Logic Synthesis & Verification PA1

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2. (b)

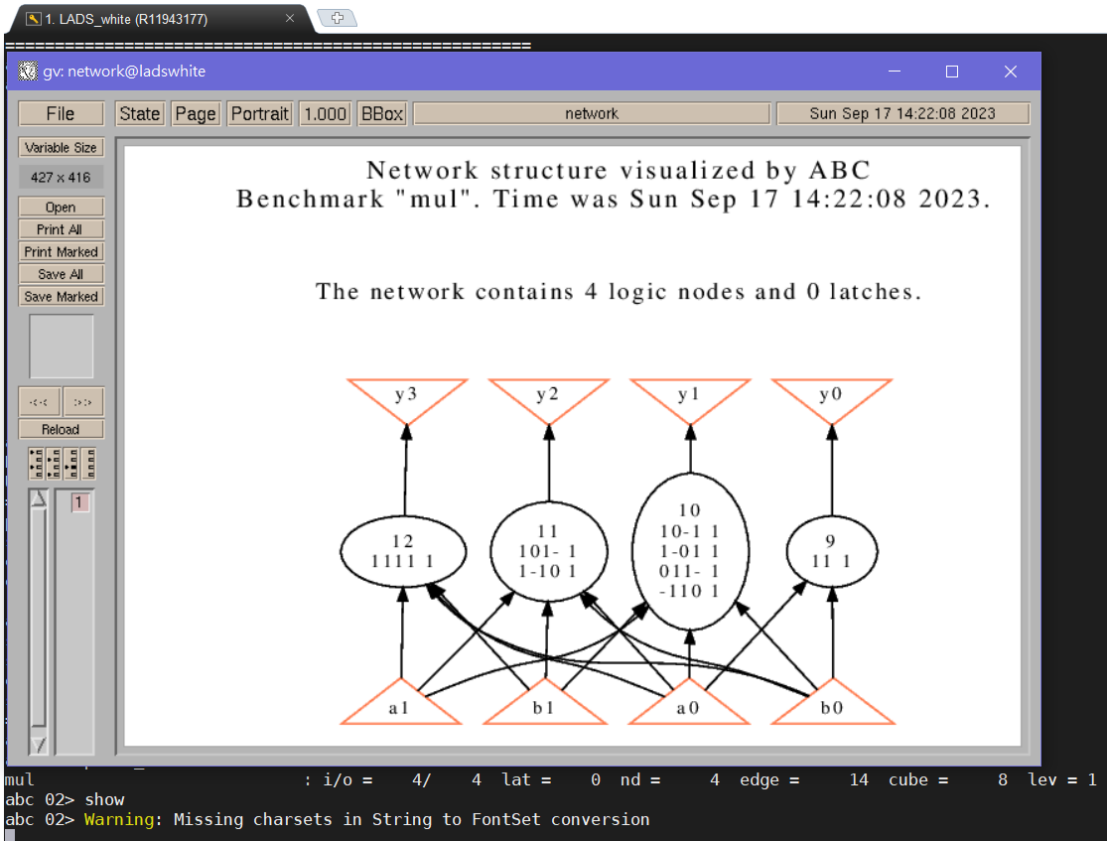
1. read the BLIF file into ABC (command “read”)

```
abc 01> read lsv/pa1/mul.blif
abc 02>
```

2. check statistics (command “print_stats”)

```
abc 02> print_stats
mul                 : i/o =    4/    4  lat =    0  nd =     4  edge =     14  cube =     8  lev = 1
abc 02>
```

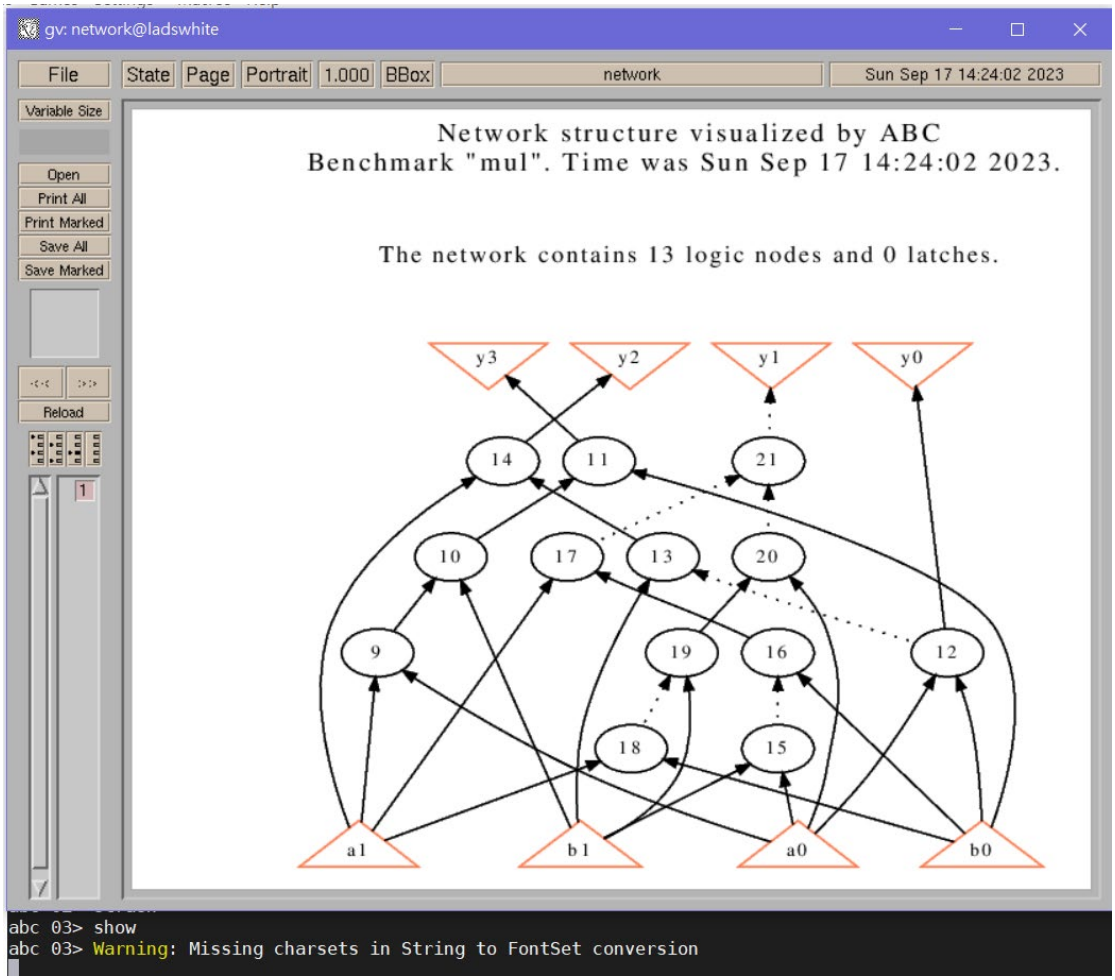
3. visualize the network structure (command “show”)



4. convert to AIG (command “strash”)

```
abc 02> strash
abc 03>
```

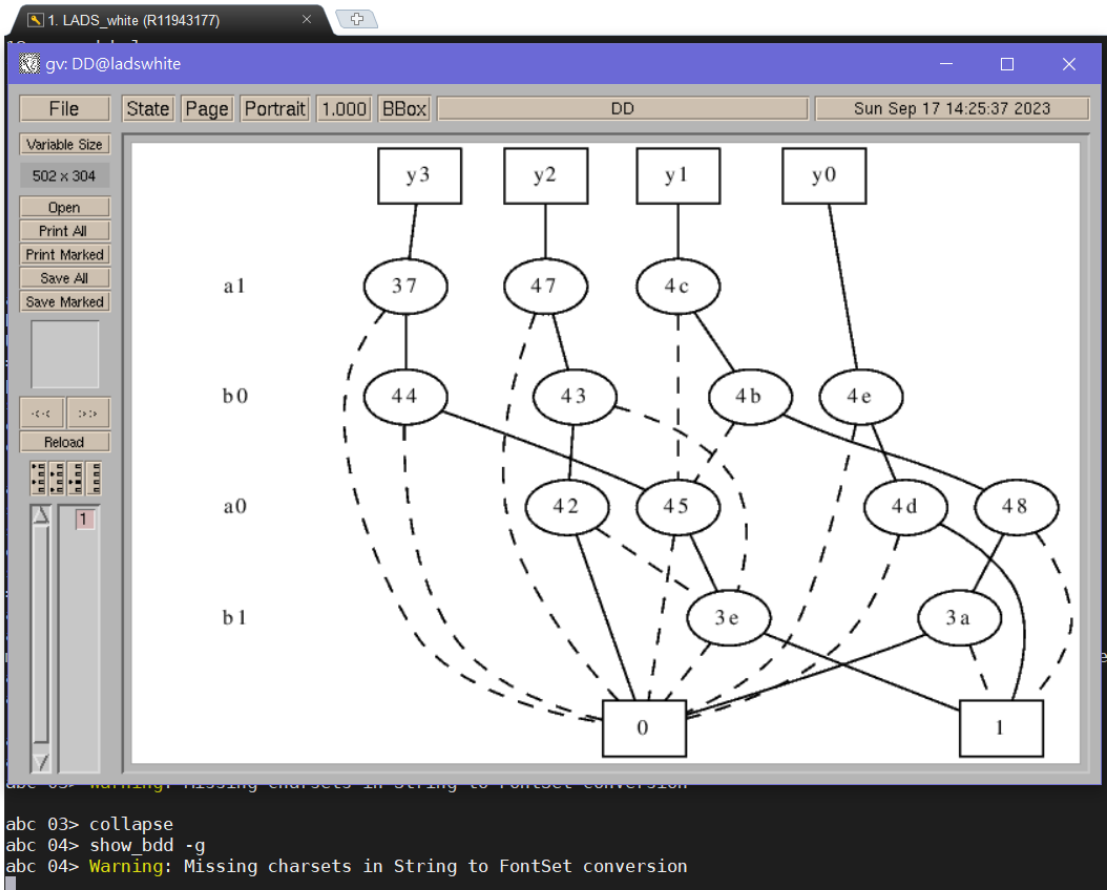
5. visualize the AIG (command “show”)



6. convert to BDD (command “collapse”)

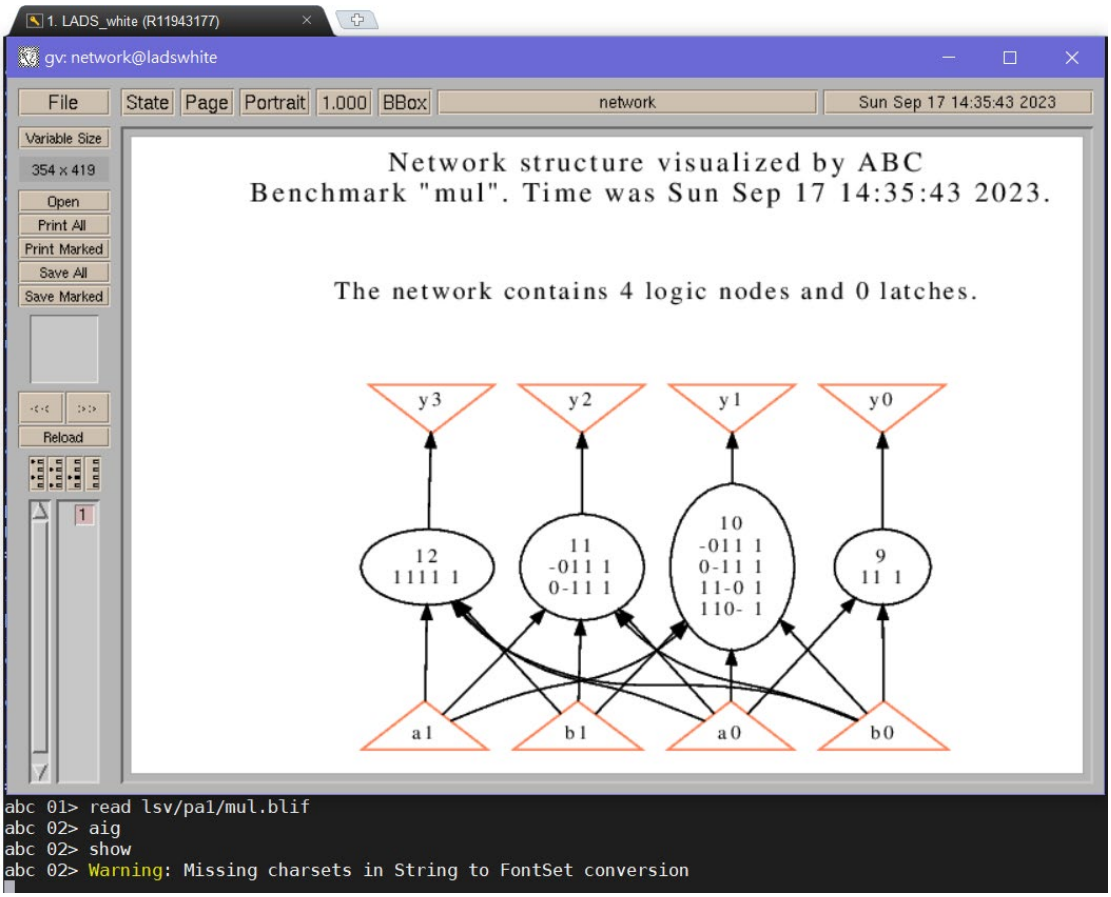
```
abc 03> collapse
abc 04>
```

7. visualize the BDD (command “show_bdd -g”; note that “show_bdd” only shows the first PO; option “-g” can be applied to show all POs)

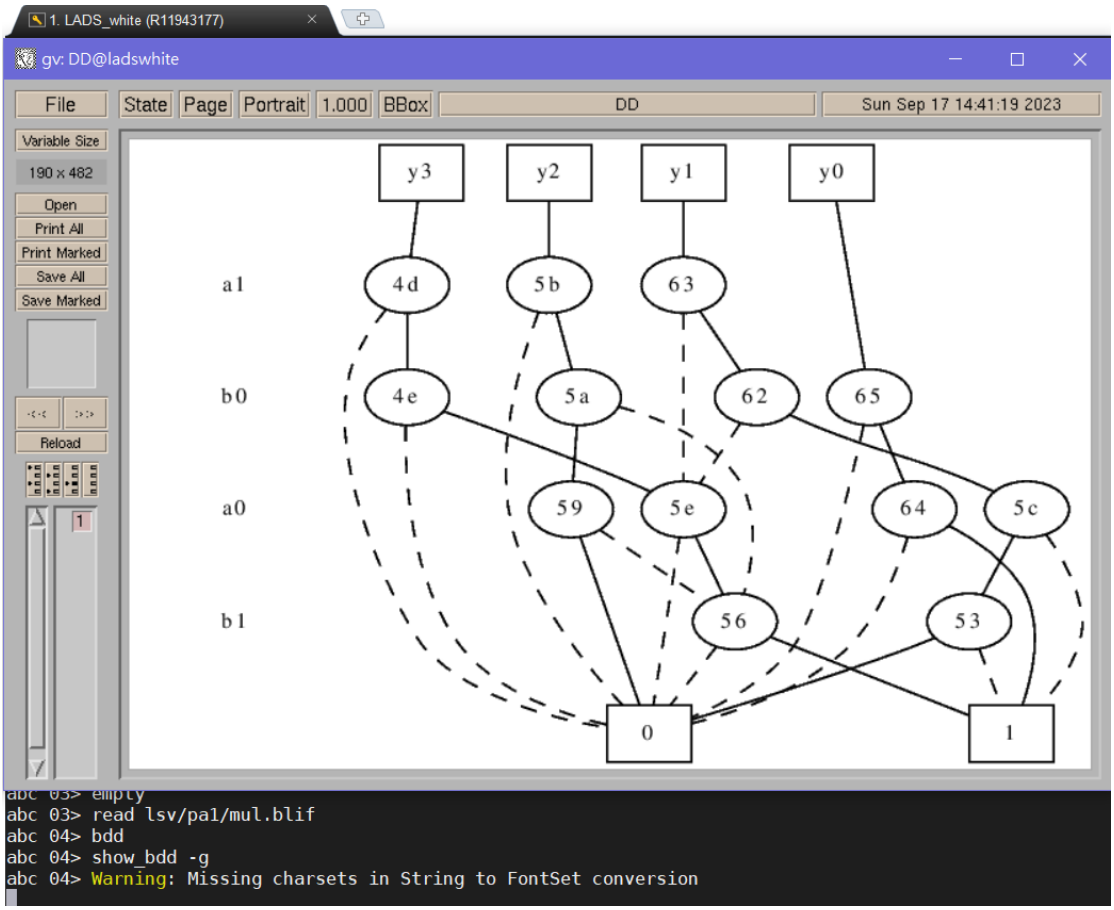


3. (a)

aig: The result is nearly identical to default read in, only it seems that the sequence for truth value description has been rearranged. It is very different from the result of command “strash”.

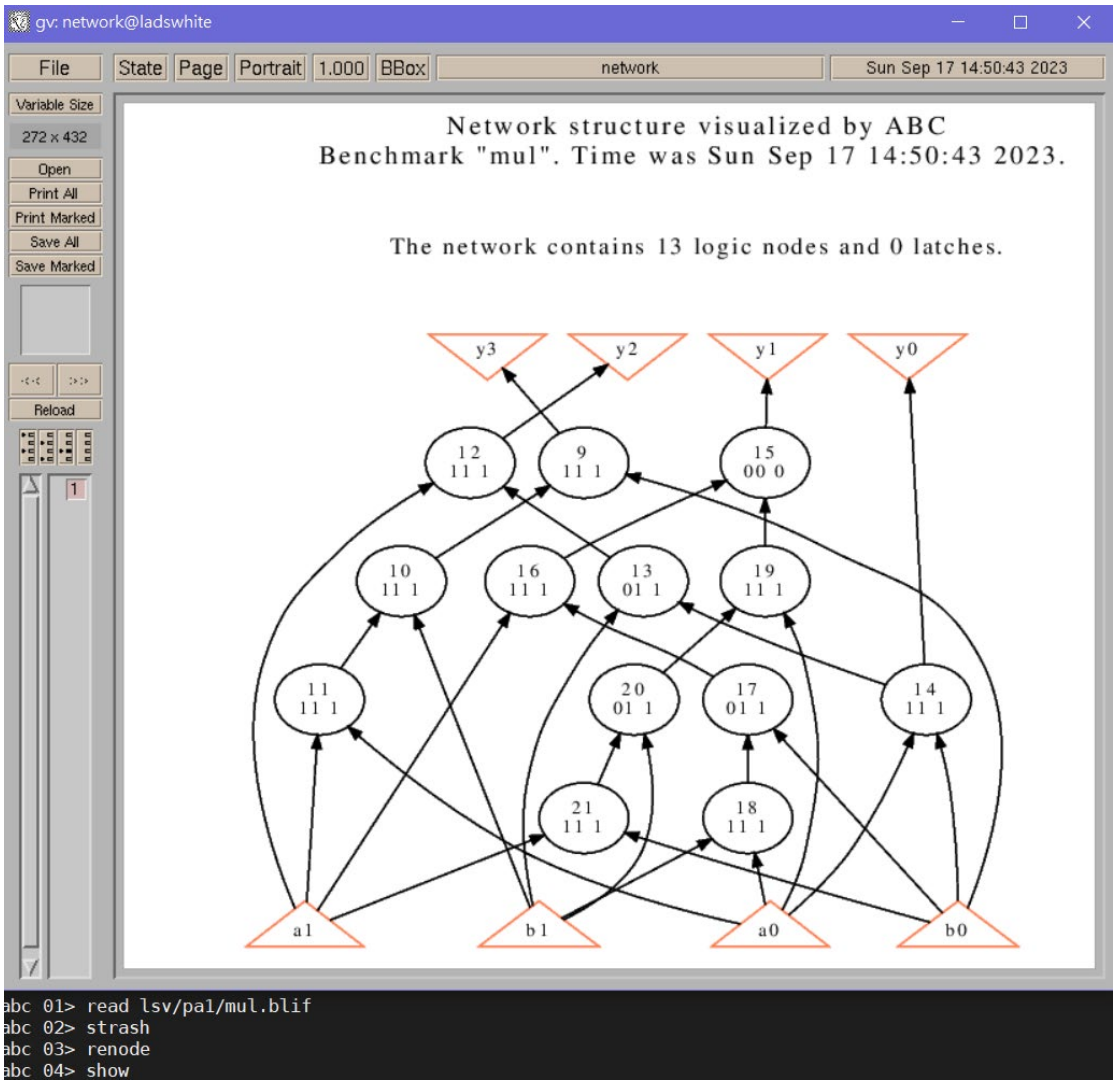


bdd: The structure is identical to the result of command “collapse”, only the naming of the intermediate nodes has changed.


1. LADS_white (R11943177)
gv: DD@ladswhite
File
State
Page
Portrait
1.000
BBox
DD
Sun Sep 17 14:41:19 2023
Variable Size
190 x 482
Open
Print All
Print Marked
Save All
Save Marked
Reload
y3
y2
y1
y0
a1
4d
5b
63
b0
4e
5a
62
65
a0
59
5e
64
5c
b1
56
53
0
1
abc 03> empty
abc 03> read lsv/pa1/mul.blif
abc 04> bdd
abc 04> show_bdd -g
abc 04> Warning: Missing charsets in String to FontSet conversion

3. (b)

renode




```
abc 01> read lsv/pa1/mul.blif
abc 02> strash
abc 03> renode
abc 04> show
```