

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/pdfscape/issues>

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1 Documentation

1.1 Supported drivers

If the PDF management is loaded by the use of `\DocumentMetadata{}` at the beginning of the document, the engines and backends supported by `l3backend` can be used. Driver options are passed to graphics and are typically only needed if \LaTeX is used with `dvipdfmx`.

Without the PDF management the following driver options can be used (many are simply aliases to each other):

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

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

1.4 Usage

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

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

2 Implementation

2.1 New version using the methods of the PDF management

Identification

```
1 (*package-new)
2 \NeedsTeXFormat{LaTeX2e}[2020/10/01]
3 \ProvidesExplPackage{pdfscape}{2025-06-23}{0.14}
4 {Display of landscape pages in PDF}%
```

Testing if the pdfmanagement is used

```
5 \IfPDFManagementActiveF {\RequirePackageWithOptions{pdfscape-nometadata}}
6 \IfPDFManagementActiveF {\endinput}
```

Load lscape, but don't pass the pdfTeX option as it would use \pdfpageattr which is incompatible with the pdf management.

```

7 \DeclareOption*{\PassOptionsToPackage\CurrentOption{graphics}}
8 \ProcessOptions
9 \RequirePackage{lscape}

```

this always turns in the same direction as the original code of pdfscape does. left and right would need \pdfmanagement_add:nnn{ThisPage}{Rotate}{...} on every page (e.g. in a shipout hook) and some option to control the wanted orientation.

```

10 \tl_new:N\g__pdfscape_saverotate_tl
11 \hook_gput_code:nnn {env/landscape/begin}{pdfscape}
12 {
13   \pdfmanagement_get:nnN {Page}{Rotate}\l_tmpa_tl
14   \tl_gset_eq:NN\g__pdfscape_saverotate_tl\l_tmpa_tl
15   \clearpage
16   \pdfmanagement_add:nnn{Page}{Rotate}{90}
17 }
18 \hook_gput_code:nnn {env/landscape/after}{pdfscape}
19 {
20   \quark_if_no_value:NTF\g__pdfscape_saverotate_tl
21   {\pdfmanagement_remove:nn{Page}{Rotate}}
22   {\pdfmanagement_add:nnx{Page}{Rotate}{\g__pdfscape_saverotate_tl}}
23 }
24 </package-new>

```

2.2 Old version without the PDF management

```

25 <*package>

```

Package identification.

```

26 \NeedsTeXFormat{LaTeX2e}
27 \ProvidesPackage{pdfscape-nometadata}%
28 [2025-06-23 v0.14 Display of landscape pages in PDF (H0)]

```

2.3 Driver options

```

29 \let\PLS@option\@empty
30 \let\PLS@driver\@empty
31 \def\PLS@temp#1#2{%
32   \DeclareOption{#1}{%
33     \let\PLS@option\CurrentOption
34     \def\PLS@driver{#2}%
35   }%
36 }
37 \PLS@temp{pdftex}{pdftex}
38 \PLS@temp{luatex}{pdftex}
39 \PLS@temp{dvips}{dvips}
40 \PLS@temp{dvipsone}{dvips}
41 \PLS@temp{pctexps}{dvips}
42 \PLS@temp{dvipdfm}{dvipdfm}
43 \PLS@temp{dvipdfmx}{dvipdfm}
44 \PLS@temp{xetex}{dvipdfm}
45 \let\PLS@temp\@empty
46 \DeclareOption*{%
47   \ifx\PLS@temp\@empty
48     \let\PLS@temp\CurrentOption
49   \else
50     \edef\PLS@temp{\PLS@temp,\CurrentOption}%
51   \fi
52 }
53 \ProcessOptions*
54 \ifx\PLS@option\@empty

```

```

55 \else
56   \expandafter\PassOptionsToPackage\expandafter{\PLS@option}{\lscap}%
57 \fi
58 \ifx\PLS@temp@empty
59 \else
60   \expandafter\PassOptionsToPackage\expandafter{\PLS@temp}{\lscap}%
61 \fi
62 \RequirePackage{iftex}[2019/11/07]%
63 \RequirePackage{lscap}

```

2.4 Autodetection of driver

2.4.1 Driver pdftex

```

64 \def\PLS@temp{pdftex}
65 \ifpdf
66   \ifx\PLS@driver@empty
67     \let\PLS@driver\PLS@temp
68     \PackageInfo{pdfscape}{Auto-detected driver: \PLS@temp}%
69   \fi
70   \ifx\PLS@driver\PLS@temp
71   \else
72     \PackageError{pdfscape}{%
73       The driver option '\PLS@option' is not compatible\MessageBreak
74       with pdfTeX in PDF mode, using driver 'pdftex' instead%
75     }\@ehc
76     \let\PLS@driver\PLS@temp
77   \fi
78 \fi

```

2.4.2 Driver xetex

```

79 \def\PLS@temp{dvipdfm}
80 \ifxetex
81   \ifx\PLS@driver@empty
82     \let\PLS@driver\PLS@temp
83     \PackageInfo{pdfscape}{%
84       Auto-detected driver: \PLS@temp\space(xetex)%
85     }%
86   \fi
87   \ifx\PLS@driver\PLS@temp
88   \else
89     \PackageError{pdfscape}{%
90       The driver option '\PLS@option' is not compatible\MessageBreak
91       with XeTeX, using driver for XeTeX (dvipdfm) instead%
92     }\@ehc
93     \let\PLS@driver\PLS@temp
94   \fi
95 \fi

```

2.4.3 Detect driver based on \Gin@driver

```

96 \def\PLS@temp#1#2{%
97   \ifx\PLS@driver@empty
98     \begingroup
99     \def\PLS@temp{#1.def}%
100    \expandafter\endgroup
101    \ifx\PLS@temp\Gin@driver
102      \def\PLS@driver{#2}%
103      \PackageInfo{pdfscape}{%
104        Auto-detected driver: \PLS@driver\space(#1)%
105      }%
106    \fi
107  \fi
108 }
109 \PLS@temp{dvipdfm}{dvipdfm}

```

```

110 \PLS@temp{dvipdfmx}{dvipdfm}
111 \PLS@temp{dvips}{dvips}
112 \PLS@temp{dvipsone}{dvips}
113 \PLS@temp{pctexps}{dvips}

```

2.4.4 Driver dvips

```

114 \ifx\PLS@driver\@empty
115   \def\PLS@temp{dvips}%
116   \ifnum 1=0\ifx\Gin@PS@raw\@undefined
117     \else
118       \ifx\Gin@PS@raw\relax
119       \else
120       \ifx\Gin@PS@raw\@empty
121       \else
122       1%
123       \fi
124     \fi
125   \fi
126   \space
127   \let\PLS@driver\PLS@temp
128   \PackageInfo{pdflscape}{%
129     Auto-detected driver: \PLS@temp\space(PostScript)%
130   }%
131 \fi
132 \fi
133 \ifx\PLS@driver\@empty
134   \PackageError{pdflscape}{%
135     Neither pdfTeX, PostScript, nor dvipdfm driver found%
136   }\@ehc
137 \fi

```

2.5 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.

2.5.1 pdfTeX

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

luatex compat.

```

138 \ifx\pdfpageattr\@undefined
139   \ifx\pdfvariable\@undefined\else
140     \protected\edef\pdfpageattr{\pdfvariable pageattr}
141   \fi
142 \fi
143 \def\PLS@temp{pdftex}
144 \ifx\PLS@temp\PLS@driver
145   \def\PLS@AddRotate#1{%
146     \ifnum#1=0 %

```

Already the default.

```

147   \else
148     \global\pdfpageattr\expandafter{%
149       \the\pdfpageattr
150       /Rotate #1%
151     }%
152   \fi
153 }%

```

Removes a /Rotate entry.

```

154 \def\PLS@RemoveRotate{%
155   \begingroup
156   \global\pdfpageattr\expandafter{\expandafter}%
157   \expandafter\PLS@@RemoveRotate
158   \the\pdfpageattr /Rotate\@nil
159   \endgroup
160 }%
161 \def\PLS@@RemoveRotate#1/Rotate#2\@nil{%

```

Append /Rotate free stuff to \pdfpageattr.

```

162   \global\pdfpageattr\expandafter{\the\pdfpageattr#1}%
163   \ifx\#2\%

```

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

```

164   \else

```

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

```

165     \afterassignment\PLS@@RemoveRotate
166     \count0=#2\@nil
167   \fi
168 }%
169 \fi

```

2.5.2 PostScript driver

```

170 \def\PLS@temp{dvips}
171 \ifx\PLS@temp\PLS@driver
172   \AddToHook{shipout/before}{\PLS@AtBeginShipout}%
173   \let\PLS@AtBeginShipout\@empty
174   \def\PLS@AddRotate#1{%
175     \ifnum#1=0 %
176     \else
177       \def\PLS@AtBeginShipout{%
178         \global\setbox\ShipoutBox\vbox{%
179           \Gin@PS@raw{%
180             [{ThisPage}\string<\string</Rotate #1\string>\string>%
181             /PUT pdfmark%
182           }%
183           \box\ShipoutBox
184         }%
185       }%
186     \fi
187   }%
188   \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%
189 \fi

```

2.5.3 Driver dvipdfm

```

190 \def\PLS@temp{dvipdfm}
191 \ifx\PLS@temp\PLS@driver
192   \AddToHook{shipout/before}{\PLS@AtBeginShipout}%
193   \let\PLS@AtBeginShipout\@empty
194   \def\PLS@AddRotate#1{%
195     \ifnum#1=0 %
196     \else
197       \def\PLS@AtBeginShipout{%
198         \global\setbox\ShipoutBox\vbox{%
199           \special{pdf: put @thispage <</Rotate #1>>}%
200           \box\ShipoutBox
201         }%
202       }%
203     \fi
204   }%
205   \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%

```

206 \fi

2.6 Driver independent stuff

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

207 \g@addto@macro{\landscape}{\PLS@Rotate{90}}

208 \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.

209 \def\PLS@Rotate#1{%

210 \begingroup

1. Check and validate the argument.

211 \PLS@CheckAngle{#1}%

212 \expandafter\endgroup

2. Remove previous \Rotate entry.

213 \expandafter\PLS@RemoveRotate

3. Add /Rotate entry.

214 \expandafter\PLS@AddRotate\expandafter{\the\count@}%

215 }

\PLS@CheckAngle Validates the rotation angle.

The result is stored in the count register \count@.

Driver independent.

216 \def\PLS@CheckAngle#1{%

Nothing means zero:

217 \ifx\#1\%

218 \count@=0 %

219 \else

220 \count@=#1\relax

221 \fi

Normalize to interval $-360 < \text{\count@} < 360$.

222 \@whilenum\count@>359\do{\advance\count@ -360 }%

223 \@whilenum\count@<-359\do{\advance\count@ 360 }%

Check values: 0, +/-90, +/-180, +/-270

224 \ifnum 1=0\ifnum\count@=0 \else

225 \ifnum\count@=90 \else

226 \ifnum\count@=-90 \else

227 \ifnum\count@=180 \else

228 \ifnum\count@=-180 \else

229 \ifnum\count@=270 \else

230 \ifnum\count@=-270 \else

231 1\fi\fi\fi\fi\fi\fi\fi\relax

232 \PackageError{pdfscape}{%

233 Invalid value \the\count@\space for /Rotate%

234 }\@ehc

235 \count@=0 %

236 \fi

237 }

238 \endpackage

3 Installation

3.1 Download

Package. This package is available on CTAN¹:

¹CTAN:pkg/pdfscape

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

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

3.2 Package installation

Unpacking. The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain $\mathrm{T\!E\!X}$:

```
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):

```
pdfscape.sty           → tex/latex/pdfscape/pdfscape.sty
pdfscape-nometadata.sty → tex/latex/pdfscape/pdfscape-nometadata.sty
pdfscape.pdf           → doc/latex/pdfscape/pdfscape.pdf
pdfscape.dtx           → source/latex/pdfscape/pdfscape.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`.

3.3 Refresh file name databases

If your $\mathrm{T\!E\!X}$ distribution ($\mathrm{T\!E\!X}$ Live, $\mathrm{MiK\!T\!E\!X}$, ...) relies on file name databases, you must refresh these. For example, $\mathrm{T\!E\!X}$ Live users run `texhash` or `mktextlsr`.

3.4 Some details for the interested

Unpacking with $\mathrm{L\!A\!T\!E\!X}$. The `.dtx` chooses its action depending on the format:

plain $\mathrm{T\!E\!X}$: Run `docstrip` and extract the files.

$\mathrm{L\!A\!T\!E\!X}$: Generate the documentation.

If you insist on using $\mathrm{L\!A\!T\!E\!X}$ for `docstrip` (really, `docstrip` does not need $\mathrm{L\!A\!T\!E\!X}$), 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 $\mathrm{L\!A\!T\!E\!X}$` :

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

4 History

[2001/01/15 v0.1]

- First public version, published in [de.comp.text.tex](#):
“Re: Querformat, pdf $\mathrm{L\!A\!T\!E\!X}$ und thumbpdf”²

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

[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.

[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

[2019/12/05 v0.12]

- Documentation updates.
- iftex package.

[2022-10-28 v0.13]

- Made the package compatible with the PDF management.
- Removed the dependency to atbegshi.

[2025-06-23 v0.14]

- Updated test for PDF management.

5 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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