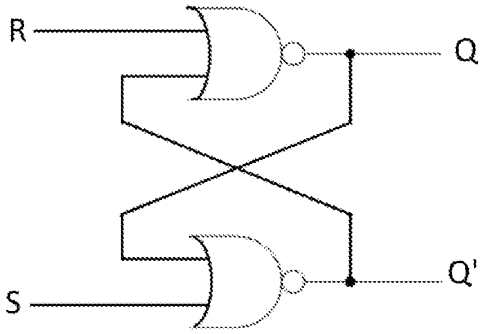


Figure 1a (Prior Art)

S	R	Q	Q'
0	0	Latch	Latch
0	1	0	1
1	0	1	0
1	1	0	0

Figure 1b (Prior Art)

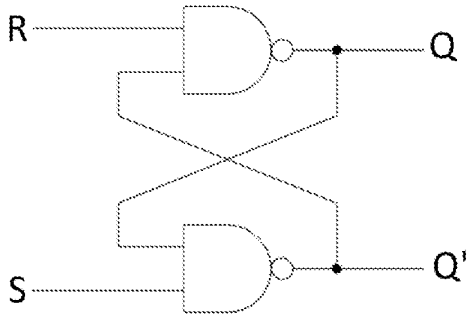


Figure 2a (Prior Art)

S	R	Q	Q'
0	0	inavlid	invalid
0	1	1	0
1	0	0	1
1	1	Latch	Latch

Figure 2b (Prior Art)

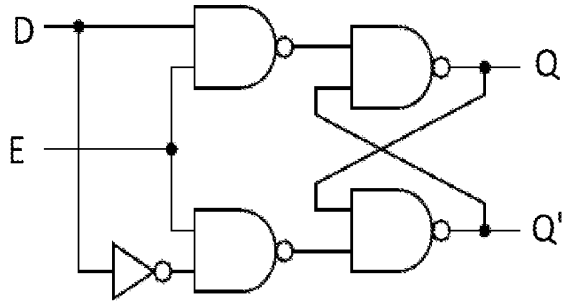


Figure 3a (Prior Art)

Enable	D	Q_n	Q_{n+1}	STATE
1	0	x	0	RESET
1	1	x	1	SET
0	x	x	Q(n)	No Change

Figure 3b (Prior Art)

	Input z_i		Output Z_i					
	x_i	y_i	Present $t=0$		Next $t=1$		Next $t=2$	
			X_i	Y_i	X_i	Y_i	X_i	Y_i
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	0	0	0	0	0	0	0	0
2			0	1	0	1	0	1
3			1	0	1	0	1	0
4			1	1	0	0	0	0
5	0	1	0	0	0	1	0	1
6			0	1	0	1		
7			1	0	0	0		
8			1	1	0	0		
9	1	0	0	0	1	0	1	0
10			1	0	1	0		
11			0	1	0	0		
12			1	1	0	0		
13	1	1	0	0	0	0	0	0
14			0	1	0	0		
15			1	0	0	0		
16			1	1	0	0		

Figure 4a

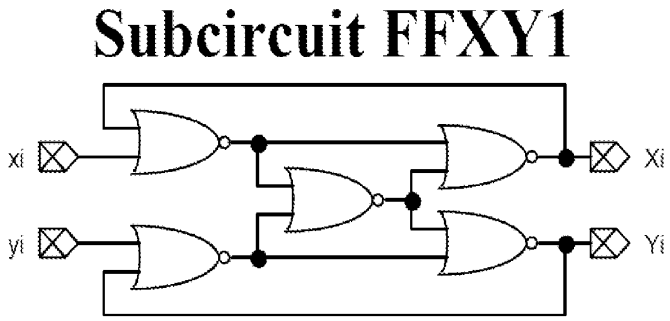


Figure 4b

,,,

	Input z_i		Output Z_i					
	x_i	y_i	Present $t=0$		Next $t=1$		Next $t=2$	
			X_i	Y_i	X_i	Y_i	X_i	Y_i
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	0	0	0	0	1	1	1	1
2			0	1	1	1		
3			1	0	1	1		
4			1	1	1	1		
5	0	1	0	0	1	1	0	1
6			1	0	1	1		
7			0	1	0	1		
8			1	1	0	1		
9	1	0	0	0	1	1	1	0
10			0	1	1	1		
11			1	0	1	0		
12			1	1	1	0		
13	1	1	0	0	1	1	1	1
14			0	1	0	1	0	1
15			1	0	1	0	1	0
16			1	1	1	1	1	1

Figure 5a

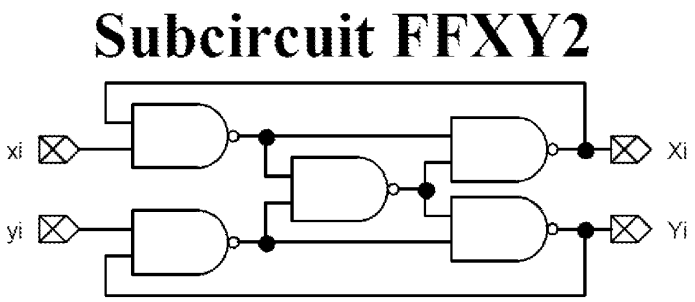


Figure 5b

	Input z_i		Output Z_i					
	x_i	y_i	Present $t=0$		Next $t=1$		Next $t=2$	
			X_i	Y_i	X_i	Y_i	X_i	Y_i
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	0	0	0	0	0	0	0	0
2			0	1	0	1	0	1
3			1	0	1	0	1	0
4			1	1	0	0	0	0
5	0	1	0	0	0	1	0	1
6			0	1	0	1		
7			1	0	0	0		
8			1	1	0	0		
9	1	0	0	0	1	0	1	0
10			1	0	1	0		
11			0	1	0	0		
12			1	1	0	0		
13	1	1	0	0	0	0	0	0
14			0	1	0	0		
15			1	0	0	0		
16			1	1	0	0		

Figure 6a

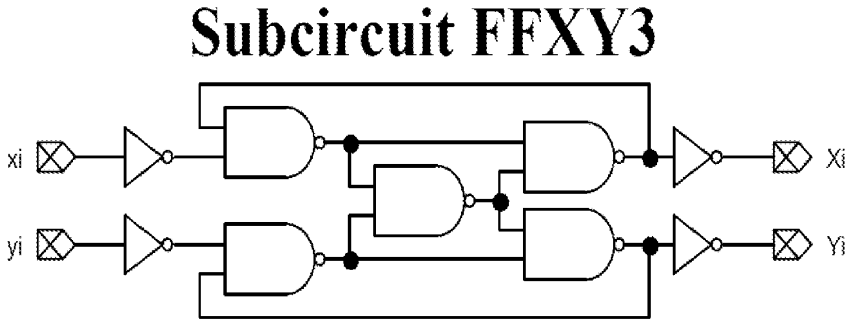


Figure 6b

	Input	Input z_i		Output Z_i					
	Enable/Clk	x_i	y_i	Present $t=0$		Next $t=1$		Next $t=2$	
				X_i	Y_i	X_i	Y_i	X_i	Y_i
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(0)
1	0	0	0	0	0	0	0	0	0
2				0	1	0	1	0	1
3				1	0	1	0	1	0
4				1	1	0	0	0	0
5		0	1	0	0	0	1	0	1
6				0	1	0	1		
7				1	0	0	0		
8				1	1	0	0		
9		1	0	0	0	1	0	1	0
10				1	0	1	0		
11				0	1	0	0		
12				1	1	0	0		
13		1	1	0	0	0	0	0	0
14				1	1				
15				1	0				
16				1	1				
17	1	0	0	0	0	0	0	0	0
18				0	1				
19				1	0				
20				1	1				
21		0	1	0	0	0	0	0	0
22				0	1				
23				1	0				
24				1	1				
25		1	0	0	0	0	0	0	0
26				0	1				
27				1	0				
28				1	1				
29		1	1	0	0	0	0	0	0
30				0	1				
31				1	0				
32				1	1				

Figure 7a

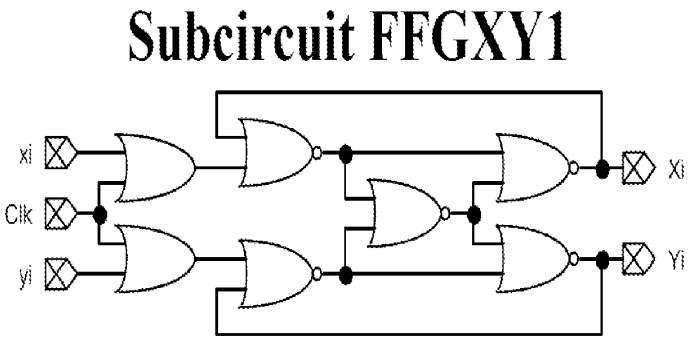


Figure 7b

	Input	Input z_i		Output Z_i					
	Enable/Clk	x_i	y_i	Present $t=0$		Next $t=1$		Next $t=2$	
				X_i	Y_i	X_i	Y_i	X_i	Y_i
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	0	0	0	0	0	1	1	1	1
2				0	1				
3				1	0				
4				1	1				
5		0	1	0	0				
6				0	1				
7				1	0				
8				1	1				
9		1	0	0	0				
10				0	1				
11				1	0				
12				1	1				
13		1	1	0	0				
14				0	1				
15				1	0				
16				1	1				
17	1	0	0	0	0	1	1	1	1
18				0	1				
19				1	0				
20				1	1				
21		0	1	0	0	1	1	0	1
22				1	0	1	1		
23				0	1	0	1		
24				1	1	0	1		
25		1	0	0	0	1	1	1	0
26				0	1	1	1		
27				1	0	1	0		
28				1	1	1	0		
29		1	1	0	0	1	1	1	1
30				0	1	0	1	0	1
31				1	0	1	0	1	0
32				1	1	1	1	1	1

Figure 8a

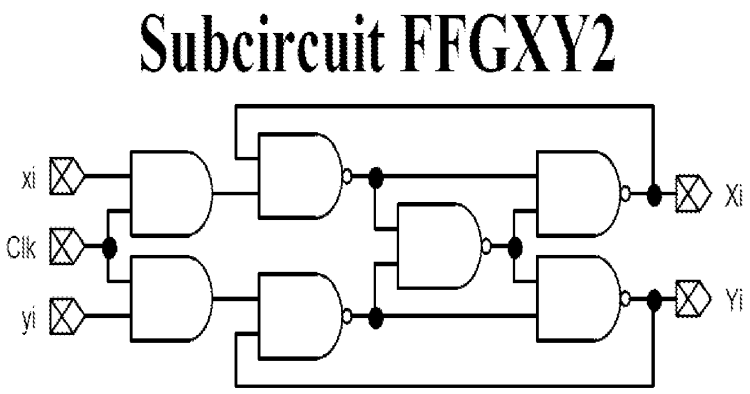


Figure 8b