The pdflscape package

Heiko Oberdiek∗
<heiko.oberdiek at googlemail.com>

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Abstract

Package pdflscape 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
1 Documentation

1.1 Supported drivers

- pdftex, lualatex
- 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, lualatex.

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 (*package)
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{pdflscape}[]
[2016/05/14 v0.11 Display of landscape pages in PDF (HO)]
```

2.2 Driver options

```
5 \let\PLS@option\@empty
6 \let\PLS@driver\@empty
7 \def\PLS@temp#1#2{%
```

2.3 Autodetection of driver

2.3.1 Driver pdftex

2.3.2 Driver xetex
2.3.3 Detect driver based on \Gin@driver

\def\PLS@temp#1#2{\
\ifx\PLS@driver\@empty\
\begingroup\
\def\PLS@temp{#1.def}\
\expandafter\endgroup\
\ifx\PLS@temp\Gin@driver\
\def\PLS@driver{#2}\
\PackageInfo{pdflscape}{\自动检测的驱动: \PLS@driver (#1)}\
\fi\
\fi\
\PLS@temp{dvipdfm}{dvipdfm}\
\PLS@temp{dvipdfmx}{dvipdfm}\
\PLS@temp{dvips}{dvips}\
\PLS@temp{dvipsone}{dvips}\
\PLS@temp{pctexps}{dvips}\
}

2.4 Driver implementation

- \PLS@AddRotate #1
  it expects the correct rotation number in #1 and implements the adding of the /Rotation entry in the /Page object of the current page.

- \PLS@RemoveRotate
  it removes a previous /Rotate entry, if necessary.
2.4.1 \texttt{pdfTeX}

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

\begin{verbatim}
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 %
124     Already the default.
125 \else
126     \global\pdfpageattr\expandafter{%
127        \the\pdfpageattr
128        /Rotate #1%
129    )%
130  \fi
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{%
139     Append /Rotate free stuff to \pdfpageattr.
140 \ifx\#2\%
141     Ready, because the detected /Rotate is part of the end marker: /Rotate\@nil
142 \else
143     First read in the argument of /Rotate, then continue parsing.
144 \afterassignment\PLS@@RemoveRotate
145 \count0=#2\@nil
146 \fi
147 )%
148 \fi
\end{verbatim}

2.4.2 PostScript driver

\begin{verbatim}
149 \def\PLS@temp{dvips}
150 \ifx\PLS@temp\PLS@driver
151 \RequirePackage{atbegshi}%
152 \AtBeginShipout{\PLS@AtBeginShipout}
153 \let\PLS@AtBeginShipout\@empty
154 \def\PLS@AddRotate#1{%
155 \ifnum#1=0 %
156 \global\setbox\AtBeginShipoutBox\vbox{%
157     \Gin@PS@raw{%
158         [{ThisPage}\string<\string</Rotate #1\string>\string>\
159         /PUT pdfmark%
160     )%
161 \fi
\end{verbatim}
2.4.3 Driver dvipdfm

2.5 Driver independent stuff

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

\PLS@Rotate
Main macro, that sets the /Rotate entry. Argument: any TeX number or nothing, that means zero. Driver independent.

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

Nothing means zero:
Normalize to interval $-360 < \texttt{count}@ < 360$.

\begin{verbatim}
\@whilenum\count@>359\do{\advance\count@ -360 }%
\@whilenum\count@<-359\do{\advance\count@ 360 }%
\end{verbatim}

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

\begin{verbatim}
\ifnum 1=0\ifnum\count@=0 \else
  \ifnum\count@=90 \else
    \ifnum\count@=-90 \else
      \ifnum\count@=180 \else
        \ifnum\count@=-180 \else
          1\fi\fi\fi\fi\fi\fi\relax
\PackageError{pdflscape}{Invalid value \the\count@ space for /Rotate}{@ehc}
\count@=0 %}
\fi}
\end{verbatim}

\section{Test}

\subsection{Driver detection tests}

\begin{verbatim}
\NeedsTeXFormat{LaTeX2e}
\documentclass{minimal}
\usepackage{qstest}
\IncludeTests{*}
\LogTests{log}{*}{*}
\end{verbatim}

\begin{verbatim}
\def\ExpectDriver{pdftex}\
usepackage[pdftex]{pdflscape}[2016/05/14]
\end{verbatim}

\begin{verbatim}
\def\ExpectDriver{dvipdfm}\
usepackage[dvipdfmx]{pdflscape}[2016/05/14]
\end{verbatim}

\begin{verbatim}
\def\ExpectDriver{dvips}\
usepackage[dvipsone]{graphics}
\end{verbatim}

\begin{verbatim}
\begin{document}
\begin{qstest}{driver}{driver}
\end{verbatim}

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3.2 Test for $\texttt{PLS@CheckAngle}$

(*test5)
\NeedsTeXFormat{LaTeX2e}
\documentclass{minimal}
\usepackage{qstest}
\IncludeTests{*}
\LogTests{log}{*}{*}
\usepackage[pdflscape]{pdftricks}
\begin{document}
\begin{qstest}{checkangle}{checkangle}
\makeatletter
\def\Result{\def\ResultString{\the\count@}}%
\PackageError#1#2#3{\def\Result{\def\ResultString{error}}}%
\def\Test#1#2{\begingroup\PLS@CheckAngle{#1}\Result\Expect*{\ResultString}{#2}\endgroup}
\Test{0}{0}
\Test{90}{90}
\Test{180}{180}
\Test{270}{270}
\Test{360}{0}
\Test{450}{90}
\Test{540}{180}
\Test{630}{270}
\Test{720}{0}
\Test{3600}{0}
\Test{3690}{90}
\Test{-90}{270}
\Test{-180}{180}
\Test{-270}{-90}
\Test{-360}{0}
\Test{-450}{270}
\Test{-540}{180}
\Test{-630}{90}
\Test{-720}{0}
\Test{-3600}{0}
\Test{-3690}{270}
\Test{1}{error}
\Test{-1}{error}
\Test{123}{error}
\end{qstest}
\end{document}
(*test5)

3.3 Test for rotate

(*test6)
\NeedsTeXFormat{LaTeX2e}
\documentclass{article}
\usepackage{pdflscape}[2016/05/14]
\begin{document}
\section{Portrait page}
\begin{landscape}
\section{Landscape page}
Foo bar foo bar foo bar foo bar foo bar foo bar
\end{landscape}
\section{Portrait Section}
Foo bar
\begin{landscape}
\section{Again Landscape Section}
\newpage
\section{Second Page of Landscape Section}
\end{landscape}
\section{Second Last Portrait Page}
\newpage
\section{Last Portrait Page}
\end{document}

/**
 * ExtractRotate.java
 *
 * Copyright (C) 2007 by Heiko Oberdiek <heiko.oberdiek at googlemail.com>
 *
 * Requires: PDFBox (http://www.pdfbox.org/)
 *
 * Syntax: java ExtractRotate <pdffile> <textfile>
 *
 * The <pdffile> is analyzed and for each page its rotation
 * setting is printed in the <textfile>. Example:
 * /Page 1 /Rotate 0
 * /Page 2 /Rotate 90
 *
 */
import java.io.FileInputStream;
import java.io.FileWriter;
import org.pdfbox.pdfparser.PDFParser;
import org.pdfbox.pdmodel.PDDocument;
import org.pdfbox.pdmodel.PDPage;

public class ExtractRotate {
    public static void main(String[] args) {
        try {
            String infile = args[0];
            String outfile = args[1];
            FileWriter out = new FileWriter(outfile);
            PDFParser parser =
                new PDFParser(new FileInputStream(infile));
parser.parse();
PDDocument document = parser.getPDDocument();
PDDocumentCatalog catalog = document.getDocumentCatalog();
int i = 0;
for (Object page: catalog.getAllPages()) {
    i++;
    out.write("/Page " + i + " /Rotate "
            + ((PDPage)page).findRotation() + "\n");
}
document.close();
out.close();
}
} catch (Exception e) {
    e.printStackTrace();
    System.exit(1);
}
}⟨/ExtractRotate⟩

4 Installation

4.1 Download

Package. This package is available on CTAN¹:


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 \LaTeX\ 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 \LaTeX:\n
    tex pdflscape.dtx

¹http://ctan.org/pkg/pdflscape
TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as \texttt{texmf} tree):

- \texttt{pdflscape.sty} → \texttt{tex/latex/oberdiek/pdflscape.sty}
- \texttt{pdflscape.pdf} → \texttt{doc/latex/oberdiek/pdflscape.pdf}
- \texttt{test/pdflscape-test1.tex} → \texttt{doc/latex/oberdiek/test/pdflscape-test1.tex}
- \texttt{test/pdflscape-test2.tex} → \texttt{doc/latex/oberdiek/test/pdflscape-test2.tex}
- \texttt{test/pdflscape-test3.tex} → \texttt{doc/latex/oberdiek/test/pdflscape-test3.tex}
- \texttt{test/pdflscape-test4.tex} → \texttt{doc/latex/oberdiek/test/pdflscape-test4.tex}
- \texttt{test/pdflscape-test5.tex} → \texttt{doc/latex/oberdiek/test/pdflscape-test5.tex}
- \texttt{test/pdflscape-test6.tex} → \texttt{doc/latex/oberdiek/test/pdflscape-test6.tex}
- \texttt{test/ExtractRotate.java} → \texttt{doc/latex/oberdiek/test/ExtractRotate.java}
- \texttt{pdflscape.dtx} → \texttt{source/latex/oberdiek/pdflscape.dtx}

If you have a \texttt{docstrip.cfg} that configures and enables \texttt{docstrip}'s TDS installing feature, then some files can already be in the right place, see the documentation of \texttt{docstrip}.

### 4.4 Refresh file name databases

If your \TeX{} distribution (\texttt{teTeX}, \texttt{mikTeX}, …) relies on file name databases, you must refresh these. For example, \texttt{teTeX} users run \texttt{texhash} or \texttt{mktexlsr}.

### 4.5 Some details for the interested

**Unpacking with \LaTeX{.}** The \texttt{.dtx} chooses its action depending on the format:

- **plain \TeX{}**: Run \texttt{docstrip} and extract the files.
- **\LaTeX{}**: Generate the documentation.

If you insist on using \LaTeX{} for \texttt{docstrip} (really, \texttt{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 \texttt{.dtx} or the \texttt{.drv} to generate the documentation. The process can be configured by the configuration file \texttt{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 \texttt{pdf\LaTeX{}}:

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

### 5 Catalogue

The following XML file can be used as source for the \TeX{} Catalogue. The elements \texttt{caption} and \texttt{description} are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is \texttt{pdflscape.xml}.

```xml
<catalogue>
  ...
</catalogue>
```
6 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.

[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.

²Url: http://groups.google.com/group/de.comp.text.tex/msg/e054c5795e52d2b8
[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 XeTeX 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

7 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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