

**NAME**

`bcomps` – biconnected components filter for graphs

**SYNOPSIS**

`bcomps` [ `-stvx?` ] [ `-outfile` ] [ *files* ]

**DESCRIPTION**

`bcomps` decomposes graphs into their biconnected components, printing the components to standard output.

**OPTIONS**

The following options are supported:

- `-s` No output graph is printed. Implies the `-v` flag.
- `-t` Print the underlying block-cutvertex tree.
- `-x` Each biconnected component is printed as a separate root graph.
- `-v` Prints number of blocks and cutvertices.

**`-o outfile`**

If specified, each root graph will be written to a different file with the names derived from *outfile*. In particular, if both `-o` and `-x` flags are used, then each block is written to a different file. If *outfile* does not have a suffix, the *n*th block of the *i*th graph is written to *outfile\_n\_i*. However, the 0th block of the 0th graph is written to *outfile*.

If *outfile* has a suffix, i.e., has the form *base.sfx*, then the files will have the same name as above, except appended with *.sfx*.

The block-cutvertex tree of *i*th graph is written to *outfile\_n\_T*, with an appended suffix if specified.

By default, each input graph is printed, with each block given as a subgraph whose name is a concatenation of the name of the input graph, the string `"_bcc_"` and the number of the block.

**OPERANDS**

The following operand is supported:

*files* Names of files containing 1 or more graphs in dot format. If no *files* operand is specified, the standard input will be used.

**RETURN CODES**

`bcomps` returns **0** if all the input graphs are biconnected; and non-zero if any graph has multiple blocks, or any error occurred.

**BUGS**

It is possible, though unlikely, that the names used for connected components and their subgraphs may conflict with existing subgraph names.

**AUTHORS**

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**SEE ALSO**

`ccomps(1)`, `gc(1)`, `dot(1)`, `gvpr(1)`, `gvcolor(1)`, `acyclic(1)`, `sccmap(1)`, `tred(1)`, `libgraph(3)`