

# The `figlatex` package\*

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## Abstract

This package allows  $\text{\LaTeX}$  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  $\text{\LaTeX}$  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  $\text{\LaTeX}$  includes the `.pstex_t` or the `.pdftex_t`.

### 1.2 Options

Available options for this package:

`debug` **debug** : more messages written while compiling

`figlatex.cfg` When the package is loaded, it tries to read a `figlatex.cfg` file. This file can  
`\debug` contains `\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
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 }
```

```

\Gincluderawtex .pstex_t or .pdfTeX_t are loaded with \input
30 \def\Gincluderawtex#1{%
31   \FL@dmessages{<#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@dmessages{<loading rawTeX #1>}%
44       \input{#1}}}%
45   \egroup}

\Gincluderfigtex .fig are loaded with \includegraphics after modifying the name
46 \def\Gincluderfigtex#1{%
47   \messages{<#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@dmessages{<****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 }

\Gincludersvgtex .svg are loaded with \includegraphics after modifying the name
59 \def\Gincludersvgtex#1{%
60   \messages{<#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@dmessages{<****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 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]{\@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 </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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General: Version 0.1.1 at last . . .	1	General: No changes in	
v0.1.2		<code>figlatex.dtx</code> . . . . .	1
General: Manage index/glossary .	1	v2.2.3	
v0.1.3		General: No changes in	
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