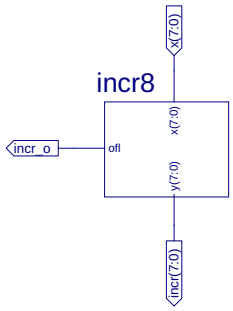
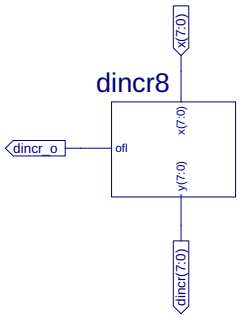
Michal Szopinski
Arithmetic component playground

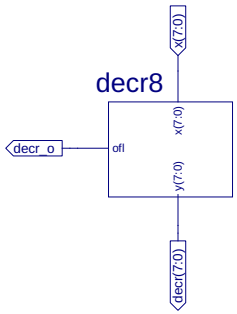
8-bit incrementer



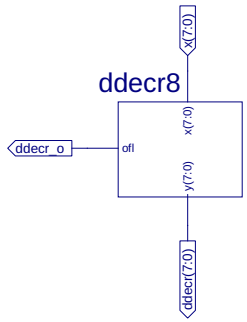
8-bit double incrementer

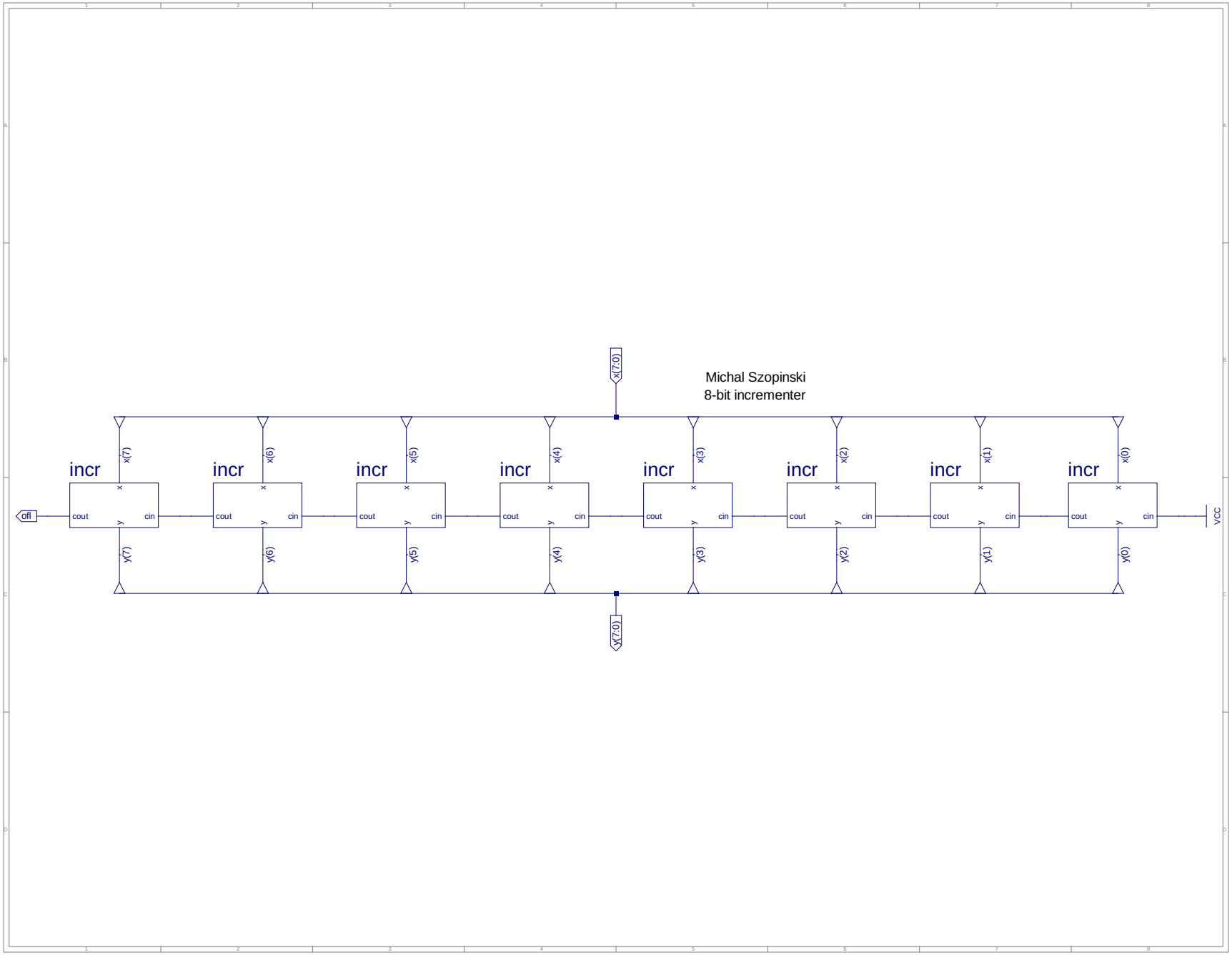


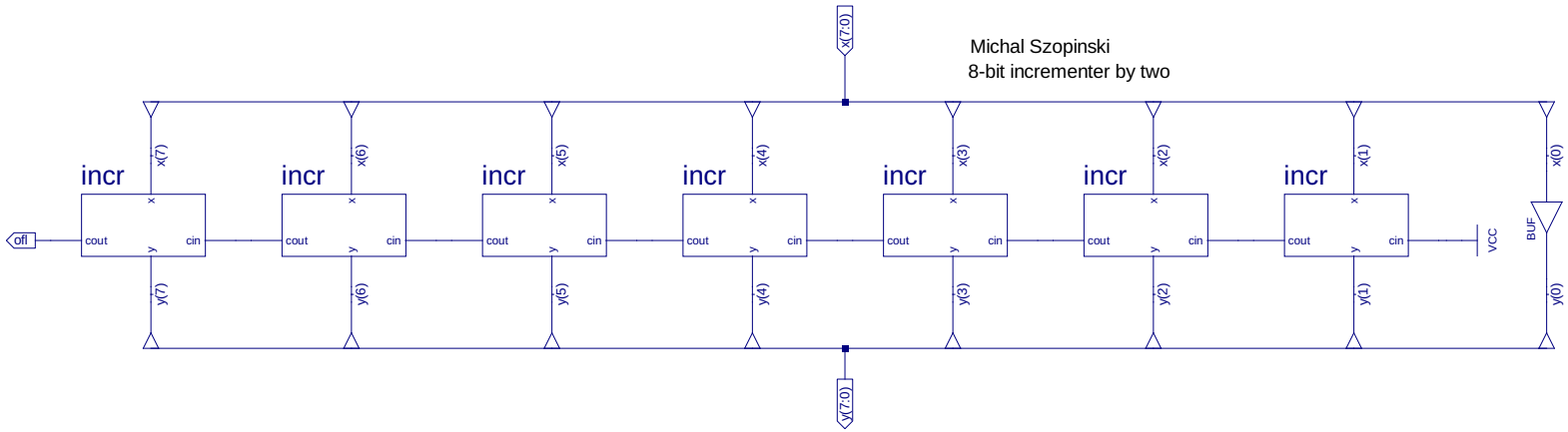
8-bit decrementer

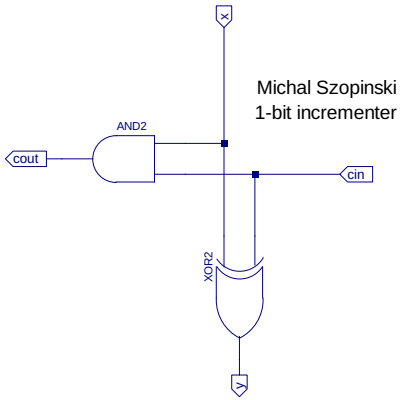


8-bit double decrementer

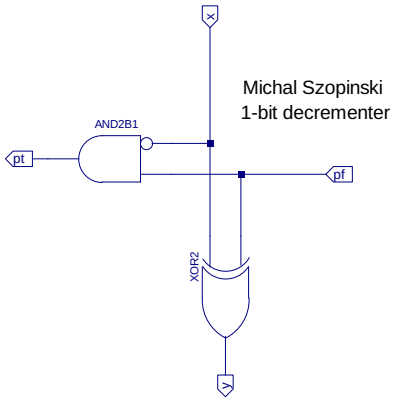


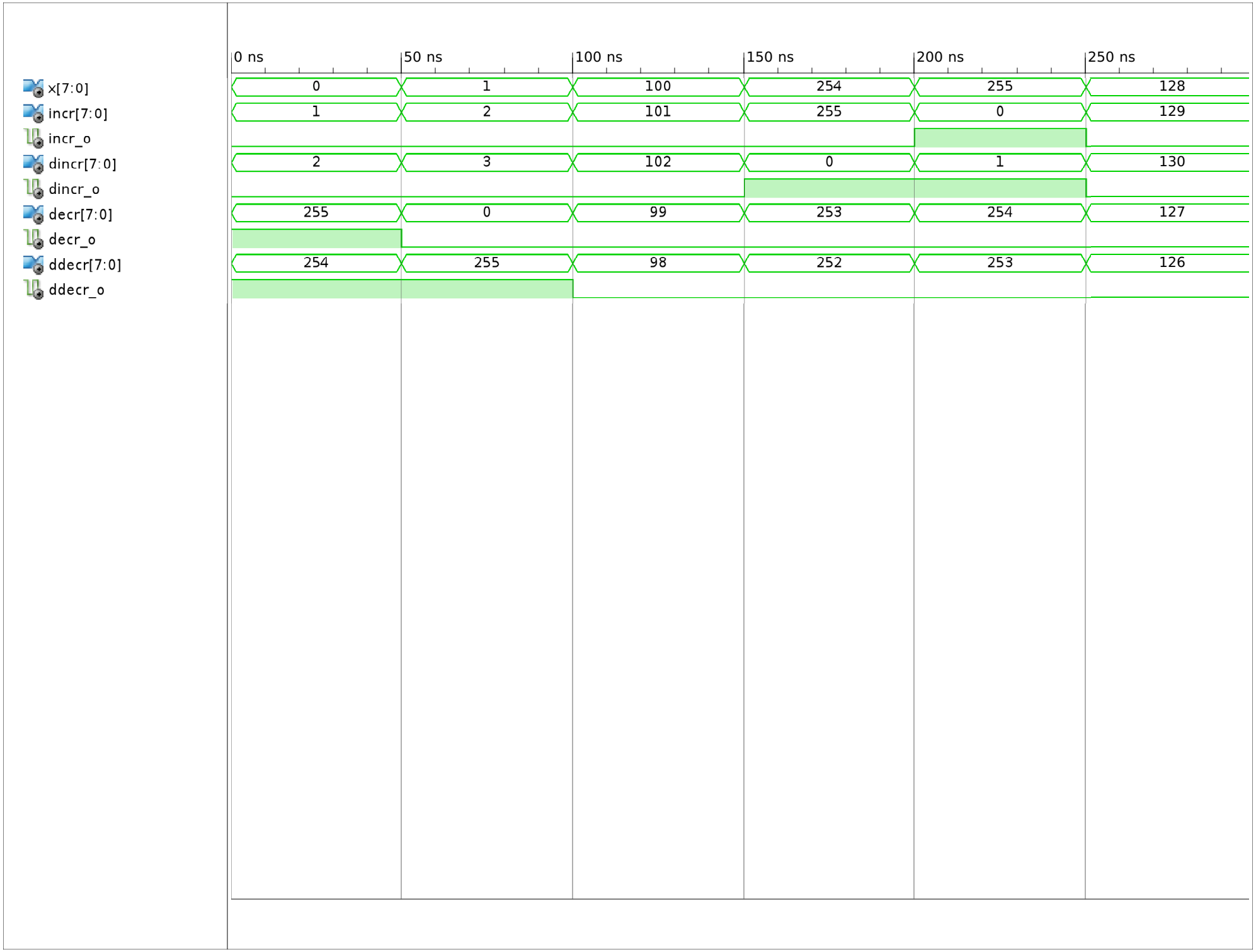

x(7:0)
Michal Szopinski
8-bit incrementer
incr
incr
incr
incr
incr
incr
incr
incr
x(7)
x(6)
x(5)
x(4)
x(3)
x(2)
x(1)
x(0)
ofl
cout
cin
x
y
y(7)
y(6)
y(5)
y(4)
y(3)
y(2)
y(1)
y(0)
y(7:0)
VCC


x(7:0)
Michal Szopinski
8-bit incrementer by two
incr
incr
incr
incr
incr
incr
incr
x(7)
x(6)
x(5)
x(4)
x(3)
x(2)
x(1)
x(0)
ofl
cout
cin
x
y
y(7)
y(6)
y(5)
y(4)
y(3)
y(2)
y(1)
y(0)
VCC
BUF
y(7:0)



Michal Szopinski
1-bit incrementer


x
Michal Szopinski
1-bit decrementer
AND2B1
pt
pf
XOR2
y


0 ns
50 ns
100 ns
150 ns
200 ns
250 ns
x[7:0]
0
1
100
254
255
128
incr[7:0]
1
2
101
255
0
129
incr_o
dincr[7:0]
2
3
102
0
1
130
dincr_o
decr[7:0]
255
0
99
253
254
127
decr_o
ddecr[7:0]
254
255
98
252
253
126
ddecr_o