

Atlas MOSFET case

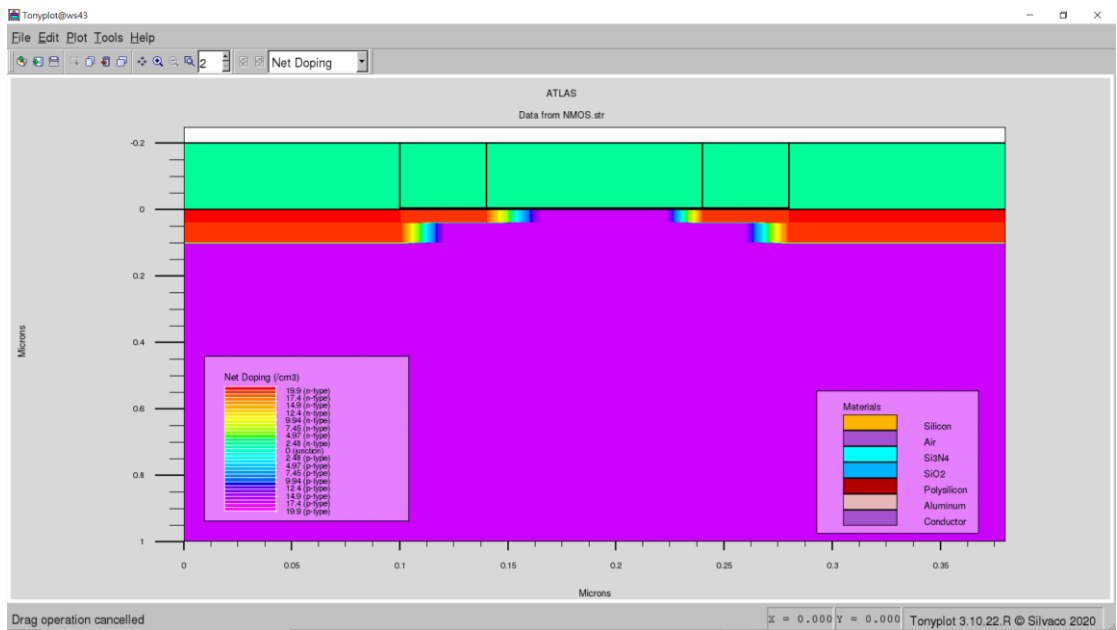
#Specifications:

1. Channel length = 0.18 μm .
2. Gate oxide thickness = 3 nm.
3. Adequate threshold voltage = 0.5 ± 0.2 V.

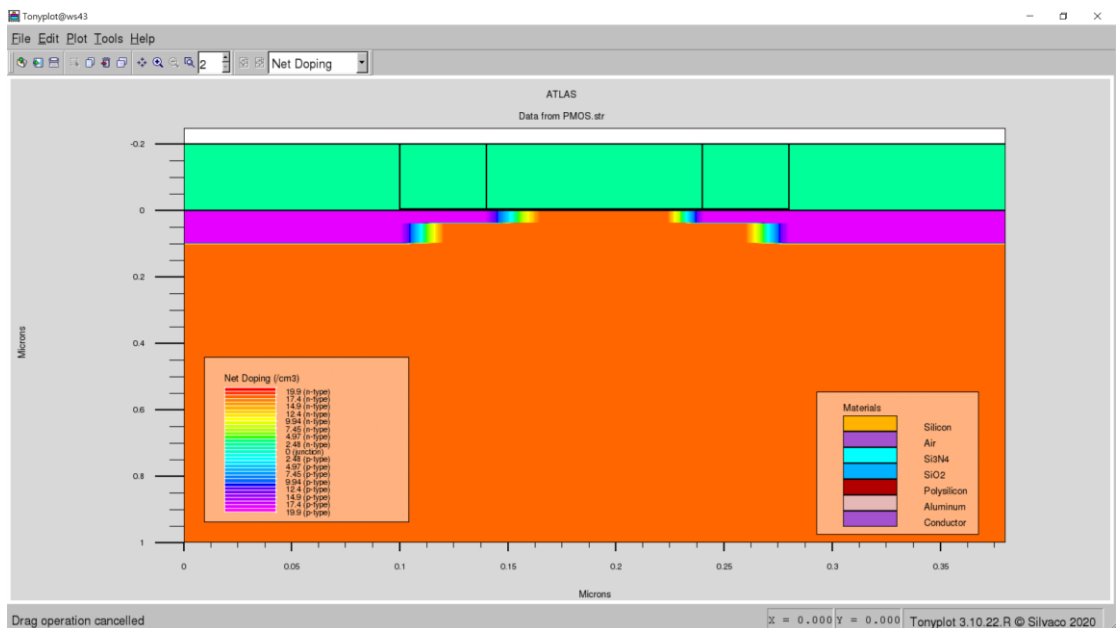
#Output:

1. Generate the device mesh for N-MOSFETs and P-MOSFETs.

- NMOS

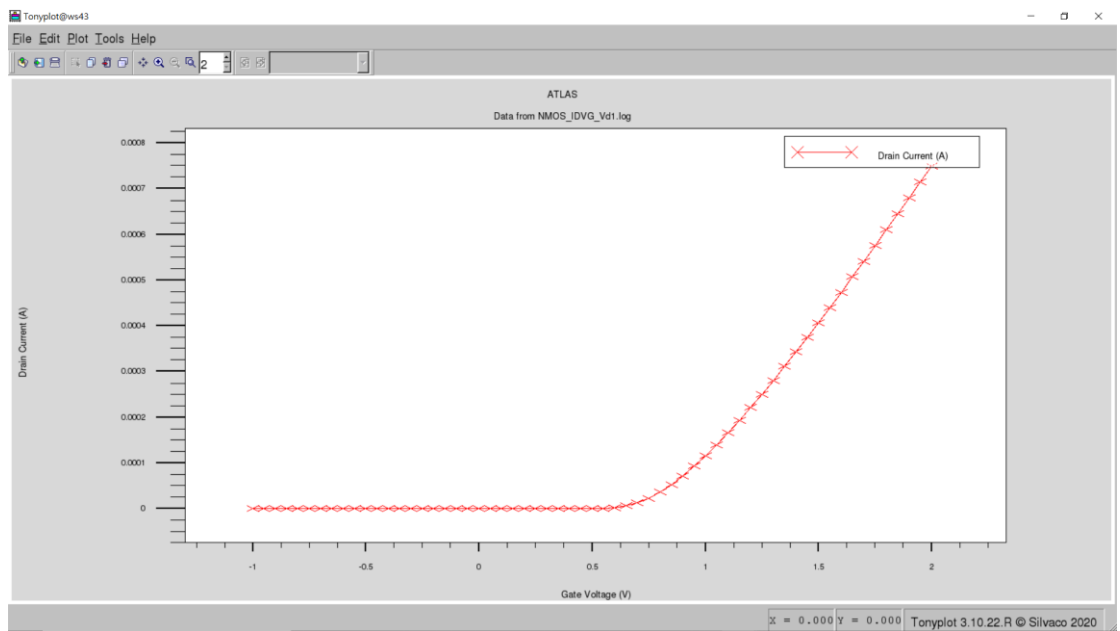


- PMOS

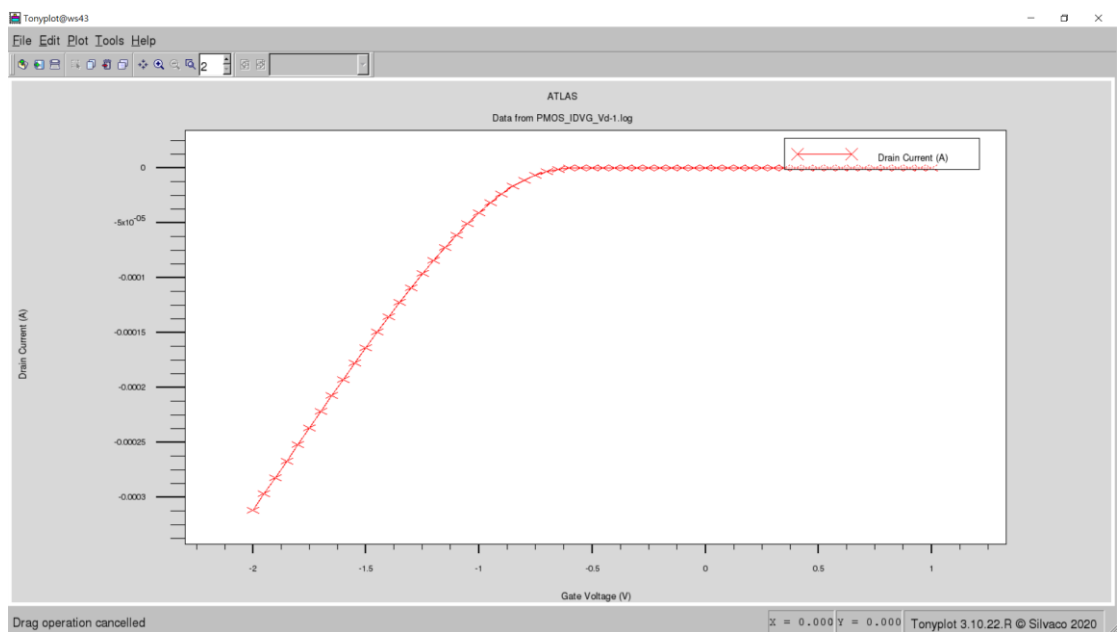


2. Plot Id-Vg at Vds= 1V for N-MOSFETs and P-MOSFETs.

● NMOS

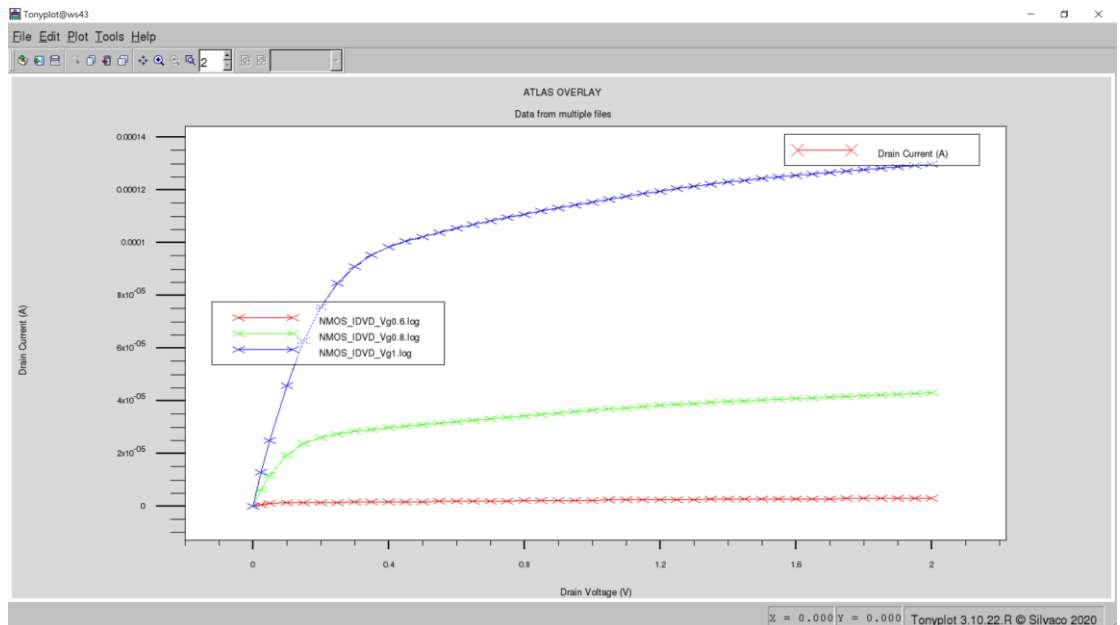


● PMOS

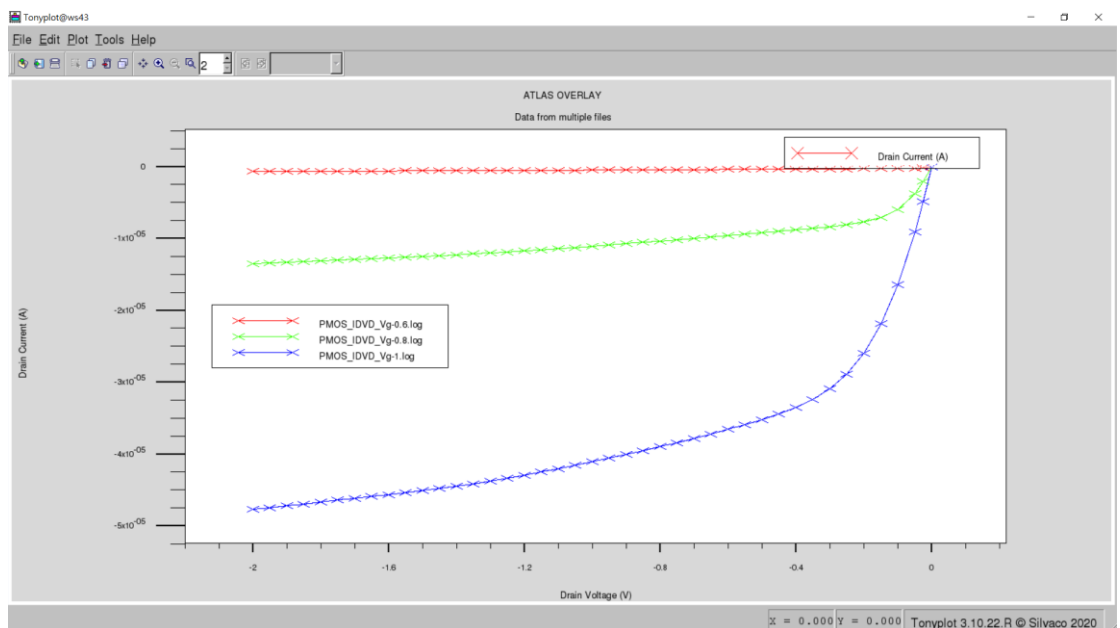


3. Plot I_d - V_d at $V_{gs} = 0.6, 0.8, 1V$ for N-MOSFETs and P-MOSFETs.

● NMOS



● PMOS

4. Shows the threshold voltage and subthreshold swing of your devices at $V_{ds} = 1V$

● NMOS

v_t 0.428574477516701
 $subvt$ 0.0842492280408115

● PMOS

v_t 0.460035513589737
 $subvt$ 0.0843479187143794

5. Upload all .in file.

Athena Inverter case

#Specifications:

1. Channel length = $0.18\ \mu\text{m}$.
2. STI isolation.

#Output:

1. Upload Inverter .in file.
2. Generate the device for Inverter.

