ILLINOIS GIS NOTES

THE NEWSLETTER OF THE ILLINOIS GIS ASSOCIATION

Working Together: A City-County GIS Partnership

By Adam Aull

For many years the City of Danville and Vermilion County have been developing separate GIS systems. They can't work together because the systems don't mesh—the data for each were not developed to match. Each has its own strengths and weaknesses, but not at the same time. Previous attempts at a countywide geographic information system had stalled from lack of cooperation. Now, that's all in the past.

In June 2001, Adam Aull was hired as the city's new GIS Manager by Mike Federman, who was the Director of Danville's Department of Development Services at the time. Aull teamed with co-worker John Dreher, the city's Community Development Manager, who also serves on the Vermilion County Board. Dreher thought the political climate might be right for another attempt at starting a countywide system. Ted Fisher, Vermilion County's MIS director and long-time GIS user, joined and the 'team' started to talk up this idea. County Board Chairman Todd Lee agreed, and an ad hoc GIS Consortium was formed.

Each member of the GIS Consortium represents a major sector in Vermilion County. For example, the Mayor of Hoopeston represents small towns, and the Assessor of Danville Township represents township government. The consortium realized immediately that a countywide GIS would benefit everyone, and they decided to market the idea on that premise.

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VOL. 4, NO. 1 Winter 2003

Flattening the Earth: Map Projections for GIS in Illinois

By Dr. Christopher F. Pearson

Introduction

Geographical references are the foundation of all geographic information systems. Locational coordinates for data that can be tied to geographic locations are usually given in terms of a projected coordinate; that is, a northing or easting. Northing and easting coordinate values vary based on the map projection from which they are derived.

There are primarily two projections that are used for geographic information systems in the United States: the Transverse Mercator and the Lambert Conformal Conic. Each state has statutorily defined state plane coordinates based on one of these two systems.

The Transverse Mercator projection and the Lambert Conformal Conic projection are favorites for GIS because they are simple mathematically and are easy to program. The projections are complementary because the Transverse Mercator projection works best for regions that are elongated in the north-south direction, and the Lambert Conformal Conic works best in regions that are oriented in the east-west direction. (Refer to Figure 1 and Figure 2 on page 6.)

All states in the United States have statutorily defined state plane coordinate systems (SPCS)

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The Editor's Corner

By Ruth Anne Tobias

Time to communicate again! And ILGISA has another way for you to keep in touch. The new ILGISA ListServ started this fall on **www.ilgisa.org**. Just click on "Services" and then on "ListServ." All the instructions are there for how to subscribe, unsubscribe, and make the best use of the discussion group with the appropriate "netiquette." We hope that this will make it easier—and, perhaps, for people like me, less intimidating—to use a discussion list.

ILGISA wants this to be a way for members to be able to find solutions to hardware and software problems from other members; find sources for data; ask about procedures used and applications developed; and generally push the envelope a little for finding new and creative uses for all the data and software residing in your organizations.

We want you to communicate with each other and the whole organization. Let us know what problems there are, what solutions were found, what hot-button issues are out there, and how we can continue to make it easier for us all to do our jobs.

There are now more than 700 members in ILGISA. We hope to grow the organization more, including adding some less traditional members such as county board and city council members; public health workers and researchers; and education workers, including teachers, administrators, and researchers. This means that it is less likely that everyone will be able to come to the spring or fall conferences to exchange ideas, even though now more than 200 come to each.

So our means of communicating through *Illinois GIS Notes* and the website become even more important. Let us hear from you if you have ideas about articles you'd like to see, topics for which you need more information, and links for the website. We like to be here for you!

Ruth Anne Tobias is Editor of "Illinois GIS Notes" and a Research Associate with the Center for Governmental Studies at Northern Illinois University.

Board Member Profile

ILGISA Board Members are elected from the membership and serve two-year terms on the eight-member board. ILGISA Board Member Ruth Anne Tobias was re-elected to her seat on the board. Keith Caldwell took office at the fall conference.

Keith Caldwell 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 11 years. The GIS program brings him into contact with engineers, planners, lawyers, landscape architects, biologists, hydrologists, county board members and many others in federal, state, county, municipal, and other organizations.

His work includes overseeing and implementing data-sharing agreements with numerous data-sharing partners, developing 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. Because of this exposure Keith has awareness of the work environments of the many GIS practitioners and users who look to ILGISA for networking, experience sharing, and training.

Keith has been active in ILGISA since 1994. Over the years he has participated in all of the volunteer activities open to members, including poster exhibits, organizing and moderating sessions at the conferences, giving presentations, and serving on both the nominating committee and the conference committee. He has also co-authored an article for a recent edition of the ILGISA newsletter.

Keith would like to build on the great foundation that's already in place by encouraging the continued development of the ILGISA website as a year-round networking resource for members.

GIS Workshop for Teachers

By Ruth Anne Tobias

The ILGISA organization offered its first free workshop for public school teachers at the fall conference in Lisle. Approximately 50 K-12 teachers spent their afternoon taking advantage of this opportunity to learn how GIS can be incorporated into their curricula to enhance students' real world problem-solving abilities. And that was with 60 percent of them not knowing what GIS really meant!

GPS & GIS The Wave of the Future in Your Hands

The workshop was presented by the GIS2GPS team of Nancy Gorny, from Naperville North High School; Ed Gorny, from Jefferson Junior High; Denis Kazelas, from Marist High in Chicago; and Glenn Polloway, from Komarek School District in North Riverside.

The GIS2GPS team has created concepts, ideas, lesson plans, and materials for teaching GIS and GPS that can be found on their website at **www.gis2gps.com.** These valuable tools were generated with the help of the ESRI K-12 Education program, under the direction of Charles Fitzgerald in Minneapolis, as well as other sponsors.

As a matter of fact, ILGISA likes what the team does so well that we gave them a service award at the fall conference for bringing GIS and GPS to Illinois schools. Through their efforts, students can explore the possibilities of the technologies available and learn how they can be incorporated into community planning, workforce development, demographic analysis, marketing, and many other career fields.

The GIS2GPS team emphasizes the value of GIS—finding patterns, combining data to make better decisions, solving problems, and answering the where, why, and how of location—for students' learning processes.

GIS and GPS can be integrated into math, science, language arts, and social studies classes. These "hi-tech" tools provide a way to enhance problem-based learning with authentic assessment. Besides, using them is fun!

Elementary school teacher Mrs. Rita Schuble was enthusiastic about the workshop. She feels that "geography is part of our everyday work" and schools can use tools like this to make the kids more aware and more interested in the world.

Mrs. Schuble teaches at Shields School in Chicago, which is known for its willingness to try educational innovations. GIS technology is at the "cutting edge" for elementary schools, and she, for one, will make recommendations at School Improvement Planning Time on ways to bring this technology more into the classroom. Her only disappointment in the workshop was that it wasn't hands-on!

The GIS2GPS team is going to present the workshop at the upcoming spring conference in Bloomington, and we hope to convince them to do it again next fall.

Thanks to Nancy, Ed, Denis and Glenn for helping to introduce the world of GIS to the next generation of users.

The Process of GIS and GPS

- *Think of a place or topic ...*
- *Formulate questions ...*
- *Develop maps ...*
- *Explore the patterns that appear ...*
- *Enhance the data and modify the analysis ...*
- *Ask new questions …*
- *Repeat ...*

A Final Thought to All Involved With GIS

GPS and GIS are the next great leap in technology. The schools of Illinois in everyone's best interest must refuse to be left behind with these great new innovations at their fingertips. Staying in the footsteps of these cutting edge technologies will usher Illinois teachers and guide students to bigger and better things as they take these bold new steps into the 21st century.

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A term was coined, "potential beneficiaries." The list of potential beneficiaries grows each day and includes school districts, engineering companies, and the public.

To convince political leaders and the public that they were potential beneficiaries, Aull and Dreher created a road show—a PowerPoint presentation tailored to the needs of the group being addressed and which includes a live ArcGIS software demonstration.

Figure 1. Property lines and other linear features on an existing map of the City of Danville do not align with features on the corresponding aerial photograph.

So far, the efforts of Danville and Vermilion County have all the earmarks of successful GIS implementation in an organizational setting. They have self-starters, interdepartmental cooperation, inclusive work groups, and a 'champion' who strongly supports GIS implementation. Taking it on the road to generate support adds another piece to the GIS puzzle.

Vermilion County and the City of Danville are working together to accomplish something larger than what each already has. Their publicity campaign will have two results: buy-in from local entities to grow the countywide GIS and a new research project.

A recent survey of Illinois counties revealed that 24% are actively using GIS, 43% are in the process of GIS development, and 33% don't have a countywide GIS in place.

Figure 1, from the 'road show' PowerPoint presentation, illustrates where the City of Danville is currently. The property lines do not fit the aerial photo, nor do they align properly. The photograph is from the Illinois Department of Natural Resources and is in UTM coordinates, while the City of Danville uses state plane coordinates.

Another layer on this map is a water utility network built on top of an inaccurate base map, which compounds the error. If this information were to be given to a third party for data creation, the error would grow exponentially larger. There is no way to stop or correct it. Only by beginning with a correct base layer can additional layers be created.

While crafting one of his presentations, Aull decided to find out what *all* the other counties in Illinois were doing—as encouragement for his own county. Now, ILGISA members and others in the GIS community can benefit from the many hours of phone calls and emails he made to get the information. As shown in Figure 2, the current study reveals that 24 of 102 counties are actively using GIS, 44 counties are in the process of developing GIS, and 34 counties don't have a countywide GIS in place.

Upon mapping the results of his survey, Aull noticed that most of the user counties, regardless of wealth, lay along the interstate highway system. Interstate highways are the transportation lifeline of a state, much like the railroads of 100 years ago. Aull, an NIU Geography/GIS graduate, wondered if proximity to the interestate was an ingredient in system development. He and Dr. Richard Greene, professor of geography at NIU, are now conducting a correlation study of counties with developed and/ or developing geographic information systems. They are looking at the following as variables that could influence the adoption of a countywide GIS:

- the presence or absence of an interstate highway,
- distance to an interstate measured from each county's geographic center to the nearest interstate,
- per capita income as a measure of county wealth, and
- population density.

Aull and Greene hypothesize that counties may think of GIS development as an economic development tool that will provide the county with another piece of the development puzzle.

In the meantime, the success continues in Vermilion County's GIS development. They have identified several sources of grant funding through the Illinios Department of Transportation (IDOT) and the county's recorder of documents fees, and may also establish a network of subscribers who will pay to access the system.

The County Health Department and the County Highway Department have already pledged $10,000 each as matching funds for an IDOT grant. Public Services and Public Works, as well as the City Council, are also interested in supporting this venture.

The consortium is team-working remarkably well. They are in agreement on what needs to be done, the level of accuracy required, and how they will go about getting it done. They think their needs assessment is relatively complete. No turf wars have erupted thus far, and the group is on track for finding a consultant who will help them implement their ideas.

The success of the Vermilion County GIS will be measured not only by the quality of the system constructed, but by the very size of Aull and Dreher's list of potential beneficiaries, which grows daily as they find GIS applications for nearly every public and private endeavor. Additionally, there will be some new research on county geogaphic information system adoption as a secondary benefit.

Adam Aull, City of Danville GIS Manager, was assisted with this article by Ruth Anne Tobias, "Illinois GIS Notes" Editor. For more information about this project, contact Aull at 217-431-2325 or **AAull@cityofdanville.org**; *or Ted Fisher, Vermilion County Information Services Director, at 217-431-6677, or* **tedf@vercomis.org**.

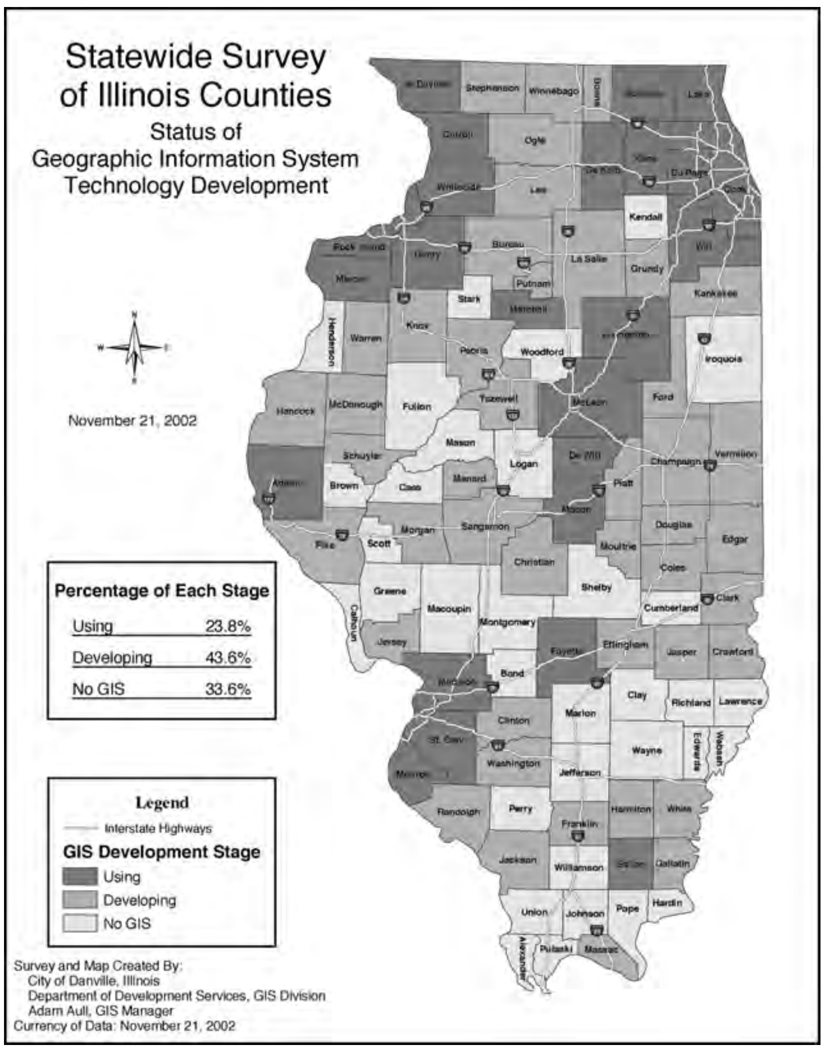

Figure 2

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based on one of these two projections. State plane coordinates have small scale distortions, but they have the undesirable effect of dividing most states into regions or zones with different coordinate systems.

Analyzing GIS data on a statewide basis is practical only when all data are presented in the same coordinate system. Many states have established official projections that cover the entire state. Currently, however, there is no official statewide projection for Illinois.

Datums

Projections are simply mathematical transformations to convert latitudes and longitudes to plane coordinates. Unfortunately, there are several coordinate systems or datums that we use to determine latitudes and longitudes.

Analyzing GIS data on a statewide basis is practical only when all data are presented in the same coordinate system. Currently there is no official statewide projection for Illinois.

Because each system produces a different set of latitudes and longitudes, it is essential that GIS administrators keep track of the datums that they use and ensure that all data are converted to a common datum when imported into a single geographic information system.

Ideally, transforming between datums is a simple mathematical procedure, but older datums are distorted due to survey error. In this case datum transformation is an approximate procedure involving grid files and linear interpolation.

The most common datum for GIS in North America is NAD83, although some systems and quite a bit of historical data are still in the older NAD27 system. Because the NAD27 system is distorted, transforming data in and out of this system will add errors to the coordinates. For this reason, use of the NAD27 datum in geographic information systems should be phased out as soon as possible.

Projection Distortions

Projecting geographic information from the surface of the earth to a plane is a two-stage process. First a point must be projected from the surface of the earth to an ellipsoid, and then the point is projected from the ellipsoid onto a plane.

Unfortunately, both of these stages produce unavoidable distortions. The first source of

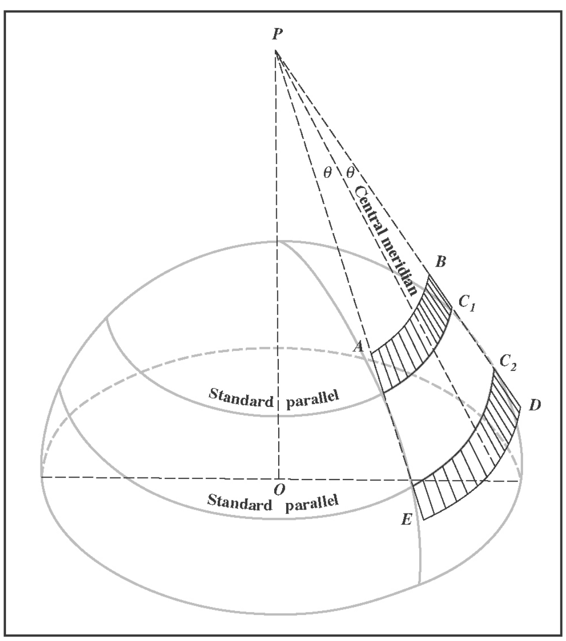

Figure 1. The Lambert Conformal Conic projection.
With this projection, the globe is projected onto the surface of a cone centered about the axis of rotation. Because this projection has lines with zero scale distortion extending in the east-west direction, it is suited to regions (like Tennessee) that are elongated in the east-west direction.

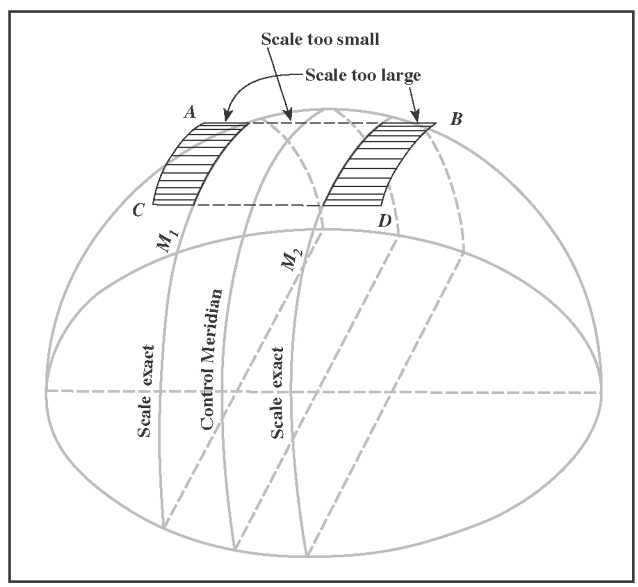

Figure 2. Transverse Mercator projection.
With this projection, the globe is projected onto the surface of a cylinder that intersects the globe at parallel lines that are symmetrical to the central meridian. Because the lines of zero distortion have a general north-south orientation, the projection is suited to regions (like Illinois) that are elongated in the north-south direction.

distortion occurs when we project points from the surface of the earth to the ellipsoid. The projection lines, which are radial lines from the center, converge.

Use of the NAD27 datum in geographic information systems should be phased out as soon as possible.

This means that distances between points on the surface of the earth will generally be less than the corresponding distances between the projections of the points on the ellipsoid (which is usually located near sea level). This difference in scale is called the "elevation factor," which is the ratio of the distance on the ground compared to the distance projected on the ellipsoid.

The second source of distortion occurs when points are projected from the ellipsoid to a plane. This is known as the grid scale factor, which is the ratio between a distance represented on the grid and its corresponding value when projected onto the ellipsoid. Correcting overall ground-to-grid distortion is achieved by computing a combined factor that is the product of the grid scale factor and the elevation factor.

It is desirable that the projections used in geographic information systems are as small as possible, because this makes it easy to compare areas and distances calculated in the GIS with corresponding quantities measured on the ground.

Map Projections Currently Used in Illinois GIS

Because Illinois is a long, narrow state, most projections in use in Illinois are based on the Transverse Mercator system. The most commonly used coordinate systems for county-based GIS are based on the two state plane projections: the Illinois State Plane East and Illinois State Plane West, together with the NAD83 datum.

These projections, which are based on NAD83 and have very low scale errors (less than 1 part in 10000), are an excellent basis for local GIS. They are not useful for statewide GIS however, because the state is divided into two zones.

The most commonly used statewide system is a custom Lambert projection based on the projection USGS uses for the 7.5′ quadrangle maps in the contiguous 48 states. It has standard parallels 45° North and 33° North (which pass through Northern Wisconsin and Louisiana) and is defined for the NAD27 datum.

This projection was originally used for the ILLIMAP system, one of the pioneering GIS systems developed by the Illinois Department of Natural Resources. The coordinate system was selected because it facilitates data interchange with USGS quad maps.

While it was the obvious choice in 1970, there are two reasons why it is not an ideal candidate for a statewide map projection currently. The first of these is that since 1970, the NAD27 datum has been superseded by NAD83, and as discussed above, modern survey data that is converted to the custom Lambert projection will be degraded.

A second problem with this projection is that the scale distortions are very large (up to 1 part in 180) because the standard parallels are located hundreds of kilometers outside of the geographical extents of the state.

Proposed Projection for Illinois Statewide GIS

Because Illinois is elongated in a north-south direction, using a Transverse Mercator projection produces minimum scale distortion. Details of a customized Transverse Mercator projection designed to minimize the total scale distortion between grid and ground are shown in Table 1. The maximum combined factor for this projection is 1:5300.

The Geodetic Layer Subcommittee of ILGIC has proposed to have this projection adopted as part of the SPCS system along with the two existing state plane zones. For more information on the proposed supplemental projection for Illinois, visit **www100.state.il.us/ilgic/**.

Dr. Chris Pearson is the Geodetic Advisor for the State of Illinois.

Latitude of origin	36º 40”
Central Meridian	89º 30”
Central Meridian scale factor	0.999852941 (or 1 part in 6800 too small)
False origin E	1000000m
False origin N	1200000m

Table 1. Parameters of best-fitting Transverse Mercator projection for Illinois

GIS, A New Learning Tool in Education

By Ann Schickner

Geographic information systems link computers to data and leverage the fundamental principals of geography. With GIS, K-12 students can forget just staring at textbook maps and studying topography. They can use this technology to map their own areas of interest. Such areas may range from locating places within their community to tracking environmental issues and conditions.

Teachers are finding that their students have greater interest and enjoyment in learning geography through GIS than in traditional geography classroom settings.

The technology associated with GIS allows students to understand, interpret, and visualize data simply not possible in a spreadsheet. The possibilities for the use of GIS appear to be endless, and it is in great demand throughout our society. For this reason, Illinois educators are now beginning to recognize GIS as an important tool for student learning, and they are implementing it into K-12 school curriculum.

The Illinois State Board of Education has helped to spur interest in GIS for student learning and K-12 school curriculum implementation through two sources of federal funding. These sources are *Links*, a cooperative technology initiative between the State of Washington and the State of Illinois, and the federal *Technology Literacy Challenge Fund* (TLCF). By providing supplemental funding, the Links initiative and the TLCF have assisted six Illinois school districts with the purchase of computer hardware and software.

To ensure that schools within these districts were prepared to incorporate GIS in instructional programs, a year-long staff development program was offered to their teachers. This program gave teachers from 17 schools an opportunity to receive extensive training in how to:

- Use the GIS software in student-centered learning environments;
- Integrate GIS into curriculum and instruction, especially for higher-order knowledge and thinking skills;
- Evaluate and access student computer-based projects; and
- Build effective working relationships with community agencies for GIS assistance and support.

Community partnerships with state, county, and local agencies that are involved with GIS can be an important element in the successful implementation of GIS in school learning environments. In addition to financial support for hardware, software, and training, they can give GIS training and technical expertise to teachers.

Community partners can also provide valuable assistance and materials, such as community maps and data, for student mapping projects. They are an excellent resource for mentoring students and can provide internships or work-study programs in real-world GIS.

To illustrate how GIS is being used as a new learning tool for K-12 education, projects in Springfield public schools and Carrollton Community School District are highlighted below.

GIS in Springfield Public Schools

In the Springfield public school system, GIS has been integrated into the social science curriculum of Springfield High School. This technology is engaging urban high school students in grades 9-12 in a project-oriented learning environment to help them develop critical thinking and problem-solving skills to achieve the Illinois Learning Standards.

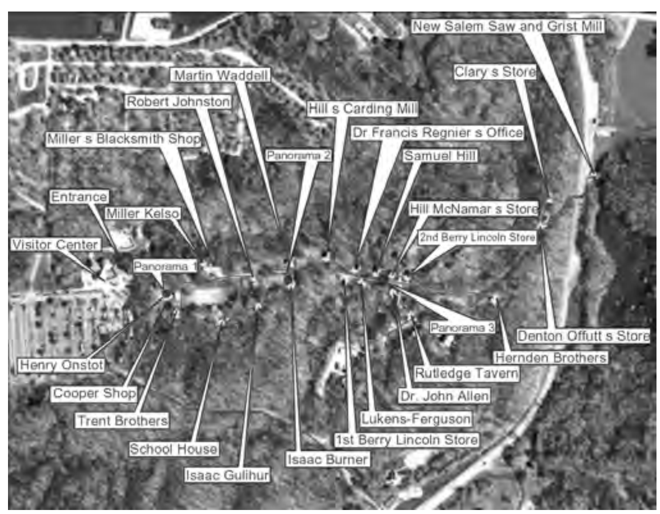

Figure 1. Abraham Lincoln-related sites in New Salem Village

Currently they are working on a community atlas project that uses GIS combined with a global positioning system (GPS) to map different periods in the life of Abraham Lincoln. In Fall 2002, a group of Springfield students and teachers visited New Salem Village in Petersburg, Illinois. Equipped with digital cameras and GPS units, their goal was to acquire data they could use to create a map, a website, and a trifold display of this historical site.

Following this expedition, Springfield students worked in teams to complete the New Salem Project. Students downloaded the waypoints they collected into a digital orthophoto quadrangle of the area. They then created hotlinks to connect their digital images to produce the map of the New Salem Village in Figure 1. This map can also be viewed at **www.shs.springfield.k12.il.us/academics/departments/gis/**.

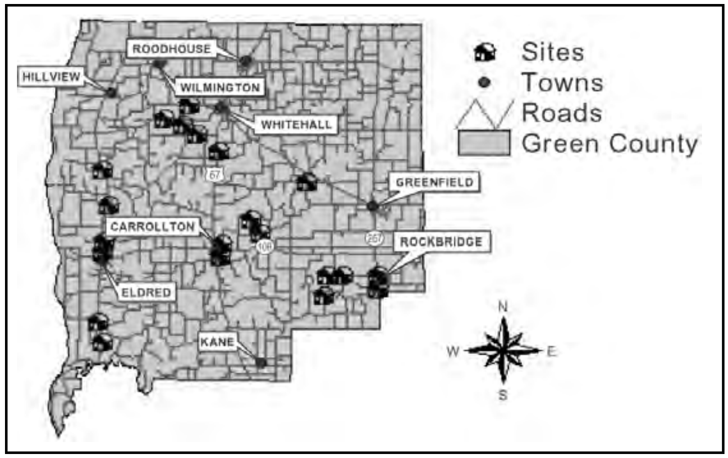

Figure 2. Greene County Barn Sites

Various other means are used to bring GIS to life for Springfield students. Since teaching is one of the best ways to learn, GIS students mentor other students and teachers in the use of the GIS software. They develop problem-solving skills by working independently to explore ArcView extensions.

Springfield students learn about community resources by inviting community GIS experts to their classroom to be guest speakers. For example, Scott Dragoo, City of Springfield GIS Manager, has been working with GIS students to help answer software questions and show them how GIS is used in city planning.

Field trips are scheduled to visit the GIS Department in the City of Springfield as well as other agencies and businesses that use GIS technology. Students also will participate in ESRI's Community Atlas Program and participate in the Illinois GIS Conference in Spring 2003.

GIS in the Carrollton School District

In the Carrollton School District, GIS has become an integral part of instruction in the high school curriculum. Students have not only learned how to use this technology, but are working closely with community partners to create county and city maps. For example, they have produced a detailed map of rural barns for Greene County (Figure 2). During the annual Greene County Fall Festival, this map is used as a guide for visitors touring the county.

Carrollton students have also completed a Community Atlas Project that describes and maps other features of Greene County. You may browse this atlas project at **http://gis.esri.com/industries/k-12/commatlas/browse.cfm**. (To find the Carrollton atlas project at this site, change the school year date to "01-02," check the grade level box for high school, select Illinois as the state, and click "Perform Search.")

From the GIS experience Carrollton students have gained, they are now developing maps the City of Carrollton will use in its fire protection activities. These maps will provide city officials with detailed information about the locations of community fire hydrants and fire buffers for unprotected properties.

Moreover, they are assisting Carrollton school administration by mapping school campuses. These data will be used by a local crisis management team to plan for possible school emergencies.

GIS technology is beginning to have an impact upon education in Illinois schools. Teachers are finding that their students have greater interest and enjoyment in learning geography through GIS than in traditional geography classroom settings. With continued support from both state and federal funding sources, this technology should be embraced by educators throughout the state in the coming decade.

If you would like to have additional information about this article or GIS K-12 staff development, contact Ann Schickner at **cschickn@warpnet.net.**

For specific information concerning GIS at Springfield High School, contact Jenni Dahl at **jdahl@springfield.k12.il.us**. For GIS at Carrollton High School, contact Jan Jungk at **jxjt@greene.k12.il.us**.

Ann Schickner previously was a teacher and GIS coordinator at Springfield High School.

From where I sit...

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

GIS. Is it a way of life or just a job? When you let your mind race about the potential of GIS technology, what vision comes to mind? What would be your goal? What would have to change in your current situation to accomplish that goal?

The goal of ILGISA is to provide its members with opportunities to expand their vision, to provide a professional networking environment, and to empower GIS professionals with tools, perspectives, ideas, and contacts to achieve their goals.

ILGISA conferences have always provided opportunities for the attendees to share and exchange ideas. In recent years, conference planners have been very deliberate to address current needs as well as futuristic technologies.

The fastest growing segment of ILGISA's membership is from the local government sector. Yet the experience and deep conceptual understanding of GIS technology resides in the veteran users. Both come to ILGISA conferences with different needs. Therefore, the planners of ILGISA's two conferences and issues of *Illinois GIS Notes* are intentional in addressing the needs of both of these segments of membership.

However, an organization can only be successful if there is a clear vision of its membership. So, knowing your goal for GIS technology, putting your finger on what you need in order to achieve that goal—and sharing that with the Board of Directors along with actively participating in the organization—is the key to ILGISA's success in achieving its goal.

In other words, the goal of ILGISA is to serve its membership. This can only be accomplished if the board knows what the needs of the membership are. And the board only knows that by the membership's input. So, share your vision, your goal, your experience with the board—I think the entire organization will benefit.

Ken Lovett is GIS Section Manager with the Illinois Department of Revenue.

Illinois GIS Notes Coming to a Computer Near You

Distribution of the ILGISA newsletter will be moving to online delivery with the Winter 2004 issue. *Illinois GIS Notes* will be delivered to subscribing members exclusively online except in those cases where an ILGISA member specifically requests that a printed newsletter be mailed.

The purpose of this shift in focus from a printed version to an online version is twofold: 1) to provide a more timely distribution of the newsletter; and 2) to more efficiently utilize the ILGISA funds that are currently spent on mass printing and mailing of the biannual newsletter.

Each current, or most recent, edition of the newsletter will be accessible only by ILGISA members on ILGISA's website at **www.ilgisa.org**. As each edition is superseded, it will be made available to nonmembers together with the other past newsletter issues.

If you do not wish to receive a printed newsletter, no action on your part is required—the Winter 2004 edition will be delivered to the email addresses of subscribing members.

If you wish to receive a printed version, you may either mail or FAX the form that will be included in the Summer 2003 newsletter; email the form that will be made available at ILGISA's website; or contact Cindy Dickinson at ILGISA's Secretariat by phone at 815-753-1906.

ILGIC Activities Update

By Sheryl Oliver

ILGIC's meeting schedule is biannual—we met last on July 30, 2002, and at the time of this writing, will be meeting on December 18, 2002.

The following is an update of activities addressed at the July meeting and through the autumn of 2002. Please check the ILGIC website at ***www100.state.il.us/ilgic/*** *for minutes of the December meeting and presentations given at that time.*

Resolution Addresses Need for Statewide Geographic Information Technology Office

ILGIC has adopted a resolution entitled *The Creation of a Permanent State Geographic Information Technology Office.* The essence of this resolution is that ILGIC's purview is to provide recommendations to the Governor and the General Assembly on geographic information issues, but ILGIC alone cannot implement the full range of said objectives without the creation of a governmental structure.

The resolution states that it is imperative that a formal and permanent office, bureau, or agency be created to manage statewide information technology with dedicated resources, and that the above entity include a statewide Geographic Information Technology (GIT) component with staff and dedicated resources. The resolution further states that the office would work with ILGIC to implement ILGIC objectives for the efficient use of GIT statewide, and that this permanent entity would provide the continuity necessary to perform long term goals and objectives through and between political elections.

The implementation of this recommendation is many years past due. It is important for future activities related to such areas as homeland security, public health and safety, transportation, education, balanced growth, and more.

ILGIC Contact Information

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Chris Pearson, Illinois Geodetic Advisor; Geodetic Control Work Group Chair: **chris.pearson@noaa.gov**

Kingsley Allan, GIS Manager, State Water Survey; ILGISA Director; Hydrography Work Group Chair: **k-allan@uiuc.edu**

Don Luman, Senior Professional Scientist, Illinois State Geological Survey; IMAC Chair; Orthoimagery Work Group Chair: **luman@isgs.uiuc.edu**

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The **ILGIC Framework Implementation Committee** addresses the development and maintenance of basic GIS foundation layers for organizations in the state to use and supplement. Four work groups have been established thus far for the basic framework layers of Street Centerline/Transportation (I-ROADS), Geodetic Control, Hydrography, Elevation, Orthoimagery, and Cadastral/Government Units. These work groups are I-ROADS, Geodetic Control, Hydrography, and Orthoimagery.

The **I-ROADS Work Group** for several months has been researching, investigating, and testing methods and data sources. Their goal is to determine the feasibility and required resources of several options that could be pursued to create the I-ROADS layer. The I-ROADS team continues to make contacts with other governmental organizations to investigate potential funding sources.

The **Geodetic Control Work Group** has been very active with meetings and informational presentations over the last six months. Check the ILGIC website for a draft document toward a Single Zone Projection for Illinois. Additional issues being addressed include a state geodetic database as part of the Illinois Spatial Data Infrastructure and Framework, education for GIS and surveying professionals in Geodesy, standards for GIS administrators, and a strategy for handling future readjustments of NAD83.

The objectives of the **Hydrography Work Group** are to identify the stakeholder group for representation on the work group and develop a strategy for the development, implementation, and maintenance of a Hydrography Framework database. The kickoff for this work group began at a presentation at the Water 2002 Conference in Champaign made by Keven Roth, USGS NHD Project Manager. On the following morning, at a workshop at the Water Survey attended by 40 participants from agencies across Illinois, Ms. Roth explained the use and function of NHD data, which supercede the former DLG hydrography layer and USEPA's Reach File 3. Presently 100K coverage is available for the state. High-resolution 1:24K-scale data will be available for the Chicago area and the Shawnee National Forest area in early 2003.

The **Orthoimagery Work Group** is in its developmental phase addressing the procurement of secondary DOQs as an essential resource for the State of Illinois. This work group will work proactively to open the doors toward partnerships in developing a long-term strategy for orthoimagery updates.

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Please direct comments, questions, and news items to the ILGISA secretariat's office above or to Y13SJT1@wpo.cso.niu.edu

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Calendar of Events

February 19-22
IPLSA 46th Annual Conference
Springfield, Illinois
www.iplsa.org

April 15-17
GITA XXV
San Antonio, Texas
www.gita.org

April 8-9
ILGISA Spring Conference
Bloomington, Illinois
www.ilgisa.org

November 3-4
ILGISA Fall Conference
Lisle, Illinois
www.ilgisa.org

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