Delaware Valley Regional Planning Commission
Information Resource Exchange Group

Highlights from meeting of Wednesday, December 7, 2011

The 81st meeting of the Information Resources Exchange Group (IREG) took place on Wednesday, December 7, 2011 at DVRPC. Thirty four people were in attendance. Highlights from the September 7th meeting were available as a handout and on the internet.

Election of CY 2012 Chair and Vice Chair

Tanya Flynt (SEPTA) was elected as Chair and Noemi Mendez (US Census Bureau) was elected Vice Chair.

Presentations

"Pedestrian Evacuation—A SimWalk Case Study"

Marlen Kokaz-Roy, an Advisor at Enabling Technologies, presented her case study, where she used a GIS tool called the SimWalk to simulate the evacuation of Franklin Field at the University of Pennsylvania during commencement. SimWalk is a simulation software for improving pedestrian logistics and flow issues in urban planning, evacuation and traffic management, which is used extensively in Europe.

Working with the university's Division of Public Safety to better plan and prepare for emergencies, they narrowed down their choices to four different types of models: Raster model using GIS, ArcGIS Network Analyst (a transportation model), Computational Fluid Dynamics model, and, an agent-based model (using pedestrian flow analysis in SimWalk [which was ultimately chosen).

The four-step process to using SimWalk included: 1.) Import the Simulation Plan (the environment being modeled, including seating charts and surrounding geography) as CAD drawings (.PDF and .AI to .DXF file conversions); 2.) Model creation and definition of passenger types and agents, including number of agents (15-18k), where will they sit (parents, students, disabled, academic council), how will they move, which exits they will take, built-in delays; 3.) Run simulation under different circumstances (controlled/uncontrolled, open/closed doors), creating simulation video and density maps; and, 4.) Analyze results, provide plans and scenarios to Public Safety.

For this case study, the computation time was 1:28 hours, with the controlled simulation time simulation of 14:45 minutes. For comparison, a recent actual evacuation drill took 15 minutes. Marlen played one of the simulation videos created by the model for the group before entertaining questions.

"Using GIS and Census data to analyze demographic data for pastoral planning within the Archdiocese"

Mia Vergari from the Office of Research and Planning at the Archdiocese of Philadelphia discussed how she uses GIS and Census in pastoral planning for their unique geography. The Archdiocese encompasses five counties in southeastern PA, which is divided into 4 Episcopal Regions, 12 Deaneries, 44 Pastoral Planning Areas, and 273 territorial and personal parishes. Mia discussed how they created a complete attribute table unioned with the parish shape files in GIS so that each parish would have it's own Census blocks, creating a connection between the two geographies. Slivers were dealt with by using the repair geometry tool, then the calculate geometry tool was run, sending the sliver to the larger geometry parish, and rectifying the Archdiocese's geography with that of the Census Bureau. Mia went over the 9 reports and maps that she created for each level of geography to assist in the pastoral planning process.

Member Updates

- Latest data shows that Allentown went from one of the lowest unemployment rates in PA (in 2007) to one of the highest (in 2010).
- SEPTA's first hackathon (October 8-9) produced about five apps (for free) that went on to further review and helped create a new atmosphere of openness.
- US Census Headquarters recently had their first geospatial summit, where they developed an internal TigerWeb to provide quick GIS web analytics for assigning field staff to survey locations.
- Members of PAMAGIC, PA-MAPPS and PA BAR met on 12-13-2011 for Hill Day to meet with representatives to show support for GIS Council formation (HB 1701).

DVRPC Updates

- IT: SharePoint 2010 is being used by three departments on an experimental basis, with plans for implementation intranet-wide in 2012. MS Office 2010 upgrades are nearly complete. ArcGIS 10 migration is taking place along with staff training.
- GIS: 2010 Land Use updates are nearing completion and discussions have begun on 2015 orthophotography for the region.
- Modeling: Household Travel Survey will capture a week of travel data from 10,000 households.
- Web: The DVRPC website refresh took place on December 1st, updating our site design which was launched in June 2009. YouTown is a free mobile app for local governments using RSS, iCal, and KML. The Data Navigator and GIS webpages will soon be updated with new streamlined information and data. Follow the IREG and NJGIS groups on LinkedIn.

Information Items

- Deirdre Garrity-Benjamin from the Community College of Philadelphia gave a brief introduction to the new GIS Certification being offered, and the GIS club that is always looking to volunteer on new GIS projects in the area.
- The 82nd IREG meeting will be held on March 7th at DVRPC.
- Government Web Professionals of NJ will have their next meeting on February 3rd (Willingboro/Burlington County).
- MAC URISA 2012 (the largest GIS conference in the mid-Atlantic region) will take place in Atlantic City NJ on October22-24, 2012.
- The Next Mid-Atlantic Geographic Transportation Users Group (MAGTUG) meeting will take place on January 12th, 2012 at the Bentley offices in Exton PA.