ECEN4375 Microstructure Fabrication Laboratory and Lecture

B. Van Zeghbroeck

Project assignment #1 assigned 1/24/01 due 1/31/01

a. Identify the function of an electronic circuit of your choice, which can be implemented with 30 or less p-MOS transistors. Provide a block diagram and describe the function of the circuit.

b. Provide the circuit diagram and an initial circuit design. You can only use p-MOS transistors, resistors and capacitors. Specify the W/L ratios for all transistors as well as values of any resistors and capacitors used. Make sure your design is consistent with the metal gate p-MOS process. Limit yourself to a circuit which can be tested with a maximum of six probes.

c. Get a version of PSPICE. Make sure know how to simulate a small circuit with the PSPICE version of your choice. Try to simulate your circuit. Start with part of your circuit initially. Report on the current status of your simulation effort. Do not hand in any simulations at this time.