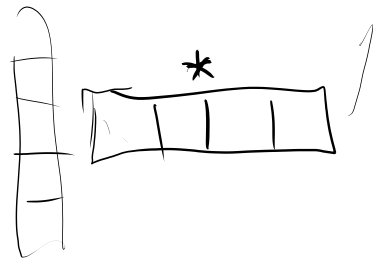
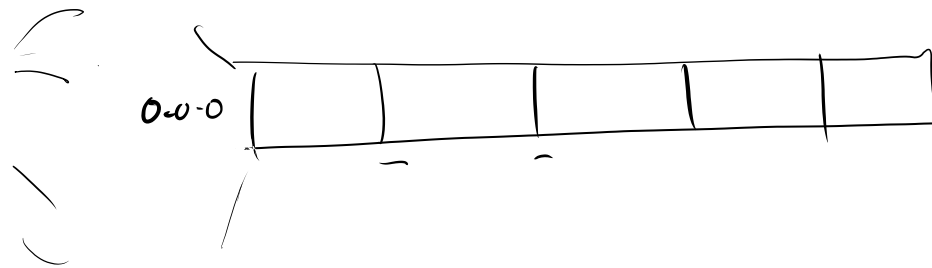
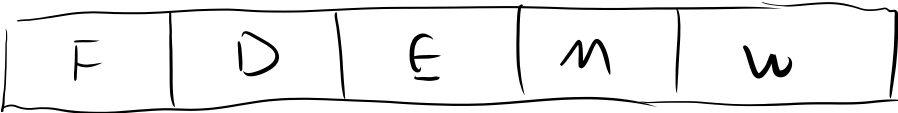


Throughput

$$\frac{\text{Total Instructions}}{\text{Total Time}}$$

flops

floating-point
operations
per second



2.4 GHz - clock

Power

$$P = \overset{\text{current}}{I} \cdot \underset{\text{voltage}}{V}$$

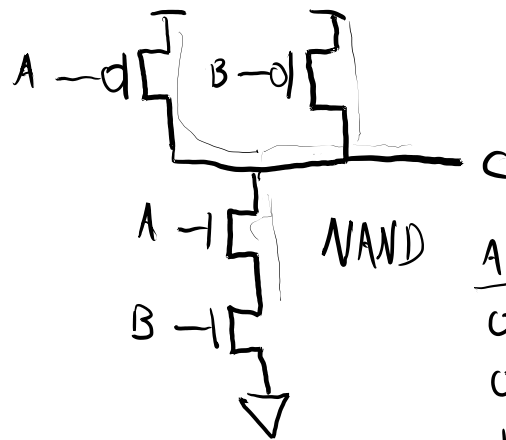
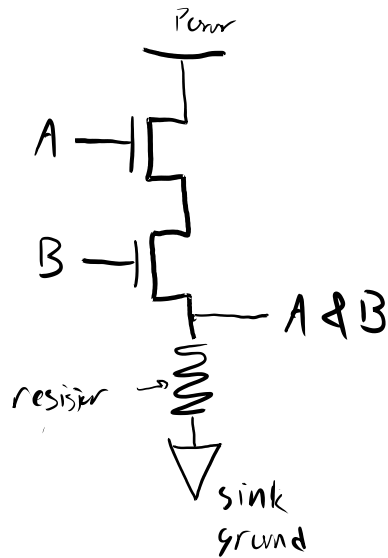
$$V = I \cdot \overset{\text{resistance}}{R}$$

metal oxide semiconductor
Field effect transistor

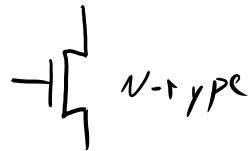
MOSFET

spacing slow

weak load power



A	B	C
0	0	1
0	1	1
1	0	1
1	1	0



N-type

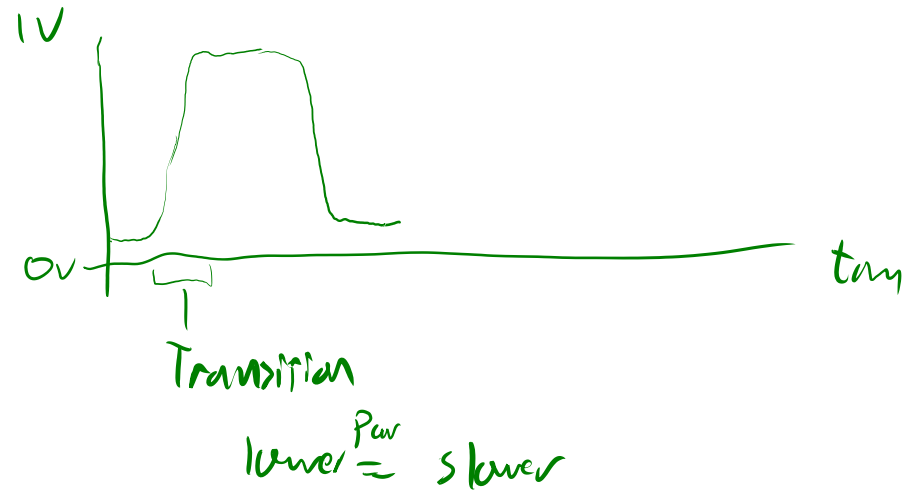


P-type

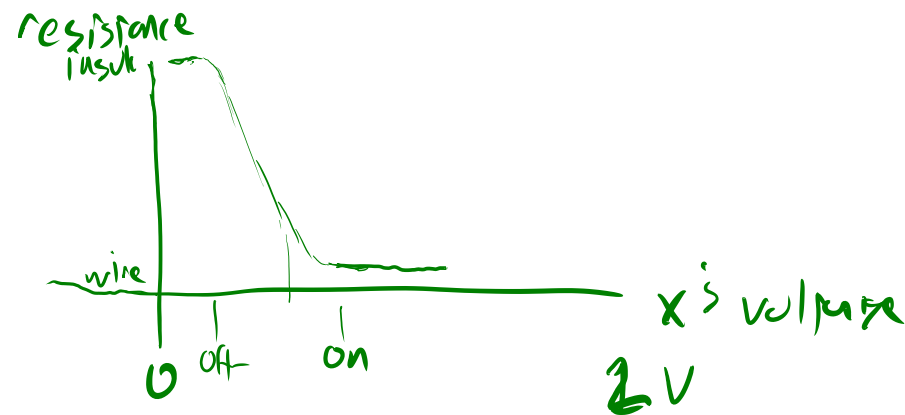
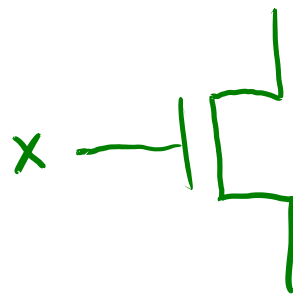
Complementary CMOS

$$P = I \cdot V \longrightarrow$$

\hookrightarrow during change
 \therefore simpler = less power
 = lower throughput

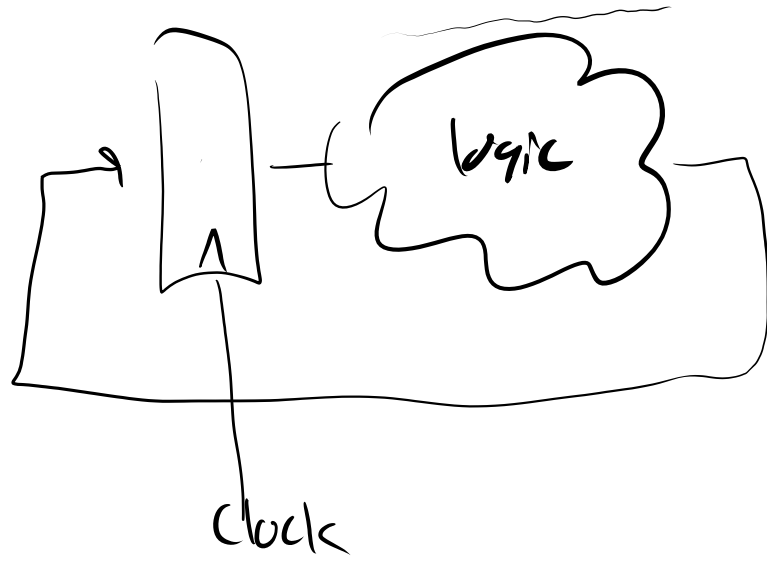


Sub-Threshold



Some times wrong

Overclocking



Transistor Speed:

- Voltage
- temperature

$$P = I \cdot V$$

