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.

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SEE ALSO
gc(1), dot(1), acyclic(1), gvpr(1), gvcolor(1), ccomps(1), sccmap(1), libgraph(3)