### NAME

unflatten - adjust directed graphs to improve layout aspect ratio

## SYNOPSIS

unflatten [-f] [-llen] [-clen ] [ -o outfile ] [ files ]

# DESCRIPTION

**unflatten** is a preprocessor to **dot** that is used to improve the aspect ratio of graphs having many leaves or disconnected nodes. The usual layout for such a graph is generally very wide or tall. **unflatten** inserts invisible edges or adjusts the **minlen** on edges to improve layout compaction.

### **OPTIONS**

The following options are supported:

- -l len The minimum length of leaf edges is staggered between 1 and len (a small integer).
- -f Enables the staggering of the -l option to fanout nodes whose indegree and outdegree are both 1. This helps with structures such as  $a \rightarrow \{w \ x \ y \ z\} \rightarrow b$ . This option only works if the -l flag is set.
- -c *len* Form disconnected nodes into chains of up to *len* nodes.

-o outfile

causes the output to be written to the specified file; by default, output is written to stdout.

#### **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.

# 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)