EGRE 224 Introduction to Microelectronics

Laboratory No. 1

Basic Analog Circuit Simulation Using the Mentor Graphics Tools
I. Introduction

This laboratory will introduce you to the use of the Mentor Graphics tools called Design Architect and Accusim for schematic capture and simulation of analog circuits. You will construct schematics and simulate a simple resistive ladder network and an RC network.

II. Procedure

Use Netscape to bring up the class web page:

http://www.people.vcu.edu/~rhklenke/egre224

Click on the Basic Schematic Capture and Analog Simulation with Design Architect and Accusim link under the Mentor Tools item. Go through Tutorial 1 and Tutorial 2. Print out the results as required for the writeup

III. Writeup

Your submission for this lab should include a coverpage, a writeup with the sections described below, and printouts of the two circuits and the appropriate result charts annotated with cursors used to measure the required values.

The writeup should include the following sections:
1. abstract
2. introduction
3. theory - include calculations of the expected value of load resistance for the resistive network of circuit 1 and the cutoff frequency of circuit 2
4. Results and conclusions - compare your results from the theory section to the measured results