

ILLINOIS GIS NOTES

THE NEWSLETTER OF THE ILLINOIS GIS ASSOCIATION

Government GIS and the Law: GIS Data Distribution

By Richard Hilton

Many government agencies in Illinois are developing GIS data and evolving policies for sharing the data with other government agencies, non-profit organizations, the private sector and the public. This article is intended to point out information resources that may be useful to government GIS professionals in order to understand the legal background. No legal advice will be offered here. While it is important for us to be aware of the laws that affect our work, as always when dealing with legal matters, you must consult with your agency's attorney.

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References: Where to find legal information

The Illinois General Assembly website is a very useful resource for reading existing state law and for monitoring ongoing legislation: <http://www.ilga.gov> gets you there. On that website, under "Legislation & Laws" you will find the text of the Illinois Constitution, Public Acts and Compiled Statutes. There is also a glossary of terms to help the newcomer. The website is careful to point out that the text you find there is not the official version, although they try to make it as accurate as possible.

Illinois Compiled Statutes provide a systematic structure that makes it easier to find things: Chapter 55 presents in one place the laws that are specific to counties; Chapter 65 does the same for municipalities; and so forth. There are other sections that affect all levels of government like Chapter 5, entitled General Provisions, which includes such topics as the Illinois Governmental Ethics Act.

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Illinois' New GIS-based Road Centerline and GIS Transportation Coalition

By Mark Kinkade

Background

In early 2005 the State of Illinois Department of Transportation (IDOT) Bureau of Information Processing (BIP) issued a Request for Proposal for firms to develop a comprehensive GIS-based road centerline and a strategic plan to better use GIS within the Department of Transportation. Through

the competitive procurement bidding process, a consultant was chosen to help IDOT on these crucial projects. The year ended with the exciting news that both the statewide road centerline and strategic plan had been completed. IDOT has begun new initiatives to share the digital road centerline with other government agencies.

New Statewide Centerline

While IDOT has been using geographic information systems for the past 15 years, GIS use has been limited based on the way IDOT stored its road inventory and transportation information. The Illinois DOT has long maintained a road network in its GIS database, which is based upon a linknode

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The Editor's Corner

By Keith Caldwell and Ruth Anne Tobias

This past fall conference saw ILGISA return to the Oak Brook Marriott after a multi-year absence. The reason for this change was space or lack thereof from our previous conference hotel. The attendance at the fall conference is on the rise, and membership has also seen an increase.

Conference Attendance

	FALL	SPRING
2002	354	275
2003	414	312
2004	418	334
2005	478	278

ILGISA Membership

2000	553
2001	556
2002	633
2003	679
2004	744
2005	768

(Visit ILGISA's website at <http://www.ilgisa.org/members.htm> for more data and statistics on the make-up of our membership.)

"Kickin' up the Heat" was the theme of the conference. The two-day event drew a large crowd, with a total attendance of more than 478! The first day's workshops covered such diverse topics as Introduction to GIS, QA/QC of data, map design, and a very popular session on project management.

The first day of the conference began with welcoming comments by ILGISA's President, Kingsley Allan. The keynote guest was Bruce Oswald from New York State's Office of Cyber Security. He gave an informative talk on how New York State fosters growth of GIS development and sharing among multiple agencies. He likened this at times to "herding cats," and he had a terrific video clip to illustrate this effort. The in-depth interview with him starts on page 8.

Participants had a plethora of sessions to attend for the remainder of the day. Tracks included data distribution, transportation, user experiences, Internet application and much more. Special thanks to the vendors who sponsored breaks and donated door prizes. These donations help defray part of the conference costs.

In this issue of *GIS Notes* you can read about government GIS and

Illinois law. This timely article discusses the intricacies of making GIS data available as it relates to FOIA and the recent opinion from the Illinois Attorney General.

The year 2005 saw the completion of a Herculean accomplishment: statewide aerial orthophotography. To get an update on this valuable data resource, go to page 10.

Also in this issue, learn about the **Illinois GIS Transportation Coalition**. This ambitious program seeks to build a coalition of GIS data sharing partners to develop a statewide road centerline file.

In December 2005 the GIS managers of northeast Illinois met to discuss issues which they have in common. Read about the **Northeastern Illinois County GIS Managers Meeting** on page 5.

Once again we have a submission for the **Interesting Aerial Photography** segment. This one comes to us from the City of Evanston. Go to page 7 to see what magic Hollywood was able to create on the streets of this north shore community.

Read this and much more in this edition of *Illinois GIS Notes*, and, as always, if you have an article you'd like to share with the rest of the GIS community, feel free to contact Keith or Ruth Anne.

Keith is GIS Applications Supervisor with the Lake County GIS/Mapping Division. Ruth Anne is a Research Associate with the Center for Governmental Studies at Northern Illinois University.

Keith Caldwell: ILGISA President-Elect for 2006

Keith is the GIS Applications Supervisor for the Lake County GIS/Mapping Division. He has been a part of the GIS program at Lake County for 14 years, where his work includes oversight and implementation of data-sharing agreements with numerous data-sharing partners, development of new products, providing training to new and existing GIS users, supporting the development of GIS applications and assisting in the development of web based products. Keith has been active in ILGISA since 1994 and has been on the Board of Directors since 2002. These have been positive experiences for Keith, and he would like to increase his commitment to ILGISA by serving as the President-elect.

ILGISA Service Award Recipients for 2005

2005 Statewide Digital Orthophotography Project

As an example of intergovernmental cooperation the 2005 Statewide Digital Orthophotography project has few equals in other states. It will create an information resource that will benefit large numbers of agencies and the general public for many years to come. It is made possible by an extraordinary and unprecedented degree of interagency cooperation, bringing together fifteen government organizations at the federal, state, regional, and county level. It will be used in a broad array of applications, ranging from rural assessment to updating the National Map and supporting homeland security. See page 10 of this issue for a project update.

Barrington Area Council of Governments

The Barrington Area Council of Governments (BACOG) has administered the regional GIS for the Barrington area since 2001. BACOG is a regional planning organization made up of seven villages and two townships. BACOG has created a model for collaboration among governments to encourage GIS integration and use in small governments, to better the quality of local GIS data and systems, to create a regional planning tool, to bring about professional development, and to achieve cost efficiencies. BACOG's member villages and townships are recognized for taking on the challenge of GIS on behalf of every member local government and committing to its future.

Bill Faedtke, GIS Manager, DuPage County Information Technology

Mr. Faedtke has been a long-time leader in the GIS community. DuPage County was one of the first counties in Illinois to implement GIS. Bill has regularly shared the evolution of the county's GIS through numerous presentations: he is an ever-familiar face at ILGISA conferences. Not only has Bill shared the evolution of the DuPage's GIS, he has shared his knowledge with young professionals about what employers look for in those entering the job market. ILGISA recognizes Mr. Faedtke's continuous contributions to the GIS community.

New ILGISA Board Members

Mary Clement GIS Manager, City of Lake Forest

Since beginning my position as GIS Manager for the City of Lake Forest some eight years ago, I have come to rely upon ILGISA as a conduit for disseminating GIS to the masses. ILGISA has been instrumental in mainstreaming GIS in Illinois during this period, and continues to set the standard for making GIS technology advances available to users at all levels of expertise.

I've had the pleasure of serving on a few of ILGISA's committees and working with many fine fellow GIS practitioners over the years, and appreciate the very positive impact ILGISA has had on GIS development in Illinois in general, and in the City of Lake Forest, in particular. Now I look forward to having the opportunity to 'give back' by serving a term on ILGISA's board. The inroads that ILGISA has established in the state can be fashioned into a network of spatial connections heretofore unknown. Let's do it!

Barb Knox GIS Systems Specialist, IDOT

I have been employed with IDOT for 15 years and have worked on the IDOT GIS Development team for six years. My previous work experience at IDOT encompasses nine years in the Engineering Design and Drafting field with concentrations in Geopak and Microstation application training, support, development, and maintenance. My current role is Project Coordinator for the Illinois GIS Transportation Coalition strategic initiative. I have also been involved in GIS application development, analysis, maintenance, and support of current production GIS applications for approximately 150 statewide GIS users at IDOT. I have developed training material and currently conduct training seminars for use with production GIS applications at IDOT.

I have been an ILGISA member since 2001. I am excited about the growth of GIS in the State of Illinois and look forward to building on this existing GIS foundation.

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Access to Government GIS Data

The most important laws directly dealing with the distribution of GIS data are found in the Freedom of Information Act (FOIA) 5 ILCS 140 at http://www.illinoisattorneygeneral.gov/government/foia_illinois.html. The Attorney General's website includes a 57-page guide to the Illinois FOIA.

Section 1 of the Freedom of Information Act states that "it is declared to be the public policy of the State of Illinois that all persons are entitled to full and complete information regarding the affairs of government...." The remainder of the Act describes how it is to be carried out and defines specific exemptions. The assumption is that unless there is a specific exemption, requested data must be provided.

Section 140/7 contains a list of exemptions from FOIA. There are specific references to GIS data: 5 ILCS 140/7 (1) (i):

"The following shall be exempt from inspection and copying:"

"Valuable formulae, computer geographic systems, designs, drawings and research data obtained or produced by any public body when disclosure could reasonably be expected to produce private gain or public loss. The exemption for 'computer geographic systems' provided in this paragraph (i) does not extend to requests made by news media as defined in Section 2 of this Act when the requested information is not otherwise exempt and the only purpose of the request is to access and disseminate information regarding the health, safety,

welfare, or legal rights of the general public".

This exemption has been interpreted in various ways by government agencies:

1. GIS data doesn't have to be made available to any individual or organization at all.
2. GIS data doesn't have to be provided to private sector, for-profit entities at all.
3. GIS data can be sold or licensed to private sector agencies for fees that greatly exceed the cost of reproduction.
4. GIS data can be provided to public sector and non-profit organizations, but no one else.
5. GIS data can be provided to anyone under the same terms and conditions, at the cost of reproduction.
6. Some combination of the above.

The Attorney General provided an opinion dated April 15, 2005 (File No. 05-002) that stated, in part, "...it is my opinion that absent express statutory authority, public bodies may not charge additional or increased fees if they elect to furnish copies of records that may be exempted from disclosure under section 7 of the Act (5 ILCS 140/7 (West 2003 Supp.)), including information generated by or contained in a geographic information system."

Note that Section 140/7 lists a variety of non-GIS exempt data such as personal information of clients, patients and others receiving social, medical, or custodial care. Exempt non-GIS data can be embedded in GIS

data, for example as an attribute of a spatial feature like home locations of patients with a contagious disease being tracked by a health department. In that case the spatial data may well be exempt because it includes and conveys the exempt non-GIS data.

Another example of spatial data embedding exempt non-GIS data would be a polygon or point theme indicating land acquisition plans. Some of the other exemptions listed are in fact mandated by other statutes, such as HIPPA or laws regulating criminal justice data.

Following the event of 9/11/2001, additional exemptions were created for information related to homeland security concerns. Among other items there is an exemption for "maps and other records regarding the location or security of a utility's generation, transmission, distribution, storage, gathering, treatment or switching facilities."

Many local government agencies operate sewer and water utilities and may form partnerships with private utilities that involve sharing infrastructure information in GIS form. This exemption may actually encourage that level of information sharing since it provides protection for private utility data that did not exist before.

Access to Government GIS Data via Interactive Internet Applications

There does not appear to be any legal requirement in Illinois to place any government information on the Internet, yet it is commonly expected that local governments will try to reach out to citizens and taxpayers via the Internet.

Northeastern Illinois County GIS Managers Meeting

By Richard Hilton

The GIS Managers of the six counties in the northeast corner of Illinois met together on December 6, 2005 to discuss a wide variety of topics and to share experiences in dealing with common issues. Cook, DuPage, Kane, Lake, McHenry and Will counties together have a population of 8,332,110 (Census Bureau, American FactFinder estimate for 2004), which represents 65% of the population of the state of Illinois.

The December meeting, part of an ongoing series of meetings that began two years ago, took place at the Lake County GIS office. The meetings are hosted by each county in rotation so that everyone becomes familiar with the GIS setting in all of the other counties.



First Row, left to right: Bill Faedtke (DuPage County); Nicole Gattuso (McHenry County); Richard Hilton (Lake County)
Second Row: Thomas Nicoski (Kane County); Greg Johnson (Will County); Alan Hobscheid (Cook County).

The county managers, all active ILGISA members, are exploring ways that the counties can work together to support applications that cross county borders, such as public safety. Other areas of cooperation include considering standardization of data sharing formats and insuring that spatial features along mutual borders are in alignment.

Can a government agency charge for Internet access? A recent statute 55 ILCS 5/5-1106.1 deals with Internet access to public records at the county level. It states, in part: "Any county may provide Internet access to public records maintained in electronic form. This access shall be provided at no charge to the public."

The statute goes on to say that a county that offers some public records (like GIS access) to the public at no charge, "may also enter into a contractual arrangement for the dissemination of the same electronic data in bulk or compiled form," and it defines bulk form as "all, or a significant subset, of any records to which the public has free Internet access, as is and without modification or compilation." It defines compiled form as "any records to which the

public has free Internet access but that has been specifically selected, aggregated, or manipulated and is not maintained or used in the county's regular course of business."

If a county offers free Internet access to the public for some public records and then does decide to offer contractual arrangements to the same data in bulk or compiled form for a fee, the statute says that "the county may charge a fee for the dissemination of the electronic data in bulk or compiled form, but the fee may not exceed 110% of the actual cost, if any, of providing the electronic data in bulk or compiled form."

Further, the county must deposit the fee in a specified fund and must have a document itemizing the cost used in setting the fee, and may not grant to any person

or entity the exclusive right to access or disseminate a public record.

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concept and which accesses attribution from the Illinois Highway Information System (IHIS). IHIS is composed of information sub-systems, the Illinois Roadway Information System (IRIS), the Illinois Structures Information System (ISIS), and the Illinois Railroad Information System (IRRIS), each of which have been integrated into the GIS through the dynamic segmentation of data onto the linknode base road network.

While the linknode based road network has served many functional needs of the department, it does not sufficiently provide for all needs of the many Department of Transportation functional areas. The lack of local road geometry and no capability to geocode by address are two major shortcomings of the current roadway base. Furthermore, the linknode road base is insufficient for most other government agency GIS requirements, primarily because of the lack of local roads and the lack of ability to geocode addresses. These shortcomings have forced other agencies to purchase or construct their own roadway data layers.

As a result of the limitations IDOT has experienced with its own linknode base road network, IDOT has acquired NAVTEQ data. NAVTEQ creates digital maps and map content to power navigation and location-based services solutions including automotive navigation (<http://www.navteq.com/>). IDOT's consultant conflated the IRIS data to NAVTEQ's data. IDOT strategically procured a statewide government enterprise license from NAVTEQ, which enabled them to distribute the base NAVTEQ data and an IDOT-conflated road centerline with local units of government at no additional charge.

IDOT's consultant and NAVTEQ are collaborating to provide a complete roadway base suitable for all of IDOT's GIS needs as well as for other government agencies that will use the data through a cooperative sharing agreement. IDOT is hoping to work with local agencies around transportation issues through the Illinois GIS Transportation Coalition, which IDOT established.

GIS Transportation Coalition

IDOT is taking a leadership role in Illinois government to develop a GIS group focused on transportation. The Illinois GIS Transportation Coalition will be a focal point for all GIS users as well as other GIS data providers. IDOT envisions the GIS Transportation Coalition as being a place to share information between all levels of government

The goal of the Coalition is to create a comprehensive set of information and source data for statewide

road coverage that can be used for location analysis, routing, and other decision support applications for all persons requiring access and information about the state's transportation network. IDOT hopes that the digital road centerline will be a catalyst to share information across government agencies, reduce redundant efforts in GIS, and over time, will help build a detailed and accurate road network for the State of Illinois.

Through the Transportation Coalition, state and local agencies can obtain a complete copy of the NAVTEQ Streets file for the State of Illinois that includes all the NAVTEQ attributes and points of interests. IDOT is hoping that local governments and agencies will register with the GIS Transportation Coalition as a starting point to share the statewide centerline.

In addition, registered users can obtain a representation of IDOT's Roadway Inventory System. This will be a separate data layer that is based on the NAVTEQ geometry but only has certain IDOT attributes attached. IDOT believes this data will be helpful to counties by providing a comprehensive coverage between county borders, a centerline that can be used for geocoding services, and mapping applications. This data, with its points of interest layers and local roads, can also be used for other GIS and business applications.

Results of IDOT/NAVTEQ Data

The Illinois Department of Transportation has already begun to use the statewide digital road centerline to build new applications to better serve the traveling public. IDOT launched a website at www.GettingAroundIllinois.com, which is a "one-stop shop" for IDOT geospatial data resources for the State of Illinois and the traveling public. *Getting Around Illinois* is a web-based interactive mapping site that provides users with the ability to explore and find locations in Illinois through various search capabilities. In addition to finding locations, users can print maps and get driving directions to and from places and addresses within Illinois.

The website provides the user with the ability to search and display several sources of information, such as points of interest that include hotels, gas stations, restaurants, airports, tourist attractions, museums, hospitals, public education, and government agencies. Other data available on the site include IDOT road construction locations, roadway weather information, average annual daily traffic volumes, weigh stations, mile posts, rest areas and information about the IDOT signage program. A combination of querying and mapping functionality allows users to explore the data in a variety of ways.

With www.GettingAroundIllinois.com, the Illinois Department of Transportation provides data to the public in a “one-stop” environment and enables users to browse a web GIS map and actively search for familiar locations and points of interest.

For more information

For more information about these projects, or to register to be part of the GIS Transportation Coalition and gain access to the statewide road centerline for your government organization, please contact Mark Kinkade, Bureau Chief, Bureau of Information Processing at 217-785-2400, or at the address below.

Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764

ILGISA Distinguished Member

Jim Carter, a professor at Illinois State University, was designated as a Distinguished Member of ILGISA at the Fall 2005 conference. Jim is an individual of acknowledged renown in Geographic Information Systems who has rendered outstanding service to the geographic information profession and who is an Active Member in good standing of the Illinois GIS Association. Distinguished Members are not required to pay dues and are elected for life.



Interesting Aerial Photography



The City of Evanston was capturing high resolution 3” color orthophotography back in April of 2004, which happened to be the same time Hollywood was covering a residential neighborhood in Evanston with fake snow. Nicolas Cage and Michael Caine were on site for the filming of “The Weather Man” which is currently in theaters.

The image(s) from the movie show a very convincing snowy background, but we GIS folks know the truth.



Submitted by Pat Keegan, GIS Manager, City of Evanston.



Statewide Data Development and Sharing: New York State's Collaborative Approach

Bruce Oswald was Chair of the New York State GIS Coordination Program from 1996-2005. This program sought to implement a collaborative approach to statewide GIS data development and sharing. Bruce's keynote presentation at the 2005 Fall ILGISA Conference highlighted some of the organizational and cultural challenges to data acquisition and distribution and how to overcome them. He shares some of those experiences with us here.

Please describe the structure of the Coordination Program and how it relates to the New York State GIS Clearinghouse and the Data Sharing Cooperative.

The New York State GIS Coordination Program was established in September 1996 to coordinate GIS activities and obtain broad representation among the state's varied GIS user community. It included a Coordinating Body (composed of individuals from the public and private sectors), state and local government, and private sector advisory committees as well as several work groups. The advisory groups provide direct input to the Coordinating Body by presenting issues requiring attention and by providing input on proposals developed by the Coordinating Body.

The work groups were put in place to deal with specific GIS issues and to develop practical, implementable solutions to resolve those issues. As a result of the active participation of those groups, a number of unique initiatives were created, including concepts for a state GIS Clearinghouse and a Data Sharing Cooperative (http://www.oft.state.ny.us/policy/tp_976.htm).

While the organization has continued to mature over the years, its basic structure has remained the same. The Coordinating Body has general oversight of the Clearinghouse and the Data Sharing Cooperative.

The organizational structure of the NYS GIS Coordinating Body seems to be important to the success of GIS in NYS. You said that you reevaluate that structure from time to time. How often is this done and to what benefit is it?

New York State has been very fortunate from the start to have exceptionally talented people involved in all aspects of the Coordination Program. These folks have worked diligently on their own time and at their own expense to provide leadership for our state's GIS community.

After several years it became evident that the energy level as well as the relevance of the Coordinating Body had diminished. A work group review recommended

that we expand the representation of county and local government as well as other sectors and ensure a consistent turnover of Coordinating Body members. This practice allowed better representation on the Coordinating Body. Furthermore, it gave a greater number of folks the opportunity to serve and ensure that new people with new ideas were made members on a regular basis.

Re-evaluation of our institutions on a regular basis ensures that they stay relevant to present day issues. I would recommend that something like that be done for a Coordinating Council every three to five years.

Describe your overall data sharing agreement. How has this reduced difficulties in sharing data within the Cooperative / Clearinghouse?

The data sharing agreement is simply an instrument that we used to codify the rules the work group established for sharing data. These rules were very simple, yet very powerful, and addressed the majority of the initial issues that we had to get governments to share data with each other.

- The Cooperative is open to governments and not-for-profits;
- There are no fees to join the Cooperative;
- You do not need GIS data to belong;
- You can borrow GIS data from any member of the Cooperative;
- Every dataset has an owner;
- A data owner is free to distribute its own data outside the Cooperative in any way it sees fit;
- You sign only one standard data sharing agreement that is executed rapidly;
- Members forward improvements to data to data owners;
- Unless required by law, you cannot redistribute another member's data without permission; and
- Not satisfied? Members can return data and terminate the agreement.

The introduction of the Cooperative concept and the ability to post data from the Cooperative to the Clearinghouse (either password protected or open to the public, the data owner's choice) revolutionized data sharing in our state. Originally, obtaining data

was done through complicated individualized licensing agreements with each state agency and local government. In order to find data, you had to use what I call the “old boy” network to locate the right person who had the right data.

After the advent of the Cooperative with its standard agreement for all, the process became very simple. The Cooperative was the vehicle for entities to enter the data sharing community, and the Clearinghouse was the means for data distribution. We started with a ten-fold increase in data sharing the first year and went from there. Today millions of datasets are exchanged via the Cooperative and the Clearinghouse.

You don't require metadata for data that's shared. Is that an incentive of sorts to get agencies to share data?

In the beginning of the Coordination Program, it became clear that our job was to break down the barriers to using GIS. Cooperative members are required to provide metadata for their data; however, metadata is not a prerequisite for joining the Cooperative, and, to be perfectly honest, no one has ever been taken to task for not having metadata.

Before we started the Cooperative, we did a small analysis on what it would take to share data and used the results to develop data inventory sheets that every entity must complete before they can become a member. Unlike the imposing 256 fields that data owners had to face for FGDC compliant metadata at that time, this provided data owners with a simple, one-page form to complete. This form eliminated an excuse for not joining the Cooperative yet provided everyone with the information required to share that data. The information from the form was posted to the Clearinghouse for all to see at <http://www.nysgis.state.ny.us/gisdata/inventories/index.cfm>.

Can you expand on the experiences you've encountered with organizations that have a fear of sharing data?

I'm going to eventually write a book on why folks don't want to share GIS data. I have given multitudes of talks to try to encourage people to join the Cooperative and share their data. There are all sorts of reasons why they choose not to share. Many of those reasons are personal. A few are political. Some are economical. The personal reasons not to share are really too numerous to delve into, but it usually involves some wrong that has been done to the individual who has responsibility for that data. The political reasons are usually fairly obvious. The economic ones are easiest because of my experience with the two largest state agency users of GIS who sold their data.

Without going into great detail, let me say that when the smoke cleared from our discussion with the two agencies, the facts were that their sales to governments and not-for-profits of digital data were less than \$5,000 per year combined. With only a very few exceptions in our state, no government entity is going to claim to have more significant sales than that. Now all members get free access to the latest roads and addressing data (among thousands of other datasets) for the state, so that offsets many of their costs.

You had mentioned that the ice storm of 1998 helped government officials realize the importance of GIS. Can you explain how?

In January of 1998 a massive ice storm hit the six most northern counties in our state. More than 360,000 people were out of power and a large part of the state's dairy industry was impacted. After shelters were established for citizens, a task force was established at the State Emergency Management Office to bring in emergency generators from around the country and distribute them to dairy farmers to allow them to milk their cows before they succumbed to mastitis.

A co-worker and I were brought in to assist. My co-worker, asked to head up the emergency generator task force, asked if GIS could help with the huge logistical problem of tracking the generators. I jumped on the idea and had GIS professionals from two state agencies in there the next day to track the generators as well as the power outages.

The system, while crude, worked extremely well. After the event was over, the Director of State Operations told us that this was the first time that the state had recovered all the assets that they had distributed. In fact, he still jokes today that GIS was so good that they actually recovered one more generator than they distributed! That made him see the value of GIS, and, from then on, he was our greatest supporter and one of the keys to our success.

What do you do for the “have-nots” in GIS, those communities or organizations that for one reason or another are in a “GIS desert”?

We've tried to focus a significant amount of our efforts on providing resources to aid the GIS “have-nots.” To begin with, we offer free training on various themes each year and deliver that training to eight cities across the state. We also have an on-line Help Desk to answer GIS questions. This includes a database of more than 2,000 questions and answers that users can search. In addition, users can submit a question to the Help Desk and it will be answered within one business day.

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2005 Statewide Digital Orthophotography Arriving!

By Don Luman and Dick Vraga

In the Winter 2005 edition of *Illinois GIS Notes* we described the particulars of the Illinois 2005 statewide digital orthophotography project. The purpose of this article is to update ILGISA members on the status of the project. In summary, project planning was initiated in late 2003, and by mid-February 2005 the cost-share funding necessary for the aerial photography acquisition and processing had been contributed by fifteen federal, state, and local governmental agencies.

The project is being conducted in two parts: 1) the Chicago Urban Area composed of Cook, DuPage, Kane, Lake, McHenry, and Will Counties; and 2) the Illinois NAPP, consisting of the remaining 96 Illinois counties. Aerial photography acquisition was 100% completed for both project areas during the leaf-off period of 2005, creating a single-year snapshot of Illinois.

After unexpected delays, data deliveries have begun to arrive in the state. On March 1 the portable data drives containing the digital orthophotography and associated data for the entire Chicago Urban Area project area were received at cost-share agencies. The datasets are being processed and the images will be posted on the Illinois Natural Resources Geospatial Data Clearinghouse, which has assumed the in-state responsibility for online distribution (see <http://www.isgs.uiuc.edu/nsdihome/webdocs/doq05/>).

The characteristics of the Chicago Urban Area project datasets are described at <http://www.isgs.uiuc.edu/nsdihome/webdocs/doq05/cua05.html>. The first of six Illinois NAPP data deliveries to cost-share agencies occurred in late March, with data characteristics

summarized at <http://www.isgs.uiuc.edu/nsdihome/webdocs/doq05/doq05.html>.

The 2005 Chicago Urban Area datasets were produced in accordance with USGS Urban Areas high-resolution orthophotography specifications to meet Homeland Security needs. These specifications were also used for the creation of the April 2002 Chicago urbanized area digital orthophotography, which has been available for online viewing and free download through the USGS Seamless Data Distribution website at <http://gisdata.usgs.net/website/seamless/>.

While it is expected that the ISGS Clearinghouse will be the primary online resource within the state for the 2005 Chicago Urban Area project data, online access and download will eventually also be available at the USGS Seamless Data Distribution website.

The 2005 Illinois NAPP digital orthophotography, produced in accordance with the USGS NAPP specifications, differs from previous Illinois NAPP-based Digital Orthophoto Quarter Quadrangle (DOQQ) imagery in that the ground spatial resolution has been increased from the traditional standard of 1 x 1 meter to ½ x ½ meter per pixel.

The figure below is a side-by-side comparison of 1998 and 2005 NAPP-based USGS DOQQ image samples for the same geographic area showing the improved discrimination of ground features. For example, compare the cluster of single-family houses in the lower left of the 2005 DOQQ image and the water tower at the right margin (note the prominent shadow) with the same areas as they appear on the 1998 DOQQ.

ILGISA members are encouraged to visit the ISGS Clearinghouse 2005 Illinois Digital Orthophotography web pages for periodic updates throughout the year.

Don Luman is with the Illinois State Geological Survey Geologic Mapping Program. Dick Vraga is with the Wisconsin/Illinois Mapping Partnership Office of the USGS.





Notes from the desk of Kingsley Allan, ILGISA President 2005-2006

My father was an architect. As a boy I loved to visit his office in the tallest building in the city. It was filled with equipment and tools I saw nowhere else. He sat at a high tilted oak drafting table lit by a clamp-on fluorescent lamp. The table had a light green rubber surface and a black parallel ruling straightedge running the full 60" width of the board. It smoothly slid up and down over his drawings attached by a sort of string pulley system.

His pencil sharpener, clamped to the table, did not fit ordinary pencils. It required him to extend the lead of a mechanical pencil a quarter inch or so beyond normal then insert it in the round upward-looking opening of the sharpener. Using the pencil as the handle he'd spin the sharpener round and round like a merry-go-round, after which the sharpened lead was poked into a white Styrofoam ring around the sharpener for cleaning.

As well as having many kinds of pencils, pens, and markers, he had three kinds of erasers: smooth white rectangular ones, a gray clay-like kneading eraser that he stretched like taffy, and an electric type that consumed an eraser column the size and length of a pencil. Gripping it like a pencil he pressed the on switch with his index finger and rode it across the drawing like he was steering a spinning top. He used a hand brush to sweep away the resulting rubber shavings. I was

awed by the crispness of the lines he drew and the realism of buildings in his drawings.

I loved my dad, and I loved his work. I proudly proclaimed my father's profession to others at every opportunity. In the mind of his son, my father had a true profession. I identified it by the setting in which he worked, the products he created, the tools he used, and the recognition of my peers to the profession's name.

When I began my GIS career nearly two decades ago, the tools were complex, equipment was exorbitantly expensive, data were sparse, users were few and far between, and I learned more about using GIS from my technical support representative than anyone else.

My, how far GIS has come! In short, all of that has gotten better and will continue to do so. Organizations such as ILGISA, URISA, ASPRS, and users groups have played a crucial role in supporting the profession, particularly in education and making connections between peers. As GIS matures, the role of peer organizations in supporting the profession is expanding to include promotion of professional certification, commonly called GISP.

Now, why be a GISP? I personally attended conference sessions on

the topic, engaged in discussions, and read the many written views from opponents and proponents. The reasons are many and can be reviewed at the GIS Certification Institute website: www.gisci.org. The most attractive to me were recognition by allied professions and adherence to a code of ethics.

*Are you a Certified
GIS Professional yet?*

In the end I was convinced enough of its legitimacy and value that I turned the question around the other way for myself. Why *not* be a GISP? The list was short—time and money. It costs \$250 every five years, to be precise. It takes time to fill out the application—one to two weeks is average—and more time for continuing education and contributing to the profession.

Will it make me more like my dad? No, but it will make my profession more like my dad's profession.

I invite every ILGISA member to make the additional investment in your career by becoming certified. By doing so, you will help elevate our work beyond "doing GIS" to being recognized GIS Professionals. Please join me in bringing the number of GISPs in Illinois to more than 100 in 2006!

Kingsley Allan, GISP

Kingsley is GIS Manager with the Illinois State Water Survey.

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Next, we provide the imagery free to everyone. We recently completed the first statewide roads and addressing dataset which members of the Cooperative can have for free. The Clearinghouse also provides a calendar of GIS events and links to GIS training courses, funding programs, etc. In addition, we have a statewide GIS list serve and a listing of GIS professionals and users called our "Who's Who in GIS." Lastly, we publish a free newsletter.

Finally, the New York Statewide Orthoimagery Program goal is to continually obtain imagery on a regular basis. What kinds of challenges are being encountered, such as in developing specifications, funding, storage, and distribution?

The specifications were performance based. A work group composed of a broad spectrum of talented individuals from around the state determined our requirements. Our goal was to have a program that met the needs of local government so an area would not have to be flown more than once, and to take advantage of the contract administration and quality assurance that the state could provide for these types of contracts. As such, we deferred to the wishes of the local governments if a conflict arose over the type of imagery to be captured for an area.

The other part of the decision process was establishing a program that we thought that we could afford to fund on an annual basis. In the end, we agreed to provide 2' panchromatic imagery for non-urban areas and 1" natural color for urban areas. State agencies and local governments could upgrade to

meet their needs and only had to pay for the differential in the cost increase.

Distribution to governments was fairly easy and done by shipping the data on hard drives to the counties, who, in turn, distributed it to their municipal governments. Distribution to individuals was done through downloads or viewing on an application we developed for the Clearinghouse.

The major challenges for us were quality assurance, for which we used staff members and the NYSDOT; project management; the cost-sharing agreements with other governments; and, most importantly, the funding. Most governments do not understand the effort required to run this type of program. It is substantial both in terms of time and manpower.

However, you can't have a program without funding. We were fortunate to have a very imaginative boss who used diverse funding solutions in the early years of the program. Now that the data has been used over and over again for many state and local government applications, it has been part of our agency's base budget and, hopefully, will receive an annual funding allotment that will enable us to fly one quarter of the state each year.

For more information on the New York State GIS Clearinghouse, visit their website at www.nysgis.state.ny.us/

Interview conducted by Keith Caldwell.

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