present State	Next state		output
	W=0	W=1	Z
5m	5m	5m+1	1
5m+1	5m+2	5m+3	0
5m+2	5m+4	5m	0
5m+3	5m+1	5m+2	0
5m+4	5m+3	5m+4	0

present state $Y_3Y_2Y_1$		Next state $w=0$ $Y_3Y_2Y_1$	Next state $w=1$ $Y_3Y_2Y_1$	output z
$5m$	0 0 0	000	001	1
$5m+1$	0 0 1	010	011	0
$5m+2$	0 1 0	100	000	0
$5m+3$	0 1 1	001	010	0
$5m+4$	1 0 0	011	100	0
	1 0 1	ddd	ddd	d
	1 1 0	ddd	ddd	d
	1 1 1	ddd	ddd	d

wy_3 \ y_2y_1	00	01	11	10
00	0	0	1	0
01	1	d	d	d
11	0	d	d	d
10	1	1	0	0

$$Y_1 = w'y_2y_1 + w'y_3 + wy_3'y_2'$$

$w\,y_3 \backslash y_2 y_1$	00	01	11	10
00	0	1	0	0
01	1	d	d	d
11	0	d	d	d
10	0	1	1	0

$$Y_2 = y_2' y_1 + w' y_3 + w y_1$$

$w\,y_3 \backslash y_2 y_1$	00	01	11	10
00	0	0	0	1
01	0	d	d	d
11	1	d	d	d
10	0	0	0	0

$$Y_3 = w' y_2 y_1' + w y_3$$

$y_3 \backslash y_2 y_1$	00	01	11	10
0	1	0	0	0
1	0	d	d	d

$$z = y_1' y_2' y_3'$$