Abstract: The wireless network connections available on campus are used frequently. However, the locations covered are known only by discovery. A formal map designating the areas covered was not in existence, rather a rough drawing created using Photoshop and a tour guide map. With the assistance of Computing and Information Services, an accurate set of maps can be created. The product will be incredibly useful to C&IS to assess current network status as well as propose future locations for antennas. This could also be a useful addition to students and faculty to possess.

Background Research:

1. Preliminary Placement – Placing the points on a printed map according to the description Dr. Nelson provided for me.

2. Joining the Network – This aspect of collection was essentially going to each location and connecting to the network to receive the necessary attributes.

3. Referencing – In order to be accurate in the placement of these points, I needed some way of recording my position with the aerial photograph which is the map used for the project.

4. Test the connection:

5. Transferring to ArcMap:

   a. Plot points where antenna is based on data from Dr. Nelson
   b. Experiment with views, data arrangement, properties, etc until satisfied with appearance
   c. Export maps of different areas

   Note: With the aerial photo covering the entire campus, there were many locations that had no data input and were irrelevant to the project. Also, with such a large image, the detail is lost. The solution: export many different maps rather than one map.

6. Create Poster:

Data Collection Methods

- Gathered initial information as stated above.
- Test the connection:
  - Played with computer and PDA in these areas to get SSID’s and a rough idea of range (although not exact)
  - Transferred to ArcMap:
    1. Plot points where antenna is based on data from Dr. Nelson
    2. Experiment with views, data arrangement, properties, etc... until satisfied with appearance
    3. Export maps of different areas

   Note: With the aerial photo covering the entire campus, there were many locations that had no data input and were irrelevant to the project. Also, with such a large image, the detail is lost. The solution: export many different maps rather than one map.

   1. Poster: The poster is one of the most important aspects of the project. Presentation is almost more important than what might be accomplished. Because if you present the information, then it might as well not be there.

My Experience

My experience with this project has been a humbling one. Staying up all night with not one hour of sleep can really beat you down. But I got it done, and I am pleased with the result. This is an example of what I can do when I get down to doing it. I want to thank everyone who helped me, especially Dr. Suresh. You’re a GIS Guru. Using GIS throughout the term has been eye-opening. This field is going to be a very popular one in the near future. It holds massive potentials that haven’t even been touched yet.