

The bookmark package

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Abstract

This package implements a new bookmark (outline) organization for package `hyperref`. Bookmark properties such as style and color can now be set. Other action types are available (URI, GoToR, Named). The bookmarks are generated in the first compile run. Package `hyperref` uses two runs.

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1 Documentation

1.1 Introduction

This package `bookmark` tries to provide a more modern management for bookmarks:

- The bookmarks are already generated in the first \TeX compile run.
- The font style and color of the bookmarks can be changed.
- More actions than simple `GoTo` actions are possible.

In the same way as `hyperref` the bookmarks are generated in the order of the bookmark generating macros (`\bookmark`). A level number is used to define the tree structure of the bookmarks. The restrictions are less strict:

- The level values may jump and omit values. A `\subsubsection` may follow a `\chapter`. This was an error in `hyperref`, that prints a warning and tries to fix this.
- Several bookmarks may point to the same destination. In `hyperref` this would mess up the bookmark tree completely, because the algorithm assumes that the destination names are keys (unique).

Note that this package is intended as experimentation platform for bookmark management. Feedback is welcome. Also the interfaces may change in future versions.

1.2 Options

Options can be given at three places:

1. `\usepackage[<options>]{bookmark}`
This is the only place for driver options.
2. `\bookmarksetup{<options>}`
This command is just for setting options.
3. `\pdfbookmark[<options>]{<title>}`
This command sets the bookmark. The option settings remain limited to this bookmark.

1.2.1 Driver options

Supported drivers are `pdftex`, `dvips`, `dvipsone`, `textures`, `dvipdfm` (`xetex`), and `vtex`. The \TeX engines `pdf \TeX` , `Xe \TeX` , and `V \TeX` are automatically detected. The default for the DVI drivers is `dvips`. This can be changed in the configuration file `bookmark.cfg` by `\BookmarkDefaultDriver`, e.g.:

```
\def\BookmarkDefaultDriver{dvipdfm}
```

1.2.2 Style options

Font options.

bold: The bookmark is shown with a bold font if the PDF viewer supports this (since PDF 1.4).

italic: An italic font is used (since PDF 1.4).

Both bold and italic can be used together. Using value **false** disables the font option.

These options are ignored with a warning if ε -TeX is not detected.

Color options. Colored bookmarks are a feature of PDF 1.4, they are not supported by all PDF viewers.

rgbcolor: This option expects an RGB triplet, three space separated values in the range 0 until 1. Example for blue: **rgbcolor=0 0 1**

color: Here the color can be given as color specification of packages **color**/**xcolor**. Package **xcolor** must be loaded first, before this option can be used.

Both options are exclusive. Used together the second option overwrites the previous color option settings. The use of color is disabled by using the empty value, e.g.: **color={}**

1.2.3 Action options

dest: Destination name.

page: Page number, first page is 1.

view: View specification, examples:

view={FitB}, **view={FitH 842}**, **view={XYZ 0 100 null}** Some view specifications expect numbers as parameters (unit bp). They can be given either as plain numbers or as length expressions inside **\calc**. Expressions of package **calc** are supported if the package is loaded. Otherwise ε -TeX's **\dimexpr** is used. Example:

view={FitH \calc{\paperheight-\topmargin-1in}}
view={XYZ 0 \calc{\paperheight} null}

named: Named action name:

FirstPage, **LastPage**, **NextPage**, **PrevPage**

gotor: Name of the external PDF file.

uri: URI specification.

rawaction: Raw action specification. Because these specification depends on the driver this option should not be used.

The appropriate action for the bookmark is selected by analyzing the specified options. The actions are distinguished by different sets of options:

Action	Options
GoTo:	dest
GoTo:	page + view
GoToR:	gotor + dest
GoToR:	gotor + page + view
Named:	named
URI:	uri

1.2.4 Level options

The order of the bookmark entries are defined by the appearance order of `\bookmark` commands. The tree structure is constructed by the property `level` of the bookmark nodes. The values of `level` are integers. If the level of a bookmark entry has a higher value than the previous node, then the entry becomes a child of the previous node. The absolute value of the difference does not matter.

Package `bookmark` remembers the level of the previous bookmark entry in a global property ‘current level’.

The behaviour of the level system can be configured by following options:

level: Sets the level, see the description above. If option `level` is given without value, then the default behaviour is restored, that the ‘current level’ is used as level value.

rellevel: Sets the level relative to the previous level. A positive value means that the bookmark entry become a child of the previous one.

keeplevel: Use the level, set by `level` or `rellevel`, but do not change the global property ‘current level’. The option can be disabled by setting to `false`.

startatroot: At this time the bookmark tree starts at the top level again. The next bookmark entry is not sorted as child to a previous entry. Example scenario: A document uses part. However there are last chapters that should not be put below the last part:

```
\documentclass{book}
[...]
\begin{document}
  \part{First part}
    \chapter{First chapter in first part}
    [...]
  \part{Second part}
    \chapter{First chapter in second part}
    [...]
  \bookmarksetup{startatroot}
  \chapter{Index}% does not belong to second part
\end{document}
```

1.3 Compatibility with hyperref

Package `bookmark` automatically disables `hyperref`’s bookmarks. However the package uses some of the code of `hyperref`. For example, the package redefines the hook `\Hy@writebookmark` that `hyperref` inserts in `\addcontentsline` and other commands. Therefore `hyperref`’s bookmarks should not be disabled.

Package `bookmark` uses `hyperref`’s `\pdfstringdef` and does not provide a replacement.

Some options of `hyperref` are also implemented in package `bookmark`:

<code>hyperref</code>	<code>bookmark</code>
<code>bookmarksdepth</code>	<code>depth</code>
<code>bookmarksopen</code>	<code>open</code>
<code>bookmarksopenlevel</code>	<code>openlevel</code>
<code>bookmarksnumbered</code>	<code>numbered</code>

The following commands are also available:

```
\pdfbookmark
\currentpdfbookmark
\subpdfbookmark
\belowpdfbookmark
```

1.4 Limitations/ToDoS

- Support for missing driver (vtexpdfmark).
- Support for missing actions (Launch, ...).
- Better design for hyperref's option `bookmarkstype`.
- Adding bookmarks at the end of the document is difficult for `dvipdfm`, because the `\special` must go into a page. The problem can be solved by two runs using `zref-abspage` for detecting the last page and package `everyshi` for adding the `\specials` at the end of the last page.

2 Example

```
1 <*example>
2 \documentclass{article}
3 \usepackage{xcolor}[2007/01/21]
4 \usepackage{hyperref}
5 \usepackage[
6   open,
7   openlevel=2
8 ]{bookmark}
9
10 \bookmarksetup{color=blue}
11
12 \begin{document}
13 \section{First section}
14 \subsection{Subsection A}
15 \begin{figure}
16   \hypertarget{fig}{}%
17   \bookmark[
18     rellevel=1,
19     keeplevel,
20     dest=fig
21   ]{A figure}
22   A figure.
23 \end{figure}
24 \subsection{Subsection B}
25 \subsubsection{Subsubsection C}
26 \subsection{Umlauts: "A"O"U"a"o"u\ss}
27 \newpage
28 \bookmarksetup{
29   bold,
30   rgbcolor=1 0 0
31 }
32 \section{Very important section}
33 \bookmarksetup{
34   italic,
35   bold=false,
36   color=blue
37 }
38 \subsection{Italic section}
39 \bookmarksetup{
40   italic=false
41 }
42 \part{Misc}
43 \section{Diverse}
44 \subsubsection{Subsubsection, omitting subsection}
45 \bookmarksetup{
46   startatroot
47 }
```

```

48 \section{Last section outside part}
49 \subsection{Subsection}
50 \bookmarksetup{
51   color={}
52 }
53 \begingroup
54   \bookmarksetup{level=0, color=green!80!black}
55   \bookmark[named=FirstPage]{First page}
56   \bookmark[named=LastPage]{Last page}
57   \bookmark[named=PrevPage]{Previous page}
58   \bookmark[named=NextPage]{Next page}
59 \endgroup
60 \bookmark[
61   page=2,
62   view=FitH 800
63 ]{Page 2, FitH 800}
64 \bookmark[
65   page=2,
66   view=FitBH \calc{\paperheight-\topmargin-1in-\headheight-\headsep}
67 ]{Page 2, FitBH top of text body}
68 \bookmark[
69   uri={http://www.dante.de/},
70   color=magenta
71 ]{Dante homepage}
72 \bookmark[
73   gotor={t.pdf},
74   page=1,
75   view={XYZ 0 1000 null},
76   color=cyan!75!black
77 ]{File t.pdf}
78 \bookmark[named=FirstPage]{First page}
79 \bookmark[rellevel=1, named=LastPage]{Last page (rellevel=1)}
80 \bookmark[named=PrevPage]{Previous page}
81 \bookmark[level=0, named=FirstPage]{First page (level=0)}
82 \bookmark[
83   rellevel=1,
84   keeplevel,
85   named=LastPage
86 ]{Last page (rellevel=1, keeplevel)}
87 \bookmark[named=PrevPage]{Previous page}
88 \end{document}
89 \end{example}

```

3 Implementation

3.1 Package

```

90 \*package
91 \NeedsTeXFormat{LaTeX2e}
92 \ProvidesPackage{bookmark}%
93   [2007/03/07 v0.7 PDF bookmarks (HO)]

```

3.1.1 Requirements

ϵ -TEX.

```

94 \newif\ifBKM@WithFlags
95 \begingroup\expandafter\expandafter\expandafter\endgroup
96 \expandafter\ifx\csname numexpr\endcsname\relax
97   \def\BKM@CalcExpr#1#2#3#4{%
98     \begingroup
99       \count@=#2\relax
100     \advance\count@ by#3#4\relax
101     \edef\x{\endgroup

```

```

102      \def\noexpand#1{\the\count@}%
103    }%
104    \x
105  }%
106  \BKM@WithFlagsfalse
107 \else
108  \def\BKM@CalcExpr#1#2#3#4{%
109    \edef#1{%
110      \the\numexpr#2#3#4\relax
111    }%
112  }%
113  \BKM@WithFlagstrue
114 \fi

```

Escape features of pdfTeX.

```

115 \RequirePackage{pdfescape}%
116 \def\BKM@EscapeName#1{%
117   \ifx#1\@empty
118   \else
119     \EdefEscapeName#1#1%
120   \fi
121 }%
122 \def\BKM@EscapeString#1{%
123   \ifx#1\@empty
124   \else
125     \EdefEscapeString#1#1%
126   \fi
127 }%
128 \def\BKM@EscapeHex#1{%
129   \ifx#1\@empty
130   \else
131     \EdefEscapeHex#1#1%
132   \fi
133 }%
134 \def\BKM@UnescapeHex#1{%
135   \EdefUnescapeHex#1#1%
136 }%

```

Packages.

```

137 \RequirePackage{ifpdf}
138 \RequirePackage{ifxetex}
139 \RequirePackage{ifvtex}
140 \RequirePackage{hyperref}
141 \RequirePackage{auxhook}
142 \RequirePackage{kvoptions}
143 \ifBKM@WithFlags
144   \RequirePackage{flags}%
145 \fi

```

3.1.2 Package options

```

146 \SetupKeyvalOptions{family=BKM,prefix=BKM@}
147 \newcommand*{\bookmarksetup}{\setkeys{BKM}}
148 \DeclareBoolOption[\ifHy@bookmarksopen true\else false\fi]{open}
149 \DeclareStringOption[\maxdimen]{openlevel}
150 \edef\BKM@openlevel{\number\@bookmarksopenlevel}
151 %\DeclareStringOption[\c@tocdepth]{depth}
152 \begingroup\expandafter\expandafter\expandafter\endgroup
153 \expandafter\ifx\csname Hy@bookmarksdepth\endcsname\relax
154   \def\BKM@depth{\c@tocdepth}%
155 \else

```

```

156 \let\BKM@depth\Hy@bookmarksdepth
157 \fi
158 \define@key{BKM}{depth}[]{}%
159 \edef\BKM@param{#1}%
160 \ifx\BKM@param\empty
161   \def\BKM@depth{\c@tocdepth}%
162 \else
163   \@ifundefined{toclevel@\BKM@param}{%
164     \@onelevel@sanitize\BKM@param
165     \edef\BKM@temp{\expandafter\@car\BKM@param\@nil}%
166     \ifcase 0\expandafter\ifx\BKM@temp-1\fi
167       \expandafter\ifnum\expandafter'\BKM@temp>47 %
168         \expandafter\ifnum\expandafter'\BKM@temp<58 %
169           1%
170         \fi
171       \fi
172       \relax
173       \PackageWarning{bookmark}{%
174         Unknown document division name (\BKM@param)%
175       }%
176     \else
177       \BKM@SetDepth\BKM@param
178     \fi
179   }{%
180     \BKM@SetDepth{\csname toclevel@\BKM@param\endcsname}%
181   }%
182 \fi
183 }
184 \def\BKM@SetDepth#1{%
185   \begingroup
186   \setbox\z@=\hbox{%
187     \count@=#1\relax
188     \expandafter
189   }%
190   \expandafter\endgroup
191   \expandafter\def\expandafter\BKM@depth\expandafter{\the\count@}%
192 }
193 \DeclareStringOption[\BKM@currentlevel]{level}[\BKM@currentlevel]
194 \DeclareBoolOption{keeplevel}
195 \DeclareBoolOption{startatroot}
196 \define@key{BKM}{rellevel}{}%
197 \BKM@CalcExpr\BKM@level{#1}+\BKM@currentlevel
198 }
199 \def\BKM@currentlevel{0}

```

Make bookmark's option numbered an alias for hyperref's bookmarksnumbered.

```

200 \DeclareBoolOption{}
201 \ifHy@bookmarksnumbered true\else false\fi
202 ]{numbered}
203 \g@addto@macro\BKM@numberedtrue{%
204   \let\ifHy@bookmarksnumbered\iftrue
205 }
206 \g@addto@macro\BKM@numberedfalse{%
207   \let\ifHy@bookmarksnumbered\iffalse
208 }
209 \g@addto@macro\Hy@bookmarksnumberedtrue{%
210   \let\ifBKM@numbered\iftrue
211 }
212 \g@addto@macro\Hy@bookmarksnumberedfalse{%
213   \let\ifBKM@numbered\iffalse
214 }

```

Redefinitions hyperref's options

```

215 \def\BKM@PatchHyperrefOption#1{%

```



```

216 \expandafter\BKM@@PatchHyperrefOption\csname KV@Hyp@#1\endcsname%
217 }
218 \def\BKM@@PatchHyperrefOption#1{%
219 \expandafter\BKM@@@PatchHyperrefOption#1{##1}\BKM@nil#1%
220 }
221 \def\BKM@@@PatchHyperrefOption#1\BKM@nil#2#3{%
222 \def#2##1{%
223 #1%
224 \bookmarksetup{#3={##1}}%
225 }%
226 }
227 \BKM@PatchHyperrefOption{bookmarksopen}{open}
228 \BKM@PatchHyperrefOption{bookmarksopenlevel}{openlevel}
229 \BKM@PatchHyperrefOption{bookmarksdepth}{depth}

```

Style options.

```

230 \ifBKM@WithFlags
231 \expandafter\@firstoftwo
232 \else
233 \expandafter\@secondoftwo
234 \fi
235 {%
236 \resetflags{BKM@style}%
237 \define@key{BKM}{italic}[true]{%
238 \expandafter\ifx\csname if#1\endcsname\iftrue
239 \setflag{BKM@style}{1}%
240 \else
241 \clearflag{BKM@style}{1}%
242 \fi
243 }%
244 \define@key{BKM}{bold}[true]{%
245 \expandafter\ifx\csname if#1\endcsname\iftrue
246 \setflag{BKM@style}{2}%
247 \else
248 \clearflag{BKM@style}{2}%
249 \fi
250 }%
251 \def\BKM@PrintStyle{%
252 \printflags{BKM@style}%
253 }%
254 }{%
255 \def\BKM@temp#1{%
256 \define@key{BKM}{#1}[true]{%
257 \PackageWarning{bookmark}{%
258 Option ‘#1’ is not available\MessageBreak
259 because of missing e-TeX%
260 }%
261 }%
262 }%
263 \BKM@temp{italic}%
264 \BKM@temp{bold}%
265 \def\BKM@PrintStyle{0}%
266 }

```

Options for color.

```

267 \define@key{BKM}{rgbcolor}{%
268 \def\BKM@color{#1}%
269 }
270 \define@key{BKM}{color}{%
271 \ifx\#1\%
272 \let\BKM@color\empty

```

```

273 \else
274   \ifundefined{XC@bordercolor}{%
275     \PackageWarning{bookmark}{%
276       Load package 'xcolor' (version >= 2.11) first.\MessageBreak
277       Ignoring color specification%
278     }%
279   }{%
280     \begingroup
281       \csname @safe@activetrue\endcsname
282       \XC@bordercolor{#1}%
283     \expandafter\endgroup
284     \expandafter\def\expandafter\BKM@color\expandafter{%
285       \@bordercolor
286     }%
287   }%
288 \fi
289 }
290 \let\BKM@color\@empty

```

3.1.3 Action options

```

291 \DeclareStringOption{dest}
292 \DeclareStringOption{named}
293 \DeclareStringOption{uri}
294 \DeclareStringOption{gotor}
295 \DeclareStringOption{rawaction}

296 \define@key{BKM}{page}{%
297   \def\BKM@page{#1}%
298   \ifx\BKM@page\@empty
299     \else
300       \edef\BKM@page{\number\BKM@page}%
301       \ifnum\BKM@page>\z@
302         \else
303           \PackageError{bookmark}{Page must be positive}\@ehc
304         \def\BKM@page{1}%
305       \fi
306     \fi
307 }
308 \let\BKM@page\@empty

309 \define@key{BKM}{view}{%
310   \BKM@CheckView{#1}%
311 }
312 \let\BKM@view\@empty
313 \def\BKM@CheckView#1{%
314   \BKM@CheckViewType#1 \@nil
315 }
316 \def\BKM@CheckViewType#1 #2\@nil{%
317   \def\BKM@type{#1}%
318   \@onelevel@sanitize\BKM@type
319   \BKM@TestViewType{Fit}{}%
320   \BKM@TestViewType{FitB}{}%
321   \BKM@TestViewType{FitH}{%
322     \BKM@CheckParam#2 \@nil{top}%
323   }%
324   \BKM@TestViewType{FitBH}{%
325     \BKM@CheckParam#2 \@nil{top}%
326   }%
327   \BKM@TestViewType{FitV}{%
328     \BKM@CheckParam#2 \@nil{bottom}%
329   }%
330   \BKM@TestViewType{FitBV}{%
331     \BKM@CheckParam#2 \@nil{bottom}%

```

```

332 }%
333 \BKM@TestViewType{FitR}{%
334   \BKM@CheckRect{#2}{ }%
335 }%
336 \BKM@TestViewType{XYZ}{%
337   \BKM@CheckXYZ{#2}{ }%
338 }%
339 \@car{%
340   \PackageError{pdfbookmark}{%
341     Unknown view type '\BKM@type',\MessageBreak
342     using 'FitH' instead%
343   }\@ehc
344   \def\BKM@view{FitH}%
345 }%
346 \@nil
347 }
348 \def\BKM@TestViewType#1{%
349   \def\BKM@temp{#1}%
350   \@onelevel@sanitize\BKM@temp
351   \ifx\BKM@type\BKM@temp
352     \let\BKM@view\BKM@temp
353     \expandafter\@car
354   \else
355     \expandafter\@gobble
356   \fi
357 }
358 \def\BKM@CheckParam#1 #2\@nil#3{%
359   \def\BKM@param{#1}%
360   \ifx\BKM@param\@empty
361     \PackageWarning{bookmark}{%
362       Missing parameter (#3) for '\BKM@type',\MessageBreak
363       using 0%
364     }%
365     \def\BKM@param{0}%
366   \else
367     \BKM@CalcParam
368   \fi
369   \edef\BKM@view{\BKM@view\space\BKM@param}%
370 }
371 \def\BKM@CheckRect#1#2{%
372   \BKM@@CheckRect#1#2#2#2\@nil
373 }
374 \def\BKM@@CheckRect#1 #2 #3 #4 #5\@nil{%
375   \def\BKM@temp{0}%
376   \def\BKM@param{#1}%
377   \ifx\BKM@param\@empty
378     \def\BKM@param{0}%
379     \def\BKM@temp{1}%
380   \else
381     \BKM@CalcParam
382   \fi
383   \edef\BKM@view{\BKM@view\space\BKM@param}%
384   \def\BKM@param{#2}%
385   \ifx\BKM@param\@empty
386     \def\BKM@param{0}%
387     \def\BKM@temp{1}%
388   \else
389     \BKM@CalcParam
390   \fi
391   \edef\BKM@view{\BKM@view\space\BKM@param}%
392   \def\BKM@param{#3}%
393   \ifx\BKM@param\@empty

```

```

394 \def\BKM@param{0}%
395 \def\BKM@temp{1}%
396 \else
397 \BKM@CalcParam
398 \fi
399 \edef\BKM@view{\BKM@view\space\BKM@param}%
400 \def\BKM@param{#4}%
401 \ifx\BKM@param\@empty
402 \def\BKM@param{0}%
403 \def\BKM@temp{1}%
404 \else
405 \BKM@CalcParam
406 \fi
407 \edef\BKM@view{\BKM@view\space\BKM@param}%
408 \ifnum\BKM@temp>\z@
409 \PackageWarning{bookmark}{Missing parameters for '\BKM@type'}%
410 \fi
411 }
412 \def\BKM@CheckXYZ#1#2{%
413 \BKM@@CheckXYZ#1#2#2\@nil
414 }
415 \def\BKM@@CheckXYZ#1 #2 #3 #4\@nil{%
416 \def\BKM@param{#1}%
417 \let\BKM@temp\BKM@param
418 \@onelevel@sanitize\BKM@temp
419 \ifx\BKM@param\@empty
420 \let\BKM@param\BKM@null
421 \else
422 \ifx\BKM@temp\BKM@null
423 \else
424 \BKM@CalcParam
425 \fi
426 \fi
427 \edef\BKM@view{\BKM@view\space\BKM@param}%
428 \def\BKM@param{#2}%
429 \let\BKM@temp\BKM@param
430 \@onelevel@sanitize\BKM@temp
431 \ifx\BKM@param\@empty
432 \let\BKM@param\BKM@null
433 \ifx\BKM@temp\BKM@null
434 \else
435 \BKM@CalcParam
436 \fi
437 \fi
438 \edef\BKM@view{\BKM@view\space\BKM@param}%
439 \def\BKM@param{#3}%
440 \ifx\BKM@param\@empty
441 \let\BKM@param\BKM@null
442 \fi
443 \edef\BKM@view{\BKM@view\space\BKM@param}%
444 }
445 \def\BKM@null{null}
446 \@onelevel@sanitize\BKM@null
447 \def\BKM@CalcParam{%
448 \begingroup
449 \let\calc\@firstofone
450 \expandafter\BKM@@CalcParam\BKM@param\@empty\@empty\@nil
451 }
452 \def\BKM@@CalcParam#1#2#3\@nil{%
453 \ifx\calc#1%
454 \@ifundefined{calc@assign@dimen}{%
455 \setlength{\dimen@}{\dimexpr#2\relax}%

```

```

456 }{%
457   \setlength{\dimen@}{#2}%
458 }%
459 \dimen@.99626\dimen@
460 \edef\BKM@param{\strip@pt\dimen@}%
461 \expandafter\endgroup
462 \expandafter\def\expandafter\BKM@param\expandafter{\BKM@param}%
463 \else
464   \endgroup
465 \fi
466 }

```

3.1.4 Driver setup and loading

Driver detection.

```

467 \def\BKM@DefineDriverKey#1{%
468   \define@key{BKM}{#1}[]{%
469     \def\BKM@driver{#1}%
470   }%
471   \g@addto@macro\BKM@DisableDriverOptions{%
472     \DisableKeyvalOption{BKM}{#1}%
473   }%
474 }
475 \let\BKM@DisableDriverOptions\@empty
476 \BKM@DefineDriverKey{pdftex}
477 \BKM@DefineDriverKey{dvips}
478 \BKM@DefineDriverKey{dvipsone}
479 \BKM@DefineDriverKey{textures}
480 \BKM@DefineDriverKey{dvipdfm}
481 \BKM@DefineDriverKey{xetex}
482 \BKM@DefineDriverKey{vtex}
483 \InputIfFileExists{bookmark.cfg}{-}{}
484 \providecommand*\BookmarkDriverDefault{dvips}
485 \ifpdf
486   \def\BKM@driver{pdftex}%
487 \else
488   \ifxetex
489     \def\BKM@driver{dvipdfm}%
490   \else
491     \ifvtex
492       \def\BKM@driver{vtex}%
493     \else
494       \let\BKM@driver\BookmarkDriverDefault
495     \fi
496   \fi
497 \fi

```

Process options.

```

498 \ProcessKeyvalOptions*
499 \BKM@DisableDriverOptions

```

Driver validation and loading.

```

500 \def\BKM@temp{pdftex}%
501 \ifpdf
502   \ifx\BKM@temp\BKM@driver
503   \else
504     \PackageWarningNoLine{bookmark}{%
505       Wrong driver ‘\BKM@driver’, using ‘pdftex’ instead%
506     }%
507     \let\BKM@driver\BKM@temp
508   \fi
509 \else

```

```

510 \ifx\BKM@temp\BKM@driver
511   \PackageError{bookmark}{%
512     Wrong driver, pdfTeX is not running in PDF mode.\MessageBreak
513     Package loading is aborted%
514   }\@ehc
515   \expandafter\expandafter\expandafter\endinput
516 \fi
517 \def\BKM@temp{dvipdfm}%
518 \ifxetex
519   \ifx\BKM@temp\BKM@driver
520   \else
521     \PackageWarningNoLine{bookmark}{%
522       Wrong driver ‘\BKM@driver’,\MessageBreak
523       using ‘dvipdfm’ for XeTeX instead%
524     }%
525     \let\BKM@driver\BKM@temp
526   \fi
527 \else
528   \def\BKM@temp{vtex}%
529   \ifvtex
530     \ifx\BKM@temp\BKM@driver
531     \else
532       \PackageWarningNoLine{bookmark}{%
533         Wrong driver ‘\BKM@driver’,\MessageBreak
534         using ‘vtex’ for VTeX instead%
535       }%
536       \let\BKM@driver\BKM@temp
537     \fi
538   \else
539     \ifx\BKM@temp\BKM@driver
540     \PackageError{bookmark}{%
541       Wrong driver, VTeX is not running in PDF mode.\MessageBreak
542       Package loading is aborted%
543     }\@ehc
544     \expandafter\expandafter\expandafter\endinput
545   \fi
546 \fi
547 \fi
548 \fi
549 \InputIfFileExists{bkm-\BKM@driver.def}{-}{%
550   \PackageError{bookmark}{%
551     Unsupported driver ‘\BKM@driver’.\MessageBreak
552     Package loading is aborted%
553   }\@ehc
554 \endinput
555 }

```

3.1.5 Compatibility for hyperref

```

556 \renewcommand*{\pdfbookmark}[3][0]{%
557   \bookmark[level=#1,dest={#3.#1}]{#2}%
558   \hyper@anchorstart{#3.#1}\hyper@anchorend
559 }
560 \renewcommand*{\currentpdfbookmark}{%
561   \pdfbookmark[\BKM@currentlevel]%
562 }
563 \renewcommand*{\subpdfbookmark}{%
564   \BKM@CalcExpr\BKM@CalcResult\BKM@currentlevel+1%
565   \expandafter\pdfbookmark\expandafter[\BKM@CalcResult]%
566 }
567 \renewcommand*{\belowpdfbookmark}[2]{%
568   \xdef\BKM@temp{\number\BKM@currentlevel}%
569   \subpdfbookmark{#1}{#2}%

```

```

570 \global\let\BKM@currentlevel\BKM@gtmp
571 }

    section number, text, label, level, file
572 \renewcommand*{\Hy@writebookmark}[5]{%
573   \ifnum#4>\BKM@depth\relax
574   \else
575     \def\BKM@type{#5}%
576     \ifx\BKM@type\Hy@bookmarkstype
577       \begingroup
578         \ifBKM@numbered
579           \let\numberline\Hy@numberline
580           \let\partnumberline\Hy@numberline
581           \let\chapternumberline\Hy@numberline
582         \else
583           \let\numberline\@gobble
584           \let\partnumberline\@gobble
585           \let\chapternumberline\@gobble
586         \fi
587         \bookmark[level=#4,dest={#3}]{#2}%
588       \endgroup
589     \fi
590   \fi
591 }

592 \let\ReadBookmarks\relax
593 </package>

```

3.2 Driver for dvipdfm

```

594 <*dvipdfm>
595 \NeedsTeXFormat{LaTeX2e}
596 \ProvidesFile{bkm-dvipdfm.def}%
597 [2007/03/07 v0.7 bookmark driver for dvipdfm (HO)]

598 \newcount\BKM@id
599 \BKM@id=\z@

600 \def\BKM@O{000}

601 \newif\ifBKM@sw

602 \newcommand*{\bookmark}[2][{}]{%
603   \if@filesw
604     \begingroup
605       \bookmarksetup{#1}%
606       \ifBKM@keeplevel
607       \else
608         \xdef\BKM@currentlevel{\BKM@level}%
609       \fi
610       \edef\BKM@prev{\the\BKM@id}%
611       \global\advance\BKM@id\@ne
612       \BKM@swtrue
613       \@whiles\ifBKM@sw\fi{%
614         \def\BKM@abslevel{1}%
615         \ifnum\ifBKM@startatroot\z@\else\BKM@prev\fi=\z@
616           \global\BKM@startatrootfalse
617           \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
618             0{\BKM@level}\BKM@abslevel
619           }%
620           \BKM@swfalse
621         \else
622           \expandafter\expandafter\expandafter\BKM@getx
623             \csname BKM@\BKM@prev\endcsname
624           \ifnum\BKM@level>\BKM@x@level\relax
625             \BKM@CalcExpr\BKM@abslevel\BKM@x@abslevel+1%
626             \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%

```

```

627         {\BKM@prev}{\BKM@level}\BKM@abslevel
628     }%
629     \BKM@swfalse
630 \else
631     \let\BKM@prev\BKM@x@parent
632 \fi
633 \fi
634 }%
635 \pdfstringdef\BKM@title{#2}%
636 \edef\BKM@FLAGS{\BKM@PrintStyle}%
637 \let\BKM@action\@empty
638 \ifx\BKM@goto\@empty
639     \ifx\BKM@dest\@empty
640         \ifx\BKM@named\@empty
641             \ifx\BKM@rawaction\@empty
642                 \ifx\BKM@uri\@empty
643                     \ifx\BKM@page\@empty
644                         \PackageError{bookmark}{Missing action}\@ehc
645                         \edef\BKM@action{/Dest[@page1/Fit]}%
646                     \else
647                         \ifx\BKM@view\@empty
648                             \def\BKM@view{Fit}%
649                         \fi
650                         \edef\BKM@action{/Dest[@page\BKM@page/\BKM@view]}%
651                     \fi
652                 \else
653                     \BKM@EscapeString\BKM@uri
654                     \edef\BKM@action{%
655                         /A<<%
656                         /S/URI%
657                         /URI(\BKM@uri)%
658                         >>%
659                     }%
660                 \fi
661             \else
662                 \edef\BKM@action{/A<<\BKM@rawaction>>%
663             \fi
664         \else
665             \BKM@EscapeName\BKM@named
666             \edef\BKM@action{%
667                 /A<</S/Named/N/\BKM@named>>%
668             }%
669         \fi
670     \else
671         \BKM@EscapeString\BKM@dest
672         \edef\BKM@action{%
673             /A<<%
674             /S/GoTo%
675             /D(\BKM@dest)%
676             >>%
677         }%
678     \fi
679 \else
680     \ifx\BKM@dest\@empty
681         \ifx\BKM@page\@empty
682             \def\BKM@page{0}%
683         \else
684             \BKM@CalcExpr\BKM@page\BKM@page-1%
685         \fi
686         \ifx\BKM@view\@empty
687             \def\BKM@view{Fit}%
688         \fi

```



```

689         \edef\BKM@action{/D[\BKM@page/\BKM@view]}%
690     \else
691         \BKM@EscapeString\BKM@dest
692         \edef\BKM@action{/D(\BKM@dest)}%
693     \fi
694     \BKM@EscapeString\BKM@goto
695     \edef\BKM@action{%
696         /A<<%
697         /S/GoToR%
698         /F(\BKM@goto)%
699         \BKM@action
700     >>%
701 }%
702 \fi
703 \special{pdf:%
704     out \BKM@abslevel
705 <<%
706     /Title(\BKM@title)%
707     \ifx\BKM@color\@empty
708     \else
709     /C[\BKM@color]%
710     \fi
711     \ifnum\BKM@FLAGS>\z@
712     /F \BKM@FLAGS
713     \fi
714     \BKM@action
715 >>%
716 }%
717 \endgroup
718 \fi
719 }

720 \def\BKM@getx#1#2#3{%
721     \def\BKM@x@parent{#1}%
722     \def\BKM@x@level{#2}%
723     \def\BKM@x@abslevel{#3}%
724 }

725 </dvipdfm>

```

3.3 Driver for VTeX

```

726 <*vtex>
727 \NeedsTeXFormat{LaTeX2e}
728 \ProvidesFile{bkm-vtex.def}%
729     [2007/03/07 v0.7 bookmark driver for VTeX (H0)]

730 \ifvtexpdf
731 \else
732     \PackageWarningNoLine{bookmark}{%
733         The VTeX driver only supports PDF mode%
734     }%
735 \fi

736 \newcount\BKM@id
737 \BKM@id=\z@

738 \def\BKM@O{00}

739 \newif\ifBKM@sw

740 \newcommand*{\bookmark}[2][ ]{%
741     \if@filesw
742         \begingroup
743         \bookmarksetup{#1}%
744         \ifBKM@keeplevel
745         \else

```

```

746     \xdef\BKM@currentlevel{\BKM@level}%
747 \fi
748 \edef\BKM@prev{\the\BKM@id}%
749 \global\advance\BKM@id\@ne
750 \BKM@swtrue
751 \@whilesw\ifBKM@sw\fi{%
752     \ifnum\ifBKM@startatroot\z@\else\BKM@prev\fi=\z@
753     \global\BKM@startatrootfalse
754     \def\BKM@parent{0}%
755     \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
756         0{\BKM@level}%
757     }%
758     \BKM@swfalse
759 \else
760     \expandafter\expandafter\expandafter\BKM@getx
761     \csname BKM@\BKM@prev\endcsname
762     \ifnum\BKM@level>\BKM@x@level\relax
763     \let\BKM@parent\BKM@prev
764     \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
765         {\BKM@prev}{\BKM@level}%
766     }%
767     \BKM@swfalse
768 \else
769     \let\BKM@prev\BKM@x@parent
770 \fi
771 \fi
772 }%
773 \pdfstringdef\BKM@title{#2}%
774 \BKM@vtx@title
775 \edef\BKM@FLAGS{\BKM@PrintStyle}%
776 \let\BKM@action\@empty
777 \ifx\BKM@goto\@empty
778     \ifx\BKM@dest\@empty
779         \ifx\BKM@named\@empty
780             \ifx\BKM@rawaction\@empty
781                 \ifx\BKM@uri\@empty
782                     \ifx\BKM@page\@empty
783                         \PackageError{bookmark}{Missing action}\@ehc
784                         \def\BKM@action{!1}%
785                     \else
786                         \edef\BKM@action{!\BKM@page}%
787                     \fi
788                 \else
789                     \BKM@EscapeString\BKM@uri
790                     \edef\BKM@action{%
791                         <u=%
792                         /S/URI%
793                         /URI(\BKM@uri)%
794                         >%
795                     }%
796                 \fi
797             \else
798                 \edef\BKM@action{<u=\BKM@rawaction>}%
799             \fi
800         \else
801             \BKM@EscapeName\BKM@named
802             \edef\BKM@action{%
803                 <u=%
804                 /S/Named%
805                 /N/\BKM@named
806                 >%
807             }%

```

```

808         \fi
809     \else
810         \BKM@EscapeString\BKM@dest
811         \edef\BKM@action{\BKM@dest}%
812     \fi
813 \else
814     \ifx\BKM@dest\@empty
815         \ifx\BKM@page\@empty
816             \def\BKM@page{1}%
817         \fi
818         \ifx\BKM@view\@empty
819             \def\BKM@view{Fit}%
820         \fi
821         \edef\BKM@action{/D[\BKM@page/\BKM@view]}%
822     \else
823         \BKM@EscapeString\BKM@dest
824         \edef\BKM@action{/D(\BKM@dest)}%
825     \fi
826     \BKM@EscapeString\BKM@gotor
827     \edef\BKM@action{%
828         <u=%
829         /S/GoToR%
830         /F(\BKM@gotor)%
831         \BKM@action
832         >>%
833     }%
834 \fi
835 \ifx\BKM@color\@empty
836     \let\BKM@RGBcolor\@empty
837 \else
838     \expandafter\BKM@toRGB\BKM@color\@nil
839 \fi
840 \special{%
841     !outline \BKM@action;%
842     p=\BKM@parent,%
843     i=\number\BKM@id,%
844     s=%
845     \ifBKM@open
846         \ifnum\BKM@level<\BKM@openlevel
847             o%
848         \else
849             c%
850         \fi
851     \else
852         c%
853     \fi,%
854     \ifx\BKM@RGBcolor\@empty
855     \else
856         c=\BKM@RGBcolor,%
857     \fi
858     \ifnum\BKM@FLAGS>\z@
859         f=\BKM@FLAGS,%
860     \fi
861     t=\BKM@title
862 }%
863 \endgroup
864 \fi
865 }

866 \def\BKM@getx#1#2{%
867     \def\BKM@x@parent{#1}%
868     \def\BKM@x@level{#2}%
869 }

```

```

870 \def\BKM@toRGB#1 #2 #3\@nil{%
871   \let\BKM@RGBcolor\@empty
872   \BKM@toRGBComponent{#1}%
873   \BKM@toRGBComponent{#2}%
874   \BKM@toRGBComponent{#3}%
875 }
876 \def\BKM@toRGBComponent#1{%
877   \dimen@=#1pt\relax
878   \ifdim\dimen@>\z@
879     \ifdim\dimen@<\p@
880       \dimen@=255\dimen@
881       \advance\dimen@ by 32768sp\relax
882       \divide\dimen@ by 65536\relax
883       \dimen@ii=\dimen@
884       \divide\dimen@ii by 16\relax
885       \edef\BKM@RGBcolor{%
886         \BKM@RGBcolor
887         \BKM@toHexDigit\dimen@ii
888       }%
889       \dimen@ii=16\dimen@ii
890       \advance\dimen@-\dimen@ii
891       \edef\BKM@RGBcolor{%
892         \BKM@RGBcolor
893         \BKM@toHexDigit\dimen@
894       }%
895     \else
896       \edef\BKM@RGBcolor{\BKM@RGBcolor FF}%
897     \fi
898   \else
899     \edef\BKM@RGBcolor{\BKM@RGBcolor00}%
900   \fi
901 }
902 \def\BKM@toHexDigit#1{%
903   \expandafter\ifcase\expandafter\@firstofone\expandafter{\number#1} %
904     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7\or
905     8\or 9\or A\or B\or C\or D\or E\or F%
906   \fi
907 }
908 \begingroup
909   \catcode'\|=0 %
910   \catcode'\|=12 %
911   \gdef\BKM@vtex@title{%
912     \@onelevel@sanitize\BKM@title
913     \edef\BKM@title{\expandafter\BKM@vtex@leftparen\BKM@title\(|@nil}%
914     \edef\BKM@title{\expandafter\BKM@vtex@rightparen\BKM@title\)|@nil}%
915     \edef\BKM@title{\expandafter\BKM@vtex@zero\BKM@title\0|@nil}%
916     \edef\BKM@title{\expandafter\BKM@vtex@one\BKM@title\1|@nil}%
917     \edef\BKM@title{\expandafter\BKM@vtex@two\BKM@title\2|@nil}%
918     \edef\BKM@title{\expandafter\BKM@vtex@three\BKM@title\3|@nil}%
919   }%
920   \gdef\BKM@vtex@leftparen#1\(#2|@nil{%
921     #1%
922     \ifx|#2| %
923     \else
924       (%
925       \@ReturnAfterFi{%
926         \BKM@vtex@leftparen#2|@nil
927       }%
928     \fi
929   }%
930   \gdef\BKM@vtex@rightparen#1\)#2|@nil{%
931     #1%

```

```

932     |ifx||#2||%
933     |else
934     )%
935     |@ReturnAfterFi{%
936     |BKM@vtex@rightparen#2|@nil
937     }%
938     |fi
939 }%
940 |gdef|BKM@vtex@zero#1\0#2|@nil{%
941     #1%
942     |ifx||#2||%
943     |else
944     |noexpand|hv@pdf@char0%
945     |@ReturnAfterFi{%
946     |BKM@vtex@zero#2|@nil
947     }%
948     |fi
949 }%
950 |gdef|BKM@vtex@one#1\1#2|@nil{%
951     #1%
952     |ifx||#2||%
953     |else
954     |noexpand|hv@pdf@char1%
955     |@ReturnAfterFi{%
956     |BKM@vtex@one#2|@nil
957     }%
958     |fi
959 }%
960 |gdef|BKM@vtex@two#1\2#2|@nil{%
961     #1%
962     |ifx||#2||%
963     |else
964     |noexpand|hv@pdf@char2%
965     |@ReturnAfterFi{%
966     |BKM@vtex@two#2|@nil
967     }%
968     |fi
969 }%
970 |gdef|BKM@vtex@three#1\3#2|@nil{%
971     #1%
972     |ifx||#2||%
973     |else
974     |noexpand|hv@pdf@char3%
975     |@ReturnAfterFi{%
976     |BKM@vtex@three#2|@nil
977     }%
978     |fi
979 }%
980 |endgroup
981 \long\def\@ReturnafterFi#1\fi{\fi#1}
982 </vtex>

```

3.4 Driver for pdfTeX

```

983 <*pdftex>
984 \NeedsTeXFormat{LaTeX2e}
985 \ProvidesFile{bkm-pdftex.def}%
986 [2007/03/07 v0.7 bookmark driver for pdftex (H0)]
987 \def\BKM@DO@entry#1#2{%
988     \begingroup
989     \setkeys{BKM@DO}{#1}%
990     \def\BKM@DO@title{#2}%
991     \BKM@UnescapeHex\BKM@DO@title

```

```

992 \expandafter\expandafter\expandafter\BKM@getx
993 \csname BKM@\BKM@D0@id\endcsname\@empty\@empty
994 \let\BKM@attr\@empty
995 \ifx\BKM@D0@flags\@empty
996 \else
997 \edef\BKM@attr{\BKM@attr/F \BKM@D0@flags}%
998 \fi
999 \ifx\BKM@D0@color\@empty
1000 \else
1001 \edef\BKM@attr{\BKM@attr/C[\BKM@D0@color]}%
1002 \fi
1003 \ifx\BKM@attr\@empty
1004 \else
1005 \edef\BKM@attr{attr{\BKM@attr}}%
1006 \fi
1007 \let\BKM@action\@empty
1008 \ifx\BKM@D0@goto\@empty
1009 \ifx\BKM@D0@dest\@empty
1010 \ifx\BKM@D0@named\@empty
1011 \ifx\BKM@D0@rawaction\@empty
1012 \ifx\BKM@D0@uri\@empty
1013 \ifx\BKM@D0@page\@empty
1014 \PackageError{bookmark}{Missing action}\@ehc
1015 \edef\BKM@action{goto page1{/Fit}}%
1016 \else
1017 \ifx\BKM@D0@view\@empty
1018 \def\BKM@D0@view{Fit}%
1019 \fi
1020 \edef\BKM@action{goto page\BKM@D0@page{/ \BKM@D0@view}}%
1021 \fi
1022 \else
1023 \BKM@UnescapeHex\BKM@D0@uri
1024 \BKM@EscapeString\BKM@D0@uri
1025 \edef\BKM@action{user{<</S/URI/URI(\BKM@D0@uri)>>}}%
1026 \fi
1027 \else
1028 \BKM@UnescapeHex\BKM@D0@rawaction
1029 \edef\BKM@action{%
1030 user{%
1031 <<%
1032 \BKM@D0@rawaction
1033 >>%
1034 }%
1035 }%
1036 \fi
1037 \else
1038 \BKM@EscapeName\BKM@D0@named
1039 \edef\BKM@action{%
1040 user{<</S/Named/N/\BKM@D0@named>>}}%
1041 }%
1042 \fi
1043 \else
1044 \BKM@UnescapeHex\BKM@D0@dest
1045 \BKM@EscapeString\BKM@D0@dest
1046 \edef\BKM@action{goto name{\BKM@D0@dest}}%
1047 \fi
1048 \else
1049 \ifx\BKM@D0@dest\@empty
1050 \ifx\BKM@D0@page\@empty
1051 \def\BKM@D0@page{0}%
1052 \else
1053 \BKM@CalcExpr\BKM@D0@page\BKM@D0@page-1%

```

```

1054     \fi
1055     \ifx\BKM@D0@view\@empty
1056     \def\BKM@D0@view{Fit}%
1057     \fi
1058     \edef\BKM@action{/D[\BKM@D0@page/\BKM@D0@view]}%
1059     \else
1060     \BKM@UnescapeHex\BKM@D0@dest
1061     \BKM@EscapeString\BKM@D0@dest
1062     \edef\BKM@action{/D(\BKM@D0@dest)}%
1063     \fi
1064     \BKM@UnescapeHex\BKM@D0@gotor
1065     \BKM@EscapeString\BKM@D0@gotor
1066     \edef\BKM@action{%
1067     user{%
1068     <<%
1069     /S/GoToR%
1070     /F(\BKM@D0@gotor)%
1071     \BKM@action
1072     >>%
1073     }%
1074     }%
1075     \fi
1076     \pdfoutline\BKM@attr\BKM@action
1077     count\ifBKM@D0@open\else-\fi\BKM@x@childs
1078     {\BKM@D0@title}%
1079     \endgroup
1080 }
1081 </pdfTeX>

```

3.5 Drivers with pdfmark specials

3.5.1 Driver dvips

```

1082 <*dvips>
1083 \NeedsTeXFormat{LaTeX2e}
1084 \ProvidesFile{bkm-dvips.def}%
1085 [2007/03/07 v0.7 bookmark driver for dvips (H0)]
1086 \def\BKM@PSHeaderFile#1{%
1087 \special{header=#1}%
1088 }
1089 </dvips>

```

3.5.2 Driver dvipsone

```

1090 <*dvipsone>
1091 \NeedsTeXFormat{LaTeX2e}
1092 \ProvidesFile{bkm-dvipsone.def}%
1093 [2007/03/07 v0.7 bookmark driver for dvipsone (H0)]
1094 \def\BKM@PSHeaderFile#1{%
1095 \special{header=#1}%
1096 }
1097 </dvipsone>

```

3.5.3 Driver textures

```

1098 <*textures>
1099 \NeedsTeXFormat{LaTeX2e}
1100 \ProvidesFile{bkm-textures.def}%
1101 [2007/03/07 v0.7 bookmark driver for textures (H0)]
1102 \def\BKM@PSHeaderFile#1{%
1103 \special{prePostScriptfile #1}%
1104 }
1105 </textures>

```

3.5.4 Common part

```
1106 <*pdfmark>
1107 \def\BKM@filename{\jobname.out.ps}
1108 \BKM@PSHeaderFile\BKM@filename
1109 \AtEndDocument{\BKM@pdfmark@out}
1110 \def\BKM@pdfmark@out{%
1111   \newwrite\BKM@file
1112   \immediate\openout\BKM@file=\BKM@filename\relax
1113   \BKM@write{\@percentchar!}%
1114   \BKM@write{/pdfmark where{pop}}%
1115   \BKM@write{%
1116     {%
1117       /globaldict where{pop globaldict}{userdict}ifelse%
1118       /pdfmark/cleartomark load put%
1119     }%
1120   }%
1121   \BKM@write{ifelse}
1122 }
1123 \def\BKM@write#{%
1124   \immediate\write\BKM@file
1125 }
```

The specification for pdfmark says that `/Color` is the name of the key for color, however ghostscript only passes the key into the PDF file, thus the key name must be `/C`.

```
1126 \def\BKM@DO@entry#1#2{%
1127   \begingroup
1128     \setkeys{BKM@DO}{#1}%
1129     \def\BKM@DO@title{#2}%
1130     \BKM@UnescapeHex\BKM@DO@title
1131     \expandafter\expandafter\expandafter\BKM@getx
1132     \csname BKM@\BKM@DO@id\endcsname\@empty\@empty
1133     \let\BKM@attr\@empty
1134     \ifx\BKM@DO@flags\@empty
1135       \else
1136         \edef\BKM@attr{\BKM@attr/F \BKM@DO@flags}%
1137       \fi
1138     \ifx\BKM@DO@color\@empty
1139       \else
1140         \edef\BKM@attr{\BKM@attr/C[\BKM@DO@color]}%
1141       \fi
1142     \let\BKM@action\@empty
1143     \ifx\BKM@DO@goto\@empty
1144       \ifx\BKM@DO@dest\@empty
1145         \ifx\BKM@DO@named\@empty
1146           \ifx\BKM@DO@rawaction\@empty
1147             \ifx\BKM@DO@uri\@empty
1148               \ifx\BKM@DO@page\@empty
1149                 \PackageError{bookmark}{Missing action}\@ehc
1150                 \edef\BKM@action{%
1151                   /Action/GoTo%
1152                   /Page 1%
1153                   /View[/Fit]%
1154                 }%
1155               \else
1156                 \ifx\BKM@DO@view\@empty
1157                   \def\BKM@DO@view{Fit}%
1158                 \fi
1159                 \edef\BKM@action{%
1160                   /Action/GoTo%
1161                   /Page \BKM@DO@page
1162                   /View[/\BKM@DO@view]%

```



```

1163        }%
1164     \fi
1165 \else
1166     \BKM@UnescapeHex\BKM@DO@uri
1167     \BKM@EscapeString\BKM@DO@uri
1168     \edef\BKM@action{%
1169         /Action<<%
1170         /Subtype/URI%
1171         /URI(\BKM@DO@uri)%
1172     >>%
1173     }%
1174 \fi
1175 \else
1176     \BKM@UnescapeHex\BKM@DO@rawaction
1177     \edef\BKM@action{%
1178         /Action<<%
1179         \BKM@DO@rawaction
1180     >>%
1181     }%
1182 \fi
1183 \else
1184     \BKM@EscapeName\BKM@DO@named
1185     \edef\BKM@action{%
1186         /Action<<%
1187         /Subtype/Named%
1188         /N/\BKM@DO@named
1189     >>%
1190     }%
1191 \fi
1192 \else
1193     \BKM@UnescapeHex\BKM@DO@dest
1194     \BKM@EscapeString\BKM@DO@dest
1195     \edef\BKM@action{%
1196         /Action/GoTo%
1197         /Dest(\BKM@DO@dest) cvn%
1198     }%
1199 \fi
1200 \else
1201     \ifx\BKM@DO@dest\@empty
1202     \ifx\BKM@DO@page\@empty
1203     \def\BKM@DO@page{1}%
1204     \fi
1205     \ifx\BKM@DO@view\@empty
1206     \def\BKM@DO@view{Fit}%
1207     \fi
1208     \edef\BKM@action{%
1209         /Page \BKM@DO@page
1210         /View[/\BKM@DO@view]%
1211     }%
1212 \else
1213     \BKM@UnescapeHex\BKM@DO@dest
1214     \BKM@EscapeString\BKM@DO@dest
1215     \edef\BKM@action{%
1216         /Dest(\BKM@DO@dest) cvn%
1217     }%
1218 \fi
1219 \BKM@UnescapeHex\BKM@DO@gotor
1220 \BKM@EscapeString\BKM@DO@gotor
1221 \edef\BKM@action{%
1222     /Action/GoToR%
1223     /F(\BKM@DO@gotor)%
1224     \BKM@action

```

```

1225     }%
1226   \fi
1227   \BKM@write{[]}%
1228   \BKM@write{/Title(\BKM@DO@title))}%
1229   \ifnum\BKM@x@chilids>\z@
1230     \BKM@write{/Count \ifBKM@DO@open\else-\fi\BKM@x@chilids}%
1231   \fi
1232   \ifx\BKM@attr\@empty
1233   \else
1234     \BKM@write{\BKM@attr}%
1235   \fi
1236   \BKM@write{\BKM@action}%
1237   \BKM@write{/OUT pdfmark}%
1238 \endgroup
1239 }
1240 </pdfmark>

```

3.6 Common part for pdftex and pdfmark

1241 <*pdftex | pdfmark>

3.6.1 Write auxiliary file

```

1242 \RequirePackage{auxhook}
1243 \AddLineBeginMainAux{%
1244   \string\providecommand\string\BKM@entry[2]{}%
1245 }
1246 \newcount\BKM@id
1247 \BKM@id=\z@
1248 \def\BKM@O{000}
1249 \newif\ifBKM@sw
1250 \newcommand*{\bookmark}[2][1]{%
1251   \if@filesw
1252     \begingroup
1253     \bookmarksetup{#1}%
1254     \ifBKM@keeplevel
1255     \else
1256       \xdef\BKM@currentlevel{\BKM@level}%
1257     \fi
1258     \edef\BKM@prev{\the\BKM@id}%
1259     \global\advance\BKM@id\@ne
1260     \BKM@swtrue
1261     \@whiles\ifBKM@sw\fi{%
1262       \ifnum\ifBKM@startatroot\z@\else\BKM@prev\fi=\z@
1263       \global\BKM@startatrootfalse
1264       \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
1265         0{\BKM@level}0%
1266       }%
1267       \BKM@swfalse
1268     \else
1269       \expandafter\expandafter\expandafter\BKM@getx
1270       \csname BKM@\BKM@prev\endcsname
1271       \ifnum\BKM@level>\BKM@x@level\relax
1272       \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
1273         {\BKM@prev}{\BKM@level}0%
1274       }%
1275       \ifnum\BKM@prev>\z@
1276       \BKM@CalcExpr\BKM@CalcResult\BKM@x@chilids+1%
1277       \expandafter\xdef\csname BKM@\BKM@prev\endcsname{%
1278         {\BKM@x@parent}{\BKM@x@level}{\BKM@CalcResult}%
1279       }%
1280     \fi

```

```

1281         \BKM@swfalse
1282     \else
1283         \let\BKM@prev\BKM@x@parent
1284     \fi
1285 \fi
1286 }%
1287 \pdfstringdef\BKM@title{#2}%
1288 \edef\BKM@FLAGS{\BKM@PrintStyle}%
1289 \BKM@EscapeHex\BKM@dest
1290 \BKM@EscapeHex\BKM@uri
1291 \BKM@EscapeHex\BKM@goto
1292 \BKM@EscapeHex\BKM@rawaction
1293 \BKM@EscapeHex\BKM@title
1294 \immediate\write\@mainaux{%
1295     \string\BKM@entry{%
1296         id=\number\BKM@id
1297         \ifBKM@open
1298             \ifnum\BKM@level<\BKM@openlevel
1299                 ,open%
1300             \fi
1301         \fi
1302         \BKM@auxentry{dest}%
1303         \BKM@auxentry{named}%
1304         \BKM@auxentry{uri}%
1305         \BKM@auxentry{goto}%
1306         \BKM@auxentry{page}%
1307         \BKM@auxentry{view}%
1308         \BKM@auxentry{rawaction}%
1309         \BKM@auxentry{color}%
1310         \ifnum\BKM@FLAGS>\z@
1311             ,flags=\BKM@FLAGS
1312         \fi
1313     }\BKM@title}%
1314 }%
1315 \endgroup
1316 \fi
1317 }

1318 \def\BKM@getx#1#2#3{%
1319     \def\BKM@x@parent{#1}%
1320     \def\BKM@x@level{#2}%
1321     \def\BKM@x@childs{#3}%
1322 }

1323 \def\BKM@auxentry#1{%
1324     \expandafter\ifx\csname BKM@#1\endcsname\empty
1325     \else
1326         ,#1={\csname BKM@#1\endcsname}%
1327     \fi
1328 }

```

3.6.2 Read auxiliary data

```

1329 \SetupKeyvalOptions{family=BKM@DO,prefix=BKM@DO@}
1330 \DeclareStringOption[0]{id}
1331 \DeclareBoolOption{open}
1332 \DeclareStringOption{flags}
1333 \DeclareStringOption{color}
1334 \DeclareStringOption{dest}
1335 \DeclareStringOption{named}
1336 \DeclareStringOption{uri}
1337 \DeclareStringOption{goto}
1338 \DeclareStringOption{page}
1339 \DeclareStringOption{view}
1340 \DeclareStringOption{rawaction}

```

```

1341 \AtBeginDocument{%
1342   \let\BKM@entry\BKM@DO@entry
1343 }
1344 </pdfTeX | pdfmark>

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/oberdiek/bookmark.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/bookmark.pdf](#) Documentation.

Bundle. All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

[CTAN:macros/latex/contrib/oberdiek/oberdiek-tds.zip](#)

4.2 Bundle installation

Unpacking. Unpack the oberdiek-tds.zip in the TDS tree (also known as texmf tree) of your choice. Example (linux):

```
unzip oberdiek-tds.zip -d ~/texmf
```

Script installation. Check the directory TDS:scripts/oberdiek/ for scripts that need further installation steps. Package attachfile2 comes with the Perl script pdfatfi.pl that should be installed in such a way that it can be called as pdfatfi. Example (linux):

```

chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/

```

4.3 Package installation

Unpacking. The .dtx file is a self-extracting docstrip archive. The files are extracted by running the .dtx through plain-TeX:

```
tex bookmark.dtx
```

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as texmf tree):

bookmark.sty	→	tex/latex/oberdiek/bookmark.sty
bkm-dvipdfm.def	→	tex/latex/oberdiek/bkm-dvipdfm.def
bkm-dvips.def	→	tex/latex/oberdiek/bkm-dvips.def
bkm-dvipsone.def	→	tex/latex/oberdiek/bkm-dvipsone.def
bkm-textures.def	→	tex/latex/oberdiek/bkm-textures.def
bkm-pdftex.def	→	tex/latex/oberdiek/bkm-pdftex.def
bkm-vtex.def	→	tex/latex/oberdiek/bkm-vtex.def
bookmark.pdf	→	doc/latex/oberdiek/bookmark.pdf
bookmark-example.tex	→	doc/latex/oberdiek/bookmark-example.tex
bookmark.dtx	→	source/latex/oberdiek/bookmark.dtx

If you have a docstrip.cfg that configures and enables docstrip’s TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

¹<http://ftp.ctan.org/tex-archive/>

4.4 Refresh file name databases

If your \TeX distribution ($\text{te}\text{\TeX}$, $\text{mik}\text{\TeX}$, ...) relies on file name databases, you must refresh these. For example, $\text{te}\text{\TeX}$ users run `texhash` or `mktextlsr`.

4.5 Some details for the interested

Attached source. The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk bookmark.pdf unpack_files output .
```

Unpacking with \LaTeX . The `.dtx` chooses its action depending on the format:

plain- \TeX : Run `docstrip` and extract the files.

\LaTeX : Generate the documentation.

If you insist on using \LaTeX for `docstrip` (really, `docstrip` does not need \LaTeX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{bookmark.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with `pdf \LaTeX` :

```
pdflatex bookmark.dtx
makeindex -s gind.ist bookmark.idx
pdflatex bookmark.dtx
makeindex -s gind.ist bookmark.idx
pdflatex bookmark.dtx
```

5 History

[2007/02/19 v0.1]

- First experimental version.

[2007/02/20 v0.2]

- Option `startatroot` added.
- Dummies for `\pdf(un)escape...` commands added to get the package basically work for non- $\text{pdf}\text{\TeX}$ users.

[2007/02/21 v0.3]

- Dependency from $\text{pdf}\text{\TeX}$ 1.30 removed by using package `pdfescape`.

[2007/02/22 v0.4]

- `hyperref`'s `bookmarkstype` respected.

[2007/03/02 v0.5]

- Driver options vtex (PDF mode), dvipsone, and textures added.
- Implementation of option depth completed. Division names are supported, see hyperref's option bookmarksdepth.
- hyperref's options bookmarksopen, bookmarksopenlevel, and bookmarksdepth respected.

[2007/03/03 v0.6]

- Option numbered as alias for hyperref's bookmarksnumbered.

[2007/03/07 v0.7]

- Dependency from ϵ -TeX removed.

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