

The `figlatex` package*

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Abstract

This package allows \LaTeX to load XFig figures (or subfigures) with the `\includegraphics` command.

1 Introduction

1.1 General

`\includegraphics` This package allows to load XFig figures from \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 \LaTeX includes the `.pstex_t` or the `.pdftex_t`.

1.2 Options

Available options for this package:

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

`compatibility` **compatibility** : old versions of `pdflatex` do not allow to declare a PDF file with `\DeclareGraphicsRule` that has not the `.pdf` extension. In such cases, this package uses the extension `.pdf` instead of `.pdftex` for PDF created from XFig figures.

`figlatex.cfg` When the package is loaded, it tries to read a `figlatex.cfg` file. This file can
`\compatibility` contains `\compatibility` and/or `\debug` to enable theses options site wide.
`\debug`

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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.

2 Implementation

2.1 figlatex

```
1 <*package>
   Options definitions
compatibility
2 \newif\ifFL@compatibility
3 \DeclareOption{compatibility}{%
4   %\PackageWarning{figlatex}{option compatibility}%
5   \global\FL@compatibilitytrue%
6 }

debug
7 \newif\ifFL@debug
8 \DeclareOption{debug}{%
9   \global\FL@debugtrue%
10 }

   We load the config file if it exists. Commands for the config file are local.
11 {

\compatibility
12 \def\compatibility{%
13   \ExecuteOptions{compatibility}%
14 }

\debug
15 \def\debug{%
16   \ExecuteOptions{debug}%
17 }

18 \InputIfFileExists{figlatex.cfg}{%
19   \typeout{*****^^J%
20             * Local config file figlatex.cfg used *^^J%
21             *****}
22 }{%
23   \typeout{Found no configuration file for figlatex}
24 }
25 }

Run the options
26 \ProcessOptions
```

and requires some packages

```
27 \RequirePackage{ifpdf}
28 \RequirePackage{graphicx}
```

XFig uses heavily the color package

```
29 \RequirePackage{color}
30 \RequirePackage{epstopdf}
```

`\FL@dmmessage` Write the message only if debug is set

```
31 \def\FL@dmmessage#1{%
32   \ifFL@debug%
33     \message{#1}%
34   \fi%
35 }
```

`\Gininclude@rawtex` .pstex_t or .pdfTEX_t are loaded with `\input`

```
36 \def\Gininclude@rawtex#1{%
37   \FL@dmmessage{<#1>}%
38   \bgroup%
39   \def\@tempa{!}%
40   \ifx\Gin@scaley\@tempa%
41     \let\Gin@scaley\Gin@scalex%
42   \else%
43     \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi%
44   \fi%
45   \hbox{%
46     \Gscale@box{\Gin@scalex}[\Gin@scaley]{%
47     \def\Gin@scalex{1}%
48     \let\Gin@scaley\Gin@exclamation% needed for pdfLATEX
49     \FL@dmmessage{<loading rawtex #1>}%
50     \input{#1}}}%
51   \egroup}
```

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

```
52 \def\Gininclude@figtex#1{%
53   \message{<#1>}%
54   \bgroup%
55   \xdef\FL@filename{#1}%
56   \filename@parse{\FL@filename}%
57   \xdef\FL@filename{\filename@area\filename@base.\FL@figext}%
58   \FL@dmmessage{<***loading fig \FL@filename>}%
59   \FL@includerawtexgraphics[]{\FL@filename}%
60   \egroup}
```

`\Gread@figtex` .fig bounding box is the same as the corresponding .pstex_t or .pdfTEX_t

```
61 \newcommand{\Gread@figtex}[1]{%
62   %\typeout{Oh, file exists #1}%
63   \Gread@rawtex{#1}%
64 }
```

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

```
65 \ifpdf
PDF part
66 \def\FL@figext{pdftex_t}%
To read bounding box information:
67 \let\Gread@rawtex\Gread@pdf%
68 \DeclareGraphicsRule{.pdftex}{pdf}{*}{}%
69 \ifFL@compatibility%
70 \PackageWarningNoLine{figlatex}{Compatibility mode enabled
71 for old LaTeX
72 \MessageBreak Using .pdf extension for pdftex files}%
73 \DeclareGraphicsRule{.pdftex_t}{rawtex}{.pdf}{}%
74 \DeclareGraphicsRule{.fig}{figtex}{.pdf}{}%
75 \else%
76 \DeclareGraphicsRule{.pdftex_t}{rawtex}{.pdftex}{}%
77 \DeclareGraphicsRule{.fig}{figtex}{.pdftex}{}%
78 \fi%
79 \else
```

DVI part

```
80 \def\FL@figext{pstex_t}%
To read bounding box information:
81 \let\Gread@rawtex\Gread@eps%
82 \DeclareGraphicsRule{.pstex}{eps}{*}{}%
83 \DeclareGraphicsRule{.pstex_t}{rawtex}{.pstex}{}%
84 \DeclareGraphicsRule{.fig}{figtex}{.pstex}{}%
85 \fi
```

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

```
86 \newcommand{\FL@includerawtexgraphics}[2][[]]{%
87 \includegraphics[#1]{#2}%
88 }
```

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

```
89 \def\FL@exclamation{!}%
90 \let\FL@subfig@name\FL@exclamation%
91 \define@key{Gin}{subfig}{%
92 \def\FL@subfig@name{#1}%
93 }
94 \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

```
95 \def\FL@subfig@check#1{%
96 }
```

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

```
97 \def\FL@Gin@getbase#1{%
98   \ifx\FL@subfig@name\FL@exclamation%
99   \else%
100  \ifthenelse{\equal{#1}{.fig}}{%
101    % If we're including a subfig
102    \IfFileExists{\filename@area\filename@base#1}{%
103      % If the original .fig file exists, just change the name so that
104      % it comprises the full path.
105      \filename@parse{\@filef@und}%
106      % Remove potential trailing space at the end of the extension
107      \def\filename@ext{fig}%
108      % Check if the subfig file exists
109      \FL@subfig@check{\filename@area\filename@base.subfig}%
110    }{%
111      % Else, write a warning (LaTeX will warn as well but it doesn't
112      % hurt)
113      \PackageWarning{figlatex}{No file
114        '\filename@area\filename@base#1'}%
115    }
116    % Add the subfig suffix to the fig name.
117    \edef\filename@base{\filename@base\FL@sepdefault\FL@subfig@name}%
118  }{%
119  }%
120  \fi%
121  \FL@orig@Gin@getbase{#1}%
122 }
123 \let\FL@orig@Gin@getbase\Gin@getbase
124 \let\Gin@getbase\FL@Gin@getbase
125
126 %\@namedef{Gin@rule@.fig}#1{%
127
128 %}
```

```
129 </package>
```

The sample config file `figlatex.cfg`...

```
130 <*config>
131 %\compatibility
132 %\debug
133 </config>
```

2.2 texgraphicx

```
134 <*compat>
135 texgraphicx.sty is only a wrapper around figlatex.sty.
136 \PackageWarning{texgraphicx}{'texgraphicx' is now
137 deprecated\MessageBreak%
137 Please, consider switching to 'figlatex'}
```

```

138 package\MessageBreak}
139 \RequirePackage{figlatex}
140 \ProcessOptions
141 </compat>

```

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Change History

v0.1.1		v0.1.3	
General: Version 0.1.1 at last ...	1	General: Better support for subfig	
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