

# The pdfscape package

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## Abstract

Package pdfscape adds PDF support to the environment landscape of package lscape by setting the PDF page attribute /Rotate.

## Contents

<b>1</b>	<b>Documentation</b>	<b>2</b>
1.1	Supported drivers	2
1.2	Caveat	2
1.3	Requirements	2
1.4	Usage	2
<b>2</b>	<b>Implementation</b>	<b>2</b>
2.1	Package identification	2
2.2	Driver options	3
2.3	Autodetection of driver	3
2.3.1	Driver pdftex	3
2.3.2	Driver xetex	3
2.3.3	Detect driver based on \Gin@driver	4
2.3.4	Driver dvips	4
2.4	Driver implementation	5
2.4.1	pdfTeX	5
2.4.2	PostScript driver	6
2.4.3	Driver dvipdfm	6
2.5	Driver independent stuff	6
<b>3</b>	<b>Test</b>	<b>7</b>
3.1	Driver detection tests	7
3.2	Test for \PLS@CheckAngle	8
3.3	Test for rotate	9
<b>4</b>	<b>Installation</b>	<b>11</b>
4.1	Download	11
4.2	Bundle installation	11
4.3	Package installation	11
4.4	Refresh file name databases	12
4.5	Some details for the interested	12

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\*Please report any issues at <https://github.com/ho-tex/oberdiek/issues>

<b>5 History</b>	<b>12</b>
[2001/01/15 v0.1]	12
[2001/02/04 v0.2]	12
[2004/05/11 v0.3]	12
[2004/05/12 v0.4]	12
[2006/02/20 v0.5]	13
[2006/04/24 v0.6]	13
[2007/04/11 v0.7]	13
[2007/04/17 v0.8]	13
[2007/10/21 v0.9]	13
[2008/08/11 v0.10]	13
[2016/05/14 v0.11]	13

## 1 Documentation

### 1.1 Supported drivers

- pdftex,luatex
- dvips, dvipsone, pctex32, pctexps (and other drivers that provide a non-empty `\Gin@PS@raw`)
- dvipdfm

### 1.2 Caveat

Depending on the configuration Ghostscript adds a guessed rotation entry by its own. This can lead to two `/Rotate` entries per page. To prevent this behaviour set the parameter `AutoRotatePages` to `/None`, eg:

```
ps2pdf -dAutoRotatePages=/None
```

### 1.3 Requirements

- The package `lscape`.
- The package `atbegshi` for all drivers except `pdftex,luatex`.

### 1.4 Usage

Load this package instead of or after package `lscape`:

```
\usepackage{pdfscape}
\begin{landscape}...\end{landscape}
```

## 2 Implementation

### 2.1 Package identification

```
1 <*package>
```

Package identification.

```
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdfscape}%
4 [2016/05/14 v0.11 Display of landscape pages in PDF (H0)]
```

## 2.2 Driver options

```
5 \let\PLS@option\@empty
6 \let\PLS@driver\@empty
7 \def\PLS@temp#1#2{%
8   \DeclareOption{#1}{%
9     \let\PLS@option\CurrentOption
10    \def\PLS@driver{#2}%
11  }%
12 }
13 \PLS@temp{pdftex}{pdftex}
14 \PLS@temp{luatex}{pdftex}
15 \PLS@temp{dvips}{dvips}
16 \PLS@temp{dvipsone}{dvips}
17 \PLS@temp{pctexps}{dvips}
18 \PLS@temp{dvipdfm}{dvipdfm}
19 \PLS@temp{dvipdfmx}{dvipdfm}
20 \PLS@temp{xetex}{dvipdfm}
21 \let\PLS@temp\@empty
22 \DeclareOption*{%
23   \ifx\PLS@temp\@empty
24     \let\PLS@temp\CurrentOption
25   \else
26     \edef\PLS@temp{\PLS@temp,\CurrentOption}%
27   \fi
28 }
29 \ProcessOptions*
30 \ifx\PLS@option\@empty
31 \else
32   \expandafter\PassOptionsToPackage\expandafter{\PLS@option}{lscscape}%
33 \fi
34 \ifx\PLS@temp\@empty
35 \else
36   \expandafter\PassOptionsToPackage\expandafter{\PLS@temp}{lscscape}%
37 \fi
38 \RequirePackage{lscscape}
```

## 2.3 Autodetection of driver

### 2.3.1 Driver pdftex

```
39 \RequirePackage{ifpdf}[2006/02/20]
40 \def\PLS@temp{pdftex}
41 \ifpdf
42   \ifx\PLS@driver\@empty
43     \let\PLS@driver\PLS@temp
44     \PackageInfo{pdfscape}{Auto-detected driver: \PLS@temp}%
45   \fi
46   \ifx\PLS@driver\PLS@temp
47   \else
48     \PackageError{pdfscape}{%
49       The driver option '\PLS@option' is not compatible\MessageBreak
50       with pdfTeX in PDF mode, using driver 'pdftex' instead%
51     }{@ehc}
52     \let\PLS@driver\PLS@temp
53   \fi
54 \fi
```

### 2.3.2 Driver xetex

```
55 \RequirePackage{ifxetex}%
```

```

56 \def\PLS@temp{dvipdfm}
57 \ifxetex
58   \ifx\PLS@driver\@empty
59     \let\PLS@driver\PLS@temp
60     \PackageInfo{pdfscape}{%
61       Auto-detected driver: \PLS@temp\space(xetex)%
62     }%
63   \fi
64   \ifx\PLS@driver\PLS@temp
65   \else
66     \PackageError{pdfscape}{%
67       The driver option '\PLS@option' is not compatible\MessageBreak
68       with XeTeX, using driver for XeTeX (dvipdfm) instead%
69     } \@ehc
70     \let\PLS@driver\PLS@temp
71   \fi
72 \fi

```

### 2.3.3 Detect driver based on \Gin@driver

```

73 \def\PLS@temp#1#2{%
74   \ifx\PLS@driver\@empty
75     \begingroup
76       \def\PLS@temp{#1.def}%
77     \expandafter\endgroup
78     \ifx\PLS@temp\Gin@driver
79       \def\PLS@driver{#2}%
80       \PackageInfo{pdfscape}{%
81         Auto-detected driver: \PLS@driver\space(#1)%
82       }%
83     \fi
84   \fi
85 }
86 \PLS@temp{dvipdfm}{dvipdfm}
87 \PLS@temp{dvipdfmx}{dvipdfm}
88 \PLS@temp{dvips}{dvips}
89 \PLS@temp{dvipsone}{dvips}
90 \PLS@temp{pctexps}{dvips}

```

### 2.3.4 Driver dvips

```

91 \ifx\PLS@driver\@empty
92   \def\PLS@temp{dvips}%
93   \ifnum 1=0\ifx\Gin@PS@raw\@undefined
94     \else
95       \ifx\Gin@PS@raw\relax
96       \else
97         \ifx\Gin@PS@raw\@empty
98         \else
99           1%
100         \fi
101       \fi
102     \fi
103     \space
104     \let\PLS@driver\PLS@temp
105     \PackageInfo{pdfscape}{%
106       Auto-detected driver: \PLS@temp\space(PostScript)%
107     }%
108   \fi
109 \fi

```

```

110 \ifx\PLS@driver\@empty
111   \PackageError{pdflscape}{%
112     Neither pdfTeX, PostScript, nor dvipdfm driver found%
113   }\@ehc
114 \fi

```

## 2.4 Driver implementation

- `\PLS@AddRotate #1`  
it expects the correct rotation number in `#1` and implements the adding of the `/Rotate` entry in the `/Page` object of the current page.
- `\PLS@RemoveRotate`  
it removes a previous `/Rotate` entry, if necessary.

### 2.4.1 pdfTeX

Not too nice is the global setting of `\pdfpageattr`. Perhaps this can be changed in future versions.

luatex compat.

```

115 \ifx\pdfpageattr\@undefined
116   \ifx\pdfvariable\@undefined\else
117     \protected\edef\pdfpageattr{\pdfvariable pageattr}
118   \fi
119 \fi

```

```

120 \def\PLS@temp{pdfTeX}
121 \ifx\PLS@temp\PLS@driver
122   \def\PLS@AddRotate#1{%
123     \ifnum#1=0 %

```

Already the default.

```

124     \else
125       \global\pdfpageattr\expandafter{%
126         \the\pdfpageattr
127         /Rotate #1%
128       }%
129     \fi
130   }%

```

Removes a `/Rotate` entry.

```

131   \def\PLS@RemoveRotate{%
132     \begingroup
133       \global\pdfpageattr\expandafter{\expandafter}%
134       \expandafter\PLS@@RemoveRotate
135       \the\pdfpageattr /Rotate\@nil
136     \endgroup
137   }%
138   \def\PLS@@RemoveRotate#1/Rotate#2\@nil{%

```

Append `/Rotate` free stuff to `\pdfpageattr`.

```

139     \global\pdfpageattr\expandafter{\the\pdfpageattr#1}%
140     \ifx\#2\%

```

Ready, because the detected `/Rotate` is part of the end marker: `/Rotate\@nil`

```

141     \else

```

First read in the argument of `/Rotate`, then continue parsing.

```

142       \afterassignment\PLS@@RemoveRotate
143       \count0=#2\@nil
144     \fi

```

```

145 }%
146 \fi

```

### 2.4.2 PostScript driver

```

147 \def\PLS@temp{dvips}
148 \ifx\PLS@temp\PLS@driver
149   \RequirePackage{atbegshi}%
150   \AtBeginShipout{\PLS@AtBeginShipout}%
151   \let\PLS@AtBeginShipout\@empty
152   \def\PLS@AddRotate#1{%
153     \ifnum#1=0 %
154     \else
155       \def\PLS@AtBeginShipout{%
156         \global\setbox\AtBeginShipoutBox\vbox{%
157           \Gin@PS@raw{%
158             [{ThisPage}\string<\string</Rotate #1\string>\string>%
159             /PUT pdfmark%
160           }%
161           \box\AtBeginShipoutBox
162         }%
163       }%
164     \fi
165   }%
166   \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%
167 \fi

```

### 2.4.3 Driver dvipdfm

```

168 \def\PLS@temp{dvipdfm}
169 \ifx\PLS@temp\PLS@driver
170   \RequirePackage{atbegshi}%
171   \AtBeginShipout{\PLS@AtBeginShipout}%
172   \let\PLS@AtBeginShipout\@empty
173   \def\PLS@AddRotate#1{%
174     \ifnum#1=0 %
175     \else
176       \def\PLS@AtBeginShipout{%
177         \global\setbox\AtBeginShipoutBox\vbox{%
178           \special{pdf: put @thispage <</Rotate #1>>}%
179           \box\AtBeginShipoutBox
180         }%
181       }%
182     \fi
183   }%
184   \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%
185 \fi

```

## 2.5 Driver independent stuff

The landscape environment is extended by adding the correct `/Rotate` entries.

```

186 \g@addto@macro{\landscape}{\PLS@Rotate{90}}
187 \g@addto@macro{\endlandscape}{\PLS@Rotate{0}}

```

`\PLS@Rotate` Main macro, that sets the `/Rotate` entry.

Argument: any TeX number or nothing, that means zero.

Driver independent.

```

188 \def\PLS@Rotate#1{%
189   \begingroup

```

1. Check and validate the argument.

```

190 \PLS@CheckAngle{#1}%
191 \expandafter\endgroup
2. Remove previous \Rotate entry.
192 \expandafter\PLS@RemoveRotate
3. Add /Rotate entry.
193 \expandafter\PLS@AddRotate\expandafter{\the\count@}%
194 }

```

```

\PLS@CheckAngle Validates the rotation angle.
The result is stored in the count register \count@.
Driver independent.
195 \def\PLS@CheckAngle#1{%
Nothing means zero:
196 \ifx\#1\%
197 \count@=0 %
198 \else
199 \count@=#1\relax
200 \fi
Normalize to interval  $-360 < \text{\count@} < 360$ .
201 \@whilenum\count@>359\do{\advance\count@ -360 }%
202 \@whilenum\count@<-359\do{\advance\count@ 360 }%
Check values: 0, +/-90, +/-180, +/-270
203 \ifnum 1=0\ifnum\count@=0 \else
204 \ifnum\count@=90 \else
205 \ifnum\count@=-90 \else
206 \ifnum\count@=180 \else
207 \ifnum\count@=-180 \else
208 \ifnum\count@=270 \else
209 \ifnum\count@=-270 \else
210 1\fi\fi\fi\fi\fi\fi\fi\relax
211 \PackageError{pdfscape}{%
212 Invalid value \the\count@\space for /Rotate%
213 }\@ehc
214 \count@=0 %
215 \fi
216 }
217 </package>

```

## 3 Test

### 3.1 Driver detection tests

```

218 <*test0>
219 \NeedsTeXFormat{LaTeX2e}
220 \documentclass{minimal}
221 \usepackage{qstest}
222 \IncludeTests{*}
223 \LogTests{log}{*}{*}
224 </test0>
225 <*test1>
226 \usepackage{ifpdf}
227 \ifpdf

```

```

228 \def\ExpectDriver{pdftex}%
229 \fi
230 \usepackage{ifxetex}%
231 \ifxetex
232 \def\ExpectDriver{dvipdfm}%
233 \fi
234 \usepackage{pdfscape}[2016/05/14]
235 \</test1>

236 \<test2>
237 \def\ExpectDriver{pdftex}
238 \usepackage[pdftex]{pdfscape}[2016/05/14]
239 \</test2>

240 \<test3>
241 \def\ExpectDriver{dvipdfm}
242 \usepackage[dvipdfm]{pdfscape}[2016/05/14]
243 \</test3>

244 \<test4>
245 \def\ExpectDriver{dvips}
246 \usepackage[dvipsone]{graphics}
247 \usepackage{pdfscape}[2016/05/14]
248 \</test4>

249 \<test0>
250 \begin{document}
251 \begin{qstest}{driver}{driver}
252 \makeatletter
253 \Expect*{\PLS@driver}*{\ExpectDriver}%
254 \end{qstest}
255 \end{document}
256 \</test0>

```

### 3.2 Test for \PLS@CheckAngle

```

257 \<test5>
258 \NeedsTeXFormat{LaTeX2e}
259 \documentclass{minimal}
260 \usepackage{qstest}
261 \IncludeTests{*}
262 \LogTests{log}{*}{*}
263 \usepackage{pdfscape}[2016/05/14]
264 \begin{document}
265 \begin{qstest}{checkangle}{checkangle}
266 \makeatletter
267 \def\Result{%
268 \def\ResultString{\the\count@}%
269 }%
270 \def\PackageError#1#2#3{%
271 \def\Result{%
272 \def\ResultString{error}%
273 }%
274 }%
275 \def\Test#1#2{%
276 \begingroup
277 \PLS@CheckAngle{#1}%
278 \Result
279 \Expect*{\ResultString}{#2}%
280 \endgroup
281 }%

```



```

282 \Test{0}{0}%
283 \Test{90}{90}%
284 \Test{180}{180}%
285 \Test{270}{270}%
286 \Test{360}{0}%
287 \Test{450}{90}%
288 \Test{540}{180}%
289 \Test{630}{270}%
290 \Test{720}{0}%
291 \Test{3600}{0}%
292 \Test{3690}{90}%
293 \Test{-90}{270}%
294 \Test{-180}{180}%
295 \Test{-270}{-90}%
296 \Test{-360}{0}%
297 \Test{-450}{270}%
298 \Test{540}{180}%
299 \Test{-630}{90}%
300 \Test{-720}{0}%
301 \Test{-3600}{0}%
302 \Test{-3690}{270}%
303 \Test{1}{error}%
304 \Test{-1}{error}%
305 \Test{123}{error}%
306 \end{qstest}
307 \end{document}
308 </test5>

```

### 3.3 Test for rotate

```

309 <*test6>
310 \NeedsTeXFormat{LaTeX2e}
311 \documentclass{article}
312 \usepackage{pdflscape}[2016/05/14]
313 \begin{document}
314 \section{Portrait page}
315 \begin{landscape}
316 \section{Landscape page}
317 Foo bar foo bar foo bar foo bar foo bar
318 foo bar foo bar foo bar foo bar foo bar.
319 \end{landscape}
320 \section{Portrait Section}
321 Foo bar
322 \begin{landscape}
323 \section{Again Landscape Section}
324 \newpage
325 \section{Second Page of Landscape Section}
326 \end{landscape}
327 \section{Second Last Portrait Page}
328 \newpage
329 \section{Last Portrait Page}
330 \end{document}
331 </test6>

332 <*result6>
333 /Page 1 /Rotate 0
334 /Page 2 /Rotate 90
335 /Page 3 /Rotate 0
336 /Page 4 /Rotate 90
337 /Page 5 /Rotate 90

```

```

338 /Page 6 /Rotate 0
339 /Page 7 /Rotate 0
340 </result6>

341 <*ExtractRotate>
342 /**
343  * ExtractRotate.java
344  *
345  * Copyright (C) 2007 by Heiko Oberdiek <heiko.oberdiek at gmail.com>
346  *
347  * Requires: PDFBox (http://www.pdfbox.org/)
348  *
349  * Syntax: java ExtractRotate <pdffile> <textfile>
350  *
351  * The <pdffile> is analyzed and for each page its rotation
352  * setting is printed in the <textfile>. Example:
353  *   /Page 1 /Rotate 0
354  *   /Page 2 /Rotate 90
355  */
356 import java.io.FileInputStream;
357 import java.io.FileWriter;
358 import org.pdfbox.pdfparser.PDFParser;
359 import org.pdfbox.pdmodel.PDDocument;
360 import org.pdfbox.pdmodel.PDDocumentCatalog;
361 import org.pdfbox.pdmodel.PDPage;
362
363 public class ExtractRotate {
364
365     public static void main(String[] args) {
366         try {
367             String infile = args[0];
368             String outfile = args[1];
369             FileWriter out = new FileWriter(outfile);
370             PDFParser parser =
371                 new PDFParser(new FileInputStream(infile));
372             parser.parse();
373             PDDocument document = parser.getPDDocument();
374             PDDocumentCatalog catalog = document.getDocumentCatalog();
375             int i = 0;
376             for (Object page: catalog.getAllPages()) {
377                 i++;
378                 out.write("/Page " + i + " " + "/Rotate "
379                     + ((PDPage)page).findRotation() + "\n");
380             }
381             document.close();
382             out.close();
383         }
384         catch (Exception e) {
385             e.printStackTrace();
386             System.exit(1);
387         }
388     }
389 }
390 </ExtractRotate>

```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

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

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

*TDS* refers to the standard “A Directory Structure for T<sub>E</sub>X Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

### 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 T<sub>E</sub>X:

```
tex pdfscape.dtx
```

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

<code>pdfscape.sty</code>	→ <code>tex/latex/oberdiek/pdfscape.sty</code>
<code>pdfscape.pdf</code>	→ <code>doc/latex/oberdiek/pdfscape.pdf</code>
<code>test/pdfscape-test1.tex</code>	→ <code>doc/latex/oberdiek/test/pdfscape-test1.tex</code>
<code>test/pdfscape-test2.tex</code>	→ <code>doc/latex/oberdiek/test/pdfscape-test2.tex</code>
<code>test/pdfscape-test3.tex</code>	→ <code>doc/latex/oberdiek/test/pdfscape-test3.tex</code>
<code>test/pdfscape-test4.tex</code>	→ <code>doc/latex/oberdiek/test/pdfscape-test4.tex</code>
<code>test/pdfscape-test5.tex</code>	→ <code>doc/latex/oberdiek/test/pdfscape-test5.tex</code>
<code>test/pdfscape-test6.tex</code>	→ <code>doc/latex/oberdiek/test/pdfscape-test6.tex</code>
<code>test/pdfscape-test6.txt</code>	→ <code>doc/latex/oberdiek/test/pdfscape-test6.txt</code>
<code>test/ExtractRotate.java</code>	→ <code>doc/latex/oberdiek/test/ExtractRotate.java</code>
<code>pdfscape.dtx</code>	→ <code>source/latex/oberdiek/pdfscape.dtx</code>

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`.

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<sup>1</sup>[CTAN:pkg/pdfscape](#)

## 4.4 Refresh file name databases

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

## 4.5 Some details for the interested

**Unpacking with  $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ .** The `.dtx` chooses its action depending on the format:

**plain  $\text{T}_{\text{E}}\text{X}$ :** Run `docstrip` and extract the files.

**$\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ :** Generate the documentation.

If you insist on using  $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$  for `docstrip` (really, `docstrip` does not need  $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ ), then inform the `autodetect` routine about your intention:

```
latex \let\install=y\input{pdfscape.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 $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ :

```
pdflatex_pdfscape.dtx
makeindex_s_gind.ist_pdfscape.idx
pdflatex_pdfscape.dtx
makeindex_s_gind.ist_pdfscape.idx
pdflatex_pdfscape.dtx
```

## 5 History

[2001/01/15 v0.1]

- First public version, published in `de.comp.text.tex`:  
“Re: Querformat, pdfLaTeX und thumbpdf”<sup>2</sup>

[2001/02/04 v0.2]

- Minor documentation update.
- CTAN.

[2004/05/11 v0.3]

- Support for `dvipdfm` added.

[2004/05/12 v0.4]

- Bug fix: support for multipage landscape environment for all drivers except for `pdftex`.

---

<sup>2</sup>Url: <https://groups.google.com/group/de.comp.text.tex/msg/e054c5795e52d2b8>

## [2006/02/20 v0.5]

- DTX framework.
- LPPL 1.3
- Code is not changed.

## [2006/04/24 v0.6]

- Bug fix: `\PLS@RemoveRotate` reinserted for `\PLS@Rotate`.
- Fix for `\PLS@RemoveRotate` (dvips/dvipdfm): `\PLS@EverhShi` hook is cleared.

## [2007/04/11 v0.7]

- Line ends sanitized.

## [2007/04/17 v0.8]

- Package `atbegshi` replaces `everyshi`.

## [2007/10/21 v0.9]

- Driver detection for  $\text{\TeX}$  added.
- Fix for rotation angles  $\leq -360$  or  $\geq 360$ .

## [2008/08/11 v0.10]

- Code is not changed.
- URLs updated.

## [2016/05/14 v0.11]

- LuaTeX Compatibility

## 6 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; plain numbers refer to the code lines where the entry is used.

Symbols	
<code>\@ehc</code> . . . . .	<i>51, 69, 113, 213</i>
<code>\@empty</code> . . . . .	<i>5, 6, 21, 23, 30, 34, 42, 58,</i> <i>74, 91, 97, 110, 151, 166, 172, 184</i>
<code>\@nil</code> . . . . .	<i>135, 138, 143</i>
<code>\@undefined</code> . . . . .	<i>93, 115, 116</i>
<code>\@whilenum</code> . . . . .	<i>201, 202</i>
<code>\@</code> . . . . .	<i>140, 196</i>
A	
<code>\advance</code> . . . . .	<i>201, 202</i>
<code>\afterassignment</code> . . . . .	<i>142</i>
B	
<code>\AtBeginShipout</code> . . . . .	<i>150, 171</i>
<code>\AtBeginShipoutBox</code> . . . . .	<i>156, 161, 177, 179</i>
<code>\begin</code> . . . . .	<i>250, 251, 264, 265, 313, 315, 322</i>
<code>\box</code> . . . . .	<i>161, 179</i>
C	
<code>\count</code> . . . . .	<i>143</i>
<code>\count@</code> . . . . .	<i>193, 197,</i> <i>199, 201, 202, 203, 204, 205,</i> <i>206, 207, 208, 209, 212, 214, 268</i>

\CurrentOption .....	9, 24, 26	\pdfvariable .....	116, 117
<b>D</b>		\PLS@@RemoveRotate ....	134, 138, 142
\DeclareOption .....	8, 22	\PLS@AddRotate ....	122, 152, 173, 193
\do .....	201, 202	\PLS@AtBeginShipout .....	150,
\documentclass .....	220, 259, 311		151, 155, 166, 171, 172, 176, 184
<b>E</b>		\PLS@CheckAngle .....	190, 195, 277
\end ..	254, 255, 306, 307, 319, 326, 330	\PLS@driver .....	6, 10, 42,
\endlandscape .....	187		43, 46, 52, 58, 59, 64, 70, 74, 79,
\Expect .....	253, 279		81, 91, 104, 110, 121, 148, 169, 253
\ExpectDriver .....		\PLS@option .....	5, 9, 30, 32, 49, 67
	228, 232, 237, 241, 245, 253	\PLS@RemoveRotate ..	131, 166, 184, 192
<b>G</b>		\PLS@Rotate .....	186, 187, 188
\g@addto@macro .....	186, 187	\PLS@temp .....	7, 13, 14,
\Gin@driver .....	78		15, 16, 17, 18, 19, 20, 21, 23,
\Gin@PS@raw .....	93, 95, 97, 157		24, 26, 34, 36, 40, 43, 44, 46,
<b>I</b>			52, 56, 59, 61, 64, 70, 73, 76,
\ifnum .....	93, 123, 153, 174,		78, 86, 87, 88, 89, 90, 92, 104,
	203, 204, 205, 206, 207, 208, 209		106, 120, 121, 147, 148, 168, 169
\ifpdf .....	41, 227	\ProcessOptions .....	29
\ifx .....	23, 30, 34, 42, 46, 58,	\protected .....	117
	64, 74, 78, 91, 93, 95, 97, 110,	\ProvidesPackage .....	3
	115, 116, 121, 140, 148, 169, 196	<b>R</b>	
\ifxetex .....	57, 231	\RequirePackage ..	38, 39, 55, 149, 170
\IncludeTests .....	222, 261	\Result .....	267, 271, 278
<b>L</b>		\ResultString .....	268, 272, 279
\landscape .....	186	<b>S</b>	
\LogTests .....	223, 262	\section	314, 316, 320, 323, 325, 327, 329
<b>M</b>		\setbox .....	156, 177
\makeatletter .....	252, 266	\space .....	61, 81, 103, 106, 212
\MessageBreak .....	49, 67	\special .....	178
<b>N</b>		<b>T</b>	
\n .....	379	\Test ..	275, 282, 283, 284, 285, 286,
\NeedsTeXFormat .....	2, 219, 258, 310		287, 288, 289, 290, 291, 292,
\newpage .....	324, 328		293, 294, 295, 296, 297, 298,
<b>P</b>			299, 300, 301, 302, 303, 304, 305
\PackageError ....	48, 66, 111, 211, 270	\the .....	126, 135, 139, 193, 212, 268
\PackageInfo .....	44, 60, 80, 105	<b>U</b>	
\PassOptionsToPackage .....	32, 36	\usepackage ....	221, 226, 230, 234,
\pdfpageattr .....			238, 242, 246, 247, 260, 263, 312
	115, 117, 125, 126, 133, 135, 139	<b>V</b>	
		\vbox .....	156, 177