The pdflscape package

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2016/05/14 v0.11

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

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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}...\end{landscape}
```

2 Implementation

2.1 Package identification

1 ⟨*package⟩

Package identification.

```
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdflscape}%
4   [2016/05/14 v0.11 Display of landscape pages in PDF (HO)]
```

2.2 Driver options

```
5 \let\PLS@option\@empty
```

```
\let\PLS@driver\@empty
\def\PLS@temp#1#2{%
  \DeclareOption{#1}{%
    \let\PLS@option\CurrentOption
    \def\PLS@driver{#2}%
  }%
}
\PLS@temp{pdftex}{pdftex}
\PLS@temp{luatex}{pdftex}
\PLS@temp{dvips}{dvips}
\PLS@temp{dvipsone}{dvips}
\PLS@temp{pctexps}{dvips}
\PLS@temp{dvipdfm}{dvipdfm}
\PLS@temp{dvipdfmx}{dvipdfm}
\PLS@temp{xetex}{dvipdfm}
\let\PLS@temp\@empty
\DeclareOption*{%
  \ifx\PLS@temp\@empty
    \let\PLS@temp\CurrentOption
  \else
    \edef\PLS@temp{\PLS@temp,\CurrentOption}%
  \fi
}
\ProcessOptions*
\ifx\PLS@option\@empty
\else
  \expandafter\PassOptionsToPackage\expandafter{\PLS@option}{lscape}%
\fi
\ifx\PLS@temp\@empty
\else
  \expandafter\PassOptionsToPackage\expandafter{\PLS@temp}{lscape}%
\fi
\RequirePackage{lscape}
```

2.3 Autodetection of driver

2.3.1 Driver pdftex

```
\RequirePackage{ifpdf}[2006/02/20]
\def\PLS@temp{pdftex}
\ifpdf
  \ifx\PLS@driver\@empty
    \let\PLS@driver\PLS@temp
    \PackageInfo{pdflscape}{Auto-detected driver: \PLS@temp}%
  \fi
  \ifx\PLS@driver\PLS@temp
  \else
    \PackageError{pdflscape}{%
      The driver option `\PLS@option' is not compatible\MessageBreak
      with pdfTeX in PDF mode, using driver `pdftex' instead%
    }\@ehc
    \let\PLS@driver\PLS@temp
  \fi
\fi
```

2.3.2 Driver xetex

```
\RequirePackage{ifxetex}%
\def\PLS@temp{dvipdfm}
\ifxetex
  \ifx\PLS@driver\@empty
    \let\PLS@driver\PLS@temp
    \PackageInfo{pdflscape}{%
      Auto-detected driver: \PLS@temp\space(xetex)%
    }%
```

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

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}{%
        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 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
          \space
    \let\PLS@driver\PLS@temp
    \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

- \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 pdfTeX

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

luatex compat.

```
\ifx\pdfpageattr\@undefined
  \ifx\pdfvariable\@undefined\else
    \protected\edef\pdfpageattr{\pdfvariable pageattr}
  \fi
\fi
\def\PLS@temp{pdftex}
\ifx\PLS@temp\PLS@driver
  \def\PLS@AddRotate#1{%
    \ifnum#1=0 %
```

Already the default.

```
    \else
      \global\pdfpageattr\expandafter{%
        \the\pdfpageattr
        /Rotate #1%
      }%
    \fi
  }%
```

Removes a /Rotate entry.

```
  \def\PLS@RemoveRotate{%
    \begingroup
      \global\pdfpageattr\expandafter{\expandafter}%
      \expandafter\PLS@@RemoveRotate
        \the\pdfpageattr /Rotate\@nil
    \endgroup
  }%
  \def\PLS@@RemoveRotate#1/Rotate#2\@nil{%
```

Append /Rotate free stuff to \pdfpageattr.

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

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

```
    \else
```

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

```
      \afterassignment\PLS@@RemoveRotate
      \count0=#2\@nil
    \fi
  }%
\fi
```

2.4.2 PostScript driver

```
\def\PLS@temp{dvips}
\ifx\PLS@temp\PLS@driver
  \RequirePackage{atbegshi}%
  \AtBeginShipout{\PLS@AtBeginShipout}%
  \let\PLS@AtBeginShipout\@empty
  \def\PLS@AddRotate#1{%
    \ifnum#1=0 %
    \else
      \def\PLS@AtBeginShipout{%
        \global\setbox\AtBeginShipoutBox\vbox{%
```

```
      \Gin@PS@raw{%
        [{ThisPage}\string<\string</Rotate #1\string>\string>%
        /PUT pdfmark%
      }%
      \box\AtBeginShipoutBox
    }%
   }%
  \fi
 }%
 \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%
\fi
```

2.4.3 Driver dvipdfm

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

2. Remove previous `\Rotate` entry.

```
 \expandafter\PLS@RemoveRotate
```

3. Add `/Rotate` entry.

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

`\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}{%
      Invalid value \the\count@\space for /Rotate%
    }\@ehc
    \count@=0 %
  \fi
}

⟨/package⟩
```

3 Test

3.1 Driver detection tests

```
⟨*test0⟩
\NeedsTeXFormat{LaTeX2e}
\documentclass{minimal}
\usepackage{qstest}
\IncludeTests{*}
\LogTests{log}{*}{*}
⟨/test0⟩

⟨*test1⟩
\usepackage{ifpdf}
\ifpdf
  \def\ExpectDriver{pdftex}%
\fi
\usepackage{ifxetex}%
\ifxetex
  \def\ExpectDriver{dvipdfm}%
\fi
\usepackage{pdflscape}[2016/05/14]
⟨/test1⟩

⟨*test2⟩
\def\ExpectDriver{pdftex}
\usepackage[pdftex]{pdflscape}[2016/05/14]
⟨/test2⟩

⟨*test3⟩
\def\ExpectDriver{dvipdfm}
\usepackage[dvipdfmx]{pdflscape}[2016/05/14]
⟨/test3⟩

⟨*test4⟩
\def\ExpectDriver{dvips}
\usepackage[dvipsone]{graphics}
\usepackage{pdflscape}[2016/05/14]
⟨/test4⟩

⟨*test0⟩
```

```
\begin{document}
\begin{qstest}{driver}{driver}
  \makeatletter
  \Expect*{\PLS@driver}*{\ExpectDriver}%
\end{qstest}
\end{document}
⟨/test0⟩
```

3.2 Test for \PLS@CheckAngle

```
⟨*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@}%
  }%
  \def\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 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}
⟨/test6⟩
```

```
⟨*result6⟩
/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
⟨/result6⟩
```

```
⟨*ExtractRotate⟩
/**
 * 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.PDDocumentCatalog;
import org.pdfbox.pdmodel.PDPage;

public class ExtractRotate {

    public static void main(String[] args) {
        try {
            String infile = args[0];
            String outfile = args[1];
```

```
369           FileWriter out = new FileWriter(outfile);
370           PDFParser parser =
371                 new PDFParser(new FileInputStream(infile));
372           parser.parse();
373           PDDocument document = parser.getPDDocument();
374           PDDocumentCatalog catalog = document.getDocumentCatalog();
375           int i = 0;
376           for (Object page: catalog.getAllPages()) {
377              i++;
378              out.write("/Page " + i + " " + "/Rotate "
379                    + ((PDPage)page).findRotation() + "\n");
380           }
381           document.close();
382           out.close();
383        }
384        catch (Exception e) {
385           e.printStackTrace();
386           System.exit(1);
387        }
388     }
389 }
390 ⟨/ExtractRotate⟩
```

4 Installation

4.1 Download

Package. This package is available on CTAN[1]:

CTAN:macros/latex/contrib/oberdiek/pdflscape.dtx The source file.

CTAN:macros/latex/contrib/oberdiek/pdflscape.pdf Documentation.

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 TEX 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 TEX:

```
tex pdflscape.dtx
```

[1] http://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 (teTEX, mikTEX, ...) relies on file name databases, you must refresh these. For example, teTEX 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:

```
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 pdfLATEX:

```
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.

391 ⟨*catalogue⟩

392 <?xml version='1.0' encoding='us-ascii'?>

```
<!DOCTYPE entry SYSTEM 'catalogue.dtd'>
<entry datestamp='$Date$' modifier='$Author$' id='pdflscape'>
  <name>pdflscape</name>
  <caption>Make landscape pages display as landscape.</caption>
  <authorref id='auth:oberdiek'/>
  <copyright owner='Heiko Oberdiek' year='2001,2004,2006-2008'/>
  <license type='lppl1.3'/>
  <version number='0.11'/>
  <description>
    The package adds PDF support to the landscape environment of
    package <xref refid='lscape'>lscape</xref>, by setting the PDF
    <tt>/Rotate</tt> page attribute.  Pages with this attribute will be
    displayed in landscape orientation by conforming PDF viewers.
    <p/>
    The package is part of the <xref refid='oberdiek'>oberdiek</xref> bundle.
  </description>
  <documentation details='Package documentation'
      href='ctan:/macros/latex/contrib/oberdiek/pdflscape.pdf'/>
  <ctan file='true' path='/macros/latex/contrib/oberdiek/pdflscape.dtx'/>
  <miktex location='oberdiek'/>
  <texlive location='oberdiek'/>
  <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip'/>
</entry>
⟨/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.

[2]Url: 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

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