

# The pdfscape package

Heiko Oberdiek  
<oberdiek@uni-freiburg.de>

2007/04/17 v0.8

## 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	2
2.3	Autodetection of driver	3
2.3.1	Driver <code>pdftex</code>	3
2.3.2	Driver <code>dvips</code>	3
2.3.3	Driver <code>dvipdfm</code>	4
2.4	Driver implementation	4
2.4.1	<code>pdfTeX</code>	4
2.4.2	PostScript driver	5
2.4.3	Driver <code>dvipdfm</code>	5
2.5	Driver independent stuff	5
<b>3</b>	<b>Installation</b>	<b>6</b>
3.1	Download	6
3.2	Bundle installation	7
3.3	Package installation	7
3.4	Refresh file name databases	7
3.5	Some details for the interested	7
<b>4</b>	<b>History</b>	<b>8</b>
	[2001/01/15 v0.1]	8
	[2001/02/04 v0.2]	8
	[2004/05/11 v0.3]	8
	[2004/05/12 v0.4]	8
	[2006/02/20 v0.5]	8
	[2006/04/24 v0.6]	8
	[2007/04/11 v0.7]	9
	[2007/04/17 v0.8]	9
<b>5</b>	<b>Index</b>	<b>9</b>

# 1 Documentation

## 1.1 Supported drivers

- pdftex
- 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`.

## 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 [2007/04/17 v0.8 Landscape pages in PDF (H0)]
```

## 2.2 Driver options

```
5 \let\PLS@driver\@empty  
6 \DeclareOption{pdftex}{%  
7   \PassOptionsToPackage\CurrentOption{lscape}%  
8   \def\PLS@driver{pdftex}%  
9 }  
10 \DeclareOption{dvips}{%  
11   \PassOptionsToPackage\CurrentOption{lscape}%  
12   \def\PLS@driver{dvips}%  
13 }  
14 \DeclareOption{dvipsone}{%  
15   \PassOptionsToPackage\CurrentOption{lscape}%  
16   \def\PLS@driver{dvips}%  
17 }  
18 \DeclareOption{pctexps}{%  
19   \PassOptionsToPackage\CurrentOption{lscape}%  
20   \def\PLS@driver{dvips}%  
21 }  
22 \DeclareOption{dvipdfm}{%
```

```

23 \PassOptionsToPackage\CurrentOption{dvipdfm}%
24 \def\PLS@driver{dvipdfm}%
25 }
26 \DeclareOption*{\PassOptionsToPackage\CurrentOption{lscape}}
27 \ProcessOptions
28 \RequirePackage{lscape}

```

## 2.3 Autodetection of driver

### 2.3.1 Driver pdftex

```

29 \def\PLS@temp{pdftex}
30 \ifnum 1=0\ifx\pdfoutput\@undefined
31     \else
32     \ifx\pdfoutput\relax
33     \else
34     \ifnum\pdfoutput>0 %
35     1%
36     \fi
37     \fi
38     \fi
39     \space
40 \ifx\PLS@driver\@empty
41     \let\PLS@driver\PLS@temp
42     \PackageInfo{pdfscape}{Auto-detected driver: ‘\PLS@temp’}%
43 \fi
44 \ifx\PLS@driver\PLS@temp
45 \else
46     \PackageError{pdfscape}{%
47         The driver option ‘\PLS@driver’ is not compatible\MessageBreak
48         with pdfTeX in PDF mode, using driver ‘pdftex’ instead%
49     }\@ehc
50     \let\PLS@driver\PLS@temp
51 \fi
52 \fi

```

### 2.3.2 Driver dvips

```

53 \def\PLS@temp{dvips}
54 \ifnum 1=0\ifx\Gin@PS@raw\@undefined
55     \else
56     \ifx\Gin@PS@raw\relax
57     \else
58     \ifx\Gin@PS@raw\@empty
59     \else
60     1%
61     \fi
62     \fi
63     \fi
64     \space
65 \ifx\PLS@driver\@empty
66     \let\PLS@driver\PLS@temp
67     \PackageInfo{pdfscape}{Auto-detected driver: ‘\PLS@temp’}%
68 \fi
69 \ifx\PLS@driver\PLS@temp
70 \else
71     \PackageError{pdfscape}{%
72         The driver option ‘\PLS@driver’ is not compatible\MessageBreak
73         with detected PostScript driver,\MessageBreak
74         Will try using driver ‘dvips’%
75     }\@ehc
76     \let\PLS@driver\PLS@temp
77 \fi
78 \fi

```

### 2.3.3 Driver dvipdfm

```
79 \def\PLS@temp{dvipdfm.def}
80 \ifx\PLS@temp\Gin@driver
81   \def\PLS@temp{dvipdfm}%
82   \ifx\PLS@driver\@empty
83     \let\PLS@driver\PLS@temp
84     \PackageInfo{pdfscape}{Auto-detected driver: '\PLS@temp'}%
85   \fi
86   \ifx\PLS@driver\PLS@temp
87   \else
88     \PackageError{pdfscape}{%
89       Graphics driver 'dvipdfm.def' is loaded, but this\MessageBreak
90       is incompatible with driver '\PLS@driver'.\MessageBreak
91       Will try using driver 'dvipdfm'%
92     }\@ehc
93     \let\PLS@driver\PLS@temp
94   \fi
95 \fi
96
97 \ifx\PLS@driver\@empty
98   \PackageError{pdfscape}{%
99     Neither pdfTeX, PostScript, nor dvipdfm driver found%
100   }\@ehc
101 \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.

```
102 \def\PLS@temp{pdftex}
103 \ifx\PLS@temp\PLS@driver
104   \def\PLS@AddRotate#1{%
105     \ifnum#1=0 %
106       \else
107         \global\pdfpageattr\expandafter{%
108           \the\pdfpageattr
109           /Rotate #1%
110         }%
111       \fi
112     }%
```

Already the default.

```
113 \def\PLS@RemoveRotate{%
114   \begingroup
115     \global\pdfpageattr\expandafter{\expandafter}%
116     \expandafter\PLS@@RemoveRotate
117     \the\pdfpageattr /Rotate\@nil
118   \endgroup
119 }%
120 \def\PLS@@RemoveRotate#1/Rotate#2\@nil{%
```

Append /Rotate free stuff to \pdfpageattr.

```
121 \global\pdfpageattr\expandafter{\the\pdfpageattr#1}%  
122 \ifx\#2\%
```

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

```
123 \else
```

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

```
124 \afterassignment\PLS@@RemoveRotate  
125 \count0=#2\@nil  
126 \fi  
127 }%  
128 \fi
```

## 2.4.2 PostScript driver

```
129 \def\PLS@temp{dvips}  
130 \ifx\PLS@temp\PLS@driver  
131 \RequirePackage{atbegshi}%  
132 \AtBeginShipout{\PLS@AtBeginShipout}%  
133 \let\PLS@AtBeginShipout\@empty  
134 \def\PLS@AddRotate#1{%  
135 \ifnum#1=0 %  
136 \else  
137 \def\PLS@AtBeginShipout{%  
138 \global\setbox\AtBeginShipoutBox\vbox{%  
139 \Gin@PS@raw{%  
140 [{ThisPage}\string<\string</Rotate #1\string>\string>%  
141 /PUT pdfmark%  
142 }%  
143 \box\AtBeginShipoutBox  
144 }%  
145 }%  
146 \fi  
147 }%  
148 \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%  
149 \fi
```

## 2.4.3 Driver dvipdfm

```
150 \def\PLS@temp{dvipdfm}  
151 \ifx\PLS@temp\PLS@driver  
152 \RequirePackage{atbegshi}%  
153 \AtBeginShipout{\PLS@AtBeginShipout}%  
154 \let\PLS@AtBeginShipout\@empty  
155 \def\PLS@AddRotate#1{%  
156 \ifnum#1=0 %  
157 \else  
158 \def\PLS@AtBeginShipout{%  
159 \global\setbox\AtBeginShipoutBox\vbox{%  
160 \special{pdf: put @thispage <</Rotate #1>>}%  
161 \box\AtBeginShipoutBox  
162 }%  
163 }%  
164 \fi  
165 }%  
166 \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%  
167 \fi
```

## 2.5 Driver independent stuff

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

```
168 \g@addto@macro{\landscape}{\PLS@Rotate{90}}  
169 \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.

```

170 \def\PLS@Rotate#1{%
171   \begingroup
1. Check and validate the argument.
172     \PLS@CheckAngle{#1}%
173   \expandafter\endgroup
2. Remove previous \Rotate entry.
174   \expandafter\PLS@RemoveRotate
3. Add /Rotate entry.
175   \expandafter\PLS@AddRotate\expandafter{\the\count@}%
176 }

```

**\PLS@CheckAngle** Validates the rotation angle.  
The result is stored in the count register `\count@`.  
Driver independent.

```

177 \def\PLS@CheckAngle#1{%
Nothing means zero:
178   \ifx\#1\%
179     \count@=0 %
180   \else
181     \count@=#1\relax
182   \fi
Normalise to interval  $-360 < \text{\count@} < 360$ .
183   \@whilenum\count@>359\do{\addtocounter\count@ -360 }%
184   \@whilenum\count@<-359\do{\addtocounter\count@ 360 }%
Check values: 0, +/-90, +/-180, +/-270
185   \ifnum 1=0\ifnum\count@=0 \else
186     \ifnum\count@=90 \else
187     \ifnum\count@=-90 \else
188     \ifnum\count@=180 \else
189     \ifnum\count@=-180 \else
190     \ifnum\count@=270 \else
191     \ifnum\count@=-270 \else
192       1\fi\fi\fi\fi\fi\fi\fi\relax
193   \PackageError{pdfscape}{%
194     Invalid value \the\count@\space for /Rotate%
195   }\@ehc
196   \count@=0 %
197   \fi
198 }
199 \</package>

```

## 3 Installation

### 3.1 Download

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

[CTAN:macros/latex/contrib/oberdiek/pdfscape.dtx](http://ftp.ctan.org/macros/latex/contrib/oberdiek/pdfscape.dtx) The source file.

[CTAN:macros/latex/contrib/oberdiek/pdfscape.pdf](http://ftp.ctan.org/macros/latex/contrib/oberdiek/pdfscape.pdf) Documentation.

---

<sup>1</sup>[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

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

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

*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.

## 3.2 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/
```

## 3.3 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):

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

## 3.4 Refresh file name databases

If your T<sub>E</sub>X distribution (teT<sub>E</sub>X, miK<sub>T</sub><sub>E</sub>X, ...) relies on file name databases, you must refresh these. For example, teT<sub>E</sub>X users run `texhash` or `mktextlsr`.

## 3.5 Some details for the interested

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

```
pdftk pdfscape.pdf unpack_files output .
```

**Unpacking with L<sup>A</sup>T<sub>E</sub>X.** The .dtx chooses its action depending on the format:

**plain-T<sub>E</sub>X:** Run docstrip and extract the files.

**L<sup>A</sup>T<sub>E</sub>X:** Generate the documentation.

If you insist on using L<sup>A</sup>T<sub>E</sub>X for docstrip (really, docstrip does not need L<sup>A</sup>T<sub>E</sub>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 pdfL<sup>A</sup>T<sub>E</sub>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.

[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.

## 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; numbers in roman refer to the code lines where the entry is used.

Symbols	M
<code>\@ehc</code> ..... 49, 75, 92, 100, 195	<code>\MessageBreak</code> ..... 47, 72, 73, 89, 90
<code>\@empty</code> ..... 5, 40, 58, 65, 82, 97, 133, 148, 154, 166	N
<code>\@nil</code> ..... 117, 120, 125	<code>\NeedsTeXFormat</code> ..... 2
<code>\@undefined</code> ..... 30, 54	P
<code>\@whilenum</code> ..... 183, 184	<code>\PackageError</code> ..... 46, 71, 88, 98, 193
<code>\@</code> ..... 122, 178	<code>\PackageInfo</code> ..... 42, 67, 84
A	<code>\PassOptionsToPackage</code> ..... 7, 11, 15, 19, 23, 26
<code>\addtocounter</code> ..... 183, 184	<code>\pdfoutput</code> ..... 30, 32, 34
<code>\afterassignment</code> ..... 124	<code>\pdfpageattr</code> .. 107, 108, 115, 117, 121
<code>\AtBeginShipout</code> ..... 132, 153	<code>\PLS@@RemoveRotate</code> .... 116, 120, 124
<code>\AtBeginShipoutBox</code> . 138, 143, 159, 161	<code>\PLS@AddRotate</code> .... 104, 134, 155, 175
B	<code>\PLS@AtBeginShipout</code> ..... 132, 133, 137, 148, 153, 154, 158, 166
<code>\box</code> ..... 143, 161	<code>\PLS@CheckAngle</code> ..... 172, <u>177</u>
C	<code>\PLS@driver</code> . 5, 8, 12, 16, 20, 24, 40, 41, 44, 47, 50, 65, 66, 69, 72, 76, 82, 83, 86, 90, 93, 97, 103, 130, 151
<code>\count</code> ..... 125	<code>\PLS@RemoveRotate</code> . 113, 148, 166, 174
<code>\count@</code> ..... 175, 179, 181, 183, 184, 185, 186, 187, 188, 189, 190, 191, 194, 196	<code>\PLS@Rotate</code> ..... 168, 169, <u>170</u>
<code>\CurrentOption</code> ... 7, 11, 15, 19, 23, 26	<code>\PLS@temp</code> ... 29, 41, 42, 44, 50, 53, 66, 67, 69, 76, 79, 80, 81, 83, 84, 86, 93, 102, 103, 129, 130, 150, 151
D	<code>\ProcessOptions</code> ..... 27
<code>\DeclareOption</code> ... 6, 10, 14, 18, 22, 26	<code>\ProvidesPackage</code> ..... 3
<code>\do</code> ..... 183, 184	R
E	<code>\RequirePackage</code> ..... 28, 131, 152
<code>\endlandscape</code> ..... 169	S
G	<code>\setbox</code> ..... 138, 159
<code>\g@addto@macro</code> ..... 168, 169	<code>\space</code> ..... 39, 64, 194
<code>\Gin@driver</code> ..... 80	<code>\special</code> ..... 160
<code>\Gin@PS@raw</code> ..... 54, 56, 58, 139	T
I	<code>\the</code> ..... 108, 117, 121, 175, 194
<code>\ifnum</code> ... 30, 34, 54, 105, 135, 156, 185, 186, 187, 188, 189, 190, 191	V
<code>\ifx</code> ..... 30, 32, 40, 44, 54, 56, 58, 65, 69, 80, 82, 86, 97, 103, 122, 130, 151, 178	<code>\vbox</code> ..... 138, 159
L	
<code>\landscape</code> ..... 168	