Digital Design 2015-11-05

r	g	b	a	a'	rb'g'	a(rb'g')'	arb'g'
0	0	0	0	1	0	0	0
0	0	1	1	0	0	1	0
0	1	0	1	0	0	1	0
0	1	1	1	0	0	1	0
1	0	0	1	0	1	0	1
1	0	1	1	0	0	1	0
1	1	0	1	0	0	1	0
1	1	1	1	0	0	1	0

START Wait RED1

(1)

examine the transition from state "Start" to "Red 1"

P38 of Valvid Ch3 Notes

You are in state Green, show transition out of state

r	g	b	a	a'	rb'g'	a(rb'g')'	arb'g'

SAME as Above!

Transition back to state Green

Transition to Wait

Transition to Red2

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(2)

Examine the truth table on p43 for the Valid Ch3 notes. Show the K-maps for outputs x, n0, and n1

X

S1 \ S0b	00	01	11	10
0	0	0	1	1
1	1	1	1	1

$X = S0 + S1$

n1

S1 \ S0b	00	01	11	10
0	0	0	1	1
1	1	1	0	0

$n1 = S1\,S0' + S1'S0$

n0

S1 \ S0b	00	01	11	10
0	0	1	0	0
1	1	1	0	0

$n0 = S1\,S0' + S0'b$