Produced by New York University · Information Technology Services

Connect
Information Technology at NYU

Fall 2003 Edition

Social Sciences, Statistics & Mapping

Print this article (128K PDF)

Friday GIS Clinics

By Frank LoPresti

This past spring, ITS Academic Computing Services' Social Sciences, Statistics, and Mapping Group started offering a Geographic Information Systems (GIS) Clinic on Fridays. "Bring your own GIS issues to this forum. Meet some GIS users at NYU. All interested NYU researchers are invited to attend," read the notices we sent to our Statistics Forum subscribers.

The key players in the GIS Clinic come from the public sector, the software industry, and academia. Pre-dating the Clinic was a mutually beneficial mapping collaboration that the Social Sciences, Statistics, and Mapping Group had formed with Antonio Lopez, a former student employee who is now a Senior Planner/GIS Analyst for New York City's Metropolitan Transit Authority. Mr. Lopez, a graduate of NYU's Wagner Graduate School of Public Service, is interested in keeping the GIS tools and applications at NYU state-of-the-art. His regular visits to the Statistics and Mapping Computational Lab to guide us on geocoding software issues, NYC map updates, and other matters are what eventually led us to formalize the meeting into a weekly public event.

Professor René Francisco Poitevin of NYU's Gallatin School of Individualized Study quickly became the Clinic's unofficial faculty sponsor. He, along with Professor Zvia Naphtali of the Wagner Graduate School of Public Service, has suggested topics for discussion and contributed to many of the presentations we have offered. They are part of a small group of faculty who teach and use GIS at NYU.

ESRI (http://www.esri.com), a GIS software company with a long track record in this exciting field, has also joined the growing Clinic partnership. ArcGIS, their mapping product, is NYU's high-end GIS software package. Their representative, Aisha Jenkins, regularly attends the GIS Clinic to meet with researchers and help them organize their GIS projects. She frequently calls upon ESRI's technical staff to help evaluate new projects.

A variety of interesting issues were discussed during the spring 2003 Clinics. For

example, two researchers—Ann Rivera of NYU's Center for Community Research and Action at the Faculty of Arts and Science, who had data representing youth services' and facilities' locations in Brooklyn, and Professor Gerald Lopez of NYU's Law Clinic, who had data representing legal facilities' locations in Brooklyn—needed to create maps on which important locations would be highlighted.

Working maps—digital or paper—are layered; picture a zoning office in which there are old paper "lot" maps with plastic overlays providing other information, such as areas of different usage. Similarly, putting a list of facilities onto a digital map (as Rivera and Lopez needed to do) involves the creation of a layer of points superimposed on a street map. The facilities' addresses must be plotted along streets, a process that almost always encounters problems like construction issues or the misspelling of street names. Fixing these discrepancies requires interactive geocoding sessions. Geocoding software that meets this need was demonstrated by ESRI at a Friday Clinic, and then installed and maintained on one of our computers by Mr. Lopez. It operates like a spell checker, suggesting matches for mismatches.

Since researchers who attended the Clinic were also interested in the "web publishing" of maps, Ms. Jenkins of ESRI hosted a presentation on their product Internet Map Server (IMS) at one Friday session. IMS provides the technology for developing not just maps, but also web-based mapping applications. Researchers learned that the software allows them to create applications to answer map-related questions (e.g., "Where is the closest youth service to my apartment?" "Which legal services are near a certain bus route?"), and then to make the application work on a stand-alone computer, which may involve spatial analysis tools available in GIS and Visual Basic. Finally, IMS can be used to publish the applications on the Web.

If these and other GIS issues are of interest to you, we encourage you to attend our Fall 2003 Friday GIS Clinics, which take place each Friday at the ITS Statistics and Mapping Computational Lab, 75 Third Avenue, level C-3; please bring along your research needs. For information on the meeting time and topic, subscribe to the NYU Forum "Statistics" (instructions below) or contact Frank LoPresti (frank.lopresti@nyu.edu or 1-212-998-3398).

Additional Information

The NYU Statistics Forum

The NYU Statistics Forum mentioned in this article is an e-mail discussion list that notifies subscribers of ITS Academic Computing Services' Social Sciences, Statistics and Mapping Group events and related software information. To subscribe to the Statistics Forum, log into NYUHome (http://home.nyu.edu), and find the "Forums" channel on the main "Home" screen. Click on the "Subscribe to an NYU Forum" link at the bottom of the channel. In the alphabetical list of Forums that appears, check the box next to "Statistics" (ITS/ACS Statistics and GIS Group). You will then be added to the mailing list. This list is open, which means that anyone can request to join.

GIS Available at ITS

ArcGIS and ArcInfo, from ESRI, are the high-end GIS software products used at NYU. ArcGIS is available at the ITS Tisch Hall and 14 Washington Place computer labs. Both ArcGIS and ArcInfo run at the ITS Statistics and Mapping Computational Lab at the ITS Third Avenue North Computer Lab.*

Another mapping system available at NYU is MapInfo (http://www.mapinfo.com/), which has fewer features, but an easier learning curve. ITS has a site license for MapInfo and may also distribute copies to researchers who are developing courses. While enrolled in courses using MapInfo, students are also allowed to run the software on their own computers. MapInfo is available at NYU at the ITS 14

Washington Pl. Lab, Tisch Hall Lab, and Third Ave. North Lab.*

GRASS, one of the earliest GIS tool sets, is still very powerful, with a large library of routines. Created by the Army Corps of Engineers, this software is open source, and is available for download at http://grass.itc.it/. GRASS is running on many of the Linux computers at the Statistics and Mapping Computational Lab in the ITS Third Ave. North Lab.* For additional information about using any of these GIS packages, please contact Frank LoPresti (frank.lopresti@nyu.edu or 1-212-998-3398).

* See the ITS Computer Labs website at http://www.nyu.edu/its/labs/ for locations and hours.

Author Biography

Frank LoPresti heads the Social Sciences, Statistics & Mapping Group of ITS Academic Computing Services. He can be reached at frank.lopresti@nyu.edu.