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A GIS Hub at Pace University

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The Thinkfinity Grant – Interim Report A GIS Hub at Pace University September 15, 2009

Dr. Peggy Minnis and Dr. Hsui-lin Winkler

The Thinkfinity Grant is to use technology to develop a GIS Hub at Pace University. The Hub is intended to show the larger community the work done at Pace and to show that our students and faculty are using GIS to solve geographically-based problems for communities and organizations. It also is intended to serve as a site from which users can download data to make their own maps and as a place where the larger community can find examples of maps and have the ability to manipulate maps.

Activity summary - analyze the GIS hub requirements and finalize a plan for ground work:

- The ESRI service representative suggested purchasing and implementing ESRI's ArcServer on an existing Pace computer and allowing a gatekeeper to upload the data and maps for the larger community. This concept required that we learn more about how the ArcGIS server worked and the compatibility with Pace's existing computing capabilities.
- In June, Minnis went to an ArcServer training course in Danvers, Mass, where ESRI was highlighting the capabilities of their server with examples of how different cities were implementing this server. It seemed that most of the attendees were from municipalities that were trying to put property maps on their servers for residents to look from home to determine whether their property taxes were fair compared to other residents.
- We worked with the ESRI office in California to develop a list of Pace licensed users and determined that only two instructors had active licenses. Therefore, most of the CSIS instructors who are using GIS as a service learning component of their CIS102 course are using temporary licenses that come with the workbook, usually featuring ArcExplorer. That meant that it would require contacting each instructor of this course individually to determine what service learning component was being used in their classes and to get copies of their maps to use on the website.
- A graduate student was interviewed and lined up to do some of the work during the fall of 2009 with regard to gathering the maps that have been created in the past by instructors and their students.
- We learned that there are few GIS hubs at universities. There are called different things, but there are few, if any, universities that have a one-stop website for showcasing their GIS projects, hosting instructional videos and making data available to users.

Activity summary - design and implement the technology hub:

- The idea of server virtualization was explored with the DoIT managers. ArcServer needs a quad core processor and about a maximum of 5 GB of disk space, 1 GB maximum for the program and 4 GB for the data at maximum. The main Pace computers in Briarcliff have the space and the computing power, but DoIT wanted to charge us \$4,000 to host our ArcServer software and to devote 5 GB of space to our project.
- When the possibility of using ArcServer diminishes due to costs and availability, the possibility of using ArcPublisher (available to students with their temporary licenses), ArcReader and some aspects of ArcExplorer became a real option. Minnis has the license for ArcPublisher and has found that the data/map packages can be offered to Internet users and the website to download the free ArcReader and ArcExplorer can be included on the webpage, the users will have the power to create their own maps easily by download the map package.
- Based on that, we decided to ask the CSIS IT Director Matt Poli if we could use their CSIS computer to host our ArcServer and data. If a way to either use our ArcServer and make it visible and useable by the community was available on the CSIS server, we would prefer to use it. This is still under consideration.

Activity summary - attend meeting and publication:

- In May, Winkler attended the 1st Summit on Incorporating Social Justice and Service-Learning into the STEM Curriculum, a conference held at Ithaca College, NY. She presented a paper 'GIS for Leaning Community' describing her teaching experiences use GIS in service learning course here at Pace.
- In May, Minnis attended the Northeast Arc Users Group meeting at Smith College, where she gave a presentation and met with the ESRI sales/service people to initiate the data collection for the project.
- Minnis is giving a presentation at the Northeast ARC Users Conference (NEARC) in Nashua, NH in October on creating the GIS hub at Pace and the challenges and process to accomplish this task.
- Minnis wrote an article for the Connecticut Geospatial Newsletter http://www.ct.gov/gis/lib/gis/CT Geospatial Newsletter Summer09.pdf. This was about the use of videos to teach GIS. When the Hub is developed, a link to these instructional videos will be a featured part of the site.