

# The **figlatex** package\*

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## 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.

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## 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@svgtx .svg are loaded with \includegraphics after modifying the name

```

59 \def\Gininclude@svgtx#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@svgtx .svg bounding box is the same as the corresponding .pstex\_t or .pdftex\_t

```

68 \newcommand{\Gread@svgtx}[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 `\Gin@figtex`). However, it's very convenient 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 `\includegraphics[...]{...}` 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 check 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]{\@file@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 </package>

The sample config file figlatex.cfg...
158 <*config>
159 %\debug
160 </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>
```

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