The \texttt{pdflscape} package

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Abstract
Package \texttt{pdflscape} adds PDF support to the environment \texttt{landscape} of package \texttt{lscape} by setting the PDF page attribute /\texttt{Rotate}.

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\textsuperscript{*}Please report any issues at https://github.com/ho-tex/oberdiek/issues
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{pdflscape}
\begin{landscape}...
```

2 Implementation

2.1 Package identification

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

2.2 Driver options

```
\let\PLS@option@empty
```
2.3 Autodetection of driver

2.3.1 Driver pdftex

2.3.2 Driver xetex
\fi
\ifx\PLS@driver\PLS@temp
\else
\PackageError{pdflscape}{The driver option \textbackslash{}PLS@option is not compatible}
with XeTeX, using driver for XeTeX (dvipdfm) instead\%
\@ehc
\let\PLS@driver\PLS@temp
\fi
\fi

2.3.3 Detect driver based on \texttt{\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}{Auto-detected driver: \PLS@driver\space(#1)}%
\fi
\fi}
\PLS@temp{dvipdfm}{dvipdfm}
\PLS@temp{dvipdfmx}{dvipdfm}
\PLS@temp{dvips}{dvips}
\PLS@temp{dvipsone}{dvips}
\PLS@temp{pctexps}{dvips}

2.3.4 Driver \texttt{dvips}
\ifx\PLS@driver\@empty
\def\PLS@temp{dvips}\ifnum 1=0\ifx\Gin@PS@raw\@undefined
\else\ifx\Gin@PS@raw\relax
\else\ifx\Gin@PS@raw\@empty
\else
1\%
\fi
\fi
\fi
\def\PLS@temp{dvips}
\PackageInfo{pdflscape}{Auto-detected driver: \PLS@temp\space(PostScript)}%
\fi
\fi
\ifx\PLS@driver\@empty
\PackageError{pdflscape}{Neither pdfTeX, PostScript, nor dvipdfm driver found}\@ehc
\fi

2.4 Driver implementation
\item \texttt{\PLS@AddRotate \#1}
it expects the correct rotation number in \texttt{\#1} and implements the adding of
the \texttt{/Rotation} entry in the \texttt{/Page} object of the current page.
• \texttt{\textbackslash{}PLS@RemoveRotate}
  
it removes a previous \texttt{/Rotate} entry, if necessary.

\textbf{2.4.1 pdftex}

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

\begin{verbatim}
\ltxcompat
 115 \iffx\pdfpageattr\@undefined
 116 \iffx\pdfvariable\@undefined\else
 117 \protect\edef\pdfpageattr{\pdfvariable pageattr}
 118 \fi
 119 \fi
 120 \def\PLS@temp{pdftex}
 121 \iffx\PLS@temp\PLS@driver
 122 \def\PLS@AddRotate#1{%
 123 \ifnum#1=0 %
 124 \else
 125 \global\pdfpageattr\expandafter{%
 126 \the\pdfpageattr
 127 /Rotate \#1%
 128 }%
 129 \fi
 130 }%
 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 \texttt{/Rotate} free stuff to \texttt{\pdfpageattr}.
 139 \global\pdfpageattr\expandafter{%\the\pdfpageattr#1}%
 140 \ifx\.#2\%
 141 \else
 142 \afterassignment\PLS@@RemoveRotate
 143 \count0=#2\@nil
 144 \fi
 145 }%
 146 \fi
\end{verbatim}

Already the default.

\begin{verbatim}
2.4.2 PostScript driver
\end{verbatim}

\begin{verbatim}
\ltxcompat
 147 \iffx\PLS@temp{dvips}
 148 \iffx\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 \AtBeginShipout{%
 156 \global\setbox\AtBeginShipoutBox\vbox{%
\end{verbatim}

Removes a \texttt{/Rotate} entry.
2.4.3 Driver dvipdfm

\def\PLS@temp{dvipdfm}
\fx\PLS@temp\PLS@driver
\RequirePackage{atbegshi}
\AtBeginShipout\PLS@AtBeginShipout\empty
\def\PLS@AddRotate#1{\let\PLS@AtBeginShipout\@empty
\ifnum#1=0 \\
\else
\def\PLS@AtBeginShipout{\global\setbox\AtBeginShipoutBox\vbox{%\
special{pdf: put @thispage <</Rotate #1>>}\\
\box\AtBeginShipoutBox
}}\fi
\fi
\def\PLS@RemoveRotate\PLS@AtBeginShipout\empty
\fi

2.5 Driver independent stuff

The landscape environment is extended by adding the correct /Rotate entries.
\g@addto@macro{\landscape}{\PLS@Rotate{90}}
\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.
\def\PLS@Rotate#1{\begingroup
1. Check and validate the argument.
\PLS@CheckAngle(#1)%
2. Remove previous /Rotate entry.
\expandafter\PLS@RemoveRotate
3. Add /Rotate entry.
\expandafter\PLS@AddRotate\expandafter{\the\count@}%
}\endgroup

\PLS@CheckAngle Validates the rotation angle.
The result is stored in the count register \count@.
Driver independent.
\def\PLS@CheckAngle#1{%
Nothing means zero:
\ifx\#1\%
\count@=0 %
\else
\count@=#1\relax
\fi
Normalize to interval -360 < \count@ < 360.
\@whilenum\count@>359\do{\advance\count@ -360 }%
\@whilenum\count@<-359\do{\advance\count@ 360 }%
Check values: 0, +/-90, +/-180, +/-270
\ifnum 1=0\ifnum\count@=0 \else
\ifnum\count@=90 \else
\ifnum\count@=-90 \else
\ifnum\count@=180 \else
\ifnum\count@=-180 \else
\ifnum\count@=270 \else
\ifnum\count@=-270 \else
1\fi\fi\fi\fi\fi\fi\fi\relax
\PackageError{pdflscape}{%Invali\the\count@ space for /Rotate%}
\@ehc
\count@=0 %
\fi
}

3 Test

3.1 Driver detection tests
\NeedsTeXFormat{LaTeX2e}
documentclass{minimal}
usepackage{qstest}
\IncludeTests{*}
\LogTests{log}{*}{*}
\def\ExpectDriver{pdftex}%
\usepackage{ifpdf}
\ifpdf
\def\ExpectDriver{dvipdfm}%
\usepackage{ifxetex}
\ifxetex
\def\ExpectDriver{pdftex}%
\usepackage{pdflscape}[2016/05/14]
\def\ExpectDriver{dvipdfm}%
\usepackage[dvipdfmx]{pdflscape}[2016/05/14]
\def\ExpectDriver{dvips}\
\usepackage[dvipsone]{graphics}
\usepackage{pdflscape}[2016/05/14]
\def\ExpectDriver{dvips}\
\def\ExpectDriver{dvipdfm}
\usepackage{pdflscape}[2016/05/14]
\usepackage{pdflscape}[2016/05/14]
3.2 Test for $\texttt{\makeatletter\Expect*{\PLS@driver}{\ExpectDriver}}$

(*test5)
\NeedsTeXFormat{LaTeX2e}
\documentclass{minimal}
\usepackage{qstest}
\IncludeTests{*}
\LogTests{log}{*}{*}
\usepackage{pdflscape}[2016/05/14]
\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

\documentclass{article}
\usepackage{pdflscape}
\begin{document}
\section{Portrait page}
\section{Landscape page}
\section{Portrait Section}
\section{Again Landscape Section}
\newpage
\section{Second Page of Landscape Section}
\newpage
\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
 * /Page 3 /Rotate 0
 * /Page 4 /Rotate 90
 * /Page 5 /Rotate 90
 * /Page 6 /Rotate 0
 * /Page 7 /Rotate 0
 */

import java.io.FileInputStream;
import java.io.FileWriter;
import org.pdfbox.pdfparser.PDFParser;
import org.pdfbox.pdmodel.PDDocument;
import org.pdfbox.pdmodel.PDPage;
import java.io.FileInputStream;
import java.io.FileWriter;
import org.pdfbox.pdfparser.PDFParser;
import org.pdfbox.pdmodel.PDDocument;
import org.pdfbox.pdmodel.PDDocumentCatalog;
import org.pdfbox.pdmodel.PDDocument;

public class ExtractRotate {
    public static void main(String[] args) {
        try {
            String infile = args[0];
            String outfile = args[1];
        }
    }
}
FileWriter out = new FileWriter(outfile);
PDFFParser parser =
  new PDFFParser(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);
}
} /

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 docu-
mentation 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 \TeX Files” (CTAN:tds/tds.pdf). Directories with \texttt{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 \texttt{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 \texttt{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 \TeX:
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 texmf tree):

```
pdflscape.sty  →  tex/latex/oberdiek/pdflscape.sty
pdflscape.pdf  →  doc/latex/oberdiek/pdflscape.pdf
test/pdflscape-test1.tex → doc/latex/oberdiek/test/pdflscape-test1.tex
test/pdflscape-test2.tex → doc/latex/oberdiek/test/pdflscape-test2.tex
test/pdflscape-test3.tex → doc/latex/oberdiek/test/pdflscape-test3.tex
test/pdflscape-test4.tex → doc/latex/oberdiek/test/pdflscape-test4.tex
test/pdflscape-test5.tex → doc/latex/oberdiek/test/pdflscape-test5.tex
test/pdflscape-test6.tex → doc/latex/oberdiek/test/pdflscape-test6.tex
test/pdflscape-test6.txt → doc/latex/oberdiek/test/pdflscape-test6.txt
test/ExtractRotate.java → doc/latex/oberdiek/test/ExtractRotate.java
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.

4.4 Refresh file name databases

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

4.5 Some details for the interested

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:

```
later \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 pdfl\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 `caption` and `description` are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is `pdflscape.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: \texttt{\textbackslash PLS@RemoveRotate} reinserted for \texttt{\textbackslash PLS@Rotate}.
- Fix for \texttt{\textbackslash PLS@RemoveRotate} (dvips/dvipdfm): \texttt{\textbackslash PLS@EverhShi} hook is cleared.

\(^2\)Url: http://groups.google.com/group/de.comp.text.tex/msg/e054c5795e22b8
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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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