ILLINOIS GIS NOTES

THE NEWSLETTER OF THE ILLINOIS GIS ASSOCIATION

A Retrospective Look at GIS and Natural Resources in Illinois

By Liane Cordle

The year 2003 marked the twentieth anniversary of the Illinois Geographic Information System (IGIS). Twenty years ago GIS was a new technology, especially in the scientific research world. Illinois was among the first states to acquire and use GIS technology, thanks to a serendipitous combination of people who recognized the potential of the technology and funding sources adequate to initiate and support the program in the critical early stages.

The seeds for what is now the widespread use of GIS to examine issues related to the natural resources of the state began in 1983. The Illinois Department of Energy and Natural Resources (DENR), now the Department of Natural Resources, established the Illinois GIS as part of the Lands Unsuitable for Mining Program (LUMP). LUMP was funded by the U.S. Office of Surface Mining and began in Illinois in June 1982 in response to federal and state laws requiring identification of lands unsuitable for mining. Unsuitable lands were defined as those where

- reclamation of surface mined areas was not feasible, or
- mining was prohibited by Act of Congress (e.g. national parks, national forests, or within 100 feet of a public road), or
- they were declared as such by the Illinois Department of Mines and Minerals as a result of a petition process.

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New ILGISA Outstanding Student Award Recognizes Accomplished Illinois GIS Students

By Kingsley Allan

The fall 2003 ILGISA conference was the venue for the first-ever ILGISA Outstanding Student awards. The idea for the student awards was conceived by the ILGISA board more than a year prior to the conference. The intent of the award is to recognize gifted students who use GIS as part of their curriculum and to encourage them in their studies and future careers.

The recipients of the first ILGISA Outstanding Student awards came from all across the state. Three of the four awardees attended the fall conference along with their parents to enjoy the awards ceremony, a fine conference lunch, and a very nice plaque from ILGISA. One of the award winners was unable to attend because of college class obligations. A summary of the awardees follows, as well as an explanation of the nomination and selection processes.

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The Editor's Corner

By Ruth Anne Tobias

Welcome to the first online edition of *Illinois GIS Notes*! We hope you find this useful—it saves the organization quite a bit of money and allows quicker access.

In addition to presenting the current newsletter, the future members-only section will allow you to search a membership directory and participate in surveys regarding issues that affect ILGISA. The directory will allow you to search by member name or organization and will provide you with an email link, phone number, and address. What a nice tool for contacting people you met at the last conference but whose business cards you failed to get! When a survey is appropriate, the results will be viewable and offer a tool for sharing what members think. Go to **http://www.ilgisa.org/member** to see the newsletter, membership directory, and the survey section.

What better way to brighten up the winter landscape than by sending an image of your best map to the ILGISA Showcase on our website! So far, only a few members have sent maps to display, and we'd like more of you to take advantage of this space. It's another way to communicate to the rest of us some of the work that you are doing. Just email a PDF, JPEG, or TIFF file to Sherrie Taylor (**taylor@niu.edu**) at the highest resolution possible.

To show you what a good tool our website is for communicating, look at the 2003 ILGISA Web Hits graphic. This can't be just members!

This year is the 10th anniversary of ILGISA, and our newsletters will reflect on the growth and maturation of GIS activity in Illinois. Last year was the 20th year of GIS use at the Illinois Surveys, and Liane Cordle from ISGS has very nicely caught the flavor of growth and change in this month's feature article.

In the summer edition we will present some of the best of ILGISA from 1994 through 2004. So if you have tales to tell, please let us know. You can send an email to Sherrie at **taylor@niu.edu**, to Ruth Anne at **rtobias@niu.edu** or to Keith at **kcaldwell@co.lake.il.us**.

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.

2003 ILGISA Dahlberg Distinguished Achievement Award Recipient

Gail Krmenec

"I was so ecstatic, albeit somewhat disbelieving, to receive the Dalhberg Award. It has been personally satisfying to contribute to the ILGISA organization and to the GIS community, yet alone to receive an award for it. I am very grateful to have received this honor in Dr. Dahlberg's name."

Gail Krmenec has been a geographer with the U.S. Census Bureau's Region V Division through two decennial censuses and has been a strong supporter of GIS in our state. She has shown tireless dedication to the cause of ILGISA.

Gail served two terms as an ILGISA board member and as its president in 2000/2001. Her leadership provided focus and structure to the board, especially in the area of conference planning. Gail has made many presentations at the annual ILGISA conferences about census geography program components, TIGER, and the bureau's local updates programs. She represents the Census Bureau to the ILGISA community—often the only federal agency voice we hear.

Gail is a graduate of the Master of Arts program in Geography at Northern Illinois University, where she was a student of Dick Dahlberg and worked in the Lab for Cartography and Spatial Analysis. Gail continues to promote the careful, dedicated work espoused by Dick Dahlberg. For her long-term service, commitment to ILGISA, and championing of good geography throughout Illinois, Gail received the Dahlberg award at the fall conference.

Board Member Profiles

Three new board members joined the ILGISA Board of Directors at the fall conference as a result of the annual election. Terri Arnold, Pat Keegan, and Chris McGarry are profiled below.

Terri Arnold is the GIS Specialist for the U.S. Geological Survey (USGS) with the upper Illinois River Basin Study Unit of the National Water-Quality Assessment Program. Her responsibilities include performing spatial and geostatistical analysis of water samples and environmental data, mapping results of sampling and analysis, managing the GIS database, serving as liaison on regional and local GIS issues, and mentoring other GIS users.

Terri began work with the USGS as a student employee drafting maps by hand. After graduation from the University of Illinois, she worked a year with the U.S. Defense Mapping Agency before rejoining USGS in 1991. As a GIS Specialist, her project focuses have included biology, hydrologic modeling, and water quality.

Terri has been an active member of ILGISA since 1995 and has participated in conferences as a session moderator and as a participant on the panel of GIS professionals for student night. Terri also has served two years on the ILGISA nominating committee.

Pat Keegan is the GIS Manager for the City of Evanston. The GIS Division of Evanston consists of three employees and provides GIS services to 400 employees and 75,000 residents. Pat has worked for the City of Evanston for 11 years, holding previous positions with the Engineering Division and Water Department. He has worked in the GIS field for eight years and has extensive local government experience and expertise in implementing GIS technologies.

Pat has been an ILGISA member for seven years. He has been a frequent contributor to ILGISA and the GIS community by presenting at numerous conferences, participating on conference committees, and serving as President of the Illinois Municipal ArcGIS User Group. He holds a Master's Degree in Software Development from DePaul University.

Pat has devoted much of his time to deploying GIS services with Internet technologies and has a strong interest in seeing GIS professionals bring their work to a wider audience.

Chris McGarry has been the GIS Database Administrator for the Winnebago County Geographic Information System (WinGIS) for two years. He has been responsible for the development and implementation of an enterprise GIS for the eight partner agencies participating in the WinGIS consortium: Winnebago County, City of Rockford, City of Loves Park, Village of Machesney Park, Village of Cherry Valley, Rockford Park District, North Park Public Water District, and Rock River Water Reclamation District.

Prior to coming to WinGIS, Chris was employed with the Illinois State Geological Survey where he was involved in many mapping projects. Most notably, he was responsible for the award-winning project to process and distribute Digital Orthophoto Quadrangles for the entire state.

Chris has been a presenter at "GIS in Illinois" conferences and served on the fall 2002 conference organizing committee. Chris believes ILGISA plays a critical role in providing educational and networking opportunities to ensure the success of newcomers and seasoned veterans in the professional GIS community in Illinois.

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The state was charged with identifying the location of a variety of natural, cultural, and economic resources, including coal and mineral resources, habitat for fish and wildlife, critical habitat for endangered or threatened species, important archeological sites, groundwater supplies, and productive farmland.

Five divisions of DENR—the three scientific Surveys (Geological, Natural History, and Water), the Illinois State Museum, and the Office of Research and Planning—were tasked with preparing Land Reports for areas with valid petitions. These divisions began using GIS in 1983 to provide the types of data and analyses needed to identify lands unsuitable for mining.

A sixth division of DENR, the Hazardous Waste Research and Information Center (now the Waste Management and Research Center), became part of the Illinois GIS system in 1985. The IGIS was regularly utilized by other state agencies, including the Department of Mines and Minerals and the Department of Conservation.

The first computer used for the IGIS was a PRIME 750 mini-computer with a total storage capacity of 600 megabytes.

In the 1980s and early 1990s the IGIS used large (at the time) centralized multi-user computers. The first computer was a PRIME 750 mini-computer that supported a dozen or so users. The total storage capacity was 600 megabytes.

Data was input from keyboard or digitizing board and output was generally from dot-matrix printers for text, and printers, pen plotters, electrostatic plotters, or slide cameras for maps. In the early years data were archived on or loaded onto the system from large spools of nine-track tape.

By 1988 the user group had expanded from just a handful to more than 300 people, and GIS was used for a variety of research and service projects in addition to LUMP-related work. A PRIME 9955 super minicomputer had been acquired and linked to the PRIME 750. Subsequently a PRIME 9650 and PRIME 2655 were acquired to accommodate the continually expanding needs of the GIS community, including increased processing speed, increased data storage capabilities, and a growing number of users. By 1988 the total available disk storage on the PRIME computers was 12 gigabytes. To give some perspective to this number, currently one server alone at the Illinois State Geological Survey stores 83 gigabytes of data.

As the IGIS evolved, many of the GIS scientists worked on Sun Microsystems or Silicon Graphics workstations, which allowed faster processing for individual users.

The Illinois GIS was one of the first groups to use ARC/INFO software. ARC/INFO 1.0 was commercially released in 1982. In 1983 the Illinois Department of Energy and Natural Resources purchased one of seven ARC/INFO licenses sold that year. DENR was customer #27 and started with ARC/INFO version 2.4.

At that time the software was completely command driven, requiring the user to type in specific software language in order to accomplish GIS tasks. As the capabilities of ARC software grew, applications became more sophisticated. ESRI was instrumental in designing and implementing the GIS system for the LUMP program in Illinois, including digitizing much of the data.

When the Illinois Department of Energy and Natural Resources purchased ARC/INFO in 1983, they were customer number 27.

Statewide databases were needed to conduct regional analyses. Some statewide databases were available in digital or tabular format from agencies such as the U.S. Geological Survey, Illinois Department of Transportation, Illinois Department of Conservation, and the U.S. and Illinois Environmental Protection Agencies. Many digital coverages had to be created when the Illinois GIS program began.

Approximately 80 data sets comprised the statewide database. These included county and other administrative boundaries, roads, railroads, streams, natural areas, land cover, soil associations, bedrock geology, and Quaternary geology.

An updated Public Land Survey System grid was one of the largest coverages migrated to the IGIS in the early 1980s. This system of townships and sections used in the legal description of property had been digitized in the early 1970s by the Illinois State Geological Survey. It was generated from coordinate pairs for section corners and is still an important and widely used data layer.

Minimally, all statewide data were at a scale of 1:500,000. A more detailed database for the coal-bearing regions (mostly southern and western Illinois) was developed at a scale of 1:62,500 or 1:40,000. Several project-specific databases were developed at even larger scales. Efforts to obtain new data and update and improve existing data were an ongoing process.

Last but not least, Illinois became one of the early leaders among states using GIS technology because of the efforts of far-sighted individuals who recognized the potential of the technology to support scientific research and outreach.

Some of the key pioneers were Dr. Warren Brigham and Dr. Paul Risser (Illinois Natural History Survey), Dr. E. Donald McKay (Illinois State Geological Survey), Colin Treworgy (Illinois State Geological Survey and Illinois Natural History Survey), Tim Johnson (DENR), Michael Terstriep (Illinois State Water Survey), and Dr. Michael Wiant (Illinois State Museum).

Much has changed in the GIS world over the past twenty years. Perhaps few could have predicted the explosive growth of GIS that has been fed by continual improvements in hardware, software, communications, data availability, and skilled personnel.

The use of GIS has given scientists, planners, resource managers, engineers, archeologists, and many others unparalleled abilities to examine issues and conduct research, and thereby improve our understanding of the natural resources of Illinois.

Liane Cordle is a Research Scientist with the Illinois Natural History Survey.

Northern Illinois University's Advanced Geospatial Laboratory Develops Virtual GIS Notebook

The Advanced Geospatial Laboratory of Northern Illinois University has completed development on a web-based Virtual GIS Notebook that promotes GIS studies. The project, funded and supported through Intergraph's Education Grant Program, was recognized at GeoSpatial World 2003 with a Best Practices award to laud innovative geospatial programs in the classroom.

The notebook was designed as a resource for individuals with little or no GIS experience and is an exclusive privilege of Intergraph GeoSpatial User Community (IGUC) membership. The online notebook contains all the information needed to assist those with an interest in learning more about GIS. It includes the basics of GIS, from data input to management from analysis to map and web presentation; the uses of GIS; and GIS research and development topics. To use the Virtual GIS Notebook, IGUC members can simply visit **http://imgs.intergraph.com/education/vgisn** and log in with their member number.

A flexible tool that can enrich GIS understanding in corporate environments, the notebook provides a structured easy-to-understand primer using common terminology and pictures, diagrams, and screen captures. An ideal resource across corporate, individual, or education environments, the notebook has accompanying presentations that highlight specific subject matter and includes chapter quizzes to test acquired knowledge. The notebook can be modified for workforce development in conjunction with an organization's local datasets. Also ideal for distance learning environments, the material can be used at a teacher's direction or can be viewed at an individual's own pace over the Internet.

The notebook is expected to be used in the geography curriculum on the Northern Illinois University campus. Completion of the materials will take on average 60 hours and equates to 1.5 education points toward GISCI certification. More information is available at **www.gisci.org.**

Undergraduate and graduate students, directed by Philip Young, research associate of the Advanced Geospatial Laboratory of Northern Illinois University, wrote sections of the notebook as well as provided information validation and field work. Young commented, "We created the Virtual GIS Notebook to fill a void in educational tools available for those with little or no understanding of GIS. An entry-level professional, a high-school student, or college student could pick this up and, by the end of the notebook, understand about GIS."

This article has been excerpted from a January 15, 2004 Intergraph Corporation press release.

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Bernard Bauer is a transfer student to Northern Illinois University from Southern Illinois University at Carbondale. He has taken courses in land surveying, control surveying, and legal aspects of surveying. He is employed part-time as survey technician and is working toward a degree and a Certificate in GIS.

Bernard was nominated by Geography Department Chair Andrew Krmenec, who considers Bernard "...the consummate professional in the way that he approaches his studies and coursework—thorough, complete, dedicated to high quality, and on time."

Pictured from left are student award winners Aaron Covey, Thomas Laue, and Jordan Decker. Not shown is student award winner Bernard Bauer.

Aaron Covey is a geology student at Olivet Nazarene University in Bourbonnais and was nominated by Priscilla Skalac and Professor Sondra Sixberry.

Robert Gotkowski, District Conservationist with the USDA-Natural Resources Conservation Service also wrote a letter of recommendation. Mr. Gotkowski wrote: "As part of a group of Olivet Nazarene University students assigned to create a digital copy of the information found on the Farm Service Agency's aerial photographs, Aaron excelled as a leader of the group, ensuring the project was done in a timely manner and a high quality product was produced… that has helped our agency more efficiently deliver the conservation provisions of the Farm Bill."

Professor Sixberry added, "Aaron immediately stood out among his classmates. He quickly caught on to the concept of GIS and was reading all the material he could get hold of concerning GIS." Aaron will also be a teaching assistant for the GIS/GPS course in spring 2004.

Jordan Decker, a senior in geography at the University of Illinois at Urbana-Champaign, was nominated by Dr. Lan Mu: "I know that he has a very clear goal in his career and study. He takes GIS, remote sensing, and statistics classes; he has started developing some experience in GIS before he graduates so that he has more to offer."

Jordan was the winner of the Ed Forrest Internship Stipend Program, a national award from the Geospatial Information and Technology Association (GITA). He was an intern at the Champaign County Regional Planning Commission in 2003. Jordan is enthusiastic about the knowledge and skill learned in class, and he has selected Fighter Jet Response Time in the U.S. as his GIS class project.

Thomas Laue, a geography student at Illinois State University, was nominated by Dr. Dagmar Budikova and Dr. James Carter of the Department of Geography-Geology.

Dr. Budikova wrote regarding Tom's independent project to recommend new fire station locations for the Bloomington-Normal area: "He developed the idea, found data, placed them into the GIS, studied GIS theories and their application in transportation, proceeded to implement these in his project, interpreted his results, and presented them to me and the class using a self-designed web page…" Tom is also noteworthy for helping his classmates, and he is currently assisting graduate students in hydrogeology by helping them set up their projects in a GIS environment.

The method used to solicit nominations for the student awards was through announcements to ILGISA members as well as specific mailings sent to university and college departments that use GIS. The following schools were solicited for nominations because they had identifiable instruction in GIS: Augustana College, Chicago State University, College of DuPage, DePaul University, Eastern Illinois University, Illinois State University, Northeastern University, Northern Illinois University, Northwestern University, Olivet Nazarene University, Parkland College, Southern Illinois University Carbondale, Southern Illinois University Edwardsville, University of Chicago, University of Illinois at Urbana-Champaign, University of Illinois at Chicago, and Western Illinois University.

Members of the selection committee for all awards including the student awards were Kingsley Allan, Illinois State Water Survey (Chairman); Gail Krmenec, US Census Bureau; Becky Motor, Illinois Department of Commerce and Economic Opportunity; and Shane McDermott, Poepping, Stone, Bach & Associates.

Kingsley Allan is GIS Manager with the Illinois State Water Survey.

GIS, 9/11 and GISMO

A conversation with Jack Eichenbaum

Dr. Jack Eichenbaum delivered the keynote address at the fall ILGISA conference, where he shared his experiences with the use and development of an Emergency Mapping and Data Center in the days after 9/11. He serves as City Assessor in the Appraisal Research Division of the New York City Department of Finance. Dr. Eichenbaum also coordinates GISMO, New York City's Geographic Information System user group.

Your presentation focused partly on the data gathering for the horrific event of 9/11. What did you see as the biggest obstacle(s) in gathering data to deal with the aftermath of the disaster?

As in any crisis situation, time constraints for the gathering of data were a major obstacle. However, a more important problem that we faced was data integration because of the lack of metadata regarding definitions and accuracy. The data we had the greatest need for were precise building locations and structural features. Employment demography data were the most lacking because of coordination problems--not knowing who had what.

Life-threatening situations often force us to revise the way we monitor them. Even so, the greater New York region did not become a data utopia in the aftermath of 9/11. We continue to grapple with issues of security vs. integration. And there will always be a tradeoff between quanitity and documented quality.

Have legislative or organizational policies been put in place to foster productive data sharing?

This is a local issue, in large part. Not much has been put in place in the New York City (NYC) area. State and federal intiatives are typically slow to develop and implement, which is not surprising given the myriad problems inherent in structuring effective and productive data sharing policies among agencies with disparate needs.

Additionally, the 9/11 event highlighted security issues in data sharing, which further increases the complexity of the task.

What do you think are some of the issues that GIS organizations will face in the next decade?

GIS organizations abound in data. But as a group, we have probably paid more attention to hardware, software, and organization than data quality and data integration. There are also enormous problems in maintaining data that is current and free of error. And for many outside of government, serious data access problems remain.

Do you have any advice for newcomers to the GIS profession?

Know where your data live. Understand the empirical world you study. (This is the Geography of GIS.) Look for new phenomena and interrelationships and imagine how GIS might capture them. When you do map new phenomena, "ground proof" them. That is, get back out there and verify your data and conclusions in the field.

What are the origins of GISMO, and what makes it a successful GIS user group?

I started GISMO, which stands for "Geographic Information Systems and Mapping Operations," in 1990 as a group for users of GIS technology in NYC municipal government. The first years of GISMO were spent networking—using each other to exchange knowledge about the hardware, the software, and the data we needed for our work in different agencies.

Around 1995 GISMO began an outreach to the private sector, GIS vendors, and all people interested in GIS in the context of the City of New York. Today we have more than 600 GIS users on the GISMO mailing list, and we meet every other month.

Networking may be our most important product. Over the years we learned that GISMO didn't really have to run anything, just catalyze. GISMO thrives on committed leadership, a cozy setting (so that people talk to each other), an emphasis on networking, and a free lunch.

ILGISA's New President and President-Elect

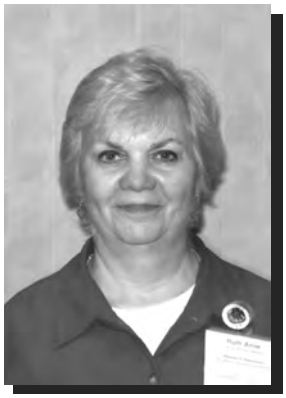
ILGISA's new President is Rob Krumm, who was installed at the fall conference. Past President Larry Gunderson left the ILGISA Board of Directors, and Ken Lovett became the new Past President. Ruth Anne Tobias is the new President-Elect. Rob and Ruth Anne are profiled below.

Rob Krumm is a Geologist at the Illinois State Geological Survey (ISGS) in Champaign. He manages the Geospatial Analysis and Modeling Section, a group that supports the GIS, database, and IT infrastructure resources for the agency. Rob has worked with GIS technology since 1983. His work experience includes positions at the ISGS, and he is a member of URISA and the Geological Society of America.

As an ILGISA member, Rob has coordinated several workshops including *All About Digital Data, GIS Implementation Issues,* and *Introduction to LIDAR.* He has presented *Introduction to GIS* workshops and hands-on GIS training for several groups, including city/county government employees, high school science teachers, and K-12 teachers.

Originally from the Belleville, Illinois area, Rob remains a die-hard fan of the St. Louis Cardinals. He now lives in Urbana and recently has been involved with an effort to establish a dog park in the local area. To the delight of canines (and people), a 10-acre dog park opened in early 2003. (Visit **www.urbanadogpark.org** for more details.)

Rob maintains a love for music and plays guitar, mandolin, and upright and electric bass. He is a member of the Noisy Gators, a band that plays Cajun and Zydeco music in the Champaign-Urbana area. Rob enjoys listening to live music of many styles, traveling, and spending time with family. In late 2003 Rob combined his love of music and travel to participate in a Cajun & Creole music camp in Louisiana. He maintained a travel journal and published an article about the experience, which can be seen at **www.thepapertheweb site.com/010904/cajun%20camp.aspx**.



Ruth Anne Tobias has been a research associate since 1981 at the Center for Governmental Studies at Northern Illinois University, where she received an MS in Geography. She has served on the ILGISA Board of Directors for the last three years and chairs the Publications Committee as co-editor of *Illinois GIS Notes*. She has had extensive experience in public data management and use for community and economic development and spatial analysis activities as well as an ongoing interest in the application of GIS to the field of public health. Ruth Anne's office has been part of the Illinois State Data Center cooperative program with the U.S. Census Bureau since the 1980 Census.

Another facet of her experience includes mapping and GIS for community and regional analysis. Current responsibilities include development of the Rock River Valley Economic Index and the production of the annual Northwest Illinois Market Facts Data Book for the 11 Illinois counties west of Boone and DeKalb. Additionally, Ruth Anne oversees the quarterly Rock River Valley Economic Outlook Survey of more than 500 businesses in the Rockford Metropolitan Area and the quarterly DeKalb County Economic Outlook Survey.

Ruth Anne has been involved with "GIS in Illinois" conferences since the first one was held in DeKalb in 1990. Her participation has included contributing to program development, presenting workshops and papers at the conferences, managing the poster exhibits and, in past years, serving as exhibits coordinator. She served as co-chair of the fall 2003 conference planning committee. Ruth Anne has a strong interest in promoting the use of GIS in state and local government and in facilitating the sharing of knowledge and experience in the field among students, practitioners, and policy makers.

Winning Poster Employs New Modeling Technology

By Kingsley Allan

The winner of best poster at the fall conference was "Illinois Topography in 3D," by Kingsley Allan from the Illinois State Water Survey. Instead of a GIS map printed on paper, it was a color plaster model of Illinois terrain held to an exhibit board by Velcro.

This terrain model output is the next step beyond onscreen spinning 3D models and is reminiscent of the papier-mâché models many of us saw in museums as children. This new generation of map models, however, are produced at dramatic savings in time and cost and can be much more accurate because they are generated directly from Digital Elevation Models.

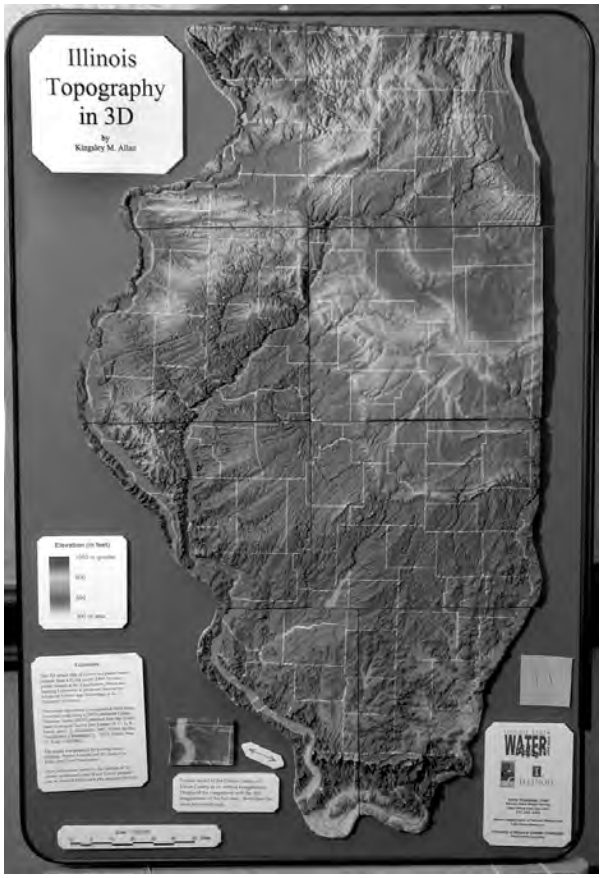
The truly exciting thing about using this medium is that it makes the terrain come alive. This map seemed to be telling the story of the glaciers, which advanced and retreated repeatedly across Illinois, scraping and smearing the landforms they covered.

The terrain heights were scaled to appear thirty times higher than they really are. An unexaggerated version of Union County, Illinois was included in the map legend to show how high ridges (in this case the Illinois Ozarks) would really appear if you were to view from an airplane or satellite.

The major steps in creating the model include building the computer model, printing it, excavating it, and treating it. First, the computer model is built, the extent and vertical exaggeration are set, and it is exported to VRML format. (A limitation in the exported VRML file required additional processing of the image files used to color the model.)

Second, the computer file is sent to the printer. The Z406 printer builds the model from the bottom up in layers of plaster powder on an 8 x 10 inch platform that retracts into the printer as the model gets taller. The printer squirts a colored adhesive in each layer of powder until the full height of the model is printed.

Finally, at the completion of printing, the model is surrounded by loose plaster powder. Excess powder is removed by vacuum then finely cleaned with an airbrush. The model is then immersed in wax to add strength and bring out the vibrancy of the colors.



"Illinois Topography in 3D" was created in collaboration with the Imaging Technology Group at the Beckman Institute for Advanced Science and Technology at the University of Illinois using the newly installed ZCorp Z406 printer.

Poster Statistics

ZCorp 3D printer and support equipment: *$90,000*
Materials (plaster, ink, etc.): *$300*
Labor: *Two weeks*
Horizontal scale: *1:720,000*
Vertical exaggeration: *30 times*
Total weight: *5300g (approximately 11.6 lbs)*
Number of tiles: *8*
Tile dimension: *8" x 10" x 1.25"*
Lightest tile: *Cave-in-Rock 280g*
Preprocessing software: *ArcMap, Spatial Analyst, & 3D Analyst by ESRI and CorelPhoto Paint*

Kingsley Allan is GIS Manager with the Illinois State Water Survey. For more information, visit ***www.sws.uiuc.edu/chief/gis****.*

From where I stand...

Rob Krumm,ILGISA President 2003-2004

Dear ILGISA Members:

I want to share some of my thoughts about ILGISA with this column.

Based on the attendance at the last several spring and fall meetings, there appears to be an all-time high level of activity in the organization. While this reflects an expanding level of activity in "all things GIS" within the state, the increased conference attendance also reflects the efforts of many people involved with meeting planning.

With the fall "GIS in Illinois" meeting, we moved into new digs at the Lisle Hilton Hotel to take advantage of increased meeting space and exhibit floor. Perhaps to be expected, the exhibit area was jammed with more participants than ever before as we had 31 exhibitors. Together with increased levels of registration for the workshops on Monday and the conference on Tuesday, we had more people than ever attending an ILGISA conference.

The ILGISA meetings are the most visible efforts of the association. Two meetings per year require a significant amount of work from the board members and ILGISA members who are pressed into service.

Perhaps the greatest challenges with these types of meetings are to a) keep the meeting content fresh, and b) design a meeting agenda that appeals to a broad user base—everyone from the interested beginner to the full-fledged GIS power user or guru.

Though there are more than 500 ILGISA members on an annual basis, a very small percentage of members is involved with meeting logistics.

That was the wind up, so get ready for the pitch. In order for the ILGISA meetings to continue to be successful, we need your ideas, encouragement, and input. If you have ideas about specific meeting content, please let us know. If you have heard someone who impressed you with a presentation, if you have ideas about a hands-on workshop, or if you'd like to organize a session or present a paper—again, please let us know. You can start by sending email to me at **krumm@uiuc.edu**.

For the ILGISA meetings to continue to be successful, we need your ideas, encouragement and input.

Other facets of ILGISA can also benefit from your participation, and this includes the ILGISA web page at **www.ilgisa.org**. If you have a map that you'd like to share with your colleagues, it can be posted to the Member Showcase part of the web page. If you are conducting a job search or want to post your resume, please let us know, because that type of information can also be posted to the website.

In addition, there is a ListServe function on the web page, so please join the ListServe as a way to exchange information and pick the brains of the membership.

Last but not least, please consider submitting an article for publication in the newsletter. Case studies are always of great interest to our membership.

Many parts of ILGISA are very enjoyable, and it is the people—the members of ILGISA —who continue to make the organization a positive and vital part of the GIS community in the state. During this next year, I'm honored to be in a position where I can support the work of many—and you, as an ILGISA member—through the efforts of ILGISA.

Rob is GIS Manager for the Illinois State Geological Survey.

The Illinois Geographic Information Council (ILGIC) was established in 1995 and is hosted by the Illinois Department of Natural Resources. For more information on ILGIC, visit ***www.illinois.gov/ilgic.***

ILGIC Activities Update

By Sheryl Oliver

The future of ILGIC...

was the foretelling theme of the last ILGIC meeting held on October 28, 2003 to a very large crowd and in conjunction with the Illinois Mapping Advisory Committee (IMAC) Meeting.

The agenda was full, including a prelude to the IMAC meeting in the afternoon by Don Luman of the Illinois State Geological Survey; updates on the Geospatial Data Clearinghouse by Rob Krumm, also of the Illinois State Geological Survey; Geodetic Control issues by Chris Pearson, Illinois Geodetic Advisor; the I-ROADS initiative; and coordinating the collection of data for Homeland Security by Ken Lovett, of the Illinois Department of Revenue and Bill Faedtke, DuPage County Information Technology. The state's Chief of Staff of Homeland Security, Carl Hawkinson, was an ILGIC guest and was very interested in the aforementioned discussion.

Because the focus of the meeting was on the future of ILGIC, Scott Kennedy, the then-Director of Technology within the then-Illinois Technology office presented his future plans for coordinating GIS within the state, which included appointing a State GIS Coordinator. Other future initiatives included new governor appointees and a rewrite of the legislation to create ILGIC, which would include additional organizations, meeting schedules, and more.

And then...

at the beginning of 2004, Scott Kennedy announced his departure as State Technology Director.

The Illinois Technology office function and staff are now part of Department of Central Management Services. Jim Matthews is the Illinois Technology Architect for the state, with the charter of consolidating information technology and telecommunications.

Governor Blagojevich ordered the consolidation of the state's Illinois Technology service in the Department of Central Management Services, tasking the agency with rationalizing and improving the system. This initiative includes the GIS domain, which has a relatively prominent place within the model.

There are various domains under the new model. The GIS domain will consist of business and technical components and include subject matter experts from the GIS community. ILGIC will provide strategic, business, and technical recommendations.

The Governance Model is a new way of making decisions for our state Illinois Technology office. The model will be presented by Jim Matthews at the spring "GIS on Illinois" conference in Springfield.

Plan to attend the Annual ILGISA Spring Conference April 13-14 at the Crowne Plaza Hotel in Springfield. Details can be found at www.ilgisa.org. Don't forget to sign up for the Tuesday evening User Group Meetings, new this conference. ***And don't miss the Crawfish Boil in honor of the keynote speaker, Mr. Kerry St. Pe, Director of a Louisianna-based National Estuary Program.***

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Editor, Ruth AnneTobias, NIU
Co-Editor, Keith Caldwell, Lake County GIS

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

Managing Editor, Nancy Place
Graphics, Richard Vaupel, Vaupel Graphics

Illinois GIS Association
Center for Governmental Studies
Northern Illinois University
DeKalb, Illinois 60115

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