SCCMAP

21 March 2001

NAME

sccmap - extract strongly connected components of directed graphs

SYNOPSIS

sccmap [**-dsv**] [**-o***outfile*] [*files*]

DESCRIPTION

sccmap decomposes digraphs into strongly connected components and an auxiliary map of the relationship between components. In this map, each component is collapsed into a node. The resulting graphs are printed to standard out. The number of nodes, edges and strongly connected components are printed to standard error. **sccmap** is a way of partitioning large graphs into more manageable pieces.

OPTIONS

The following options are supported:

-d Preserve degenerate components of only one node.

-s Do not print the resulting graphs. Only the statistics are important.

-S Just print the resulting graphs. No statistics are printed.

-o*output* Prints output to the file *output*. If not given, **sccmap** uses stdout.

-v Generate additional statistics. In particular, **sccmap** prints the number of nodes, edges, connected components, and strongly connected components, followed by the fraction of nodes in a non-trivial strongly connected components, the maximum degree of the graph, and fraction of non-tree edges in the graph.

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.

DIAGNOSTICS

sccmap emits a warning if it encounters an undirected graph, and ignores it.

AUTHORS

Stephen C. North <north@research.att.com>
Emden R. Gansner <erg@research.att.com>

SEE ALSO

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