

The pdfscape package

Heiko Oberdiek
<oberdiek@uni-freiburg.de>

2006/04/24 v0.6

Abstract

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

Contents

1	Documentation	1
1.1	Supported drivers	1
1.2	Caveat	2
1.3	Requirements	2
1.4	Usage	2
2	Implementation	2
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>	3
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
3	Installation	6
3.1	Some details for the interested	7
4	History	7
[2001/01/15 v0.1]		7
[2001/02/04 v0.2]		7
[2004/05/11 v0.3]		8
[2004/05/12 v0.4]		8
[2006/02/20 v0.5]		8
[2006/04/24 v0.6]		8
5	Index	8

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 `everyshi` for all drivers except `pdftex`.

1.4 Usage

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

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

2 Implementation

2.1 Package identification

```
1 \langle *package \rangle
```

Package identification.

```
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdflscape}%
4 [2006/04/24 v0.6 Landscape pages in PDF (HO)]
```

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

```

Already the default.

```

106     \else
107       \global\pdfpageattr\expandafter{%
108         \the\pdfpageattr
109         /Rotate #1%
110       }%
111     \fi
112   }

```

Removes a `/Rotate` entry.

```

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{everyshi}%
132   \EveryShipout{\PLS@EveryShi}%
133   \let\PLS@EveryShi\@empty
134   \def\PLS@AddRotate#1{%
135     \ifnum#1=0
136     \else
137       \def\PLS@EveryShi{%
138         \global\setbox\@ccclv\vbox{%
139           \Gin@PS@raw{%
140             [{ThisPage}]\string<\string</Rotate #1\string>\string>%
141             /PUT pdfmark%
142           }%
143           \box\@ccclv
144         }%
145       }%
146     \fi
147   }%
148   \def\PLS@RemoveRotate{\let\PLS@EveryShi\@empty}%
149 \fi

```

2.4.3 Driver dvipdfm

```

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

CTAN. This package is available on CTAN¹:

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

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

Unpacking. The .dtx file is a self-extracting docstrip archive. The files are extracted by running the .dtx through plain-TeX:

```
tex pdfscape.dtx
```

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

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

```
pdflscape.sty → tex/latex/oberdiek/pdflscape.sty
pdflscape.pdf → doc/latex/oberdiek/pdflscape.pdf
pdflscape.dtx → source/latex/oberdiek/pdflscape.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 (`te \TeX` , `mik \TeX` , ...) rely on file databases, you must refresh these. For example, `te \TeX` users run `texhash` or `mktextlsr`.

3.1 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 pdflscape.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{pdflscape.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 pdflscape.dtx
makeindex -s gind.ist pdflscape.idx
pdflatex pdflscape.dtx
makeindex -s gind.ist pdflscape.idx
pdflatex pdflscape.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.

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		G	
<code>\ccclv</code>	138, 143, 159, 161	<code>\g@addto@macro</code>	168, 169
<code>\@ehc</code>	49, 75, 92, 100, 195	<code>\Gin@driver</code>	80
<code>\@empty</code>	5,	<code>\Gin@PS@raw</code>	54, 56, 58, 139
	40, 58, 65, 82, 97, 133, 148, 154, 166		
<code>\@nil</code>	117, 120, 125	I	
<code>\@undefined</code>	30, 54	<code>\ifnum</code> ...	30, 34, 54, 105, 135, 156,
<code>\@whilenum</code>	183, 184		185, 186, 187, 188, 189, 190, 191
<code>\@</code>	122, 178	<code>\ifx</code>	30,
			32, 40, 44, 54, 56, 58, 65, 69, 80,
			82, 86, 97, 103, 122, 130, 151, 178
A		L	
<code>\addtocounter</code>	183, 184	<code>\landscape</code>	168
<code>\afterassignment</code>	124		
B		M	
<code>\box</code>	143, 161	<code>\MessageBreak</code>	47, 72, 73, 89, 90
C		N	
<code>\count</code>	125	<code>\NeedsTeXFormat</code>	2
<code>\count@</code>	175,		
	179, 181, 183, 184, 185, 186,		
	187, 188, 189, 190, 191, 194, 196		
<code>\CurrentOption</code> ...	7, 11, 15, 19, 23, 26	P	
D		<code>\PackageError</code>	46, 71, 88, 98, 193
<code>\DeclareOption</code> ...	6, 10, 14, 18, 22, 26	<code>\PackageInfo</code>	42, 67, 84
<code>\do</code>	183, 184	<code>\PassOptionsToPackage</code>	
E			7, 11, 15, 19, 23, 26
<code>\endlandscape</code>	169	<code>\pdfoutput</code>	30, 32, 34
<code>\EveryShipout</code>	132, 153	<code>\pdfpageattr</code> ..	107, 108, 115, 117, 121
		<code>\PLS@RemoveRotate</code>	116, 120, 124
		<code>\PLS@AddRotate</code>	104, 134, 155, 175
		<code>\PLS@CheckAngle</code>	172, <u>177</u>

\PLS@driver .	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	
\PLS@EveryShi	132, 133, 137, 148, 153, 154, 158, 166	
\PLS@RemoveRotate .	113, 148, 166, 174	
\PLS@Rotate	168, 169, <u>170</u>	
\PLS@temp	29, 41, 42, 44, 50, 53, 66, 67, 69, 76, 79, 80, 81, 83, 84, 86, 93, 102, 103, 129, 130, 150, 151	
\ProcessOptions	27	
\ProvidesPackage	3	
		R
\RequirePackage	28, 131, 152	
		S
\setbox	138, 159	
\space	39, 64, 194	
\special	160	
		T
\the	108, 117, 121, 175, 194	
		V
\vbox	138, 159	