



GIS *in Illinois*

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2004 FALL CONFERENCE

November 8 - 9, 2004

10  
year  
anniversary

This is the fourteenth annual GIS in Illinois Conference. Some 300 GIS practitioners, educators, students and interested persons are expected to attend this two-day event, sponsored by ILGISA, the Illinois GIS Association.

The Illinois GIS Association, a non-profit and non-commercial professional association, hosts the conference. ILGISA exists to provide GIS professionals with opportunities for sharing experiences and participating in educational programs.

If you are not an ILGISA member, but would like to become a member, you can download a membership form from the ILGISA web site ([www.ilgisa.org](http://www.ilgisa.org)) and mail it in with payment of \$30.00 (\$10.00 for students with proof). Or, if you plan on attending the conference, you can register as a member and pay for your dues with your conference registration as all ILGISA members receive a reduced registration fee. If you are already a member, but are not sure of when your membership expires, please contact Cindy Dickinson at 815-753-1906. Membership entitles you to copies of the ILGISA membership directory, conference discounts, and the semi-annual newsletter, Illinois GIS Notes.



## monday EVENTS

Monday, November 8th, the first day of this event, includes nine educational workshops. Later in the afternoon a reception marks the opening of the exhibits and the poster displays. Posters are brought by practitioners to share their work with others, and remain on display throughout the second day. The ILGISA Board of Directors will meet in the evening on Monday, and welcomes any member to sit in and observe on Monday evening from 6:30 pm – 7:30 pm. See the ILGISA registration desk for the location of the board meeting.

## student NIGHT

ILGISA will again host Student Night on Monday evening. There will be a bulletin board for student resumes as well as positions that are currently vacant. Student admission from 5:00 PM onwards will be free, and Dr. Richard Greene, Northern Illinois University Department of Geography, will moderate a panel discussion on GIS career opportunities, including a question and answer period afterwards, for students and/or those interested in beginning a career in GIS.

## tuesday EVENTS

The day will begin with an opening session that includes introductory remarks by the ILGISA President, Robert Krumm, followed by the keynote address by Michael Domaratz.

The year 2004 marks not only the tenth anniversary of the ILGISA, but also the tenth anniversary of the first efforts to organize a national “framework” of basic geospatial data – information like imagery, elevation, roads, streams, parcels, and control – that would be developed, maintained, and shared among local, state, and Federal agencies and the private sector. Both ILGISA and the framework effort recognized the key roles that technology, community, and education would play – and that all three areas must develop simultaneously. Come and listen to Michael Domaratz explain how “Timing is Everything!”

Michael Domaratz is a member of the Cooperative Topographic Mapping Program headquarters group of the U.S. Geological Survey (USGS). His responsibilities include implementing The National Map, a plan to provide current and accurate digital map data for the United States. He is part of the team that coordinates USGS activities in support of homeland security, and also has responsibilities for coordinating with the Bureau of the Census and internal USGS activities related to transportation data development. He co-chairs the Homeland Security Working Group of the Federal Geographic Data Committee.

## changes on the ILGISA BOARD

The 2004 Board of Directors will take office following this conference, as a result of the annual election. Past President, Larry Gunderson, will leave the Board. ILGISA’s current President, Rob Krumm, will become the new Past President. Ruth Anne Tobias, currently the President Elect, will become President. A newly elected President Elect will join the Board based upon the results of the elections to be announced during the annual meeting on Tuesday. The rotation through the presidency takes place annually under the Illinois GIS Association bylaws.

The Board would like to recognize the contributions of members who have served on committees, chaired sessions at conferences, made presentations or contributed articles to the publications during 2004. This has been an amazing year of many changes for the association, which would not be possible without their hard work and dedication. The Board also expresses gratitude to the exhibitors; their presence adds value to the conference for attendees.

Member comments and suggestions are valued; please complete the survey forms included in the registration packet and drop them off at the registration desk before leaving. You can also fax them after the conference to 815-753-2305, or scan and email a copy to [taylor@niu.edu](mailto:taylor@niu.edu).

# honors PRESENTATIONS

## DAHLBERG DISTINGUISHED ACHIEVEMENT AWARD RECIPIENT

**Jim Westervelt** of the US Army Corp of Engineers Research Laboratory of Champaign, Illinois is this year's Dahlberg Distinguished Achievement Award recipient for his pioneering work in creating Illinois' first GIS software, Geographic Resources Analysis Support System (GRASS). Jim was the visionary lead of an initial three person team including William Goran and Michael Shappiro. Together they worked designing and developing the first prototype used for military installations from 1979 through 1984. Jim was the key architect for GRASS and pioneered many of the innovative approaches that made GRASS attractive. These include a seamless linkage between GIS and image analysis, a robust suite of raster analysis tools, a library with procedures for building and contributing new capabilities, and an integrated visualization environment. All these innovations were later emulated by commercial vendors. GRASS served an important role in bringing GIS capabilities into the hands of hundreds of users, before the commercial marketplace matured with similar capabilities. The unique nature of GRASS as a free open source GIS environment is still important as evidenced by its resurgence with the creation of an international GRASS-GIS user organization.

Beyond GRASS, Jim has added vision to various spatial modeling projects and is an avid publisher of his findings. He helped establish the combined GIS laboratory with the Departments of Geography, Landscape Architecture, Urban and Regional Planning, and Anthropology at the University of Illinois. There he actively taught workshops and graduate courses, and also sponsored a scholarship program to recognize and encourage students pursuing geospatial challenges. Later, while leading a technology committee for the Illinois Council on Food and Agricultural Research, Jim was able to promote GIS including providing funding to the Illinois Natural Resources Geospatial Data Clearinghouse maintained at the Illinois State Geological Survey. His current work is landscape simulation modeling titled Fort Future which is a combination of tools and data that will help the Department of Defense address the planning requirements of lands, seas, and airspace to maintain mission readiness.

His standing in the profession, his passion for his work, and his dedication to education make Jim an ideal recipient of this award.

## ILGISA SERVICE AWARD RECIPIENT

**Dr. Michael Sublett** of Illinois State University is one the the ILGISA Service award recipients for his work and dedication as the coordinator of internships for students in the Geography Program as

Illinois State University. The first intern that Dr. Sublett placed was in the late 1980's.

Over the years Dr. Sublett has reached out to firms and agencies to attempt to set up internships for seniors in the Geography program. He has been very successful placing students in and in monitoring their progress during the time they are in the on the job. Beyond placing and monitoring students in an internship, Dr. Sublett also teaches the Seminar in Geography course. During the semester the students are in the Seminar class, they are able to fully prepare themselves for life after college. They are prepped for interviews, prepare a professional resume, and spend a great deal of time writing. These and the other skills and knowledge obtained during the semester allow the Illinois State Geography students to more fully and quickly integrate into the workforce. Because of his hard work and dedication, there are a number of GIS employees in the State of Illinois who got their first practical experience as an intern under the direction of Dr. Michael Sublett.

## ILGISA SERVICE AWARD RECIPIENT

**Tom Nicoski** has been involved with GIS/Mapping and computers since the early 1970's. He spent the first 18 years with a local GIS/Mapping company in positions such as a drafter, production supervisor, programmer, programmer analyst, network administrator and network installer. The last 12 years have been with Kane County, Illinois where he is serving as the Kane County GIS Director. Tom has a degree in MIS from Judson College along with Certificates in GIS from Ferris State University, and Visual Basic Programming from ECC. Tom also holds an intermediate level Certified Illinois Assessing Official professional designation (CIAO/I) and is currently finishing a second major at Judson College in Management Technology Systems (MTS).

Through the years, Tom has grown the GIS department in Kane County enabling others to understand and utilize GIS, while updating the cadastral base for the Kane County Tax Maps. Tom has written programs used by Units of Government, Township Assessors, Supervisors of Assessments, GIS-Technologies, Development, Transportation, Water Resources, Environmental Management, States Attorneys, County Clerk, Forest Preserve, Sheriff, Central Services, Public Safety, and Public Health just to name a few. He has a reputation for being a mentor, teacher, project manager, problem solver and an energetic leader in the development and distribution of the Kane County GIS. It is from his dedication to and enthusiasm for bringing Kane County to the forefront in the use of GIS that Tom deserves this recognition.

# CONFERENCE at a GLANCE

## ILGISA SERVICE AWARD RECIPIENTS

For nearly twenty years, **Tim Johnson** and **Bob Lindquist** have advanced the implementation and application of geospatial technologies in Illinois. While the GIS community of Illinois has benefited from their efforts, the impact of their efforts extends beyond the state's boundaries and across many states and organizations. Bob and Tim had the foresight to explore GIS technology in the early 1980s. They were instrumental in the development of a multi-departmental GIS at the Illinois Department of Energy and Natural Resources (ENR, now DNR). With funding from the Lands Unsuitable for Mining Program, they supported the development of several statewide GIS databases that formed the basemap foundation for many early organizational GIS programs in Illinois. With the cooperative assistance of many individuals, these early efforts led to the development of a larger, distributed, multi-agency GIS in Illinois that was considered one of the leading GIS installations in the country.

In 1991, Bob and Tim left ENR to launch GIS Solutions, Inc., a GIS consulting firm that is now recognized as a leading GIS vendor. Bob & Tim have demonstrated a commitment to the Illinois GIS community by extending themselves to meet GIS installations challenges and help countless organizations apply geospatial technology for the last twenty years. The GIS applications developed by GIS Solutions are recognized nationally, and many of their techniques are being applied in other states and in federal programs. More than 50 invited presentations have been delivered at international and national meetings and at technical forums focused on state government, resource management and other issues. GIS Solutions has received several awards from ESRI including Business Partner of Year in 1999 and 2001, and Foundation Partner of Year in 2003. Tim and Bob have invested considerable energy and financial resources supporting GIS coordination organizations such as ILGISA, the Midwest/Great Lakes Arc Users Group and the National States Geographic Information Council (NSGIC). GIS Solutions regularly participates at ILGISA meetings by sponsoring an exhibit booth and by making presentations about various aspects of GIS technology. In recognition of their many years of dedicated service to support the GIS user community in Illinois and the region through tireless networking and sponsorship support, their efforts to educate decision-makers and policy-makers about the value and application of the technology, and their sustained efforts to support ILGISA, Tim Johnson and Bob Lindquist are truly deserving of an ILGISA Service Award. building GIS models, scripting, geoprocessing, 3D visualization, enhanced annotation and labeling, server-side GIS, improved geocoding, creating customer GIS applications, and more.

## MONDAY, NOVEMBER 8

8:00 A.M. - 9:00 A.M.

*Registration, Continental Breakfast*

9:00 A.M. - 12:00 P.M.

*Concurrent Workshops*

12:00 P.M. - 1:00 P.M.

*Lunch (buffet style)*

1:00 P.M. - 4:00 P.M.

*Concurrent Workshops*

4:00 P.M. - 7:00 P.M.

*Exhibitor Reception; Poster Displays*

5:00 P.M. - 7:00 P.M.

*Student Night*

6:30 P.M. - 7:30 P.M.

*Open ILGISA Board Meeting*

7:00 P.M. - 9:00 P.M.

*User Group Meetings*

## TUESDAY, NOVEMBER 9 (EXHIBITS OPEN ALL DAY)

8:00 A.M. - 9:00 A.M.

*Registration, Continental Breakfast*

8:00 A.M. - 3:30 P.M.

*Exhibits and Poster Displays*

9:00 A.M. - 10:00 A.M.

*Keynote Presentation*

10:00 A.M. - 10:30 A.M.

*Refreshment Break in Exhibit Hall*

10:30 A.M. - 11:45 A.M.

*Concurrent Sessions*

11:45 A.M. - 1:15 P.M.

*Lunch (provided, place meal ticket on table)*

*Honors Presentations; Annual Report to the Membership; Election Results*

1:15 P.M. - 2:30 P.M.

*Concurrent Sessions*

2:30 P.M. - 3:00 P.M.

*Refreshment Break*

3:00 P.M. - 4:00 P.M.

*Concurrent Sessions*

## monday NOVEMBER 8

9:00 - 12:00 PM

**WORKSHOP I:** Introduction to GIS - *Redwood Room*

**WORKSHOP II:** GIS – An Analytical Approach in the  
Transportation/Planning Field – *Rosewood Room*

**WORKSHOP III:** Integrating CAD and GIS – *Aspen Room*

**WORKSHOP IV:** Public Participation GIS Workshop – *Cypress  
Room*

**WORKSHOP V:** Using GIS for Spatial Analysis – *NIU Naperville*

**WORKSHOP VI:** Beyond Tables and Graphs: Mapping the Census  
– *NIU Naperville*

12:00 - 1:00 PM

Lunch

1:00 - 4:00 PM

**WORKSHOP I:** Introduction to GIS - *Redwood Room*

**WORKSHOP II:** Geodesy – *Rosewood Room*

**WORKSHOP III:** What's New in ArcGIS 9.0? – *Aspen Room*

**WORKSHOP IV:** Designing and Developing Enterprise Address  
Systems – *Cypress Room*

**WORKSHOP V:** Using GIS for Spatial Analysis – *NIU Naperville*

**WORKSHOP VI:** Beyond Tables and Graphs: Mapping the Census  
– *NIU Naperville*

4:00 - 7:00 PM

**EXHIBIT HALL RECEPTION** – *Regency Ballroom*

5:00 - 7:00 PM

**STUDENT NIGHT EVENTS** – *Birch/Hickory/Oak Rooms*

6:30 - 7:30 PM

**OPEN ILGISA BOARD MEETING** – *Lisle Executive Boardroom*

7:00 - 9:00 PM

**USER GROUP SESSIONS** (Sign up at registration table)

**JERRY DAVENPORT GROUP** - *Aspen Room*

## tuesday NOVEMBER 9

Exhibits open all day in the Regency Ballroom

9:00 - 10:00 AM

**PLENARY SESSION**

**WELCOME:** Rob Krumm - President, ILGISA

**CONFERENCE HIGHLIGHTS**

Chris McGarry - *Conference Co-Chair*

Pat Keegan – *Conference Co-Chair*

**KEYNOTE PRESENTATION:** Michael Domaratz, U.S. Geological  
Survey

10:00 - 10:30 AM

Break Regency Ballroom

10:30 - 11:45 AM

**APPLICATIONS OF GIS - WOODS ROOM**

*Session Moderator: Jennifer Gandy, Village of Niles*

**A GIS APPROACH TO THE STUDY OF TEARDOWNS**

Teardowns, the replacement of an existing home with a new, often considerably larger one, has received much attention in recent years as communities have grappled with issues of historic preservation, neighborhood character and affordability of housing. For the past several years, Elmhurst has undergone one of the highest rates of teardown activity in the Chicago area. In this presentation we'll look at ways Elmhurst has studied the teardown issue: the spatial distribution of teardowns; whether this has changed over time; which structures are being demolished; how teardowns have impacted the surrounding neighborhoods.

*Presenter: Pete Piet, GIS Specialist with the City of Elmhurst*

**LOCAL COMMUNITY GIS- KANE COUNTY LESA AND  
BUILDING ELBURN'S GIS**

Program will discuss the planning, development and implementation of a County Wide Land Evaluation and Site Assessment System (LESA) as well as the use of the NRCS Landscape Suitability Analysis in Community Planning Model in the development of a GIS for the Village of Elburn

*Presenters: Rand Briggs, NRCS Area GIS Specialist and Jonathan Koepke, Resource Analyst, both with the Kane DuPage SWCD.*

## **AGENCY UPDATES AND RESOURCES - ASPEN ROOM**

*Session Moderator: Andy Zaletel, City of St. Charles*

### **TWENTY YEARS OF GIS AT THE ILLINOIS STATE SCIENTIFIC SURVEYS**

The State of Illinois officially began its GIS implementation in 1983. The Lands Unsuitable For Mining Program, funded by the U.S. Office of Surface Mining, provided the funding and an initial focus for GIS in Illinois. Several agencies were involved initially the Illinois Natural History Survey, Illinois State Water Survey, Illinois State Geological Survey, Illinois State Museum and the Illinois Department of Energy and Natural Resources (now, the IL Dept. of Natural Resources). A multi-vendor selection process resulted in the State of Illinois selecting ESRI for software and contractual services and ArcInfo rev. 2.4 was initially installed on a Prime minicomputer in 1983. GIS has changed in the past 20 years in scope, technology and venue. The use of GIS at the State Scientific Surveys and within many state agencies has also changed dramatically. This presentation will highlight many of these aspects as they were then and how they are now in Illinois. Along the way, we'll pay tribute to some of the people who made it happen.

*Presenters: Robert Krumm, Geologist & GIS Manager with the Illinois State Geological Survey, Dawn McWha, Senior Project Manager at ESRI, and Bob Lindquist, Vice President of GIS Solutions.*

### **MEETING CARTOGRAPHIC NEEDS AT THE ILLINOIS STATE LIBRARY MAP DEPARTMENT**

Tom Huber, map librarian at the Illinois State Library, will give a presentation on all aspects of the Illinois State Library Map Collection. The Illinois State Library is a Regional Depository in the Federal Depository Library Program, as well as the main State Depository library. The collection consists of over 185,000 maps along with many other cartographic resources such as platbooks, historic atlases, gazetteers, carto-bibliographies, and digital data. Mr. Huber will also speak on how one can access the Map Collection, and how it can be of service to your information needs.

*Presenter: Tom Huber, Map Librarian at the Illinois State Library*

## **WEB APPLICATIONS/USER TECHNOLOGY - CYPRESS ROOM**

*Session Moderator: Kingsley Allan, Illinois State Water Survey*

### **CREATING METADATA IN ARC CATALOG AND THE ILLINOIS STATE WATER SURVEY METADATA SERVICE**

I will demonstrate how to enter metadata into ArcCatalog including some shortcuts such as using a template or cutting and pasting from text documents. I will also show how easy it is to load metadata from ArcCatalog into a Metadata Service and will demo our ISWS Metadata Service, including some customizing Kingsley Allan has done.

*Presenter: Kathy Brown, GIS Specialist, Illinois State Water Survey*

## **LESSONS LEARNED IN GIS PROGRAMMING**

This presentation will focus on experiences encountered in porting an ArcView 3.x/Avenue Emergency Planning extension to ArcGIS 8.3/Visual Basic for Applications. The system includes functions that perform GIS processing, display results from a plume model, allow editing of data, and produce custom reports.

*Presenter: Jim Kuiper, GIS Analyst/Biogeographer, Argonne National Laboratory*

## **IMPLEMENTATION OF A MULTI-AGENCY ARCSDE ENTERPRISE DATABASE**

The Peoria GIS Consortium, consisting of the City of Peoria, Peoria County, and the Greater Peoria Sanitary District, has combined resources to develop, maintain, and distribute GIS data to personnel. There will be discussions of technical infrastructure, staffing, scheduling, and administrative issues.

*Presenter: Gregory Sachau, GIS Project Manager, Tri-County Regional Planning Commission*

## **EMERGING TECHNOLOGIES / REMOTE SENSING - PARLOR ROOM DOWNSTAIRS**

*Session Moderator: Richard Hilton, Lake County*

## **ALL ABOUT LIDAR**

LIDAR technology for airborne collection of elevation information has rapidly become a mainstream approach for local government topographic mapping. This presentation will discuss how LIDAR works; its accuracy, benefits, limitations and production workflow, and the characteristics of the deliverable LIDAR database. Application of LIDAR to create digital elevation models, contours, solid terrain models, 3D landscape visualization, drainage evaluation, 3D building extrusion, vegetation studies and other uses will be profiled by end users.

*Presenters: Doug Jacoby with Merrick Corporation, Bryan Luman with Lake County, and David Mick with the Illinois Department of Natural Resources*

## **1:15 - 2:30 PM APPLICATIONS OF GIS - WOODS ROOM**

*Session Moderator: Julie Muzzarelli, Argonne National Laboratory*

### **PREMATURE BIRTH IN LAKE COUNTY: A SMALL AREA ASSESSMENT**

An assessment of the non-random spatial distribution of premature births in Lake County, Illinois visually by identifying and mapping zip code areas with premature birth rates greater than the County rate, and statistically using Kulldorff's SatScan Software.

*Presenter: Marty DuBois, Research Analyst with the Lake County Health Department*

## **FOCUSED ENVIRONMENTAL REMEDIATION USING ADVANCED WEB AND GIS TECHNOLOGIES**

Argonne National Laboratory has been using the latest off-the-shelf communications technologies (including PDAs, laptop and tablet computers, and wireless communications) to rapidly collect, analyze, and disseminate data during clean up of contaminated sites. This presentation will focus on some examples and offer some conclusions as to the benefits and costs of using this approach.

*Presenter: Brian Cantwell, GIS Programmer with Argonne National Laboratory*

## **GIS IN EDUCATION – INFRASTRUCTURE PLANNING**

This presentation will discuss the work that has been done for Community Unit School District 303 in St. Charles, Illinois. Using GIS and ArcView we have created maps and shape files that represent the many attributes of our school district including:

- Creation of a highly reliable and repeatable process for plotting any student data from our SASI database in a GIS format.
- Plotting students within their parcel using Parcel Identification Numbers as opposed to street addresses.
- School Building capacities
- Planning area data correlating students to schools
- New development data showing the status of each new development within our district
- Enrollment projection and boundary analysis tools evaluated.
- SchoolSite from Davis Demographics was provided via a grant and is being evaluated.

The District is very excited about our new abilities to accurately project the growth and needs of our school district, thus allowing us to serve our community better.

*Presenter: Rebecca Small, Special Projects with St. Charles Schools*

## **AGENCY UPDATES AND RESOURCES - ASPEN ROOM**

*Session Moderator: Dan Weeden, DuPage County Forest Preserve District*

## **PROJECT PROGRESS IN CHAMPAIGN COUNTY – A “DO-IT-YOURSELF” APPROACH TO GIS**

This presentation will briefly review the major decisions and obstacles faced to date in the process of building our own GIS. Issues discussed will include data model development, accuracy and quality considerations, resource limitations and processes employed. The presentation will utilize a PowerPoint slide show with live ArcInfo data to illustrate the issues above and provide a graphic summary of current project status. The presentation will conclude with estimates of project completion cost, duration, and personnel requirements.

*Presenter: Mark Toalson, GIS Manager with the Champaign County Regional Planning Commission – Champaign County GIS Consortium*

## **BRINGING IT ALL TOGETHER**

This presentation reviews the GIS applications that have been developed by the Kane County GIS Technologies Department with the intent of packaging traditional county tabular data with the County's interactive GIS. The different types of applications developed include those for the Enterprise and Public using ArcIMS, those for the Mobil Community and Units of Government using MapObjectsLT and most recently a custom application for those working with the new Cadastral geodatabase using ArcObjects.

*Presenter: Thomas S. Nicoski, GIS-Technologies Director with Kane County*

## **ROAD TRIP? (THE COOK COUNTY HIGHWAY DEPARTMENT GIS IMPLEMENTATION PROJECT)**

This presentation is a status report on a multi-year GIS project. GIS will be the foundation for the general automation within the Department. The project includes database design and development of applications for project management, asset management and maintenance of operations.

*Presenters: Michael Hammer, Map Division Supervisor, and Alan Hobscheid, Cook County GIS Coordinator both with Cook County Highway Department and Keith Searles, GIS/Engineer with Patrick Engineering.*

## **WEB APPLICATIONS/USER TECHNOLOGY - CYPRESS ROOM**

*Session Moderator: Kingsley Allan, Illinois State Water Survey*

## **INTERNET GIS APPLICATIONS AT LAKE COUNTY**

Lake County has implemented a new family of tightly integrated Internet and Intranet based GIS applications. This includes interactive applications available to the public, spanning a wide variety of information, but also integrates multiple restricted access applications for internal use by county departments and over 140 external government agencies and other data-sharing partners. The objectives, design concepts, development experiences, technology, deployment approach and benefits will be reviewed, and the applications will be profiled. GIS and map-related information has proven to be the second most popular offering on the county's public web site, which averages 1.5 million hits per month. The new and greatly expanded public applications will be live this Fall, prior to the ILGISA conference.

*Presenter: Richard Hilton, Lake County*

## INTEGRATING & WEB ENABLING GIS WITHIN THE CHICAGO POLICE DEPARTMENT

The GIS Team of CPD has automated the process of geocoding thousands of points a day from the production system. This data is used to map the results of queries for crime, arrests, alerts and other data through the web. This system has enabled officers to quickly and easily visualize information and focus on emerging trends and patterns. The system is fully integrated, drawing from multiple databases for attribute information, mug shots and points.

*Presenter: Scot R. Hamilton, GIS Developer with the Chicago Police Department*

## PLANNING AND DESIGN OF ARCIMS MAP SERVICES AT THE ILLINOIS STATE GEOLOGICAL SURVEY

Illinois State Geological Survey (ISGS) staff members have been developing ArcIMS-driven Interactive Maps to provide unprecedented data access to a diverse array of on-line audiences since June, 2001. This paper will outline the planning procedures developed from the successful completion and public release of multiple map services. Interactive maps served by the SIGS and the Illinois Natural Resources Geospatial Data Clearinghouse at <http://www.isgs.uiuc.edu/nsdi-home> will be used to illustrate technical lessons learned.

*Presenter: Sheena Beaverson, Clearinghouse Administrator with the Illinois State Geological Survey*

## EMERGING TECHNOLOGIES / REMOTE SENSING - PARLOR ROOM DOWNSTAIRS

*Moderator: Dr. Donald Luman, Illinois State Geological Survey*

## NAIP: THE NATIONAL AGRICULTURAL IMAGERY PROGRAM IN ILLINOIS

Color infrared aerial photography of the entire state of Illinois was flown this summer and is scheduled for rapid delivery as digital orthophotography. NAIP, the National Agricultural Imagery Program, is managed by the U.S. Department of Agriculture. This program and its products will be reviewed in depth.

*Presenter: Joseph K. Curlless, GIS Specialist with the U.S. Department of Agriculture Farm Service Agency*

## THE NATIONAL MAP: 2005 STATEWIDE DIGITAL ORTHOPHOTO IMAGERY FOR ILLINOIS

The U.S. Geological Survey, in partnership with a number of Illinois agencies, will fly the entire state next Spring, creating statewide digital orthophoto products. This project has involved an unprecedented consortium of federal, state and county agencies. The resulting data will become part of the National Map and will be available to government agencies and the public.

*Presenters: Dick Vraga, Geography Liaison for Wisconsin and Illinois, U.S. Geological Survey and Dr. Donald Luman, Illinois State Geological Survey and Chair of the Illinois Mapping Advisory Committee*

## CLEARINGHOUSE DISTRIBUTION OF 2004 AND 2005 STATEWIDE IMAGERY

The Illinois State Clearinghouse already holds very large data collections as a part of the National Spatial Data Infrastructure and is heavily visited. The 2004 and 2005 statewide photography projects will involve major challenges for access and distribution.

*Presenter: Rob Krumm, Head, Geospatial Analysis and Modeling Section, Illinois State Geological Survey*

## 3:00 - 4:00 PM APPLICATIONS OF GIS - WOODS ROOM

*Session Moderator: Andrew Vitale, City of Evanston*

## PREPARING FOR CENSUS 2010: THE MAF/TIGER ACCURACY IMPROVEMENT PROGRAM

The Census Bureau's TIGER database is the framework on which all census data rest. A key component in preparing for Census 2010 is improving the spatial coordinate accuracy of TIGER, utilizing local data where available. Is your county contributing? How does it affect you? Find out about the issues driving MTAIP, spatial accuracy requirements, various strategies for achieving the goal, and the status of TIGER enhancement in Illinois.

*Presenter: Gail A. Krmenc, U.S. Census Bureau*



## **LAKE COUNTY CENSUS DATA APPLICATIONS AND PARTICIPATION IN THE CENSUS BUREAU ACCURACY IMPROVEMENT PROGRAM**

There are many applications for census data in county and municipal government. The positional accuracy of census spatial features has been a limiting factor in the past. Lake County participated in the accuracy improvement program and will share our experiences working with the Census Bureau as well as review major applications in the areas of redistricting, emergency planning and management, facility siting and developing demographic profiles of government jurisdictions.

*Presenter: Peter Schoenfield, Principal GIS Analyst with Lake County GIS*

## **AGENCY UPDATES AND RESOURCES - ASPEN ROOM**

*Session Moderator: Mark Varner, City of Evanston*

## **STREAMBANK EROSION SURVEY ON AN ILLINOIS RIVER TRIBUTARY**

Tri-County Regional Planning Commission utilized GIS technologies to create stream cross-sections and perform time-lapse comparisons of stream migration in a rapidly eroding stream. Ortho photography, topographic layers, and real-time GPS were combined with on-site data collection to identify excessive erosion and guide landowners in stabilization techniques.

*Presenter: Melissa Eaton, Planner II with the Tri-County Regional Planning Commission*

## **OLD MAN RIVER PROJECT**

The Old Man River Project is a three-year program established to provide the best in professional development through the theme of discovering and recording the rich American history of life up and down the vital Mississippi River. Thirty (30) fifth through 12th grade teachers of history, social studies, geography, language arts, science, reading, and special education are leading their students in learning about a variety of topics that explore our connection with the mighty Mississippi River. Our participants, from 19 different school districts, annually experience nine days of professional development presented by carefully selected faculty.

OMRP gives teachers nine days of professional development annually, supporting technology, appropriate software, a materials budget, electronic and onsite support, and the flexibility to choose lessons that support their curriculum while guiding them to further educational and content area expertise. Old Man River participants are continuing to grow professionally during our second grant year through studies higher-order thinking, unit writing, technology integration, GPS/GIS training as well as designing scoring rubrics and other appropriate assessment tools. Further information on this project can be found on the ILGISA web site at <http://www.ilgisa.org>.

*Presenter: Patricia "Trish" Meyer, Principal Designer & Grant Coordinator with the St. Clair Regional Office of Education*

## **WEB APPLICATIONS/USER TECHNOLOGY - CYPRESS ROOM**

*Session Moderator: Frank Frelka, Village of Glen Ellyn*

## **DUPAGE COUNTY GPS COOPERATIVE CORS NETWORK**

DuPage County Government, in cooperation with local municipalities and other governmental agencies, is developing a comprehensive GPS base station network that will provide for most countywide geodetic control needs and dramatically improve the accuracy of GIS databases.

*Presenters: William Faedtke, Manager of GIS and Jeff Luteyn, GIS Processor both with the DuPage County GIS Division*

## GPS MODERNIZATION

GPS is a \$16 billion dollar industry, but more than that it is not an overstatement to say that GPS has developed into part of the foundation of the U.S. economy. So it is clear that this system cannot and does not remain static. Do you use the computer you bought 15 years ago? Your system has been upgraded, and so must GPS. In fact, the goal of a single receiver that can track all of the old and new satellite signals with a significant performance improvement and without a significant cost increase, while possible, may be elusive. But, with greatly increased number of satellites and signals, better satellite availability, better dilution of precision, immediate ambiguity resolution on long baselines with three-frequency data, better accuracy in urban settings, and fewer multi-path worries it is beginning to look like at least some extraordinary things are achievable.

*Presenter: Jan Van Sickle, Director of GIS for V3 Consultants*

## EMERGING TECHNOLOGIES / REMOTE SENSING - PARLOR ROOM DOWNSTAIRS

*Session Moderator: Pat Keegan, City of Evanston*

## ALL-DIGITAL AERIAL PHOTOGRAPHY

Aerial photography and photogrammetry have seen major technology changes over the last few years, with the introduction of airborne GPS, Inertial motion sensors (IMU), LIDAR and most recently, all-digital imagery acquisition. This session will include a detailed profile of the airborne sensor, the data it captures and the workflow for creating high-resolution black and white, color or color infrared digital orthophotos. The benefits and costs relative to conventional aerial photography will be reviewed. Experiences with this new digital imagery by agencies in our region will be shared by end users.

*Presenter: Doug Fuller, Aerometric*



