

**NAME**

sccmap – extract strongly connected components of directed graphs

**SYNOPSIS**

**sccmap** [**-dsSv**] [**-ooutfile**] [*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.
- ooutput** 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), gvclock(1), ccomps(1), tred(1), libgraph(3)