NAME

tred – transitive reduction filter for directed graphs

SYNOPSIS

tred [**−ovr?**] [*files*]

DESCRIPTION

tred computes the transitive reduction of directed graphs, and prints the resulting graphs to a file or standard output. This removes edges implied by transitivity. Nodes and subgraphs are not otherwise affected. The ''meaning'' and validity of the reduced graphs is application dependent. **tred** is particularly useful as a preprocessor to *dot* to reduce clutter in dense layouts.

Undirected graphs are silently ignored.

OPTIONS

The following options are supported:

−o FILE
: Redirect output to the given file. By default, output goes to stdout.

−v
: Verbose output to stderr.

−r
: Print information of removed edges to stderr.

−?
: Print usage information.

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.

BUGS

Using bitmaps internally would substantially decrease running time.

DIAGNOSTICS

If a graph has cycles, its transitive reduction is not uniquely defined. In this case *tred* emits a warning.

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), sccmap(1), libgraph(3)