Lab Assignment 1 – Internet GIS Example and Web Design

Due Date: 12/15/2011

Part I: An Example of Internet GIS

Your first task is to search and find an example of Internet GIS application. Then, you will describe, explain, and share with the rest of the class by posting the information on the Discussion Board on ELMS. In general, you will try to answer the following questions:

- What is the subject or title of this Internet GIS application?
- Who or which organization designed it or is hosting it?
- What is this application used for?
- What are the targeted users?
- What are the major functions or features?
- What software or technology was used to design this application?

It is possible that you may not be able to find all of the answers. The bottom line is that you should provide a sufficient description before other people decide to click on the link. Besides the postings here, you may also want to attach a Word document which may contains some screen shots to help you explain or describe.

Part II: Designing a Website

In this exercise, you are required to design a website that will be used to organize your lab assignments and also the final project. You will expect to improve and update this site over the entire semester.

Here below is an example from the same class in previous years: http://terpconnect.umd.edu/~dbarker7/html/arcgis_server_web_adf.html (Your website can look very different.)

For the final project, here is an example: http://terpconnect.umd.edu/~aallegre/flexviewer/

Eventually, for a more complete project such as a Capstone Project, here is an example: http://baboyma.com/apps/geo228/mapping.html

It is evident that Web design is a very important skill that can be helpful in developing Internet GIS application. This is because you will have to customize the user interface and/or create extra functions based on a default Web GIS published by Web server. In fact, you will expect to spend

the majority of time on customization using HTML or other programming languages to enhance an Internet GIS application.
You can use any technics or tools to complete the task. So, you can be creative.

Here below are the minimum requirements for this website:

- There must be a self introduction in text format on the homepage. It is similar to a bio.
- There must be a picture of you.
- There must be a title (it is the web page title defined by HTML tags, not a title for text) for every webpage you create.
- There must be at least two web pages.
- Most importantly, you need to design the layout so that it will help you organize all the Web pages that you are going to create for other lab assignments as well.

If you are already familiar with Web design, you can skip and move to Part III.

If you are not familiar with HTML, you will find another supplement document that is posted under the same folder on ELMS. You may want to start by designing something very simple (e.g. http://www.terpconnect.umd.edu/~jma3/GEOG677/Lab1/) and then modify it to make it more and more sophisticated (e.g. http://www.terpconnect.umd.edu/~jma3/GEOG677/Lab1/index2.html)

Part III: Publishing a Website

These web pages have not been published on the Internet yet and none else can see them. So, the next step is to upload the files to the server and make the web pages available to anyone via the Internet.

To publish a website, you will have to have a space on a Web server. Many of you may not be aware that every student or faculty/staff has been allocated some storage space (~10MB) on a UMD server: **terpconnect.umd.edu.** This is exactly where I published my website.

Once you finish creating the HTML files, you will need to upload these files to the server. There are different ways of doing it:

- through a graphical SFTP client
- through a command line SFTP
- Through mapping drives to "H:" if you work from a computer lab on campus

The best option is to use a graphical SFTP. There is a free program called WinSCP available. WinSCP is an open source free SFTP client and FTP client for Windows. Its main function is safe copying of files between a local and a remote computer. It can be downloaded from here: http://www.helpdesk.umd.edu/documents/4/4313/

From this web page, you can also find the information about how to install WinSCP.

Note: I have also post a copy of WinSCP on Blackboard from where you can download as well. Once you installed WinSCP, now you need to set up a connection between your local computer and the server.

It is particularly important that the web files must be uploaded and saved under a folder called "/pub" on the server. Otherwise, the web server will not recognize your web file if they are saved in different folders.

To navigate to "/pub" folder, you will click on the drop down list and select the folder which is named after your user ID. In my case, it's "jma3" (see the image below). To find your **Pub** directory you can click on the button in the top right of WinSCP. You may also choose to click on the icon which will take you up one level on your remote system.

Be sure to transfer all the files that are related to your website to the server, including HTML files, documents, images, etc.

Also make sure the file/folder structure on the server should be the same on the local computer when you created them. Otherwise, there will be broken links when certain files are miss-placed in different folders. So, it is important to maintain the relative path of all of those files.

To exit the WinSCP FTP client, click on the **F10** button (shown below), or click on the **X** in the top right corner.

Once you are done with transferring those files, now you can test your website. Just open a Web browser and type the URL in the address bar: http://www.terpconnect.umd.edu/~userID (replace the userID with yours). It should work!

What do you need to turn in for this lab assignment?

- Create a Word document in which you should include the description of the Internet GIS example that you have found. (You should also post this part on the Discussion Board on ELMS).
- Also write down the URL of your website and then a few important screen shots of the web pages.

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