

The `pagesel` package

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Abstract

Single pages or page areas can be selected for output.

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*Please report any issues at <https://github.com/ho-tex/oberdiek/issues>

1 Usage

The package `pagesel` is a $\text{\LaTeX} 2_{\epsilon}$ package:

```
\usepackage[<options>]{pagesel}
```

(For plain \TeX and \LaTeX 2.09 the similar package `selectp`¹ from Donald Arsenau² can be used.)

Depending on the options the package works in two modes:

1. If no page selecting option is present, so the package ignores the other options and finishes itself. So no page will be suppressed by the package and auxiliary files will be written.
2. With at least one page selecting option the specified pages are selected and the other are suppressed. The default for this mode is that auxiliary will not be overwritten. (This can be changed by an option.)

1.1 Page selecting

The package `pagesel` sets up a new counter that is incremented by each `\shipout`. In this way the package counts the output pages regardless the value of the page counter. So each page can individually be addressed, even if there are several pages with the same page number.

1.1.1 Options for selecting pages

odd: The output pages must have an odd number. All even output pages are suppressed. If there are no page areas specified so all odd pages are print. With page areas only the odd pages in this areas are selected.

even: The opposite of option `odd`.

Page area: A page area consists of three elements: the starting output page number, an “area” hyphen, and the output page number of the last page in this area. Each component is optional, so there are four kinds to specify a page area:

`<m>-<n>`: All pages between `<m>` and `<n>` inclusive.

`-<n>`: All pages until `<n>` inclusive.

`<m>-`: The page area starts with `<m>` and all pages to the end of document are selected.

`-`: All pages (not very useful).

`<s>`: The single page `<s>`.

1.1.2 Examples

| Options | Output pages |
|---------------------------------|--------------------|
| <code>[1, 4, 9]</code> | 1, 4, and 9 |
| <code>[7-10, 3]</code> | 3, 7, 8, 9, and 10 |
| <code>[odd, 3-6]</code> | 3, and 5 |
| <code>[-4, 3, even, 7-8]</code> | 2, 4, and 8 |

¹Url: <https://ctan.org/pkg/selectp>

²Donald Arsenau’s email address: asnd@triumf.ca

1.2 Auxiliary files

If a page is suppressed, the `\write` commands are not performed. Labels, index entries, or entries for the table of contents aren't written. So it is likely that the table of contents, registers, and lists are incomplete.

1.2.1 Options for handling auxiliary files

nofiles: This is the default. Auxiliary files are read but not written or changed. Also the job is aborted after the last selected page for saving time.

nonofiles/files: Auxiliary files are written.

1.2.2 Package hyperref

In old versions of `hyperref` [1999/04/12 v6.55] (and below) there is a bug with `\nofiles`:

- Some “garbage” appears on terminal and in the log file. This is harmless and can be ignored.
- The outline auxiliary file `\jobname.out`, however, is opened and truncated to zero bytes. Version 1.0 of this package had loaded a patch file `hypnofil.tex`, if it detects `hyperref` to get `\nofiles` work.

With the new version of `hyperref` [1999/04/13 v6.56] `\nofiles` works now. Therefore the workaround code is no longer needed and removed.

2 Implementation

2.1 Package

```
1 (*package)
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pagesel}
4 [2016/05/16 v1.9 Select pages of a document for output (H0)]%
5 \@ifundefined{ps@makevoid}{\}%
6 \PackageWarningNoLine{pagesel}{Package already loaded.}%
7 \endinput
8 }
```

If the package is loaded twice, the package code does not work. So stop loading the package, if it is already loaded.

`\ps@makevoid` Macro `\ps@makevoid` clears the output box. Because nothing is shipped out and this is intended, we reduce the counter `\deadcycles` in order to avoid problems, if more than `\maxdeadcycles` pages are omitted.

```
9 \newcommand*{\ps@makevoid}{\%
10 \global\setbox\@cc1v\copy\voidb@x
11 \begingroup
12 \count@=\deadcycles
13 \advance\count@ by -1\relax
14 \deadcycles=\count@
15 \endgroup
16 }
```

`\ps@oddpages`

```
17 \newcommand*\ps@oddpages{0}
18 \DeclareOption{odd}{\renewcommand*\ps@oddpages{1}}
19 \DeclareOption{even}{\renewcommand*\ps@oddpages{2}}
```

```

20 \DeclareOption{nofiles}{\let\ps@nofiles\nofiles}
21 \DeclareOption{nonofiles}{\let\ps@nofiles\@empty}
22 \DeclareOption{files}{\let\ps@nofiles\@empty}
23 \ExecuteOptions{nofiles}

24 \DeclareOption*{%
25   \begingroup
26     \expandafter\ps@checkoption\CurrentOption-\END
27     \edef\x{\endgroup\noexpand\ps@store{\ps@first}{\ps@last}}}%
28   \x
29 }

\ps@checkoption
30 \newcommand\ps@checkoption{}
31 \def\ps@checkoption#1-#2\END{%
32   \ifx\#2\%
33     \ifx\#1\%
34       % empty option
35       \def\ps@first{\maxdimen}%
36       \def\ps@last{\maxdimen}%
37     \else
38       \edef\ps@first{#1}%
39       \edef\ps@last{#1}%
40     \fi
41   \else
42     \ifx\#1\%
43       \def\ps@first{-\maxdimen}%
44     \else
45       \edef\ps@first{#1}%
46     \fi
47     \ps@checklast#2%
48   \fi
49 }

\ps@checklast
50 \newcommand\ps@checklast{}
51 \def\ps@checklast#1-{%
52   \ifx\#1\%
53     \def\ps@last{\maxdimen}%
54   \else
55     \edef\ps@last{#1}%
56   \fi
57 }

\ps@store
58 \newcommand*\ps@store}[2]{%
59   \expandafter\def\expandafter\ps@testlist\expandafter{%
60     \ps@testlist\ps@pagetest{#1}{#2}%
61   }%
62 }

\ps@testlist
63 \newcommand*\ps@testlist{}

64 \ProcessOptions
65 \begingroup
66   \edef\x{%
67     \ifnum\ps@oddpages>0 \relax\fi

```

```

68     \ifx\ps@testlist\@empty\else\relax\fi
69   }%
70   \ifx\x\@empty
71     \endgroup
72     \PackageInfo{pagesel}{Nothing to do}%
73     \expandafter\endinput
74   \fi
75 \endgroup

76 \RequirePackage{everyshi}

77 \ps@nofiles

\c@ps@count

78 \newcounter{ps@count}
79 \setcounter{ps@count}{0}

\ps@ReturnAfterElseFi
\ps@ReturnAfterFi
80 \long\def\ps@ReturnAfterElseFi#1\else#2\fi{\fi#1}
81 \long\def\ps@ReturnAfterFi#1\fi{\fi#1}

82 \newcommand{\ps@lastpage}{\maxdimen}
83 \ifx\ps@nofiles\nofiles
84   \ifx\ps@testlist\@empty
85     \else
86       \def\ps@lastpage{0}%
87       \newcommand*{\ps@pagetest}[2]{%
88         \ifnum#2>\ps@lastpage\relax
89         \def\ps@lastpage{#2}%
90       \fi
91     }%
92     \ps@testlist
93     \let\ps@pagetest\relax
94   \fi
95 \fi

\ps@ifinset

96 \newcommand*{\ps@ifinset}[4]{%
97   \ifnum#1>\value{ps@count}%
98     \ps@ReturnAfterElseFi{#4}%
99   \else
100     \ps@ReturnAfterFi{%
101       \ifnum#2<\value{ps@count}%
102         \ps@ReturnAfterElseFi{#4}%
103       \else
104         \ps@ReturnAfterFi{#3}%
105       \fi
106     }%
107   \fi
108 }

\ps@pagetest

109 \newcommand*{\ps@pagetest}[2]{%
110   \ps@ifinset{#1}{#2}{\let\ps@next\@empty}{}%
111 }

112 \EveryShipout{%
113   \stepcounter{ps@count}%
114   \ifnum\value{ps@count}>\ps@lastpage\relax

```

```

115 \global\output{%
116 \ps@cleanup@if
117 \ps@group@message
118 \typeout{%
119 Package pagesel Notice: Aborting LaTeX job %
120 after last selected page (\ps@lastpage).%
121 }%
122 \ps@message@ignore
123 \global\setbox\@cclv\box\voidb@x
124 \deadcycles0\relax

```

First leave the output group before ending the job.

```

125 \aftergroup\@@end
126 }%
127 \fi
128 \let\ps@next\@empty
129 \ifx\ps@testlist\@empty
130 \else
131 \let\ps@next\ps@makevoid
132 \ps@testlist
133 \fi
134 \ifnum\ps@oddpages=1 %
135 \ifodd\value\ps@count}%
136 \else
137 \let\ps@next\ps@makevoid
138 \fi
139 \fi
140 \ifnum\ps@oddpages=2 %
141 \ifodd\value\ps@count}%
142 \let\ps@next\ps@makevoid
143 \else
144 \fi
145 \fi
146 \ps@begindvi
147 \ps@next
148 }

149 \begingroup\expandafter\expandafter\expandafter\endgroup
150 \expandafter\ifx\csname currentiflevel\endcsname\relax
151 \let\ps@cleanup@if\@empty
152 \else
153 \def\ps@cleanup@if{%
154 \ifnum\currentiflevel>\@ne
155 \csname fi\endcsname
156 \expandafter\ps@cleanup@if
157 \fi
158 }%
159 \fi

```

Because of `\aftergroup` it is too dangerous to perform a similar cleanup for groups.

```

160 \begingroup\expandafter\expandafter\expandafter\endgroup
161 \expandafter\ifx\csname currentgrouplevel\endcsname\relax
162 \let\ps@group@message\@empty
163 \def\ps@message@ignore{%
164 \typeout{%
165 (pagesel) \space\space\@spaces\@spaces\@spaces
166 Messages (\string\end\space occurred ...) can be ignored.%
167 }%

```

```

168 }%
169 \else
170   \def\ps@group@message{%
171     \ifnum\currentgrouplevel>\@ne
172       \def\ps@message@ignore{%
173         \typeout{%
174           (pagesel) \space\space\@spaces\@spaces\@spaces
175           Message (\string\end\space occurred ...) %
176           can be ignored.%
177         }%
178       }%
179     \else
180       \let\ps@message@ignore\@empty
181     \fi
182 }%
183 \fi

```

2.2 AtBeginDvi hook support

The material of box \@begindvibox is recorded in parallel in box \ps@begindvibox.

```

184 \newbox\ps@begindvibox
185 \ifvoid\@begindvibox
186 \else
187   \global\setbox\ps@begindvibox\vbox{%
188     \unvbox\@begindvibox
189   }%
190 \fi
191 \let\ps@org@AtBeginDvi\AtBeginDvi
192 \def\AtBeginDvi#1{%
193   \global\setbox\ps@begindvibox\vbox{%
194     \unvbox\ps@begindvibox
195     #1%
196   }%
197   \ps@org@AtBeginDvi{#1}%
198 }

```

\ps@begindvi Macro \ps@begindvi is called the similar way as \@begindvi. If the first page is printed, then \AtBeginDvi should work as usual. Otherwise the contents of box \ps@begindvibox is set on the first selected page.

```

199 \def\ps@begindvi{%
200   \ifx\ps@next\@empty
201     \global\let\ps@begindvi\@empty
202   \else
203     \global\let\ps@begindvi\ps@begindvi@do
204   \fi
205 }
206 \def\ps@begindvi@do{%
207   \ifx\ps@next\@empty
208     \setbox\@cclv\vbox{%
209       \unvbox\ps@begindvibox
210       \box\@cclv
211     }%
212     \global\let\ps@begindvi\@empty
213   \fi
214 }
215 </package>

```

3 Installation

3.1 Download

Package. This package is available on CTAN³:

[CTAN:macros/latex/contrib/oberdiek/pagesel.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/pagesel.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 T_EX Files” ([CTAN:pkg/tds](#)). Directories with `texmf` in their name are usually organized this way.

3.2 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
```

3.3 Package installation

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

```
tex pagesel.dtx
```

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

```
pagesel.sty → tex/latex/oberdiek/pagesel.sty
pagesel.pdf → doc/latex/oberdiek/pagesel.pdf
pagesel.dtx → source/latex/oberdiek/pagesel.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 T_EX distribution (T_EX Live, mikT_EX, ...) relies on file name databases, you must refresh these. For example, T_EX Live users run `texhash` or `mktexlsr`.

3.5 Some details for the interested

Unpacking with L^AT_EX. The `.dtx` chooses its action depending on the format:

plain T_EX: Run `docstrip` and extract the files.

L^AT_EX: Generate the documentation.

³[CTAN:pkg/pagesel](#)

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{pagesel.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 pagesel.dtx
makeindex -s gind.ist pagesel.idx
pdflatex pagesel.dtx
makeindex -s gind.ist pagesel.idx
pdflatex pagesel.dtx
```

4 History

[1999/03/01 v0.9]

- The first version was built as a response to a question of Dirk Kuypers⁴, published in the newsgroup `de.comp.text.tex`:
“`Re: pdflatex nur fuer bestimmte Seiten?!?`”⁵

[1999/04/05 v1.0]

- Documentation added in `dtx` format.
- Copyright: LPPL (`CTAN:macros/latex/base/lppl.txt`)
- Options `odd`, `even` added.
- `\nofiles` added, bug fix for `hyperref`.
- Abort loading of package, if nothing to do.

[1999/04/13 v1.1]

- `\nofiles` bug fix removed because of `hyperref` 6.55.
- First CTAN release.

[2003/06/05 v1.2]

- `\deadcycles` is decremented for omitted pages.
- LPPL 1.2.

⁴Dirk Kuypers’s email address: `dk@comnets.rwth-aachen.de`

⁵Url: <https://groups.google.com/group/de.comp.text.tex/msg/6b68c7b3439fb658>

[2006/02/20 v1.3]

- Code is not changed.
- New DTX framework.
- LPPL 1.3

[2006/03/02 v1.4]

- Support for `\AtBeginDvi` added.

[2006/03/07 v1.5]

- Job is aborted after last selected page.

[2007/04/11 v1.6]

- Line ends sanitized.

[2007/04/12 v1.7]

- Hard coded box number 255 replaced by macro `\ccclv`.

[2008/08/11 v1.8]

- Code is not changed.
- URL updated from `www.dejanews.com` to `groups.google.com`.

[2016/05/16 v1.9]

- Documentation updates.

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; plain numbers refer to the code lines where the entry is used.

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