

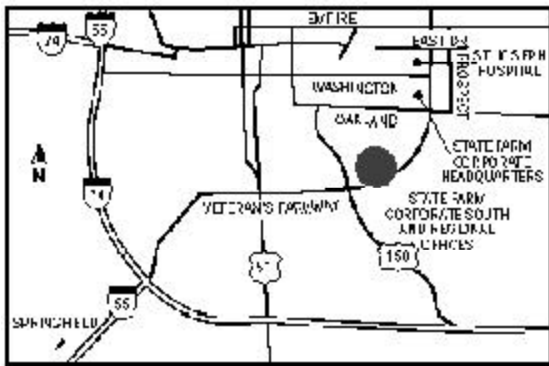
GIS in Illinois

2003 Spring Conference

April 8-9

Radisson Hotel ❖ Bloomington

Register online now!
www.ilgisa.org



Accommodations

- Radisson Hotel, 10 Brickyard Drive, Bloomington, IL 61701
- Room rates: \$95+ tax (single/double); \$105+tax (triple); \$115+tax (quad)
- Reservations must be made by **March 16** to guarantee these rates
- Please **call (309) 664-6446** and mention the **Illinois GIS Association**
- The national toll-free number is 1-800-333-3333

Conference Snapshot

Tuesday, April 8

8:00 - 9:00 a.m.

Registration/Continental Breakfast

9:00 a.m. - noon

Leveraging the Power of ArcGIS 8.3

Introduction to GPS

Migrating from ArcView 3.2 to 8.2 Beginner (offsite at InfoTech)

MODIS and ASTER (offsite at InfoTech)

All About LIDAR

National Hydrographic Data

Noon - 1:00 p.m. Lunch (buffet style)

1:00 - 4:00 p.m.

Generating 2-D Surfaces

Introduction to GPS (continues)

Migrating from ArcView 3.2 to 8.2 Intermediate (continues)

MODIS and ASTER (continues)

GIS Implementation Planning

National Hydrographic Data (continues)

4:00 - 6:00 p.m.

Poster Display and Vendor Reception

5:00 - 7:00 p.m.

Student Night with a Special Focus on GIS Career Development

6:00 - 7:00 p.m.

ILGISA Board Meeting (open to all)

Wednesday, April 9

8:00 a.m. - 4:30 p.m.

Vendor Exhibits and Poster Displays

8:00 - 9:00 a.m.

Registration/Continental Breakfast

9:00 - 10:00 a.m.

Opening Session

10:00 - 10:30 a.m.

Break

10:30 - 11:45 a.m.

Concurrent Sessions

11:45 a.m. - 1:00 p.m.

Lunch (provided, selection of meal required)

1:00 - 1:45 p.m.

Concurrent Sessions

1:45 - 2:00 p.m.

Break

2:00 - 2:45 p.m.

Concurrent Sessions

2:45 - 3:00 p.m.

Break

3:00 - 3:45 p.m.

Concurrent Sessions

TUESDAY, APRIL 8

Registration/Continental Breakfast

8:00 - 9:00 a.m.

Leveraging the Power of ArcGIS8.3

Half-day classroom workshop, 9:00 a.m. - Noon

The objective of this workshop is to introduce users to new functionality of ArcGIS 8.3 and the Geodatabase. The workshop will include a lecture, demonstrations and a question and answer session. Topics include loading data, applying domains and topology rules for data integrity and advanced editing enhancements such as COGO. Demonstrations will focus on maintaining parcel data. This workshop is intended for anyone interested in the advantages of managing and editing spatial data using enhanced topology in the Geodatabase.

Presented by: Jason Grootens, ESRI-Minneapolis

Introduction to LIDAR

Half-day classroom workshop, 9:00 a.m. - Noon

LIDAR (Light Distance And Ranging) is a relatively new technology that employs an airborne scanning laser rangefinder to produce accurate topographic surveys of unparalleled detail. With LIDAR, users can generate very detailed digital elevation models. The opportunity to use LIDAR data for mapping applications has spawned considerable interest within the GIS user community. While there is a lot of buzz, many people are unfamiliar with the basic facts about LIDAR. This workshop is intended to provide you with an introduction to LIDAR technology - what is it, how is it produced, who generates the data, what types of applications are taking advantage of LIDAR data, what are the limitations of the data, and what are the costs involved?

Presented by: Terra Point, Inc. (speaker TBD)

Introduction to GPS (Beginners)

Full-day workshop, 9:00 a.m. - 4:00 p.m. Combined classroom workshop and hands-on training.

Get an understanding into the complex operation and ease of use of the Global Positioning System (GPS). This comprehensive overview of how GPS functions, its uses in your every day operation and real hands-on exposure through a classroom overview followed by an afternoon of fun in the sun (no rain allowed). Come see GPS for yourself and find out where you can apply its many uses.

Presented by Tim McCann, Seiler Instruments and Randy Nydegger, WinGIS

Migrating from ArcView 3.2 to ArcView 8.2

Two half-day workshops, 9:00 a.m. - 4:00 p.m. Hands-on training, off-site at ISU InfoTech PC Lab.

Part A (morning) - Introduction to ArcView at 8.2

Part B (afternoon) - Advanced Concepts

This workshop is meant to ease the transition for those making the change from ArcView 3.x to the 8.x technology. The basic differences between procedures performed with the two versions will be emphasized. The more extraordinary advances with 8.x, such as the superior ability to georeference scanned images, will be demonstrated. The afternoon session will cover some advance areas in the 8.x technology. The class will be exposed to the new Geodatabase format. Annotation, dealing with map projections, and some customization of the graphical user interface with basic VBA code are some of the topics that will be addressed. Participants will use ArcGIS8.2 to tackle hands-on exercises during this workshop.

Presented by: Karen Russ, Byron Fire Protection district and an ESRI Authorized Instructor. Note that this is NOT an ESRI Authorized course, but a condensed Conference workshop.

MODIS and ASTER Remote Sensing Workshop

Full day workshop, 9:00 a.m. - 4:00 p.m. Combined classroom workshop and hands-on training, off-site at InfoTech PC Lab

Expand your remote sensing horizons with a workshop about MODIS and ASTER. MODIS (Moderate Resolution Imaging Spectroradiometer) data are used to for small-scale studies that concern energy balance/surface radiation and biophysical/ecological parameters, and land use/land cover studies. MODIS data represent four broad geophysical categories: surface reflectance and albedo; land surface temperature and emissivity; vegetation characteristics; and surface cover. Spatial resolutions include 250 m, 500 m, 1000 m, and 0.05 degree climate-modeling grids. Also, MODIS datasets are available at no cost! Data collected with the ASTER (Advance Spaceborne Thermal Emission and Reflection Radiometer) sensor can be used to generate Digital Elevation Models (DEMs). The ASTER imagery is quite nice, having a ground spatial resolution of 15x15 meters for the visible & near-IR multispectral channels (Landsat TM has 30x30 meter multispectral resolution). In Illinois, there is great potential for the ASTER DEM product, especially since the average age of the source aerial photography for Illinois USGS DEMs is 30+ years old (some quads are 50+ years

old). It's a long drive to the Eros Data Center in Sioux Falls, SD, so come to this workshop to take full advantage of having a remote sensing expert from EDC at the ILGISA meeting.

Presented by: Calli Jenkerson, USGS-Eros Data Center

National Hydrographic Data (NHD) Workshop

Full day classroom workshop, 9:00 a.m. - 4:00 p.m.

The National Hydrography Dataset (NHD) is a comprehensive set of digital spatial data that encodes information about naturally occurring and constructed bodies of water, paths through which water flows. Data are available for the whole country at 1:100,000 scale and approximately 25% of the country is available or in work at 1:24,000 scale or better including Northeastern and Southern Illinois. See <http://www.crrw.utexas.edu/giswr/> for more details.

Presented by: Keven Roth, NHD program director at USGS

GIS Implementation Planning

Half-day classroom workshop – 1:00 - 4:00 p.m.

The purpose of this workshop is to help GIS Managers and other decision makers plan for implementing GIS technology within their organizations. The format for this workshop will be a combination of case study lectures with interactive discussion. Topics covered in this workshop include: What's the difference between a Needs Assessment and Implementation Plan? What does a typical Implementation Model look like? How do you translate business needs to measurable objectives? What are the four categories of Implementation preparation tasks? What are some of the best practices for Implementation planning? What are some strategies to deal with resource constraints? What are the Next Steps for moving forward with the Implementation Plan? How do you validate the Implementation Plan before full deployment?

Presented by: Walter Potts, ESRI-Minneapolis and local/state government GIS Managers

Generating 2-D Surfaces

Half-day classroom workshop, 1:00 – 4:00 p.m.
Many GIS software packages have the ability to create (i.e. interpolate) surface models of continuously varying spatial data. Accordingly, interpolation and analysis of continuous 2D data is becoming an integral part of many GIS projects. These modeling efforts can include storm water management, watershed management, air quality mapping, groundwater contaminant mapping, geologic mapping, and watershed sighting. Surprisingly, widely differing results can be obtained from subtle differences in the modeling algorithms. Most software does a poor job documenting how or why a user should choose one technique over another. Often, the documentation encourages users to “use the default values” in generating surfaces, rather than experimenting with program settings to find the best surface possible. This workshop will use several common software packages to introduce attendees to various techniques in 2D modeling and analysis. We will discuss the different types of algorithms that are available for creating surface models, and we will discuss ways of deciding which algorithm is likely to be best for a given project. We will describe the purpose of the most common parameters used in configuring these algorithms. Finally, we will present several methods for evaluating which of several surface models is the best fit to the modeling objectives of a project.

Presented by: Curt Abert and Don Keefer, Illinois State Geological Survey

Important Information about the Off-Site Workshops

The Migrating from ArcView 3.2 to 8.2 and MODIS/ASTER Workshops will be held at the Extended University Center for Information Systems Technology (InfoTech), located close to the conference hotel at 205 N. Main St., Bloomington. There is limited parking close to the lab, so shuttle service will be available from the hotel if you do not want to try and find parking on your own.

Tuesday Evening, 5:00 - 7:00 p.m.

Special Focus on GIS Career Development for Students, Career Changers and GIS Professionals

This variation of the longstanding ILGISA Student Night will be built around a presentation by Jan Drennan, Director of Career Services for Elgin Community College, on “Constructing a Focused Resume and Supporting Portfolio.” Two representatives of GIS organizations will round out the discussion that will be moderated by Jim Carter, Past-President. Questions and comments from the audience will be invited to trade useful tips.

Poster Session

The poster displays will be open 4:00 – 6:30 p.m. Any individual or organization intending to present a poster display should contact: Ruth Anne Tobias, Center for Governmental Studies, Northern Illinois University, DeKalb, IL 60115, 815-753-0922, or e-mail: rtobias@niu.edu. ILGISA will inaugurate the People’s Choice Award for the “Best Map” and the “Best Poster” at this conference, with small mystery prizes on Wednesday during the last break!

WEDNESDAY, APRIL 9

The day will begin with an opening keynote session that includes introductory remarks by the ILGISA President, Ken Lovett, and a keynote address by Barbara Ryan, Associate Director of Geography at the U.S. Geological Survey.

9:00 – 10:00 a.m. Keynote presentation by Barbara Ryan, Associate Director of Geography at the U.S. Geological Survey.

The keynote address will provide a review of concepts for The National Map and highlight progress to date, particularly with other Federal, State, and local agencies. Relationship between this and other Federal programs, including Geospatial One-Stop and the Federal Geographic Data Committee will be discussed. The federal interstate highway system will be discussed as a model for a national spatial data infrastructure.

Sessions

Please refer to the Illinois GIS Association web site at www.ilgisa.org for updated information on session content and presentations.

Morning Break 10 – 10:30 a.m.
Technical Sessions I 10:30 – 11:45 a.m.

Data Modeling & Data Models

A presentation on the data modeling process followed by information about a base map data model that should interest all ArcGIS users. Attend the session to learn more about data models, one of the building blocks of GIS.

Doug Roberts, SD.I Inc. – Data Modeling: A Primer
Charlie Frye, ESRI – The ArcGIS 1:24,000-scale Topographic Base Map Data Model

GIS on the Web, Part 1

Join us for the first of four sessions. We start with GIS Web Services that offer useful ways to provide IT services on a transaction level. Then, two presentations summarizing the pros & cons of specific web technology and lessons learned from a web development experience.

Dick Chronowski, ESRI – An Introduction to GIS Web Services
Jeff Siegel, HNTB – GIS Website Implementation: Examining the Pros & Cons of ESRI and Intergraph Web Solutions
Thomas Tym, Ruekert & Milke – GIS Web Application Development: Lessons Learned

Spotlight on southern Illinois GIS Applications

There is life south of I-80! This session features three presentations that focus on GIS projects from the southern part of the state. SIU-Edwardsville has a steady history of applied geography & planning projects. Two projects from SIU-E serve as bookends to a presentation concerning a Kaskaskia River forest cover application.

Dave Clelland, SIU-Edwardsville-Sinkhole Plain GIS in Monroe County, Illinois
Randy Pearson, SIU-Edwardsville-Mapping Abandoned Underground Mines
Michael Gawedzinski, Southwestern IL GIS Resource Center-Land Registry for the Forest Health of the Kaskaskia River Basin

Lunch Break 11:45 a.m. – 1:00 p.m.
Technical Sessions II 1:00 – 1:45 p.m.

GIS Applications: The History of Illinois

Two applications with historic perspectives. Get a glimpse of the landscape of Illinois in the early 1800s and learn about HAARGIS, a GIS project focused on historic properties in Illinois.

Diane Szafoni, IL Natural History Survey – Land Cover of Illinois in the Early 1800s
Martha Benner, IL Historic Preservation Agency – Historic Architectural/Archaeological Resources GIS

GIS on the Web, Part 2

Learn more about communicating effectively with the masses, and get a better appreciation of the building blocks (hardware/software) and preparation that are required to make your web applications fly.

Scott Hameister, Taylor Technologies –Taking Your Data to the Web: Best Practices for Communicating GIS Data to non-GIS Users
Joel Zitterich, ProMap – GIS on the Web: Hardware and Software Issues and Website Preparation

Mapping Methods

Using high-resolution (3 inch pixel) orthophotography, the City of Lake Forest wanted to avoid the cost of a full-scale GPS field inventory of storm sewers. Can digital orthophotos eliminate the need for field inventory? The second presentation will be about a project at Springfield High School where students are pioneering a curriculum called 'Mapping Our World' to learn geographic concepts and to develop a proficiency with GIS software. Employers, take note!

Mary Clement, City of Lake Forest and Paul Vastag, Ruekert & Milke – Using High-Resolution Digital Orthophotos to Reduce Field
Jenni Dahl, Springfield High School – Mapping Our World

Break: 1:45 - 2:00 p.m.
Technical Sessions III 2:00 - 2:45 p.m.

Public Health Session

The first presentation concerns the potential for the use of GIS at a local department of public health. Linkages to local GIS efforts, homeland security concerns, sample applications and obstacles will be addressed. The Chicago Food Security project concerns access to food sources in the Chicago area, including mapping of groceries and other food sources.

Marilyn Ruiz, University of Illinois – GIS at Local Health Department
Daniel Block, Chicago State University – Chicago Food Security Project

GIS on the Web, Part 3

Web-mania continues! The lead-off presentation concerns developing a web-mapping system at low cost and the integration of mapping and journalism. The second presentation will introduce XML web mapping as a viable, feature-based solution that is quick, secure, and less costly to implement.

John Hagstrand, SaveAnticoh.com – Grassroots Web Mapping
Ian Clemons, Universal Map – XML for Feature-Based Web Mapping

Technology Integration/Field GIS

Attend this session to learn about integrating GIS, GPS, and Sonar technologies. The project was focused on characterization of lake and sediment fill metrics of a 142-acre freshwater lake for assessment and planning purposes. The second presentation concerns the Qwest Communications GIS database that contains features that

represent 25,000 miles of fiber optics with over 100 attributes and layers. The challenges of integrating Oracle & Field-based GIS technologies will be addressed.

Doug Hermann, STS Consultants – Integrating GIS and Sonar Technologies to Characterize Lake and Sediment Fill Metrics
Jan Van Sickle, V3 Consultants – Working With Oracle and Field-based GIS

Break: 2:45 - 3:00 p.m.
Technical Sessions IV 3:00 - 3:45 p.m.

Database Issues: Working with Geodatabases

If you're concerned about Geodatabase issues, then this session is for you. The first presentation will highlight various ArcMap and ArcCatalog tools that can be used to import data to a Geodatabase. Presentation two will concern relationship classes that allow users to increase the power of the Geodatabase by associating attribute intelligence to graphic feature classes which are permanently linked to, and driven by, the life of the map feature.

Brent Mainzinger, Sidwell – Migrating Parcel Data to the Geodatabase
Jason Sheldon, Sidwell – Extending the Geodatabase With Relationship Classes

GIS Applications: Analysis & Prediction

A GeoMedia application to calculate impervious surface areas will be the focus of the first presentation followed by information on the development of algorithms that attempt to fine-tune a raster-based prediction application.

Matthew Kading, Emapping Solutions – Impervious Area Calculation Application
Brad Larson, Parkland College – Algorithms in Avenue for Raster-based Predictions

GIS on the Web, Part 4

The first presentation emphasizes a web application that provides the ability to access and process information quickly and allows Police Departments to allocate resources quickly and more effectively. This will be followed by a presentation that describes a creative solution for serving images with ArcSDE. Complete all four GIS/Web sessions and you can pass GO & collect \$200.

Lex Bitner, GIS Solutions – Using GIS for Decision Making in Law Enforcement
Jason Grootens, ESRI – Using ArcSDE to Efficiently Serve Georeferenced Images

End of Sessions – 3:45 p.m.

Conference Questions

Conference Hotline: (815) 753-7922
ILGISA Web Site: www.ilgisa.org

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DeKalb, IL 60115

815-753-7922 ❖ Fax: 815-753-6900
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Registration, Refund & Lunch Information

Registrations accepted by mail, fax, or online (online registration using Visa, MasterCard, American Express or Discover) prior to March 18 to receive the early-bird discount. Registrations after that date will pay the regular registration fee through March 27. After March 27, registrations received will be considered on-site and will be assigned to workshops based upon the order you arrive at the conference and availability of seats. Any individual registering on-site must do so with cash, check or credit card that day. Students must be at least half-time students and need to include a letter from their department chair with the registration form. Student registration includes Wednesday conference activities only. **Please mail registration materials to the address at left, fax them to 815-753-6900, call 815-753-7922, or e-mail ksyversen@niu.edu.**

Refunds: A full refund will be issued if written request, by fax or mail, is received by NIU Outreach Services - Registration and postmarked on or before March 27. No refunds will be issued after that date. If you cannot attend, you may send a substitute. If you do not send a substitute and you do not attend yourself, you are still responsible for notifying Registration before the deadline for the refund to be processed. Please allow 6-8 weeks for refunds to be processed.

Lunch: There are options for lunch, so be sure to indicate which choice you prefer on your registration. A lunch ticket will be provided with your registration packet when you arrive.