

The `grffile` package*

Heiko Oberdiek[†]

November 11, 2019

Abstract

The package extends the file name processing of package `graphics` to support a larger range of file names. For example, the file name may contain several dots. Or in case of pdfTeX in PDF mode the file name may contain spaces.

Contents

1	Usage	2
1.1	Option <code>multidot</code>	2
1.2	Option <code>babel</code>	2
1.3	Option <code>extendedchars</code>	3
1.4	Option <code>encoding</code>	3
1.4.1	Option <code>inputencoding</code>	3
1.4.2	Option <code>filenameencoding</code>	3
1.4.3	Example	3
1.5	Option <code>space</code>	4
1.6	General use	4
1.7	Default settings	5
2	Implementation	5
2.1	New Package status	5
2.2	Identification	5
2.3	Catcode stuff	5
2.4	Options	6
2.5	Fix <code>\Gin@ii</code> of package <code>graphicx</code>	14
3	Test	15
3.1	Multidot with default rule	15
4	Installation	15
4.1	Download	15
4.2	Bundle installation	16
4.3	Package installation	16
4.4	Refresh file name databases	16
4.5	Some details for the interested	16
5	Catalogue	17

*The documentation here describes version 1.x, accessed via `\usepackage{grffile} [=v1]`, the current version 2.0 does nothing as the current graphics package handles multiple dots, spaces and UTF-8 characters in filenames

[†]Please report any issues at <https://github.com/ho-tex/grffile/issues>

6	References	18
7	History	18
[2004/07/18 v0.5]	.....	18
[2006/08/15 v1.0]	.....	18
[2006/08/17 v1.1]	.....	18
[2006/11/30 v1.2]	.....	18
[2007/04/11 v1.3]	.....	18
[2007/06/13 v1.4]	.....	18
[2007/08/16 v1.5]	.....	18
[2007/11/11 v1.6]	.....	18
[2007/11/24 v1.7]	.....	19
[2008/08/11 v1.8]	.....	19
[2008/10/13 v1.9]	.....	19
[2009/09/25 v1.10]	.....	19
[2010/01/28 v1.11]	.....	19
[2010/08/26 v1.12]	.....	19
[2010/12/09 v1.13]	.....	19
[2011/10/04 v1.14]	.....	19
[2011/10/17 v1.15]	.....	19
[2012/04/05 v1.16]	.....	19
[2016/05/16 v1.17]	.....	19
[2017/06/30 v1.18]	.....	19

8	Index	20
----------	--------------	-----------

1 Usage

1.1 Option `multidot`

The file name parsing of package `graphics` is changed, in order to detect known extensions. This allows both the use of dots inside the base file name and extensions with several dots.

Assume there are two files in the current directory: `Hello.World.eps` and `Hello.World.pdf`. `\includegraphics{Hello.World}` will find `Hello.World.pdf` with driver `pdftex` or `Hello.World.eps` with driver `dvips`.

Limitations: Problem could occur on systems, which don't use the dot as extension delimiter. These systems needs an own `texsys.cfg` containing definitions for `\filename@parse`. The author could not test that, due to a missing example.

1.2 Option `babel`

This option allows the use of shorthand characters of package `babel` inside the `graphics` file name. Additionally the tilde ‘~’ is supported. The option is turned on as default. (In version v1.1 or below of this package, the features of this option were part of option `extendedchars`.)

Example:

```
\usepackage[frenchb]{babel}
\usepackage{grffile}
Image:\includegraphics{C:/path/image}
```

1.3 Option `extendedchars`

If the input encoding is the same encoding as the encoding that is used for file names and the driver allows non-ascii characters. Without option `extendedchars` the 8-bit characters are expanded, if they are active characters. For example, see the L^AT_EX package `inputenc`. However a file name is not input for L^AT_EX. Therefore this option `extendedchars` removes the active status and the 8-bit characters are not expandable any more.

Example:

```
\usepackage[latin1]{inputenc}
\usepackage[extendedchars]{grffile}
\includegraphics{Bäckerstraße}
```

If the `draft` option of the graphics package is enabled, the file name is printed with the current font encoding for `\ttfamily`. Thus it is possible, that such characters are omitted or the wrong characters are displayed, if the font encoding is not the same as the file name encoding.

1.4 Option `encoding`

Consider the following scenario. Your file system is using UTF-8 as encoding for file names. But you use `latin1` as input encoding for your T_EX files, because some packages are not ready for multi-byte encodings (`listings`, ...).

Then this option `encoding` loads support for converting encodings by loading package `stringenc`. The option is not defined after the preamble, because L^AT_EX limits package loading to the preamble.

File names are converted, if package `stringenc` is loaded and the encodings are known, see options `inputencoding` and `filenameencoding`.

1.4.1 Option `inputencoding`

Option `inputencoding` specifies the encoding of the file name in your T_EX input file.

Package `inputenx` and package `inputenc` since version 2006/02/22 v1.1a remember the name of the input encoding that is looked up by this package. Therefore option `inputencoding` is usually not mandatory.

1.4.2 Option `filenameencoding`

This is the encoding of the filename of your file system. This option is mandatory, file names are not converted without this option. The option is disabled, if the value is empty.

1.4.3 Example

Back to the scenario where the file system uses UTF-8 and the L^AT_EX input files are encoded in `latin1`.

```
\usepackage[latin1]{inputenc}[2006/02/22]
% \usepackage[latin1]{inputenx}
\usepackage{graphicx}
\usepackage[encoding,filenameencoding=utf8]{grffile}
```

For older versions of package `inputenc` option `inputencoding` provides the necessary informations.

```

\usepackage[latin1]{inputenc}
\usepackage{graphicx}
\usepackage{grffile}
\grffilessetup{
  encoding,
  inputencoding=latin1,
  filenameencoding=utf8,
}

```

1.5 Option space

This option allows graphics file names that contain spaces if possible.

In general it is not possible to use space inside file names, because \TeX considers the space character as termination in its syntax for commands that expect a file name.

Regarding graphics inclusion with the package `graphics` file names are used in two or three contexts:

1. The basic `\special` statement or primitive command for graphics inclusion. The `\special` statements for drivers `dviips` or `dvipdfm` do not allow spaces. However `pdf\TeX`'s primitive `\pdfximage` uses curly braces to delimit the file name and allows spaces. In case of `X\TeX` file names can be enclosed in quotes to support spaces (at the cost that quotes no longer work).
2. `\includegraphics` checks the existence of the file. Also it looks for the right extension if the extension is not given.

If `pdf\TeX` 1.30 is given, the file existence test can be rewritten using a new primitive that allows spaces. This works in both modes DVI and PDF.

In case of `X\TeX` the file existence test is rewritten to automatically add quotes.

3. Sometimes files are read as \TeX input files. For example, `.bb` files or `MPS` files.

If `pdf\TeX` 1.30 or greater is used in PDF mode then the graphics file names may contain spaces except for `MPS` files. Therefore option `space` is only enabled by default, if the supported `pdf\TeX` in PDF mode is detected or `X\TeX` is running. You can enable the option manually, if you know, your DVI driver supports spaces in its `\special` syntax and if there is no need to read the image file as \TeX input file (third context).

1.6 General use

The options can be given at many places:

1. As package options:
`\usepackage[<options>]{grffile}`
2. Setup command of package `grffile`:
`\grffilessetup{<options>}`
3. The options are also available as options for package `graphicx`:
`\setkeys{Gin}{<options>}`
4. If package `graphicx` is loaded the options can also be applied for a single image:
`\includegraphics[<options>]{...}`

1.7 Default settings

```
multidot      true
babel        true
extendedchars false
space         true   if pdfTeX 1.30 or greater is used in PDF mode
                  false otherwise
```

2 Implementation

2.1 New Package status.

Changes to the core `graphics` code have made the main features of this package (supporting multiple dots and spaces in filenames) unneeded as they are supported in the core code. The changes in the core also mean some patches in this package no longer work.

So by default this package does nothing but (especially if you have rolled back other aspects of the latex code) you may want the original version, which is available as

```
1 \usepackage{grffile} [=2017/06/30]
2
3 1 (*new)
4 2 \DeclareRelease{v1}{2017-06-30}{grffile-2017-06-30.sty}
5 3 \DeclareCurrentRelease{}{2019-11-11}
6 4 \ProvidesPackage{grffile}%
7 5 [2019/11/11 v2.1 Extended file name support for graphics (legacy)]%
8 6 \PackageInfo{grffile}{This package is an empty stub for compatibility}
9 7 \DeclareOption*{}
10 8 \ProcessOptions
11 9 \RequirePackage{graphicx}
12 10 </new>
```

2.2 Identification

```
11 1 (*package)
12 2 \NeedsTeXFormat{LaTeX2e}
13 3 \ProvidesPackage{grffile}%
14 4 [2017/06/30 v1.18 Extended file name support for graphics (HO)]%
```

2.3 Catcode stuff

```
15 \edef\grffile@RestoreCatcodes{%
16   \catcode`\noexpand=\the\catcode`\relax
17   \catcode`\noexpand\:\the\catcode`\:\relax
18   \catcode`\noexpand.\the\catcode`\.\relax
19   \catcode`\noexpand`\the\catcode`\'\relax
20   \catcode`\noexpand\<\the\catcode`\<\relax
21   \catcode`\noexpand\>\the\catcode`\>\relax
22   \catcode`\noexpand\*\the\catcode`\*\relax
23   \catcode`\noexpand\^\the\catcode`\^\relax
24   \catcode`\noexpand\~\the\catcode`\~\relax
25 }
26 \makeother\
27 \makeother\:
28 \makeother\.
29 \makeother\'
```

```

30 \@makeother\<
31 \@makeother\>
32 \@makeother\*
33 \catcode`^=7 %
34 \catcode`\~=active

2.4 Options

35 \RequirePackage{ifpdf}[2010/01/28]
36 \RequirePackage{ifxetex}[2010/09/12]
37 \RequirePackage{kvoptions}[2006/08/17]
38 \SetupKeyvalOptions{%
39   family=Gin,%
40   prefix=grffile@%
41 }
42 \DeclareDefaultOption{\@unknownonoptionerror}
43 \DeclareBoolOption[true]{multidot}
44 \DeclareBoolOption[true]{babel}
45 \DeclareBoolOption[false]{extendedchars}
46 \DeclareBoolOption{space}
47 \DeclareVoidOption{encoding}{%
48   \RequirePackage{stringenc}\relax
49 }
50 \DeclareStringOption{inputencoding}
51 \DeclareStringOption{filenameencoding}
52 \DeclareDefaultOption{%
53   \PassOptionsToPackage{CurrentOption{graphics}}%
54 }

Default setting for option space.

55 \RequirePackage{pdftexcmds}[2007/11/11]
56 \ifxetex
57   \grffile@spacetrue
58 \else
59   \begingroup\expandafter\expandafter\expandafter\endgroup
60   \expandafter\ifx\csname pdf@filesize\endcsname\relax
61     \grffile@spacefalse
62     \let\grffile@space@disabled\@empty
63     \def\grffile@spacetrue{%
64       \PackageWarning{grffile}{%
65         Option 'space' is not available,\MessageBreak
66         because it needs pdfTeX >= 1.30 or XeTeX%
67       }%
68     }%
69   \else
70     \ifpdf
71       \grffile@spacetrue
72     \else
73       \grffile@spacefalse
74     \fi
75   \fi
76 \fi
77 \ProcessKeyvalOptions*
78 \AtBeginDocument{%
79   \DisableKeyvalOption[package=grffile]{Gin}{encoding}%
80 }
81 \RequirePackage{graphics}

\grffilessetup

```

```

82 \newcommand*{\grffilesetup}{%
83   \setkeys{Gin}%
84 }

\grffile@org@Ginclude@graphics
85 \let\grffile@org@Ginclude@graphics\Ginclude@graphics

\Ginclude@graphics
86 \renewcommand*{\Ginclude@graphics}{%
87   \ifx\grffile@filenameencoding\empty
88   \else
89     \ifx\grffile@inputencoding\empty
90       \expandafter\ifx\csname inputencodingname\endcsname\relax
91         \expandafter\ifx\csname
92           CurrentInputEncodingOption\endcsname\relax
93         \else
94           \let\grffile@inputencoding\CurrentInputEncodingOption
95         \fi
96       \else
97         \let\grffile@inputencoding\inputencodingname
98       \fi
99     \fi
100   \ifx\grffile@inputencoding\empty
101   \else
102     \grffile@extendedcharstrue
103   \fi
104 \fi
105 \ifnum0\ifgrffile@babel 1\fi\ifgrffile@extendedchars 1\fi>\z@
106   \begingroup
Support of babel's shorthand characters.

107   \ifgrffile@babel
108     \csname @safe@activestrue\endcsname
Support of active tilde.

109   \edef~{\string~}%
Support of characters controlled by package inputenc.

110   \fi
111   \ifgrffile@extendedchars
112     \grffile@inputenc@loop\^\^A\^\^H%
113     \grffile@inputenc@loop\^\^K\^\^K%
114     \grffile@inputenc@loop\^\^N\^\^_%
115     \grffile@inputenc@loop\^\^\?\^\^ff%
116   \fi
117   \expandafter\grffile@extchar@Ginclude@graphics
118 \else
119   \expandafter\grffile@Ginclude@graphics
120 \fi
121 }

file@extchar@Ginclude@graphics
122 \def\grffile@extchar@Ginclude@graphics#1{%
123   \toks@{#1}%
124   \edef\grffile@filename{\the\toks@}%
125   \ifx\grffile@inputencoding\empty
126   \else
127     \ifx\grffile@filenameencoding\empty
128     \else

```

```

129      \ifx\grffile@inputencoding\grffile@filenameencoding
130      \else
131          \expandafter\ifx\csname StringEncodingConvert\endcsname\relax
132              \PackageError{\grffile}{%
133                  Package `stringenc' is not loaded,\MessageBreak
134                  omitting file name conversion%
135              }{\@ehc}
136          \else
137              \StringEncodingConvert\grffile@temp\grffile@filename
138                  \grffile@inputencoding\grffile@filenameencoding
139              \StringEncodingSuccessFailure{%
140                  \let\grffile@filename\grffile@temp
141              }{%
142                  \PackageError{\grffile}{%
143                      Filename conversion failed%
144                  }{\@ehc
145              }%
146          \fi
147      \fi
148  \fi
149 \fi
150 % \toks@\expandafter{\grffile@filename}%
151 \edef\x{\endgroup
152 % \noexpand\grffile@Ginclude@graphics{\the\toks@}%
153 \noexpand\grffile@Ginclude@graphics{\grffile@filename}%
154 }%
155 \x
156 }

```

\grffile@inputenc@loop

```

157 \def\grffile@inputenc@loop#1#2{%
158   \count@='#1\relax
159   \loop
160     \begingroup
161       \uccode`~=`\count@
162     \uppercase{%
163       \endgroup
164       \edef~{\string~}%
165     }%
166     \ifnum\count@<'#2\relax
167       \advance\count@\@ne
168     \repeat
169 }

```

Support for option space

\grffile@space@getbase

```

170 \def\grffile@space@getbase#1{%
171   \edef\grffile@tempa{%
172     \def\noexpand\@tempa##1#1\noexpand\@nil{%
173       \def\noexpand\Gin@base{####1}%
174     }%
175   }%
176   \grffile@IfFileExists{\filename@area\filename@base#1}{%
177     \grffile@tempa
178     \expandafter\@tempa\grffile@file@found\@nil
179     \edef\Gin@ext{#1}%
180   }{%

```

```

181  }%
182 }

183 \begingroup\expandafter\expandafter\expandafter\endgroup
184 \expandafter\ifx\csname pdf@filesize\endcsname\relax
185   \ifxetex

\grffile@XeTeX@IfFileExists

186 \long\def\grffile@XeTeX@IfFileExists#1{%
187   \openin\@inputcheck"#1" %
188   \ifeof\@inputcheck
189     \closein\@inputcheck
190     \expandafter\@secondoftwo
191   \else
192     \closein\@inputcheck
193     \expandafter\@firstoftwo
194   \fi
195 }%

\grffile@IfFileExists

196 \long\def\grffile@IfFileExists#1{%
197   \grffile@XeTeX@IfFileExists{#1}{%
198     \edef\grffile@file@found{#1}%
199     \@firstoftwo
200   }{%
201     \let\reserved@a\@secondoftwo
202     \ifx\input@path\@undefined
203       \else
204         \expandafter\@tfor\expandafter\reserved@b\expandafter
205           :\expandafter=\input@path\do{%
206             \grffile@XeTeX@IfFileExists{\reserved@b#1}{%
207               \edef\grffile@file@found{\reserved@b#1}%
208               \let\reserved@a\@firstoftwo
209               \iftrue\@break@tfor\fi
210             }{%
211               }%
212             \fi
213             \reserved@a
214           }%
215         }%
216       }%
217     \fi
218   }%
219   \G@measure@QTm{\Gin@base}{\Gin@ext}%
220 }%
221 }%
222 }%
223 \ifx\Gread@QTm\grffile@org@Gread@QTm

\Gread@QTm

224 \def\Gread@QTm#1{%
225   \grffile@IfFileExists{\Gin@base.bb}{%
226     \Gread@eps{\Gin@base.bb}%
227   }{%
228     \G@measure@QTm{\Gin@base}{\Gin@ext}%

```

```

229      }%
230      }%

231      \PackageInfo{grffile}{\string\Gread@QTm\space patched}%
232 \else
233     \begingroup\expandafter\expandafter\expandafter\endgroup
234     \expandafter\ifx\csname Gread@QTm\endcsname\relax
235       \@ifpackagelater{graphics}{2017/06/01}
236       {}
237       {%
238         \PackageWarning{grffile}{%
239           \string\Gread@QTm\space of xetex.def not found%
240         }%
241       }%
242     \else
243
\grffile@org@Gread@QTm
243     \let\grffile@org@Gread@QTm\Gread@QTm

\Gread@QTm
244     \def\Gread@QTm#1{%
245       \let\grffile@saved@IfExists\IfExists
246       \let\IfExists\grffile@IfExists
247       \grffile@org@Gread@QTm{#1}%
248       \let\IfExists\grffile@saved@IfExists
249     }%
250
\fi
251 \fi

\grffile@org@Gread@eps
252   \let\grffile@org@Gread@eps\Gread@eps

253   \def\grffile@temp#1\immediate\openin#2 #3\grffile@nil#4\grffile@NIL{%
254     \begingroup
255     \toks@{#2}%
256     \edef\grffile@temp{\the\toks@}%
257     \def\grffile@test{\@inputcheck##1}%
258     \ifx\grffile@temp\grffile@test
259       \expandafter\@firstoftwo
260     \else
261       \expandafter\@secondoftwo
262     \fi
263   {%
264     \toks@{%
265       #1%
266       \immediate\openin\@inputcheck"##1"\relax
267       #3%
268     }%
269     \expandafter\endgroup
270     \expandafter\def\expandafter\Gread@eps
271     \expandafter##\expandafter1\expandafter{%
272       \the\toks@
273     }%
274     \PackageInfo{grffile}{%
275       \string\Gread@eps\space patched%
276     }%
277   }{%
278     \@ifpackagelater{graphics}{2017/06/01}

```

```

279      {}
280      {%
281          \PackageWarning{grffile}{%
282              Unsupported \string\Gread@eps\space not patched%
283          }%
284      }%
285      \endgroup
286  }%
287 }%
288 \expandafter\grffile@temp\Gread@eps{\#1}\grffile@nil
289     \immediate\openin{} \grffile@nil\grffile@NIL

290 \else
291     \begingroup
292     \let\on@line\@empty
293     \PackageInfo{grffile}{%
294         \string\grffile@IfFileExists\space without space support,%
295         \MessageBreak
296         because pdfTeX's \string\pdffilesize\space is not available%
297         \MessageBreak
298         or XeTeX is not running%
299     }%
300     \endgroup

\grffile@IfFileExists
301 \long\def\grffile@IfFileExists#1{%
302     \IfFileExists{\#1}{%
303         \let\grffile@IFE@next\@firstoftwo
304     }{%
305         \let\grffile@file@found\@filef@und
306         \let\grffile@IFE@next\@secondoftwo
307     }%
308     \grffile@IFE@next
309 }%

310 \fi
311 \else

\grffile@IfFileExists
312 \long\def\grffile@IfFileExists#1{%
313     \expandafter\expandafter\expandafter
314     \ifx\expandafter\expandafter\expandafter\\pdf@filesize{\#1}\\%
315     \let\reserved@a\@secondoftwo
316     \ifx\input@path\@undefined
317     \else
318         \expandafter\@tfor\expandafter\reserved@b\expandafter
319             :\expandafter=\input@path\do{%
320                 \expandafter\expandafter\expandafter
321                 \ifx\expandafter\expandafter\expandafter\\pdf@filesize{\reserved@b\#1}\\%
322                 \else
323                     \edef\grffile@file@found{\reserved@b\#1}%
324                     \let\reserved@a\@firstoftwo
325                     \break@tfor
326                 \else
327                     \fi
328                 }%
329                 \fi
330                 \expandafter\reserved@a
331             \else

```

```

332      \edef\grffile@file@found{#1}%
333      \expandafter\@firstoftwo
334      \fi
335  }%
336 \fi

\grffile@Ginclude@graphics
337 \def\grffile@Ginclude@graphics#1{%
338   \begingroup
339   \ifgrffile@space
340     \let\Gin@getbase\grffile@space@getbase
341   \fi
342   \ifgrffile@multidot
343     \let\filename@base\empty
344     \let\filename@simple\grffile@filename@simple
345   \fi
346   \grffile@org@Ginclude@graphics{#1}%
347   \endgroup
348 }%

\grffile@filename@simple
349 \def\grffile@filename@simple#1.#2\\{%
350   \ifx\\#2\\%
351   \def\filename@base{#1}%
352   \let\filename@ext\relax
353   \else
354   \def\filename@base{}%
355   \grffile@analyze@ext{#1}.{#2}\\%
356   \fi
357 }%

\grffile@analyze@ext
358 \def\grffile@analyze@ext#1.#2\\{%
359   \let\grffile@next\relax
360   \ifx\\#2\\%
361   \edef\filename@base{\filename@base#1}%
362   \let\filename@ext\relax
363   \def\grffile@next{\grffile@try@extlist}%
364   \else
365   \edef\filename@base{\filename@base #1}%
366   \edef\filename@ext{\filename@dot#2\\}%
367   \expandafter\ifx\csname Gin@rule@\filename@ext\endcsname\relax
368     \edef\filename@base{\filename@base.}%
369     \def\grffile@next{\grffile@analyze@ext#2\\}%
370   \else
371     \grffile@IfExists{\filename@area\filename@base.\filename@ext}{%
372       % success
373     }{%
374       \edef\filename@base{\filename@base.\filename@ext}%
375       \let\filename@ext\relax
376       \def\grffile@next{\grffile@try@extlist}%
377     }%
378   \fi
379 \fi
380 \grffile@next
381 }%

```

```

\grffile@try@extlist
    382 \def\grffile@try@extlist{%
    383   \@for\grffile@temp:=\Gin@extensions\do{%
    384     \grffile@IfFileExists{\filename@area\filename@base\grffile@temp}{%
    385       \ifx\filename@ext\relax
    386         \edef\filename@ext{\expandafter@gobble\grffile@temp\@empty}%
    387       \fi
    388     }{}%
    389   }%
    390   \ifx\filename@ext\relax
    391     \expandafter\let\expandafter\filename@base\expandafter\@empty
    392     \expandafter\grffile@use@last@ext\filename@base.\@%
    393   \fi
    394 }

\grffile@use@last@ext
    395 \def\grffile@use@last@ext#1.#2\\{%
    396   \ifx\\#2\\%
    397     \edef\filename@base{\expandafter\filename@dot\filename@base\@}%
    398     \def\filename@ext{#1}%
    399     \expandafter\@gobble
    400   \else
    401     \edef\filename@base{\filename@base#1.}%
    402     \expandafter\@firstofone
    403   \fi
    404 {}%
    405   \grffile@use@last@ext#2\\%
    406 }%
    407 }

Print current option setting

\grffile@option@status
    408 \def\grffile@option@status#1{%
    409   \begingroup
    410     \let\on@line\@empty
    411     \PackageInfo{grffile}{%
    412       Option '#1' is %
    413       \expandafter\ifx\csname ifgrffile@#1\expandafter\endcsname
    414         \csname iftrue\endcsname
    415         set to 'true'%
    416       \else
    417         \expandafter\ifx\csname grffile@#1@disabled\endcsname\@empty
    418           not available%
    419         \else
    420           set to 'false'%
    421         \fi
    422       \fi
    423     }%
    424   \endgroup
    425 }

    426 \grffile@option@status{multidot}
    427 \grffile@option@status{extendedchars}
    428 \grffile@option@status{space}

```

2.5 Fix \Gin@ii of package **graphicx**

If the image file name contains the hash character macro \Gin@ii of package graphicx breaks.

```
\grffile@Gin@ii@graphicx
 429 \def\grffile@Gin@ii@graphicx[#1]#2{%
 430   \def\@tempa{[]}%
 431   \def\@tempb{#2}%
 432   \ifx\@tempa\@tempb
 433     \def\@tempa{\Gin@iii[#1] []% hash-ok
 434     \expandafter\@tempa
 435   \else
 436     \begingroup
 437       \tempswafalse
 438       \toks@{\Gininclude@graphics{#2}}%
 439       \setkeys{Gin}{#1}%
 440       \Gin@esetsize
 441       \the\toks@
 442     \endgroup
 443   \fi
 444 }

\grffile@Gin@ii@fixed
 445 \def\grffile@Gin@ii@fixed[#1]#2{%
 446   \def\@tempa{[]}%
 447   \begingroup
 448     \toks@={#2}%
 449     \edef\@tempb{\the\toks@}%
 450   \expandafter\endgroup
 451   \ifx\@tempa\@tempb
 452     \def\@tempa{\Gin@iii[#1] []% hash-ok
 453     \expandafter\@tempa
 454   \else
 455     \begingroup
 456       \tempswafalse
 457       \toks@{\Gininclude@graphics{#2}}%
 458       \setkeys{Gin}{#1}%
 459       \Gin@esetsize
 460       \the\toks@
 461     \endgroup
 462   \fi
 463 }

\grffile@Fix@Gin@ii
 464 \def\grffile@Fix@Gin@ii{%
 465   \let\Gin@ii\grffile@Gin@ii@fixed
 466   \begingroup
 467     \escapechar=92 %
 468     \PackageInfo{\grffile}{\string\Gin@ii\space of package 'graphicx' fixed}%
 469   \endgroup
 470 }

 471 \ifx\Gin@ii\grffile@Gin@ii@graphicx
 472   \grffile@Fix@Gin@ii
 473 \else
 474   \AtBeginDocument{\grffile@Fix@Gin@ii}%
 475 \fi
```

```

476 \grffile@RestoreCatcodes
477 </package>

```

3 Test

3.1 Multidot with default rule

```

478 <*test1>
479 \NeedsTeXFormat{LaTeX2e}
480 \documentclass{article}
481 \usepackage{filecontents}
482 % file grffile-test.mp:
483 % beginfig(1);
484 %   draw fullcircle scaled 2cm withpen pencircle scaled 2mm;
485 % endfig;
486 % end
487 \begin{filecontents*}{grffile-test.1}
488 %!PS
489 %%BoundingBox: -32 -32 32 32
490 %%Creator: MetaPost
491 %%CreationDate: 2004.06.16:1257
492 %%Pages: 1
493 %%EndProlog
494 %%Page: 1 1
495 0 5.66928 dtransform truncate idtransform setlinewidth pop [] 0 setdash
496 1 setlinejoin 10 setmiterlimit
497 newpath 28.34645 0 moveto
498 28.34645 7.51828 25.35938 14.72774 20.04356 20.04356 curveto
499 14.72774 25.35938 7.51828 28.34645 0 28.34645 curveto
500 -7.51828 28.34645 -14.72774 25.35938 -20.04356 20.04356 curveto
501 -25.35938 14.72774 -28.34645 7.51828 -28.34645 0 curveto
502 -28.34645 -7.51828 -25.35938 -14.72774 -20.04356 -20.04356 curveto
503 -14.72774 -25.35938 -7.51828 -28.34645 0 -28.34645 curveto
504 7.51828 -28.34645 14.72774 -25.35938 20.04356 -20.04356 curveto
505 25.35938 -14.72774 28.34645 -7.51828 28.34645 0 curveto closepath stroke
506 showpage
507 %%EOF
508 \end{filecontents*}
509 \usepackage{graphicx}
510 \usepackage[multidot]{grffile}[2008/10/13]
511 \DeclareGraphicsRule{*}{mps}{}{} % for pdflatex
512 \begin{document}
513 \includegraphics{grffile-test.1}
514 \end{document}
515 </test1>

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/grffile/grffile.dtx](http://ctan.org/pkg/grffile) The source file.

[CTAN:macros/latex/contrib/grffile/grffile.pdf](http://ctan.org/pkg/grffile) Documentation.

¹<http://ctan.org/pkg/grffile>

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:install/macros/latex/contrib/grffile.tds.zip](#)

TDS refers to the standard “A Directory Structure for *TEX* 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 `TDSScripts/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 *TEX*:

```
tex grffile.dtx
```

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

<code>grffile.sty</code>	→ <code>tex/latex/grffile/grffile.sty</code>
<code>grffile.pdf</code>	→ <code>doc/latex/grffile/grffile.pdf</code>
<code>test/grffile-test1.tex</code>	→ <code>doc/latex/grffile/test/grffile-test1.tex</code>
<code>grffile.dtx</code>	→ <code>source/latex/grffile/grffile.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 *TEX* distribution (te*TEX*, mik*TEX*, ...) relies on file name databases, you must refresh these. For example, te*TEX* users run `texhash` or `mktextslr`.

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 grffile.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{grffile.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 grffile.dtx
makeindex -s grffile.ist grffile.idx
pdflatex grffile.dtx
makeindex -s grffile.ist grffile.idx
pdflatex grffile.dtx
```

5 Catalogue

The following XML file can be used as source for the **T_EX Catalogue**. The elements **caption** and **description** are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is **grffile.xml**.

```
516 <catalogue>
517 <?xml version='1.0' encoding='us-ascii'?>
518 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>
519 <entry datestamp='$Date$' modifier='$Author$' id='grffile'>
520   <name>grffile</name>
521   <caption>Extended file name support for graphics.</caption>
522   <authorref id='auth:oberdiek' />
523   <copyright owner='Heiko Oberdiek' year='2006-2012' />
524   <license type='lppl1.3' />
525   <version number='1.18' />
526   <description>
527     The package extends the file name processing of package
528     <xref refid='graphics'>graphics</xref> to support a larger range
529     of file names. For example, the file name may contain several dots.
530
531     Or in case of <xref refid='pdftex'>pdfTeX</xref> in PDF mode the
532     file name may contain spaces.
533     <p>
534       The package is part of the <xref refid='oberdiek'>oberdiek</xref>
535       bundle.
536     </description>
537     <documentation details='Package documentation'
538       href='ctan:/macros/latex/contrib/grffile/grffile.pdf' />
539     <ctan file='true' path='/macros/latex/contrib/grffile/grffile.dtx' />
540     <miktex location='oberdiek' />
```

```

541   <texlive location='oberdiek' />
542   <install path='/macros/latex/contrib/grffile/grffile.tds.zip' />
543 </entry>
544 </catalogue>
```

6 References

- [1] David Carlisle, Sebastian Rahtz: *The graphics package*; 2006/02/20 v1.0o;
[CTAN:macros/latex/required/graphics/graphics.dtx](#).
- [2] Sebastian Rahtz, Heiko Oberdiek: *The graphicx package*; 1999/02/16 v1.0f;
[CTAN:macros/latex/required/graphics/graphicx.dtx](#).

7 History

[2004/07/18 v0.5]

- First version, published in newsgroup [de.comp.text.tex](#):
“Re: Dateinamenproblem”²

[2006/08/15 v1.0]

- File existence check by new primitives of pdfTeX 1.30.
- Implementation partly rewritten.
- New DTX framework.

[2006/08/17 v1.1]

- Adaptation to version 2.3 of package `kvoptions`.

[2006/11/30 v1.2]

- New option `babel`. Before this feature was part of option `extendedchars`.

[2007/04/11 v1.3]

- Line ends sanitized.

[2007/06/13 v1.4]

- Encoding support added with options `encoding`, `inputencoding`, and `filenameencoding`.

[2007/08/16 v1.5]

- Bug fix in encoding support.

[2007/11/11 v1.6]

- Use of package `pdftexcmds` for LuaTeX support.

²Url: <http://groups.google.com/group/de.comp.text.tex/msg/b85984095d1a3c95>

[2007/11/24 v1.7]

- Bug fix of broken previous version.

[2008/08/11 v1.8]

- Code is not changed.
- URLs updated.

[2008/10/13 v1.9]

- Fix for option ‘multidot’ with default rule.

[2009/09/25 v1.10]

- Rewrite of ‘multidot’ algorithm to fix a problem (‘multidot’ with `\graphicspath`).

[2010/01/28 v1.11]

- Undefined `\pdf@filesize` fixed.

[2010/08/26 v1.12]

- Macro `\Gin@ii` of package `graphicx` fixed for the case that the file name contains a hash.

[2010/12/09 v1.13]

- Option `space` also supports X_ET_EX.

[2011/10/04 v1.14]

- Fix for option `space` support of X_ET_EX for EPS files (`\Gread@eps`). (Bug reported by Peter Davis.)

[2011/10/17 v1.15]

- Bug fix for option `space` support of X_ET_EX. Wrong usage of `\@break@tfor` fixed. (Bug reported by Martin Schröder.)

[2012/04/05 v1.16]

- Some fix for option `extendedchars`.

[2016/05/16 v1.17]

- Documentation updates.

[2017/06/30 v1.18]

- Update to follow `graphics` changes.

8 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; plain numbers refer to the code lines where the entry is used.

Symbols	
\'	19, 29
*	22, 32
\.	18, 28
\:	17, 27
\<	20, 30
\=	16, 26
\>	21, 31
\@break@tfor	209, 326
\@ehc	135, 144
\@empty	62, 87, 89, 100, 125, 127, 292, 343, 386, 391, 410, 417
\@filef@und	305
\@firstofone	402
\@firstoftwo	. 193, 199, 208, 259, 303, 325, 333
\@for	383
\@gobble	386, 399
\@ifpackagelater	235, 278
\@inputcheck	187, 188, 189, 192, 257, 266
\@makeother	26, 27, 28, 29, 30, 31, 32
\@ne	167
\@nil	172, 178
\@secondoftwo	190, 201, 261, 306, 315
\@tempa	172, 178, 430, 432, 433, 434, 446, 451, 452, 453
\@tempb	431, 432, 449, 451
\@tempswafalse	437, 456
\@tfor	204, 318
\@undefined	202, 316
\@unknownoptionerror	42
\`	314, 322, 349, 350, 355, 358, 360, 366, 369, 392, 395, 396, 397, 405
\^	23, 33, 112, 113, 114, 115
\~	24, 34, 161
A	
\active	34
\advance	167
\AtBeginDocument	78, 474
B	
\begin	487, 512
C	
\catcode	16, 17, 18, 19, 20, 21, 22, 23, 24, 33, 34
\closein	189, 192
\count@	158, 161, 166, 167
\csname	60, 90, 91, 108, 131, 184, 234, 367, 413, 414, 417
\CurrentInputEncodingOption	94
\CurrentOption	..... 53
D	
\DeclareBoolOption	43, 44, 45, 46
\DeclareCurrentRelease	..... 3
\DeclareDefaultOption	42, 52
\DeclareGraphicsRule	511
\DeclareOption	..... 7
\DeclareRelease	..... 2
\DeclareStringOption	50, 51
\DeclareVoidOption	47
\DisableKeyvalOption	79
\do	205, 319, 383
\documentclass	..... 480
E	
\end	508, 514
\endcsname	60, 90, 92, 108, 131, 184, 234, 367, 413, 414, 417
\escapechar	..... 467
F	
\filename@area	176, 371, 384
\filename@base	..... 176, 343, 351, 354, 361, 365, 368, 371, 374, 384, 391, 392, 397, 401
\filename@dot	366, 397
\filename@ext	352, 362, 366, 367, 371, 374, 375, 385, 386, 390, 398
\filename@simple	..... 344
G	
\G@measure@QTm	220, 228
\Gin@base	..... 173, 217, 218, 220, 225, 226, 228
\Gin@esetsize	440, 459
\Gin@ext	179, 220, 228
\Gin@extensions	383
\Gin@getbase	340
\Gin@ii	465, 468, 471
\Gin@iii	433, 452
\Gininclude@graphics	85, <u>86</u> , 438, 457
\Gread@eps	..... 218, 226, 252, 270, 275, 282, 288
\Gread@QTm	<u>223</u> , <u>224</u> , 231, 239, 243, <u>244</u>
\grffile@analyze@ext	..... 355, <u>358</u>
\grffile@extchar@Ginclude@graphics	..... 117, <u>122</u>
\grffile@extendedcharstrue	102
\grffile@file@found	..... 178, 198, 207, 305, 324, 332
\grffile@filename	..... 124, 137, 140, 150, 153

\grffile@filename@simple ...	344, 349	\input@path	202, 205, 316, 319
\grffile@filenameencoding	87, 129, 138	\inputencodingname	97
\grffile@Fix@Gin@ii	464, 472, 474		
\grffile@Gin@ii@fixed	445, 465	L	
\grffile@Gin@ii@graphicx	429, 471	\loop	159
\grffile@Ginclude@graphics	.....	
	119, 152, 153, 337	M	
\grffile@IFE@next	303, 306, 308	\MessageBreak	65, 133, 295, 297
\grffile@IfFileExists	.. 176, 196,	N	
	225, 246, 294, 301, 312, 371, 384	\NeedsTeXFormat	12, 479
\grffile@inputenc@loop	.....	\newcommand .....	82
	112, 113, 114, 115, 157	O	
\grffile@inputencoding	.....	
	... 89, 94, 97, 100, 125, 129, 138	P	
\grffile@next	. 359, 363, 369, 376, 380	\PackageError	132, 142
\grffile@NIL	.....	\PackageInfo .	6, 231, 274, 293, 411, 468
\grffile@nil	.....	\PackageWarning .....	64, 238, 281
\grffile@option@status	.....	\PassOptionsToPackage .....	53
	..... 408, 426, 427, 428	\pdf@filesize	314, 322
\grffile@org@Ginclude@graphics	.....	\pdff filesize	296
	85, 346	\ProcessKeyvalOptions	77
\grffile@org@Gread@eps	252	\ProcessOptions	8
\grffile@org@Gread@QTM	216, 223, 243	\ProvidesPackage	4, 13
\grffile@org@GreadQTm	R	
\grffile@RestoreCatcodes	15, 476	\renewcommand	86
\grffile@saved@IfFileExists	245, 248	\repeat	168
\grffile@space@disabled	62	\RequirePackage	9, 35, 36, 37, 48, 55, 81
\grffile@space@getbase	170, 340	\reserved@a	201, 208, 213, 315, 325, 330
\grffile@spacefalse	61, 73	\reserved@b	204, 206, 207, 318, 322, 324
\grffile@spacettrue	57, 63, 71	S	
\grffile@temp	137, 140,	\setkeys	83, 439, 458
	253, 256, 258, 288, 383, 384, 386	\SetupKeyvalOptions	38
\grffile@tempa	171, 177	\space	231, 239, 275, 282, 294, 296, 468
\grffile@test	257, 258	\StringEncodingConvert	137
\grffile@try@extlist	363, 376, 382	\StringEncodingSuccessFailure ..	139
\grffile@use@last@ext	392, 395	T	
\grffile@XeTeX@IfFileExists	.....	\the ..	16, 17, 18, 19, 20, 21, 22, 23,
	186, 197, 206		24, 124, 152, 256, 272, 441, 449, 460
\grffilesetup	82	\toks@	123,
\grffile@filenameencoding	127		124, 150, 152, 255, 256, 264,
I			272, 438, 441, 448, 449, 457, 460
\ifeof	188	U	
\IfFileExists	217, 245, 246, 248, 302	\uccode	161
\ifgrffile@babel	105, 107	\uppercase	162
\ifgrffile@extendedchars	105, 111	\usepackage	481, 509, 510
\ifgrffile@multidot	342	X	
\ifgrffile@space	339	\x	151, 155
\ifnum	105, 166	Z	
\ifpdf	70	\z@	105
\iftrue	209		
\ifix	60, 87, 89,		
	90, 91, 100, 125, 127, 129, 131,		
	184, 202, 223, 234, 258, 314,		
	316, 321, 350, 360, 367, 385,		
	390, 396, 413, 417, 432, 451, 471		
\ifxetex	56, 185		
\immediate	253, 266, 289		
\includegraphics	513		