

ukli168

← codice google classroom

architettura

- AUTO <sup>12G</sup> 1Core
- LAVATRICE
- TELEFONO
- TABLET
- LAPTOP
- SERVER

.TOP500.org

SUPERCALCOLATORI

1979

ZX80

1Core NO CPU

Z80

Zilog

1MHz

2-3 GHz

4K

1k

8G memoria

~ 700 video

16K

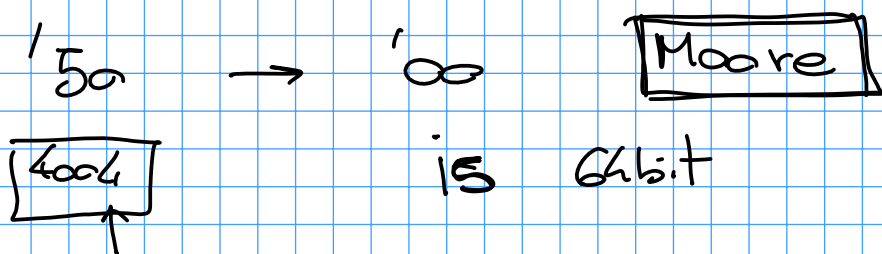
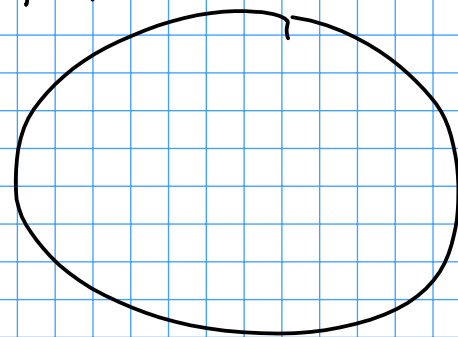
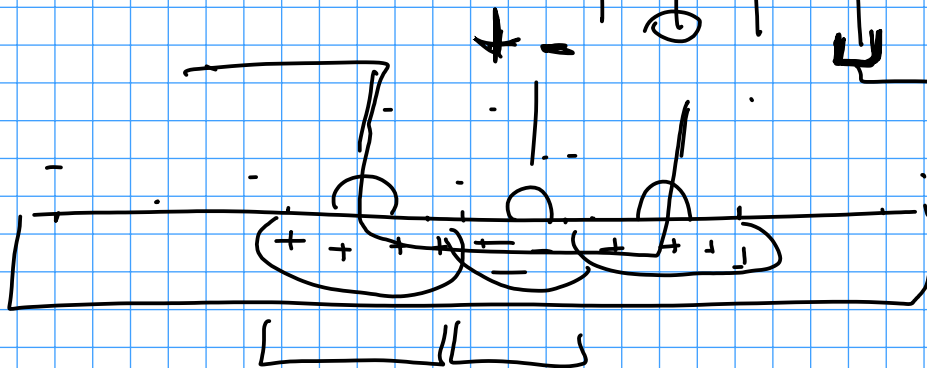
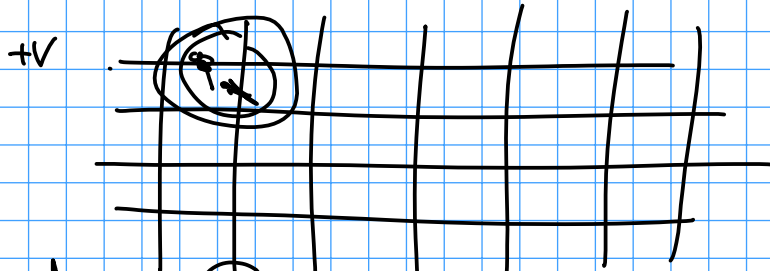
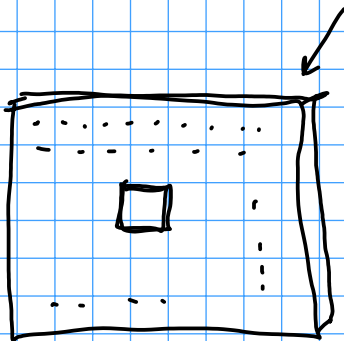
8K

RAM

~ 100 mem. syst

SSD 256G

4Core  
2.4 x Core } 8



1MHz  
↓  
1GHz

is 6bit

≈ 2000 - 2005



Ma sopra  
più cere

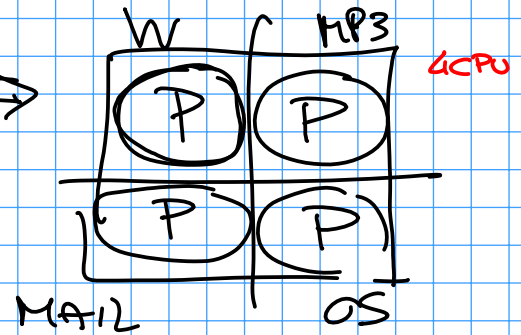
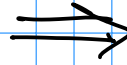
valore:  
componenti  
distribuiti



+ componenti  
+ clock

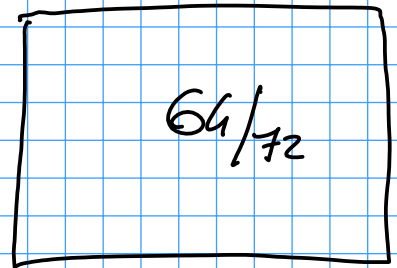


+ calore



15% silicio (ore)  
7% ingegnerato

PHI KNL



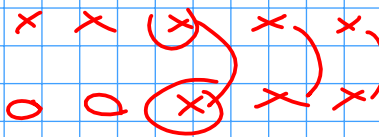
ACCELERATORI:



1500 cere

Tensor  
unit

A



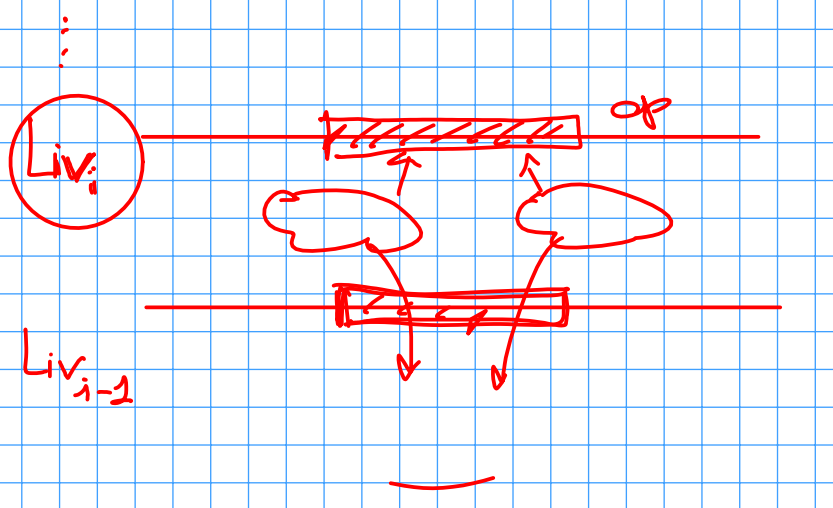
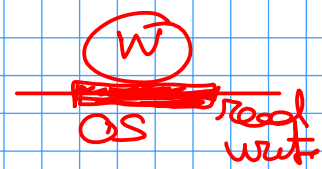
b



GP-GPU



# STRUTTURAZIONE a LIVELLI



Mette a disposizione funzionalità  
 offerte dai livelli  
 successivi  
 utilizzando ciò che è  
 meno o dispensa  
 dei livelli precedenti.

MU <sub>4</sub>	APPLICATIONS	R = { } L = { JAVA, C, OCAML, ... }
MU <sub>3</sub>	<u>PROCESSI</u>	R = { oggetti, codice, variabili } L = mag concorrente
MU <sub>2</sub>	ASSEMBLER	R = { registri generali, spori di memoria, I/O } L = ASSEMBLER
MU <sub>1</sub>	FIRMWARE	R = { registri, ALU, Memoria, Connettori } L = micro programmazione
MU <sub>0</sub>	HW	R = { porte logiche (AND OR NOT) }

OR

x <sub>1</sub>	x <sub>2</sub>	OR
0	0	0
1	0	1
0	1	1
1	1	1

AND

x <sub>1</sub>	x <sub>2</sub>	AND
0	0	0
0	1	0
1	0	0
1	1	1

NOT

x <sub>1</sub>	NOT
0	1
1	0