

NAME

bcg_draw – display graphs encoded in the BCG format

SYNOPSIS

bcg_draw [*bcg_options*] [**-ps**] [**-eps**] [**-size** *x y*] [**-paper** *z*] [**-bg**] [**-fg**] *filename* [**.bcg**]

DESCRIPTION

This command takes as input the BCG graph *filename.bcg* and displays this graph in an X11 window using the PostScript viewer specified by the environment variable **\$CADP_PS_VIEWER** (see below).

Alternatively, **bcg_draw** can generate PostScript files (which can be printed) as well as Encapsulated PostScript files (which can be included in electronic documents).

bcg_draw attempts to provide nice graphical representations for BCG graphs. It borrows ideas from a prototype tool for 2D graph drawing developed by Claude Jard and Thierry Jeron (IRISA, Rennes, France). Radu Mateescu added various placement heuristics for states and labels, so as to reduce the number of edge intersections and label overwriting, while trying to preserve symmetry.

A dynamic library corresponding to *filename.bcg* may be generated if necessary.

The format of the PostScript files generated by **bcg_draw** is described in a technical report (see the files **\$CADP/doc/*/Tock-95.***).

The PostScript files generated by **bcg_draw** can be modified interactively using the **bcg_edit**(LOCAL) command.

GENERAL OPTIONS

The following *bcg_options* are currently supported: **-version**, **-create**, **-update**, **-remove**, **-cc**, and **-tmp**. See the **bcg**(LOCAL) manual page for a description of these options.

PARTICULAR OPTIONS

The following options are also supported:

-ps Do not display the graph, but generate instead a PostScript file named *filename.ps*.

-eps Do not display the graph in an X11 window, but generate instead an Encapsulated PostScript file named *filename.ps*. The bounding box of the picture is computed according to the value of the environment variable **\$CADP_PS_INTERPRETER** (see below).

-size *x y*
Reduce the size of the picture to a rectangle of length *x* and height *y*, where *x* and *y* are two dimensions expressed in points (1 cm = 28.3 points, 1 inch = 72 points). By default, an A4 page format is selected.

-paper *z*
Reduce the size of the picture to a rectangle of format *z*, where *z* is a character string that may take one of the following values: Letter, A0, A1, A2, A3, A4, or A5. By default, an A4 page format is selected. The *-size* and *-paper* options are mutually exclusive.

-bg When displaying the graph, open a display window running in background mode. The execution of **bcg_draw** will terminate immediately after this display window is started. Default option.

-fg When displaying the graph, open a display window running in foreground mode. The execution of **bcg_draw** will only terminate when the user quits the display window. Not a default option.

SAMPLE DRAWINGS

see http://cadp.inria.fr/man/pictures/bcg_draw.jpg
Graph drawings produced by bcg_draw

ENVIRONMENT VARIABLES

See the **bcg(LOCAL)** manual page for a description of the environment variables used by all the BCG application tools. In addition, the following environment variables are used by **bcg_draw**:

\$CADP_PS_VIEWER

If this variable is set, its value determines the name of the PostScript viewer that will be invoked by **bcg_draw** (the name of the viewer may be followed by options). Otherwise, **bcg_draw** will search (in the list of directories defined by the **\$PATH** variable plus in a set of plausible default locations) for a viewer named '**ghostview**' under Unix and '**gsview32.exe**' under Windows.

\$CADP_PS_INTERPRETER

If this variable is set, its value determines the name of the PostScript tool that will be invoked by **bcg_draw** with option **-eps** to compute the bounding box of the Encapsulated PostScript file. Otherwise, **bcg_draw** will search (in the list of directories defined by the **\$PATH** variable plus in a set of plausible default locations) for a tool named '**gs**' under Unix and '**gswin32c.exe**' under Windows.

EXIT STATUS

Exit status is 0 if everything is alright, 1 otherwise.

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OPERANDS

<i>filename.bcg</i>	BCG graph (input)
<i>filename@1.o</i>	dynamic library (input or output)
<i>filename.ps</i>	PostScript file (output)

FILES

\$CADP/com/bcg_draw	" bcg_draw " shell script
\$CADP/bin./arch/libbcg_draw.a	" bcg_draw " static library
\$CADP/src/bcg_draw/bcg_draw_*.ps	PostScript header & footer
\$CADP/src/com/cadp_postscript	auxiliary shell script
\$CADP/src/com/cadp_psbox	auxiliary shell script

See the **bcg(LOCAL)** manual page for a description of the other files.

SEE ALSO

bcg(LOCAL), **bcg_edit(LOCAL)**.

Additional information is available from the CADP Web page located at <http://cadp.inria.fr>

Directives for installation are given in files **\$CADP/INSTALLATION_***.

Recent changes and improvements to this software are reported and commented in file **\$CADP/HISTORY**.

BUGS

bcdraw is far from being perfect. There are several known problems, such as frequent overwriting of transitions and labels, even for small graphs. For large BCG graphs, the 2D representation is likely to be untractable by the user.

Please report bugs to Hubert.Garavel@inria.fr