

# The grffile package

Heiko Oberdiek  
<heiko.oberdiek at googlemail.com>

2010/12/09 v1.13

## 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

<b>1</b>	<b>Usage</b>	<b>2</b>
1.1	Option <code>multidot</code>	2
1.2	Option <code>babel</code>	2
1.3	Option <code>extendedchars</code>	2
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>	3
1.6	General use	4
1.7	Default settings	4
<b>2</b>	<b>Implementation</b>	<b>4</b>
2.1	Identification	4
2.2	Catcode stuff	4
2.3	Options	5
2.4	Fix <code>\Gin@ii</code> of package <code>graphicx</code>	11
<b>3</b>	<b>Test</b>	<b>12</b>
3.1	Multidot with default rule	12
<b>4</b>	<b>Installation</b>	<b>13</b>
4.1	Download	13
4.2	Bundle installation	13
4.3	Package installation	14
4.4	Refresh file name databases	14
4.5	Some details for the interested	14
<b>5</b>	<b>References</b>	<b>15</b>
<b>6</b>	<b>History</b>	<b>15</b>
	[2004/07/18 v0.5]	15
	[2006/08/15 v1.0]	15
	[2006/08/17 v1.1]	15
	[2006/11/30 v1.2]	15
	[2007/04/11 v1.3]	15
	[2007/06/13 v1.4]	15

[2007/08/16 v1.5]	15
[2007/11/11 v1.6]	15
[2007/11/24 v1.7]	15
[2008/08/11 v1.8]	15
[2008/10/13 v1.9]	16
[2009/09/25 v1.10]	16
[2010/01/28 v1.11]	16
[2010/08/26 v1.12]	16
[2010/12/09 v1.13]	16

<b>7 Index</b>	<b>16</b>
----------------	-----------

## 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  $\text{\LaTeX}$  package `inputenc`. However a file name is not input for  $\text{\LaTeX}$ . 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  $\text{\TeX}$  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  $\text{\LaTeX}$  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  $\text{\TeX}$  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  $\text{\LaTeX}$  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}
\grffilesetup{
  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  $\text{\TeX}$  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 `dvips` or `dvipdfm` do not allow spaces. However  $\text{\pdfTeX}$ 's primitive `\pdfximage` uses curly braces to delimit the file name and allows spaces. In case of  $\text{\XeTeX}$  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`:  
`\grffilesetup{<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

<code>multidot</code>	<code>true</code>	
<code>babel</code>	<code>true</code>	
<code>extendedchars</code>	<code>false</code>	
<code>space</code>	<code>true</code>	if pdf $\TeX$ 1.30 or greater is used in PDF mode
	<code>false</code>	otherwise

# 2 Implementation

## 2.1 Identification

```

1 \<package>
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{grffile}%
4 [2010/12/09 v1.13 Extended file name support for graphics (H0)]%
```

## 2.2 Catcode stuff

```

5 \edef\grffile@RestoreCatcodes{%
6   \catcode'\noexpand\=\the\catcode'\=\relax
7   \catcode'\noexpand\:\the\catcode'\:\relax
8   \catcode'\noexpand\.\the\catcode'\.\relax
9   \catcode'\noexpand\' \the\catcode\' \relax
10  \catcode'\noexpand\<\the\catcode'\<\relax
11  \catcode'\noexpand\>\the\catcode'\>\relax
12  \catcode'\noexpand*\the\catcode'\*\relax
```

```

13 \catcode'\noexpand\~\the\catcode'\~\relax
14 \catcode'\noexpand\~\the\catcode'\~\relax
15 }
16 \@makeother\=
17 \@makeother\:
18 \@makeother\.
19 \@makeother\'
20 \@makeother\<
21 \@makeother\>
22 \@makeother\*
23 \catcode'\^=7 %
24 \catcode'\~= \active

```

## 2.3 Options

```

25 \RequirePackage{ifpdf}[2010/01/28]
26 \RequirePackage{ifxetex}[2010/09/12]
27 \RequirePackage{kvoptions}[2006/08/17]
28 \SetupKeyvalOptions{%
29   family=Gin,%
30   prefix=grffile%
31 }
32 \DeclareDefaultOption{\@unknownoptionerror}
33 \DeclareBoolOption[true]{multidot}
34 \DeclareBoolOption[true]{babel}
35 \DeclareBoolOption[false]{extendedchars}
36 \DeclareBoolOption{space}
37 \DeclareVoidOption{encoding}{%
38   \RequirePackage{stringenc}\relax
39 }
40 \DeclareStringOption{inputencoding}
41 \DeclareStringOption{filenameencoding}
42 \DeclareDefaultOption{%
43   \PassOptionsToPackage\CurrentOption{graphics}%
44 }

```

Default setting for option space.

```

45 \RequirePackage{pdftexcmds}[2007/11/11]
46 \ifxetex
47   \grffile@spacetrue
48 \else
49   \begingroup\expandafter\expandafter\expandafter\endgroup
50   \expandafter\ifx\csname pdf@filesize\endcsname\relax
51     \grffile@spacefalse
52     \let\grffile@space@disabled\@empty
53     \def\grffile@spacetrue{%
54       \PackageWarning{grffile}{%
55         Option 'space' is not available,\MessageBreak
56         because it needs pdfTeX >= 1.30 or XeTeX%
57       }%
58     }%
59   \else
60     \ifpdf
61       \grffile@spacetrue
62     \else
63       \grffile@spacefalse
64     \fi
65   \fi
66 \fi
67 \ProcessKeyvalOptions*
68 \AtBeginDocument{%
69   \DisableKeyvalOption[package=grffile]{Gin}{encoding}%
70 }

```

```

71 \RequirePackage{graphics}

\grffilesetup

72 \newcommand*{\grffilesetup}{%
73   \setkeys{Gin}%
74 }

grffile@org@Gininclude@graphics

75 \let\grffile@org@Gininclude@graphics\Gininclude@graphics

\Gininclude@graphics

76 \renewcommand*{\Gininclude@graphics}{%
77   \ifx\grffile@filenameencoding\@empty
78   \else
79     \ifx\grffile@inputencoding\@empty
80       \expandafter\ifx\csname inputencodingname\endcsname\relax
81       \expandafter\ifx\csname
82         CurrentInputEncodingOption\endcsname\relax
83       \else
84         \let\grffile@inputencoding\CurrentInputEncodingOption
85       \fi
86     \else
87       \let\grffile@inputencoding\inputencodingname
88     \fi
89   \fi
90   \ifx\grffile@inputencoding\@empty
91   \else
92     \grffile@extendedchartrue
93   \fi
94   \fi
95   \ifnum0\ifgrffile@babel 1\fi\ifgrffile@extendedchars 1\fi>\z@
96   \begingroup

Support of babel's shorthand characters.

97     \ifgrffile@babel
98     \csname @safe@activetrue\endcsname

Support of active tilde.

99     \edef~{\string~}%

Support of characters controlled by package inputenc.

100    \fi
101    \ifgrffile@extendedchars
102      \grffile@inputenc@loop\^^A\^^H%
103      \grffile@inputenc@loop\^^K\^^K%
104      \grffile@inputenc@loop\^^N\^^_%
105      \grffile@inputenc@loop\^^?\^^ff%
106    \fi
107    \expandafter\grffile@extchar@Gininclude@graphics
108  \else
109    \expandafter\grffile@Gininclude@graphics
110  \fi
111 }

ile@extchar@Gininclude@graphics

112 \def\grffile@extchar@Gininclude@graphics#1{%
113   \toks@{#1}%
114   \edef\grffile@filename{\the\toks@}%
115   \ifx\grffile@inputencoding\@empty
116   \else
117     \ifx\grffile@filenameencoding\@empty
118     \else
119       \ifx\grffile@inputencoding\grffile@filenameencoding

```

```

120     \else
121     \expandafter\ifx\csname StringEncodingConvert\endcsname\relax
122     \PackageError{grffile}{%
123     Package 'stringenc' is not loaded,\MessageBreak
124     omitting file name conversion%
125     }\@ehc
126     \else
127     \StringEncodingConvert\grffile@temp\grffile@filename
128     \grffile@inputencoding\grffile@filenameencoding
129     \StringEncodingSuccessFailure{%
130     \let\grffile@filename\grffile@temp
131     }{%
132     \PackageError{grffile}{%
133     Filename conversion failed%
134     }\@ehc
135     }%
136     \fi
137     \fi
138     \fi
139     \fi
140     \toks@\expandafter{\grffile@filename}%
141     \edef\x{\endgroup
142     \noexpand\grffile@Ginclude@graphics{\the\toks@}%
143     }%
144     \x
145 }

```

\grffile@inputenc@loop

```

146 \def\grffile@inputenc@loop#1#2{%
147   \count@=#1\relax
148   \loop
149   \begingroup
150   \uccode'\~=\count@
151   \uppercase{%
152   \endgroup
153   \edef~{\string~}%
154   }%
155   \ifnum\count@<#2\relax
156   \advance\count@\@ne
157   \repeat
158 }

```

Support for option space

\grffile@space@getbase

```

159 \def\grffile@space@getbase#1{%
160   \edef\grffile@tempa{%
161     \def\noexpand\@tempa####1#1\noexpand\@nil{%
162       \def\noexpand\Gin@base{####1}%
163     }%
164   }%
165   \grffile@ifFileExists{\filename@area\filename@base#1}{%
166     \grffile@tempa
167     \expandafter\@tempa\grffile@file@found\@nil
168     \edef\Gin@ext{#1}%
169   }{%
170   }%
171 }

172 \begingroup\expandafter\expandafter\expandafter\endgroup
173 \expandafter\ifx\csname pdf@filesize\endcsname\relax
174 \ifxetex

```

\grffile@XeTeX@ifFileExists

```

175 \long\def\grffile@XeTeX@ifFileExists#1{%
176   \openin\@inputcheck"#1" %
177   \ifeof\@inputcheck
178     \closein\@inputcheck
179     \expandafter\@secondoftwo
180   \else
181     \closein\@inputcheck
182     \expandafter\@firstoftwo
183   \fi
184 }%
```

\grffile@ifFileExists

```

185 \long\def\grffile@ifFileExists#1{%
186   \grffile@XeTeX@ifFileExists{#1}{%
187     \edef\grffile@file@found{#1}%
188     \@firstoftwo
189   }{%
190     \let\reserved@a\@secondoftwo
191     \ifx\input@path\@undefined
192     \else
193       \expandafter\@tfor\expandafter\reserved@b\expandafter
194         :\expandafter=\input@path\do{%
195         \grffile@XeTeX@ifFileExists{\reserved@b#1}{%
196         \edef\grffile@file@found{\reserved@b#1}%
197         \let\reserved@a\@firstoftwo
198         \@break@tfor
199       }{}%
200     }%
201     \fi
202     \reserved@a
203   }%
204 }%
```

\grffile@org@Gread@QTm Patch \Gread@QTm of xetex.def.

```

205 \def\grffile@org@Gread@QTm#1{%
206   \IfFileExists{\Gin@base.bb}{%
207     \Gread@eps{\Gin@base.bb}%
208   }{%
209     \G@measure@QTm{\Gin@base}{\Gin@ext}%
210   }%
211 }%
```

```

212 \ifx\Gread@QTm\grffile@org@Gread@QTm
```

\Gread@QTm

```

213 \def\Gread@QTm#1{%
214   \grffile@ifFileExists{\Gin@base.bb}{%
215     \Gread@eps{\Gin@base.bb}%
216   }{%
217     \G@measure@QTm{\Gin@base}{\Gin@ext}%
218   }%
219 }%

220 \PackageInfo{grffile}{\string\Gread@QTm\space patched}%
221 \else
222   \begingroup\expandafter\expandafter\expandafter\endgroup
223   \expandafter\ifx\csname Gread@QTm\endcsname\relax
224     \PackageWarning{grffile}{%
225       \string\Gread@QTm\space of xetex.def not found%
226     }%
227   \else
```



```

\grffile@org@Gread@QTm
228      \let\grffile@org@Gread@QTm\Gread@QTm

\Gread@QTm
229      \def\Gread@QTm#1{%
230          \let\grffile@saved@ifFileExists\ifFileExists
231          \let\ifFileExists\grffile@ifFileExists
232          \grffile@org@Gread@QTm{#1}%
233          \let\ifFileExists\grffile@saved@ifFileExists
234      }%

235      \fi
236      \fi
237      \else
238          \begingroup
239          \let\on@line\@empty
240          \PackageInfo{grffile}{%
241              \string\grffile@ifFileExists\space without space support,%
242              \MessageBreak
243              because pdfTeX's \string\pdffilesize\space is not available%
244              \MessageBreak
245              or XeTeX is not running%
246          }%
247      \endgroup

\grffile@ifFileExists
248      \long\def\grffile@ifFileExists#1{%
249          \ifFileExists{#1}{%
250              \let\grffile@IFE@next\@firstoftwo
251          }{%
252              \let\grffile@file@found\@file@und
253              \let\grffile@IFE@next\@secondoftwo
254          }%
255          \grffile@IFE@next
256      }%

257      \fi
258      \else

\grffile@ifFileExists
259      \long\def\grffile@ifFileExists#1{%
260          \expandafter\expandafter\expandafter
261          \ifx\expandafter\expandafter\expandafter\pdf@filesize{#1}\%
262              \let\reserved@a\@secondoftwo
263              \ifx\input@path\@undefined
264              \else
265                  \expandafter\@tfor\expandafter\reserved@b\expandafter
266                  :\expandafter=\input@path\do{%
267                      \expandafter\expandafter\expandafter
268                      \ifx\expandafter\expandafter\expandafter
269                      \\\pdf@filesize{\reserved@b#1}\%
270                  \else
271                      \edef\grffile@file@found{\reserved@b#1}%
272                      \let\reserved@a\@firstoftwo
273                      \@break@tfor
274                  \fi
275              }%
276              \fi
277              \expandafter\reserved@a
278          \else
279              \edef\grffile@file@found{#1}%
280              \expandafter\@firstoftwo

```

```

281     \fi
282 }%

283 \fi

\grffile@Gininclude@graphics

284 \def\grffile@Gininclude@graphics#1{%
285   \begingroup
286   \ifgrffile@space
287     \let\Gin@getbase\grffile@space@getbase
288     \fi
289   \ifgrffile@multidot
290     \let\filename@base\@empty
291     \let\filename@simple\grffile@filename@simple
292     \fi
293     \grffile@org@Gininclude@graphics{#1}%
294   \endgroup
295 }%

\grffile@filename@simple

296 \def\grffile@filename@simple#1.#2\\{%
297   \ifx\\#2\\%
298     \def\filename@base{#1}%
299     \let\filename@ext\relax
300   \else
301     \def\filename@base{}%
302     \grffile@analyze@ext{#1}.{#2}\\%
303   \fi
304 }

\grffile@analyze@ext

305 \def\grffile@analyze@ext#1.#2\\{%
306   \let\grffile@next\relax
307   \ifx\\#2\\%
308     \edef\filename@base{\filename@base#1}%
309     \let\filename@ext\relax
310     \def\grffile@next{\grffile@try@extlist}%
311   \else
312     \edef\filename@base{\filename@base #1}%
313     \edef\filename@ext{\filename@dot#2\\}%
314     \expandafter\ifx\csname Gin@rule@.\filename@ext\endcsname\relax
315       \edef\filename@base{\filename@base.}%
316       \def\grffile@next{\grffile@analyze@ext#2\\}%
317     \else
318       \grffile@IfFileExists{\filename@area\filename@base.\filename@ext}{%
319         % success
320       }{%
321         \edef\filename@base{\filename@base.\filename@ext}%
322         \let\filename@ext\relax
323         \def\grffile@next{\grffile@try@extlist}%
324       }%
325     \fi
326   \fi
327   \grffile@next
328 }

\grffile@try@extlist

329 \def\grffile@try@extlist{%
330   \@for\grffile@temp:=\Gin@extensions\do{%
331     \grffile@IfFileExists{\filename@area\filename@base\grffile@temp}{%
332       \ifx\filename@ext\relax
333         \edef\filename@ext{\expandafter\@gobble\grffile@temp\@empty}%

```

```

334     \fi
335   }{}%
336 }%
337 \ifx\filename@ext\relax
338   \expandafter\let\expandafter\filename@base\expandafter\@empty
339   \expandafter\grffile@use@last@ext\filename@base.\%
340 \fi
341 }

```

\grffile@use@last@ext

```

342 \def\grffile@use@last@ext#1.#2\{%
343   \ifx\#2\%
344     \edef\filename@base{\expandafter\filename@dot\filename@base\}%
345     \def\filename@ext{#1}%
346     \expandafter\@gobble
347   \else
348     \edef\filename@base{\filename@base#1.}%
349     \expandafter\@firstofone
350   \fi
351   {%
352     \grffile@use@last@ext#2\%
353   }%
354 }

```

Print current option setting

\grffile@option@status

```

355 \def\grffile@option@status#1{%
356   \begingroup
357   \let\on@line\@empty
358   \PackageInfo{grffile}{%
359     Option ‘#1’ is %
360     \expandafter\ifx\csname ifgrffile@#1\expandafter\endcsname
361       \csname iftrue\endcsname
362       set to ‘true’%
363   \else
364     \expandafter\ifx\csname grffile@#1@disabled\endcsname\@empty
365       not available%
366   \else
367     set to ‘false’%
368   \fi
369   \fi
370 }%
371 \endgroup
372 }

373 \grffile@option@status{multidot}
374 \grffile@option@status{extendedchars}
375 \grffile@option@status{space}

```

## 2.4 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

```

376 \def\grffile@Gin@ii@graphicx[#1]#2{%
377   \def\@tempa{[]}%
378   \def\@tempb{#2}%
379   \ifx\@tempa\@tempb
380     \def\@tempa{\Gin@iii[#1] []}% hash-ok
381     \expandafter\@tempa

```

```

382 \else
383 \begingroup
384 \@tempswafalse
385 \toks@{\Gininclude@graphics{#2}}%
386 \setkeys{Gin}{#1}%
387 \Gin@esetsize
388 \the\toks@
389 \endgroup
390 \fi
391 }

\grffile@Gin@ii@fixed

392 \def\grffile@Gin@ii@fixed[#1]#2{%
393 \def\@tempa{[]}%
394 \begingroup
395 \toks@={#2}%
396 \edef\@tempb{\the\toks@}%
397 \expandafter\endgroup
398 \ifx\@tempa\@tempb
399 \def\@tempa{\Gin@iii[#1] []}% hash-ok
400 \expandafter\@tempa
401 \else
402 \begingroup
403 \@tempswafalse
404 \toks@{\Gininclude@graphics{#2}}%
405 \setkeys{Gin}{#1}%
406 \Gin@esetsize
407 \the\toks@
408 \endgroup
409 \fi
410 }

\grffile@Fix@Gin@ii

411 \def\grffile@Fix@Gin@ii{%
412 \let\Gin@ii\grffile@Gin@ii@fixed
413 \begingroup
414 \escapechar=92 %
415 \PackageInfo{grffile}{\string\Gin@ii\space of package 'graphicx' fixed}%
416 \endgroup
417 }

418 \ifx\Gin@ii\grffile@Gin@ii@graphicx
419 \grffile@Fix@Gin@ii
420 \else
421 \AtBeginDocument{\grffile@Fix@Gin@ii}%
422 \fi

423 \grffile@RestoreCatcodes
424 </package>

```

### 3 Test

#### 3.1 Multidot with default rule

```

425 \test1
426 \NeedsTeXFormat{LaTeX2e}
427 \documentclass{article}
428 \usepackage{filecontents}
429 % file grffile-test.mp:
430 % beginfig(1);
431 % draw fullcircle scaled 2cm withpen pencircle scaled 2mm;
432 % endfig;

```

```

433 % end
434 \begin{filecontents*}{grffile-test.1}
435 %!PS
436 %%BoundingBox: -32 -32 32 32
437 %%Creator: MetaPost
438 %%CreationDate: 2004.06.16:1257
439 %%Pages: 1
440 %%EndProlog
441 %%Page: 1 1
442 0 5.66928 dtransform truncate idtransform setlinewidth pop [] 0 setdash
443 1 setlinejoin 10 setmiterlimit
444 newpath 28.34645 0 moveto
445 28.34645 7.51828 25.35938 14.72774 20.04356 20.04356 curveto
446 14.72774 25.35938 7.51828 28.34645 0 28.34645 curveto
447 -7.51828 28.34645 -14.72774 25.35938 -20.04356 20.04356 curveto
448 -25.35938 14.72774 -28.34645 7.51828 -28.34645 0 curveto
449 -28.34645 -7.51828 -25.35938 -14.72774 -20.04356 -20.04356 curveto
450 -14.72774 -25.35938 -7.51828 -28.34645 0 -28.34645 curveto
451 7.51828 -28.34645 14.72774 -25.35938 20.04356 -20.04356 curveto
452 25.35938 -14.72774 28.34645 -7.51828 28.34645 0 curveto closepath stroke
453 showpage
454 %%EOF
455 \end{filecontents*}
456 \usepackage{graphicx}
457 \usepackage[multidot]{grffile}[2008/10/13]
458 \DeclareGraphicsRule{*}{mps}{*}{} % for pdflatex
459 \begin{document}
460 \includegraphics{grffile-test.1}
461 \end{document}
462 \end{test1}

```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

[CTAN:macros/latex/contrib/oberdiek/grffile.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/grffile.pdf](#) Documentation.

**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/oberdiek.tds.zip](#)

*TDS* refers to the standard “A Directory Structure for T<sub>E</sub>X 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 `TDS:scripts/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):

---

<sup>1</sup>[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

```
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  $\text{\TeX}$ :

```
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):

```
grffile.sty      → tex/latex/oberdiek/grffile.sty
grffile.pdf      → doc/latex/oberdiek/grffile.pdf
test/grffile-test1.tex → doc/latex/oberdiek/test/grffile-test1.tex
grffile.dtx      → source/latex/oberdiek/grffile.dtx
```

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  $\text{\TeX}$  distribution (`te $\text{\TeX}$` , `mik $\text{\TeX}$` , ...) relies on file name databases, you must refresh these. For example, `te $\text{\TeX}$`  users run `texhash` or `mktextlsr`.

### 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  $\text{\LaTeX}$ .** The `.dtx` chooses its action depending on the format:

**plain  $\text{\TeX}$ :** Run docstrip and extract the files.

**$\text{\LaTeX}$ :** Generate the documentation.

If you insist on using  $\text{\LaTeX}$  for docstrip (really, docstrip does not need  $\text{\LaTeX}$ ), 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 `pdf $\text{\LaTeX}$` :

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

## 5 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](#).

## 6 History

### [2004/07/18 v0.5]

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

### [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.

### [2007/11/24 v1.7]

- Bug fix of broken previous version.

### [2008/08/11 v1.8]

- Code is not changed.
- URLs updated.

---

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

[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  $\text{X}\text{\textsf{E}}\text{\textsf{L}}\text{\textsf{A}}\text{\textsf{T}}\text{\textsf{E}}\text{\textsf{X}}$ .

## 7 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	
<code>\'</code> .....	9, 19
<code>\*</code> .....	12, 22
<code>\.</code> .....	8, 18
<code>\:</code> .....	7, 17
<code>\&lt;</code> .....	10, 20
<code>\=</code> .....	6, 16
<code>\&gt;</code> .....	11, 21
<code>\@break@tfor</code> .....	198, 273
<code>\@ehc</code> .....	125, 134
<code>\@empty</code> .....	52, 77, 79, 90, 115, 117, 239, 290, 333, 338, 357, 364
<code>\@filef@und</code> .....	252
<code>\@firstofone</code> .....	349
<code>\@firstoftwo</code> .....	182, 188, 197, 250, 272, 280
<code>\@for</code> .....	330
<code>\@gobble</code> .....	333, 346
<code>\@inputcheck</code> .....	176, 177, 178, 181
<code>\@makeoother</code> ..	16, 17, 18, 19, 20, 21, 22
<code>\@ne</code> .....	156
<code>\@nil</code> .....	161, 167
<code>\@secondoftwo</code> .....	179, 190, 253, 262
<code>\@tempa</code> .....	161, 167, 377, 379, 380, 381, 393, 398, 399, 400
<code>\@tempb</code> .....	378, 379, 396, 398
<code>\@tempswafalse</code> .....	384, 403
<code>\@tfor</code> .....	193, 265
<code>\@undefined</code> .....	191, 263
<code>\@unknownoptionerror</code> .....	32
<code>\@</code> .....	261, 269, 296, 297, 302, 305, 307, 313, 316, 339, 342, 343, 344, 352
<code>\~</code> .....	13, 23, 102, 103, 104, 105
<code>\~</code> .....	14, 24, 150
<b>A</b>	
<code>\active</code> .....	24
<code>\advance</code> .....	156
<code>\AtBeginDocument</code> .....	68, 421
<b>B</b>	
<code>\begin</code> .....	434, 459
<b>C</b>	
<code>\catcode</code> .....	6, 7, 8, 9, 10, 11, 12, 13, 14, 23, 24
<code>\closein</code> .....	178, 181
<code>\count@</code> .....	147, 150, 155, 156
<code>\csname</code> .....	50, 80, 81, 98, 121, 173, 223, 314, 360, 361, 364
<code>\CurrentInputEncodingOption</code> .....	84
<code>\CurrentOption</code> .....	43
<b>D</b>	
<code>\DeclareBoolOption</code> .....	33, 34, 35, 36
<code>\DeclareDefaultOption</code> .....	32, 42
<code>\DeclareGraphicsRule</code> .....	458
<code>\DeclareStringOption</code> .....	40, 41
<code>\DeclareVoidOption</code> .....	37
<code>\DisableKeyvalOption</code> .....	69
<code>\do</code> .....	194, 266, 330
<code>\documentclass</code> .....	427
<b>E</b>	
<code>\end</code> .....	455, 461



\endcsname	50, 80, 82, 98, 121, 173, 223, 314, 360, 361, 364
\escapechar	414
<b>F</b>	
\filename@area	165, 318, 331
\filename@base	165, 290, 298, 301, 308, 312, 315, 318, 321, 331, 338, 339, 344, 348
\filename@dot	313, 344
\filename@ext	299, 309, 313, 314, 318, 321, 322, 332, 333, 337, 345
\filename@simple	291
<b>G</b>	
\G@measure@QTm	209, 217
\Gin@base	162, 206, 207, 209, 214, 215, 217
\Gin@esetsize	387, 406
\Gin@ext	168, 209, 217
\Gin@extensions	330
\Gin@getbase	287
\Gin@ii	412, 415, 418
\Gin@iii	380, 399
\Ginclude@graphics	75, 76, 385, 404
\Gread@eps	207, 215
\Gread@QTm	212, 213, 220, 225, 228, 229
\grffile@analyze@ext	302, 305
\grffile@extchar@Ginclude@graphics	107, 112
\grffile@extendedcharstrue	92
\grffile@file@found	167, 187, 196, 252, 271, 279
\grffile@filename	114, 127, 130, 140
\grffile@filename@simple	291, 296
\grffile@filenameencoding	77, 119, 128
\grffile@Fix@Gin@ii	411, 419, 421
\grffile@Gin@ii@fixed	392, 412
\grffile@Gin@ii@graphicx	376, 418
\grffile@Ginclude@graphics	109, 142, 284
\grffile@IFE@next	250, 253, 255
\grffile@IfFileExists	165, 185, 214, 231, 241, 248, 259, 318, 331
\grffile@inputenc@loop	102, 103, 104, 105, 146
\grffile@inputencoding	79, 84, 87, 90, 115, 119, 128
\grffile@next	306, 310, 316, 323, 327
\grffile@option@status	355, 373, 374, 375
\grffile@org@Ginclude@graphics	75, 293
\grffile@org@Gread@QTm	205, 212, 228
\grffile@org@Gread@QTm	232
\grffile@RestoreCatcodes	5, 423
\grffile@savd@IfFileExists	230, 233
\grffile@space@disabled	52
\grffile@space@getbase	159, 287
\grffile@spacefalse	51, 63
\grffile@spacetrue	47, 53, 61
\grffile@temp	127, 130, 330, 331, 333
\grffile@tempa	160, 166
\grffile@try@extlist	310, 323, 329
\grffile@use@last@ext	339, 342
\grffile@XeTeX@IfFileExists	175, 186, 195
\grffile@setup	72
\grffile@filenameencoding	117
<b>I</b>	
\ifeof	177
\IfFileExists	206, 230, 231, 233, 249
\ifgrffile@babel	95, 97
\ifgrffile@extendedchars	95, 101
\ifgrffile@multidot	289
\ifgrffile@space	286
\ifnum	95, 155
\ifpdf	60
\ifx	50, 77, 79, 80, 81, 90, 115, 117, 119, 121, 173, 191, 212, 223, 261, 263, 268, 297, 307, 314, 332, 337, 343, 360, 364, 379, 398, 418
\ifxetex	46, 174
\includegraphics	460
\input@path	191, 194, 263, 266
\inputencodingname	87
<b>L</b>	
\loop	148
<b>M</b>	
\MessageBreak	55, 123, 242, 244
<b>N</b>	
\NeedsTeXFormat	2, 426
\newcommand	72
<b>O</b>	
\on@line	239, 357
\openin	176
<b>P</b>	
\PackageError	122, 132
\PackageInfo	220, 240, 358, 415
\PackageWarning	54, 224
\PassOptionsToPackage	43
\pdf@filesize	261, 269
\pdffilesize	243
\ProcessKeyvalOptions	67
\ProvidesPackage	3
<b>R</b>	
\renewcommand	76
\repeat	157
\RequirePackage	25, 26, 27, 38, 45, 71
\reserved@a	190, 197, 202, 262, 272, 277
\reserved@b	193, 195, 196, 265, 269, 271
<b>S</b>	
\setkeys	73, 386, 405
\SetupKeyvalOptions	28
\space	220, 225, 241, 243, 415
\StringEncodingConvert	127
\StringEncodingSuccessFailure	129

	<b>T</b>		<b>\uppercase</b> . . . . .	151
<b>\the</b> . . . . .	6, 7, 8, 9, 10, 11, 12, 13, 14, 114, 142, 388, 396, 407		<b>\usepackage</b> . . . . .	428, 456, 457
<b>\toks@</b> . . . . .	113, 114, 140, 142, 385, 388, 395, 396, 404, 407		<b>X</b>	
		<b>\x</b> . . . . .		141, 144
	<b>U</b>		<b>Z</b>	
<b>\uccode</b> . . . . .	150	<b>\z@</b> . . . . .		95