \HyField@AdvanceAnnotCount
11185 \LayoutPushButtonField{%
11186 \leavevmode
11187 \Hy@escapeform\PDFForm@Push
11188 \@pdfm@mark{%
11189 ann @push\HyField@TheAnnotCount\space
11190 \dvi pdfm@setdim
11191 <<\PDFForm@Push>>%
11192 }%
11193 }%
11194 \unhbox\pdfm@box
11195 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11196 \fi
11197 \endgroup
11198 }

\@Submit

11199 \def\@Submit[#1]#2{%
11200 \Field@toks={ }%
11201 \def\Fld@width{\DefaultWidthofSubmit}%
11202 \def\Fld@height{\DefaultHeightofSubmit}%
11203 \begingroup
11204 \expandafter\HyField@SetKeys\expandafter{%
11205 \DefaultOptionsofSubmit,#1%
11206 }%
11207 \HyField@FlagsPushButton
11208 \HyField@FlagsSubmit
11209 \ifFld@hidden\def\Fld@width{1sp}\fi
11210 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11211 \leavevmode
11212 \Hy@escapeform\PDFForm@Submit
11213 \HyField@AdvanceAnnotCount
11214 \@pdfm@mark{%
11215 ann @submit\HyField@TheAnnotCount\space
11216 \dvi pdfm@setdim
11217 <<\PDFForm@Submit>>%
11218 }%
11219 \unhbox\pdfm@box%
11220 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11221 \endgroup
11222 }

\@Reset

11223 \def\@Reset[#1]#2{%
11224 \Field@toks={ }%
11225 \def\Fld@width{\DefaultWidthofReset}%
11226 \def\Fld@height{\DefaultHeightofReset}%
11227 \begingroup
11228 \expandafter\HyField@SetKeys\expandafter{%
11229 \DefaultOptionsofReset,#1%
11230 }%
11231 \leavevmode
11232 \ifHy@pdfa

```

```

11233 \PackageError{hyperref}{%
11234   PDF/A: Reset action is prohibited%
11235 }{\@ehc
11236 \MakeButtonField{#2}%
11237 \else
11238 \HyField@FlagsPushButton
11239 \ifFld@hidden\def\Fld@width{1sp}\fi
11240 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11241 \Hy@escapeform\PDFForm@Reset
11242 \HyField@AdvanceAnnotCount
11243 \@pdfm@mark{%
11244   ann @reset\HyField@TheAnnotCount\space
11245   \dvipdfm@setdim
11246   <<\PDFForm@Reset>>%
11247 }%
11248 \unhbox\pdfm@box
11249 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11250 \fi
11251 \endgroup
11252 }

```

\@CheckBox

```

11253 \def\@CheckBox[#1]#2{% parameters, label
11254 \def\Fld@name{#2}%
11255 \def\Fld@default{0}%
11256 \begingroup
11257 \def\Fld@width{\DefaultWidthofCheckBox}%
11258 \def\Fld@height{\DefaultHeightofCheckBox}%
11259 \Field@toks={ }%
11260 \expandafter\HyField@SetKeys\expandafter{%
11261   \DefaultOptionsofCheckBox,#1%
11262 }%
11263 \PDFForm@Name
11264 \HyField@FlagsCheckBox
11265 \ifFld@hidden\def\Fld@width{1sp}\fi
11266 \setbox\pdfm@box=\hbox{\MakeCheckField{\Fld@width}{\Fld@height}}%
11267 \HyField@AdvanceAnnotCount
11268 \LayoutCheckField{#2}{%
11269   \Hy@escapeform\PDFForm@Check
11270   \@pdfm@mark{%
11271     ann @check\HyField@TheAnnotCount\space
11272     \dvipdfm@setdim
11273     <<\PDFForm@Check>>%
11274   }%
11275   \unhbox\pdfm@box
11276   \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11277 }%
11278 \endgroup
11279 }

11280 \def\Hy@FormObjects{%
11281 \@pdfm@mark{obj @OBJpdfdocencoding%
11282 <<%
11283 /Type/Encoding%
11284 /Differences[%
11285   24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11286   39/quotesingle %
11287   96/grave %

```

```

11288      128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11289      /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11290      /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11291      /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11292      /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11293      164/currency %
11294      166/brokenbar %
11295      168/dieresis/copyright/ordfeminine %
11296      172/logicalnot/.notdef/registered/macron/degree/plusminus%
11297      /twosuperior/threesuperior/acute/mu %
11298      183/periodcentered/cedilla/onesuperior/ordmasculine %
11299      188/onequarter/onehalf/threequarters %
11300      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11301      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11302      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11303      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11304      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11305      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11306      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11307      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
11308      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
11309      /thorn/ydieresis%
11310      ]%
11311      >>%
11312    }%
11313    \@pdfm@mark{obj @OBJZaDb%
11314      <<%
11315      /Type/Font%
11316      /Subtype/Type1%
11317      /Name/ZaDb%
11318      /BaseFont/ZapfDingbats%
11319      >>%
11320    }%
11321    \@pdfm@mark{obj @OBJHelv%
11322      <<%
11323      /Type/Font%
11324      /Subtype/Type1%
11325      /Name/Helv%
11326      /BaseFont/Helvetica%
11327      /Encoding @OBJpdfdocencoding%
11328      >>%
11329    }%
11330    \global\let\Hy@FormObjects\relax
11331  }
11332 </dvipdfm>

```

47.6 Common forms part

```
11333 <*pdfform>
```

\Hy@escapestring

```

11334 \begingroup\expandafter\expandafter\expandafter\endgroup
11335 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11336   \let\Hy@escapestring\@firstofone
11337   \def\Hy@escapeform#1{%
11338     \ifHy@escapeform
11339     \def\Hy@escapestring##1{%

```

```

11340      \noexpand\Hy@escapestring{\noexpand##1}%
11341    }%
11342    \edef\Hy@temp{#1}%
11343    \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{ }\@nil
11344    \def\Hy@escapestring##1{%
11345      \@ifundefined{Hy@esc@\string##1}{%
11346        ##1%
11347        \ThisShouldNotHappen
11348      }{%
11349        \csname Hy@esc@\string##1\endcsname
11350      }%
11351    }%
11352    \else
11353      \let\Hy@escapestring\@firstofone
11354    \fi
11355  }%
11356  \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
11357    \ifx\#3\%
11358      \else
11359        \expandafter\Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11360        \Hy@ReturnAfterFi{%
11361          \Hy@@escapeform#3\@nil
11362        }%
11363      \fi
11364    }%
11365  \else
11366    \def\Hy@escapeform#1{%
11367      \ifHy@escapeform
11368        \let\Hy@escapestring\pdfescapestring
11369      \else
11370        \let\Hy@escapestring\@firstofone
11371      \fi
11372    }%
11373    \Hy@escapeform{ }%
11374  \fi

```

\PDFForm@Name

```

11375 \def\PDFForm@Name{%
11376   \begingroup
11377     \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11378       \ifHy@unicode
11379         \Hy@unicodedefalse
11380       \fi
11381     \fi
11382     \pdfstringdef\Hy@gtemp\Fld@name
11383   \endgroup
11384   \let\Fld@name\Hy@gtemp
11385 }

```

\PDFForm@Check

```

11386 \def\PDFForm@Check{%
11387   /Subtype/Widget%
11388   \Fld@annotflags
11389   /T(\Fld@name)%
11390   /FT/Btn%
11391   \Fld@flags
11392   /Q \Fld@align

```



```

11393 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
11394 /MK<<%
11395 \ifnum\Fld@rotation=\z@
11396 \else
11397 /R \Fld@rotation
11398 \fi
11399 \ifx\Fld@bordercolor\relax
11400 \else
11401 /BC[\Fld@bordercolor]%
11402 \fi
11403 \ifx\Fld@bcolor\relax
11404 \else
11405 /BG[\Fld@bcolor]%
11406 \fi
11407 /CA(\Hy@escapestring{\Fld@cbsymbol})%
11408 >>%
11409 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11410 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11411 /H/P%
11412 \ifFld@checked /V/Yes\else /V/Off\fi
11413 }

```

\PDFForm@Push

```

11414 \ifHy@pdfa
11415 \else
11416 \def\PDFForm@Push{%
11417 /Subtype/Widget%
11418 \Fld@annotflags
11419 /T(\Fld@name)%
11420 /FT/Btn%
11421 \Fld@flags
11422 /H/P%
11423 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11424 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11425 \ifx\Fld@bordercolor\relax\else 1\fi
11426 \space
11427 \else
11428 /MK<<%
11429 \ifnum\Fld@rotation=\z@
11430 \else
11431 /R \Fld@rotation
11432 \fi
11433 \ifx\Fld@bordercolor\relax
11434 \else
11435 /BC[\Fld@bordercolor]%
11436 \fi
11437 >>%
11438 \fi
11439 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
11440 }%
11441 \fi

```

\Fld@additionalactions

```

11442 \def\Fld@@additionalactions{%
K input (keystroke) format
11443 \ifx\Fld@keystroke@code\@empty

```

```

11444 \else
11445     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
11446 \fi

F display format
11447 \ifx\Fld@format@code\@empty
11448 \else
11449     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
11450 \fi

V validation
11451 \ifx\Fld@validate@code\@empty
11452 \else
11453     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
11454 \fi

C calculation
11455 \ifx\Fld@calculate@code\@empty
11456 \else
11457     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
11458 \fi

Fo receiving the input focus
11459 \ifx\Fld@onfocus@code\@empty
11460 \else
11461     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
11462 \fi

Bl loosing the input focus (blurred)
11463 \ifx\Fld@onblur@code\@empty
11464 \else
11465     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
11466 \fi

D pressing the mouse button (down)
11467 \ifx\Fld@onmousedown@code\@empty
11468 \else
11469     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
11470 \fi

U releasing the mouse button (up)
11471 \ifx\Fld@onmouseup@code\@empty
11472 \else
11473     /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
11474 \fi

E cursor enters the annotation's active area.
11475 \ifx\Fld@onenter@code\@empty
11476 \else
11477     /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
11478 \fi

X cursor exits the annotation's active area.
11479 \ifx\Fld@onexit@code\@empty
11480 \else
11481     /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
11482 \fi
11483 }
11484 \def\Fld@additionalactions{%
11485 \if-\Fld@@additionalactions-%
11486 \else

```

```

11487     \ifHy@pdfa
11488     \else
11489         /AA<<\Fld@@additionalactions>>%
11490     \fi
11491 \fi
11492 }

```

\PDFForm@List

```

11493 \def\PDFForm@List{%
11494     /Subtype/Widget%
11495     \Fld@annotflags
11496     /T(\Fld@name)%
11497     /FT/Ch%
11498     \Fld@flags
11499     /Q \Fld@align
11500     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11501     \ifcase0\ifnum\Fld@rotation=\z@    \else 1\fi
11502         \ifx\Fld@bordercolor\relax\else 1\fi
11503         \ifx\Fld@bcolor\relax    \else 1\fi
11504         \space
11505     \else
11506         /MK<<%
11507         \ifnum\Fld@rotation=\z@
11508         \else
11509             /R \Fld@rotation
11510         \fi
11511         \ifx\Fld@bordercolor\relax
11512         \else
11513             /BC[\Fld@bordercolor]%
11514         \fi
11515         \ifx\Fld@bcolor\relax
11516         \else
11517             /BG[\Fld@bcolor]%
11518         \fi
11519         >>%
11520     \fi
11521     /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11522         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11523     \Fld@choices
11524     \Fld@additionalactions
11525 }

```

\PDFForm@Radio

```

11526 \def\PDFForm@Radio{%
11527     /Subtype/Widget%
11528     \Fld@annotflags
11529     /T(\Fld@name)%
11530     /FT/Btn%
11531     \Fld@flags
11532     /H/P%
11533     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11534     /MK<<%
11535         \ifnum\Fld@rotation=\z@
11536         \else
11537             /R \Fld@rotation
11538         \fi
11539         \ifx\Fld@bordercolor\relax

```

```

11540     \else
11541         /BC[\Fld@bordercolor]%
11542     \fi
11543     \ifx\Fld@bcolor\relax
11544     \else
11545         /BG[\Fld@bcolor]%
11546     \fi
11547     /CA(H)%
11548 >>%
11549 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11550     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11551 \ifx\@currValue\Fld@default
11552     /V\Fld@default
11553 \else
11554     /V/Off%
11555 \fi
11556 \Fld@additionalactions
11557 }

```

\PDFForm@Text

```

11558 \def\PDFForm@Text{%
11559     /Subtype/Widget%
11560     \Fld@annotflags
11561     /T(\Fld@name)%
11562     /FT/Tx%
11563     \Fld@flags
11564     /Q \Fld@align
11565     /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
11566     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11567         \ifx\Fld@bordercolor\relax\else 1\fi
11568         \ifx\Fld@bcolor\relax \else 1\fi
11569         \space
11570     \else
11571         /MK<<%
11572         \ifnum\Fld@rotation=\z@
11573         \else
11574             /R \Fld@rotation
11575         \fi
11576         \ifx\Fld@bordercolor\relax
11577         \else
11578             /BC[\Fld@bordercolor]%
11579         \fi
11580         \ifx\Fld@bcolor\relax
11581         \else
11582             /BG[\Fld@bcolor]%
11583         \fi
11584     >>%
11585     \fi
11586 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11587     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11588 /DV(\Hy@escapestring{\Fld@default})%
11589 /V(\Hy@escapestring{\Fld@value})%
11590 \Fld@additionalactions
11591 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
11592 }

```

\PDFForm@Submit

```

11593 \def\PDFForm@Submit{%
11594   /Subtype/Widget%
11595   \Fld@annotflags
11596   /T(\Fld@name)%
11597   /FT/Btn%
11598   \Fld@flags
11599   /H/P%
11600   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11601   \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
11602       \ifx\Fld@bordercolor\relax\else 1\fi
11603       \space
11604   \else
11605       /MK<<%
11606       \ifnum\Fld@rotation=\z@
11607       \else
11608       /R \Fld@rotation
11609       \fi
11610       \ifx\Fld@bordercolor\relax
11611       \else
11612       /BC[\Fld@bordercolor]%
11613       \fi
11614   >>%
11615   \fi
11616   /A<<%
11617   /S/SubmitForm%
11618   /F<<%
11619   /FS/URL%
11620   /F(\Hy@escapestring{\Form@action})%
11621   >>%
11622   \Fld@submitflags
11623   >>%
11624 }

```

\PDFForm@Reset

```

11625 \ifHy@pdfa
11626 \else
11627   \def\PDFForm@Reset{%
11628     /Subtype/Widget%
11629     \Fld@annotflags
11630     /T(\Fld@name)%
11631     /FT/Btn%
11632     \Fld@flags
11633     /H/P%
11634     /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
11635     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
11636         \ifx\Fld@bordercolor\relax\else 1\fi
11637         \space
11638     \else
11639         /MK<<%
11640         \ifnum\Fld@rotation=\z@
11641         \else
11642         /R \Fld@rotation
11643         \fi
11644         \ifx\Fld@bordercolor\relax
11645         \else
11646         /BC[\Fld@bordercolor]%
11647         \fi

```

```

11648 %      /CA (Clear)
11649 %      /AC (Done)
11650      >>%
11651      \fi
11652      /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11653      /A<</S/ResetForm>>%
11654      }%
11655 \fi

11656 </pdfform>
11657 <*package>

```

48 Bookmarks in the PDF file

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

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

```

11658 \def\phantomsection{%
11659   \Hy@GlobalStepCount\Hy@linkcounter
11660   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11661   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
11662 }
11663 </package>

```

48.1 Bookmarks

```

11664 <*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`.

```

11665 \def\Hy@writebookmark#1#2#3#4#5{%
11666   % section number, text, label, level, file
11667   \ifx\WriteBookmarks\relax%
11668   \else
11669     \ifnum#4>\Hy@bookmarksdepth\relax
11670     \else
11671       \@writetorep{#1}{#2}{#3}{#4}{#5}%
11672     \fi
11673   \fi
11674 }
11675 \def\Hy@currentbookmarklevel{0}
11676 \def\Hy@numberline#1{#1 }
11677 \def\@writetorep#1#2#3#4#5{%
11678   \begingroup
11679     \edef\Hy@tempa{#5}%
11680     \ifx\Hy@tempa\Hy@bookmarkstype
11681       \edef\Hy@level{#4}%
11682       \ifx\Hy@levelcheck Y%

```

```

11683 \@tempcnta\Hy@level\relax
11684 \advance\@tempcnta by -1 %
11685 \ifnum\Hy@currentbookmarklevel<\@tempcnta
11686 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
11687 \advance\@tempcnta by 1 %
11688 \Hy@Warning{%
11689     Difference (\the\@tempcnta) between bookmark levels is %
11690     greater \MessageBreak than one, level fixed%
11691 }%
11692 \@tempcnta\Hy@currentbookmarklevel
11693 \advance\@tempcnta by 1 %
11694 \edef\Hy@level{\the\@tempcnta}%
11695 \fi
11696 \else
11697 \global\let\Hy@levelcheck Y%
11698 \fi
11699 \global\let\Hy@currentbookmarklevel\Hy@level
11700 \@tempcnta\Hy@level\relax
11701 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
11702 \advance\@tempcnta by -1 %
11703 \edef\Hy@tempa{#3}%
11704 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
11705 \ifx\Hy@tempa\Hy@tempb
11706 \Hy@Warning{%
11707     The anchor of a bookmark and its parent's must not%
11708     \MessageBreak be the same. Added a new anchor%
11709 }%
11710 \phantomsection
11711 \fi
11712 \ifHy@bookmarksnumbered
11713 \let\numberline\Hy@numberline
11714 \let\partnumberline\Hy@numberline
11715 \let\chapternumberline\Hy@numberline
11716 \else
11717 \let\numberline\@gobble
11718 \let\partnumberline\@gobble
11719 \let\chapternumberline\@gobble
11720 \fi
11721 \pdfstringdef\Hy@tempa{#2}%
11722 \if@files
11723 \protected@write\@outlinefile{}{%
11724 \protect\BOOKMARK
11725 [\Hy@level] [\@bookmarkopenstatus{\Hy@level}]{#3}%
11726 {\Hy@tempa}{\Hy@tempb}%
11727 }%
11728 \fi
11729 \fi
11730 \endgroup
11731 }

```

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

```

11732 \newcommand{\currentpdfbookmark}{%
11733 \pdfbookmark[\Hy@currentbookmarklevel]%
11734 }
11735 \newcommand{\subpdfbookmark}{%
11736 \@tempcnta\Hy@currentbookmarklevel
11737 \Hy@StepCount\@tempcnta

```

```

11738 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
11739 }
11740 \newcommand{\belowpdfbookmark}[2]{%
11741 \@tempcnta\Hy@currentbookmarklevel
11742 \Hy@StepCount\@tempcnta
11743 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
11744 \advance\@tempcnta by -1 %
11745 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
11746 }

```

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.

```

11747 \renewcommand\pdfbookmark[3][0]{%
11748 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
11749 \hyper@anchorstart{#3.#1}\hyper@anchorend
11750 }
11751 \def\BOOKMARK{\@ifnextchar[{\@BOOKMARK}{\@BOOKMARK[1] [-]}}
11752 \def\@BOOKMARK[#1]{\@ifnextchar[{\@BOOKMARK[#1] {\@BOOKMARK[#1] [-]}}

```

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

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

11753 <*vtex>
11754 \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.

```

11755 \begingroup
11756 \catcode'\'=12 %
11757 \ifnum\Hy@VTeXversion<650 %
11758 \catcode\'=12 %
11759 \gdef\hv@pdf@char#1#2#3{%
11760 \char
11761 \ifcase'#1#2#3 %
11762 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
11763 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
11764 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
11765 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
11766 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
11767 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
11768 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
11769 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
11770 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
11771 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
11772 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
11773 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
11774 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
11775 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
11776 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
11777 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
11778 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
11779 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
11780 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%

```



```

11781 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
11782 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
11783 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
11784 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
11785 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
11786 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
11787 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
11788 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
11789 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
11790 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
11791 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
11792 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
11793 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
11794 \fi
11795 }%
11796 \else
11797 \gdef\hv@pdf@char{\char'}%
11798 \fi
11799 \endgroup

```

\@@BOOKMARK

```

11800 \def\@@BOOKMARK[#1][#2]#3#4#5{%
11801 \expandafter\edef\csname @count@#3\endcsname{\the\@serial@counter}%
11802 \edef\@mycount{\the\@serial@counter}%
11803 \Hy@StepCount\@serial@counter
11804 \edef\@parcount{%
11805 \expandafter\ifx\csname @count@#5\endcsname\relax
11806 0%
11807 \else
11808 \csname @count@#5\endcsname
11809 \fi
11810 }%
11811 \immediate\special{%
11812 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
11813 s=\ifx#2-c\else o\fi,t=#4%
11814 }%
11815 }%

```

\ReadBookmarks

```

11816 \def\ReadBookmarks{%
11817 \begingroup
11818 \def\0{\hv@pdf@char 0}%
11819 \def\1{\hv@pdf@char 1}%
11820 \def\2{\hv@pdf@char 2}%
11821 \def\3{\hv@pdf@char 3}%
11822 \def\({}%
11823 \def\)}%
11824 \def\do##1{%
11825 \ifnum\the\catcode'##1=\active
11826 \makeoother##1%
11827 \fi
11828 }%
11829 \dospecials
11830 \InputIfFileExists{\jobname.out}{-}{-}%
11831 \endgroup
11832 \ifx\WriteBookmarks\relax
11833 \else

```

```

11834 \if@files
11835 \newwrite\@outlinefile
11836 \immediate\openout\@outlinefile=\jobname.out\relax
11837 \ifHy@typexml
11838 \immediate\write\@outlinefile{<relaxxml>\relax}%
11839 \fi
11840 \fi
11841 \fi
11842 }

11843 </vtx>
11844 <!*vtx>
11845 \def\ReadBookmarks{%
11846 \begingroup
11847 \escapechar='\'%
11848 \let\escapechar\@gobble %
11849 \def\@BOOKMARK[##1][##2]##3##4##5{\calc@bm@number{##5}}%
11850 \InputIfFileExists{\jobname.out}{-}{-}%
11851 \ifx\WriteBookmarks\relax
11852 \global\let\WriteBookmarks\relax
11853 \fi
11854 \def\@BOOKMARK[##1][##2]##3##4##5{%
11855 \def\Hy@temp{##4}%
11856 <*pdftex>
11857 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11858 \Hy@OutlineName{}\Hy@pstringName{%
11859 ##2\check@bm@number{##3}%
11860 }{%
11861 \expandafter\strip@prefix\meaning\Hy@temp
11862 }%
11863 </pdftex>
11864 <*pdfmark>
11865 \pdfmark{%
11866 pdfmark=/OUT,%
11867 Count={##2\check@bm@number{##3}},%
11868 Dest={##3},%
11869 Title=\expandafter\strip@prefix\meaning\Hy@temp
11870 }%
11871 </pdfmark>
11872 <*dvipdfm>
11873 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11874 \@pdfm@mark{%
11875 outline \ifHy@DvipdfmxOutlineOpen
11876 [%
11877 \ifnum##21>\z@
11878 \else
11879 -%
11880 \fi
11881 ] %
11882 \fi
11883 ##1<<%
11884 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
11885 /A<<%
11886 /S/GoTo%
11887 /D(\Hy@pstringName)%
11888 >>%
11889 >>%
11890 }%

```

```

11891 </dvipdfm>
11892 }%
11893 {%
11894   \def\WriteBookmarks{0}%
11895   \InputIfFileExists{\jobname.out}{-}{-}%
11896 }%
11897 {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
11898 \ifx\WriteBookmarks\relax
11899   \else
11900     \if@files
11901       \newwrite\@outlinefile
11902       \immediate\openout\@outlinefile=\jobname.out\relax
11903       \ifHy@typexml
11904         \immediate\write\@outlinefile{<relaxxml>\relax}%
11905       \fi
11906     \fi
11907   \fi
11908 \endgroup
11909 }
11910 <*pdfTeX>
11911 \def\Hy@OutlineName#1#2#3#4{%
11912   \pdfoutline goto name{#2}count#3{#4}%
11913 }
11914 </pdfTeX>
11915 \def\check@bm@number#1{%
11916   \expandafter\ifx\csname B_#1\endcsname\relax
11917     0%
11918   \else
11919     \csname B_#1\endcsname
11920   \fi
11921 }
11922 \def\calc@bm@number#1{%
11923   \@tempcnta=\check@bm@number{#1}\relax
11924   \advance\@tempcnta by 1 %
11925   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
11926 }
11927 </!vTeX>

11928 \ifHy@implicit
11929 \else
11930   \expandafter\endinput
11931 \fi

11932 </outlines>
11933 <*outlines | hypertex>

11934 \let\H@old@ssect\@ssect
11935 \def\@ssect#1#2#3#4#5{%
11936   \H@old@ssect{#1}{#2}{#3}{#4}{#5}%
11937   \phantomsection
11938 }
11939 \let\H@old@schapter\@schapter
11940 \def\@schapter#1{%
11941   \H@old@schapter{#1}%
11942   \beginngroup
11943     \let\mkboth\gobbletwo
11944     \Hy@GlobalStepCount\Hy@linkcounter
11945     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11946     \Hy@raisedlink{%

```

```

11947     \hyper@anchorstart{\@currentHref}\hyper@anchorend
11948   }%
11949 \endgroup
11950 }

```

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:

```

11951 \@ifundefined{chapter}{\%
11952   \let\Hy@org@chapter\@chapter
11953   \def\@chapter{%
11954     \def\Hy@next{%
11955       \Hy@GlobalStepCount\Hy@linkcounter
11956       \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11957       \Hy@raisedlink{%
11958         \hyper@anchorstart{\@currentHref}\hyper@anchorend
11959       }%
11960     }%
11961     \ifnum\c@secnumdepth>\m@ne
11962       \@ifundefined{if@mainmatter}%
11963       \iftrue{\csname if@mainmatter\endcsname}%
11964       \let\Hy@next\relax
11965     \fi
11966   \fi
11967   \Hy@next
11968   \Hy@org@chapter
11969 }%
11970 }

11971 \let\H@old@part\@part
11972 \begingroup\expandafter\expandafter\expandafter\endgroup
11973 \expandafter\ifx\csname chapter\endcsname\relax
11974   \let\Hy@secnum@part\z@
11975 \else
11976   \let\Hy@secnum@part\m@ne
11977 \fi
11978 \def\@part{%
11979   \ifnum\Hy@secnum@part>\c@secnumdepth
11980     \phantomsection
11981   \fi
11982   \H@old@part
11983 }

11984 \let\H@old@spart\@spart
11985 \def\@spart#1{%
11986   \H@old@spart{#1}%
11987   \Hy@GlobalStepCount\Hy@linkcounter
11988   \xdef\@currentHref{part*.\the\Hy@linkcounter}%
11989   \Hy@raisedlink{%
11990     \hyper@anchorstart{\@currentHref}\hyper@anchorend
11991   }%
11992 }

11993 \let\H@old@sect\@sect
11994 \def\@sect#1#2#3#4#5#6[#7]#8{%
11995   \ifnum #2>\c@secnumdepth
11996     \Hy@GlobalStepCount\Hy@linkcounter
11997     \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11998   \fi
11999   \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[#7]{#8}%

```

```

12000 \ifnum #2>\c@secnumdepth
12001   \Hy@raisedlink{%
12002     \hyper@anchorstart{\@currentHref}\hyper@anchorend
12003   }%
12004 \fi
12005 }

12006 \</outlines | hypertex>
12007 \<*outlines>

12008 \expandafter\def\csname Parent-4\endcsname{}
12009 \expandafter\def\csname Parent-3\endcsname{}
12010 \expandafter\def\csname Parent-2\endcsname{}
12011 \expandafter\def\csname Parent-1\endcsname{}
12012 \expandafter\def\csname Parent0\endcsname{}
12013 \expandafter\def\csname Parent1\endcsname{}
12014 \expandafter\def\csname Parent2\endcsname{}
12015 \expandafter\def\csname Parent3\endcsname{}
12016 \expandafter\def\csname Parent4\endcsname{}

12017 \</outlines>

```

49 Compatibility with koma-script classes

```

12018 \<*outlines | hypertex>

```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for 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.

```

12019 \def\Hy@tempa{%
12020   \def\@addchap[##1]##2{%
12021     \typeout{##2}%
12022     \if@twoside
12023       \mkboth{##1}{}%
12024     \else
12025       \mkboth{}{##1}%
12026     \fi
12027     \addtocontents{lof}{\protect\addvspace{10\p@}}%
12028     \addtocontents{lot}{\protect\addvspace{10\p@}}%
12029     \Hy@GlobalStepCount\Hy@linkcounter
12030     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12031     \Hy@raisedlink{%
12032       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12033     }%
12034     \if@twocolumn
12035       \@topnewpage[\@makeschapterhead{##2}]%
12036     \else
12037       \@makeschapterhead{##2}%
12038       \@afterheading
12039     \fi
12040     \addcontentsline{toc}{chapter}{##1}%
12041   }%
12042 }

12043 \@ifclassloaded{scrbook}{%
12044   \@ifclasslater{scrbook}{2001/01/01}{%
12045     \let\Hy@tempa\@empty
12046   }{}%
12047 }{%
12048   \@ifclassloaded{scrreprt}{%

```

```

12049 \@ifclasslater{scrreprt}{2001/01/01}{%
12050 \let\Hy@tempa\@empty
12051 }{}%
12052 }{%
12053 \let\Hy@tempa\@empty
12054 }%
12055 }%
12056 \Hy@tempa
12057 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek oberdiek@ruf.uni-freiburg.de

50.1 PD1 encoding

```

12058 <*pd1enc>
12059 \DeclareFontEncoding{PD1}{}{}

```

Accents

```

12060 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
12061 \DeclareTextAccent{\'}{PD1}{\textacute}
12062 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
12063 \DeclareTextAccent{\~}{PD1}{\texttilde}
12064 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
12065 \DeclareTextAccent{\r}{PD1}{\textring}
12066 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
12067 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
12068 \DeclareTextAccent{\c}{PD1}{\textcedilla}
12069 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
12070 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
12071 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
12072 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
12073 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
12074 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
12075 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
12076 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
12077 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
12078 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
12079 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
12080 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
12081 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
12082 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
12083 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
12084 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
12085 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
12086 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
12087 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
12088 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
12089 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
12090 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
12091 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
12092 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
12093 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
12094 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
12095 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
12096 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}

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12097 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
12098 \DeclareTextCommand{\newtie}{PD1}[1]{\TextSymbolUnavailable{\newtie{#1}}#1}
Special white space escape characters not for use in bookmarks but for other PDF strings.
12099 % U+0009 (CHARACTER TABULATION)
12100 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
12101 % U+000A (LINE FEED)
12102 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
12103 % U+000D (CARRIAGE RETURN)
12104 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D
Accent glyph names
12105 % U+02D8 BREVE; breve
12106 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
12107 % U+02C7 CARON; caron
12108 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
12109 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
12110 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
12111 % U+02D9 DOT ABOVE; dotaccent
12112 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
12113 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
12114 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
12115 % U+02DB OGONEK; ogonek
12116 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
12117 % U+02DA RING ABOVE; ring
12118 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
12119 % U+02DC SMALL TILDE; ilde, *tilde
12120 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
12121 % U+0022 QUOTATION MARK; quotedbl
12122 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
12123 % U+0023 NUMBER SIGN; numbersign
12124 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
12125 % U+0024 DOLLAR SIGN; dollar
12126 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
12127 % U+0025 PERCENT SIGN; percent
12128 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
12129 % U+0026 AMPERSAND; ampersand
12130 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
\047: U+0027 APOSTROPHE; quotesingle

12131 % U+0028 LEFT PARENTHESIS; parenleft
12132 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
12133 % U+0029 RIGHT PARENTHESIS; parenright
12134 \DeclareTextCommand{\textparenright}{PD1}{\string\)%}% \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
12135 % U+002E FULL STOP; period
12136 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E
\057: U+002F SOLIDUS; slash
\060: U+0030 DIGIT ZERO; zero
...
\071: U+0039 DIGIT NINE; nine

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\072: U+003A COLON; colon
 \073: U+003B SEMICOLON; semicolon
 12137 % U+003C LESS-THAN SIGN; less
 12138 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 12139 % U+003E GREATER-THAN SIGN; greater
 12140 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 12141 % U+005C REVERSE SOLIDUS; backslash
 12142 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 12143 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12144 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 12145 % U+005F LOW LINE; underscore
 12146 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 12147 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 12148 % U+0060 GRAVE ACCENT; grave
 12149 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 12150 % U+0069 LATIN SMALL LETTER I; i
 12151 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 12152 % U+007B LEFT CURLY BRACKET; braceleft
 12153 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 12154 % U+007C VERTICAL LINE; *bar, verticalbar
 12155 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 12156 % U+007D RIGHT CURLY BRACKET; braceright
 12157 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 12158 % U+007E TILDE; asciitilde
 12159 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 12160 % U+2022 BULLET; bullet
 12161 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 12162 % U+2020 DAGGER; dagger
 12163 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 12164 % U+2021 DOUBLE DAGGER; daggerdbl
 12165 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 12166 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 12167 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 12168 % U+2014 EM DASH; emdash
 12169 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 12170 % U+2013 EN DASH; endash
 12171 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 12172 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 12173 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192

12174 % U+2044 FRACTION SLASH; fraction
12175 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
12176 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
12177 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
12178 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
12179 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
12180 % U+2212 MINUS SIGN; minus
12181 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
12182 % U+2030 PER MILLE SIGN; perthousand
12183 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
12184 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
12185 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
12186 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
12187 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
12188 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
12189 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
12190 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
12191 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
12192 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
12193 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
12194 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
12195 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
12196 % U+2122 TRADE MARK SIGN; trademark
12197 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
12198 % U+FB01 LATIN SMALL LIGATURE FI; fi
12199 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
12200 % U+FB02 LATIN SMALL LIGATURE FL; fl
12201 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
12202 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12203 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
12204 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12205 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
12206 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
12207 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
12208 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
12209 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
12210 \DeclareTextCommand{\IJ}{PD1}{\230}
12211 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
12212 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
12213 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12214 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
12215 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12216 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
12217 % U+0153 LATIN SMALL LIGATURE OE; oe
12218 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
12219 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12220 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
12221 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
12222 \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.
12223 % U+20AC EURO SIGN; *Euro, euro
12224 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
12225 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
12226 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
12227 % U+00A2 CENT SIGN; cent
12228 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2

12229 % U+00A3 POUND SIGN; sterling
 12230 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 12231 % U+00A4 CURRENCY SIGN; currency
 12232 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 12233 % U+00A5 YEN SIGN; yen
 12234 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 12235 % U+00A6 BROKEN BAR; brokenbar
 12236 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 12237 % U+00A7 SECTION SIGN; section
 12238 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 12239 % U+00A8 DIAERESIS; dieresis
 12240 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 12241 % U+00A9 COPYRIGHT SIGN; copyright
 12242 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 12243 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12244 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 12245 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12246 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 12247 % U+00AC NOT SIGN; logicalnot
 12248 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 12249 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 12250 % U+00AE REGISTERED SIGN; registered
 12251 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 12252 % U+00AF MACRON; *macron, overscore
 12253 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 12254 % U+00B0 DEGREE SIGN; degree
 12255 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 12256 % U+00B1 PLUS-MINUS SIGN; plusminus
 12257 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 12258 % U+00B2 SUPERSCRRIPT TWO; twosuperior
 12259 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 12260 % U+00B3 SUPERSCRRIPT THREE; threesuperior
 12261 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 12262 % U+00B4 ACUTE ACCENT; acute
 12263 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 12264 % U+00B5 MICRO SIGN; mu, mu1
 12265 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 12266 % U+00B6 PILCROW SIGN; paragraph
 12267 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 12268 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12269 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 12270 % U+00B8 CEDILLA; cedilla
 12271 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 12272 % U+00B9 SUPERSCRRIPT ONE; onesuperior
 12273 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 12274 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12275 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 12276 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12277 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 12278 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12279 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 12280 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12281 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 12282 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 12283 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 12284 % U+00BF INVERTED QUESTION MARK; questiondown

12285 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
12286 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12287 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
12288 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12289 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
12290 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12291 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
12292 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12293 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
12294 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12295 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
12296 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12297 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
12298 % U+00C6 LATIN CAPITAL LETTER AE; AE
12299 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
12300 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12301 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
12302 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12303 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
12304 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12305 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
12306 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12307 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
12308 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12309 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
12310 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12311 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
12312 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12313 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
12314 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12315 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
12316 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12317 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
12318 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12319 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
12320 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
12321 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12322 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
12323 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12324 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
12325 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12326 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
12327 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12328 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
12329 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12330 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
12331 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12332 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
12333 % U+00D7 MULTIPLICATION SIGN; multiply
12334 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
12335 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12336 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
12337 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12338 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
12339 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12340 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
12341 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex

12342 \DeclareTextCompositeCommand{\~}{PD1}{U}{\333}% U+00DB
12343 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12344 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
12345 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12346 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
12347 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12348 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
12349 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12350 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
12351 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12352 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
12353 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12354 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
12355 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12356 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
12357 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12358 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
12359 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12360 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
12361 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12362 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
12363 % U+00E6 LATIN SMALL LETTER AE; ae
12364 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
12365 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12366 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
12367 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12368 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
12369 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12370 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
12371 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12372 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
12373 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12374 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
12375 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12376 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
12377 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12378 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12379 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12380 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12381 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12382 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12383 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12384 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12385 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12386 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12387 % U+00F0 LATIN SMALL LETTER ETH; eth
12388 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
12389 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12390 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
12391 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12392 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
12393 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12394 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
12395 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12396 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
12397 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12398 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5

12399 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 12400 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
 12401 % U+00F7 DIVISION SIGN; divide
 12402 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 12403 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 12404 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 12405 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 12406 \DeclareTextCompositeCommand{'}{PD1}{u}{\371}% U+00F9
 12407 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 12408 \DeclareTextCompositeCommand{'}{PD1}{u}{\372}% U+00FA
 12409 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 12410 \DeclareTextCompositeCommand{'}{PD1}{u}{\373}% U+00FB
 12411 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12412 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
 12413 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12414 \DeclareTextCompositeCommand{'}{PD1}{y}{\375}% U+00FD
 12415 % U+00FE LATIN SMALL LETTER THORN; thorn
 12416 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 12417 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12418 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
 12419 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

12420 \DeclareTextCommand{\SS}{PD1}{SS}
 12421 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

12422 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 12423 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 12424 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 12425 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 12426 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 12427 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 12428 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 12429 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

12430 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 12431 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 12432 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 12433 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 12434 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 12435 \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;

12436 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
 12437 \DeclareTextCompositeCommand{'}{PD1}{c}{c}% cacute
 12438 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
 12439 \DeclareTextCompositeCommand{'}{PD1}{n}{n}% nacute
 12440 \DeclareTextCompositeCommand{'}{PD1}{s}{s}% sacute
 12441 \DeclareTextCompositeCommand{'}{PD1}{z}{z}% zacute
 12442 \DeclareTextCompositeCommand{.}{PD1}{z}{z}% zdot
 12443 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
 12444 \DeclareTextCompositeCommand{'}{PD1}{C}{C}% Cacute
 12445 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
 12446 \DeclareTextCompositeCommand{'}{PD1}{N}{N}% Nacute
 12447 \DeclareTextCompositeCommand{'}{PD1}{S}{S}% Sacute
 12448 \DeclareTextCompositeCommand{'}{PD1}{Z}{Z}% Zacute
 12449 \DeclareTextCompositeCommand{.}{PD1}{Z}{Z}% Zdot

12450 \langle /pdlenc)

50.2 PU encoding

12451 \langle *puenc)

12452 \DeclareFontEncoding{PU}{-}{-}

50.2.1 NFSS2 accents

12453 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecmb
12454 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
12455 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecmb
12456 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
12457 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
12458 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
12459 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
12460 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
12461 % U+0304 COMBINING MACRON; macroncmb
12462 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
12463 % U+0306 COMBINING BREVE; brevecmb
12464 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
12465 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
12466 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
12467 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
12468 % U+0308 COMBINING DIAERESIS; dieresiscmb
12469 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
12470 % U+030A COMBINING RING ABOVE; ringcmb
12471 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
12472 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
12473 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
12474 % U+030C COMBINING CARON; caroncmb
12475 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
12476 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
12477 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
12478 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
12479 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
12480 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
12481 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
12482 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
12483 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
12484 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
12485 % U+0327 COMBINING CEDILLA; cedillacmb
12486 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
12487 % U+0328 COMBINING OGONEK; ogonekcmb
12488 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
12489 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
12490 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
12491 % U+20DD COMBINING ENCLOSING CIRCLE
12492 \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.

12493 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
12494 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
12495 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
12496 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
12497 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
12498 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
12499 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
12500 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}

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12501 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
12502 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
12503 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
12504 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
12505 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
12506 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
12507 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
12508 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
12509 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
12510 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
12511 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

12512 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
12513 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
12514 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
12515 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
12516 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
12517 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
12518 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
12519 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
12520 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
12521 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
12522 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
12523 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
12524 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
12525 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
12526 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
12527 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
12528 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
12529 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
12530 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

12531 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
12532 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
12533 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
12534 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
12535 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
12536 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
12537 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}
12538 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
12539 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
12540 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
12541 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
12542 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
12543 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
12544 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
12545 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

12546 % U+0009 (CHARACTER TABULATION)
12547 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
12548 % U+000A (LINE FEED)
12549 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
12550 % U+000D (CARRIAGE RETURN)
12551 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

```

\80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 12552 % U+0022 QUOTATION MARK; quotedbl
 12553 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
 12554 % U+0023 NUMBER SIGN; numbersign
 12555 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 12556 % U+0024 DOLLAR SIGN; dollar
 12557 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 12558 % U+0025 PERCENT SIGN; percent
 12559 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 12560 % U+0026 AMPERSAND; ampersand
 12561 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 12562 % U+0027 APOSTROPHE; quotesingle
 12563 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 12564 % U+0028 LEFT PARENTHESIS; parenleft
 12565 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 12566 % U+0029 RIGHT PARENTHESIS; parenright
 12567 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 12568 % U+002A ASTERISK; asterisk
 12569 \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
 12570 % U+003C LESS-THAN SIGN; less
 12571 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 12572 % U+003E GREATER-THAN SIGN; greater
 12573 \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
 12574 % U+005C REVERSE SOLIDUS; backslash
 12575 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 12576 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12577 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 12578 % U+005F LOW LINE; underscore
 12579 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 12580 % U+0060 GRAVE ACCENT; grave
 12581 \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


```

12582 % U+0069 LATIN SMALL LETTER I; i
12583 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
12584 \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
12585 % U+007B LEFT CURLY BRACKET; braceleft
12586 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
12587 % U+007C VERTICAL LINE; *bar, verticalbar
12588 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
12589 % U+007D RIGHT CURLY BRACKET; braceright
12590 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
12591 % U+007E TILDE; asciitilde
12592 \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
12593 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
12594 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
12595 % U+00A2 CENT SIGN; cent
12596 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
12597 % U+00A3 POUND SIGN; sterling
12598 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
12599 % U+00A4 CURRENCY SIGN; currency
12600 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
12601 % U+00A5 YEN SIGN; yen
12602 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
12603 % U+00A6 BROKEN BAR; brokenbar
12604 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
12605 % U+00A7 SECTION SIGN; section
12606 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
12607 % U+00A8 DIAERESIS; diaeresis
12608 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
12609 % U+00A9 COPYRIGHT SIGN; copyright
12610 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
12611 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
12612 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
12613 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
12614 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
12615 % U+00AC NOT SIGN; logicalnot
12616 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
12617 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softhyphen
12618 % U+00AE REGISTERED SIGN; registered
12619 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
12620 % U+00AF MACRON; *macron, overscore
12621 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
12622 % U+00B0 DEGREE SIGN; degree
12623 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
12624 % U+00B1 PLUS-MINUS SIGN; plusminus
12625 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
12626 % U+00B2 SUPERScript TWO; twosuperior
12627 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
12628 % U+00B3 SUPERScript THREE; threesuperior
12629 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3

```

12630 % U+00B4 ACUTE ACCENT; acute
 12631 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 12632 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 12633 % U+00B5 MICRO SIGN; mu, mu1
 12634 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 12635 % U+00B6 PILCROW SIGN; paragraph
 12636 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 12637 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12638 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 12639 % U+00B8 CEDILLA; cedilla
 12640 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 12641 % U+00B9 SUPERSCRIPT ONE; onesuperior
 12642 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 12643 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12644 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 12645 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12646 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 12647 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12648 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 12649 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12650 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 12651 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 12652 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 12653 % U+00BF INVERTED QUESTION MARK; questiondown
 12654 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 12655 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 12656 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 12657 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 12658 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 12659 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 12660 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 12661 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 12662 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 12663 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 12664 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 12665 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 12666 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 12667 % U+00C6 LATIN CAPITAL LETTER AE; AE
 12668 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 12669 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 12670 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 12671 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 12672 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 12673 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 12674 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 12675 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 12676 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 12677 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 12678 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 12679 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 12680 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 12681 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 12682 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 12683 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 12684 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
 12685 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 12686 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF

12687 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12688 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
12689 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12690 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
12691 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12692 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
12693 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12694 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
12695 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12696 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
12697 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12698 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
12699 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12700 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
12701 % U+00D7 MULTIPLICATION SIGN; multiply
12702 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
12703 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12704 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
12705 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12706 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
12707 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12708 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
12709 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12710 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
12711 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12712 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
12713 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12714 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
12715 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12716 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
12717 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12718 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
12719 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12720 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
12721 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12722 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
12723 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12724 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
12725 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12726 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
12727 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12728 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
12729 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12730 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
12731 % U+00E6 LATIN SMALL LETTER AE; ae
12732 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
12733 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12734 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
12735 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12736 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
12737 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12738 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
12739 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12740 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
12741 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12742 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
12743 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave

12744 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 12745 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
 12746 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
 12747 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 12748 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 12749 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
 12750 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
 12751 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
 12752 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 12753 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 12754 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 12755 % U+00F0 LATIN SMALL LETTER ETH; eth
 12756 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 12757 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 12758 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 12759 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 12760 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 12761 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 12762 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 12763 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 12764 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 12765 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 12766 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 12767 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 12768 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 12769 % U+00F7 DIVISION SIGN; divide
 12770 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 12771 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 12772 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 12773 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 12774 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 12775 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 12776 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 12777 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 12778 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 12779 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12780 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 12781 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12782 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 12783 % U+00FE LATIN SMALL LETTER THORN; thorn
 12784 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 12785 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12786 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

12787 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 12788 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 12789 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 12790 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 12791 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 12792 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 12793 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 12794 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 12795 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 12796 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 12797 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek

12798 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
12799 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
12800 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
12801 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
12802 \DeclareTextCompositeCommand{\c}{PU}{c}{\81\007}% U+0107
12803 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
12804 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
12805 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
12806 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
12807 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
12808 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
12809 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
12810 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
12811 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
12812 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
12813 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
12814 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
12815 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
12816 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
12817 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
12818 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
12819 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
12820 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
12821 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
12822 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
12823 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
12824 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
12825 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
12826 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
12827 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
12828 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
12829 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
12830 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
12831 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
12832 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
12833 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
12834 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
12835 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
12836 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
12837 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
12838 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
12839 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
12840 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
12841 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
12842 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
12843 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
12844 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
12845 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
12846 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
12847 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
12848 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
12849 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
12850 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
12851 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
12852 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
12853 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
12854 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121

12855 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
 12856 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
 12857 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
 12858 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
 12859 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
 12860 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
 12861 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
 12862 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
 12863 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
 12864 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
 12865 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
 12866 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
 12867 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
 12868 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 12869 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
 12870 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 12871 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 12872 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
 12873 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
 12874 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
 12875 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 12876 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 12877 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibrevé
 12878 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
 12879 % U+012D LATIN SMALL LETTER I WITH BREVE; ibrevé
 12880 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 12881 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 12882 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
 12883 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
 12884 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
 12885 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 12886 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 12887 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 12888 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 12889 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 12890 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 12891 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 12892 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 12893 % U+0133 LATIN SMALL LIGATURE IJ; ij
 12894 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 12895 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 12896 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 12897 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 12898 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 12899 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 12900 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 12901 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 12902 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 12903 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has chosen `\textkra`.

12904 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 12905 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 12906 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 12907 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 12908 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute

12909 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
12910 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
12911 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
12912 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
12913 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
12914 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
12915 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
12916 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
12917 \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.

12918 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
12919 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
12920 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
12921 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
12922 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12923 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
12924 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12925 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
12926 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
12927 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
12928 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
12929 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
12930 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
12931 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
12932 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
12933 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
12934 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
12935 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
12936 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
12937 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
12938 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
12939 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
12940 % U+014A LATIN CAPITAL LETTER ENG; Eng
12941 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
12942 % U+014B LATIN SMALL LETTER ENG; eng
12943 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
12944 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
12945 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
12946 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
12947 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
12948 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
12949 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
12950 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
12951 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
12952 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
12953 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
12954 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
12955 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
12956 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12957 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
12958 % U+0153 LATIN SMALL LIGATURE OE; oe
12959 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
12960 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
12961 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
12962 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
12963 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155

12964 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 12965 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 12966 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 12967 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 12968 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 12969 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 12970 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 12971 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 12972 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 12973 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 12974 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 12975 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 12976 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 12977 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 12978 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 12979 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 12980 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 12981 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 12982 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 12983 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 12984 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 12985 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 12986 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 12987 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 12988 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 12989 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 12990 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 12991 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 12992 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 12993 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 12994 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 12995 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 12996 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 12997 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 12998 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 12999 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 13000 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 13001 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 13002 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 13003 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 13004 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 13005 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 13006 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 13007 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 13008 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 13009 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 13010 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 13011 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 13012 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 13013 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 13014 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 13015 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 13016 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 13017 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 13018 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 13019 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 13020 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek

13021 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 13022 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 13023 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 13024 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 13025 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 13026 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 13027 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 13028 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 13029 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 13030 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 13031 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 13032 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 13033 \DeclareTextCompositeCommand{"}{PU}{Y}{\81\170}% U+0178
 13034 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 13035 \DeclareTextCompositeCommand{'}{PU}{Z}{\81\171}% U+0179
 13036 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 13037 \DeclareTextCompositeCommand{'}{PU}{z}{\81\172}% U+017A
 13038 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 13039 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 13040 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 13041 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 13042 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13043 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 13044 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13045 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 13046 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 13047 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

13048 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13049 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 13050 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 13051 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 13052 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 13053 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 13054 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 13055 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 13056 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 13057 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13058 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13059 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 13060 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 13061 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 13062 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 13063 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 13064 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 13065 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 13066 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 13067 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 13068 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 13069 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 13070 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 13071 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 13072 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 13073 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 13074 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 13075 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron

13076 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
13077 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
13078 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
13079 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
13080 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
13081 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
13082 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
13083 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
13084 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13085 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13086 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
13087 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
13088 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
13089 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
13090 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
13091 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
13092 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
13093 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
13094 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
13095 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
13096 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
13097 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
13098 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut
13099 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
13100 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
13101 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
13102 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
13103 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
13104 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
13105 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
13106 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
13107 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
13108 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
13109 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
13110 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
13111 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
13112 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
13113 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13114 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13115 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
13116 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
13117 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
13118 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
13119 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
13120 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
13121 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
13122 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
13123 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
13124 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
13125 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
13126 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
13127 % U+021E LATIN CAPITAL LETTER H WITH CARON
13128 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
13129 % U+021F LATIN SMALL LETTER H WITH CARON
13130 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
13131 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
13132 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226

13133 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 13134 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 13135 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 13136 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 13137 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 13138 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 13139 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 13140 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 13141 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 13142 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 13143 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 13144 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 13145 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 13146 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 13147 % U+0237 LATIN SMALL LETTER DOTLESS J
 13148 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13149 % U+02C7 CARON; caron
 13150 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 13151 % U+02D8 BREVE; breve
 13152 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 13153 % U+02D9 DOT ABOVE; dotaccent
 13154 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 13155 % U+02DA RING ABOVE; ring
 13156 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 13157 % U+02DB OGONEK; ogonek
 13158 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 13159 % U+02DC SMALL TILDE; ilde, *tilde
 13160 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 13161 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13162 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 13163 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 13164 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 13165 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 13166 % U+02F7 MODIFIER LETTER LOW TILDE
 13167 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13168 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13169 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 13170 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13171 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 13172 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 13173 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 13174 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13175 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 13176 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13177 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13178 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 13179 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 13180 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 13181 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 13182 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 13183 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386

13184 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
13185 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
13186 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
13187 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
13188 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
13189 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
13190 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
13191 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
13192 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
13193 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
13194 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
13195 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
13196 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iodadiesistonos
13197 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesisis}{\83\220}% U+0390
13198 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
13199 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
13200 % U+0392 GREEK CAPITAL LETTER BETA; Beta
13201 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
13202 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
13203 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
13204 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
13205 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
13206 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
13207 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
13208 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
13209 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
13210 % U+0397 GREEK CAPITAL LETTER ETA; Eta
13211 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
13212 % U+0398 GREEK CAPITAL LETTER THETA; Theta
13213 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
13214 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
13215 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
13216 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
13217 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
13218 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
13219 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
13220 % U+039C GREEK CAPITAL LETTER MU; Mu
13221 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
13222 % U+039D GREEK CAPITAL LETTER NU; Nu
13223 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
13224 % U+039E GREEK CAPITAL LETTER XI; Xi
13225 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
13226 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13227 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13228 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13229 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13230 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13231 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13232 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13233 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13234 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13235 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13236 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13237 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13238 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13239 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13240 % U+03A7 GREEK CAPITAL LETTER CHI; Chi

13241 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13242 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13243 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13244 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13245 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13246 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13247 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13248 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
13249 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
13250 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13251 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13252 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13253 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
13254 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13255 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
13256 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13257 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotonos
13258 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13259 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
13260 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
13261 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
13262 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13263 % U+03B2 GREEK SMALL LETTER BETA; beta
13264 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13265 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13266 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13267 % U+03B4 GREEK SMALL LETTER DELTA; delta
13268 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13269 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13270 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13271 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13272 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13273 % U+03B7 GREEK SMALL LETTER ETA; eta
13274 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13275 % U+03B8 GREEK SMALL LETTER THETA; theta
13276 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13277 % U+03B9 GREEK SMALL LETTER IOTA; iota
13278 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13279 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13280 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
13281 % U+03BB GREEK SMALL LETTER LAMDA; lambda
13282 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
13283 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
13284 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
13285 % U+03BD GREEK SMALL LETTER NU; nu
13286 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
13287 % U+03BE GREEK SMALL LETTER XI; xi
13288 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
13289 % U+03BF GREEK SMALL LETTER OMICRON; omicron
13290 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
13291 % U+03C0 GREEK SMALL LETTER PI; pi
13292 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
13293 % U+03C1 GREEK SMALL LETTER RHO; rho
13294 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
13295 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
13296 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
13297 % U+03C3 GREEK SMALL LETTER SIGMA; sigma

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13298 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
13299 % U+03C4 GREEK SMALL LETTER TAU; tau
13300 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
13301 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
13302 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
13303 % U+03C6 GREEK SMALL LETTER PHI; phi
13304 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
13305 % U+03C7 GREEK SMALL LETTER CHI; chi
13306 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
13307 % U+03C8 GREEK SMALL LETTER PSI; psi
13308 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
13309 % U+03C9 GREEK SMALL LETTER OMEGA; omega
13310 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
13311 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
13312 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
13313 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; upsilondieresis
13314 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
13315 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
13316 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
13317 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
13318 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
13319 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
13320 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
13321 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
13322 % U+03DA GREEK LETTER STIGMA; Stigmagreek
13323 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
13324 % U+03DB GREEK SMALL LETTER STIGMA
13325 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
13326 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
13327 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
13328 % U+03DD GREEK SMALL LETTER DIGAMMA
13329 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
13330 % U+03DE GREEK LETTER KOPPA; Koppagreek
13331 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
13332 % U+03DF GREEK SMALL LETTER KOPPA
13333 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
13334 % U+03E0 GREEK LETTER SAMPI; Sampigreek
13335 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
13336 % U+03E1 GREEK SMALL LETTER SAMPI
13337 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

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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.

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13338 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
13339 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
13340 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
13341 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
13342 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
13343 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
13344 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
13345 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
13346 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
13347 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
13348 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
13349 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
13350 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405

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13351 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrillic, *afii10055
13352 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
13353 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
13354 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
13355 \DeclareTextCompositeCommand{\}{PU}{\CYRII}{\84\007}% U+0407
13356 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
13357 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
13358 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
13359 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
13360 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
13361 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
13362 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
13363 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
13364 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
13365 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
13366 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
13367 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
13368 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
13369 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
13370 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
13371 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
13372 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
13373 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
13374 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
13375 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
13376 \DeclareTextCommand{\CYRE}{PU}{\84\021}% U+0411
13377 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
13378 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
13379 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
13380 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
13381 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
13382 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
13383 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
13384 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
13385 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
13386 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
13387 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
13388 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
13389 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
13390 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
13391 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
13392 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
13393 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
13394 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
13395 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
13396 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
13397 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
13398 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
13399 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
13400 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
13401 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
13402 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
13403 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
13404 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
13405 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
13406 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
13407 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420

13408 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
13409 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
13410 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
13411 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
13412 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
13413 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
13414 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
13415 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
13416 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
13417 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
13418 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
13419 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
13420 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
13421 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
13422 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
13423 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
13424 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
13425 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
13426 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
13427 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
13428 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
13429 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
13430 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
13431 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
13432 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
13433 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
13434 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
13435 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
13436 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
13437 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
13438 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
13439 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
13440 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
13441 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
13442 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
13443 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
13444 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
13445 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
13446 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
13447 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
13448 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
13449 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
13450 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
13451 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
13452 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
13453 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
13454 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, icyrillic
13455 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
13456 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
13457 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
13458 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
13459 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
13460 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
13461 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
13462 \DeclareTextCommand{\cyr1}{PU}{\84\073}% U+043B
13463 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
13464 \DeclareTextCommand{\cyr1m}{PU}{\84\074}% U+043C

13465 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
13466 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
13467 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
13468 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
13469 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
13470 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
13471 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
13472 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
13473 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
13474 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
13475 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
13476 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
13477 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
13478 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
13479 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
13480 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
13481 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
13482 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
13483 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
13484 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
13485 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
13486 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
13487 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
13488 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
13489 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
13490 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
13491 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
13492 \DeclareTextCommand{\cyrhdsn}{PU}{\84\112}% U+044A
13493 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
13494 \DeclareTextCommand{\cyry}{PU}{\84\113}% U+044B
13495 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
13496 \DeclareTextCommand{\cyrsftsn}{PU}{\84\114}% U+044C
13497 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
13498 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
13499 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
13500 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
13501 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
13502 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
13503 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
13504 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
13505 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
13506 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
13507 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
13508 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
13509 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
13510 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
13511 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
13512 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
13513 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
13514 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
13515 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
13516 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
13517 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
13518 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
13519 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
13520 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
13521 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic

13522 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
13523 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
13524 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
13525 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
13526 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
13527 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
13528 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
13529 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
13530 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
13531 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
13532 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
13533 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
13534 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
13535 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
13536 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
13537 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
13538 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
13539 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
13540 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
13541 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
13542 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
13543 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
13544 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
13545 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
13546 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
13547 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
13548 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
13549 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
13550 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
13551 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
13552 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
13553 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
13554 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleiotifiedcyrillic
13555 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
13556 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotifiedcyrillic
13557 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
13558 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
13559 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
13560 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
13561 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
13562 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
13563 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
13564 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
13565 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
13566 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
13567 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
13568 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
13569 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
13570 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
13571 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
13572 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
13573 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
13574 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
13575 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
13576 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
13577 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
13578 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148

13579 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 13580 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 13581 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 13582 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 13583 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 13584 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 13585 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 13586 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 13587 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 13588 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 13589 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 13590 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 13591 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 13592 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 13593 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 13594 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 13595 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 13596 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 13597 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 13598 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 13599 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 13600 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 13601 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 13602 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 13603 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 13604 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 13605 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 13606 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 13607 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrlliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 13608 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 13609 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 13610 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 13611 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 13612 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 13613 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 13614 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 13615 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 13616 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 13617 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 13618 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 13619 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 13620 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 13621 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 13622 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 13623 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 13624 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic

13625 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
13626 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
13627 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
13628 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
13629 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
13630 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
13631 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
13632 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
13633 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
13634 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
13635 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
13636 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
13637 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
13638 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
13639 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
13640 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
13641 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
13642 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
13643 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
13644 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
13645 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
13646 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaverticalstrokecyrillic
13647 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
13648 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaverticalstrokecyrillic
13649 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
13650 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
13651 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
13652 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
13653 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
13654 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
13655 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
13656 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
13657 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
13658 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
13659 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
13660 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
13661 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
13662 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
13663 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
13664 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
13665 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
13666 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
13667 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
13668 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
13669 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
13670 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
13671 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
13672 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
13673 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
13674 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
13675 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
13676 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
13677 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
13678 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
13679 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
13680 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
13681 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC

13682 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
13683 \DeclareTextCommand{\cyrtddsc}{PU}{\84\255}% U+04AD
13684 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
13685 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
13686 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
13687 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
13688 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
13689 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
13690 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
13691 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
13692 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic
13693 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
13694 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
13695 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
13696 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
13697 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
13698 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
13699 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
13700 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
13701 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
13702 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
13703 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
13704 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Cheverticalstrokecyrillic
13705 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
13706 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; cheverticalstrokecyrillic
13707 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
13708 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
13709 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
13710 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
13711 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
13712 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
13713 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
13714 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
13715 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
13716 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
13717 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
13718 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
13719 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
13720 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
13721 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
13722 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
13723 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
13724 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
13725 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
13726 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
13727 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
13728 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
13729 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
13730 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
13731 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
13732 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
13733 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
13734 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
13735 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
13736 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
13737 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
13738 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic

13739 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 13740 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
 13741 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 13742 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
 13743 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 13744 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 13745 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 13746 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 13747 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 13748 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 13749 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 13750 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 13751 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 13752 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 13753 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 13754 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 13755 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 13756 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 13757 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 13758 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 13759 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 13760 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 13761 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 13762 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 13763 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 13764 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 13765 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 13766 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 13767 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 13768 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiescyrillic
 13769 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 13770 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiescyrillic
 13771 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
 13772 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
 13773 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 13774 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
 13775 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\335}% U+04DD
 13776 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
 13777 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
 13778 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 13779 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
 13780 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
 13781 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 13782 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 13783 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 13784 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 13785 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2
 13786 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 13787 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\343}% U+04E3
 13788 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 13789 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\344}% U+04E4
 13790 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 13791 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\345}% U+04E5
 13792 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 13793 \DeclareTextCompositeCommand{\U}{PU}{\CYRO}{\84\346}% U+04E6
 13794 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

13795 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 13796 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 13797 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 13798 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 13799 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 13800 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
 13801 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 13802 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
 13803 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 13804 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 13805 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 13806 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 13807 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 13808 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 13809 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 13810 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 13811 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
 13812 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 13813 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 13814 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 13815 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 13816 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 13817 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 13818 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 13819 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 13820 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 13821 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 13822 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 13823 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 13824 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 13825 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 13826 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 13827 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 13828 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 13829 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 13830 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 13831 \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
 13832 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 13833 \DeclareTextCommand{\CYRHKK}{PU}{\84\374}% U+04FC
 13834 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 13835 \DeclareTextCommand{\cyrhkk}{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

13836 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 13837 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

13838 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 13839 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 13840 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 13841 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03

13842 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
13843 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
13844 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
13845 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
13846 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
13847 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
13848 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
13849 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
13850 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
13851 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
13852 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
13853 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
13854 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
13855 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
13856 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
13857 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
13858 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
13859 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
13860 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
13861 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
13862 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
13863 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
13864 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
13865 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
13866 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
13867 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
13868 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
13869 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
13870 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
13871 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
13872 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
13873 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
13874 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
13875 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
13876 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
13877 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
13878 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
13879 \DeclareTextCompositeCommand{\'} {PU}{K}{\9036\060}% U+1E30
13880 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
13881 \DeclareTextCompositeCommand{\'} {PU}{k}{\9036\061}% U+1E31
13882 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
13883 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
13884 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
13885 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
13886 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
13887 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
13888 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
13889 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
13890 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
13891 \DeclareTextCompositeCommand{\'} {PU}{M}{\9036\076}% U+1E3E
13892 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
13893 \DeclareTextCompositeCommand{\'} {PU}{m}{\9036\077}% U+1E3F
13894 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
13895 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
13896 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
13897 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
13898 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent

13899 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
13900 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
13901 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
13902 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
13903 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
13904 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
13905 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
13906 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
13907 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
13908 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
13909 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
13910 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
13911 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
13912 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
13913 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
13914 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
13915 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
13916 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
13917 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
13918 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
13919 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
13920 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
13921 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
13922 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
13923 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
13924 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
13925 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
13926 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
13927 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
13928 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
13929 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
13930 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
13931 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
13932 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
13933 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
13934 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
13935 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
13936 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
13937 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
13938 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
13939 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
13940 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
13941 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
13942 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
13943 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
13944 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
13945 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
13946 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
13947 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
13948 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
13949 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
13950 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
13951 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
13952 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
13953 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
13954 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
13955 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C

13956 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 13957 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 13958 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 13959 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
 13960 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 13961 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
 13962 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 13963 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
 13964 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 13965 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
 13966 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 13967 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 13968 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 13969 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 13970 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 13971 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 13972 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 13973 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 13974 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 13975 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 13976 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 13977 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 13978 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
 13979 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 13980 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 13981 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}% U+1EBC
 13982 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 13983 \DeclareTextCompositeCommand{~}{PU}{e}{\9036\275}% U+1EBD
 13984 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 13985 \DeclareTextCompositeCommand{`}{PU}{Y}{\9036\362}% U+1EF2
 13986 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 13987 \DeclareTextCompositeCommand{`}{PU}{y}{\9036\363}% U+1EF3
 13988 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 13989 \DeclareTextCompositeCommand{~}{PU}{Y}{\9036\370}% U+1EF8
 13990 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 13991 \DeclareTextCompositeCommand{~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

13992 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 13993 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 13994 % U+2013 EN DASH; endash
 13995 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 13996 % U+2014 EM DASH; emdash
 13997 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 13998 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 13999 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 14000 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 14001 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 14002 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 14003 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 14004 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 14005 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 14006 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 14007 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 14008 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 14009 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 14010 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase

14011 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 14012 % U+2020 DAGGER; dagger
 14013 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 14014 % U+2021 DOUBLE DAGGER; daggerdbl
 14015 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 14016 % U+2022 BULLET; bullet
 14017 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 14018 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14019 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 14020 % U+2030 PER MILLE SIGN; perthousand
 14021 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 14022 % U+2031 PER TEN THOUSAND SIGN
 14023 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 14024 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 14025 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 14026 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 14027 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 14028 % U+203B REFERENCE MARK; referencemark
 14029 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 14030 % U+203D INTERROBANG
 14031 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 14032 % U+2044 FRACTION SLASH; fraction
 14033 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 14034 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 14035 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 14036 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 14037 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 14038 % U+2052 COMMERCIAL MINUS SIGN
 14039 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

14040 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 14041 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 14042 % U+2074 SUPERSCRIPT FOUR; foursuperior
 14043 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 14044 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 14045 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 14046 % U+2076 SUPERSCRIPT SIX; sixsuperior
 14047 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 14048 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 14049 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 14050 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 14051 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 14052 % U+2079 SUPERSCRIPT NINE; ninesuperior
 14053 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 14054 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 14055 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 14056 % U+207B SUPERSCRIPT MINUS
 14057 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 14058 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 14059 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
 14060 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 14061 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 14062 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 14063 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 14064 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 14065 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}

14066 % U+2080 SUBSCRIPT ZERO; zeroinferior
 14067 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 14068 % U+2081 SUBSCRIPT ONE; oneinferior
 14069 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 14070 % U+2082 SUBSCRIPT TWO; twoinferior
 14071 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 14072 % U+2083 SUBSCRIPT THREE; threeinferior
 14073 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 14074 % U+2084 SUBSCRIPT FOUR; fourinferior
 14075 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 14076 % U+2085 SUBSCRIPT FIVE; fiveinferior
 14077 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 14078 % U+2086 SUBSCRIPT SIX; sixinferior
 14079 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 14080 % U+2087 SUBSCRIPT SEVEN; seveninferior
 14081 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 14082 % U+2088 SUBSCRIPT EIGHT; eightinferior
 14083 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 14084 % U+2089 SUBSCRIPT NINE; nineinferior
 14085 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 14086 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 14087 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 14088 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 14089 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14090 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 14091 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 14092 % U+20A4 LIRA SIGN; afii08941, *lira
 14093 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 14094 % U+20A6 NAIRA SIGN
 14095 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 14096 % U+20A7 PESETA SIGN; peseta
 14097 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 14098 % U+20A9 WON SIGN; won
 14099 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 14100 % U+20AB DONG SIGN; dong
 14101 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 14102 % U+20AC EURO SIGN; *Euro, euro
 14103 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 14104 % U+20B1 PESO SIGN
 14105 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 14106 % U+20B2 GUARANI SIGN
 14107 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14108 % U+2103 DEGREE CELSIUS; centigrade
 14109 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 14110 % U+2116 NUMERO SIGN; *afii61352, numero
 14111 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 14112 % U+2117 SOUND RECORDING COPYRIGHT
 14113 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 14114 % U+211E PRESCRIPTION TAKE; prescription
 14115 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 14116 % U+2120 SERVICE MARK
 14117 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 14118 % U+2122 TRADE MARK SIGN; trademark

14119 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 14120 % U+2126 OHM SIGN; Ohm, Omega
 14121 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 14122 % U+2127 INVERTED OHM SIGN
 14123 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 14124 % U+212B ANGSTROM SIGN; angstrom
 14125 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 14126 % U+212E ESTIMATED SYMBOL; estimated
 14127 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 14128 % U+2135 ALEF SYMBOL; aleph
 14129 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14130 % U+2190 LEFTWARDS ARROW; arrowleft
 14131 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 14132 % U+2191 UPWARDS ARROW; arrowup
 14133 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 14134 % U+2192 RIGHTWARDS ARROW; arrowright
 14135 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 14136 % U+2193 DOWNWARDS ARROW; arrowdown
 14137 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14138 % U+2212 MINUS SIGN; minus
 14139 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 14140 % U+221A SQUARE ROOT; radical
 14141 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14142 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 14143 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 14144 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 14145 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14146 % U+2422 BLANK SYMBOL
 14147 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 14148 % U+2423 OPEN BOX; blank
 14149 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14150 % U+2460 CIRCLED DIGIT ONE; onecircle
 14151 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 14152 % U+2461 CIRCLED DIGIT TWO; twocircle
 14153 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 14154 % U+2462 CIRCLED DIGIT THREE; threecircle
 14155 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 14156 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 14157 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 14158 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 14159 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 14160 % U+2465 CIRCLED DIGIT SIX; sixcircle
 14161 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 14162 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
 14163 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 14164 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 14165 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467

14166 % U+2468 CIRCLED DIGIT NINE; ninecircle
14167 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
14168 % U+2469 CIRCLED NUMBER TEN; tencircle
14169 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
14170 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
14171 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
14172 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
14173 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
14174 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
14175 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
14176 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
14177 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
14178 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
14179 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
14180 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
14181 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
14182 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
14183 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
14184 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
14185 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
14186 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
14187 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
14188 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
14189 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
14190 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
14191 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
14192 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
14193 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
14194 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
14195 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
14196 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
14197 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
14198 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
14199 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
14200 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
14201 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
14202 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
14203 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
14204 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
14205 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
14206 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
14207 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
14208 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
14209 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
14210 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
14211 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
14212 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
14213 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
14214 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
14215 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
14216 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
14217 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
14218 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
14219 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
14220 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
14221 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
14222 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle

14223 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
14224 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
14225 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
14226 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
14227 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
14228 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
14229 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
14230 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
14231 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
14232 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
14233 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
14234 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
14235 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
14236 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
14237 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
14238 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
14239 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
14240 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
14241 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
14242 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
14243 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
14244 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
14245 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
14246 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
14247 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
14248 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
14249 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
14250 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
14251 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
14252 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
14253 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
14254 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
14255 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
14256 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
14257 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
14258 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
14259 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
14260 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
14261 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
14262 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
14263 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
14264 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
14265 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
14266 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
14267 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
14268 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
14269 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
14270 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
14271 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
14272 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
14273 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
14274 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
14275 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
14276 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
14277 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
14278 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
14279 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2

14280 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 14281 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 14282 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 14283 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 14284 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 14285 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 14286 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 14287 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 14288 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 14289 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14290 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 14291 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14292 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 14293 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14294 % U+24EA CIRCLED DIGIT ZERO
 14295 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14296 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14297 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14298 % U+25EF LARGE CIRCLE; largecircle
 14299 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

14300 % U+266A EIGHTH NOTE; musicalnote
 14301 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 14302 % U+26AD MARRIAGE SYMBOL
 14303 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 14304 % U+26AE DIVORCE SYMBOL
 14305 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

14306 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 14307 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 14308 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 14309 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

14310 % U+FB01 LATIN SMALL LIGATURE FI; fi
 14311 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 14312 % U+FB02 LATIN SMALL LIGATURE FL; fl
 14313 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

14314 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

14315 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 14316 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 14317 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 14318 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 14319 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 14320 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 14321 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 14322 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

```
14323 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
14324 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
14325 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
14326 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
14327 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
14328 \puenc)
```

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

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14329 \*puvnenc)

14330 \DeclareTextCommand{\abreve}{PU}{\81\003}
14331 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
14332 \DeclareTextCommand{\dj}{PU}{\81\021}
14333 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
14334 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
14335 \DeclareTextCommand{\ohorn}{PU}{\81\241}
14336 \DeclareTextCommand{\uhorn}{PU}{\81\260}
14337 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
14338 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
14339 \DeclareTextCommand{\DJ}{PU}{\81\020}
14340 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
14341 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
14342 \DeclareTextCommand{\OHORN}{PU}{\81\240}
14343 \DeclareTextCommand{\UHORN}{PU}{\81\257}

14344 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
14345 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
14346 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
14347 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
14348 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
14349 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
14350 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
14351 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
14352 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
14353 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
14354 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
14355 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
14356 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
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14360 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
14361 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
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14368 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
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14371 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
14372 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
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14373 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
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14380 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
14381 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
14382 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
14383 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
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14428 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
14429 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}

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14430 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
14431 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
14432 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
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14439 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
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14462 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
14463 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
14464 </puvnenc>

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50.4 PU encoding, additions for Arabi

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14465 <*puarenc>
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```

14466 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LETTER HAMZA
14467 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LETTER ALEF WITH MADDA A
14468 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LETTER ALEF WITH HAMZA A
14469 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LETTER WAW WITH HAMZA AE
14470 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LETTER ALEF WITH HA
14471 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
14472 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
14473 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
14474 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
14475 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
14476 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LETTER THEH
14477 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LETTER JEEM
14478 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
14479 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
14480 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
14481 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL

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14482 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
14483 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
14484 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
14485 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LETTER SHEEN
14486 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
14487 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
14488 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
14489 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
14490 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
14491 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LETTER GHAIN
14492 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
14493 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
14494 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
14495 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
14496 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
14497 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LETTER MEEM
14498 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
14499 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
14500 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
14501 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LETTER ALEF MAKSURA
14502 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH

14503 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
14504 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
14505 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
14506 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
14507 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
14508 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
14509 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
14510 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afii57458;ARABIC SUKUN

Farsi

14511 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afii57506;ARABIC LETTER PEH
14512 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afii57507;ARABIC LETTER TCHEH
14513 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
14514 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii????;FARSI LETTER KAF
14515 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
14516 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii????;FARSI LETTER YEH

14517 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
14518 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

14519 </puarenc>

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51 End of file hycheck.tex

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14520 <*check>
14521 \typeout{}
14522 \begin{document}
14523 \end{document}
14524 </check>

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