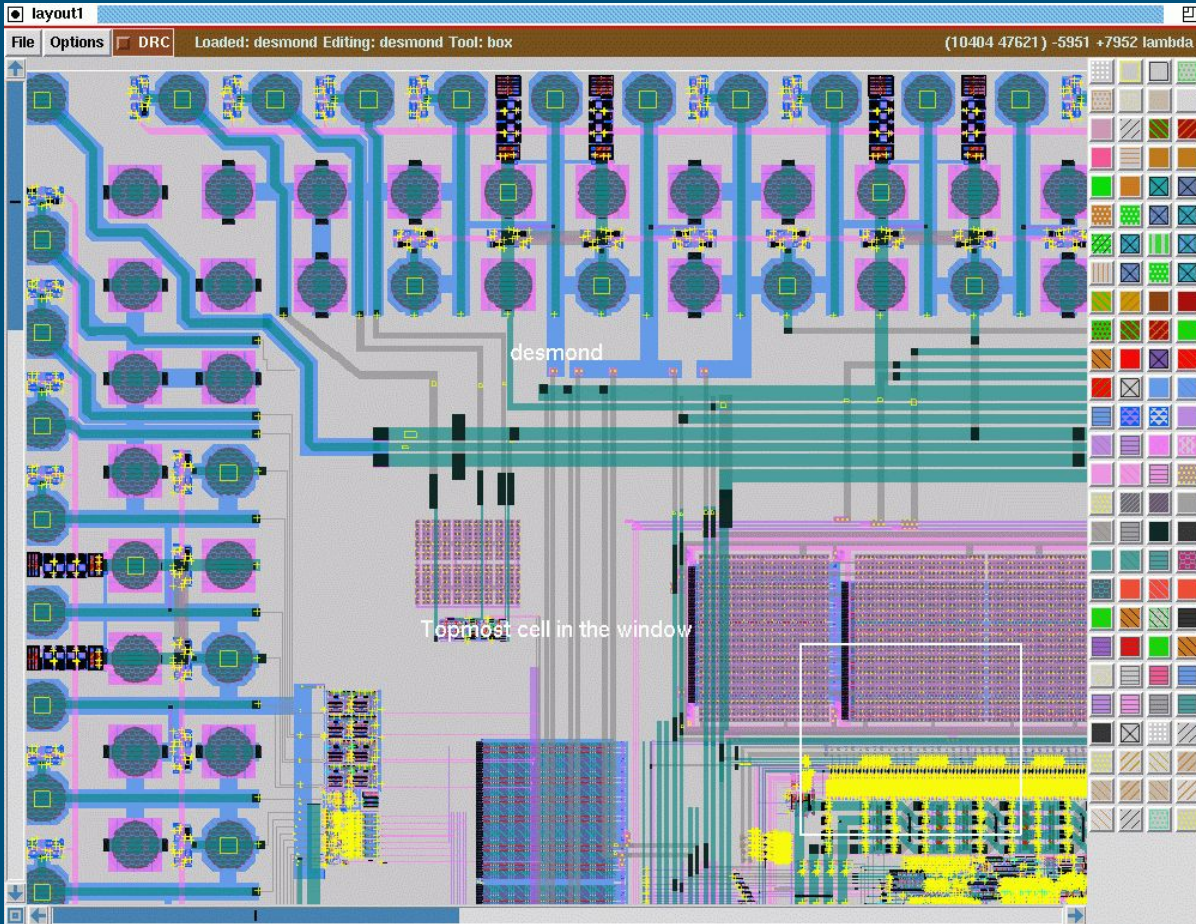


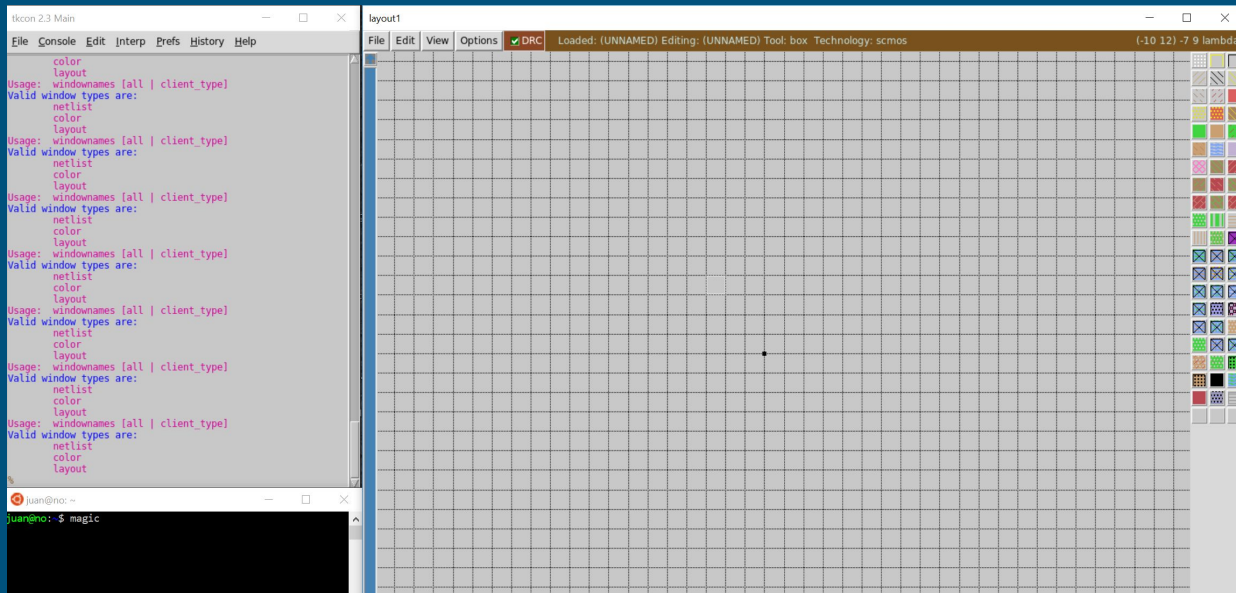
VLSI

- CST 231 Digital Systems + Self Learning
- What is VLSI
- Tools:
 - Licensed Tools
 - Mentor Graphics
 - Synopsys
 - Cadence
 - Open Source Tools
 - Magic



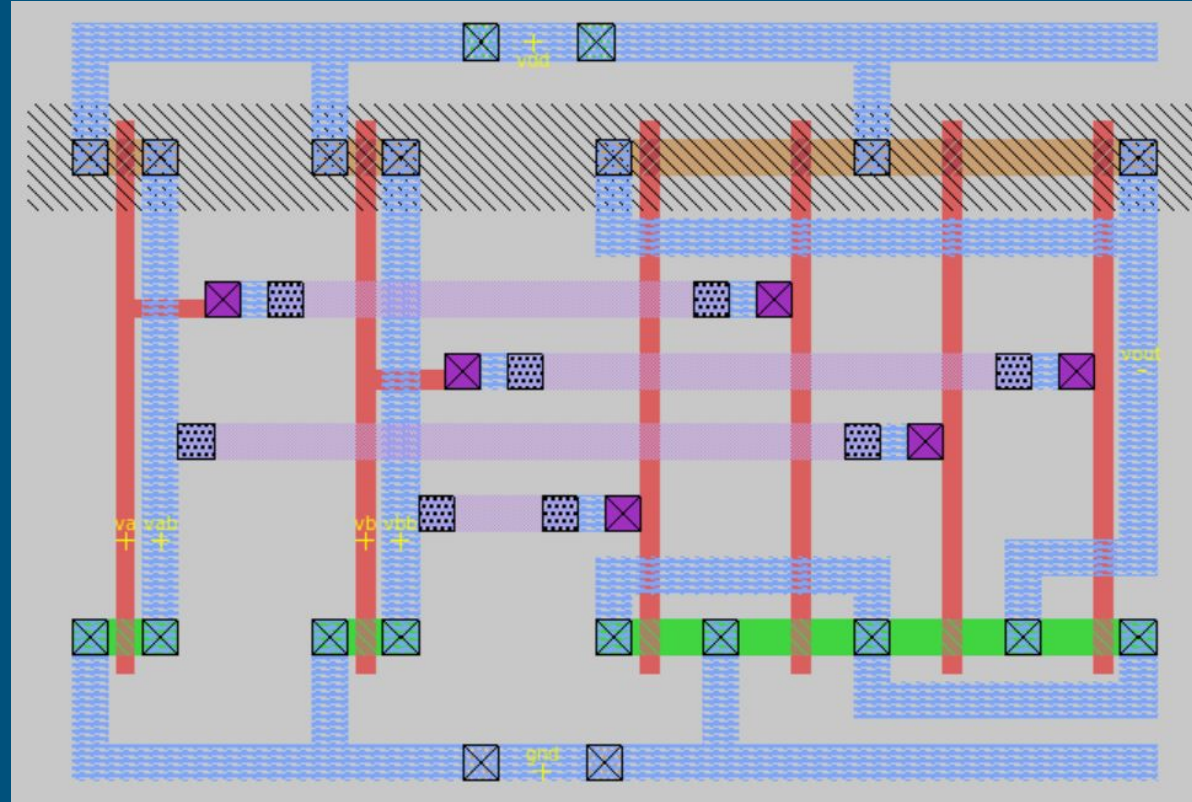
MAGIC

- UC Berkeley
- FREE
- Linux Based
- Installation: Bash
+ X11 Server



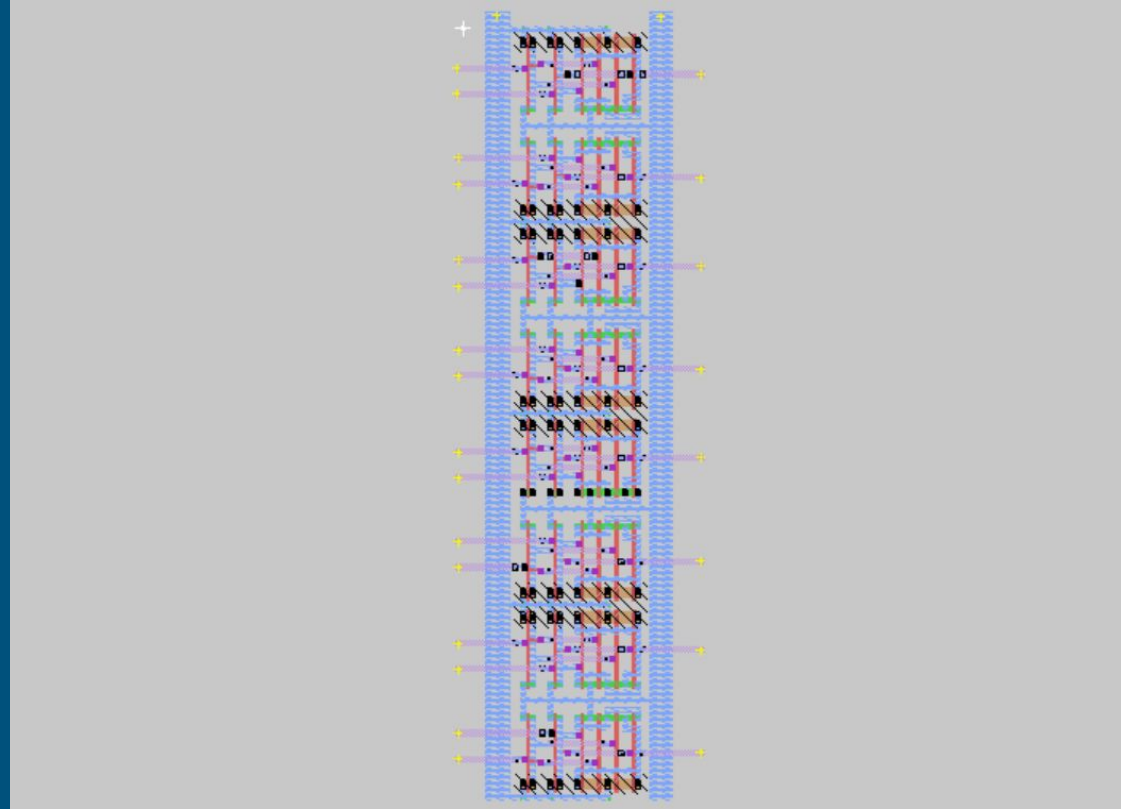
1-Bit XOR

- Truth table
- Single XOR stick diagram
- VLSI diagram
- VLSI sizing
 - Don't want those electrons jumping!
 - Pmos double the size of Nmos!



8-bit XOR

- Extrapolate to an 8-bit XOR
- 2 8-bit input streams to 8-bit output stream
- Whiteboard
- Show 8-bit VLSI design
- Simulate 8-bit XOR
- Remember the XOR in the S-DES?



XORs in Cryptography

- Used as adders
- Plain and Cipher key is the same
- Used in DES, Vernam, RSA, etc.



RSA

- Being built for the RSA adder
- Will be sent to foundry
- Phong will continue to build this chip with other students

Alice, Bob and Eve



som_{ee}cards
user card