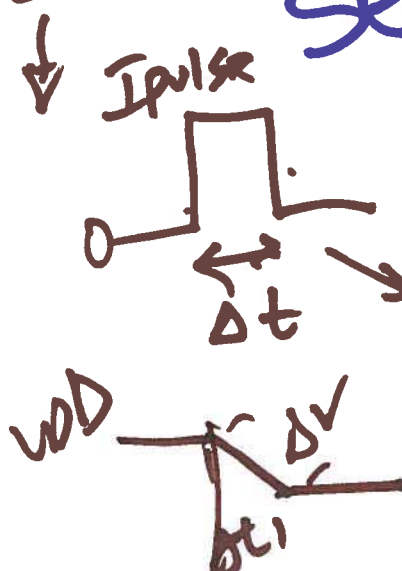


EE 421 / ECG 621

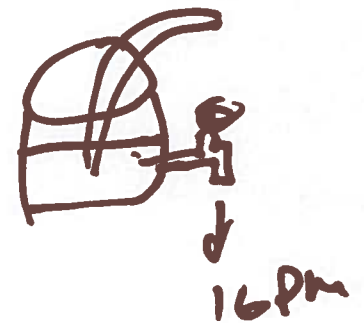
# Digital IC Design

## Lecture 6

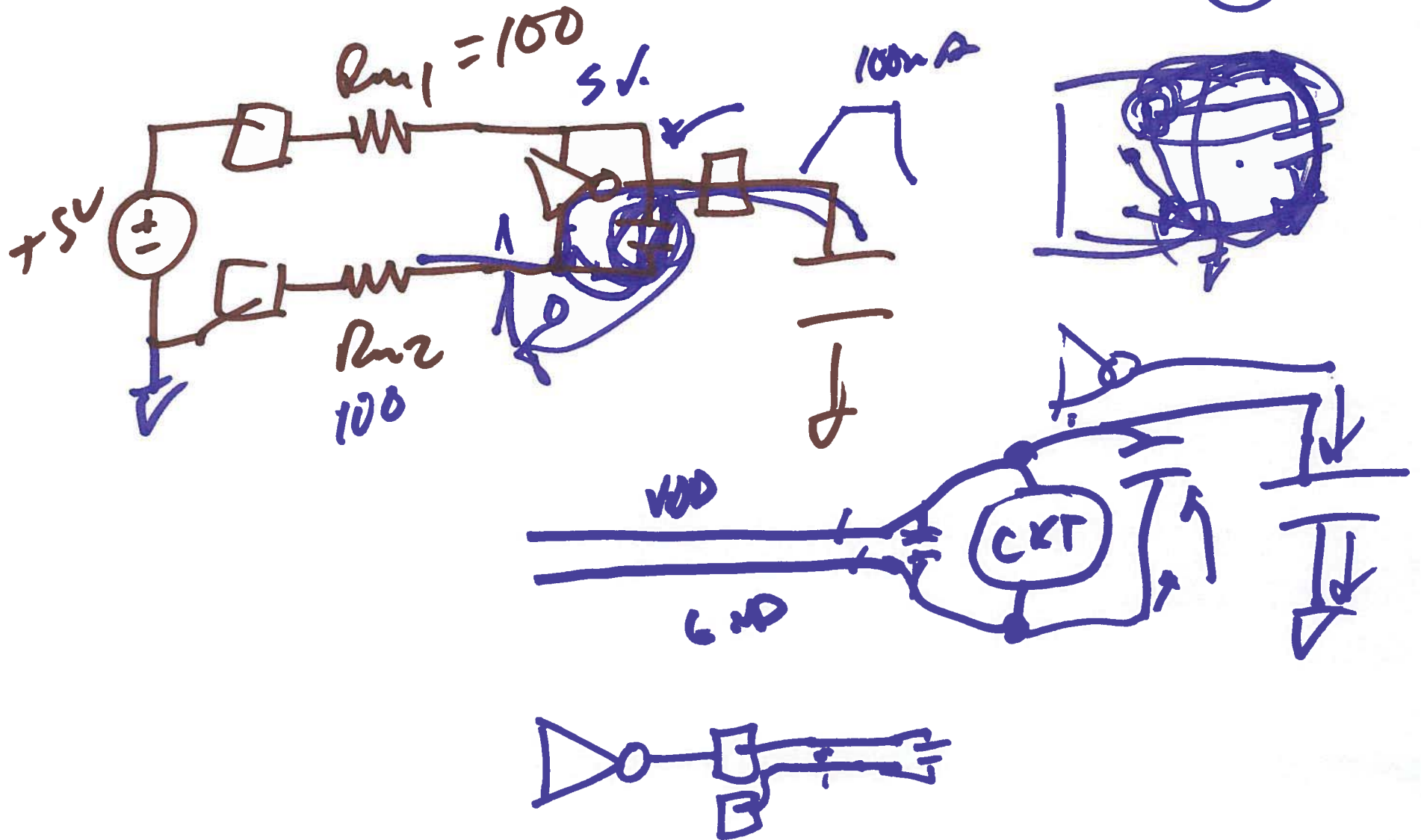
Sept. 19, 2016

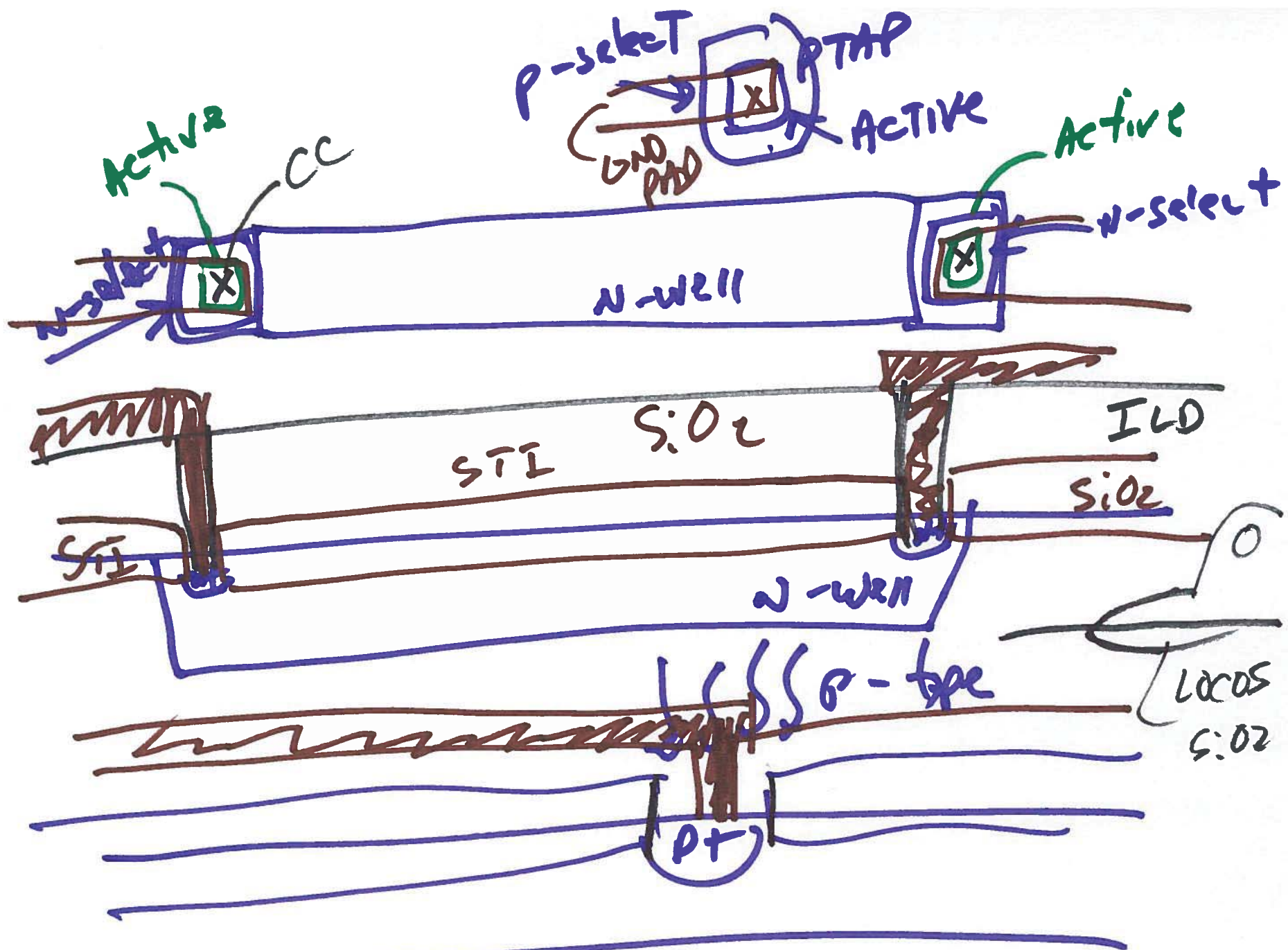


$$CV = Q$$
$$I = C \frac{\Delta V}{\Delta t}$$



# Ground bounce

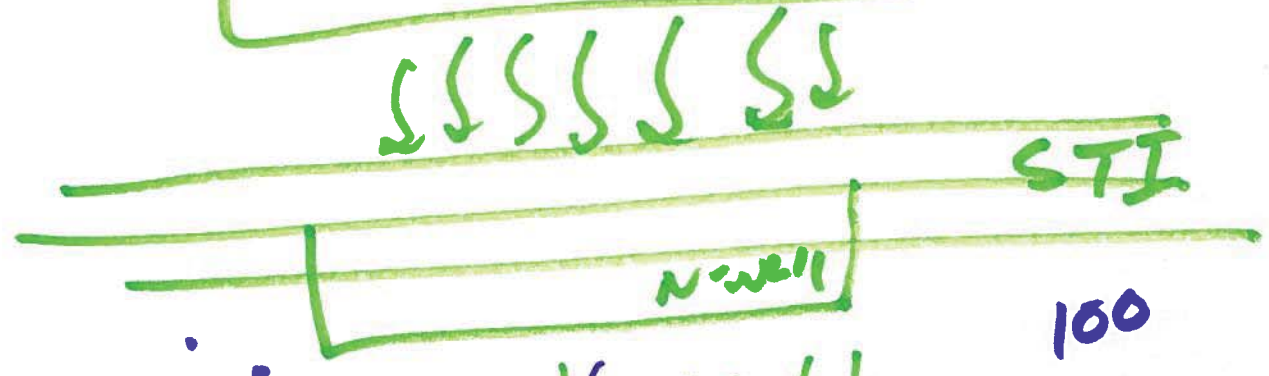




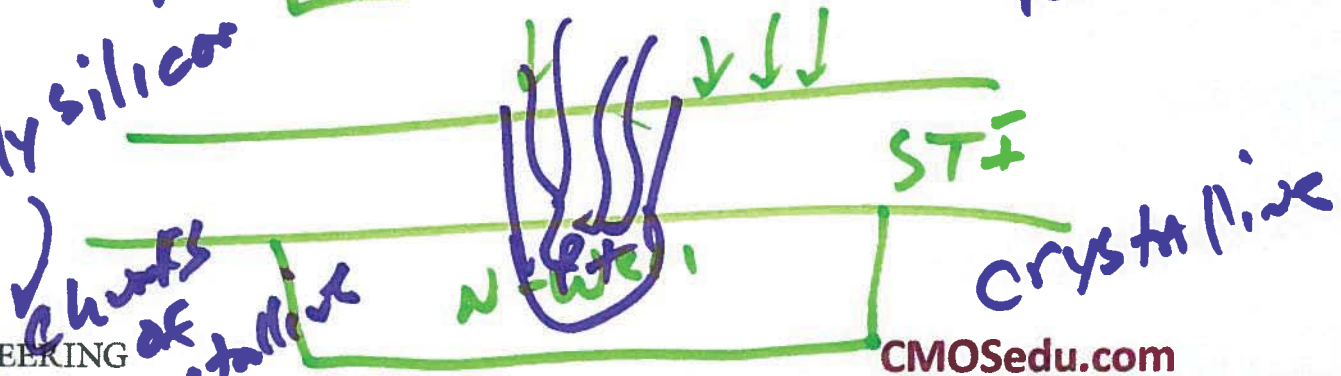
3)

N-well  
 Active  
 p-select  
 N-select  
 CC  
 metal 1  
 Via  
 metal 2  
 via 2  
 metal 3  
 glass

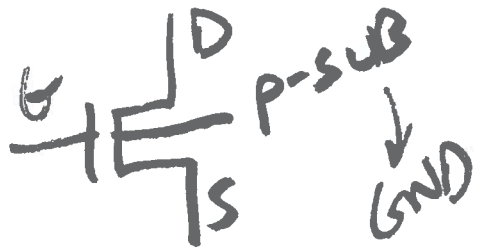
NActive — NT  
 PActive — Pt.



→ poly → poly silicon  
 poly 2 (elec)  
 chunks of crystalline



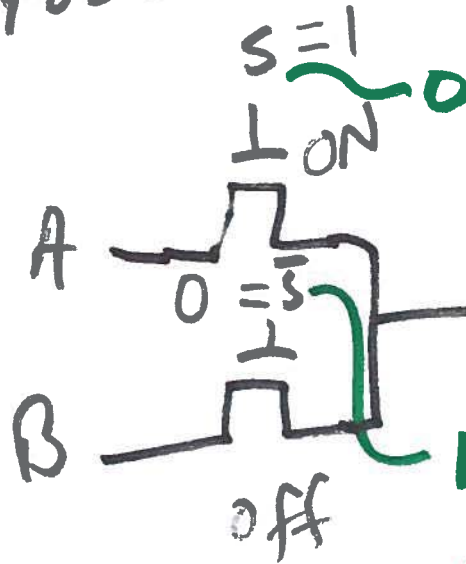
# LAYOUT of a MOSFET



1 Switch closed  
 0 Switch open

Self-Aligned gate

N-select



$$Z = A \cdot S + B \cdot \bar{S}$$

2-to-1 MUX

