Geography 128 Spring 2005 Assignment 4: Terrain Visualization with MicroDEM

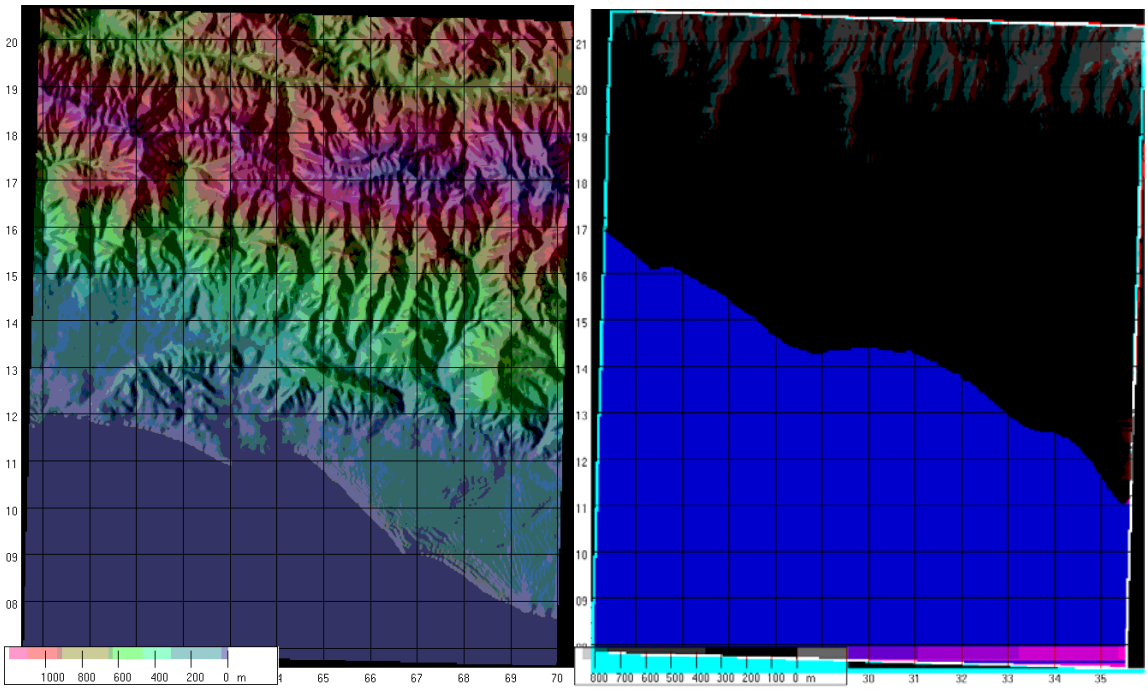
MicroDEM is an extraordinary computer package for PCs written by Peter Guth of the Naval Academy in Annapolis. You can download the software free from www.usna.edu/Users/oceano/pguth/website/microdem.htm. The program handles input from a huge variety of file formats, and does everything from anaglyphs to variograms.

MicroDEM is installed on the Descartes computers. Log in and launch the Solaris Windows PC software. The go to Start->Programs->MicroDEM

For this assignment, I have loaded some local DEM data at: /net/user35/disk3/CA_DEM/ The files have the same names as the USGS quads. The SouthCoast files are mosaicked from the NED and the SRTM data. You will be choosing one of these for assignment 4.

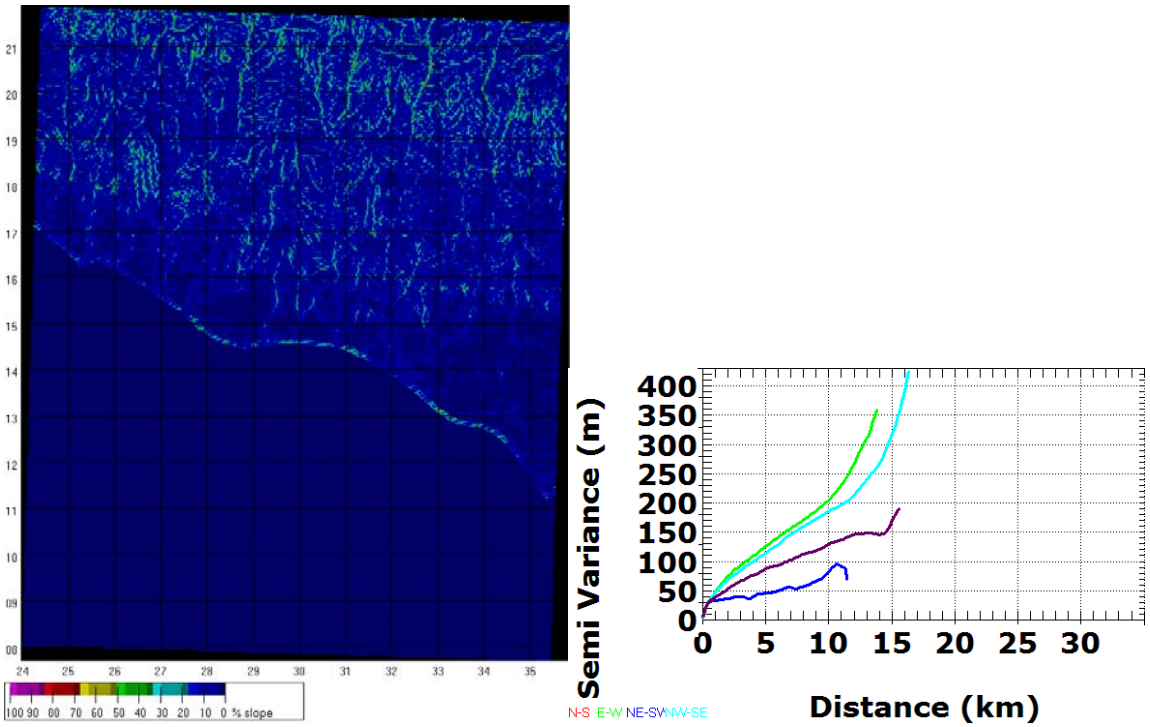
Launch MicroDEM and use file->open DEM to read the data. A right click and display parameter->elevation allows considerable control over the way that the terrain is diplayed and colored. Create at least four differently colored views of the terrain you have selected, and use File->Save image (and choose GIF) to save the images. I would suggest at least one colored view, one hillshaded, and an anaglyph. Put the images into a web page that you should create in your public_html directory. You could use netscape creator or another browser to do this.

Examples:



MicroDEM is also capable of computing a large number of derived terrain parameters, both as maps (such as slope and aspect) and graphics (e.g. variogram). Compute at least one of each, and save the images as before.

Example:



Write a brief description of what each image represents.

Finally, use any function you choose to make a derived map to illustrate some aspect of the terrain. This can include a movie, a perspective view, or a line-of-sight diagram. Don't know how to do this? Check out the index in the help file. The more creative the better. Note that the movie can be saved in a variety of formats. I find the GIF animation files easiest.