Introduction to using EE CAD tools at WWC
An Outline

Intro

Mentor Graphics CAD tools are used at WWC to assist the following design tasks:
      Schematic capture
      Printed circuit board layout (PCB layout)
      Analog circuit simulation
      Digital circuit simulation
      Digital logic simulation
      VHDL simulation & synthesis
      FPGA based circuit design
      IC design
These tools were designed to handle large designs. Thus they tend to be powerful and are capable of performing well but may not be as user friendly as you would like. A couple possible reasons: their user interfaces were designed and were in use before Microsoft Windows existed. Thus they don't have the same look and feel that you, as a Windows user, are accustom to. Second, because these tools are sold in small quantities, the cost of re-writing them to be consistent with windows can't be amortized over a large number of users and thus Mentor has not rewritten them yet.

Our Mentor software runs on Sun work stations under the Solaris operating system. Thus you will need to learn some basics regarding Unix system use.

Getting Started with the Sun Workstations

Login
      The Sun workstations are equipped with a graphical login window. Normally, if the machine is not in use, a window box will be displayed where you can enter your user name.
      (If this is the first time you have used the Suns, click the Session button and select Session. A list of DeskTop styles will be listed. Select CDE. Olvwm is also known to work. Mentor programs don't work well with KDE. KDE3 may work.)

      Enter your user name. Then press enter or click the OK button. The prompt will change to asking for your password. Enter your password and again press return or click on OK.

      Depending on the chosen DeskTop, click the correct icon at the bottome of the screen or right click with the mouse cursor over the background and start a Xterm window (sometimes labeled command window by some DeskTops). You will enter command-line commands in the window that opens. You can have many windows open at the same time with different programs running in each.

Logout
      Depends on the DeskTop. Some have an icon in the lower left corner. Some require that you right click on the background and select exit from a pop-up menu.

Essential Commands

While it is possible to set up a Unix operating system to be nearly as mouse driven as MS Windows, WWC has not invested the time to do that for running Mentor programs. Thus you will need to learn how to use "command line" commands to start programs and perform system utility operations.

(in the examples below, two right arrows denote the command line prompt. What follows the two right arrows is what you need to type in, followed by pressing the return key)

NOTE: that commands and file names in Unix are case sensitive.
NOTE: a forward slash / is used to separate directories in file names rather than back slash \ as used in MS-Dos and Windows.
NOTE: the term directory is a synonym for folder.

Display the files in a directory: >> **ls**
     long version with file sizes: >> **ls -l**
     the "wild card" character * can
     be used to select file names: >> **ls *.txt**
                      (this displays all files with .txt file extension)

Change current directory (one down):   >> **cd *new_directory_name***
     one level up   >> **cd ..**   (thats right, two periods)

Delete a file: >> **rm *file_name***

Copy a file: >> **cp *file_name1 file_name2***
     copies from file_name1 to file_name2

Rename a file: >> **mv *file_name1 file_name2***

Make a new directory (under the current directory):   >> **mkdir *directory_name***

Getting Help

If you know the name of a command but not its syntax, try >> **man *command***
     where command is the command in question. For example, to get help on the
     ls command: >> **man ls**

There is a Unix tutorial on my web site:
     http://homepages.wwc.edu/staff/aamola/docs/docs.html