

# The **figlatex** package\*

Arnaud LEGRAND

Vincent DANJEAN

2021/10/26

## Abstract

This package allows L<sup>A</sup>T<sub>E</sub>X to load XFig and SVG figures (or subfigures) with the `\includegraphics` command.

## 1 Introduction

### 1.1 General

`\includegraphics` This package allows to load XFig figures from L<sup>A</sup>T<sub>E</sub>X sources with the `\includegraphics` command from the `graphicx` package:

```
\includegraphics[width=\linewidth]{myfig.fig}
```

This package does not convert by itself XFig figures (see package `texdepends` for that). It only diverts the loading functions so that L<sup>A</sup>T<sub>E</sub>X includes the `.pstex_t` or the `.pdftex_t`.

### 1.2 Options

Available options for this package:

`debug` (*env.*) **debug** : more messages written while compiling

`figlatex.cfg` (*env.*) When the package is loaded, it tries to read a `figlatex.cfg` file. This file can contain `\debug` to enable this option site wide.

### 1.3 Subfigures

Sometimes, several figures made with XFig should be similar. It is possible to make only one XFig figure and then create subfigures which contains only a subset of the depths of the original figure.

---

\*This file has version number v2.4.3, last revised 2021/10/26.

## 2 Implementation

### 2.1 figlatex

```

1 <*package>
  Options definitions
debug (env.)
2 \newif\ifFL@debug
3 \DeclareOption{debug}{%
4   \global\FL@debugtrue%
5 }

  We load the config file if it exists. Commands for the config file are local.
6 {

  \debug
7   \def\debug{%
8     \ExecuteOptions{debug}%
9   }

10  \InputIfFileExists{figlatex.cfg}{%
11    \typeout{*****^J%
12              * Local config file figlatex.cfg used *^J%
13              *****}
14  }{%
15    \typeout{Found no configuration file for figlatex}
16  }
17 }

  Run the options
18 \ProcessOptions
  and requires some packages
19 \RequirePackage{ifthen}
20 \RequirePackage{ifpdf}
21 \RequirePackage{graphicx}
22 \RequirePackage{xstring}

  XFig uses heavily the color package
23 \RequirePackage{color}
24 \RequirePackage{epstopdf}

\FL@dmessage Write the message only if debug is set
25 \def\FL@dmessage#1{%
26   \ifFL@debug%
27     \message{#1}%
28   \fi%
29 }

\Gininclude@rawtex .pstex_t or .pdfTeX_t are loaded with \input
30 \def\Gininclude@rawtex#1{%
31   \FL@dmessage{<#1>}%
32   \bgroup%
33   \def\@tempa{!}%

```

```

34 \ifx\Gin@scaley\@tempa%
35 \let\Gin@scaley\Gin@scalex%
36 \else%
37 \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi%
38 \fi%
39 \hbox{%
40 \Gscale@box{\Gin@scalex}{\Gin@scaley}{%
41 \def\Gin@scalex{1}%
42 \let\Gin@scaley\Gin@exclamation% needed for pdflatex
43 \FL@dmessage{<loading rawtex #1>}%
44 \input{#1}}}%
45 \egroup}

```

\Gininclude@figtex .fig are loaded with \includegraphics after modifying the name

```

46 \def\Gininclude@figtex#1{%
47 \message{<#1>}%
48 \bgroup%
49 \xdef\FL@filename{#1}%
50 \filename@parse{\FL@filename}%
51 \xdef\FL@filename{\filename@area\filename@base.\FL@figext}%
52 \FL@dmessage{<****loading fig \FL@filename>}%
53 \FL@includerawtexgraphics[]{\FL@filename}%
54 \egroup}

```

\Gread@figtex .fig bounding box is the same as the corresponding .pstex\_t or .pdftex\_t

```

55 \newcommand{\Gread@figtex}[1]{%
56 \typeout{Oh, file exists #1}%
57 \Gread@rawtex{#1}%
58 }

```

\Gininclude@svgtex .svg are loaded with \includegraphics after modifying the name

```

59 \def\Gininclude@svgtex#1{%
60 \message{<#1>}%
61 \bgroup%
62 \xdef\FL@filename{#1}%
63 \filename@parse{\FL@filename}%
64 \xdef\FL@filename{\filename@area\filename@base.\FL@svgext}%
65 \FL@dmessage{<****loading svg \FL@filename>}%
66 \FL@includerawtexgraphics[]{\FL@filename}%
67 \egroup}

```

\Gread@svgtex .svg bounding box is the same as the corresponding .pstex\_t or .pdftex\_t

```

68 \newcommand{\Gread@svgtex}[1]{%
69 \typeout{Oh, file exists #1}%
70 \Gread@rawtex{#1}%
71 }

```

Declare the right things depending whether we build a DVI or a PDF file.

72 \ifpdf

PDF part

```

73 \def\FL@figext{pdftex_t}%
74 \def\FL@svgext{pdftex_t}%

```

To read bounding box information:

```

75 \let\Gread@rawtex\Gread@pdf%
76 \DeclareGraphicsRule{.pdftex}{pdf}{*}{}%
77 \DeclareGraphicsRule{.pdftex_t}{rawtex}{.pdftex}{}%
78 \DeclareGraphicsRule{.fig}{figtex}{.pdftex}{}%
79 \DeclareGraphicsRule{.svg}{svgtex}{.pdftex}{}%
80 \else

```

DVI part

```

81 \def\FL@figext{pstex_t}%
82 \def\FL@svgext{pstex_t}%

```

To read bounding box information:

```

83 \let\Gread@rawtex\Gread@eps%
84 \DeclareGraphicsRule{.pstex}{eps}{*}{}%
85 \DeclareGraphicsRule{.pstex_t}{rawtex}{.pstex}{}%
86 \DeclareGraphicsRule{.fig}{figtex}{.pstex}{}%
87 \DeclareGraphicsRule{.svg}{svgtex}{.pstex}{}%
88 \fi

```

This command is not really necessary here (code could be added in `\Ginclude@figtex`). However, it's very convinient for the `texdepends` package.

```

89 \newcommand{\FL@includerawtexgraphics}[2][{}]{%
90 \includegraphics[#1]{#2}%
91 }

```

Addition of the `subfig=name` key for the options of the `\includegraphicx[...]{...}` macro.

```

92 \def\FL@exclamation{!}%
93 \let\FL@subfig@name\FL@exclamation%
94 \define@key{Gin}{subfig}{%
95 \typeout{using subfig #1}%
96 \def\FL@subfig@name{#1}%
97 }
98 \def\FL@sepdefault{_%

```

We should ckeck if the `#1` file exists (`XXX.subfig`) This is not yet done but `texdepends` divert this macro to record the dependency

```

99 \def\FL@subfig@check#1{%
100 }

```

We divert `\Gin@getbase` to modify the file name if the `subfig` key is used.

```

101 \def\FL@Gin@getbase#1{%
102 \typeout{In getbase #1 with \FL@subfig@name / \FL@exclamation}%
103 \ifx\FL@subfig@name\FL@exclamation%
104 \else%
105 \typeout{getbase lets go (\filename@area)(\filename@base)(#1)}%
106 \IfStrEq*{#1}{.fig}{%
107 % If we're including a subfig
108 \IfFileExists{\filename@area\filename@base#1}{%
109 % If the original .fig file exists, just change the name so that
110 % it comprises the full path (file has been looked into
111 % texgraphics, etc.)
112 % Warning: the found filename is quoted :-(
113 \StrBetween[1,2]{\@filef@und}{"}{"}\FL@filename@unquoted]
114 \filename@parse{\FL@filename@unquoted}%

```

```

115     % Check if the subfig file exists
116     \FL@subfig@check{\filename@area\filename@base.subfig}%
117 }{%
118     % Else, write a warning (LaTeX will warn as well but it doesn't
119     % hurt)
120     \PackageWarning{figlatex}{No file
121     '\filename@area\filename@base#1'}%
122 }
123 % Add the subfig suffix to the fig name.
124 \edef\filename@base{\filename@base\FL@sepdefault\FL@subfig@name}%
125 }{%
126 }%
127 \IfStrEq*{#1}{.svg}{%
128     % If we're including a subfig
129     \IfFileExists{\filename@area\filename@base#1}{%
130         % If the original .svg file exists, just change the name so that
131         % it comprises the full path (file has been looked into
132         % texgraphics, etc.)
133         % Warning: the found filename is quoted :- (
134         \StrBetween[1,2]{\@filef@und}{"}{"}[\FL@filename@unquoted]
135         \filename@parse{\FL@filename@unquoted}%
136         % Check if the subfig file exists
137         \FL@subfig@check{\filename@area\filename@base.subfig}%
138     }{%
139         % Else, write a warning (LaTeX will warn as well but it doesn't
140         % hurt)
141         \PackageWarning{figlatex}{No file
142         '\filename@area\filename@base#1'}%
143     }
144     % Add the subfig suffix to the svg name.
145     \edef\filename@base{\filename@base\FL@sepdefault\FL@subfig@name}%
146 }{%
147 }%
148 \fi%
149 \FL@orig@Gin@getbase{#1}%
150 }
151 \let\FL@orig@Gin@getbase\Gin@getbase
152 \let\Gin@getbase\FL@Gin@getbase
153
154 %\@namedef{Gin@rule@.fig}#1{%
155
156 %}
157 \end{package}

```

The sample config file figlatex.cfg...

```

158 \*config
159 %\debug
160 \end{config}

```

## 2.2 texgraphicx

```

161 \*compat

```

`texgraphicx.sty` was only a wrapper around `figlatex.sty`. Now, an error is generated.

```

162 \PackageError{texgraphicx}{‘texgraphicx’ is now
163   gone\MessageBreak%
164   Please, switching to ‘figlatex’
165   package\MessageBreak}{%}
166 \ProcessOptions
167 </compat>

```

## 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>\@namedef</code> . . . . .	154
D	
<code>\debug</code> . . . . .	1, <u>7</u> , 159
<code>debug (option)</code> . . . . .	1, <u>2</u>
<code>\DeclareGraphicsRule</code> . . . . .	
. . .	76, 77, 78, 79, 84, 85, 86, 87
F	
<code>figlatex.cfg (option)</code> . . . . .	1
<code>\FL@debugtrue</code> . . . . .	4
<code>\FL@dmmessage</code> . . . . .	<u>25</u> , 31, 43, 52, 65
<code>\FL@exclamation</code> . . . . .	92, 93, 102, 103
<code>\FL@figext</code> . . . . .	51, 73, 81
<code>\FL@filename</code> . . . . .	49,
50, 51, 52, 53, 62, 63, 64, 65, 66	
<code>\FL@filename@unquoted</code> . . . . .	
. . . . .	113, 114, 134, 135
<code>\FL@Gin@getbase</code> . . . . .	101, 152
<code>\FL@includerawtexgraphics</code> . . . . .	53, 66, 89
<code>\FL@orig@Gin@getbase</code> . . . . .	149, 151
<code>\FL@sepdefault</code> . . . . .	98, 124, 145
<code>\FL@subfig@check</code> . . . . .	99, 116, 137
<code>\FL@subfig@name</code> . . . . .	
. . . . .	93, 96, 102, 103, 124, 145
<code>\FL@svgext</code> . . . . .	64, 74, 82
G	
<code>\Gininclude@figtex</code> . . . . .	<u>46</u>
I	
<code>\ifFL@debug</code> . . . . .	2, 26
<code>\IfStrEq</code> . . . . .	106, 127
<code>\includegraphics</code> . . . . .	1, 90
O	
options:	
<code>debug</code> . . . . .	<u>2</u>
<code>debug</code> . . . . .	1
<code>figlatex.cfg</code> . . . . .	1
P	
<code>\PackageError</code> . . . . .	162
S	
<code>\StrBetween</code> . . . . .	113, 134

## Change History

v0.1.1	v0.1.2
General: Version 0.1.1 at last . . .	General: Manage index/glossary .
1	1

v0.1.3		v2.2.4	
General: Better support for subfig		General: Add missing required	
with texdepends . . . . .	1	package 'ifthen' . . . . .	1
v0.1.4		Fix python syntax for python3 . . . . .	1
General: Support for svg with		v2.2.5	
texdepends . . . . .	1	General: No changes in	
v2.2.0		figlatex.dtx . . . . .	1
General: No changes in		v2.4.0	
figlatex.dtx . . . . .	1	General: Fix path handling for	
v2.2.1		subfig and new core LaTeX . . . . .	1
General: No changes in		v2.4.1	
figlatex.dtx . . . . .	1	General: No changes in	
v2.2.2		figlatex.dtx . . . . .	1
General: No changes in		v2.4.2	
figlatex.dtx . . . . .	1	General: No changes in	
v2.2.3		figlatex.dtx . . . . .	1
General: No changes in		v2.4.3	
figlatex.dtx . . . . .	1	General: No changes in	
		figlatex.dtx . . . . .	1