

## GIS and the Surveyor

By Tim Burch

Land surveying has been a profession as long as time itself. From cavemen setting out their territories to the staking out of modern detailed subdivisions and developments, land surveying has always played an important role in the defining of boundaries.

With today's uncertain economy, property ownership remains a solid and certain investment. It is critical to public and private owners alike that the boundaries of property be defined accurately. In recent years, the development of geographic information system (GIS) databases has raised the importance of the well-defined base map provided by surveyors. It is this step in the development of GIS databases that is the most critical. However, this crucial step is often overlooked.

Many different types of personnel for various reasons use GIS databases, as the information contained in a GIS database covers many areas and disciplines. The fact is the majority of this information is collected and used by non-surveyors. For example, the location of a house to nearby fire hydrants is critical to emergency workers. However, the precise location to the smallest measurement is not necessary. However, the location of the same house to the property lines needs to be very precise.

That same hydrant used for emergency purposes also needs to be located with closer accuracy to property lines to ensure its position in

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## Digital Township Plats Online

By Bob Bailey

Digital images of Federal Township Plats for the State of Illinois can now be accessed via the Internet. Illinois State Archives has posted all 3,478 Federal Township Plats (record series 953.012) at our website: <http://landplats.ilsos.net/flash/welcome.html>.

These certified copies originally were transferred from the U.S. Surveyor General to the Governor of Illinois in 1865. Later they were turned over to the

Illinois Secretary of State for deposit at the State Archives in 1957.

Since that time they have received considerable use, particularly by land surveyors and also by a variety of other professionals such as archeologists, engineers, environmentalists, geographers, geologists, and historians. Family historians and genealogists in increasing numbers have consulted them as well for the visual representations they provide of ancestors' home sites close to the times they were settled.

The plat images were digitally scanned by a contracted vendor on-site in Springfield. Funding for this purpose was provided by a grant from the

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## The Editors' Corner

By Ruth Anne Tobias and Keith Caldwell

We want to highlight two different communication issues this summer. The first is just a reminder about how useful email communication is to a professional group when an important piece of legislation is in the pipeline. Notice of this spring's flurry of activity around the surveyors' legislation was sent organization-wide within minutes, allowing monitoring and amendments in favor of the GIS profession. We should remember to thank our members—especially Ken Lovett—for bringing an important matter like this to our attention.

This effort also enhances our awareness of issues that need to be brought to a wider audience and developed more fully. Hence, our feature article on GIS activity in this edition, from both the professional surveyor viewpoint and from a GIS practitioner viewpoint.

We would venture to say that most GIS practitioners are not fully aware of the differing uses each group makes of GIS activity. Survey information for instance, is a critical component of a cadastral base layer. A positive and constructive relationship between the GIS and surveying professions is beneficial

in the creation of this important base layer. Look for further development of this topic at the Fall Conference!

The second communication issue deals with putting *Illinois GIS Notes* online. Starting with the winter 2004 edition, our newsletter will be available online only to the membership. It is always put online now, but we hope to make it available in our new *Members Only* section. It will stay as a *Members Only* feature until the subsequent edition is available. Details about the *Members Only* section of ILGISA's website will be forthcoming both through email and a letter.

Going online has several advantages. First, it will save money for the association, which will enable us to keep dues increases to a very modest level. Second, we will be able to provide live links to sites mentioned. Third, it will be available more quickly.

For those who wish to continue to receive a print copy, there is a form on page 11 for you to notify the association of your preferred delivery method.

*Ruth Anne Tobias is Editor of "Illinois GIS Notes" and a Research Associate with the Center for Governmental Studies at Northern Illinois University. Keith Caldwell is co-Editor of the newsletter and is the GIS Applications Supervisor for the Lake County GIS/Mapping division.*

**Mark your calendar for the fall "GIS in Illinois" conference November 17 and 18 at the Lisle Hilton.**

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Please direct comments, questions, and news items to the ILGISA secretariat's office above or to [taylor@niu.edu](mailto:taylor@niu.edu).

#### **Editors**

Ruth Anne Tobias  
Northern Illinois Univ.  
Keith Caldwell  
Lake County GIS

#### **Managing Editor**

Nancy Place

#### **Graphics**

Richard Vaupel  
Vaupel Graphics

## ILGISA Elections This Fall

The ILGISA Nominating Committee is soliciting names of persons to be considered for election by the ILGISA membership this fall. We are seeking candidates for three directors and the President-Elect.

The ILGISA Board of Directors is elected from the membership according to the By-Laws of the association. The board consists of five elected directors and the President, President Elect, and Past President.

Board members Ruth Anne Tobias and Keith Caldwell will be entering the second year of their two-year terms this fall. Up for re-election are current board members Kingsley Allan, Nina Savar, and Zorica Nedovich-Budic. ILGISA's current President is Ken Lovett; Robert Krumm is the current President-Elect and will take office in the fall; and Larry Gunderson is the Past President.

Nominations for board members and for President Elect will be taken over the summer—watch for an email message—with voting ballots to be sent out in early fall. Names and addresses of potential candidates must be submitted by August 1.



## One Man's Wrench Is Another Man's Hammer — *The Use and Misuse of Tools*

*Notes from the desk of  
Ken Lovett, ILGISA President 2002-2003*

I know I'm guilty of it. I'm working on a project and I need a hammer. However, the only tool in sight is that pipe wrench I just put down. So, not wanting to walk across the room, I grab the wrench and beat on this thing I'm trying to fix. (I'm certain that if my dad saw me do this, he'd take away the wrench!) Alas, it worked, and I'm satisfied with the successful substitution ... this time.

Sometimes tools are interchangeable, and then again, sometimes they're not. As GIS technology becomes more sophisticated, software vendors are adding more functions to their 'tool belt'.

Like a sharp knife, some of these new tools are quite wonderful. However that same tool, just like a sharp knife, in the hands of someone who doesn't know how to use it properly can cause some problems.

Before I lose you, let me get to the point of these analogies. Over the past several months, bills have gone through the state legislature that could have an impact on how GIS technology is used in Illinois. These bills have made me realize that some dialog about GIS tools needs to occur.

At ILGISA our role is to inform our membership and provide opportunities to educate users about GIS tools and how to use them. So, in that vein, I thought it would be appropriate to try to get everyone on the same page about how we should use GIS technology tools—and how we should avoid misusing them.

The potential for misuse can often originate from a misunderstanding of accuracy and precision or unfamiliarity with the data's origin. Computer-based technology allows GIS users to be very precise (i.e., zooming in really close) when viewing and editing data. High precision, however, doesn't necessarily equate to high accuracy. (If

your dad sees you misuse these terms, he should take away your GIS!)

Likewise, unfamiliarity with data can also get us into trouble. Meta-data can guide and direct us on the uses and limitations of a data set—if in fact we actually accept the responsibility to take the time to use it. Our tool belt should include an FGDC-compliant meta-data application. Mixing data sets with different scales may be appropriate, as long as we understand the limitations of doing so.

Finally, the terms we use for our tools are equally important. A hammer to one person may be a mallet to another. In a GIS, a parcel data set that represents bearings and distances of property lines is not a substitute for a surveyed legal description of that same property.

GIS applications include survey-oriented tools, and a GIS user could even create survey-like documents from their data sets. However—don't be mistaken—this is not a legal survey and should not be presented as such.

On the other hand, GIS users who are not registered land surveyors should not be concerned about building and maintaining high-quality, survey-like data in their system. The data in a GIS is merely a representation of a survey—our meta-data and map disclaimer statements should make that clear.

GIS technology provides us with some pretty cool tools, we simply have to make sure we don't ask for a wrench when a hammer is the tool we really need. This should give us the freedom to continue to create and work with our data without unintended results (and our dad won't take our tools away). Look for some 'tool time' sessions at the upcoming *GIS in Illinois* conference in November.

(continued from page 1)

relation to easements and right-of-way lines. The same parcel involved in that emergency situation is also subject to information such as zoning, voter wards, and school districts.

*The partnering of Professional Land Surveyors and GIS professionals will ultimately ensure the reliability of the GIS database system overall.*

All of this information can be more reliable if based on data that are collected by more accurate methods. This base mapping for parcels, easements, and right-of-ways is a critical step for successful GIS database creation and utilization.

Many GIS database installations are initiated using digitized maps or highway plans forced together by a method called "rubber sheeting." This method has been seen as a quicker and less expensive path to get base mapping together.

The trade-off for a less expensive startup, however, is significant inaccuracies. These are sure to rear their ugly heads with future data collection of higher accuracy information. This is where the expertise of Professional Land Surveyors can be utilized to assist in establishing quality base mapping with high accuracy and precision.

The initial step for establishing quality base mapping is implementation of a high accuracy control point network. This network of first order survey grade monuments is necessary to establish a coordinate system in which the GIS information is based.

Control monuments conforming to National Geodetic Survey (NGS) specifications are submitted to NGS for referencing into the National Spatial Reference System. This ensures these

monuments are available to the public and will be maintained with any future adjustments to the coordinate system. These

monuments will be utilized by surveyors to locate existing and future surveys and subdivisions for submission to the GIS database.

Another significant step in the creation of a successful GIS database is the organization of existing surveys, subdivisions, easements, and rights-of-way. This task consists of researching and compiling existing documents and locating key points of the properties to establish common corners and lines.

It is this determination of property corners and lines that makes it imperative that a professionally licensed land surveyor completes a review of all key elements of the properties in question. While most properties will fit together with little or no problem, it is impossible to know when such instances of gaps or overlaps will occur. A licensed land surveyor has the knowledge and training to determine what the outcome of such occurrences might be.

In this post 9-11 world, homeland security has become a substantial issue with local, state, and federal government. In fact, a Congressional mandate is now in place requiring Security Assessment for municipalities of a certain size.

The deadline for this compliance is fast approaching—December 2003 and June 2004, depending on the size of the municipality.

Utility atlases will be a critical component in conducting such assessments and are an important item related to homeland security. These atlases track the location of municipal utilities (storm sewer, sanitary sewer, or water main) or private utilities (electrical, telephone, gas, or cable systems).

Stormwater and water main facilities will be mapped and analyzed for contamination opportunities as well as the locations which these facilities serve. Certainly, the surveying profession will be integral in preparing the mapping required by these mandates as they accurately identify the locations of said utilities and the relationships to the properties they serve.

Professional Land Surveyors play a vital role in the successful implementation of a GIS database. The surveying professional offers the most precise data by utilizing his/her skills and providing accurate information in a timely manner.

The partnering of Professional Land Surveyors and GIS professionals will ultimately ensure the reliability of the GIS database system overall, as it will provide for more accurate information in the long term for reliable future planning and application.

*Timothy W. Burch, P.L.S., is Business Development Manager for SEC Surveying Consultants.*

(continued from page 1)

federal Institute of Museum and Library Services. The Secretary of State's Department of Information Technology (DOIT) has taken the compressed TIFF images produced by the vendor and loaded them onto the State Archives server for Internet access.

DOIT staff have provided a multi-tiered access platform for the Federal Township Plats:

- An introduction provides a project overview.
  - A history section outlines how the U.S. Land Ordinance of 1785 provided for the surveying and sale of federal public lands in the West.
  - The link to "About the Township Plats" defines a legal township and broadly covers the natural and man-made features the plats describe.
  - A section on the rectangular survey system gives the basics for surveying townships in relation to orientation and measurements.
  - "Georeferencing" addresses researchers who want to fix real world coordinates onto our digital images through the use of GIS software.
  - A link to the State Archives Public Domain Land Sales Database enables users to locate the first purchaser of any given Illinois public domain parcel.
- It should be noted here that at our Public Domain Land Sale Database site, there is a link to the Federal Township Plats site. Furthermore, our Public Domain Land Sale Database site contains a link to the Federal Land Patents Database of the U.S. Bureau of Land Management. Land patents were issued by the federal government when public domain parcels had been paid for in full.
- A legend graphically depicts the various symbols and measurements the surveyors employed while drawing the plats.
  - A "Viewing Tips" link offers helpful advice for users maneuvering through the Federal Township Plats Web site.
  - The link to "View the Plats" (Figure 1) takes the user to the actual visual images of the digitized plats. An introduction at this link explains that in most instances individual townships have more than one certified plat. Users have their

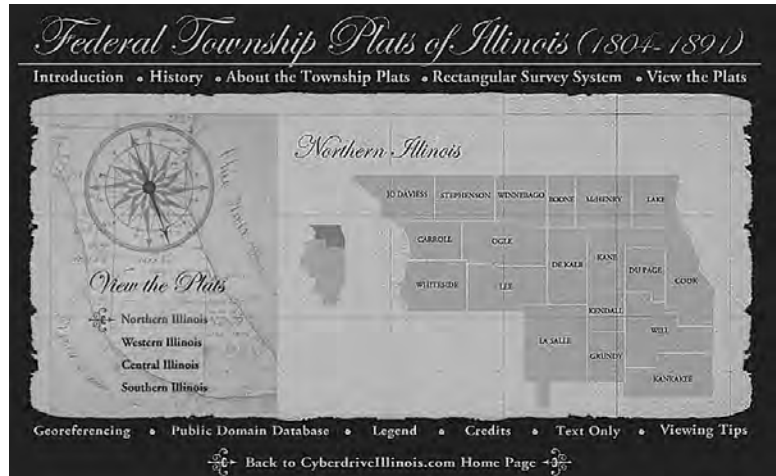


Figure 1. Interactive "View the Plats" screen at the Illinois State Archives website: <http://landplats.ilsos.net/flash/welcome.html>.

choice among multiple plats for most townships. Each certified plat has been dated by the U.S. Surveyor General.

The user is presented with four options to view the plats. Either the northern, western, central, or southern portions of the state can be selected. After one of these geographic areas has been chosen, a map of the particular region will be displayed. Individual counties are delineated and their names are printed within.

Once a given county has been selected, a map of that county will be displayed which will show grid coordinates as well as political township boundaries. The user can select the appropriate Federal Township Plat(s) either by legal township and range grid coordinates or by political township designation. Once the appropriate plat has been chosen, a compressed image of it will appear on the user's screen.

Built in controls allow the user to zoom in on the portions of the township plat that he or she is particularly interested in. The user can print copies of the images as they appear on their screens as they choose.

Prior to this project high resolution images of these Federal Township Plats were available only at the Illinois State Archives in Springfield or in Washington, D.C. in their original form. Now they are available throughout Illinois, across the country, and around the world by way of the Internet.

*Bob Bailey is a Senior Archivist with the Illinois State Archives and can be reached at 217-782-3674 and [bbailey@ilsos.net](mailto:bbailey@ilsos.net).*

# Professional Land Surveyors and GIS Practitioners: Mutually Exclusive or Codependent?

By Randy Nydegger

As a Professional Land Surveyor and GIS practitioner, I have the unique opportunity to look at both the services of the land surveyor and how the GIS profession utilizes them, as well as how GIS is dependent on the surveyor.

Many areas of a GIS require a surveyor's support. The most apparent is the control network, the foundation of spatially referenced components in a GIS. The spatial reference is normally in one of the many map projections used by the GIS profession; i.e. State Plane, Universal Transverse Mercator (UTM), latitude and longitude, or other.

The surveying profession almost exclusively uses the Public Land Survey System (PLSS) to reference property and boundary surveys that represent real property ownership, title, or possession as a part of the cadastral (property boundary) fabric. The GIS practitioner almost exclusively develops the representations of this cadastral fabric from the surveyors' plats of surveys.

A spatially referenced network such as a cadastral mapping project is a result of reference ties to aerial photography or other remote sensing through aerial triangulation of known ground referenced control points. The triangulation process compares the known distance, bearing, and elevation to the flagged or reference points within the photography. They are mathematically balanced or rectified to provide a network of points that will be used to remove the tilt and distortion from aerial photography or other remote sensing products. This is commonly called ortho-rectification of photography.

The surveyor plays a key role in creating a balanced control network for ortho-rectifying the photography. After ortho-rectification, the GIS professional can use the photography in the development of a cadastral parcel map, measuring areas or distances (within the limits of its accuracy) on a photographic backdrop for construction projects and other uses. Because the byproduct of triangulation and rectification is the creation of a coordinate system, both the surveyor and GIS practitioner can now share information

for a common spatial area. In addition to cadastral mapping, they might utilize a common projected coordinate system for state and local roadways, utilities, and large construction projects.

As these projects are developed it is apparent that there is a different accuracy requirement for representing a boundary or layer of data on an ortho-rectified photograph. This utilization and statutory requirement for accuracy is where we separate the Professional Land Surveyor and GIS practitioner duties.

The surveyor is statutorily required to review physical evidence such as recorded documents of plats, deeds, surveys, and judicial judgments in the pursuit of support of the resolution of boundaries and any conflicts therein through re-survey. The level of accuracy and closure precision necessary for property surveys varies as established by the previous surveys and statutory requirements. The surveyor views a boundary mainly as, but not limited to, that which is a representation of possession or ownership of real property. Possession and ownership are not necessarily the same. A boundary in the eyes of a surveyor can show possession, ownership, easement use, platted location, or deed rights.

The GIS practitioner's goal is to provide an accurate representation of a boundary or edge that defines an area of interest, whether the boundary is known or unknown. These boundaries may not coincide with any possession or ownership rights. They may

Table 1. Accuracy Standards for GPS Surveys vs. Horizontal Control Surveys

GPS Orders of Accuracy*	Allowable Error (95% Confidence Level)	Control Survey Order of Accuracy**	Allowable Error
AA	0.3 cm + 1:100,000,000	-	-
A	0.5 cm + 1:10,000,000	-	-
B	0.8 cm + 1:1,000,000	-	-
C-1	1.0 cm + 1:100,000	First	1:100,000
C-1-I	2.0 cm + 1:50,000	Second - Class I	1:50,000
C-2-II	3.0 cm + 1:20,000	Second - Class II	1:20,000
C-3	5.0 cm + 1:10,000	Third - Class I	1:10,000
		Third - Class II	1:5,000

\*Federal Geodetic Control Committee "Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques," Version 5.0, Rockville, Maryland: U.S. Department of Commerce, NOAA, 1989.

\*\*Standards and Specifications for Geodetic Control Networks, Rockville, Maryland: U.S. Department of Commerce, NOAA, 1984.

cross different planes of existence, such as subsurface, surface, or air. Both the Professional Land Surveyor and GIS practitioner must meet a level of accuracy that is pertinent to the scope of their projects.

Surveyors are constantly mixing different levels of accuracy in survey plat closures in order to achieve a level of acceptable accuracy and precision to the physical evidence on the ground. Table 1 shows the relationship between two standards of acceptable accuracy utilized by surveyors as related to different survey methodologies: global positioning systems and conventional horizontal traverse techniques.

Conversely, the GIS practitioner needs accuracy and precision for the foundation of mapping at multiple map scales. But the manipulation of the survey within the mapping and analysis environment of the GIS falls under a different standard of accuracy; that is, a map accuracy standard based on map production. Table 2 shows NSPS model standards for Land Information/Geographic Information System surveys. Approved 3/12/02, Section F.

Table 2. Minimum Horizontal Accuracy

Acceptable Base Mapping Scale of LIS/GIS	Positional Accuracy Statistic of Survey Data
1" = 20 ft.	0.7 feet
1" = 50 ft.	1.7 feet
1" = 100 ft.	3.5 feet
1" = 200 ft.	6.9 feet
1" = 400 ft.	13.8 feet
1" = 500 ft.	17.3 feet
1" = 1000 ft.	34.6 feet
1" = 2000 ft.	69.2 feet

The surveyor and GIS practitioner both look at precision of data, but each have a different need. The surveyor will almost always be pursuing accuracies for property boundary surveys in the sub-centimeter range. In a GIS environment the precision ranges from highly accurate and precise in the millimeter range to very coarse and general in the tens to hundreds of meters.

The Professional Land Surveyor needs the expertise of the GIS practitioner's ability to take totally unrelated map and data elements and combine them into a usable and reasonably accurate map or data layer with a normalized level of accuracy for analysis. The GIS practitioner needs the control and precision of highly

accurate surveys that are developed by the Professional Land Surveyor for the foundation of many ortho- and small-scale mapping operations.

*Both the Professional Land Surveyor and GIS practitioner must meet a level of accuracy that is pertinent to the scope of their projects.*

This interrelationship with accuracy and precision, and surveying and GIS, has raised concerns that the GIS practitioner practices land surveying or the land surveyor must over-

see that every GIS boundary created meets the statutory requirement of boundary law.

But the manipulation of precise cadastral surveys in the GIS mapping and analysis environment does not constitute the practice of land surveying (as long as no new real property rights are changed). The GIS practitioner is merely managing an asset that is already in existence. Boundaries developed for GIS use – such as those that display political, social, or physical natural resources – that are not changing real property rights do not need a land surveyor in the production process.

For Professional Land Surveyors and GIS practitioners to be mutually exclusive there should be no need to provide support to each other. We need to see ourselves as being codependent on each other. Each group has a level of expertise and skill that can complement the other's. With the ongoing growth in GIS implementations throughout the state and the ever-changing electronic data collection industry (GPS, robotics, software...), the level of cooperation must increase to prevent the misuse of public trust and security.

Public land surveys and property boundary surveys will be tied to State Plane Coordinate and or latitude and longitude over time, it is just a matter of how. County governments are utilizing GIS to drive the development of georeferenced mapping (State Plane, latitude and longitude...). So who is best to provide that relationship tie from the PLSS to the Spatial (State Plane, latitude and longitude...): the Professional Land Surveyor. And who can provide the best presentation of natural resources, cadastral parcels and satellite overlay: the GIS practitioner.

We are codependent on each other's abilities to provide the best possible product to the public and our customers. At a time in our history when cooperation and sharing information should be at an all time high, we should be known as two professions that have the tools, knowledge, and direction to coordinate and cooperate in the creation and distribution of shared public information.

*Randel Nydegger is the WinGIS Program Manager for Winnebago County.*



## The National Map Program

*A conversation with Barb Ryan*

Barb Ryan is the USGS Associate Director for Geography. Her keynote address at the spring conference generated considerable interest—and questions—among the membership regarding how *The National Map* will impact the Illinois GIS community.

*What is “The National Map” program?*

*The National Map* is a partnership effort led by the U.S. Geological Survey (USGS) to develop and portray a consistent framework for geographic data, information, and knowledge. It is a network of distributed databases (federal, state, and local) of continuously maintained base geographic data for the United States and its territories that will serve as the nation’s topographic map for the 21<sup>st</sup> Century. More information about *The National Map* is available at [www.nationalmap.usgs.gov](http://www.nationalmap.usgs.gov).

*How is GIS involved in The National Map and what will The National Map do for GIS?*

*The National Map* provides access to nationally consistent, complete, and current base geographic information that serves as the foundation for GIS-based applications. Governments depend on base geographic information that describes the Earth’s surface and locates features.

This information is used for economic and community development, land and natural resource management, delivery of health services, and ensuring public safety. It is also the foun-

ation for studying and solving geographically based problems.

These data are the foundation for long-term monitoring, analysis, process-modeling, and prediction necessary to understand the nation’s landscape. Geographic information also underpins an increasingly large part of the nation’s economy.

*Why should The National Map and maps/GIS, in general, be considered part of the new infrastructure?*

The missions of state and local governments involve the management and support of people, infrastructure, and resources that are geographically distributed. Therefore, these governments are greatly dependent on geographic information, geospatial data, and maps.

Geographic information needs to be managed as a long-term investment and asset so that it is readily accessible, sharable, consistent, and up-to-date. Building it once, and allowing many to use it, like other infrastructures (i.e., the nation’s interstate highway system) avoids everyone having to build their own.

In the GIS community, we often speak of data acquisition in terms

of “collect once and share often.” Ultimately, resources can be better leveraged with this approach.

*How is The National Map important for the Illinois GIS community?*

One of the key aspects of *The National Map* is the creation of partnerships and the ensuing reliance on sharing data, technology, and information to best serve the geospatial needs of the nation. *The National Map* seeks to build distributed databases through partnerships with federal, state, and local governments that collect and maintain higher resolution, more current data.

The USGS and the National Imagery and Mapping Agency (NIMA) have joined forces to collect data for the nation’s major urban areas. These areas, although covering less than 4% of the nation’s land mass, are home to more than 180 million Americans and much of our transportation, banking, communications, industrial, and other critical infrastructure.

The USGS would like to partner with the State of Illinois to jointly fund the acquisition of aerial photography and the production of Digital Orthophoto Quads (DOQs). These data will be placed into the public domain and will be available to all users.

In Illinois, the metropolitan areas of Chicago, St. Louis, and Springfield are on the urban area list. We intend to recognize and respect the work of local governments that collect and maintain current high resolution data and to work together to schedule data collection and production projects that pool resources and acquire and generate data that satisfy all levels of government.



USGS is also entering into partnerships with states that have central distribution mechanisms for public domain data. The Illinois State Geological Survey oversees the Illinois National Resources Geospatial Data Clearinghouse which already houses and distributes the USGS Digital Orthophoto Quads for the state. Activities such as this will serve as a starting point for expanded partnerships within Illinois. *The National Map* would direct users nationwide to this clearinghouse for DOQ data for the State of Illinois.

*One of the main goals of the program is to develop hyper-partnerships with other federal agencies. How are other federal agencies contributing to The National Map?*

*The National Map* is part of a broader series of federal initiatives. Federal responsibilities for geographic information coordination have been established by the Office of Management and Budget in Circular A-16. This circular establishes a coordinated approach to electronically develop the National Spatial Data Infrastructure (NSDI) through the Federal Geographic Data Committee (FGDC).

The USGS has been assigned the lead responsibility for several data components including hydrography, elevation, imagery, and geographic names. The other themes of *The National Map*—transportation, structures, land cover, and boundaries—will be created, maintained, and disseminated in cooperation with other partners, including federal agencies, through contracting and formal data sharing agreements.

For example, the Bureau of the Census is working to incorporate

updated transportation and boundary data from the TIGER database into *The National Map*. Also, the National Oceanic and Atmospheric Administration (NOAA), the U.S. Environmental Protection Agency (EPA), and the Forest Service are all working to incorporate land cover into *The National Map*.

*How can state and local governments best participate in The National Map, and what will be involved in the process?*

State and local governments interested in exploring partnership opportunities can contact the USGS geography liaison for their state. The following link will direct you to the current list of geography liaisons: <http://mapping.usgs.gov/www/partners/crreps.html>. Current partnership activities are summarized on the partnership pages of *The National Map* website at <http://nationalmap.usgs.gov/nmpartnerships.html>.

*If there are difficulties in finding/working with partners, what is the best way to overcome them?*

The USGS has had a 100-year history of working with partners, but our role in national mapping is changing from that of the sole data producer to ensuring the availability of data standards, providing data integration and access capabilities, and stimulating applications of geographic information to address critical policy and management issues.

To make sustainable partnerships for data stewardship feasible, the USGS is seeking opportunities to both co-locate our workforce with our partners on the landscape and develop incentives for working with our partners. If difficulties arise, any potential partner

should feel free to contact our state liaisons at <http://mapping.usgs.gov/www/partners/crreps.html>.

*If there are restrictions in local data use, how will local data get distributed to The National Map program?*

*The National Map* will generally provide public domain geographic data about the United States and its territories. However, *The National Map* will be a foundation of information to which partners in state and local governments and the private sector can contribute core feature content. Proprietary or distribution-limited datasets may also be linked to provide access to higher resolution data, additional (non-base) features, and enriched attribute information.

*What is the projected timetable for the first round of products from The National Map, and which areas will be mapped first (referring to partnership projects or including the urban areas)?*

Data are already being served through *The National Map* at [www.nationalmap.usgs.gov](http://www.nationalmap.usgs.gov), which provides access to data from the USGS and its partners, including state and local governments.

Data from new partnerships and new or improved national coverages are continually being added. National datasets for elevation, hydrography, orthoimagery, geographic names, and land cover are currently available. Selected coverages for higher resolution data, like orthoimagery for some urban areas, are also available.

*Interview conducted by Ruth Anne Tobias and Keith Caldwell.*



## ILGIC Activities Update

By Sheryl Oliver



Scott Kennedy, Director of Technology for the State of Illinois, will be in attendance for the October ILGIC meeting. Scott is interested in participating in a forum where he can meet members of the Geographic Information Technology (GIT) community and dialogue with individuals in an open environment.

He is eager to receive input on issues, concerns, challenges, and strategies in preparing and implementing a vision for GIT in the state.

Scott was appointed by Governor Blagojevich as the Director of Technology, and he heads up the Information Technology Office. Prior to this appointment

Scott worked for the Governor's campaign as Director of Operations, which included financial management, statewide operations, and technology. Before working for the Governor, Scott helped start up the company of Wilhelm and Conlon Public Strategies, managing all internal operations.

When asked what major challenges Scott faces in his position as Director of Technology, it came as no surprise that it is those thorny natural barriers that interfere with agencies collaborating to provide services to its citizens. He would like to see agencies, such as human services as a category, working toward providing common solutions.

Scott feels that the state is under-prepared to take advantage of collaboration, but he is working on changing that. Major issues that filtered to the top of the discussion were looking to post 9-11 network security and law enforcement and homeland security. Scott is also very interested in coordinating utility functions, which broadly includes network, data, and support functions, thus allowing agencies to focus on their mission.

I'd like to thank Scott for candid conversation and his genuine interest in learning and working with the GIT community

*The next ILGIC meeting is Tuesday, October 28, 2003, from 10:00 a.m. to noon. Location to be determined.*

## 2002 Dahlberg Distinguished Achievement Award Recipient

### *Darryl Williams*



Darryl Williams was the USGS National Mapping Division representative to the State of Illinois for most of the 1990s. During that time he vigorously represented Illinois interests within USGS and made sure that Illinois knew about all of the opportunities for working with USGS. He worked tirelessly to see that digital versions of the quadrangle maps were completed, and then the image versions of these maps, the digital raster graphics. Most recently, Darryl was instrumental in securing USGS cooperation for the production of the first statewide digital orthophoto coverage, working closely with IDOT and IDNR.

Darryl attended almost every ILGISA conference during his years as the Illinois NMD representative. He staffed the USGS information booth for the convenience of attendees, gave presentations, and helped bring speakers on special topics to our conferences.

Darryl's gift of service to Illinois extended beyond the already broad scope of the National Mapping Division. His contributions to the Illinois GIS community have been made with professionalism, energy, dedication and a genuine commitment to bring the best of his agency's programs to fruition here to the benefit of many. For these reasons, Darryl was awarded the Dahlberg award at the fall conference.

*Contributed by Richard M. Hilton.*

## ILGISA *Illinois GIS Notes* Publication Request

*Beginning January 2004*

**I am interested in having the publication, *GIS Notes*, sent to me in paper copy.**

Name

Address

City/State/Zip

Phone  Email

Agency/Company

The electronic version will be sent to you via link on an email when it becomes available. There will not be any difference between the digital (pdf format) and the paper-based edition. ILGISA is concerned with conservation and would like to cut down the printing costs. However, if you still appreciate having the paper-based copy we are more than happy to send it to you, but you must send back this form. You can either fill in the text boxes above and save this to your hard drive, then send as an attachment to [taylor@niu.edu](mailto:taylor@niu.edu), or you can print this form and fax to 815-753-2305.

If you choose not to have a paper-based copy, then you do not need to do anything. Beginning with the winter 2004 issue, the electronic version will be sent to you via link on an email when it becomes available. The newsletter will be available on the website, [www.ilgisa.org](http://www.ilgisa.org), for six months in a password-protected area of the site. All members will be notified of their password and login ID prior to that time. It is hoped that other 'members only' materials can be posted at that location as well to add to current member benefits.

If you have any questions, or concerns, please feel free to call. Have a great summer!

Sherrie J. Taylor  
ILGISA Executive Director  
Center for Governmental Studies  
Northern Illinois University  
DeKalb, IL 60115  
Fax: 815-753-2305  
Email: [taylor@niu.edu](mailto:taylor@niu.edu)

**"Illinois ... moved in to the top spot in the area of Geographic Information Systems and Transportation for the first time. GIS technology or providing data geographically is playing an increasingly critical role in all areas of government.**

**"From road conditions to bike routes, crime reporting to environmental protection, spatially mapping data can provide enhanced services, link interrelated issues and create new efficiencies for government as well as industry."**



**"In 2001, Illinois ranked first in Education and second nationally in GIS. In 2000, the category of education was ranked separately in the areas of K-12 education and higher education. The GIS category was new to the survey in 2001."**

**"This is a highly competitive survey and Illinois is the most populous state among those ranked at the top in these two categories. Initiatives like the Illinois Century Network make Illinois a leader in the nation," Governor Ryan added. "Expanding our learning online provides an expansive list of opportunities for our students, regardless of geographic location or age."**

*Press Release, November 1, 2002 Office of the Governor of the State of Illinois*

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Illinois GIS Association  
Center for Governmental Studies  
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