

$$S = C_i \bar{A} \bar{B} + \bar{A} \bar{B} \bar{C}_i + A \bar{B} \bar{C}_i + A B C_i$$

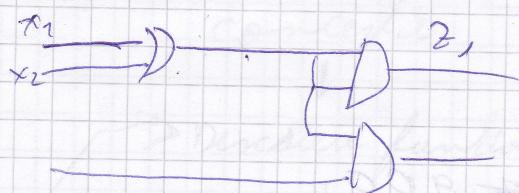
$$= \underline{C_i(\bar{A} \bar{B} + A B)} + \bar{C}_i (\bar{A} \bar{B} + \bar{A} B)$$

$$= \underline{\underline{C_i(A \bar{B} + \bar{A} B)}} + \bar{C}_i (\bar{A} \text{xor } B)$$

$$= \underline{\underline{\bar{C}_i}} + \underline{\underline{(\bar{A} \bar{B} + A B)}} + \bar{C}_i (\bar{A} \text{xor } B)$$

$$= \bar{C}_i + \underline{\underline{\bar{A} \bar{B}}} + \underline{\underline{A B}}$$

$$= C_i \text{xor } A \text{xor } B$$

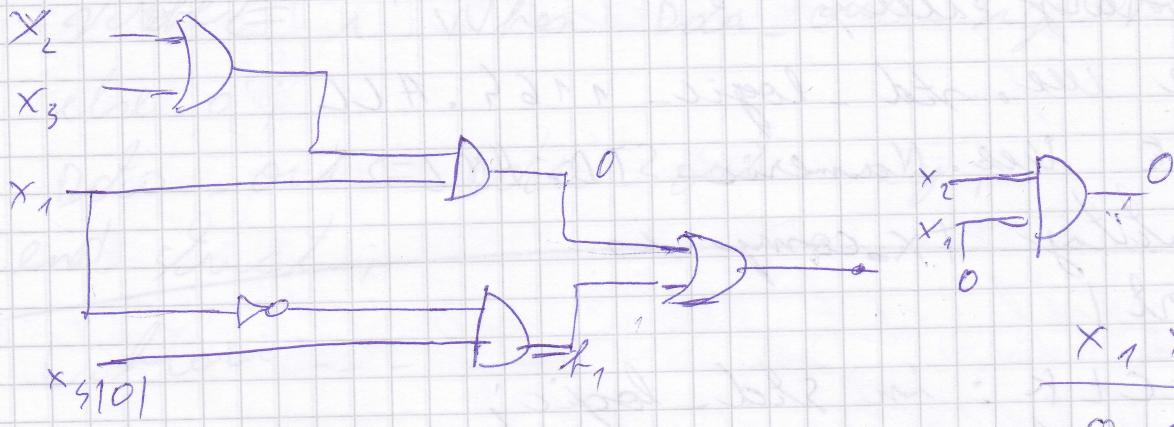


<del>Z<sub>1</sub></del>	X <sub>2</sub>	<del>Z<sub>1</sub></del>
0	0	1
0	1	
0	0	
1	1	

<del>Z<sub>1</sub></del>	X <sub>1</sub>	X <sub>2</sub>	<del>Z<sub>1</sub></del>
0	0	0	1
0	0	1	
1	0	0	
1	1	0	1
1	1	1	

$$\begin{array}{ccc|c}
& x_1 & x_2 & x_3 \\
\hline
0 & 0 & - & 0 & 0 \\
0 & 1 & - & 1 & 0 \\
1 & 0 & - & 1 & 0 \\
1 & 1 & - & 1 & 1
\end{array}$$

$$z_2 \neq x_3$$



$x_1$	$x_2$	$f_1$
0	0	0
0	1	1
1	0	0
1	1	0

000	000
110	000

$x_1$	$x_2$	cor.	$x_1$	$x_2$	0	0
0	0	0	0	0	0	0
0	1	0	0	1	0	0
1	0	0	1	0	0	0
1	1	1	1	1	1	0

Generadorul de acs. — Laborator

CLK\_Gen VHDL

LIBRARY IEEE;

USE ieee.std\_logic\_1164.all;

Entity cogen

PORT (

CK : out STD\_LOGIC

);

END cogen;

Architecture struc of cogen is

signal CLK : std\_logic := '0';

Begin

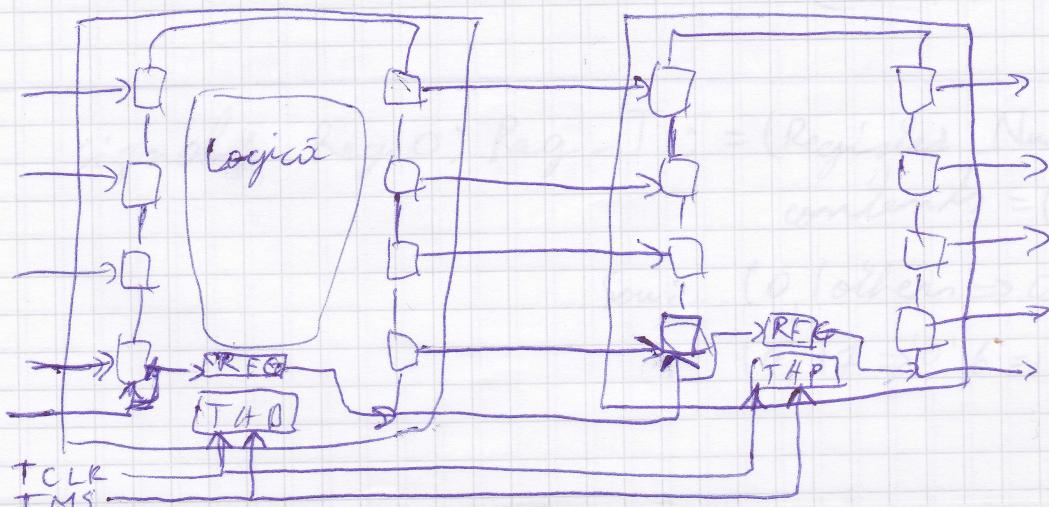
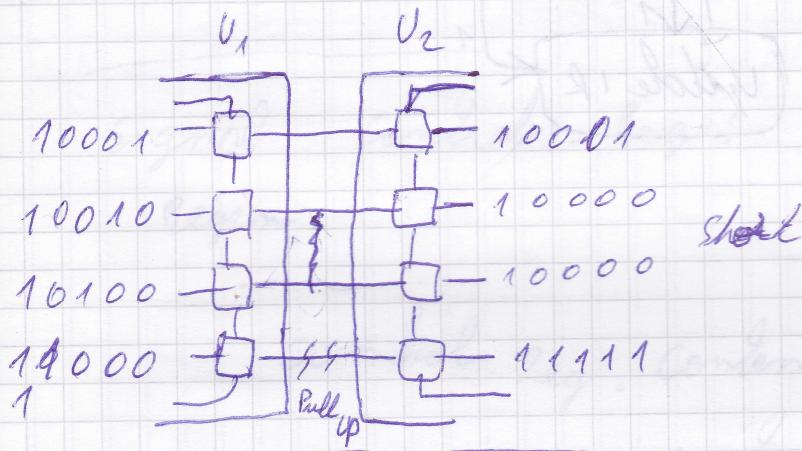
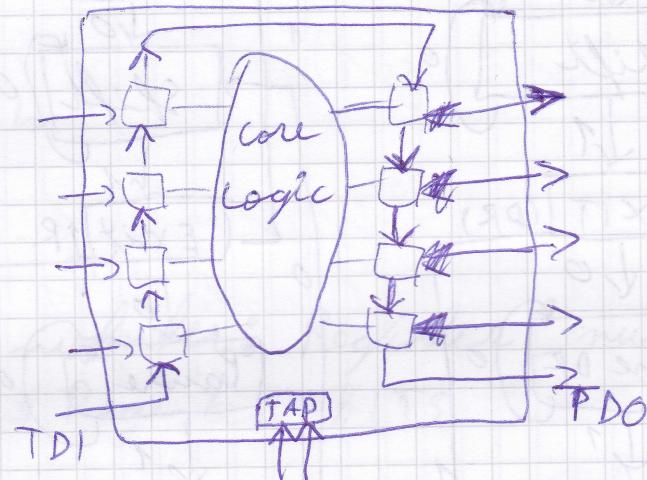
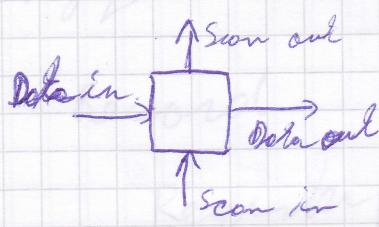
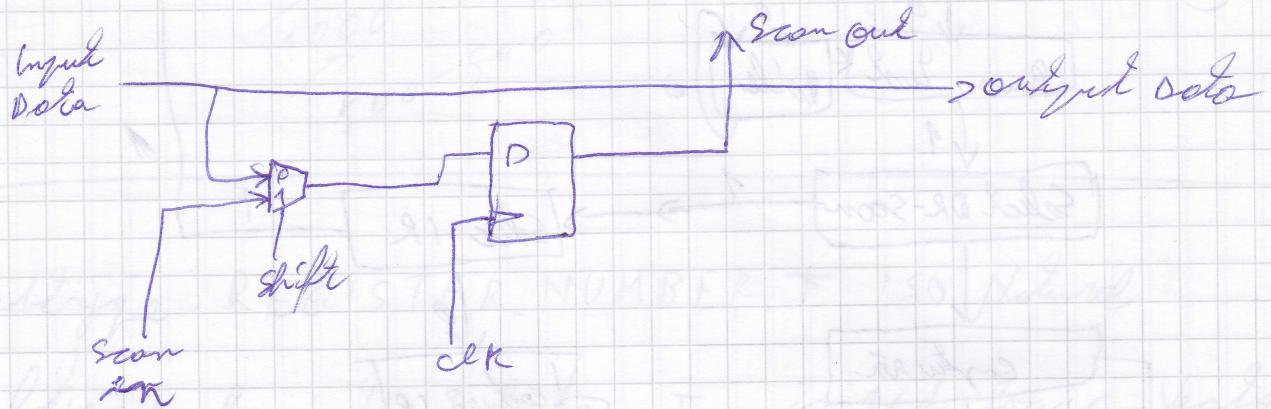
CLK <= not CLK after 5 ns;

CK <= CLK

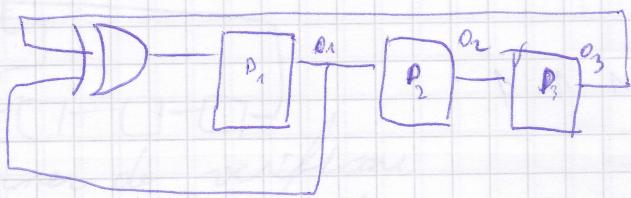
END struc;

Curs.

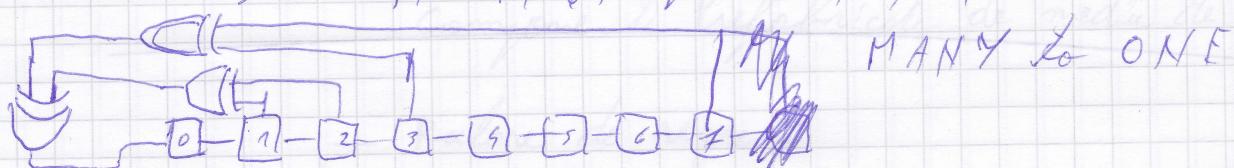
Forma inicial de la célula JTAG



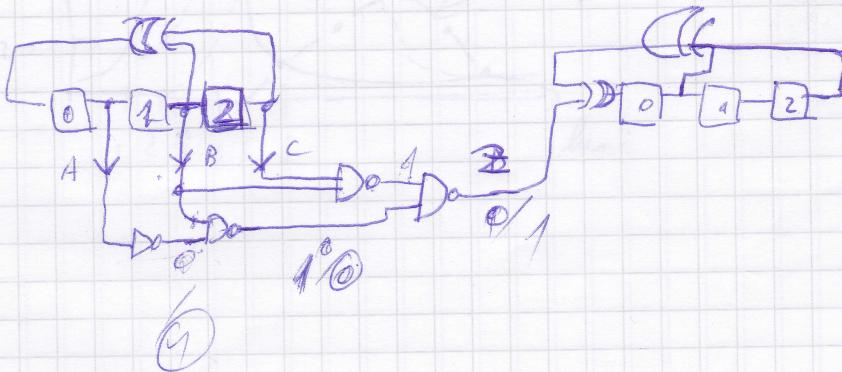
$O_1$	$O_2$	$O_3$
1	1	1
0	1	1
1	0	1
0	1	0
0	0	1
1	0	0
1	1	0



Nb Bits	Lungime	Tags (lunete de conexiune)
2	3	[0, 1]
3	7	[0, 2]
4	15	[0, 3]
8	255	[1, 2, 3, 7]
16	65535	[1, 2, 3, 15]
32	3294967295	[1, 3, 6, 31]



One to MANY

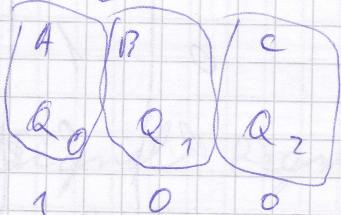


0	0	0	-
-	-	-	-
1	0	0	-
-	-	-	-
1	1	1	-
-	-	-	-
1	0	1	-
-	-	-	-
0	1	0	-
-	-	-	-

$$Q_0 = d \ 0 \ 1 \ 1 \ 1 \ 0 \ 0$$

$$Q_1 = 0 \ 1 \ 0 \ 1 \ 1 \ 1 \ 0$$

$$Q_2 = 0 \ 0 \ 1 \ 0 \ 1 \ 1 \ 1$$



	$Z$	$R_0$	$R_1$	$R_2$
1 0 0	0	0	0	0
0 1 0	1	0	0	0
1 0 1	0	1	0	0
1 1 0	0	1	1	0
1 1 1	1	0	1	1
0 1 1	1	1	1	1
0 0 1	0	1	1	1
1 0 0	0	0	1	1

0 1 0 0

$Q \rightarrow 0 \ 1 \ 1 \ 0$   
0 1 1 /