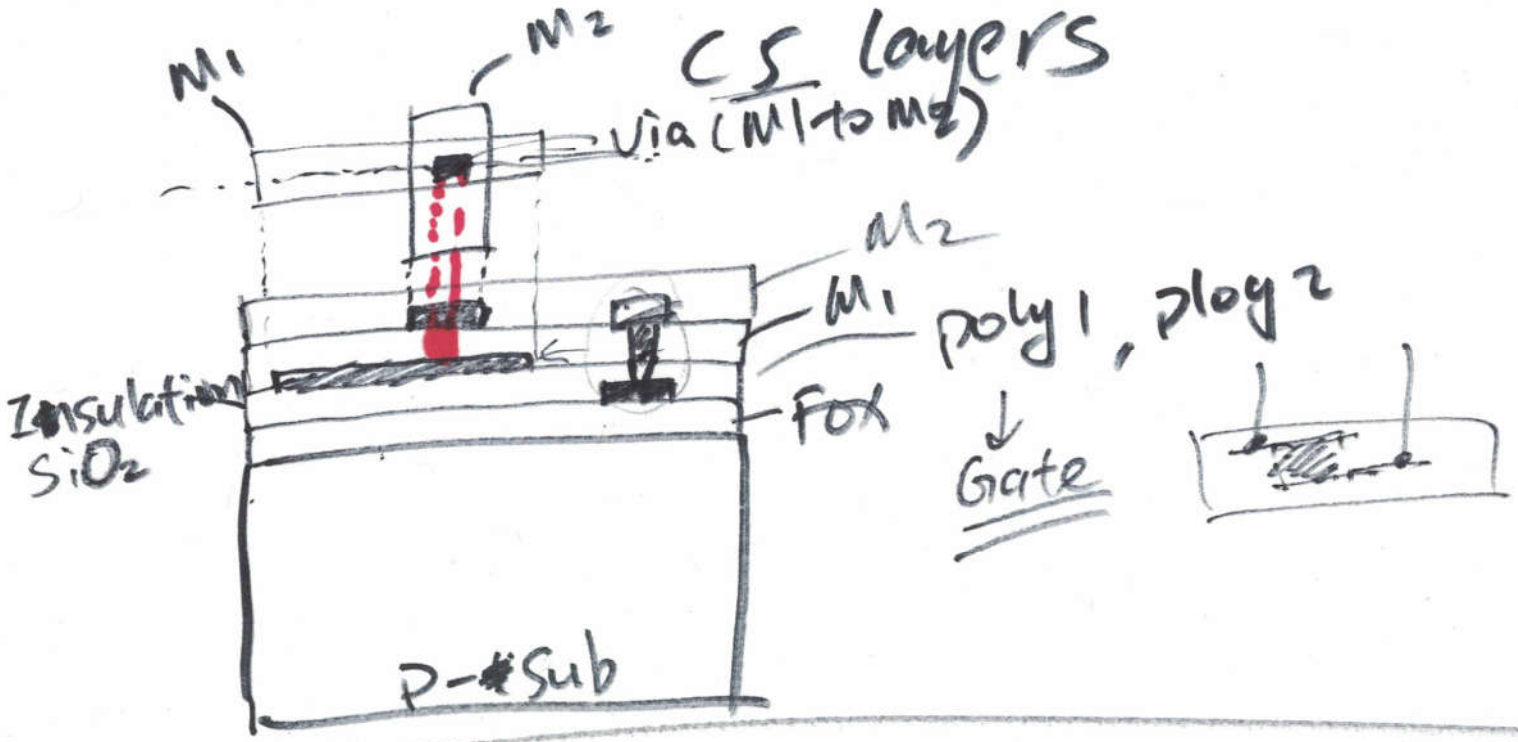


Eletric VLSI

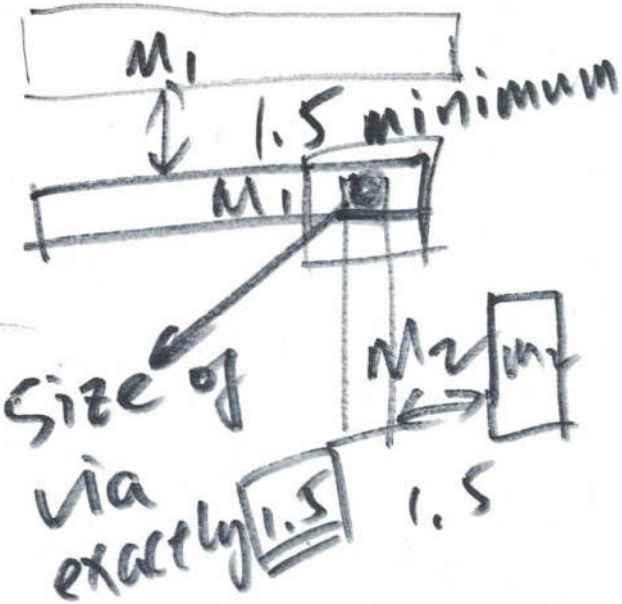
↓

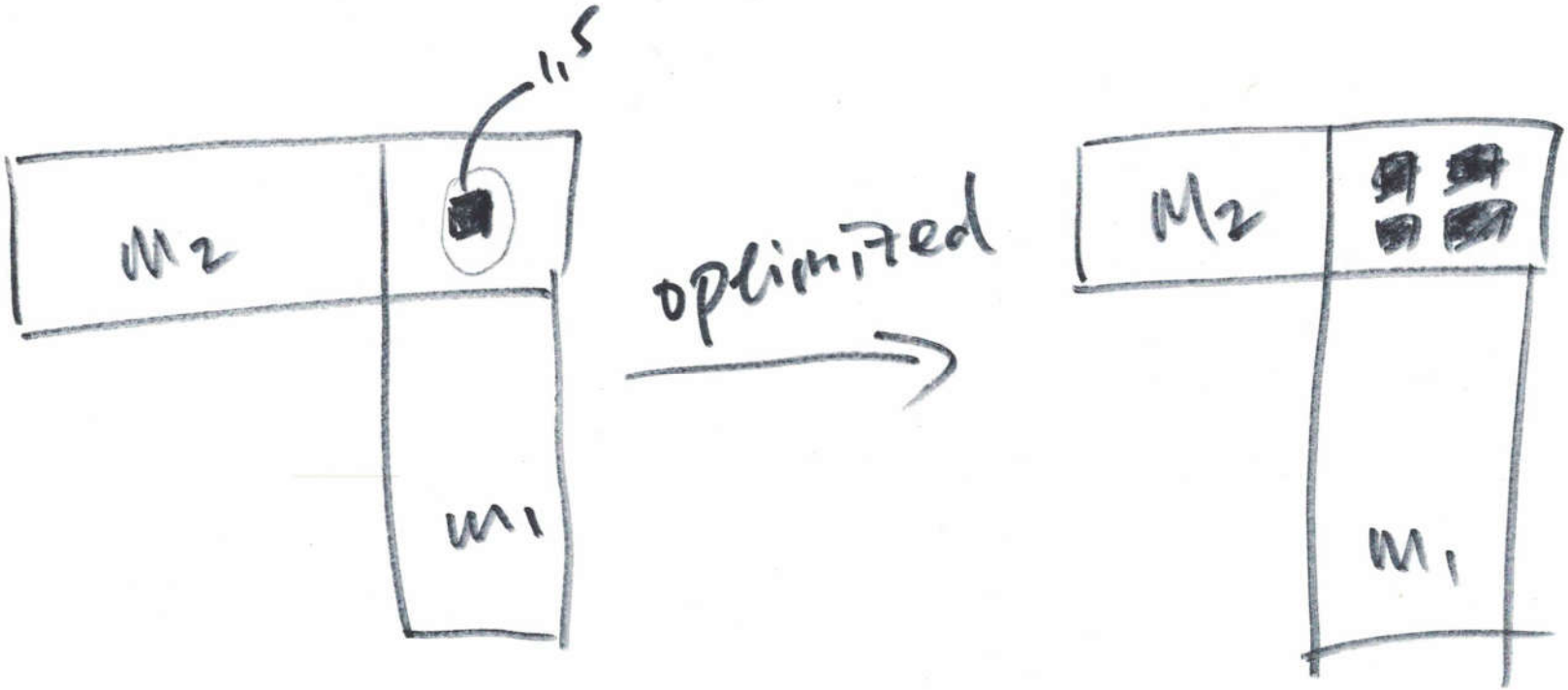
Preferences

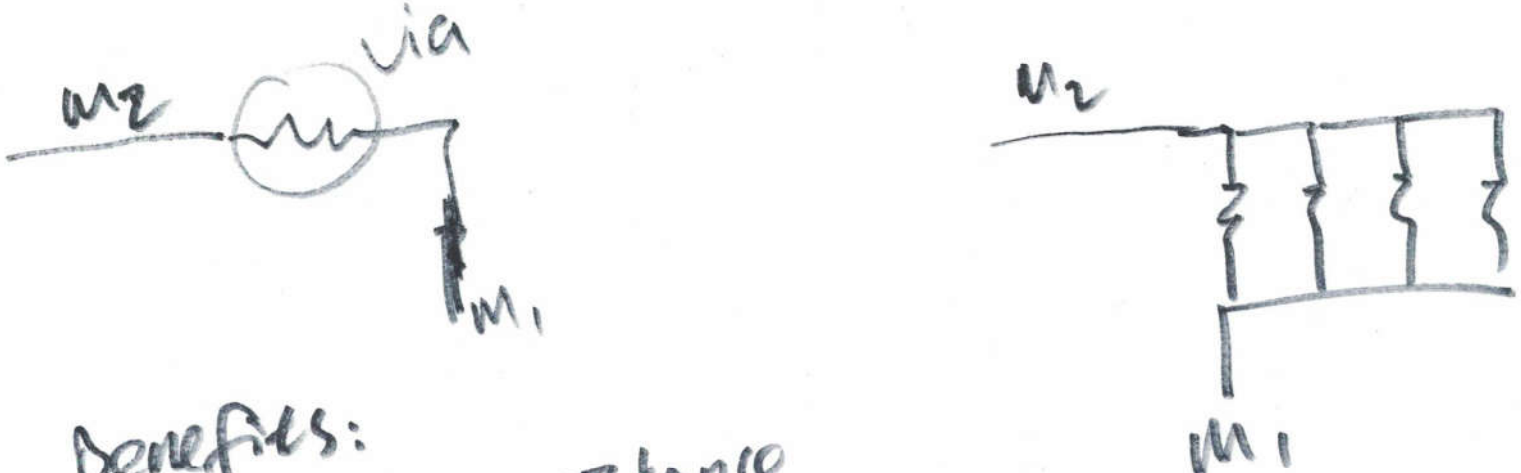
↓

Technology (lamda Rule)

$\lambda = 300nm$



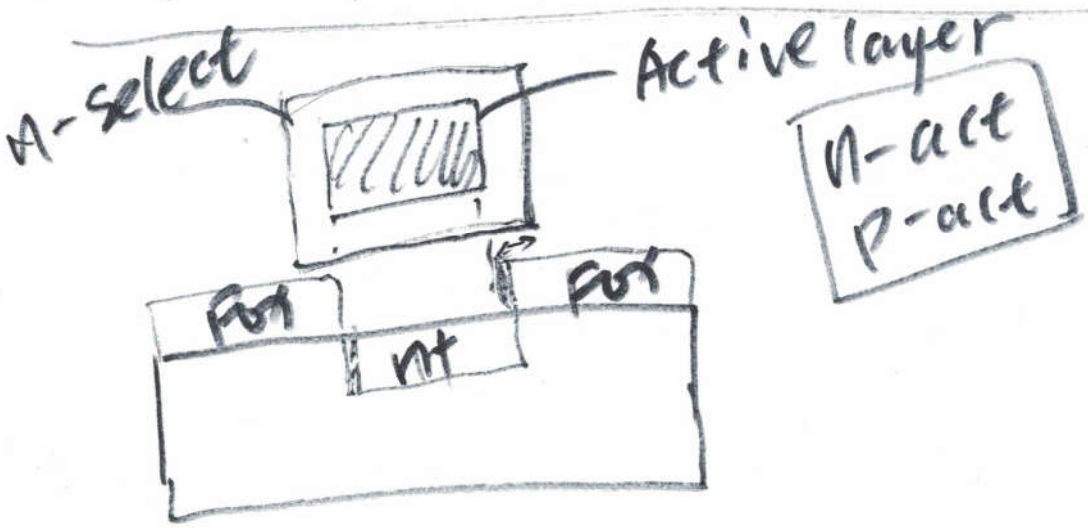


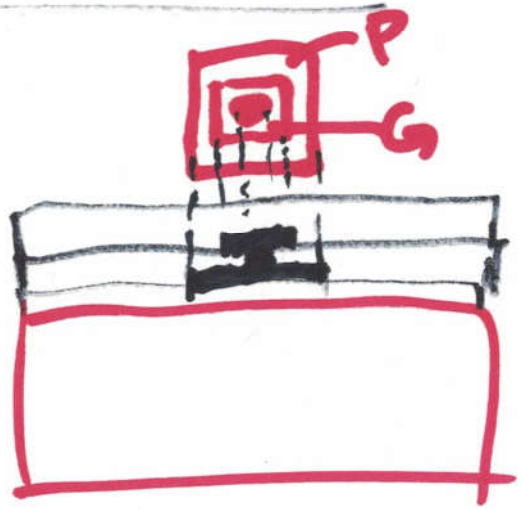


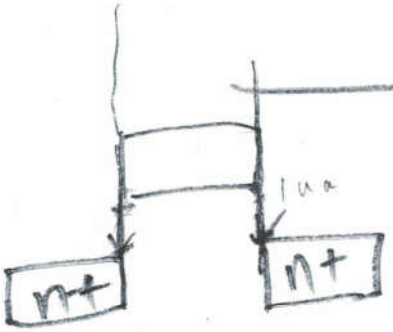
Benefits:

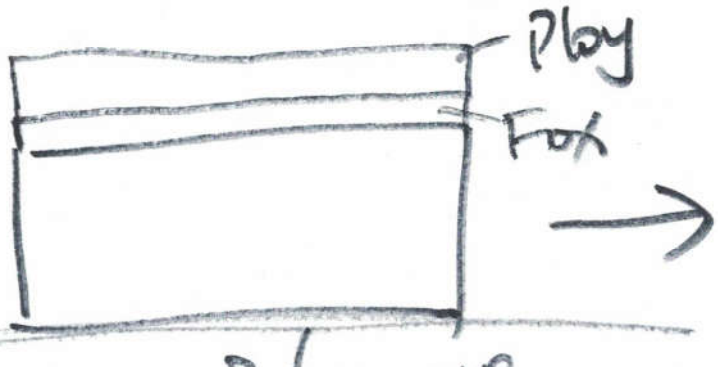
1. lower resistance
2. Get some backup vias
3. Dive the current (lower the current)

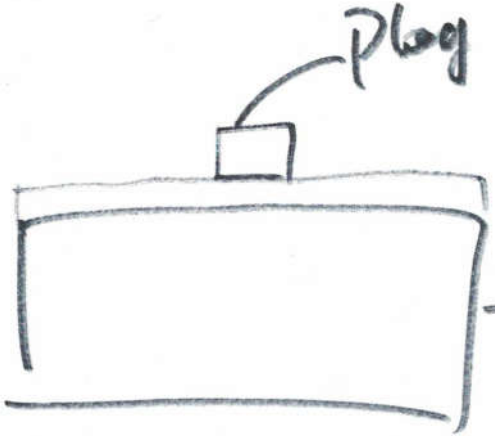
The Active Layer Opens Up the Fox

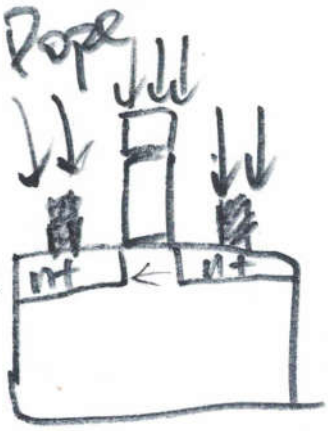








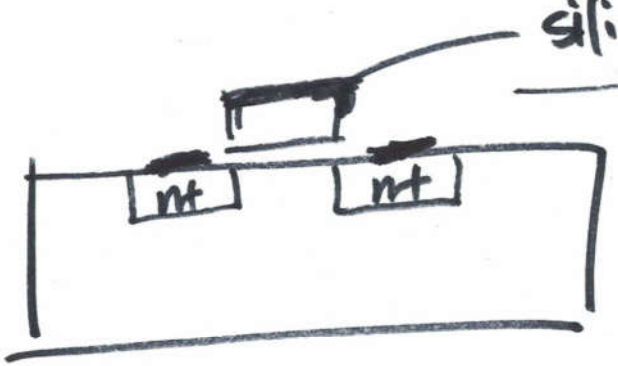




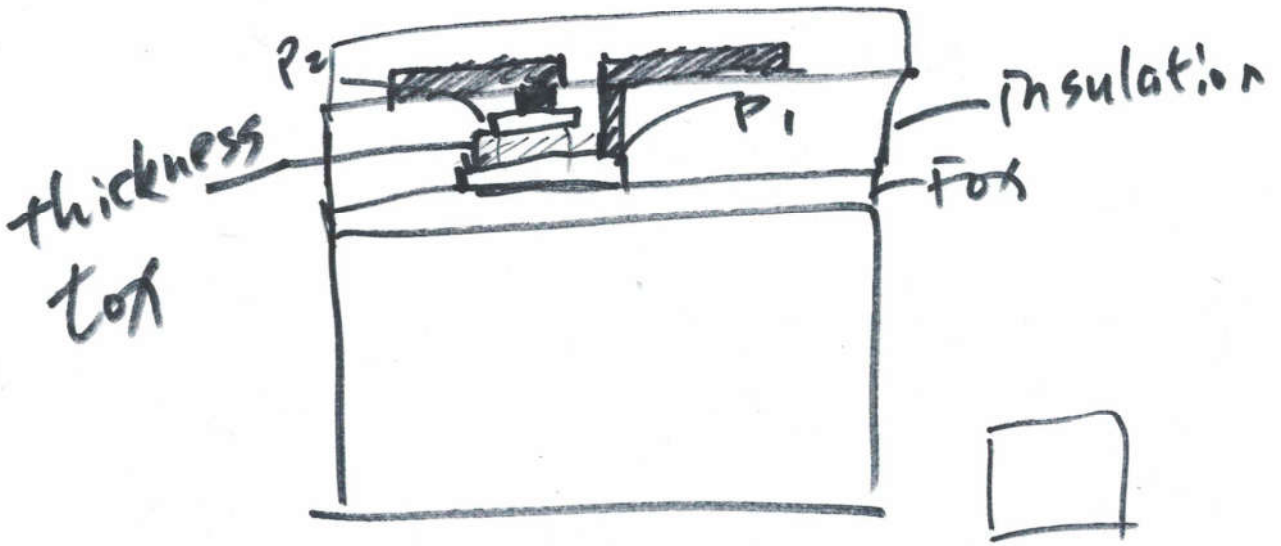
poly 200 Ω/square

M1 0.1 Ω/square

poly/n+ are self-aligned



to reduce the resistance of poly



Given $C_{ox}' = \frac{\varepsilon_r \cdot \varepsilon_0}{t_{ox}}$

ε_r: permitivity of a dielectric material

ε_0: permitivity of vacuum

$C_{ox} = C_{ox}' \cdot A$

50 nm ~~the~~ Technology, 10×10 (P_1 and P_2)

$C_{ox} = C_{ox}' \times (50\text{nm} \times 10) \times (50\text{nm} \times 10)$

$\hookrightarrow 25\,fF/\mu m^2$