The **ifvtex** package

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Abstract

This package looks for VT$_{E}$X, implements and sets the switches `\ifvtex`, `\ifvtex`⟨*mode*⟩, `\ifvtexgex`. It works with plain or L^AT$_{E}$X formats.

Contents

1 Usage

The package ifvtex can be used with both plain-T$_{E}$X and L^AT$_{E}$X:

plain-T$_{E}$X: `\input ifvtex.sty`

L^AT$_{E}$X 2$_{\varepsilon}$: `\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 Implemenation

2.1 Reload check and package identification

1 ⟨∗package⟩

Reload check, especially if the package is not used with 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\relax
54          \xdef#1{#3}%
55        \fi
56      }%
57    \fi
58 \expandafter\x\csname ver@ifvtex.sty\endcsname
59 \ProvidesPackage{ifvtex}%
60    [2007/09/09 v1.3 Switches for detecting VTeX and its modes (HO)]
```

2.2 Catcodes

```
61 \begingroup
62    \catcode123 1 % {
63    \catcode125 2 % }
64    \def\x{\endgroup
65      \expandafter\edef\csname ifvtex@AtEnd\endcsname{%
66        \catcode35 \the\catcode35\relax
67        \catcode64 \the\catcode64\relax
68        \catcode123 \the\catcode123\relax
69        \catcode125 \the\catcode125\relax
70      }%
71    }%
72 \x
73 \catcode35 6 % #
74 \catcode64 11 % @
75 \catcode123 1 % {
76 \catcode125 2 % }
77 \def\TMP@EnsureCode#1#2{%
78    \edef\ifvtex@AtEnd{%
79      \ifvtex@AtEnd
80      \catcode#1 \the\catcode#1\relax
81    }%
82    \catcode#1 #2\relax
83 }
84 \TMP@EnsureCode{10}{12}% ^^J
85 \TMP@EnsureCode{39}{12}% '
```

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

2.3   Check for previously defined \ifvtex

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

2.4   \ifvtex

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

```
123 \newif\ifvtex

124 \begingroup\expandafter\expandafter\expandafter\endgroup
125 \expandafter\ifx\csname VTeXversion\endcsname\relax
126 \else
127   \begingroup\expandafter\expandafter\expandafter\endgroup
128   \expandafter\ifx\csname OpMOde\endcsname\relax
129   \else
130     \vtextrue
131   \fi
132 \fi
```

2.5   Mode and GeX switches

```
133 \newif\ifvtexdvi
134 \newif\ifvtexpdf
135 \newif\ifvtexps
136 \newif\ifvtexhtml
137 \newif\ifvtexgex
138 \ifvtex
```

```
139 \ifcase\OpMode\relax
140   \vtexdvitrue
141 \or % 1
142   \vtexpdftrue
143 \or % 2
144   \vtexpstrue
145 \or % 3
146   \vtexpstrue
147 \or\or\or\or\or\or\or % 10
148   \vtexhtmltrue
149 \fi
150 \begingroup\expandafter\expandafter\expandafter\endgroup
151 \expandafter\ifx\csname gexmode\endcsname\relax
152 \else
153   \ifnum\gexmode>0 %
154     \vtexgextrue
155   \fi
156 \fi
157 \fi
```

2.6   Protocol entry

Log comment:

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

182 \ifvtex@AtEnd
183 ⟨/package⟩
```

3   Test

3.1   Catcode checks for loading

```
184 ⟨*test1⟩

185 \catcode`\{=1 %
186 \catcode`\}=2 %
187 \catcode`\#=6 %
188 \catcode`\@=11 %
189 \expandafter\ifx\csname count@\endcsname\relax
190   \countdef\count@=255 %
```

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```
191 \fi
192 \expandafter\ifx\csname @gobble\endcsname\relax
193   \long\def\@gobble#1{}%
194 \fi
195 \expandafter\ifx\csname @firstofone\endcsname\relax
196   \long\def\@firstofone#1{#1}%
197 \fi
198 \expandafter\ifx\csname loop\endcsname\relax
199   \expandafter\@firstofone
200 \else
201   \expandafter\@gobble
202 \fi
203 {%
204   \def\loop#1\repeat{%
205     \def\body{#1}%
206     \iterate
207   }%
208   \def\iterate{%
209     \body
210       \let\next\iterate
211     \else
212       \let\next\relax
213     \fi
214     \next
215   }%
216   \let\repeat=\fi
217 }%
218 \def\RestoreCatcodes{}
219 \count@=0 %
220 \loop
221   \edef\RestoreCatcodes{%
222     \RestoreCatcodes
223     \catcode\the\count@=\the\catcode\count@\relax
224   }%
225 \ifnum\count@<255 %
226   \advance\count@ 1 %
227 \repeat
228
229 \def\RangeCatcodeInvalid#1#2{%
230   \count@=#1\relax
231   \loop
232     \catcode\count@=15 %
233   \ifnum\count@<#2\relax
234     \advance\count@ 1 %
235   \repeat
236 }
237 \expandafter\ifx\csname LoadCommand\endcsname\relax
238   \def\LoadCommand{\input ifvtex.sty\relax}%
239 \fi
240 \def\Test{%
241   \RangeCatcodeInvalid{0}{47}%
242   \RangeCatcodeInvalid{58}{64}%
243   \RangeCatcodeInvalid{91}{96}%
244   \RangeCatcodeInvalid{123}{255}%
245   \catcode`\@=12 %
246   \catcode`\\=0 %
247   \catcode`\{=1 %
248   \catcode`\}=2 %
249   \catcode`\#=6 %
250   \catcode`\[=12 %
251   \catcode`\]=12 %
252   \catcode`\%=14 %
```

```
253  \catcode'\ =10 %
254  \catcode13=5 %
255  \LoadCommand
256  \RestoreCatcodes
257 }
258 \Test
259 \csname @@end\endcsname
260 \end
```

261 ⟨/test1⟩

4 Installation

4.1 Download

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

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 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 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`.

---

[1] ftp://ftp.ctan.org/tex-archive/

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

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 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 `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 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.

6 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; numbers in roman refer to the code lines where the entry is used.