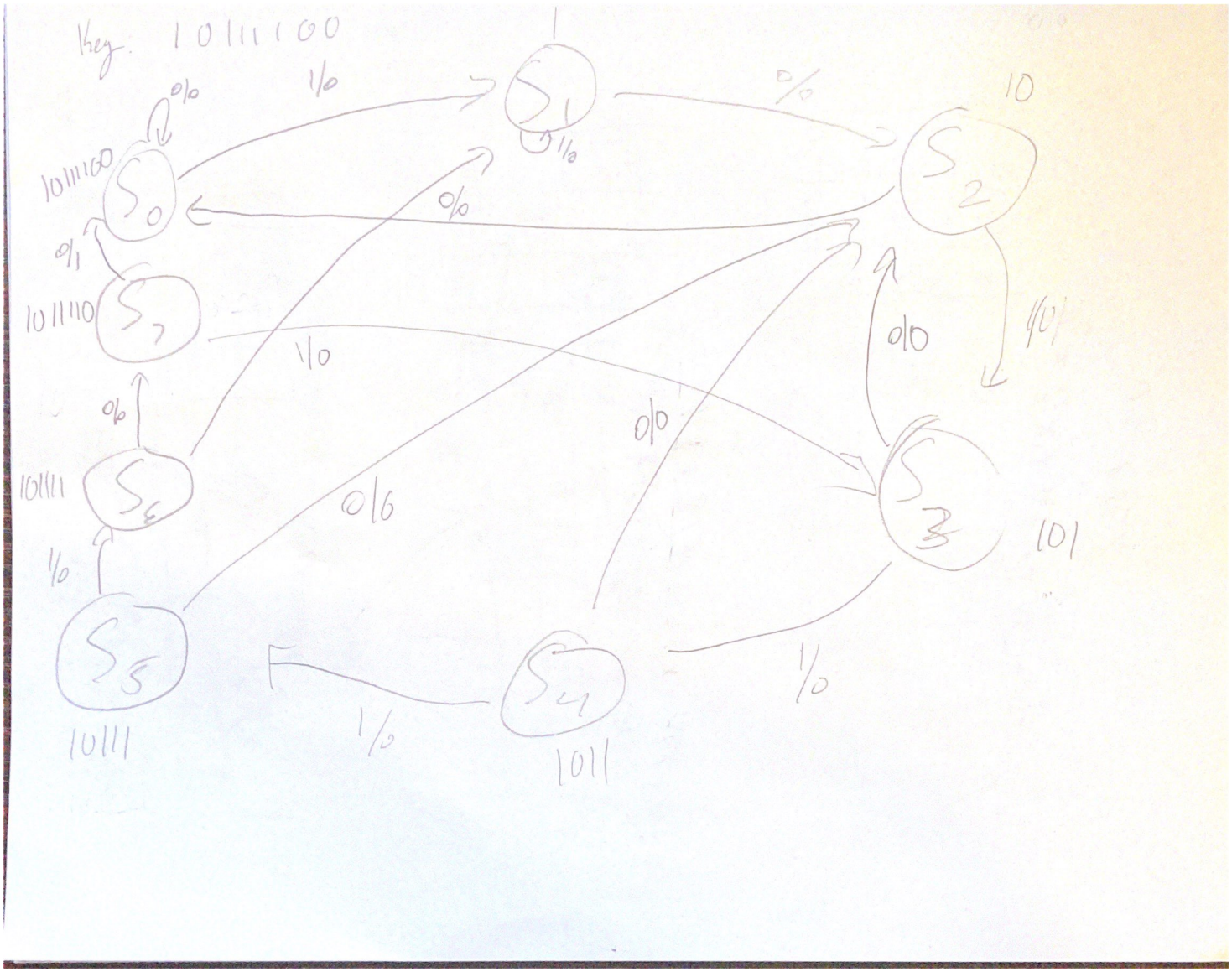
Present State C B A	Input X	Next State D_C D_B D_A	Output U
0 0 0	0	0 0 0	0
0 0 0	1	0 0 1	0
0 0 1	0	0 1 0	0
0 0 1	1	0 0 1	0
0 1 0	0	0 1 1	0
0 1 0	1	0 1 0	0
0 1 1	0	1 0 0	0
0 1 1	1	0 1 0	0
1 0 0	0	1 0 1	0
1 0 0	1	0 1 0	0
1 0 1	0	1 1 0	0
1 0 1	1		0
1 1 0	0	1 1 1	0
1 1 0	1	0 0 1	1
1 1 1	0	0 0 0	0
1 1 1	1	0 1 1	


Key: 10111100
0/0
1/0
10111100
S0
0/1
10111
S7
1/0
0/0
101111
S6
1/0
S5
10111
1/0
S1
1/0
0/0
S4
1011
1/0
0/0
S2
10
0/0
1/0
0/0
S3
101
1/0

Ruben Rubalcaba

D_A

AB \ CX	00	01	11	10
00	0	1	3	2
01	4	5	1 7	6
11	1 12	13	15	14
10	8	1 9	1 11	10

$D_A = AB\bar{C}\bar{X} + \bar{A}BCX + A\bar{B}X$ ✓

D_B

AB \ CX	00	01	11	10
00	0	1	3	1 2
01	4	1 5	7	1 6
11	1 12	13	1 15	14
10	1 8	9	1 11	1 10

$D_B = A\bar{C}\bar{X} + \bar{A}CX + \bar{A}B\bar{C}X + ACX + AB\bar{C}$

$A\bar{C}\bar{X} + \bar{B}C\bar{X} + A\bar{C}\bar{X} + ACX + \bar{A}B\bar{C}X$ ✓

D_C

AB \ CX	00	01	11	10
00	0	1 1	1 3	2
01	1 4	1 5	7	6
11	1 12	1 13	1 15	14
10	8	1 9	11	10

$D_C = \bar{C}X + \bar{A}BX + AB\bar{C} + ABX$ ✓

$U = ABC\bar{X}$