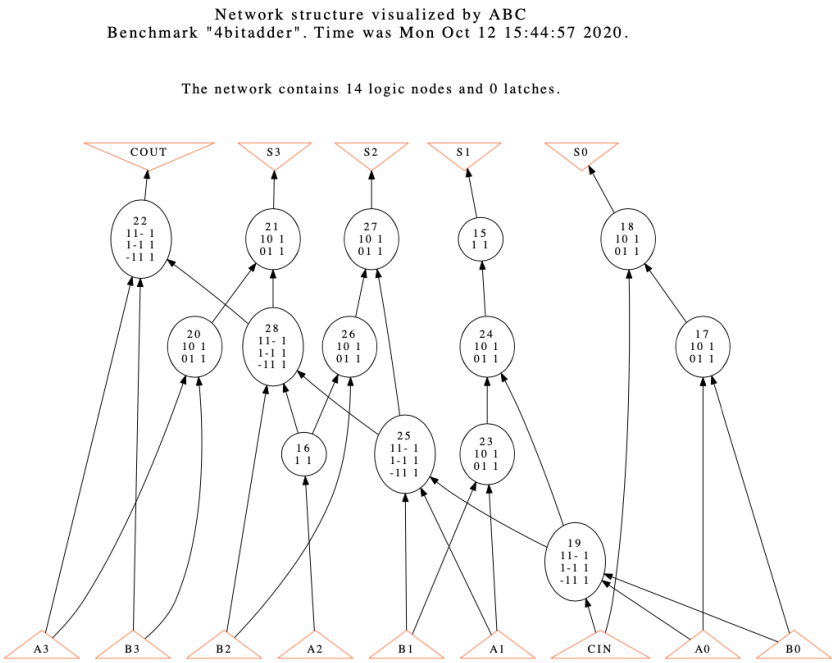
1.[Using ABC]

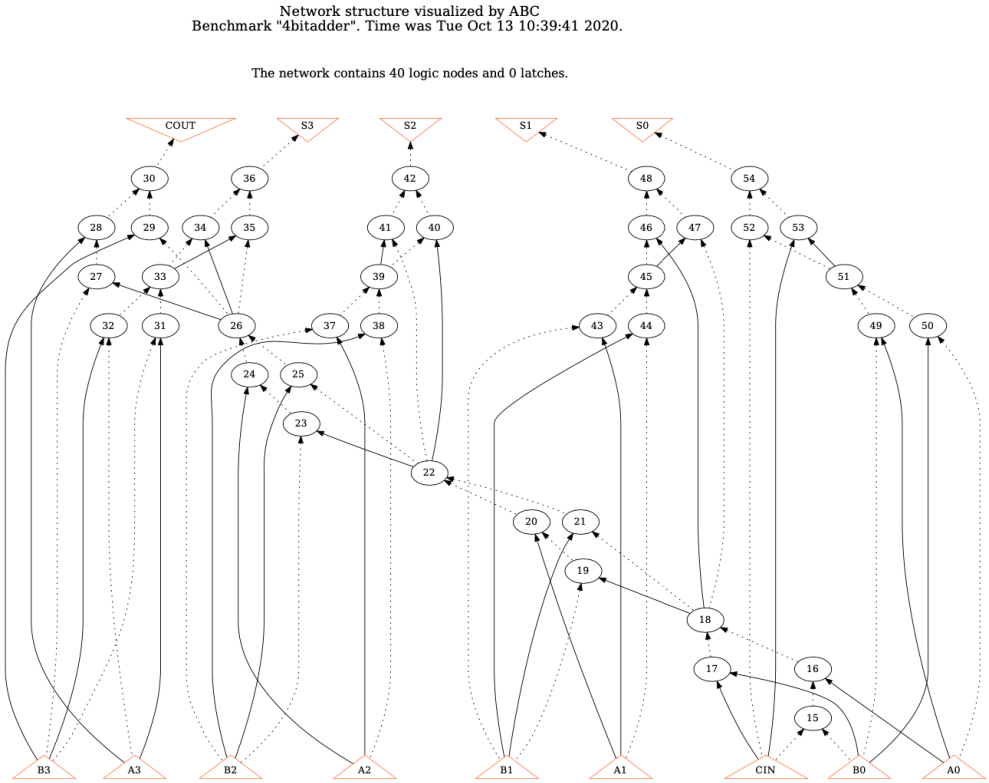
Results of **show** and **show_bdd**

network structure (command **show**)

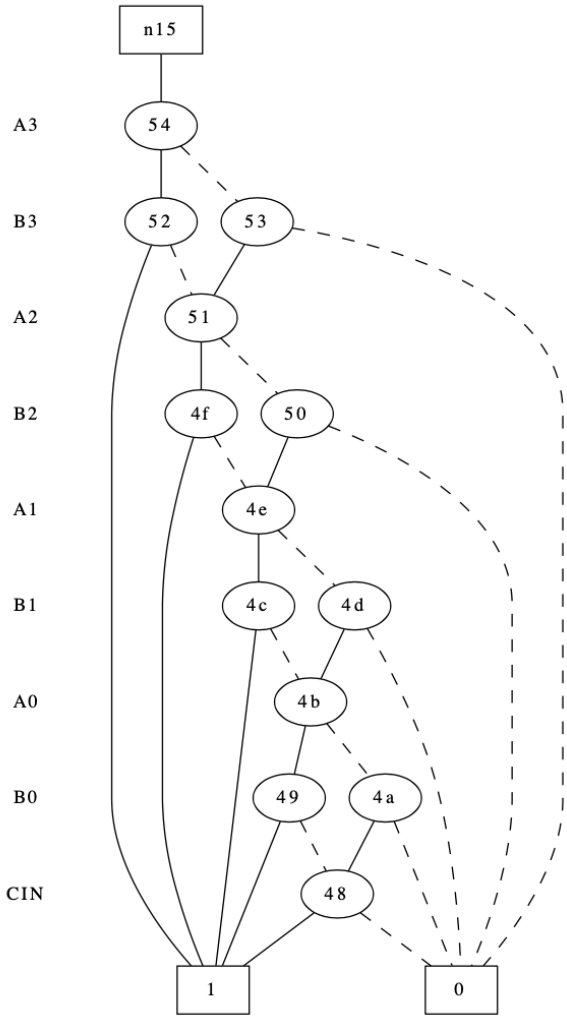


convert to AIG (command **strash**)

visualize the AIG (command **show**)



convert to BDD (command **collapse**)
visualize the BDD (command **show_bdd**)



2. Compare the differences with the four-bit adder

(a)

1. logic network in AIG (by command **aig**) vs. structurally hashed AIG (by command **strash**)

Command aig converts local functions of the nodes to AIGs.

Command strash, transforms the current network into an AIG by one-level structural hashing. By doing structure hashing, it will check a node with the same fanins when a new AND-gate is added.

2.logic network in BDD (by command **bdd**) vs. collapsed BDD (by command **collapse**)

Command bdd converts local functions of the nodes to BDDs.

Command collapse recursively composes the fanin nodes into the fanout nodes resulting in a network. Collapse usually limits to small circuit.

(b)

Command **logic**, transforms the AIG into a logic network with the SOP representation of the two-input AND-gates.