

Creation of state officer reconfirms value of GIS

Virtually unnoticed in the spate of bills that emerged from the 2007 session of the Indiana General Assembly was creation of a new officer in state government who can be extremely helpful in the state's economic development efforts.



VOICES FROM THE INDUSTRY

Jim Sparks

The law creating a Geographic Information Officer, or GIO, gives official status to an important discipline that has been blossoming over the last 25 years and is increasingly relied upon in business and political decision-making.

A Geographic Information System is a collection of seamless computerized maps that are connected to databases containing information about features on the maps.

A familiar example of GIS could well be those acetate overlays we used in high school hygiene classes that showed the various parts of the body and how they all relate to each other. A more modern version of those illustrations might tap into computerized data to cite acceptable characteristics of normal bodily functions broken out by gender, age group, height, weight, etc.

My first GIS project was creating a computerized land-parcel map for the city of Monroe, Wis., in 1982. Back in those days, we called it "computer aided mapping," but the term GIS was beginning to circulate about that time.

Big-time growth

Since the early 1980s, GIS has evolved into a major industry. By 2006, it had grown to about a \$3 billion business worldwide, according to a report by Daratech Inc. Software alone accounted for about \$1.5 billion of that amount, the study said.

One of the most well-publicized GIS projects occurred three years ago when it was used to accurately model the expected location and distribution of debris from the Space Shuttle Columbia, after it broke up on re-entry over eastern Texas on Feb. 1, 2003. GIS was instrumental in recovery of the shuttle's parts scattered over many miles, leading to the eventual reassembly of the aircraft and pinpointing the causes of the tragedy.

Closer to home, GIS has been and continues to be an important contributor to construction and development projects across Indiana. Many are unaware, for example, that GIS was an important contributor to landing the Honda deal for Decatur County.

The Indiana Economic Development Corp. was able to provide Honda with aerial photography that had been

processed so that users could measure across it (something called orthophotography), along with other geographic information. It gave Honda officials tons of information about the community they were evaluating.

More recently, GIS was used in the aftermath of the 2005 tornado that ripped through Vanderburgh and Warrick counties. GIS was helpful in using a mosaic of photographic images to recreate the tornado's path to offer a clear visual assessment of the level of property damage caused by the storm.

One of the leading users of GIS is Eli Lilly and Co. GIS has played a key role in assembling information for several multi-million dollar projects at Lilly Corporate Center, the Lilly Technology Center, the Lilly Materials Center, the company's airport hanger, Park Fletcher in Indianapolis and the Greenfield Labs.

GIS also is a major component in redevelopment of Indianapolis International Airport and refurbishing of our interstate highway system throughout Indiana, especially the Greater Indianapolis area.

Other important GIS projects have involved Indiana University in Bloomington, Purdue University in West Lafayette, Indiana state government, and county and municipal governments all across the state.

Agency backing

Especially heartening are the efforts of a private agency called the Indiana Geographic Information Council to coordinate the effective application and use of GIS for Hoosier projects "through the dissemination of data, education and outreach, adoption of standards, building partnerships and the IndianaMap (www.in.gov/igic). This not-for-profit group includes members from all levels of government, private industry, educational institutions and civic organizations.

The IGIC was the coordinating force behind a project funded by Homeland Security to acquire color digital orthophotography, the foundation layer of GIS, for the entire state. Businesses (including Google Maps), cities, counties and state government are now using that data extensively. That resource also could be important to public safety groups in thwarting potential terrorists who might seek to inflict damage somewhere in Indiana.

As computerization continues to be more sophisticated over the years, GIS surely will flower in lockstep. But for now, with the passage of Senate Bill 461, it is comforting to know that the state officially has affirmed its importance and is using it so widely. •

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