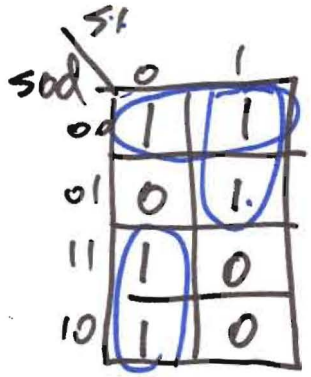
# ECGR2181 - Extra Notes 11/24/09



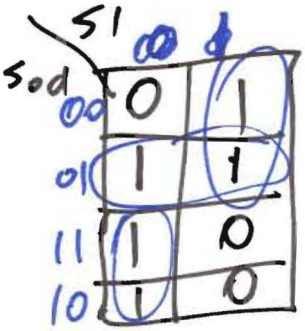
n1




$n1 = S0'd' + S1S0' + S1'S0$

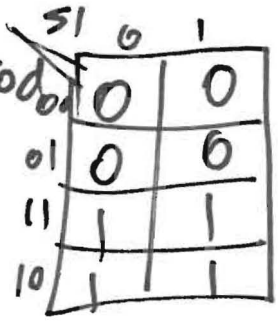
1

n0




$n0 = S1'S0 + S0'd + S1S0'$

X




$X = S0$

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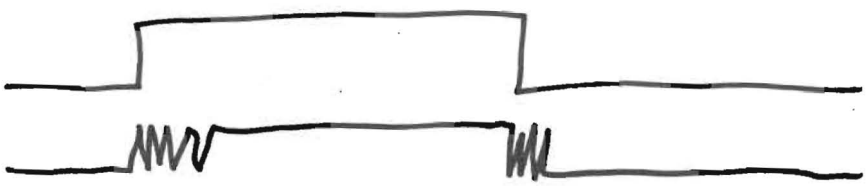
Debounce



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(2)


#states = #ffneed

$\#states \leq 2^{\#ff}$

$5 \leq 2^3$

K counts from 0 to $2^{20}-1$ (1M)

0 to 1048,575

Clock is 50 MHz

So how long will it take to count from 1 to 1,048,575

$f = 50 \times 10^6 = 5.0 \times 10^7$

$period = \frac{1}{5. \times 10^7} = 20\ ns \quad (.000\ 000\ 02)$

period * size of reg =

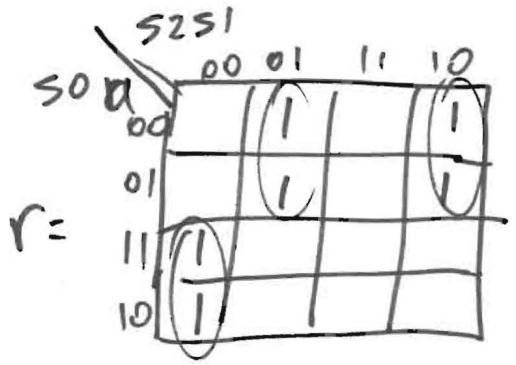
= .000 000 02 sec * 1,048,575

= .021 sec (21 msec)

# ECGR 4101 - Extra Notes

11/24/09 Sec 2
11/30/09 Sec 1

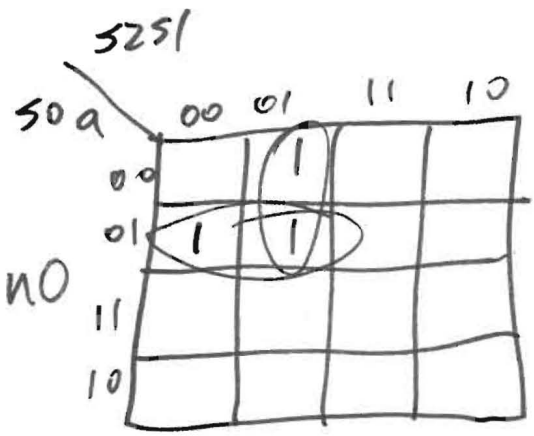
## Slide 45, Chapter 3 notes




$r = S2'S1'S0 + S2'S1S0' + S2S1'S0'$

$n2 = S2'S1S0$

$n1 = S2'S1'S0 + S2'S1S0'$




$n0 = S2'S0'a + S2'S1S0'$

Sect 2, 11/24/09 through Notes p 45

Sect 1, 11/30/09 through Notes p 52