

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 (URL, 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.

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 \</example>

```

3 Implementation

3.1 Package

```

90 \<package>
91 \NeedsTeXFormat{LaTeX2e}
92 \ProvidesPackage{bookmark}%
93   [2007/03/03 v0.6 PDF bookmarks (HO)]

```

3.1.1 Requirements

```

94 \RequirePackage{pdfescape}%
95 \def\BKM@EscapeName#1{%
96   \ifx#1\@empty
97   \else
98     \EdefEscapeName#1#1%
99   \fi
100 }%
101 \def\BKM@EscapeString#1{%
102   \ifx#1\@empty

```

```

103 \else
104   \EdefEscapeString#1#1%
105 \fi
106 }%
107 \def\BKM@EscapeHex#1{%
108   \ifx#1\@empty
109   \else
110     \EdefEscapeHex#1#1%
111   \fi
112 }%
113 \def\BKM@UnescapeHex#1{%
114   \EdefUnescapeHex#1#1%
115 }%

```

Packages.

```

116 \RequirePackage{ifpdf}
117 \RequirePackage{ifxetex}
118 \RequirePackage{ifvtex}
119 \RequirePackage{hyperref}
120 \RequirePackage{auxhook}
121 \RequirePackage{flags}
122 \RequirePackage{kvoptions}

```

3.1.2 Package options

```

123 \SetupKeyvalOptions{family=BKM,prefix=BKM@}
124 \newcommand*{\bookmarksetup}{\setkeys{BKM}}
125 \DeclareBoolOption[\ifHy@bookmarksopen true\else false\fi]{open}
126 \DeclareStringOption[\maxdimen]{openlevel}
127 \edef\BKM@openlevel{\number\@bookmarksopenlevel}
128 %\DeclareStringOption[\c@tocdepth]{depth}
129 \begingroup\expandafter\expandafter\expandafter\endgroup
130 \expandafter\ifx\curname Hy@bookmarksdepth\endcsname\relax
131   \def\BKM@depth{\c@tocdepth}%
132 \else
133   \let\BKM@depth\Hy@bookmarksdepth
134 \fi
135 \define@key{BKM}{depth}[][%
136   \edef\BKM@param{#1}%
137   \ifx\BKM@param\@empty
138     \def\BKM@depth{\c@tocdepth}%
139   \else
140     \ifundefined{toclevel@\BKM@param}{%
141       \onelevel@sanitize\BKM@param
142       \edef\BKM@temp{\expandafter\@car\BKM@param\@nil}%
143       \ifcase 0\expandafter\ifx\BKM@temp-1\fi
144         \expandafter\ifnum\expandafter'\BKM@temp>47 %
145           \expandafter\ifnum\expandafter'\BKM@temp<58 %
146             1%
147           \fi
148         \fi
149         \relax
150       \PackageWarning{bookmark}{%
151         Unknown document division name (\BKM@param)%
152       }%
153     \else
154       \BKM@SetDepth\BKM@param
155     \fi
156   }{%
157     \BKM@SetDepth{\curname toclevel@\BKM@param\endcsname}%
158   }%
159 \fi
160 }

```

```

161 \def\BKM@SetDepth#1{%
162   \begingroup
163     \setbox\z@=\hbox{%
164       \count@=#1\relax
165     \expandafter
166   }%
167 \expandafter\endgroup
168 \expandafter\def\expandafter\BKM@depth\expandafter{\the\count@}%
169 }
170 \DeclareStringOption[\BKM@currentlevel]{level}[\BKM@currentlevel]
171 \DeclareBoolOption{keeplevel}
172 \DeclareBoolOption{startatroot}
173 \define@key{BKM}{rellevel}{%
174   \edef\BKM@level{\number\numexpr#1+\BKM@currentlevel\relax}%
175 }
176 \def\BKM@currentlevel{0}

```

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

```

177 \DeclareBoolOption[%
178   \ifHy@bookmarksnumbered true\else false\fi
179 ]{numbered}
180 \g@addto@macro\BKM@numberedtrue{%
181   \let\ifHy@bookmarksnumbered\iftrue
182 }
183 \g@addto@macro\BKM@numberedfalse{%
184   \let\ifHy@bookmarksnumbered\iffalse
185 }
186 \g@addto@macro\Hy@bookmarksnumberedtrue{%
187   \let\ifBKM@numbered\iftrue
188 }
189 \g@addto@macro\Hy@bookmarksnumberedfalse{%
190   \let\ifBKM@numbered\iffalse
191 }

```

Redefinitions hyperref's options

```

192 \def\BKM@PatchHyperrefOption#1{%
193   \expandafter\BKM@@PatchHyperrefOption\csname KV@Hyp@#1\endcsname%
194 }
195 \def\BKM@@PatchHyperrefOption#1{%
196   \expandafter\BKM@@@PatchHyperrefOption#1{##1}\BKM@nil#1%
197 }
198 \def\BKM@@@PatchHyperrefOption#1\BKM@nil#2#3{%
199   \def#2##1{%
200     #1%
201     \bookmarksetup{#3={##1}}%
202   }%
203 }
204 \BKM@PatchHyperrefOption{bookmarksopen}{open}
205 \BKM@PatchHyperrefOption{bookmarksopenlevel}{openlevel}
206 \BKM@PatchHyperrefOption{bookmarksdepth}{depth}

```

Style options.

```

207 \resetflags{BKM@style}
208 \define@key{BKM}{italic}[true]{%
209   \expandafter\ifx\csname if#1\endcsname\iftrue
210     \setflag{BKM@style}{1}%
211   \else
212     \clearflag{BKM@style}{1}%
213   \fi
214 }
215 \define@key{BKM}{bold}[true]{%
216   \expandafter\ifx\csname if#1\endcsname\iftrue
217     \setflag{BKM@style}{2}%

```



```

218 \else
219 \clearflag{BKM@style}{2}%
220 \fi
221 }

```

Options for color.

```

222 \define@key{BKM}{rgbcolor}{%
223 \def\BKM@color{#1}%
224 }
225 \define@key{BKM}{color}{%
226 \ifx\#1\%
227 \let\BKM@color\@empty
228 \else
229 \ifundefined{XC@bordercolor}{%
230 \PackageWarning{bookmark}{%
231 Load package 'xcolor' (version >= 2.11) first.\MessageBreak
232 Ignoring color specification%
233 }%
234 }{%
235 \begingroup
236 \csname @safe@activetrue\endcsname
237 \XC@bordercolor{#1}%
238 \expandafter\endgroup
239 \expandafter\def\expandafter\BKM@color\expandafter{%
240 \@bordercolor
241 }%
242 }%
243 \fi
244 }
245 \let\BKM@color\@empty

```

3.1.3 Action options

```

246 \DeclareStringOption{dest}
247 \DeclareStringOption{named}
248 \DeclareStringOption{uri}
249 \DeclareStringOption{gotor}
250 \DeclareStringOption{rawaction}

251 \define@key{BKM}{page}{%
252 \def\BKM@page{#1}%
253 \ifx\BKM@page\@empty
254 \else
255 \edef\BKM@page{\number\BKM@page}%
256 \ifnum\BKM@page>\z@
257 \else
258 \PackageError{bookmark}{Page must be positive}\@ehc
259 \def\BKM@page{1}%
260 \fi
261 \fi
262 }
263 \let\BKM@page\@empty

264 \define@key{BKM}{view}{%
265 \BKM@CheckView{#1}%
266 }
267 \let\BKM@view\@empty
268 \def\BKM@CheckView#1{%
269 \BKM@CheckViewType#1 \@nil
270 }
271 \def\BKM@CheckViewType#1 #2\@nil{%
272 \def\BKM@type{#1}%
273 \@onelevel@sanitize\BKM@type

```

```

274 \BKM@TestViewType{Fit}{}%
275 \BKM@TestViewType{FitB}{}%
276 \BKM@TestViewType{FitH}{%
277   \BKM@CheckParam#2 \@nil{top}%
278 }%
279 \BKM@TestViewType{FitBH}{%
280   \BKM@CheckParam#2 \@nil{top}%
281 }%
282 \BKM@TestViewType{FitV}{%
283   \BKM@CheckParam#2 \@nil{bottom}%
284 }%
285 \BKM@TestViewType{FitBV}{%
286   \BKM@CheckParam#2 \@nil{bottom}%
287 }%
288 \BKM@TestViewType{FitR}{%
289   \BKM@CheckRect{#2}{ }%
290 }%
291 \BKM@TestViewType{XYZ}{%
292   \BKM@CheckXYZ{#2}{ }%
293 }%
294 \@car{%
295   \PackageError{pdfbookmark}{%
296     Unknown view type ‘\BKM@type’,\MessageBreak
297     using ‘FitH’ instead%
298   }\@ehc
299   \def\BKM@view{FitH}%
300 }%
301 \@nil
302 }
303 \def\BKM@TestViewType#1{%
304   \def\BKM@temp{#1}%
305   \@onelevel@sanitize\BKM@temp
306   \ifx\BKM@type\BKM@temp
307     \let\BKM@view\BKM@temp
308     \expandafter\@car
309   \else
310     \expandafter\@gobble
311   \fi
312 }
313 \def\BKM@CheckParam#1 #2\@nil#3{%
314   \def\BKM@param{#1}%
315   \ifx\BKM@param\@empty
316     \PackageWarning{bookmark}{%
317       Missing parameter (#3) for ‘\BKM@type’,\MessageBreak
318       using 0%
319     }%
320     \def\BKM@param{0}%
321   \else
322     \BKM@CalcParam
323   \fi
324   \edef\BKM@view{\BKM@view\space\BKM@param}%
325 }
326 \def\BKM@CheckRect#1#2{%
327   \BKM@@CheckRect#1#2#2#2\@nil
328 }
329 \def\BKM@@CheckRect#1 #2 #3 #4 #5\@nil{%
330   \def\BKM@temp{0}%
331   \def\BKM@param{#1}%
332   \ifx\BKM@param\@empty
333     \def\BKM@param{0}%
334     \def\BKM@temp{1}%
335   \else

```

```

336     \BKM@CalcParam
337 \fi
338 \edef\BKM@view{\BKM@view\space\BKM@param}%
339 \def\BKM@param{#2}%
340 \ifx\BKM@param\@empty
341     \def\BKM@param{0}%
342     \def\BKM@temp{1}%
343 \else
344     \BKM@CalcParam
345 \fi
346 \edef\BKM@view{\BKM@view\space\BKM@param}%
347 \def\BKM@param{#3}%
348 \ifx\BKM@param\@empty
349     \def\BKM@param{0}%
350     \def\BKM@temp{1}%
351 \else
352     \BKM@CalcParam
353 \fi
354 \edef\BKM@view{\BKM@view\space\BKM@param}%
355 \def\BKM@param{#4}%
356 \ifx\BKM@param\@empty
357     \def\BKM@param{0}%
358     \def\BKM@temp{1}%
359 \else
360     \BKM@CalcParam
361 \fi
362 \edef\BKM@view{\BKM@view\space\BKM@param}%
363 \ifnum\BKM@temp>\z@
364     \PackageWarning{bookmark}{Missing parameters for ‘\BKM@type’}%
365 \fi
366 }
367 \def\BKM@CheckXYZ#1#2{%
368     \BKM@@CheckXYZ#1#2#2\@nil
369 }
370 \def\BKM@@CheckXYZ#1 #2 #3 #4\@nil{%
371     \def\BKM@param{#1}%
372     \let\BKM@temp\BKM@param
373     \@onelevel@sanitize\BKM@temp
374     \ifx\BKM@param\@empty
375         \let\BKM@param\BKM@null
376     \else
377         \ifx\BKM@temp\BKM@null
378             \else
379                 \BKM@CalcParam
380             \fi
381         \fi
382     \edef\BKM@view{\BKM@view\space\BKM@param}%
383     \def\BKM@param{#2}%
384     \let\BKM@temp\BKM@param
385     \@onelevel@sanitize\BKM@temp
386     \ifx\BKM@param\@empty
387         \let\BKM@param\BKM@null
388     \ifx\BKM@temp\BKM@null
389         \else
390             \BKM@CalcParam
391         \fi
392     \fi
393     \edef\BKM@view{\BKM@view\space\BKM@param}%
394     \def\BKM@param{#3}%
395     \ifx\BKM@param\@empty
396         \let\BKM@param\BKM@null
397     \fi

```

```

398 \edef\BKM@view{\BKM@view\space\BKM@param}%
399 }
400 \def\BKM@null{null}
401 \@onelevel@sanitize\BKM@null
402 \def\BKM@CalcParam{%
403 \begingroup
404 \let\calc\@firstofone
405 \expandafter\BKM@@CalcParam\BKM@param\@empty\@empty\@nil
406 }
407 \def\BKM@@CalcParam#1#2#3\@nil{%
408 \ifx\calc#1%
409 \ifundefined{calc@assign@dimen}{%
410 \setlength{\dimen@}{\dimexpr#2\relax}%
411 }{%
412 \setlength{\dimen@}{#2}%
413 }%
414 \dimen@.99626\dimen@
415 \edef\BKM@param{\strip@pt\dimen@}%
416 \expandafter\endgroup
417 \expandafter\def\expandafter\BKM@param\expandafter{\BKM@param}%
418 \else
419 \endgroup
420 \fi
421 }

```

3.1.4 Driver setup and loading

Driver detection.

```

422 \def\BKM@DefineDriverKey#1{%
423 \define@key{BKM}{#1}[]{%
424 \def\BKM@driver{#1}%
425 }%
426 \g@addto@macro\BKM@DisableDriverOptions{%
427 \DisableKeyvalOption{BKM}{#1}%
428 }%
429 }
430 \let\BKM@DisableDriverOptions\@empty
431 \BKM@DefineDriverKey{pdftex}
432 \BKM@DefineDriverKey{dvips}
433 \BKM@DefineDriverKey{dvipsone}
434 \BKM@DefineDriverKey{textures}
435 \BKM@DefineDriverKey{dvipdfm}
436 \BKM@DefineDriverKey{xetex}
437 \BKM@DefineDriverKey{vtex}
438 \InputIfFileExists{bookmark.cfg}{\{}}{\{}}
439 \providecommand*\BookmarkDriverDefault{\dvips}
440 \ifpdf
441 \def\BKM@driver{pdftex}%
442 \else
443 \ifxetex
444 \def\BKM@driver{dvipdfm}%
445 \else
446 \ifvtex
447 \def\BKM@driver{vtex}%
448 \else
449 \let\BKM@driver\BookmarkDriverDefault
450 \fi
451 \fi
452 \fi

```

Process options.

```

453 \ProcessKeyvalOptions*

```

454 \BKM@DisableDriverOptions

Driver validation and loading.

```
455 \def\BKM@temp{pdftex}%
456 \ifpdf
457   \ifx\BKM@temp\BKM@driver
458   \else
459     \PackageWarningNoLine{bookmark}{%
460       Wrong driver '\BKM@driver', using 'pdftex' instead%
461     }%
462     \let\BKM@driver\BKM@temp
463   \fi
464 \else
465   \ifx\BKM@temp\BKM@driver
466   \PackageError{bookmark}{%
467     Wrong driver, pdfTeX is not running in PDF mode.\MessageBreak
468     Package loading is aborted%
469   }\@ehc
470   \expandafter\expandafter\expandafter\endinput
471 \fi
472 \def\BKM@temp{dvipdfm}%
473 \ifxetex
474   \ifx\BKM@temp\BKM@driver
475   \else
476     \PackageWarningNoLine{bookmark}{%
477       Wrong driver '\BKM@driver',\MessageBreak
478       using 'dvipdfm' for XeTeX instead%
479     }%
480     \let\BKM@driver\BKM@temp
481   \fi
482 \else
483   \def\BKM@temp{vtex}%
484   \ifvtex
485     \ifx\BKM@temp\BKM@driver
486     \else
487       \PackageWarningNoLine{bookmark}{%
488         Wrong driver '\BKM@driver',\MessageBreak
489         using 'vtex' for VTeX instead%
490       }%
491       \let\BKM@driver\BKM@temp
492     \fi
493   \else
494     \ifx\BKM@temp\BKM@driver
495     \PackageError{bookmark}{%
496       Wrong driver, VTeX is not running in PDF mode.\MessageBreak
497       Package loading is aborted%
498     }\@ehc
499     \expandafter\expandafter\expandafter\endinput
500   \fi
501 \fi
502 \fi
503 \fi
504 \InputIfFileExists{bkm-\BKM@driver.def}{-}{%
505   \PackageError{bookmark}{%
506     Unsupported driver '\BKM@driver'.\MessageBreak
507     Package loading is aborted%
508   }\@ehc
509   \endinput
510 }
```

3.1.5 Compatibility for hyperref

```

511 \renewcommand*{\pdfbookmark}[3][0]{%
512   \bookmark[level=#1,dest={#3.#1}]{#2}%
513   \hyper@anchorstart{#3.#1}\hyper@anchorend
514 }
515 \renewcommand*{\currentpdfbookmark}{%
516   \pdfbookmark[\BKM@currentlevel]%
517 }
518 \renewcommand*{\subpdfbookmark}{%
519   \expandafter\pdfbookmark\expandafter[%
520     \the\numexpr\BKM@currentlevel+1\relax
521   ]%
522 }
523 \renewcommand*{\belowpdfbookmark}[2]{%
524   \xdef\BKM@gtemp{\number\BKM@currentlevel}%
525   \subpdfbookmark{#1}{#2}%
526   \global\let\BKM@currentlevel\BKM@gtemp
527 }

    section number, text, label, level, file
528 \renewcommand*{\Hy@writebookmark}[5]{%
529   \ifnum#4>\BKM@depth\relax
530   \else
531     \def\BKM@type{#5}%
532     \ifx\BKM@type\Hy@bookmarkstype
533       \begingroup
534         \ifBKM@numbered
535           \let\numberline\Hy@numberline
536           \let\partnumberline\Hy@numberline
537           \let\chapternumberline\Hy@numberline
538         \else
539           \let\numberline\@gobble
540           \let\partnumberline\@gobble
541           \let\chapternumberline\@gobble
542         \fi
543         \bookmark[level=#4,dest={#3}]{#2}%
544       \endgroup
545     \fi
546   \fi
547 }
548 \let\ReadBookmarks\relax
549 \endpackage

```

3.2 Driver for dvipdfm

```

550 \documentclass{*dvipdfm}
551 \NeedsTeXFormat{LaTeX2e}
552 \ProvidesFile{bkm-dvipdfm.def}%
553   [2007/03/03 v0.6 bookmark driver for dvipdfm (H0)]

554 \newcount\BKM@id
555 \BKM@id=\z@

556 \def\BKM@O{000}

557 \newif\ifBKM@sw

558 \newcommand*{\bookmark}[2][]{%
559   \if@filesw
560     \begingroup
561       \bookmarksetup{#1}%
562       \ifBKM@keeplevel
563       \else
564         \xdef\BKM@currentlevel{\BKM@level}%
565       \fi
566       \edef\BKM@prev{\the\BKM@id}%
567       \global\advance\BKM@id\@ne

```

```

568 \BKM@swtrue
569 \@whilesw\ifBKM@sw\fi{%
570 \def\BKM@abslevel{1}%
571 \ifnum\ifBKM@startatroot\z@\else\BKM@prev\fi=\z@
572 \global\BKM@startatrootfalse
573 \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
574 0{\BKM@level}\BKM@abslevel
575 }%
576 \BKM@swfalse
577 \else
578 \expandafter\expandafter\expandafter\BKM@getx
579 \csname BKM@\BKM@prev\endcsname
580 \ifnum\BKM@level>\BKM@x@level\relax
581 \edef\BKM@abslevel{\the\numexpr\BKM@x@abslevel+1\relax}%
582 \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
583 {\BKM@prev}{\BKM@level}\BKM@abslevel
584 }%
585 \BKM@swfalse
586 \else
587 \let\BKM@prev\BKM@x@parent
588 \fi
589 \fi
590 }%
591 \pdfstringdef\BKM@title{#2}%
592 \edef\BKM@FLAGS{\printflags{BKM@style}}%
593 \let\BKM@action\@empty
594 \ifx\BKM@goto\@empty
595 \ifx\BKM@dest\@empty
596 \ifx\BKM@named\@empty
597 \ifx\BKM@rawaction\@empty
598 \ifx\BKM@uri\@empty
599 \ifx\BKM@page\@empty
600 \PackageError{bookmark}{Missing action}\@ehc
601 \edef\BKM@action{/Dest[@page1/Fit]}%
602 \else
603 \ifx\BKM@view\@empty
604 \def\BKM@view{Fit}%
605 \fi
606 \edef\BKM@action{/Dest[@page\BKM@page/\BKM@view]}%
607 \fi
608 \else
609 \BKM@EscapeString\BKM@uri
610 \edef\BKM@action{%
611 /A<<%
612 /S/URI%
613 /URI(\BKM@uri)%
614 >>%
615 }%
616 \fi
617 \else
618 \edef\BKM@action{/A<<\BKM@rawaction>>}%
619 \fi
620 \else
621 \BKM@EscapeName\BKM@named
622 \edef\BKM@action{%
623 /A<</S/Named/N/\BKM@named>>%
624 }%
625 \fi
626 \else
627 \BKM@EscapeString\BKM@dest
628 \edef\BKM@action{%
629 /A<<%

```

```

630          /S/GoTo%
631          /D(\BKM@dest)%
632      >>%
633  }%
634  \fi
635  \else
636      \ifx\BKM@dest\@empty
637          \ifx\BKM@page\@empty
638              \def\BKM@page{0}%
639          \else
640              \edef\BKM@page{\the\numexpr\BKM@page-1\relax}%
641          \fi
642          \ifx\BKM@view\@empty
643              \def\BKM@view{Fit}%
644          \fi
645          \edef\BKM@action{/D[\BKM@page/\BKM@view]}%
646      \else
647          \BKM@EscapeString\BKM@dest
648          \edef\BKM@action{/D(\BKM@dest)}%
649      \fi
650      \BKM@EscapeString\BKM@gotor
651      \edef\BKM@action{%
652          /A<<%
653          /S/GoToR%
654          /F(\BKM@gotor)%
655          \BKM@action
656      >>%
657  }%
658  \fi
659  \special{pdf:%
660      out \BKM@abslevel
661      <<%
662          /Title(\BKM@title)%
663          \ifx\BKM@color\@empty
664          \else
665              /C[\BKM@color]%
666          \fi
667          \ifnum\BKM@FLAGS>\z@
668              /F \BKM@FLAGS
669          \fi
670          \BKM@action
671      >>%
672  }%
673  \endgroup
674  \fi
675 }

676 \def\BKM@getx#1#2#3{%
677     \def\BKM@x@parent{#1}%
678     \def\BKM@x@level{#2}%
679     \def\BKM@x@abslevel{#3}%
680 }

681 </dvipdfm>

```

3.3 Driver for VTeX

```

682 <*vtex>
683 \NeedsTeXFormat{LaTeX2e}
684 \ProvidesFile{bkm-vtex.def}%
685     [2007/03/03 v0.6 bookmark driver for VTeX (HO)]

686 \ifvtexpdf
687 \else
688     \PackageWarningNoLine{bookmark}{%

```



```

689     The VTeX driver only supports PDF mode%
690 }%
691 \fi

692 \newcount\BKM@id
693 \BKM@id=\z@

694 \def\BKM@O{00}

695 \newif\ifBKM@sw

696 \newcommand*{\bookmark}[2][{}]{%
697   \if@filesw
698     \begingroup
699     \bookmarksetup{#1}%
700     \ifBKM@keeplevel
701     \else
702       \xdef\BKM@currentlevel{\BKM@level}%
703     \fi
704     \edef\BKM@prev{\the\BKM@id}%
705     \global\advance\BKM@id\@ne
706     \BKM@swtrue
707     \@whiles\ifBKM@sw\fi{%
708       \ifnum\ifBKM@startatroot\z@\else\BKM@prev\fi=\z@
709       \global\BKM@startatrootfalse
710       \def\BKM@parent{0}%
711       \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
712         0{\BKM@level}%
713       }%
714       \BKM@swfalse
715     \else
716       \expandafter\expandafter\expandafter\BKM@getx
717       \csname BKM@\BKM@prev\endcsname
718       \ifnum\BKM@level>\BKM@x@level\relax
719       \let\BKM@parent\BKM@prev
720       \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
721         {\BKM@prev}{\BKM@level}%
722       }%
723       \BKM@swfalse
724     \else
725       \let\BKM@prev\BKM@x@parent
726     \fi
727   \fi
728 }%
729 \pdfstringdef\BKM@title{#2}%
730 \BKM@vtex@title
731 \edef\BKM@FLAGS{\printflags{BKM@style}}%
732 \let\BKM@action\@empty
733 \ifx\BKM@goto\@empty
734   \ifx\BKM@dest\@empty
735     \ifx\BKM@named\@empty
736       \ifx\BKM@rawaction\@empty
737         \ifx\BKM@uri\@empty
738           \ifx\BKM@page\@empty
739             \PackageError{bookmark}{Missing action}\@ehc
740             \def\BKM@action{!}%
741           \else
742             \edef\BKM@action{!\BKM@page}%
743           \fi
744         \else
745           \BKM@EscapeString\BKM@uri
746           \edef\BKM@action{%
747             <u=%
748             /S/URI%
749             /URI(\BKM@uri)%

```

```

750             >%
751         }%
752     \fi
753     \else
754         \edef\BKM@action{<u=\BKM@rawaction>}%
755     \fi
756     \else
757         \BKM@EscapeName\BKM@named
758         \edef\BKM@action{%
759             <u=%
760                 /S/Named%
761                 /N/\BKM@named
762             >%
763         }%
764     \fi
765     \else
766         \BKM@EscapeString\BKM@dest
767         \edef\BKM@action{\BKM@dest}%
768     \fi
769     \else
770         \ifx\BKM@dest\@empty
771             \ifx\BKM@page\@empty
772                 \def\BKM@page{1}%
773             \fi
774             \ifx\BKM@view\@empty
775                 \def\BKM@view{Fit}%
776             \fi
777             \edef\BKM@action{/D[\BKM@page/\BKM@view]}%
778         \else
779             \BKM@EscapeString\BKM@dest
780             \edef\BKM@action{/D(\BKM@dest)}%
781         \fi
782         \BKM@EscapeString\BKM@gotor
783         \edef\BKM@action{%
784             <u=%
785                 /S/GoToR%
786                 /F(\BKM@gotor)%
787             \BKM@action
788             >>%
789         }%
790     \fi
791     \ifx\BKM@color\@empty
792         \let\BKM@RGBcolor\@empty
793     \else
794         \expandafter\BKM@toRGB\BKM@color\@nil
795     \fi
796     \special{%
797         !outline \BKM@action;%
798         p=\BKM@parent,%
799         i=\number\BKM@id,%
800         s=%
801         \ifBKM@open
802             \ifnum\BKM@level<\BKM@openlevel
803                 o%
804             \else
805                 c%
806             \fi
807         \else
808             c%
809         \fi,%
810     \ifx\BKM@RGBcolor\@empty
811         \else

```

```

812         c=\BKM@RGBcolor,%
813     \fi
814     \ifnum\BKM@FLAGS>\z@
815         f=\BKM@FLAGS,%
816     \fi
817     t=\BKM@title
818 }%
819 \endgroup
820 \fi
821 }

822 \def\BKM@getx#1#2{%
823     \def\BKM@x@parent{#1}%
824     \def\BKM@x@level{#2}%
825 }

826 \def\BKM@toRGB#1 #2 #3\@nil{%
827     \let\BKM@RGBcolor\@empty
828     \BKM@toRGBComponent{#1}%
829     \BKM@toRGBComponent{#2}%
830     \BKM@toRGBComponent{#3}%
831 }

832 \def\BKM@toRGBComponent#1{%
833     \dimen@=#1pt\relax
834     \ifdim\dimen@>\z@
835         \ifdim\dimen@<\p@
836             \dimen@=255\dimen@
837             \advance\dimen@ by 32768sp\relax
838             \divide\dimen@ by 65536\relax
839             \dimen@ii=\dimen@
840             \divide\dimen@ii by 16\relax
841             \edef\BKM@RGBcolor{%
842                 \BKM@RGBcolor
843                 \BKM@toHexDigit\dimen@ii
844             }%
845             \dimen@ii=16\dimen@ii
846             \advance\dimen@-\dimen@ii
847             \edef\BKM@RGBcolor{%
848                 \BKM@RGBcolor
849                 \BKM@toHexDigit\dimen@
850             }%
851         \else
852             \edef\BKM@RGBcolor{\BKM@RGBcolor FF}%
853         \fi
854     \else
855         \edef\BKM@RGBcolor{\BKM@RGBcolor00}%
856     \fi
857 }

858 \def\BKM@toHexDigit#1{%
859     \expandafter\ifcase\expandafter\@firstofone\expandafter{\number#1} %
860     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7\or
861     8\or 9\or A\or B\or C\or D\or E\or F%
862     \fi
863 }

864 \begingroup
865     \catcode'\|=0 %
866     \catcode'\|=12 %
867     \gdef\BKM@vtex@title{%
868         \@onelevel@sanitize\BKM@title
869         \edef\BKM@title{\expandafter\BKM@vtex@leftparen\BKM@title\(|@nil}%
870         \edef\BKM@title{\expandafter\BKM@vtex@rightparen\BKM@title\)|@nil}%
871         \edef\BKM@title{\expandafter\BKM@vtex@zero\BKM@title\0|@nil}%
872         \edef\BKM@title{\expandafter\BKM@vtex@one\BKM@title\1|@nil}%
873         \edef\BKM@title{\expandafter\BKM@vtex@two\BKM@title\2|@nil}%

```

```

874 |edef|BKM@title{|expandafter|BKM@vtex@three|BKM@title\3|@nil}%
875 }%
876 |gdef|BKM@vtex@leftparen#1\(#2|@nil{%
877 #1%
878 |ifx||#2||%
879 |else
880 (%)
881 |@ReturnAfterFi{%
882 |BKM@vtex@leftparen#2|@nil
883 }%
884 |fi
885 }%
886 |gdef|BKM@vtex@rightparen#1\)#2|@nil{%
887 #1%
888 |ifx||#2||%
889 |else
890 )%
891 |@ReturnAfterFi{%
892 |BKM@vtex@rightparen#2|@nil
893 }%
894 |fi
895 }%
896 |gdef|BKM@vtex@zero#1\0#2|@nil{%
897 #1%
898 |ifx||#2||%
899 |else
900 |noexpand|hv@pdf@char0%
901 |@ReturnAfterFi{%
902 |BKM@vtex@zero#2|@nil
903 }%
904 |fi
905 }%
906 |gdef|BKM@vtex@one#1\1#2|@nil{%
907 #1%
908 |ifx||#2||%
909 |else
910 |noexpand|hv@pdf@char1%
911 |@ReturnAfterFi{%
912 |BKM@vtex@one#2|@nil
913 }%
914 |fi
915 }%
916 |gdef|BKM@vtex@two#1\2#2|@nil{%
917 #1%
918 |ifx||#2||%
919 |else
920 |noexpand|hv@pdf@char2%
921 |@ReturnAfterFi{%
922 |BKM@vtex@two#2|@nil
923 }%
924 |fi
925 }%
926 |gdef|BKM@vtex@three#1\3#2|@nil{%
927 #1%
928 |ifx||#2||%
929 |else
930 |noexpand|hv@pdf@char3%
931 |@ReturnAfterFi{%
932 |BKM@vtex@three#2|@nil
933 }%
934 |fi
935 }%

```

```

936 \endgroup
937 \long\def\@ReturnafterFi#1\fi{\fi#1}
938 \vtx)

```

3.4 Driver for pdfTeX

```

939 \*pdfTeX
940 \NeedsTeXFormat{LaTeX2e}
941 \ProvidesFile{bkm-pdfTeX.def}%
942 [2007/03/03 v0.6 bookmark driver for pdfTeX (H0)]
943 \def\BKM@D0@entry#1#2{%
944   \begingroup
945     \setkeys{BKM@D0}{#1}%
946     \def\BKM@D0@title{#2}%
947     \BKM@UnescapeHex\BKM@D0@title
948     \expandafter\expandafter\expandafter\BKM@getx
949       \csname BKM@BKM@D0@id\endcsname\@empty\@empty
950     \let\BKM@attr\@empty
951     \ifx\BKM@D0@flags\@empty
952       \else
953         \edef\BKM@attr{\BKM@attr/F \BKM@D0@flags}%
954       \fi
955     \ifx\BKM@D0@color\@empty
956       \else
957         \edef\BKM@attr{\BKM@attr/C[\BKM@D0@color]}%
958       \fi
959     \ifx\BKM@attr\@empty
960       \else
961         \edef\BKM@attr{attr{\BKM@attr}}%
962       \fi
963     \let\BKM@action\@empty
964     \ifx\BKM@D0@goto\@empty
965       \ifx\BKM@D0@dest\@empty
966         \ifx\BKM@D0@named\@empty
967           \ifx\BKM@D0@rawaction\@empty
968             \ifx\BKM@D0@uri\@empty
969               \ifx\BKM@D0@page\@empty
970                 \PackageError{bookmark}{Missing action}\@ehc
971                 \edef\BKM@action{goto page1{/Fit}}%
972               \else
973                 \ifx\BKM@D0@view\@empty
974                   \def\BKM@D0@view{Fit}%
975                 \fi
976                 \edef\BKM@action{goto page\BKM@D0@page{/BKM@D0@view}}%
977               \fi
978             \else
979               \BKM@UnescapeHex\BKM@D0@uri
980               \BKM@EscapeString\BKM@D0@uri
981               \edef\BKM@action{user{<</S/URI/URI(\BKM@D0@uri)>>}}%
982             \fi
983           \else
984             \BKM@UnescapeHex\BKM@D0@rawaction
985             \edef\BKM@action{%
986               user{%
987                 <<%
988                   \BKM@D0@rawaction
989                 >>%
990               }%
991             }%
992           \fi
993         \else
994           \BKM@EscapeName\BKM@D0@named
995           \edef\BKM@action{%

```

```

996         user{<</S/Named/N/\BKM@D0@named>>}%
997     }%
998     \fi
999     \else
1000         \BKM@UnescapeHex\BKM@D0@dest
1001         \BKM@EscapeString\BKM@D0@dest
1002         \edef\BKM@action{goto name{\BKM@D0@dest}}%
1003     \fi
1004     \else
1005         \ifx\BKM@D0@dest\@empty
1006             \ifx\BKM@D0@page\@empty
1007                 \def\BKM@D0@page{0}%
1008             \else
1009                 \edef\BKM@D0@page{\the\numexpr\BKM@D0@page-1\relax}%
1010             \fi
1011             \ifx\BKM@D0@view\@empty
1012                 \def\BKM@D0@view{Fit}%
1013             \fi
1014             \edef\BKM@action{/D[\BKM@D0@page/\BKM@D0@view]}%
1015         \else
1016             \BKM@UnescapeHex\BKM@D0@dest
1017             \BKM@EscapeString\BKM@D0@dest
1018             \edef\BKM@action{/D(\BKM@D0@dest)}%
1019         \fi
1020         \BKM@UnescapeHex\BKM@D0@goto
1021         \BKM@EscapeString\BKM@D0@goto
1022         \edef\BKM@action{%
1023             user{%
1024                 <<%
1025                     /S/GoToR%
1026                     /F(\BKM@D0@goto)%
1027                     \BKM@action
1028                 >>%
1029             }%
1030         }%
1031     \fi
1032     \pdfoutline\BKM@attr\BKM@action
1033         count\ifBKM@D0@open\else-\fi\BKM@x@childs
1034         {\BKM@D0@title}%
1035 \endgroup
1036 }
1037 </pdfTeX>

```

3.5 Drivers with pdfmark specials

3.5.1 Driver dvips

```

1038 <*dvips>
1039 \NeedsTeXFormat{LaTeX2e}
1040 \ProvidesFile{bkm-dvips.def}%
1041 [2007/03/03 v0.6 bookmark driver for dvips (HO)]
1042 \def\BKM@PSHeaderFile#1{%
1043     \special{header=#1}%
1044 }
1045 </dvips>

```

3.5.2 Driver dvipsone

```

1046 <*dvipsone>
1047 \NeedsTeXFormat{LaTeX2e}
1048 \ProvidesFile{bkm-dvipsone.def}%
1049 [2007/03/03 v0.6 bookmark driver for dvipsone (HO)]
1050 \def\BKM@PSHeaderFile#1{%

```

```

1051 \special{header=#1}%
1052 }
1053 </dvipsone>

```

3.5.3 Driver textures

```

1054 <*textures>
1055 \NeedsTeXFormat{LaTeX2e}
1056 \ProvidesFile{bkm-textures.def}%
1057 [2007/03/03 v0.6 bookmark driver for textures (H0)]
1058 \def\BKM@PSHeaderFile#1{%
1059 \special{prePostScriptfile #1}%
1060 }
1061 </textures>

```

3.5.4 Common part

```

1062 <*pdfmark>
1063 \def\BKM@filename{\jobname.out.ps}
1064 \BKM@PSHeaderFile\BKM@filename
1065 \AtEndDocument{\BKM@pdfmark@out}
1066 \def\BKM@pdfmark@out{%
1067 \newwrite\BKM@file
1068 \immediate\openout\BKM@file=\BKM@filename\relax
1069 \BKM@write{\percentchar!}%
1070 \BKM@write{/pdfmark where{pop}}}%
1071 \BKM@write{%
1072 {%
1073 /globaldict where{pop globaldict}{userdict}ifelse%
1074 /pdfmark/cleartomark load put%
1075 }%
1076 }%
1077 \BKM@write{ifelse}
1078 }
1079 \def\BKM@write#1{%
1080 \immediate\write\BKM@file
1081 }

```

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.

```

1082 \def\BKM@DO@entry#1#2{%
1083 \begingroup
1084 \setkeys{BKM@DO}{#1}%
1085 \def\BKM@DO@title{#2}%
1086 \BKM@UnescapeHex\BKM@DO@title
1087 \expandafter\expandafter\expandafter\BKM@getx
1088 \csname BKM@\BKM@DO@id\endcsname\@empty\@empty
1089 \let\BKM@attr\@empty
1090 \ifx\BKM@DO@flags\@empty
1091 \else
1092 \edef\BKM@attr{\BKM@attr/F \BKM@DO@flags}%
1093 \fi
1094 \ifx\BKM@DO@color\@empty
1095 \else
1096 \edef\BKM@attr{\BKM@attr/C[\BKM@DO@color]}%
1097 \fi
1098 \let\BKM@action\@empty
1099 \ifx\BKM@DO@goto\@empty
1100 \ifx\BKM@DO@dest\@empty
1101 \ifx\BKM@DO@named\@empty
1102 \ifx\BKM@DO@rawaction\@empty
1103 \ifx\BKM@DO@uri\@empty
1104 \ifx\BKM@DO@page\@empty

```

```

1105         \PackageError{bookmark}{Missing action}\@ehc
1106         \edef\BKM@action{%
1107             /Action/GoTo%
1108             /Page 1%
1109             /View[/Fit]%
1110         }%
1111     \else
1112         \ifx\BKM@DO@view\@empty
1113             \def\BKM@DO@view{Fit}%
1114         \fi
1115         \edef\BKM@action{%
1116             /Action/GoTo%
1117             /Page \BKM@DO@page
1118             /View[/\BKM@DO@view]%
1119         }%
1120     \fi
1121 \else
1122     \BKM@UnescapeHex\BKM@DO@uri
1123     \BKM@EscapeString\BKM@DO@uri
1124     \edef\BKM@action{%
1125         /Action<<%
1126         /Subtype/URI%
1127         /URI(\BKM@DO@uri)%
1128     >>%
1129     }%
1130 \fi
1131 \else
1132     \BKM@UnescapeHex\BKM@DO@rawaction
1133     \edef\BKM@action{%
1134         /Action<<%
1135         \BKM@DO@rawaction
1136     >>%
1137     }%
1138 \fi
1139 \else
1140     \BKM@EscapeName\BKM@DO@named
1141     \edef\BKM@action{%
1142         /Action<<%
1143         /Subtype/Named%
1144         /N/\BKM@DO@named
1145     >>%
1146     }%
1147 \fi
1148 \else
1149     \BKM@UnescapeHex\BKM@DO@dest
1150     \BKM@EscapeString\BKM@DO@dest
1151     \edef\BKM@action{%
1152         /Action/GoTo%
1153         /Dest(\BKM@DO@dest)cvn%
1154     }%
1155 \fi
1156 \else
1157     \ifx\BKM@DO@dest\@empty
1158         \ifx\BKM@DO@page\@empty
1159             \def\BKM@DO@page{1}%
1160         \fi
1161         \ifx\BKM@DO@view\@empty
1162             \def\BKM@DO@view{Fit}%
1163         \fi
1164         \edef\BKM@action{%
1165             /Page \BKM@DO@page
1166             /View[/\BKM@DO@view]%

```



```

1167     }%
1168   \else
1169     \BKM@UnescapeHex\BKM@DO@dest
1170     \BKM@EscapeString\BKM@DO@dest
1171     \edef\BKM@action{%
1172       /Dest(\BKM@DO@dest) cvn%
1173     }%
1174   \fi
1175   \BKM@UnescapeHex\BKM@DO@gotor
1176   \BKM@EscapeString\BKM@DO@gotor
1177   \edef\BKM@action{%
1178     /Action/GoToR%
1179     /F(\BKM@DO@gotor)%
1180     \BKM@action
1181   }%
1182 \fi
1183 \BKM@write{[]}%
1184 \BKM@write{/Title(\BKM@DO@title)}%
1185 \ifnum\BKM@x@chlds>\z@
1186   \BKM@write{/Count \ifBKM@DO@open\else-\fi\BKM@x@chlds}%
1187 \fi
1188 \ifx\BKM@attr\@empty
1189 \else
1190   \BKM@write{\BKM@attr}%
1191 \fi
1192 \BKM@write{\BKM@action}%
1193 \BKM@write{/OUT pdfmark}%
1194 \endgroup
1195 }
1196 </pdfmark>

```

3.6 Common part for pdftex and pdfmark

1197 <*pdftex | pdfmark>

3.6.1 Write auxiliary file

```

1198 \RequirePackage{auxhook}
1199 \AddLineBeginMainAux{%
1200   \string\providecommand\string\BKM@entry[2]{}%
1201 }
1202 \newcount\BKM@id
1203 \BKM@id=\z@
1204 \def\BKM@O{000}
1205 \newif\ifBKM@sw
1206 \newcommand*{\bookmark}[2][ ]{%
1207   \if@filesw
1208     \begingroup
1209       \bookmarksetup{#1}%
1210       \ifBKM@keeplevel
1211       \else
1212         \xdef\BKM@currentlevel{\BKM@level}%
1213       \fi
1214       \edef\BKM@prev{\the\BKM@id}%
1215       \global\advance\BKM@id\@ne
1216       \BKM@swtrue
1217       \@whiles\ifBKM@sw\fi{%
1218         \ifnum\ifBKM@startatroot\z@\else\BKM@prev\fi=\z@
1219           \global\BKM@startatrootfalse
1220           \expandafter\xdef\csize BKM@\the\BKM@id\endcsize{%
1221             0{\BKM@level}0%
1222           }%

```

```

1223         \BKM@swfalse
1224     \else
1225         \expandafter\expandafter\expandafter\BKM@getx
1226             \csname BKM@\BKM@prev\endcsname
1227         \ifnum\BKM@level>\BKM@x@level\relax
1228             \expandafter\xdef\csname BKM@\the\BKM@id\endcsname{%
1229                 {\BKM@prev}{\BKM@level}0%
1230             }%
1231         \ifnum\BKM@prev>\z@
1232             \expandafter\xdef\csname BKM@\BKM@prev\endcsname{%
1233                 {\BKM@x@parent}{\BKM@x@level}{%
1234                     \the\numexpr\BKM@x@childs+1\relax
1235                 }%
1236             }%
1237         \fi
1238         \BKM@swfalse
1239     \else
1240         \let\BKM@prev\BKM@x@parent
1241     \fi
1242 \fi
1243 }%
1244 \pdfstringdef\BKM@title{#2}%
1245 \edef\BKM@FLAGS{\printflags{BKM@style}}%
1246 \BKM@EscapeHex\BKM@dest
1247 \BKM@EscapeHex\BKM@uri
1248 \BKM@EscapeHex\BKM@goto
1249 \BKM@EscapeHex\BKM@rawaction
1250 \BKM@EscapeHex\BKM@title
1251 \immediate\write\@mainaux{%
1252     \string\BKM@entry{%
1253         id=\number\BKM@id
1254         \ifBKM@open
1255             \ifnum\BKM@level<\BKM@openlevel
1256                 ,open%
1257             \fi
1258         \fi
1259         \BKM@auxentry{dest}%
1260         \BKM@auxentry{named}%
1261         \BKM@auxentry{uri}%
1262         \BKM@auxentry{goto}%
1263         \BKM@auxentry{page}%
1264         \BKM@auxentry{view}%
1265         \BKM@auxentry{rawaction}%
1266         \BKM@auxentry{color}%
1267         \ifnum\BKM@FLAGS>\z@
1268             ,flags=\BKM@FLAGS
1269         \fi
1270     }{\BKM@title}%
1271 }%
1272 \endgroup
1273 \fi
1274 }

1275 \def\BKM@getx#1#2#3{%
1276     \def\BKM@x@parent{#1}%
1277     \def\BKM@x@level{#2}%
1278     \def\BKM@x@childs{#3}%
1279 }

1280 \def\BKM@auxentry#1{%
1281     \expandafter\ifx\csname BKM@#1\endcsname\@empty
1282     \else
1283         ,#1={\csname BKM@#1\endcsname}%
1284     \fi

```

```
1285 }
```

3.6.2 Read auxiliary data

```
1286 \SetupKeyvalOptions{family=BKM@DO,prefix=BKM@DO@}
1287 \DeclareStringOption[0]{id}
1288 \DeclareBoolOption{open}
1289 \DeclareStringOption{flags}
1290 \DeclareStringOption{color}
1291 \DeclareStringOption{dest}
1292 \DeclareStringOption{named}
1293 \DeclareStringOption{uri}
1294 \DeclareStringOption{gotor}
1295 \DeclareStringOption{page}
1296 \DeclareStringOption{view}
1297 \DeclareStringOption{rawaction}

1298 \AtBeginDocument{%
1299   \let\BKM@entry\BKM@DO@entry
1300 }

1301 </pdfTeX | pdfmark>
```

4 Installation

CTAN. This package is available on CTAN¹:

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

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

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.

Refresh file databases. If your TeX distribution (teTeX, mikTeX, ...) rely on file databases, you must refresh these. For example, teTeX users run texhash or mktexlsr.

¹<http://ftp.ctan.org/tex-archive/>

4.1 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-`pdf \TeX` users.

[2007/02/21 v0.3]

- Dependency from `pdf \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.
- Option `depth` also accepts division name like `hyperref`'s option `bookmarksdepth`.
- `hyperref`'s `bookmarksopen`, `bookmarksopenlevel`, and `bookmarksdepth` respected.

- Option numbered as alias for hyperref's bookmarksnumbered.

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