

Ontwerp van een synchrone 4-bit teller met JK-flipflops

MOEBIUSTELLER

Oud -> nieuw	Oud	Nieuw	FF4		FF3		FF2		FF1	
			J4	K4	J3	K3	J2	K2	J1	K1
0	1	0000	0	x	0	x	0	x	1	x
1	3	0001	0	x	0	x	1	x	x	0
3	7	0011	0	x	1	x	x	0	x	0
7	15	0111	1	x	x	0	x	0	x	0
15	14	1111	x	0	x	0	x	0	x	1
14	12	1110	x	0	x	0	x	1	0	x
12	8	1100	x	0	x	1	0	x	0	x
8	0	1000	x	1	0	x	0	x	0	x
		#####								
		#####								
		#####								
		#####								
		#####								
		#####								
		#####								

J1: \bar{Q}_4

K1: Q_4

J2: Q_1

K2: \bar{Q}_1

J3: Q_2

K3: \bar{Q}_2

J4: Q_3

K4: \bar{Q}_3

J1

		Q2Q1	00	01	11	10
Q4Q3	00		1	x	x	
	01				x	
	11		0		x	0
	10		0			

K1

		Q2Q1	00	01	11	10
Q4Q3	00		x	0	0	
	01				0	
	11		x		1	x
	10		x			

J2

		Q2Q1	00	01	11	10
Q4Q3	00		0	1	x	
	01				x	
	11		0		x	x
	10		0			

K2

		Q2Q1	00	01	11	10
Q4Q3	00		x	x	0	
	01				0	
	11		x		0	1
	10		x			

J3

		Q2Q1	00	01	11	10
Q4Q3	00		0	0	1	
	01				x	
	11		x		x	x
	10		0			

K3

		Q2Q1	00	01	11	10
Q4Q3	00		x	x	x	
	01				0	
	11		1		0	0
	10		x			

J4

		Q2Q1	00	01	11	10
Q4Q3	00		0	0	0	
	01				1	
	11		x		x	x
	10		x			

K4

		Q2Q1	00	01	11	10
Q4Q3	00		x	x	x	
	01				x	
	11		0		0	0
	10		1			