Appendix C

Further Examples.

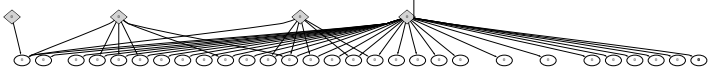
This appendix shows a number of examples of circuits produced by GEN.

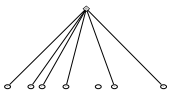
Figures C.1 through C.4 show examples of short GEN scripts and drawings of two circuits produced by each script. The scripts show how the user can choose specific features of a circuit, such as the maximum fanout, the combinational delay, or the relative shape profile in generating circuits. Note that whenever parameters are omitted from the figure caption, the defaults were used by GEN.

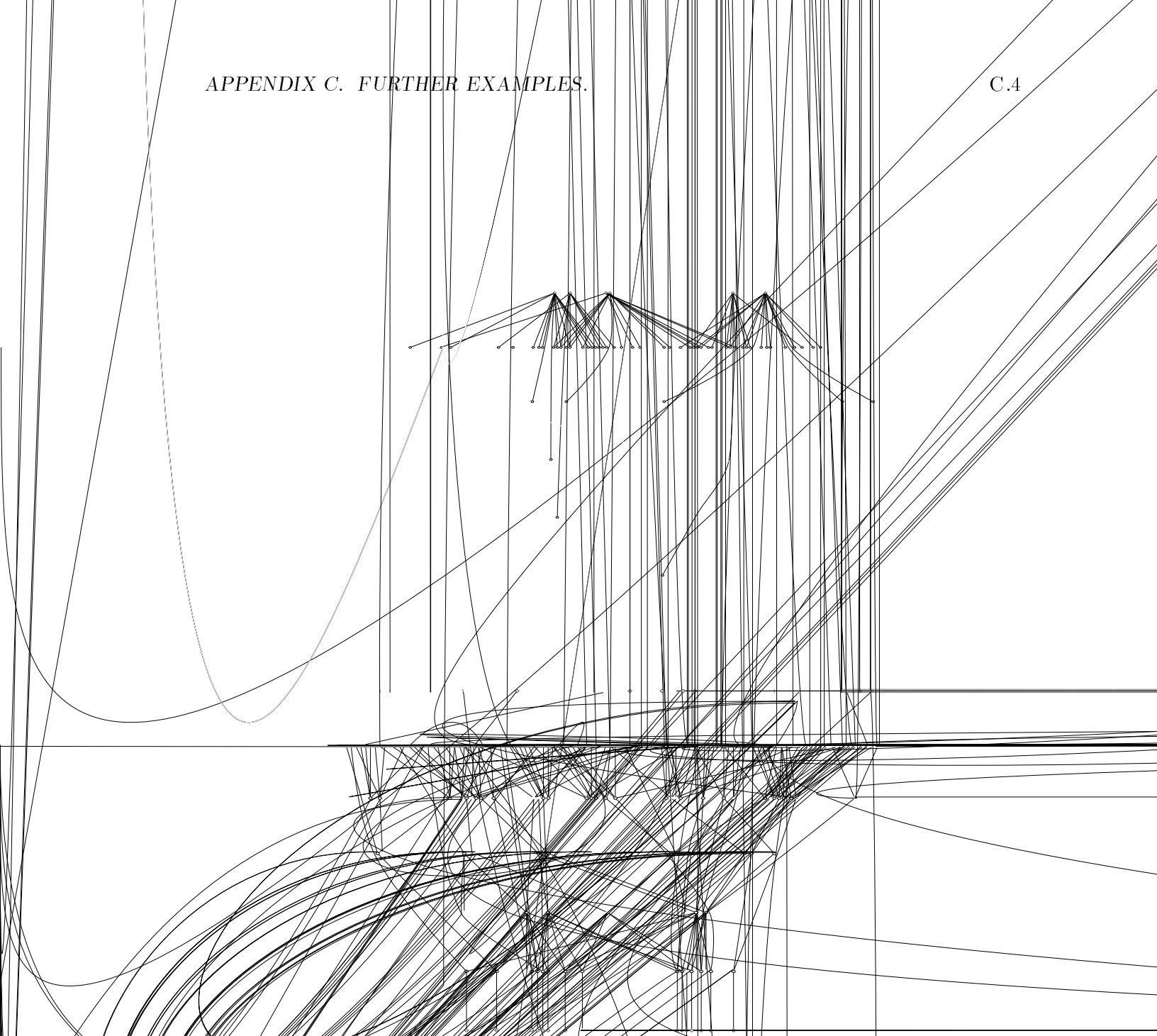
Figures C.4 and C.5 show two different sequential circuits generated from the same clone script, in which the user specifies only high-level information such as the number of flip-flops.

Figures C.6 through C.10 show four different MCNC combinational circuits, and their clones produced by GEN.

Figures C.11 and C.12 show two different MCNC sequential circuits, and their clones produced by GEN.



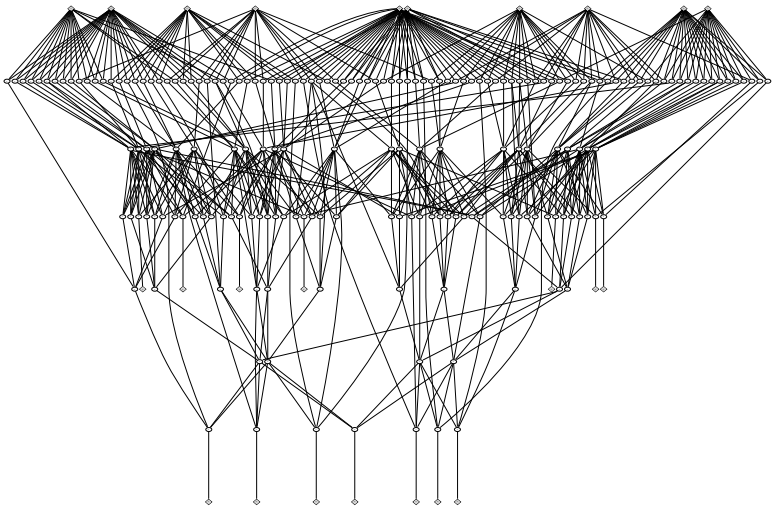




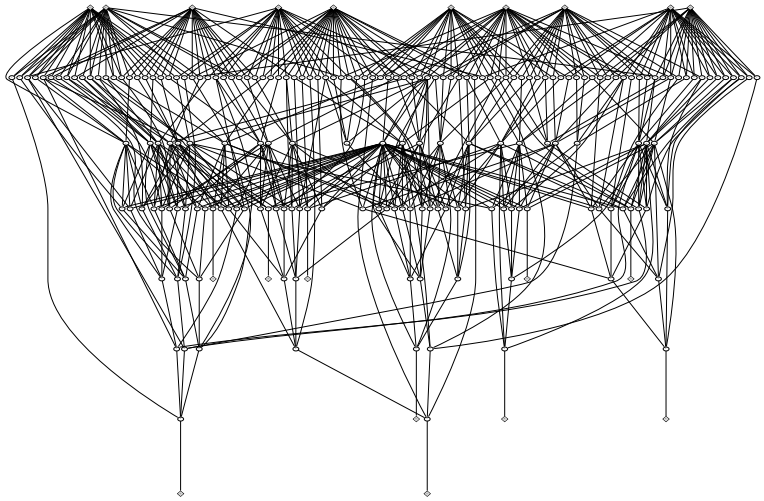
Circuit 2

```
X = comb_circ {name="A"; n = 200; nPI = 30; nPO = 20;
               delay=5; shape=(1,5,4,3,2,1); };
output(circuit(X));
```

Figure C.3: Two combinational GEN circuits with specified shape.



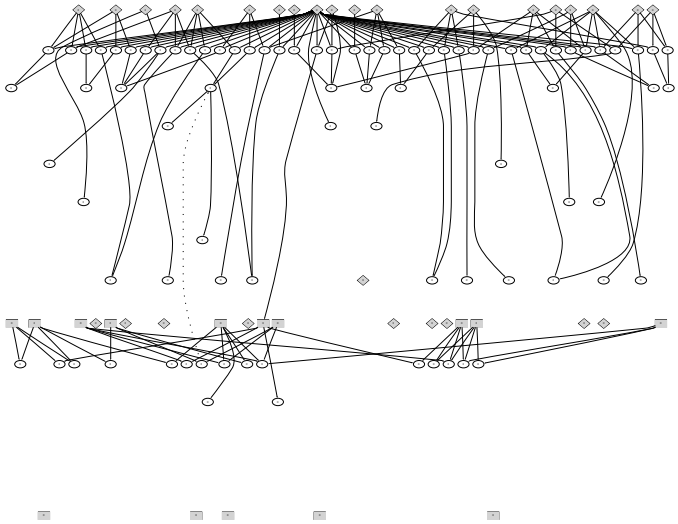
Circuit 1

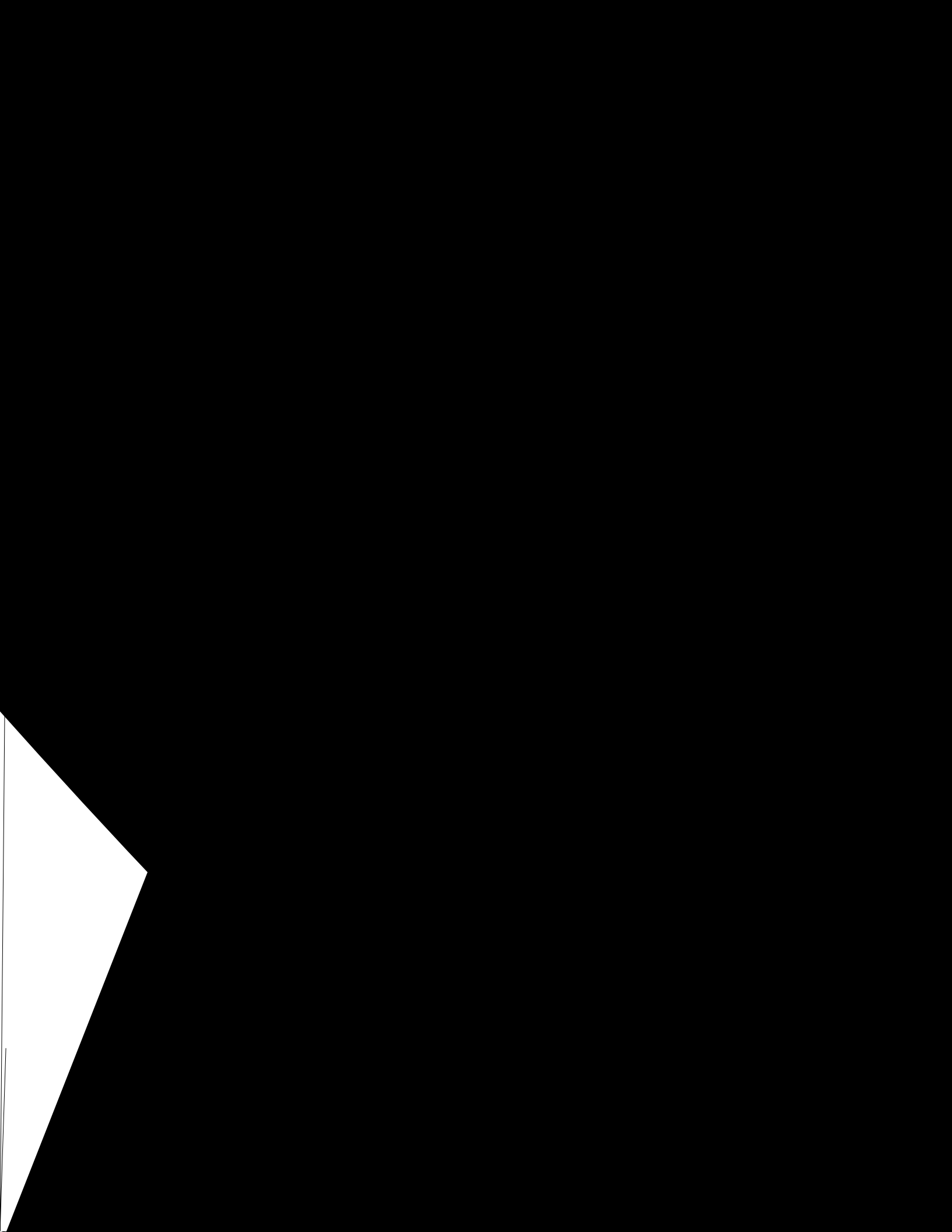


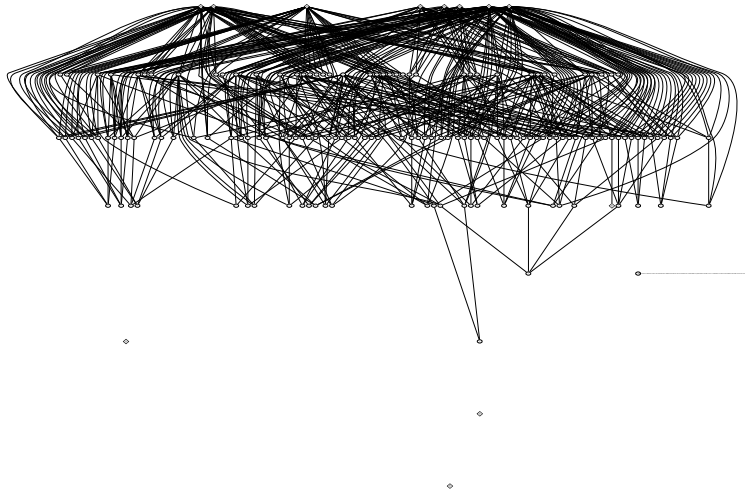
Circuit 2

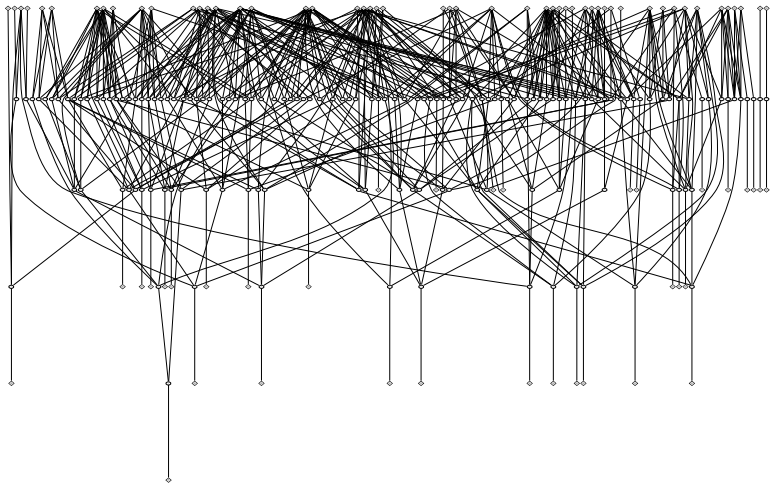
```
X = comb_circ {name="A"; n = 200; nPI = 30; nPO = 20;
               delay=5; shape=(1,5,4,3,2,1); };
output(circuit(X));
```

Figure C.4: Two combinational GEN circuits with specified shape.

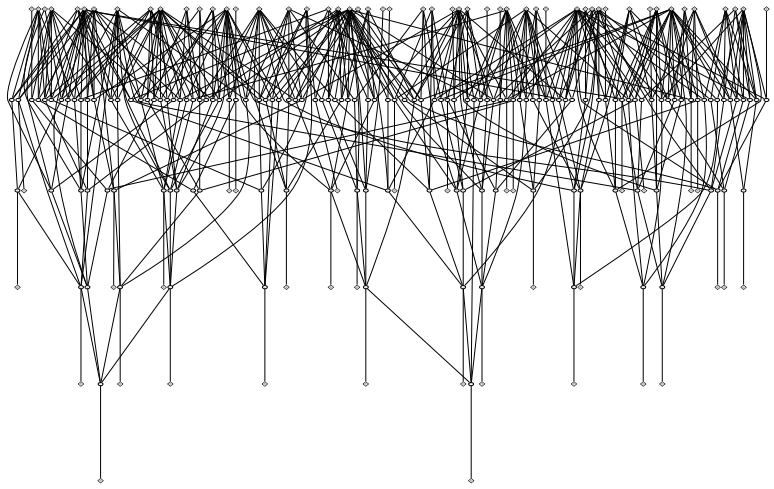






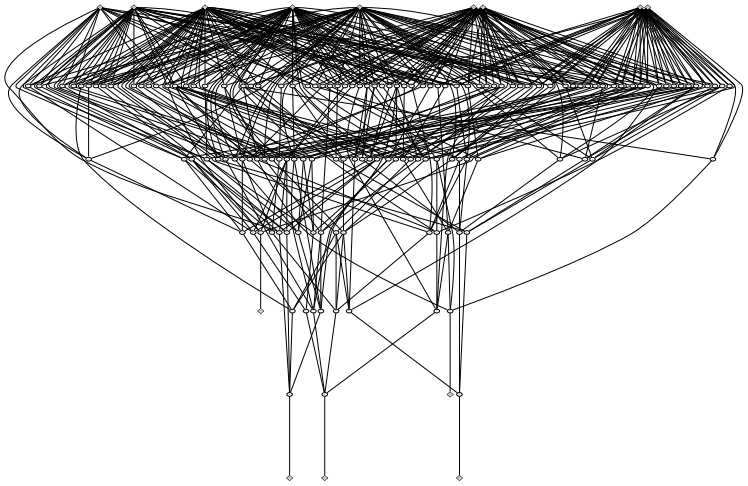


Original circuit

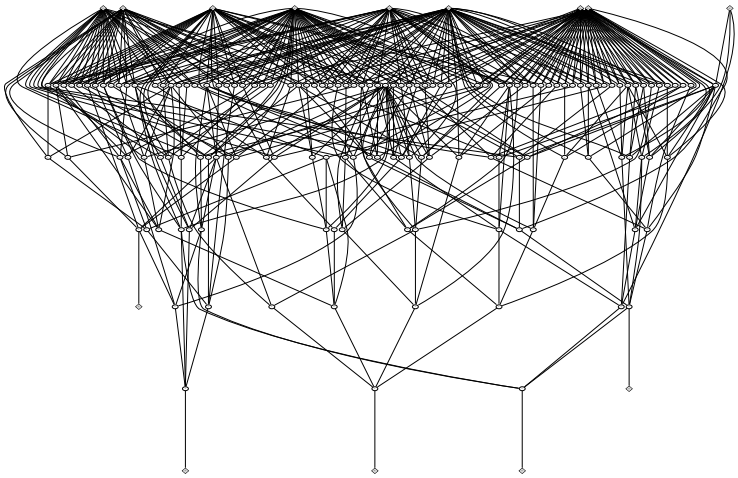


Clone circuit

Figure C.8: MCNC circuit **x1** and a clone by GEN.

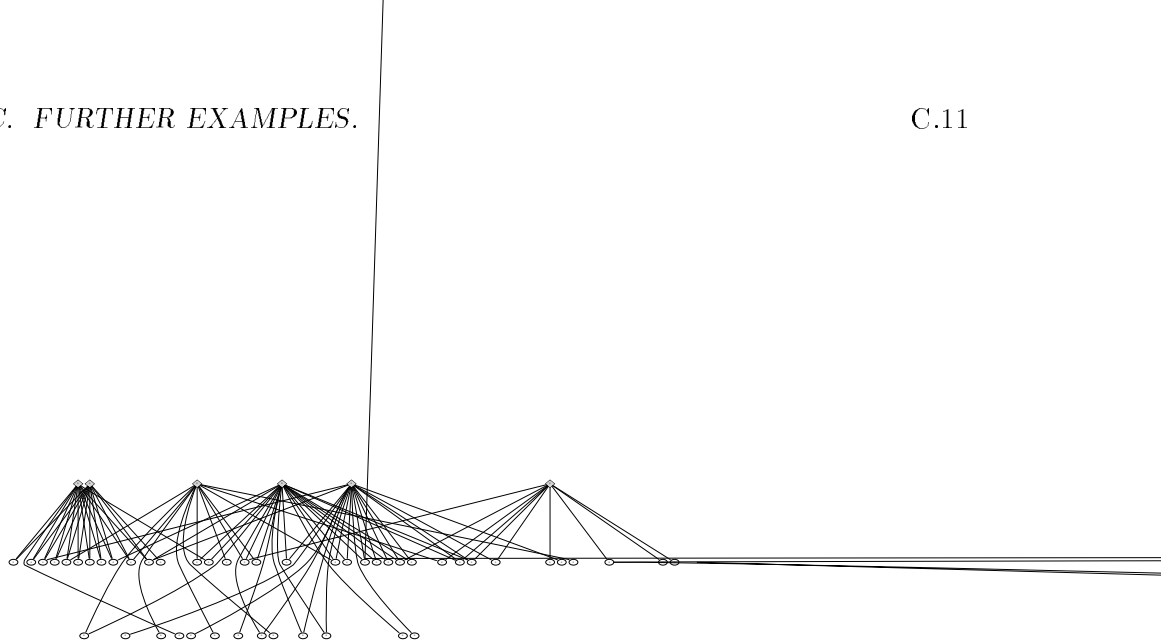


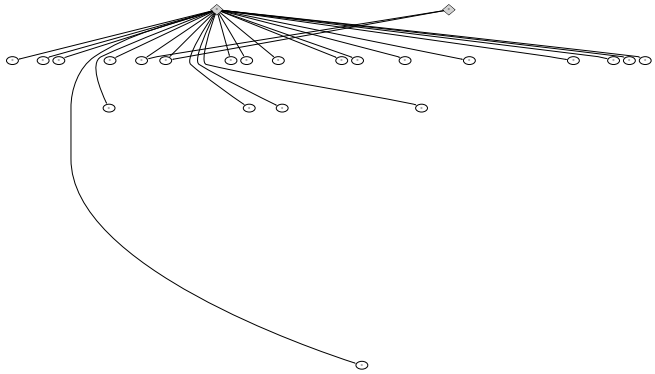
Original circuit

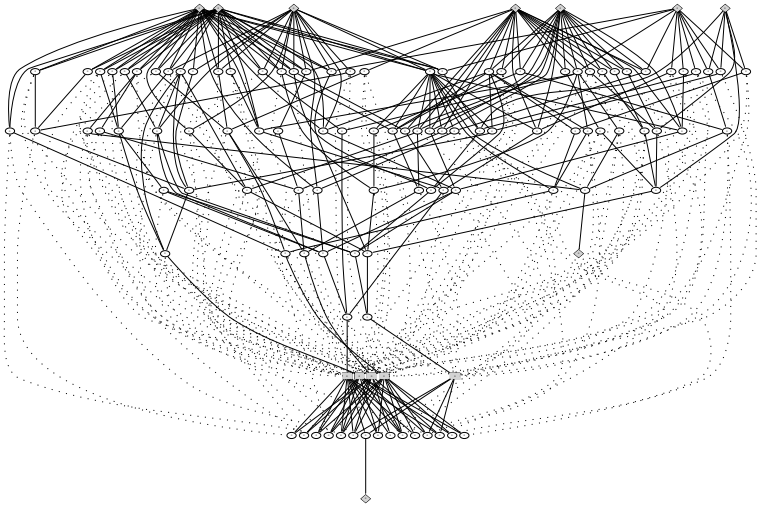


Clone circuit

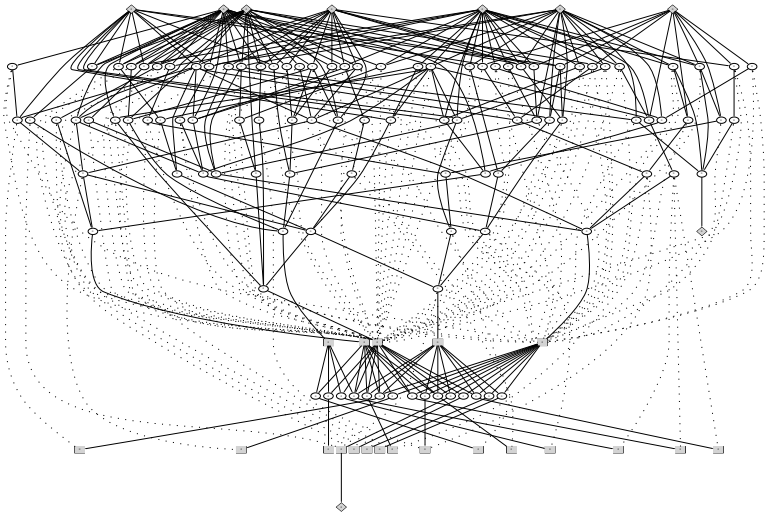
Figure C.9: MCNC circuit **clip** and a clone by GEN.





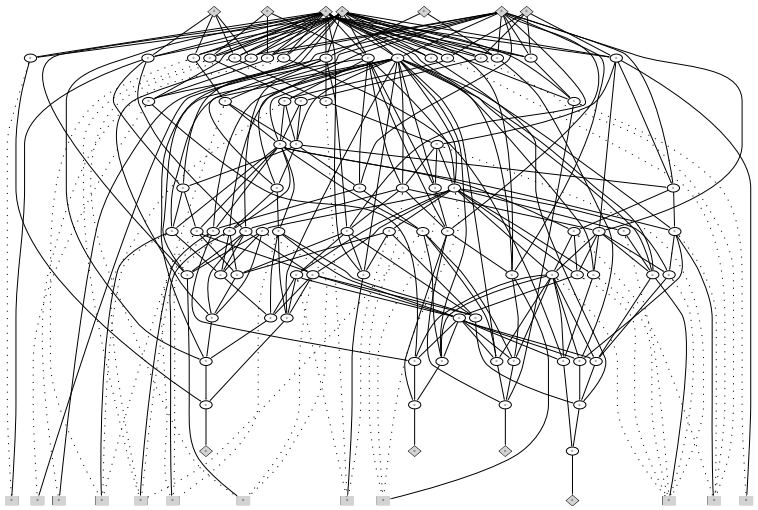


Original circuit

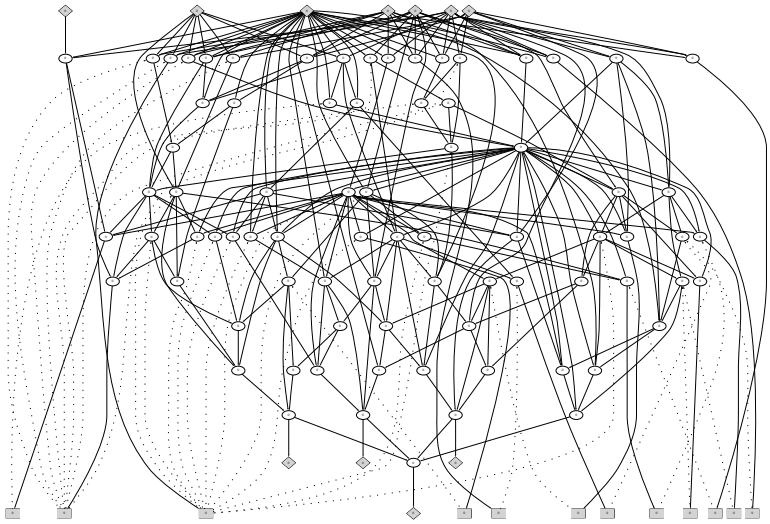


Clone circuit

Figure C.12: MCNC sequential circuit **keyb** and a clone by GEN.



Original circuit



Clone circuit

Figure C.14: MCNC sequential circuit **mm4a** and a clone by GEN.