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The *Stata Journal* is published quarterly by the Stata Press, College Station, Texas, USA.

Address changes should be sent to the *Stata Journal*, StataCorp, 4905 Lakeway Drive, College Station, TX 77845, USA, or emailed to sj@stata.com.


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The Stata Journal (2015)
15, Number 2, pp. 594–596

graphlog: Creating log files with embedded graphics

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Abstract. In this note, I describe the user-written command `graphlog`. Stata's built-in `log` command lacks the ability to include graphics in log files. `graphlog` embeds graphics in a Stata log file and saves the result to a PDF file. This improves the documentation of the work done.

Keywords: gr0064, graphlog, data documentation, log files, document preparation, LaTeX, graphics

Introduction

A shortcoming of Stata's `log` command is that it can save logs in only plain text (`.txt` or `.log`) and Stata's own `.smcl` format, neither of which support embedded graphics. The command `graphlog` converts Stata log files to PDF, embedding graphics into the PDF file at the points where references are made to each graph. This improves the overview of the log and makes sharing results easier when collaborating with others.

The graphlog command

Use of the `graphlog` command requires the LaTeX typesetting engine with `pdflatex` to be installed to your system (free of charge). For Microsoft Windows, I recommend MiKTeX (http://miktex.org/download); for Mac OS X, MacTeX (http://tug.org/mactex); and for Linux, TeX Live (http://tug.org/texlive).

Syntax

The command's syntax is as follows:

```
graphlog using filename [ , gdirectory(string) psize(a4|letter)
   porientation(portrait|landscape) msize(#) fsize(10|11|12)
   lspacing(#) splitoutput sepfigures fwidth(#) enumerate keeptex
   replace openpdf ]
```

Options

`gdirectory(`*string*`)` specifies the directory where the graphics files are placed. This is helpful if `graphlog` cannot find your graph.

`psize(a4|letter)` determines the paper size of the PDF document. The default is `psize(a4)`.

`porientation(portrait|landscape)` determines the page orientation. The default is `porientation(portrait)`.

`msize(#)` specifies the margin size in inches. The default is `msize(0.5)`. The minimum value is 0.1, and the maximum value is 2.5.

`fsize(10|11|12)` determines the font size. The default is `fsize(11)`.

`lspacing(#)` specifies the line spacing used in the PDF document. The default is `lspacing(0.7)`

`splitoutput` allows output from one command to be split over multiple pages. Use this option to conserve paper. Normally, `graphlog` will split output over multiple pages only if the block of output is too large to fit on one page.

`sepfigures` forces `graphlog` to place embedded figures on separate pages in landscape mode (regardless of the page orientation of the rest of the PDF document). If not specified, figures will be embedded on the text pages.

`fwidth(#)` defines the width of the figures as a fraction of the maximum text width (that is, as a fraction of the paper width minus the margins). The default is `fwidth(1)`.

`enumerate` adds a footer on each page reading "`Page` *X* `of` *Y*".

`keeptex` saves a copy of the TEX file for manual editing.

`replace` allows overwriting an existing PDF or TEX file.

`openpdf` opens the PDF document upon completion. Available only for Windows systems.

Due to limitations in the file types that LATEX can handle, graphics in only `.gph`, `.png`, or `.pdf` format can be incorporated in the final file.

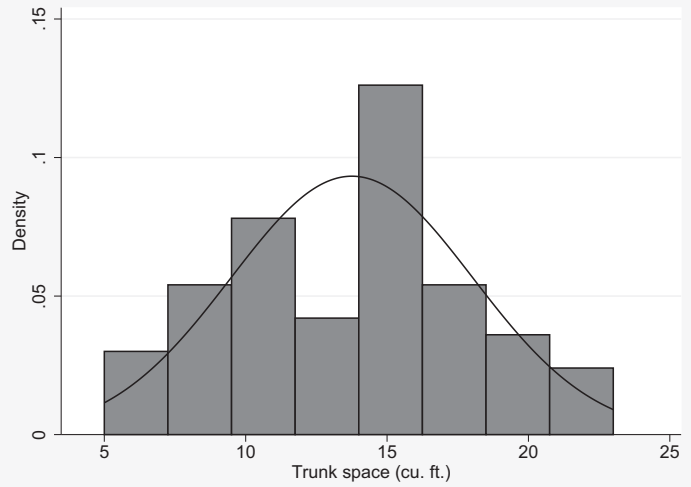
Example

Below is an example using `graphlog`.

```
log using example.log
sysuse auto
summarize trunk
histogram trunk, normal
graph export graph.pdf
log close
graphlog using example.log, lspacing(1)
```

The PDF file generated by the code above can be seen in figure 1.

```
-------------------------------------------------------------------------------
      name:  <unnamed>
       log:  U:\example.log
  log type:  text
 opened on:  7 Jan 2015, 17:17:46
. sysuse auto, clear
(1978 Automobile Data)
. summarize trunk
    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       trunk |        74    13.75676    4.277404         5         23
. histogram trunk, normal
(bin=8, start=5, width=2.25)
. graph export graph.pdf
(file graph.pdf written in PDF format)
```




```
. log close
      name:  <unnamed>
       log:  U:\example.log
  log type:  text
 closed on:  7 Jan 2015, 17:17:46
-------------------------------------------------------------------------------
```

Figure 1. `graphlog` example output

Acknowledgment

I thank Christopher F. Baum for suggestions for cleaning up the code of `graphlog` and making the command platform independent.

About the author

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