

The ifluatex package

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Abstract

This package looks for L^AT_EX regardless of its mode and provides the switch `\ifluatex`. It works with plain-T_EX or L^AT_EX.

Contents

1	Documentation	1
2	Implementation	2
2.1	Reload check and package identification	2
2.2	Catcodes	3
2.3	Check for previously defined <code>\ifluatex</code>	3
2.4	<code>\ifluatex</code>	4
2.5	Protocol entry	4
3	Test	4
3.1	Catcode checks for loading	4
4	Installation	6
4.1	Download	6
4.2	Bundle installation	6
4.3	Package installation	6
4.4	Refresh file name databases	6
4.5	Some details for the interested	7
5	History	7
	[2007/12/12 v1.0]	7
6	Index	7

1 Documentation

The package ifluatex can be used with both plain-T_EX and L^AT_EX:

plain-T_EX: `\input ifluatex.sty`

L^AT_EX 2_ε: `\usepackage{ifluatex}`

`\ifluatex` The package provides the switch `\ifluatex`:

```
\ifluatex
LATEX is running
\else
Without LATEX
\fi
```

If you want to detect the mode (DVI or PDF), then use package ifpdf. L^AT_EX has inherited `\pdfoutput` from pdfT_EX.

2 Implementation

```
1 (*package)
```

2.1 Reload check and package identification

Reload check, especially if the package is not used with L^AT_EX.

```
2 \begingroup
3   \catcode44 12 % ,
4   \catcode45 12 % -
5   \catcode46 12 % .
6   \catcode58 12 % :
7   \catcode64 11 % @
8   \expandafter\let\expandafter\x\csname ver@ifluatex.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@ifluatex{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@ifluatex.sty\endcsname
59 \ProvidesPackage{ifluatex}%
60 [2007/12/12 v1.0 Provides the ifluatex switch (H0)]

```

2.2 Catcodes

```

61 \begingroup
62 \catcode123 1 % {
63 \catcode125 2 % }
64 \def\x{\endgroup
65 \expandafter\edef\csname ifluatex@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\ifluatex@AtEnd{%
79 \ifluatex@AtEnd
80 \catcode#1 \the\catcode#1\relax
81 }%
82 \catcode#1 #2\relax
83 }
84 \TMP@EnsureCode{10}{12}% ^^J
85 \TMP@EnsureCode{44}{12}% ,
86 \TMP@EnsureCode{45}{12}% -
87 \TMP@EnsureCode{46}{12}% .
88 \TMP@EnsureCode{47}{12}% /
89 \TMP@EnsureCode{58}{12}% :
90 \TMP@EnsureCode{61}{12}% =
91 \TMP@EnsureCode{94}{7}% ^

```

2.3 Check for previously defined \ifluatex

```

92 \begingroup
93 \expandafter\ifx\csname ifluatex\endcsname\relax
94 \else
95 \edef\i/{\expandafter\string\csname ifluatex\endcsname}%
96 \expandafter\ifx\csname PackageError\endcsname\relax
97 \def\x#1#2{%
98 \edef\z{#2}%
99 \expandafter\errhelp\expandafter{\z}%
100 \errmessage{Package ifluatex Error: #1}%
101 }%
102 \def\y{^^J}%
103 \newlinechar=10 %
104 \else
105 \def\x#1#2{%
106 \PackageError{ifluatex}{#1}{#2}%
107 }%
108 \def\y{\MessageBreak}%
109 \fi
110 \x{Name clash, \i/ is already defined}{%
111 Incompatible versions of \i/ can cause problems,\y
112 therefore package loading is aborted.%
113 }%

```

```

114     \endgroup
115     \ifluatex@AtEnd
116     \expandafter\endinput
117 \fi
118 \endgroup

```

2.4 \ifluatex

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

```

119 \newif\ifluatex

```

Test `\pdfoutput`. Is it defined and different from `\relax`? Someone could have used L^AT_EX internal `\@ifundefined`, or something else involving. Notice, `\csname` is executed inside a group for the test to cancel the side effect of `\csname`.

```

120 \begingroup\expandafter\expandafter\expandafter\endgroup
121 \expandafter\ifx\csname luatexversion\endcsname\relax
122 \else
123     \luatextrue
124 \fi

```

2.5 Protocol entry

Log comment:

```

125 \begingroup
126     \expandafter\ifx\csname PackageInfo\endcsname\relax
127         \def\x#1#2{%
128             \immediate\write-1{Package #1 Info: #2.}%
129         }%
130     \else
131         \let\x\PackageInfo
132     \expandafter\let\csname on@line\endcsname\empty
133 \fi
134 \x{\ifluatex}{LuaTeX \ifluatex\else not \fi detected}%
135 \endgroup
136 \ifluatex@AtEnd
137 </package>

```

3 Test

3.1 Catcode checks for loading

```

138 <*test1>
139 \catcode'\{=1 %
140 \catcode'\}=2 %
141 \catcode'\#=6 %
142 \catcode'\@=11 %
143 \expandafter\ifx\csname count@\endcsname\relax
144     \countdef\count@=255 %
145 \fi
146 \expandafter\ifx\csname @gobble\endcsname\relax
147     \long\def\@gobble#1{%
148 \fi
149 \expandafter\ifx\csname @firstofone\endcsname\relax
150     \long\def\@firstofone#1{#1}%
151 \fi
152 \expandafter\ifx\csname loop\endcsname\relax
153     \expandafter\@firstofone
154 \else
155     \expandafter\@gobble
156 \fi
157 {%

```

```

158 \def\loop#1\repeat{%
159   \def\body{#1}%
160   \iterate
161 }%
162 \def\iterate{%
163   \body
164   \let\next\iterate
165   \else
166     \let\next\relax
167   \fi
168   \next
169 }%
170 \let\repeat=\fi
171 }%
172 \def\RestoreCatcodes{}
173 \count@=0 %
174 \loop
175   \edef\RestoreCatcodes{%
176     \RestoreCatcodes
177     \catcode\the\count@=\the\catcode\count@\relax
178   }%
179   \ifnum\count@<255 %
180     \advance\count@ 1 %
181   \repeat
182 }
183 \def\RangeCatcodeInvalid#1#2{%
184   \count@=#1\relax
185   \loop
186     \catcode\count@=15 %
187     \ifnum\count@<#2\relax
188       \advance\count@ 1 %
189     \repeat
190 }
191 \expandafter\ifx\csname LoadCommand\endcsname\relax
192   \def\LoadCommand{\input ifluatex.sty\relax}%
193 \fi
194 \def\Test{%
195   \RangeCatcodeInvalid{0}{47}%
196   \RangeCatcodeInvalid{58}{64}%
197   \RangeCatcodeInvalid{91}{96}%
198   \RangeCatcodeInvalid{123}{255}%
199   \catcode'\@=12 %
200   \catcode'\=0 %
201   \catcode'\{=1 %
202   \catcode'\}=2 %
203   \catcode'\#=6 %
204   \catcode'\[=12 %
205   \catcode'\]=12 %
206   \catcode'\%=14 %
207   \catcode'\ =10 %
208   \catcode\l3=5 %
209   \LoadCommand
210   \RestoreCatcodes
211 }
212 \Test
213 \csname @@end\endcsname
214 \end
215 </test1>

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

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

[CTAN:macros/latex/contrib/oberdiek/ifluatex.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:macros/latex/contrib/oberdiek/oberdiek-tds.zip](#)

TDS refers to the standard “A Directory Structure for T_EX 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_EX:

```
tex ifluatex.dtx
```

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

<code>ifluatex.sty</code>	→ <code>tex/generic/oberdiek/ifluatex.sty</code>
<code>ifluatex.pdf</code>	→ <code>doc/latex/oberdiek/ifluatex.pdf</code>
<code>test/ifluatex-test1.tex</code>	→ <code>doc/latex/oberdiek/test/ifluatex-test1.tex</code>
<code>ifluatex.dtx</code>	→ <code>source/latex/oberdiek/ifluatex.dtx</code>

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 T_EX distribution (teT_EX, miK_TE_X, ...) relies on file name databases, you must refresh these. For example, teT_EX users run `texhash` or `mktextlsr`.

¹<http://ftp.ctan.org/tex-archive/>

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 ifluatex.pdf unpack_files output .
```

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.

If you insist on using L^AT_EX for `docstrip` (really, `docstrip` does not need L^AT_EX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{ifluatex.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 pdfL^AT_EX:

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

5 History

[2007/12/12 v1.0]

- First public version.

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.

Symbols	
<code>\#</code>	141, 203
<code>\%</code>	206
<code>\@</code>	142, 199
<code>\@firstofone</code>	150, 153
<code>\@gobble</code>	147, 155
<code>\[</code>	204
<code>\]</code>	200
<code>\{</code>	139, 201
<code>\}</code>	140, 202
<code>\]</code>	205
<code>_</code>	207
A	
<code>\advance</code>	180, 188
B	
<code>\body</code>	159, 163
C	
<code>\catcode</code> . . .	3, 4, 5, 6, 7, 18, 19, 20, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 62, 63, 66, 67, 68, 69, 73, 74, 75, 76, 80, 82, 139, 140, 141,

142, 177, 186, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208	
\count@	144, 173,
177, 179, 180, 184, 186, 187, 188	
\countdef	144
\csname	8, 21,
45, 58, 65, 93, 95, 96, 121, 126,	
132, 143, 146, 149, 152, 191, 213	
E	
\empty	12, 132
\end	214
\endcsname	8, 21,
45, 58, 65, 93, 95, 96, 121, 126,	
132, 143, 146, 149, 152, 191, 213	
\endinput	30, 116
\errhelp	99
\errmessage	100
I	
\i	95, 110, 111
\ifcase	9
\ifluatex	1, 119, 134
\ifluatex@AtEnd	78, 79, 115, 136
\ifnum	179, 187
\ifx	10, 12, 21, 45, 53, 93,
96, 121, 126, 143, 146, 149, 152, 191	
\immediate	23, 47, 128
\input	192
\iterate	160, 162, 164
L	
\LoadCommand	192, 209
\loop	158, 174, 185
\luatextrue	123
M	
\MessageBreak	108
N	
\newif	119
\newlinechar	103
\next	164, 166, 168
P	
\PackageError	106
\PackageInfo	26, 131
\ProvidesPackage	59
R	
\RangeCatcodeInvalid	183, 195, 196, 197, 198
\repeat	158, 170, 181, 189
\RestoreCatcodes	172, 175, 176, 210
T	
\Test	194, 212
\the	66, 67, 68, 69, 80, 177
\TMP@EnsureCode	77, 84, 85, 86, 87, 88, 89, 90, 91
W	
\write	23, 47, 128
X	
\x	8, 10, 12, 22, 26, 28, 46, 51, 58, 64, 72, 97, 105, 110, 127, 131, 134
Y	
\y	102, 108, 111
Z	
\z	98, 99