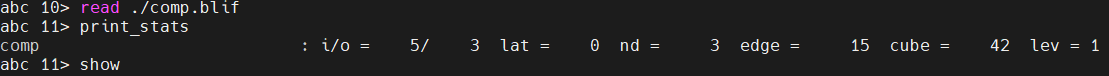
LSV PA1

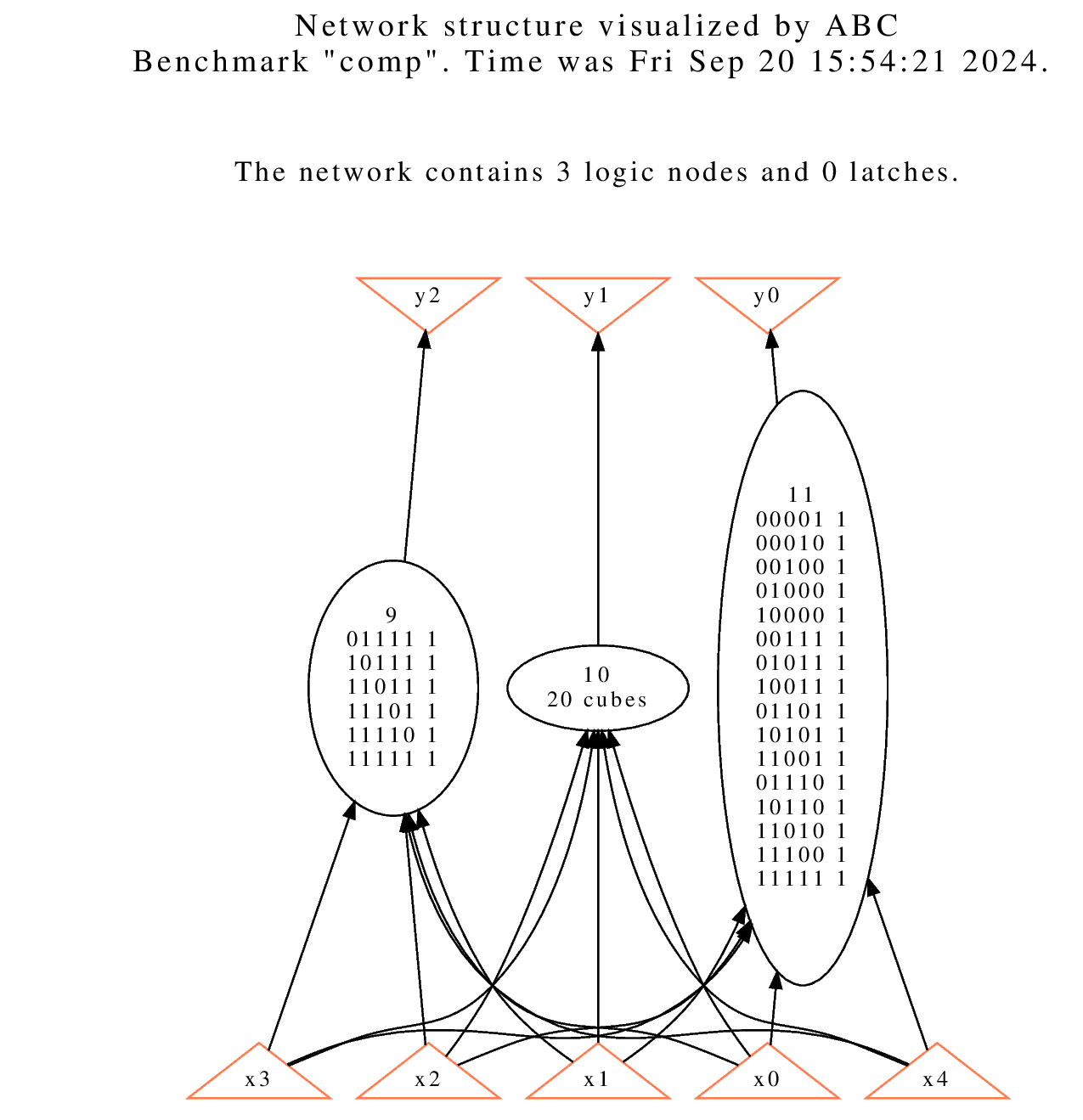
R13943151 黃鈺翔

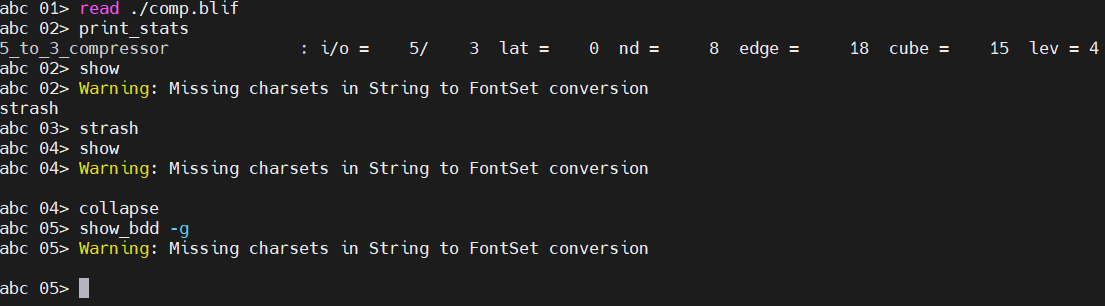
Part1

1. The structure is written in comp.blif.

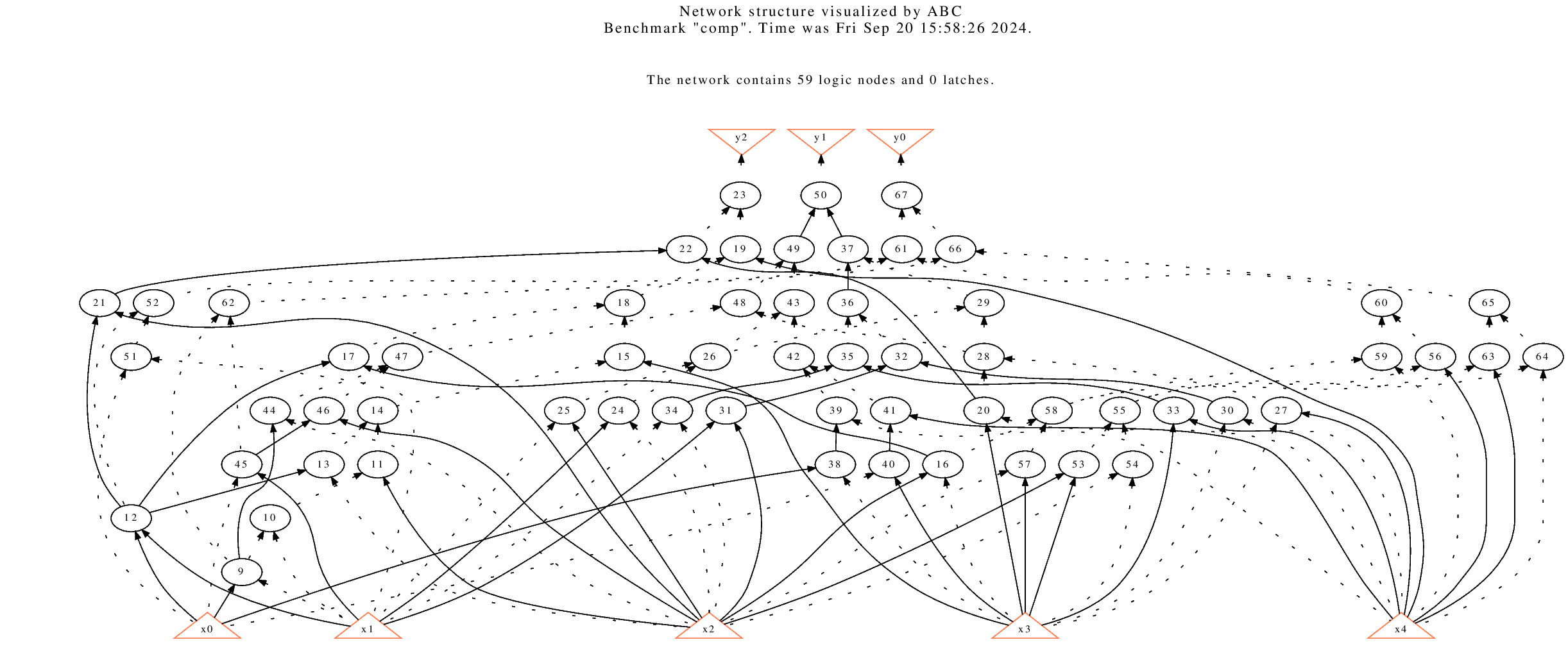
(b) Execution result :

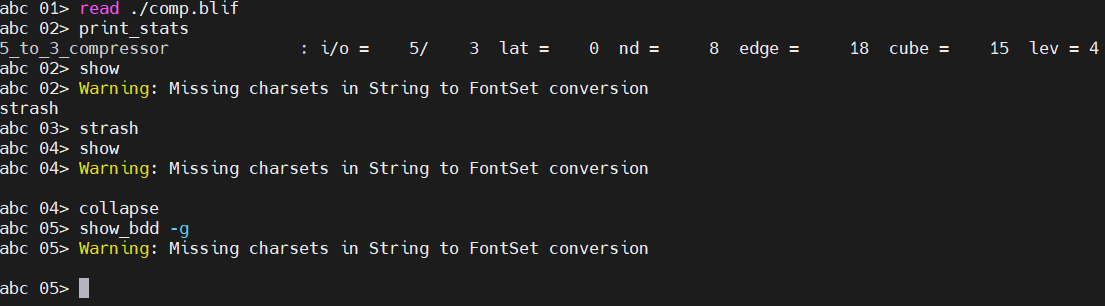


Result of “show” in step 3,

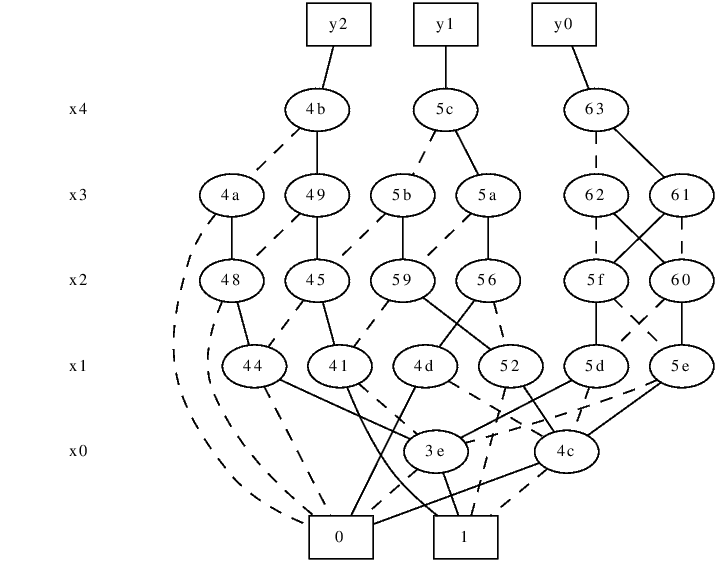


Result of “show” in step 5,





Result of “show\_bdd -g” in step 7,

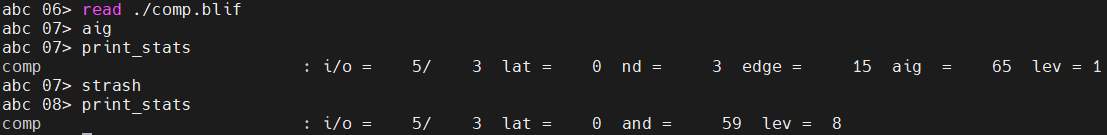


Part2

1.

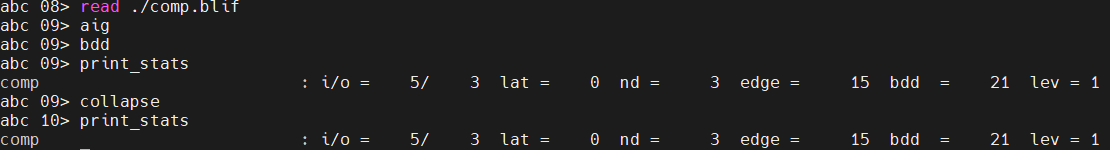
Both commands convert the current network into AIG. Command “aig” converts local functions of the nodes to AIGs. Its network from command “show” is still the single-output-cover form from the blif file. Command “strash” would transforms the current network into an AIG by one-level structural hashing; the resulting logic network is composed of two-input AND gates.

After command “aig,” the level of the network remains the same, whereas the network after command “strash” become 8.

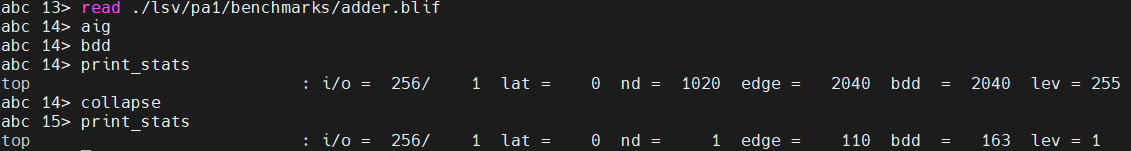


2.

Command “bdd” Converts local functions of the nodes to BDDs. After command “aig,” the statistics shows that cubes are converts to bdds.

Command “collapse” recursively composes the fanin nodes into the fanout nodes resulting in a network, in which each CO is produced by a node, whose fanins are CIs. The command will eliminate the redundancy and simplify the bdd structure.

The print\_stats of both structure are the same for comp.blif . However, the result might be different if using different \*.blif (e.g. adder.blif).



1. Command “logic” can transform the AIG into a logic network with the SOP representation of the two-input AND-gates.

