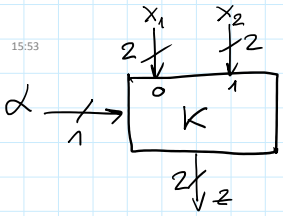
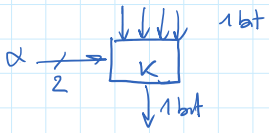
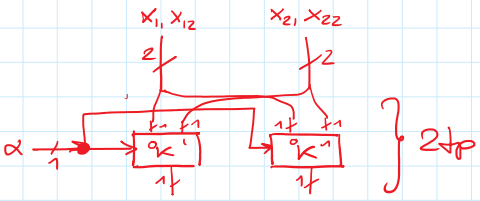
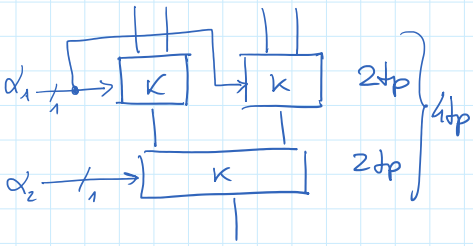


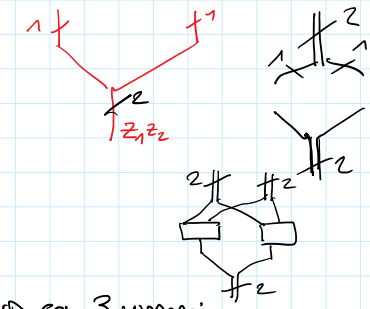






Scegliere X_{11} e X_{21}

Scegliere X_{12} X_{22}



32 righe

X_{11}	X_{12}	X_{21}	X_{22}	α	Z_1	Z_2
0	0	–	–	0	0	0
0	1	–	–	0	0	1
1	0	–	–	0	1	0
1	1	–	–	0	1	1
–	–	0	0	1	0	0
–	–	0	1	1	0	1
–	–	1	0	1	1	0
–	–	1	1	1	1	1

$$Z_1 = X_{11}\overline{X_{12}}\,\overline{\alpha} + X_{11}X_{12}\overline{\alpha} + X_{21}\overline{X_{22}}\,\alpha + X_{21}X_{22}\alpha$$

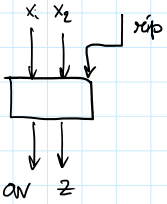
4 termini da 3 var $\Rightarrow$ AND con 3 ingressi

$\Downarrow$

OR con 4 ingressi

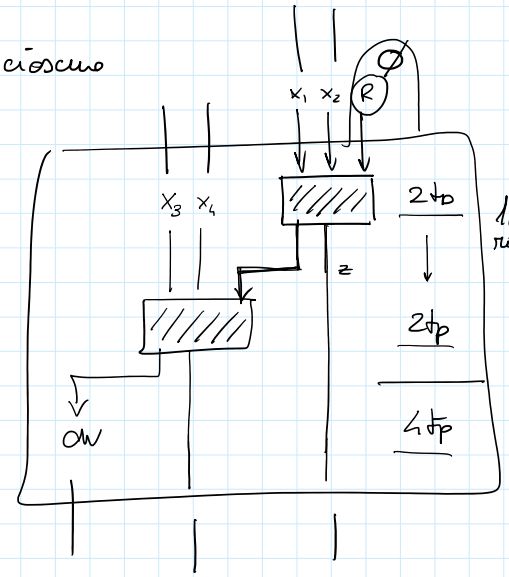
$$Z_2 =$$

Addizionatore da 2 valori di 1 bit ciascuno



1 1 0 × ← 0
0 1 1 0
0 0 1 0
1 0 0 0

0 0 1 0 ←
1 2 3 4
1 2 2 9
2 4 6 3



AND la + piu 4 ingressi $\Rightarrow$ 1 livello $\Rightarrow$ 1tp

4 ingressi

3 usate

16 righe

max 16 − 1 "1"

+5

termini nella somma (OR)

2 livelli OR $\Rightarrow$ 2tp

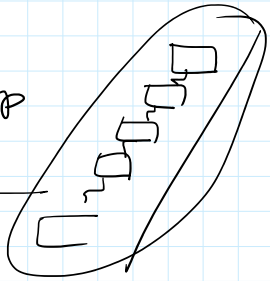
AND 1tp + 2tp = 3tp

sommatore 2 bit + rip → 1 rs + 1 rip

≅ 16 bit

16 × 2 tp

2 tp



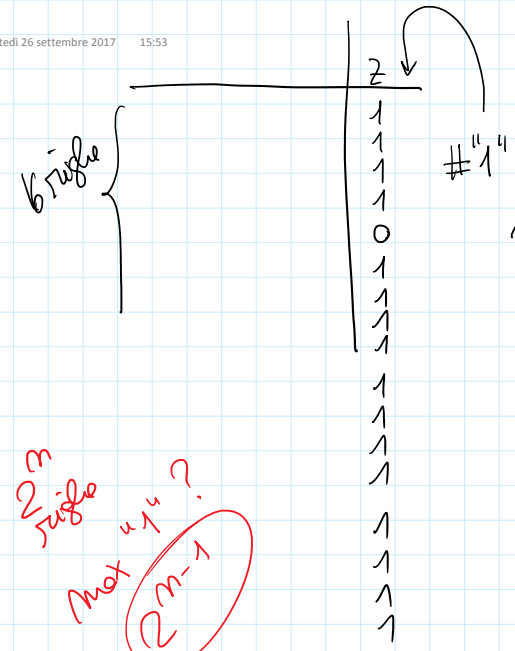
2 livelli AND

32 ingressi

2^{32}

$\log_{2^3} 2^{32} = \frac{32}{3}$

Livelli OR



max 15 (16-1)

AND 1tp
OR 1tp
NOT ∅tp

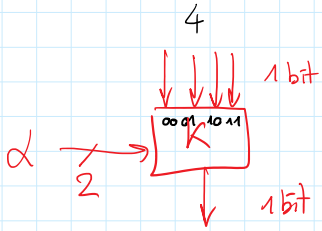
x_1 x_2	z
0 0	∅
0 1	1
1 ∅	0
1 1	1

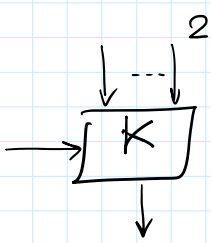
$z = \bar{x}_1\bar{x}_2 + \bar{x}_1 x_2 + x_1 x_2$

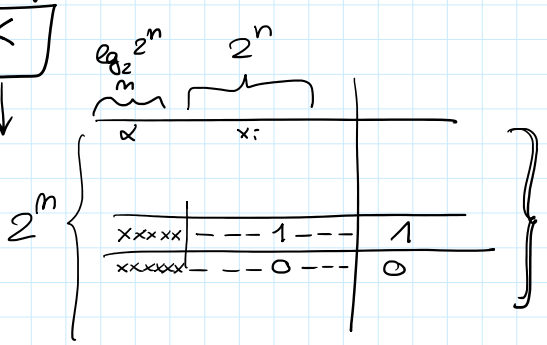
$z' = x_1\bar{x}_2$

x_1 x_2	∅	
0 0	0	1
0 1	0	1
1 0	1	0
1 1	0	1

2^n righe
max "1"? 2^{n-1}







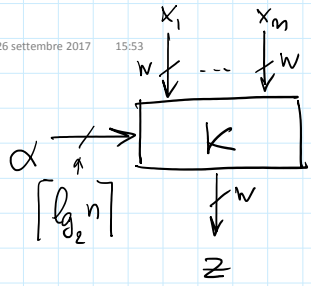
2^2

$\alpha_1\alpha_2$	x_1 x_2 x_3 x_4	z
0 0	1 – – –	1
0 1	– 1 – –	1
1 0	– – 1 0	1
1 1	– – – 1	1

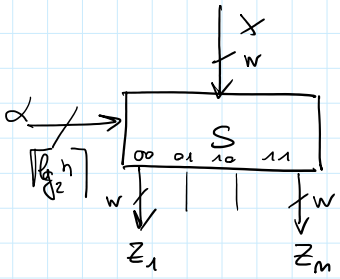
livello AND ?
n+1 ingressi
$\lceil \log_8 (n+1) \rceil$

livello OR ?
2^n ingressi
$\lceil \log_8 (2^n) \rceil$

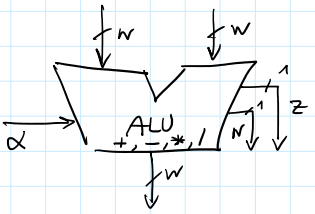
+



Commutatore



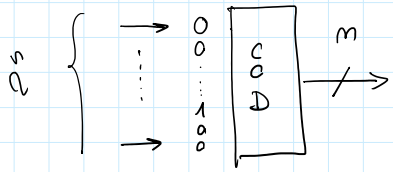
Selettore



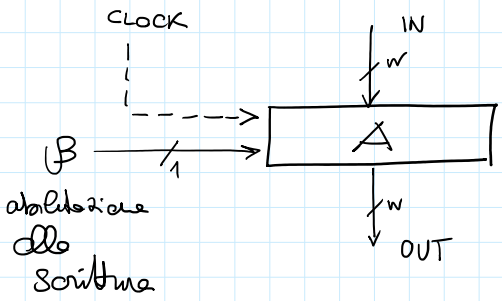
ALU

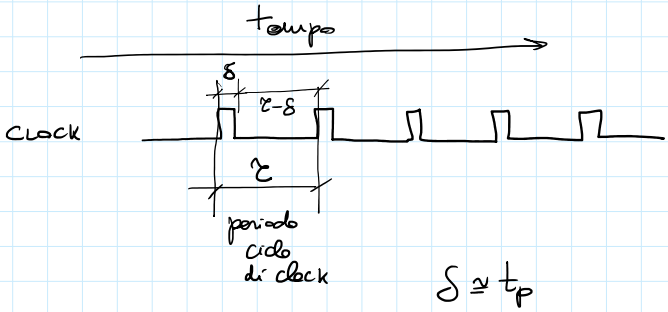
calcolano funzioni

Reti logiche combinatorie

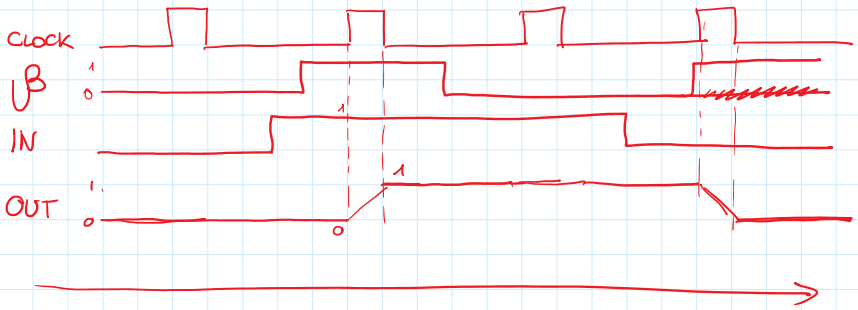


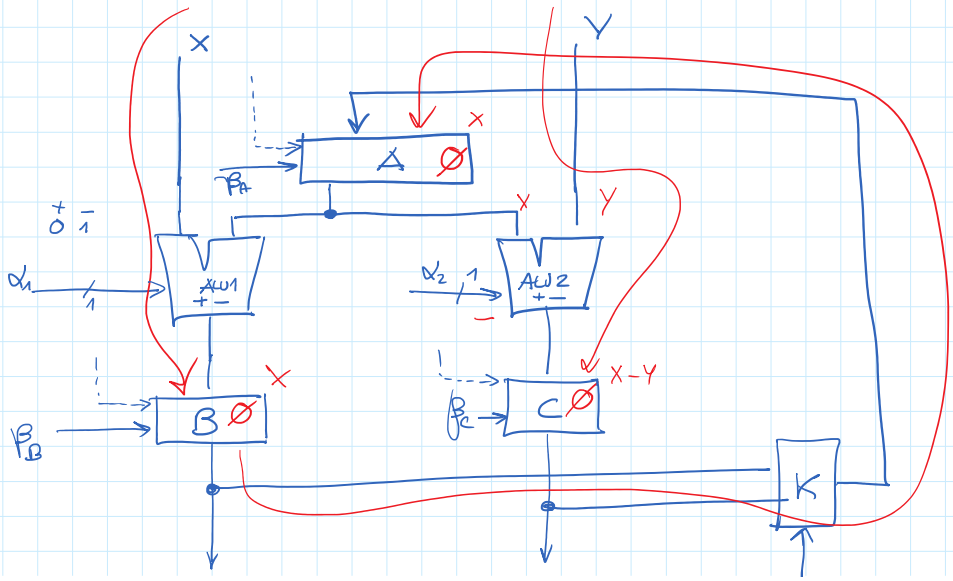
REGISTRI

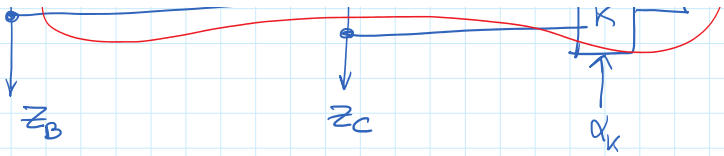


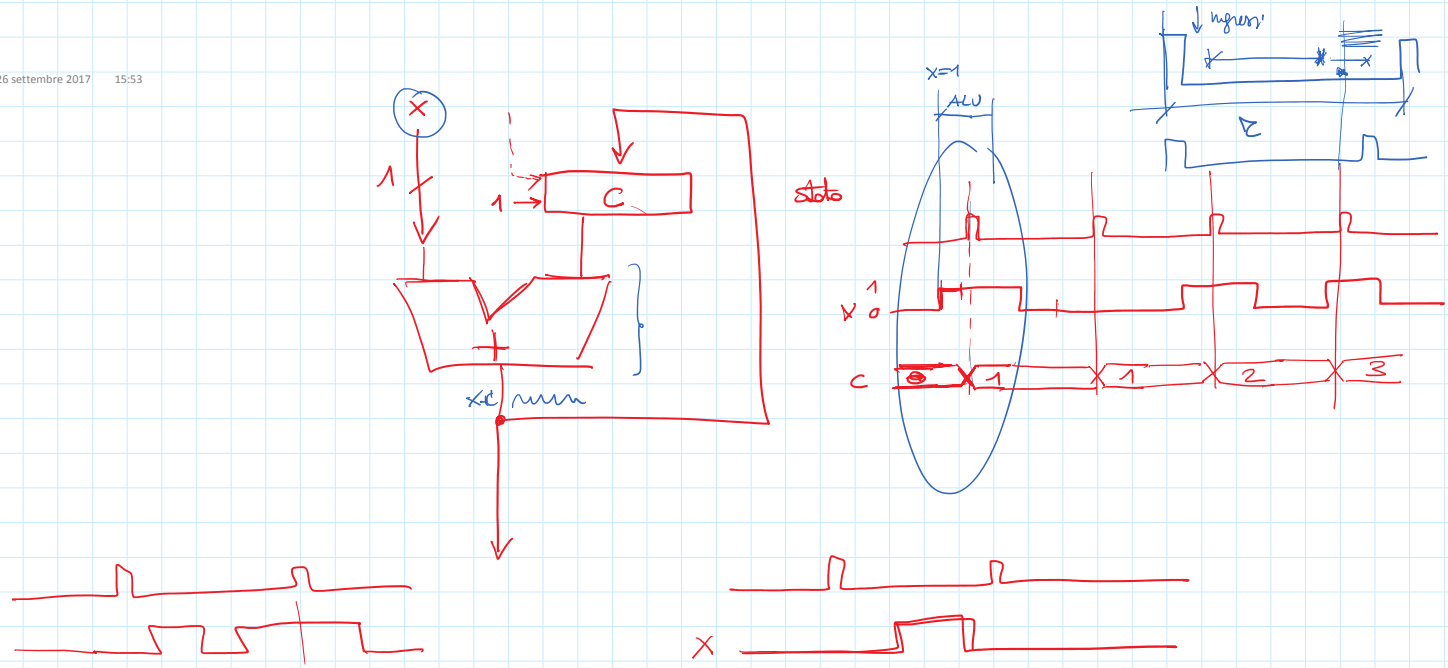


$\delta \geq t_p$

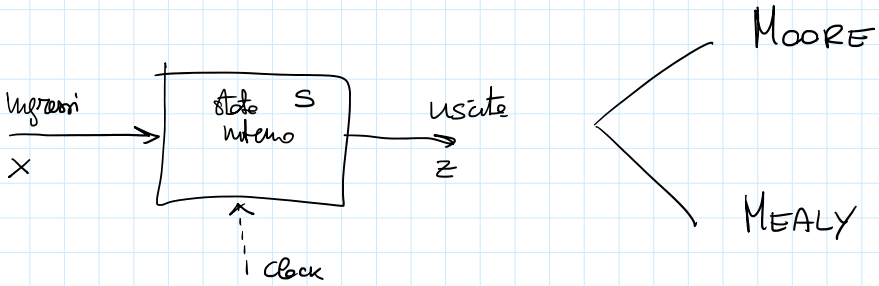





K
z_B
z_C
α_K

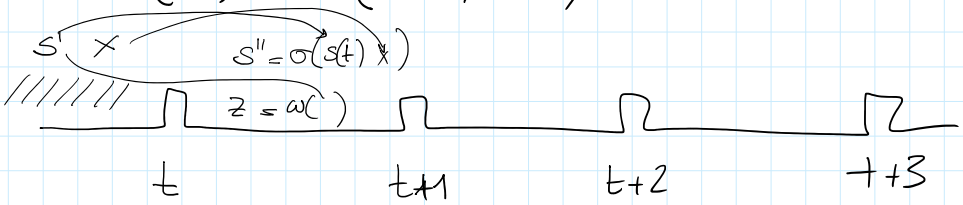


Reti (logiche) sequenziali



MOORE $z(t) = \omega(s(t))$ $\quad s(t+1) = \sigma(s(t), x(t))$

MEALY $z(t) = \omega(x(t), s(t))$ $\quad s(t+1) = \sigma(s(t), x(t))$



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martedì 26 settembre 2017 15:53

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