The \texttt{pdflscape} package

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Abstract

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

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

```bash
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:

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

2 Implementation

2.1 Package identification

1 (*package)

Package identification.

2 \NeedsTeXFormat{LaTeX2e}

3 \ProvidesPackage{pdflscape}[]%

4 [2019/12/05 v0.12 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{%

8 \DeclareOption{#1}{%
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}\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

\def\PLS@temp{dvips}\
\ifnum1=0\ifx\Gin@PS@raw\@undefined\else\ifx\Gin@PS@raw\relax\else\ifx\Gin@PS@raw\@empty\else1\fi\fi\fi\fi\let\PLS@driver\PLS@temp
\PackageInfo{pdflscape}{Auto-detected driver: \PLS@temp space(PostScript)}
\fi
\fi
\fi
\PackageError{pdflscape}{Neither pdfTeX, PostScript, nor dvipdfm driver found}
2.4 Driver implementation

- \texttt{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.

- \texttt{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.

\texttt{luatex compat.}

\begin{verbatim}
\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
  \else
    \global\pdfpageattr{\the\pdfpageattr /Rotate #1%}
  \fi
}
\def\PLS@RemoveRotate{%\begingroup
  \global\pdfpageattr{\expandafter}{\expandafter}
  \expandafter\PLS@@RemoveRotate\the\pdfpageattr /Rotate\@nil
  \endgroup
\def\PLS@@RemoveRotate#1/Rotate#2\@nil{%\global\pdfpageattr{\the\pdfpageattr#1}%
  \ifx\#2\%
  \else
    \afterassignment\PLS@@RemoveRotate
    \count0=#2\@nil
  \fi
}
\def\PLS@RemoveRotate{%\begingroup
  \global\pdfpageattr{\expandafter{\expandafter}{\expandafter}
  \expandafter\PLS@@RemoveRotate\the\pdfpageattr /Rotate\@nil
  \endgroup
\def\PLS@@RemoveRotate#1/Rotate#2\@nil{%\global\pdfpageattr{\the\pdfpageattr#1}%
  \ifx\#2\%
  \else
    \afterassignment\PLS@@RemoveRotate
    \count0=#2\@nil
  \fi
}
\end{verbatim}
### 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>\string>%
          /PUT pdfmark%
        }%
        \box\AtBeginShipoutBox
      }%
    }%
    \fi
  }
  \def\PLS@RemoveRotate\@empty
\else
  \def\PLS@AtBeginShipout{%
    \global\setbox\AtBeginShipoutBox\vbox{%
      \Gin@PS@raw{%
        [{ThisPage}\string<\string</Rotate #1\string>\string>\string>%
        /PUT pdfmark%
      }%
    }
  }
\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\@empty
\else
  \def\PLS@AtBeginShipout{%
    \global\setbox\AtBeginShipoutBox\vbox{%
      \special{pdf: put @thispage <</Rotate #1>>}%
    }
  }
\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}}
```

\textbf{\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
}

3 Installation

3.1 Download

Package. This package is available on CTAN:\(^{1}\):
\url{CTAN:macros/latex/contrib/pdflscape/pdflscape.dtx} The source file.
\url{CTAN:macros/latex/contrib/pdflscape/pdflscape.pdf} Documentation.

Bundle. All the packages of the bundle ‘pdflscape’ are also available in a TDS
compliant ZIP archive. There the packages are already unpacked and the docu-
m entation files are generated. The files and directories obey the TDS standard.
\url{CTAN:install/macros/latex/contrib/pdflscape.tds.zip}

TDS refers to the standard “A Directory Structure for \TeX\ Files” (CTAN:pkg/tds). Directories with \texttt{texmf} in their name are usually organized this way.

\(^{1}\)CTAN:pkg/pdflscape
3.2 Bundle installation

**Unpacking.** Unpack the `pdflscape.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip pdflscape.tds.zip -d ~/texmf
```

3.3 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
```

**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/pdflscape/pdflscape.sty
pdflscape.pdf → doc/latex/pdflscape/pdflscape.pdf
pdflscape.dtx → source/latex/pdflscape/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`.

3.4 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`.

3.5 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:

```
ltx \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:
  “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.

[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 Xe\TeX added.
- Fix for rotation angles ≤ -360 or ≥ 360.

[2008/08/11 v0.10]
- Code is not changed.
- URLs updated.

\(^2\)Url: https://groups.google.com/group/de.comp.text.tex/msg/e054c5795e52d2b8
5 Index

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[2016/05/14 v0.11]
• LuaTeX Compatibility

[2019/12/05 v0.12]
• Documentation updates.
• iftex package.
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