## NAME

bcomps – biconnected components filter for graphs

## SYNOPSIS

**bcomps** [ **–stvx?** ] [ **-o***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 nth block of the ith 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 ith 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)