

# The ifvtex package

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## Abstract

This package looks for VT<sub>E</sub>X, implements and sets the switches `\ifvtex`, `\ifvtex<mode>`, `\ifvtexgex`. It works with plain or L<sup>A</sup>T<sub>E</sub>X formats.

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## 1 Usage

The package ifvtex can be used with both plain-T<sub>E</sub>X and L<sup>A</sup>T<sub>E</sub>X:

plain-T<sub>E</sub>X: `\input ifvtex.sty`

L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>: `\usepackage{ifvtex}`

The package implements switches for  $\text{\TeX}$  and its different modes and interprets `\TeXversion`, `\OpMode`, and `\gexmode`.

`\ifvtex`

The package provides the switch `\ifvtex`:

```
\ifvtex
... do things, if  $\text{\TeX}$  is running ...
\else
... other  $\text{\TeX}$  compiler ...
\fi
```

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

```
\boolean{ifvtex}
```

`\ifvtexdvi`  
`\ifvtexpdf`  
`\ifvtexps`  
`\ifvtexhtml`

$\text{\TeX}$  knows different output modes that can be asked by these switches.

`\ifvtexgex`

This switch shows, whether GeX is available.

## 2 Implemenation

### 2.1 Reload check and package identification

```
1 <*package>
```

Reload check, especially if the package is not used with  $\text{\LaTeX}$ .

```
2 \begingroup
3   \catcode44 12 % ,
4   \catcode45 12 % -
5   \catcode46 12 % .
6   \catcode58 12 % :
7   \catcode64 11 % @
8   \expandafter\let\expandafter\x\csname ver@ifvtex.sty\endcsname
9   \ifcase 0%
10    \ifx\x\relax % plain
11    \else
12      \ifx\x\empty % LaTeX
13      \else
14        1%
15      \fi
16    \fi
17  \else
18    \catcode35 6 % #
19    \catcode123 1 % {
20    \catcode125 2 % }
21    \expandafter\ifx\csname PackageInfo\endcsname\relax
22      \def\x#1#2{%
23        \immediate\write-1{Package #1 Info: #2.}%
24      }%
25    \else
26      \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
```

```

27   \fi
28   \x{ifvtex}{The package is already loaded}%
29   \endgroup
30   \expandafter\endinput
31   \fi
32 \endgroup
Package identification:
33 \begingroup
34   \catcode35 6 % #
35   \catcode40 12 % (
36   \catcode41 12 % )
37   \catcode44 12 % ,
38   \catcode45 12 % -
39   \catcode46 12 % .
40   \catcode47 12 % /
41   \catcode58 12 % :
42   \catcode64 11 % @
43   \catcode123 1 % {
44   \catcode125 2 % }
45   \expandafter\ifx\csname ProvidesPackage\endcsname\relax
46     \def\x#1#2#3[#4]{\endgroup
47       \immediate\write-1{Package: #3 #4}%
48       \xdef#1{#4}%
49     }%
50   \else
51     \def\x#1#2[#3]{\endgroup
52       #2[{#3}]%
53       \ifx#1@undefined
54         \xdef#1{#3}%
55       \fi
56       \ifx#1\relax
57         \xdef#1{#3}%
58       \fi
59     }%
60   \fi
61 \expandafter\x\csname ver@ifvtex.sty\endcsname
62 \ProvidesPackage{ifvtex}%
63 [2008/11/04 v1.4 Switches for detecting VTeX and its modes (H0)]

```

## 2.2 Catcodes

```

64 \begingroup
65   \catcode123 1 % {
66   \catcode125 2 % }
67   \def\x{\endgroup
68     \expandafter\edef\csname ifvtex@AtEnd\endcsname{%
69       \catcode35 \the\catcode35\relax
70       \catcode64 \the\catcode64\relax
71       \catcode123 \the\catcode123\relax
72       \catcode125 \the\catcode125\relax
73     }%
74   }%
75 \x
76 \catcode35 6 % #
77 \catcode64 11 % @
78 \catcode123 1 % {
79 \catcode125 2 % }
80 \def\TMP@EnsureCode#1#2{%
81   \edef@ifvtex@AtEnd{%
82     \ifvtex@AtEnd
83     \catcode#1 \the\catcode#1\relax
84   }%
85   \catcode#1 #2\relax

```

```

86 }
87 \TMP@EnsureCode{10}{12}% ^^J
88 \TMP@EnsureCode{39}{12}% '
89 \TMP@EnsureCode{44}{12}% ,
90 \TMP@EnsureCode{45}{12}% -
91 \TMP@EnsureCode{46}{12}% .
92 \TMP@EnsureCode{47}{12}% /
93 \TMP@EnsureCode{58}{12}% :
94 \TMP@EnsureCode{60}{12}% <
95 \TMP@EnsureCode{61}{12}% =
96 \TMP@EnsureCode{62}{12}% >
97 \TMP@EnsureCode{94}{7}% ^
98 \TMP@EnsureCode{96}{12}% '

```

## 2.3 Check for previously defined \ifvtex

```

99 \begingroup
100 \expandafter\ifx\csname ifvtex\endcsname\relax
101 \else
102 \edef\i/{\expandafter\string\csname ifvtex\endcsname}%
103 \expandafter\ifx\csname PackageError\endcsname\relax
104 \def\x#1#2{%
105 \edef\z{#2}%
106 \expandafter\errhelp\expandafter{\z}%
107 \errmessage{Package ifvtex Error: #1}%
108 }%
109 \def\y{^^J}%
110 \newlinechar=10 %
111 \else
112 \def\x#1#2{%
113 \PackageError{ifvtex}{#1}{#2}%
114 }%
115 \def\y{\MessageBreak}%
116 \fi
117 \x{Name clash, \i/ is already defined}{%
118 Incompatible versions of \i/ can cause problems,\y
119 therefore package loading is aborted.%
120 }%
121 \endgroup
122 \ifvtex@AtEnd
123 \expandafter\endinput
124 \fi
125 \endgroup

```

## 2.4 \ifvtex

`\ifvtex` Create and set the switch. `\newif` initializes the switch with `\iffalse`.

```

126 \newif\ifvtex
127 \begingroup\expandafter\expandafter\expandafter\endgroup
128 \expandafter\ifx\csname VTeXversion\endcsname\relax
129 \else
130 \begingroup\expandafter\expandafter\expandafter\endgroup
131 \expandafter\ifx\csname OpMode\endcsname\relax
132 \else
133 \vtexttrue
134 \fi
135 \fi

```

## 2.5 Mode and GeX switches

```

136 \newif\ifvtexdvi
137 \newif\ifvtexpdf
138 \newif\ifvtexps

```

```

139 \newif\ifvtexhtml
140 \newif\ifvtexgex
141 \ifvtex
142   \ifcase\OpMode\relax
143     \vtextdvitrue
144   \or % 1
145     \vtextpdftrue
146   \or % 2
147     \vtextpstrue
148   \or % 3
149     \vtextpstrue
150   \or\or\or\or\or\or\or % 10
151     \vtexthtmltrue
152   \fi
153 \begingroup\expandafter\expandafter\expandafter\endgroup
154 \expandafter\ifx\csname gexmode\endcsname\relax
155 \else
156   \ifnum\gexmode>0 %
157     \vtextgextrue
158   \fi
159 \fi
160 \fi

```

## 2.6 Protocol entry

Log comment:

```

161 \begingroup
162   \expandafter\ifx\csname PackageInfo\endcsname\relax
163     \def\x#1#2{%
164       \immediate\write-1{Package #1 Info: #2.}%
165     }%
166   \else
167     \let\x\PackageInfo
168     \expandafter\let\csname on@line\endcsname\empty
169   \fi
170 \x{ifvtex}{%
171   VTeX %
172   \ifvtex
173     in \ifvtexdvi DVI\fi
174     \ifvtexpdf PDF\fi
175     \ifvtexps PS\fi
176     \ifvtexhtml HTML\fi
177     \space mode %
178     with\ifvtexgex\else out\fi\space GeX %
179   \else
180     not %
181   \fi
182   detected%
183 }%
184 \endgroup
185 \ifvtex@AtEnd
186 </package>

```

## 3 Test

### 3.1 Catcode checks for loading

```

187 <*test1>
188 \catcode'\{=1 %
189 \catcode'\}=2 %
190 \catcode'\#=6 %

```

```

191 \catcode'\@=11 %
192 \expandafter\ifx\csname count@\endcsname\relax
193   \countdef\count@=255 %
194 \fi
195 \expandafter\ifx\csname @gobble\endcsname\relax
196   \long\def\@gobble#1{%
197 \fi
198 \expandafter\ifx\csname @firstofone\endcsname\relax
199   \long\def\@firstofone#1{#1}%
200 \fi
201 \expandafter\ifx\csname loop\endcsname\relax
202   \expandafter\@firstofone
203 \else
204   \expandafter\@gobble
205 \fi
206 {%
207   \def\loop#1\repeat{%
208     \def\body{#1}%
209     \iterate
210   }%
211   \def\iterate{%
212     \body
213     \let\next\iterate
214   \else
215     \let\next\relax
216   \fi
217   \next
218 }%
219 \let\repeat=\fi
220 }%
221 \def\RestoreCatcodes{
222 \count@=0 %
223 \loop
224   \edef\RestoreCatcodes{%
225     \RestoreCatcodes
226     \catcode\the\count@=\the\catcode\count@\relax
227   }%
228 \ifnum\count@<255 %
229   \advance\count@ 1 %
230 \repeat
231
232 \def\RangeCatcodeInvalid#1#2{%
233   \count@=#1\relax
234   \loop
235     \catcode\count@=15 %
236   \ifnum\count@<#2\relax
237     \advance\count@ 1 %
238   \repeat
239 }
240 \expandafter\ifx\csname LoadCommand\endcsname\relax
241   \def\LoadCommand{\input ifvtex.sty\relax}%
242 \fi
243 \def\Test{%
244   \RangeCatcodeInvalid{0}{47}%
245   \RangeCatcodeInvalid{58}{64}%
246   \RangeCatcodeInvalid{91}{96}%
247   \RangeCatcodeInvalid{123}{255}%
248   \catcode'\@=12 %
249   \catcode'\=0 %
250   \catcode'\{=1 %
251   \catcode'\}=2 %
252   \catcode'\#=6 %

```

```

253 \catcode'\[=12 %
254 \catcode'\]=12 %
255 \catcode'\%=14 %
256 \catcode'\ =10 %
257 \catcode13=5 %
258 \LoadCommand
259 \RestoreCatcodes
260 }
261 \Test
262 \csname @@end\endcsname
263 \end
264 </test1>

```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

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

[CTAN:macros/latex/contrib/oberdiek/ifvtex.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<sub>E</sub>X 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-T<sub>E</sub>X:

```
tex ifvtex.dtx
```

---

<sup>1</sup>[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

**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  $\text{\TeX}$  distribution (`te $\text{\TeX}$` , `mik $\text{\TeX}$` , ...) relies on file name databases, you must refresh these. For example, `te $\text{\TeX}$`  users run `texhash` or `mktextlsr`.

## 4.5 Some details for the interested

**Attached source.** The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk ifvtex.pdf unpack_files output .
```

**Unpacking with  $\text{\LaTeX}$ .** The `.dtx` chooses its action depending on the format:

**plain- $\text{\TeX}$ :** Run `docstrip` and extract the files.

**$\text{\LaTeX}$ :** Generate the documentation.

If you insist on using  $\text{\LaTeX}$  for `docstrip` (really, `docstrip` does not need  $\text{\LaTeX}$ ), 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 `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 $\text{\LaTeX}$` :

```
pdflatex ifvtex.dtx
makeindex -s gind.ist ifvtex.idx
pdflatex ifvtex.dtx
makeindex -s gind.ist ifvtex.idx
pdflatex ifvtex.dtx
```

# 5 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 `\ProvidesPackage` description.

[2007/09/09 v1.3]

- Catcode section added.

[2008/11/04 v1.4]

- Bug fix: Misspelled `\OpMode` (found by Hideo Umeki).

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