The \texttt{ifvtex} package

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Abstract

This package looks for \TeX, implements and sets the switches \texttt{\ifvtex}, \texttt{\ifvtex\langle mode\rangle}, \texttt{\ifvtextex}. It works with plain or \LaTeX\ formats.

Contents

1 Usage 2

2 Implementation 2
  2.1 Reload check and package identification 2
  2.2 Catcodes 3
  2.3 Check for previously defined \texttt{\ifvtex} 4
  2.4 Provide \texttt{\newif} 5
  2.5 \texttt{\ifvtex} 5
  2.6 Mode and GeX switches 6
  2.7 Protocol entry 6

3 Test 6
  3.1 Catcode checks for loading 6

4 Installation 8
  4.1 Download 8
  4.2 Bundle installation 8
  4.3 Package installation 9
  4.4 Refresh file name databases 9
  4.5 Some details for the interested 9

5 Catalogue 9

6 History 10
  [2001/09/26 v1.0] 10
  [2006/02/20 v1.1] 10
  [2007/01/10 v1.2] 10
  [2007/09/09 v1.3] 10
  [2008/11/04 v1.4] 10
  [2010/03/01 v1.5] 10
  [2016/05/16 v1.6] 10

7 Index 11

*Please report any issues at \url{https://github.com/ho-tex/oberdiek/issues}
1 Usage

The package `ifvtex` can be used with both plain TeX and \LaTeX:

plain TeX: \input ifvtex.sty
\LaTeX 2ε: \usepackage{ifvtex}

The package implements switches for \VTEx and its different modes and interprets \VTeXversion, \OpMode, and \gexmode.

\ifvtex

The package provides the switch `\ifvtex`:

\ifvtex
  ... do things, if \VTEx is running ...
\else
  ... other TeX compiler ...
\fi

Users of the package `ifthen` can use the switch as boolean:

\boolean{ifvtex}

\ifvtexdvi \ifvtexpdf \ifvtexps \ifvtexhtml

\VTEx knows different output modes that can be asked by these switches.

\ifvtexgex

This switch shows, whether GeX is available.

2 Implementation

2.1 Reload check and package identification

1 (*package*)

Reload check, especially if the package is not used with \LaTeX.

2 \begin{group}\catcode61\catcode48\catcode32=10\relax%
3 \catcode13=5 % \^^M
4 \endlinechar=13 %
5 \catcode35=6 % #
6 \catcode39=12 % '
7 \catcode44=12 % ,
8 \catcode45=12 % -
9 \catcode46=12 % .
10 \catcode58=12 % :
11 \catcode64=11 % @
12 \catcode123=1 % {
13 \catcode125=2 % }
14 \expandafter\let\expandafter\x\csname ver@ifvtex.sty\endcsname
15 \xrelax % plain-TeX, first loading
16 \else
17 \def\empty{}%
\ifx\empty % LaTeX, first loading,
% variable is initialized, but \ProvidesPackage not yet seen
\else
\expandafter\ifx\csname PackageInfo\endcsname\relax
\def\x#1#2{\
\immediate\write-1{Package #1 Info: #2.}\
}%
\else
\def\x#1#2\{\PackageInfo{#1}{#2, stopped}\}%
\fi
\fi
\fi
\aftergroup\endinput
\fi
\fi
\endgroup%
Package identification:
\begingroup\catcode61\catcode48\catcode32=10\relax%
\catcode13=5 % ^^M
\endlinechar=13 %
\catcode35=6 % #
\catcode39=12 % '
\catcode40=12 % (;
\catcode41=12 % )
\catcode44=12 % ,
\catcode45=12 % -;
\catcode46=12 % .
\catcode47=12 % /
\catcode48=12 % :
\catcode49=11 % @
\catcode58=12 % :
\expandafter\ifx\csname ProvidesPackage\endcsname\relax
\def\x#1#2#3[#4]{\endgroup
\immediate\write-1{Package: #3 #4}\
\xdef#1{#4}\
}%
\else
\def\x#1#2[#3]{\endgroup
#2[#3]\
\ifx#1\@undefined
\xdef#1{#3}\
\fi
\ifx#1\relax
\xdef#1{#3}\
\fi
}%
\expandafter\x\csname ver@ifvtex.sty\endcsname
\ProvidesPackage{ifvtex}\
[2016/05/16 v1.6 Detect VTeX and its facilities (HO)]%
2.2 Catcodes
\begingroup\catcode61\catcode48\catcode32=10\relax%
\catcode13=5 % "^M
\endlinechar=13 %
\catcode35=6 % #
\catcode39=12 % '
\catcode40=12 % (;
\catcode41=12 % )
\catcode44=12 % ,
\catcode45=12 % -;
\catcode46=12 % .
\catcode47=12 % /
\catcode48=12 % :
\catcode49=11 % @
\catcode58=12 % :
2.3 Check for previously defined \iftex

\begingroup
\edef\ifxtxcase{\iftex\endcsname}\relax
\else\def\ifxtxcase{\iftex\endcsname}\relax
\edef\x{\iftex\endcsname}\relax
\expandafter\edef\expandafter\ifxtxcase\expandafter{\iftex\endcsname}\relax
\edef\z{\iftex\endcsname}\relax
\ifxtx\errmessage{\iftex\endcsname}\relax
\fi
\endgroup
\iffontef\AtEnd\iftex\endcsname\relax\iffontef\AtEnd\endinput

\endinput
2.4 Provide \newif

\begingroup\newif\endgroup

2.5 \ifvtex

\ifvtex \iffalse \newif initializes the switch with \iffalse.

2.6 Mode and GeX switches

\ifcase\OpMode\relax\vtxdtrue \fi \or % 1
2.7 Protocol entry

Log comment:

\begingroup
\expandafter\ifx\csname PackageInfo\endcsname\relax
\def\x#1#2{\immediate\write-1{Package #1 Info: #2.}}\else
\let\x\PackageInfo\expandafter\let\csname on@line\endcsname\empty\fi
\x{ifvtex}{VTeX % \ifvtex in \ifvtexdvi DVI\fi \ifvtexpdf PDF\fi \ifvtexps PS\fi \ifvtexhtml HTML\fi \space mode % with \ifvtexgex out \space GeX % \else not % \fi \fi detected}\% \endgroup

\ifvtex@AtEnd\langle/\package\rangle

3 Test

3.1 Catcode checks for loading

\langle{\texttt{test1}}\rangle
\catcode{`\{=1 \catcode{`\}=2 \catcode{`\#=6 \catcode{`\@}=11 \expandafter\ifx\csname count@\endcsname\relax\countdef\count@=255 \fi\expandafter\ifx\csname @gobble\endcsname\relax\long\def\@gobble#1{}\fi\expandafter\expandafter\expandafter\endgroup\expandafter\ifx\csname gexmode\endcsname\relax\else\ifnum\gexmode>0 \else\fi\fi\fi\fi\space GeX % \else not % \fi detected\% \endgroup \ifvtex\@AtEnd\langle/\package\rangle
\fi
\expandafter\ifx\csname @firstofone\endcsname\relax
\long\def\@firstofone#1\{#1}\%
\fi
\expandafter\expandafter\@firstofone
\else
\expandafter\@gobble
\fi
{%
\def\loop#1\repeat{%}
\def\body{#1}%
\iterate
}
\def\iterate{%
\body
\let\next\iterate
\else
\let\next\relax
\fi
\next
}
\let\repeat=\fi
\def\RestoreCatcodes{}
\count@=0 %
\loop
\edef\RestoreCatcodes{%
\RestoreCatcodes
\catcode\the\count@=\the\catcode\count@\relax
}%
\ifnum\count@<255 %
\advance\count@ 1 %
\repeat
\def\RangeCatcodeInvalid#1#2{%
\count@=#1\relax
\loop
\catcode\count@=15 %
\ifnum\count@<#2\relax
\advance\count@ 1 %
\repeat
}
\def\RangeCatcodeCheck#1#2#3{%
\count@=#1\relax
\loop
\ifnum#3=\catcode\count@
\else
\errmessage{%
Character \the\count@space
with wrong catcode \the\catcode\count@space
instead of \number#3%
}%
\fi
\ifnum\count@<#2\relax
\advance\count@ 1 %
\repeat
}
\space
\expandafter\ifx\csname LoadCommand\endcsname\relax
\def\LoadCommand{\input ifvtex.sty}\relax%
\fi

4 Installation

4.1 Download

Package. This package is available on CTAN\footnote{http://ctan.org/pkg/ifvtex}:


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 \input{ifvtex.dtx}

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

- ifvtex.sty → tex/generic/oberdiek/ifvtex.sty
- ifvtex.pdf → doc/latex/oberdiek/ifvtex.pdf
- test/ifvtex-test1.tex → doc/latex/oberdiek/test/ifvtex-test1.tex
- ifvtex.dtx → source/latex/oberdiek/ifvtex.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 \texttt{texhash} or \texttt{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{ifvtex.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 \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 pdf\LaTeX{}:

\pdf\latex ifvtex.dtx
\makeindex -s gind.ist ifvtex.idx
\pdf\latex ifvtex.dtx
\makeindex -s gind.ist ifvtex.idx
\pdf\latex ifvtex.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 ifvtex.xml.

323 ⟨*catalogue⟩
324 <xml version="1.0" encoding="us-ascii"/>
325 <DOCTYPE entry SYSTEM 'catalogue.dtd'>
The package looks for VTeX and sets the switch \texttt{\ifvtex}. In the presence of VTeX, the mode switches \texttt{\ifvtexdvi}, \texttt{\ifvtexpdf} and \texttt{\ifvtexps} are set; \texttt{\ifvtexgex} tells you whether \TeX{} is operating.

The package is part of the \texttt{\oberdiek} bundle.

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The package is part of the \texttt{\oberdiek} bundle.

### History

**[2001/09/26 v1.0]**
- First public version.

**[2006/02/20 v1.1]**
- DTX framework.
- Undefined tests changed.

**[2007/01/10 v1.2]**
- Fix of the \texttt{\ProvidesPackage} description.

**[2007/09/09 v1.3]**
- Catcode section added.

**[2008/11/04 v1.4]**
- Bug fix: Mispelled \texttt{\OpMode} (found by Hideo Umeki).

**[2010/03/01 v1.5]**
- Compatibility with ini\TeX{}.

**[2016/05/16 v1.6]**
- Documentation updates.
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.

Symbols

\# ........................................ 227
\% ........................................ 303
\@ .......................................... 228, 301
\@firstofone ................................ 236, 239
\@gobble .................................. 233, 241
\@nil ...................................... 145, 147
\@undefined ................................ 58
\\ ............................................ 302
\{ ........................................... 225
\} ........................................... 226
\advance ................................... 266, 274, 289
\aftergroup .................................. 29
\body ....................................... 245, 249
\catcode ................................... 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 69, 70, 72, 73, 74, 78, 79, 80, 81, 82, 83, 84, 87, 88, 90, 91, 92, 93, 97, 99, 225, 226, 227, 228, 263, 272, 280, 284, 301, 302, 303
\count@ .................................... 230, 259, 263, 265, 266, 270, 272, 273, 274, 278, 280, 283, 284, 288, 289
\countdef .................................. 230
\csname ..................................... 14, 21, 50, 66, 76, 114, 116, 117, 140, 148, 150, 151, 153, 155, 156, 158, 161, 165, 168, 191, 199, 205, 229, 232, 235, 238, 293, 320
\empty ...................................... 17, 18, 205
\end ......................................... 321
\endcsname .................................. 14, 21, 50, 66, 76, 114, 116, 117, 140, 148, 150, 151, 153, 155, 156, 158, 161, 165, 168, 191, 199, 205, 229, 232, 235, 238, 293, 320
\endinput ................................... 29, 112
\endlinechar ............................... 4, 35, 71, 77, 89
\errhelp .................................... 120
\errmessage ................................ 121, 282
\escapechar ................................. 143
\gexmode ................................... 193
\i .......................................... 116, 131, 132
\ifcase ..................................... 179


\vtexdvitrue  
\vtexgextrue  
\vtexhtmltrue  
\vtexpdftrue  
\vtexpstrue  
\vtextrue  
\write  
\x  
\y  
\z  

\vtexdvitrue 180  \x 14, 15, 18, 22, 26, 28, 51, 56, 66,  
\vtexgextrue 194  \x 75, 87, 118, 126, 131, 200, 204, 207  
\vtexhtmltrue 188  \y  
\vtexpdftrue 182  \y 123, 129, 132  
\vtexpstrue 184, 186  \y  
\vtextrue 170  \z 119, 120  
\write 23, 52, 201  \z  

12