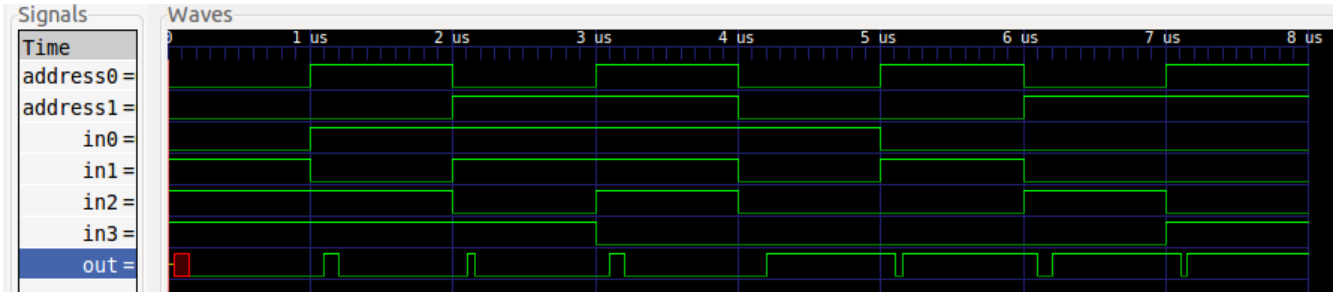
Multiplexer

The results from the structural multiplexer are shown on top with the results from the behavioral multiplexer below it.

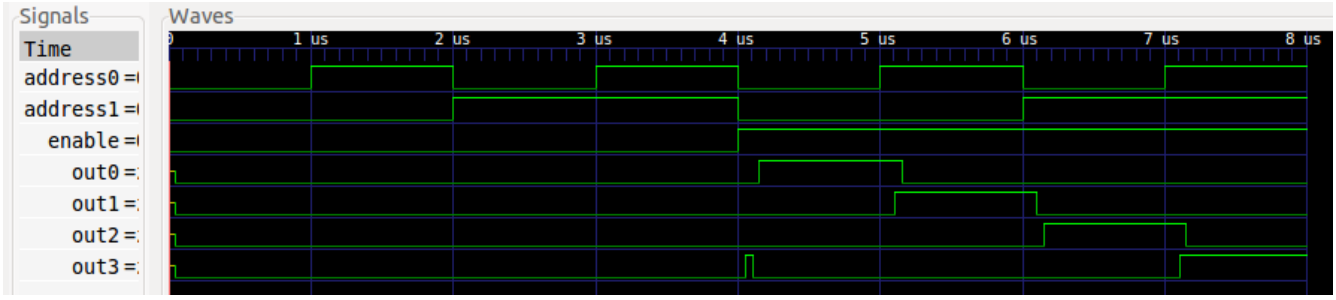
```
rsiegel@rsiegel-Latitude-E6440:~/Documents/CompArch/HW2$ ./structuralMultiplexer

VCD info: dumpfile multiplexer.vcd opened for output.
A0 A1| I0 I1 I2 I3 | Out |Expected Output
0  0 |  0  1  1  1 |  0  |     0
1  0 |  1  0  1  1 |  0  |     0
0  1 |  1  1  0  1 |  0  |     0
1  1 |  1  1  1  0 |  0  |     0
0  0 |  1  0  0  0 |  1  |     1
1  0 |  0  1  0  0 |  1  |     1
0  1 |  0  0  1  0 |  1  |     1
1  1 |  0  0  0  1 |  1  |     1
rsiegel@rsiegel-Latitude-E6440:~/Documents/CompArch/HW2$ ./behavioralMultiplexer

A0 A1| I0 I1 I2 I3 | Out |Expected Output
0  0 |  0  1  1  1 |  0  |     0
1  0 |  1  0  1  1 |  0  |     0
0  1 |  1  1  0  1 |  0  |     0
1  1 |  1  1  1  0 |  0  |     0
0  0 |  1  0  0  0 |  1  |     1
1  0 |  0  1  0  0 |  1  |     1
0  1 |  0  0  1  0 |  1  |     1
1  1 |  0  0  0  1 |  1  |     1
```



Decoder

The results from the structural decoder shown on top with the results from the behavioral decoder below it.

```
rsiegel@rsiegel-Latitude-E6440:~/Documents/CompArch/HW2$ ./structuralDecoder
VCD info: dumpfile dump.vcd opened for output.
En A0 A1| O0 O1 O2 O3 | Expected Output
0  0  0 |  0  0  0  0 | All false
0  1  0 |  0  0  0  0 | All false
0  0  1 |  0  0  0  0 | All false
0  1  1 |  0  0  0  0 | All false
1  0  0 |  1  0  0  0 | O0 Only
1  1  0 |  0  1  0  0 | O1 Only
1  0  1 |  0  0  1  0 | O2 Only
1  1  1 |  0  0  0  1 | O3 Only
rsiegel@rsiegel-Latitude-E6440:~/Documents/CompArch/HW2$ ./behavioralDecoder
En A0 A1| O0 O1 O2 O3 | Expected Output
0  0  0 |  0  0  0  0 | All false
0  1  0 |  0  0  0  0 | All false
0  0  1 |  0  0  0  0 | All false
0  1  1 |  0  0  0  0 | All false
1  0  0 |  1  0  0  0 | O0 Only
1  1  0 |  0  1  0  0 | O1 Only
1  0  1 |  0  0  1  0 | O2 Only
1  1  1 |  0  0  0  1 | O3 Only
```



Adder

The results from the structural adder are shown on top with the results from the behavioral adder below it.

```
rsiegel@rsiegel-Latitude-E6440:~/Documents/CompArch/HW2$ ./structuralAdder
VCD info: dumpfile adder.vcd opened for output.
a|b|Cin|Cout sum|Expected
0|0| 0 |  0  0  |  0  0
0|0| 1 |  0  1  |  0  1
0|1| 0 |  0  1  |  0  1
0|1| 1 |  1  0  |  1  0
1|0| 0 |  0  1  |  0  1
1|0| 1 |  1  0  |  1  0
1|1| 0 |  1  0  |  1  0
1|1| 1 |  1  1  |  1  1
rsiegel@rsiegel-Latitude-E6440:~/Documents/CompArch/HW2$ ./behavioralAdder
a|b|Cin|Cout sum|Expected
0|0| 0 |  0  0  |  0  0
0|0| 1 |  0  1  |  0  1
0|1| 0 |  0  1  |  0  1
0|1| 1 |  1  0  |  1  0
1|0| 0 |  0  1  |  0  1
1|0| 1 |  1  0  |  1  0
1|1| 0 |  1  0  |  1  0
1|1| 1 |  1  1  |  1  1
```