

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.

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

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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 CTAN¹:

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

[CTAN:macros/latex/contrib/oberdiek/pdflscape.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_EX 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.

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_EX:

```
tex pdflscape.dtx
```

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

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

¹[CTAN:pkg/pdflscape](#)

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”²

[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`.

²Url: <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 \TeX added.
- Fix for rotation angles ≤ -360 or ≥ 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.

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