



Preliminary Program
Minnesota GIS/LIS Consortium



*15th Annual
Conference & Workshops*



October 3 - 5, 2005
Civic Center • St. Cloud, MN
www.mngisliis.org



Conference Highlights

The Minnesota GIS/LIS Consortium will hold its **15th Annual Conference and Workshops** on Geographic Information Systems (GIS) and Land Information Systems (LIS) on October 3-5, 2005 at the St. Cloud Civic Center in St. Cloud, Minnesota. Conference and Workshop materials will be available at the Civic Center beginning Monday morning.

A full slate of **workshops** are scheduled for Monday October 3 on the University of Minnesota, St. Cloud Campus (SCSU). Workshops range from beginner level workshops to advanced topics and both half and full day workshops will be offered. A full description of available workshops begins on page 6 of this program.

Although the workshops will be held at the SCSU campus, attendees will still be required to check in before their workshop at the St. Cloud Civic Center. Transportation will be provided to and from the campus. This will allow registrants to leave their vehicles at the Civic Center or their hotels. There is no available parking at the University.

A **welcome reception/social hour**, hosted by the Mn GIS/LIS Consortium, is scheduled for Monday evening. After the workshops, join your colleagues for socializing, complimentary appetizers, free pool tables, and a variety of drink selections at the Martini Lounge in the Red Carpet Bar and Restaurant, located within walking distance of the Civic Center.

Beginning Tuesday, the **concurrent sessions, product demonstrations and poster presentations** will address numerous subjects of interest to GIS professionals. Topics cover many traditional areas such as natural resource applications and remote sensing in addition to emerging subjects such as Community GIS and Web-Mapping. A complete listing begins on page 10.

The **exhibit hall** will be located in the spacious Terry Haws Center of the St. Cloud Civic Center. Numerous vendors will be showcasing their latest GIS-related hardware, software, products and services. The exhibit hall will be open on Tuesday and Wednesday.

The **vendor reception and poster session** will be held on Tuesday evening in the exhibit hall. Participant posters will also be on display throughout the conference, including a poster competition among scholarship recipients. Authors will be available between 6 and 7 p.m. to discuss their posters.

The reception, as always, will feature a fine selection of complimentary hors d'oeuvres, a cash bar, and a variety of prizes (must be present to win). The annual beer tasting will follow the vendor reception in the historic Lahr building, a short walk from the civic center.

New this year is a **competition among GIS/LIS scholarship recipients** for substantial cash prizes. Both undergraduate and graduate students will be presenting papers in a dedicated student track. Two-year program students will compete in a poster competition.

A hard-copy edition of the **Fall Mn GIS/LIS News** will be available at the consortium booth and in honor of the 15th Annual Conference; **new attendees** are being offered a discounted rate.

So, please **join us and spread the word** far and wide because the 2005 Mn GIS/LIS Conference will be great!

Who Should Attend?

The conference program is designed to address the needs of:

- Government officials who implement and use GIS/LIS for a variety of applications.
- Surveyors, engineers, and land management specialists who use GIS/LIS technology.
- People who want to utilize and/or publish GIS/LIS data over the Web.
- Business, real estate, banking, and insurance specialists who need to understand and access GIS/LIS data.
- Public and private utility representatives who use GIS/LIS technology for infrastructure management.
- Consultants who provide GIS/LIS services, hardware or software.

- People in precision agriculture, health care and other fields just starting to use GIS/LIS.
- University faculty and students interested in new GIS/LIS technology and research applications.
- People concerned with homeland security or emergency preparedness.
- Managers who supervise GIS/LIS technology or staff.
- GIS professionals in any discipline.

Outstanding Keynote Speakers!

Two dynamic speakers will address this year's conference.

- 8:30 a.m. Tuesday, October 4, 2005 — Karen Siderelis, Associate Director for Geospatial Information at the United States Geological Survey (USGS)

Karen Siderelis was named the first federal Geospatial Information Officer (GIO) in the nation and currently serves as the Associate Director for Geospatial Information and Chief Information Officer at the USGS. The recent creation of the National Geospatial Programs Office under her direction signals major changes at the USGS, bringing several important GIS programs — The National Map, Geospatial One-Stop, and the Federal Geographic Data Committee — into a single program office. As the largest traditional federal partner of the GIS community, the USGS is experiencing many changes likely to affect its partners. This reorganization aligns the agency to work more fully and directly with state and local governments. Ms. Siderelis will discuss current geospatial activities at the USGS and explain how new changes may benefit the Minnesota mapping community.

- Noon Wednesday, October 5, 2005 — Rob Nurre, The Surly Surveyor

Step back in time 150 years, grab your chain and compass, round up your bearing axe and get ready to conduct the first survey of Minnesota. Rob Nurre, Land Records Manager for the State of Wisconsin Board of Commissioners of Public Lands, will close the conference with an entertaining and informative performance assuming the personality of the land surveyor that first mapped the area now known as St. Cloud, Minnesota. Rob will explain the difficulties surveyors faced during those years, offer fun facts about St. Cloud and Minnesota, and stress the importance of those original survey records to everyone living in Minnesota today. This is a performance you will not want to miss.

Exhibitors

The Exhibit Hall will be open on Tuesday and Wednesday. The Vendor Reception will take place Tuesday night after the close of the concurrent sessions and will include hors d'oeuvres, a cash bar and a variety of prizes. Vendor participation in this conference has always been strong and we anticipate this year being no exception. At this time, the list of participating vendors includes:

Aerial Services, Inc.

Ayres Associates

BullBerry Systems, Inc.

GeoAnalytics

Horizons, Inc.

GeoComm

Nazca Solutions

Pro-West & Associates, Inc.

Rowekamp Associates, Inc.

Saint Mary's University of Minnesota

United States Geological Survey

Land Management Information Center





About the Minnesota GIS/LIS Consortium

The Minnesota GIS/LIS Consortium is a forum for communicating information to, and improving cooperation among, those interested in Geographic Information Systems (GIS) and Land Information Systems (LIS) in the state of Minnesota. Members include GIS users in local, state and federal government agencies, business and industry, and educational institutions. Membership is free.

The consortium hosts a statewide conference each year and establishes committees that deal with specific GIS/LIS-related issues in Minnesota. Opportunities to participate in consortium activities are available through volunteer work with committees, conferences and workshops. For more information on current Consortium activities and volunteer opportunities, visit our Web site, www.mngislis.org, or stop by our booth during the conference.

Minnesota GIS/LIS Consortium Sponsors

The Minnesota GIS/LIS Consortium would like to recognize and thank organizations that are supporting the consortium this year as sponsors. At this time, sponsors include the organizations listed below.

Bronze Sponsor: **Nazca Solutions**

Job Fair Board

Are you an employer with an open GIS position? Are you an individual looking for a job in GIS? A job fair board will be located next to the registration desk at the conference where employers can post job descriptions and individuals can post their resumes. Bring several copies and check the board throughout the conference for updates.

Conference Planning Committee

A note of thanks to everyone who helps make this conference a success — and special appreciation to the Conference Planning Committee who, without their help, this event would not be possible.

James Beal, UCIT Inc.
Chris Cialek, Land Management Information Center
Rebecca Foster, City of Edina
Monica Gerberding, Private Consultant (Conference Chair Elect)
Kevin Horne, National Historic GIS, University of Minnesota
Steve Kloiber, Metropolitan Council
Matt Koukol, Minnesota Department of Transportation
Chad Martini, GeoComm
Crystal Phillips-Mustain, Minnesota Department of Transportation
Chris Pouliot, Minnesota Department of Natural Resources
Cynthia Sweet, Ayres Associates
Ben Verbick, Logis
Sally Wakefield, Minnesota Department of Transportation (Conference Chair)
Ron Wencl, United States Geological Survey

A big thank you to Susan Church and all the others at Ewald Consulting who skillfully help to manage the Mn GIS/LIS Consortium and this conference.

Minnesota GIS/LIS Consortium

1000 Westgate Drive, Suite 252
St. Paul, MN 55114
Phone: 651-203-7242
Fax: 651-290-6279
www.mngislis.org

2005 GIS/LIS Conference At-A-Glance

Tuesday, October 4

7:30 a.m. Conference Registration and Materials Pick-Up — Refreshments in Foyer
 8:30 a.m. Opening Plenary Session — Karen Siderelis, Associate Director for Geospatial Information at the U.S. Geological Survey

10 a.m. Refreshment Break
Exhibit Hall Opens and Poster Display Begins

10:30 a.m. Concurrent Sessions

Session 1 Management Strategies	Session 2 Data Management	Session 3 Data Modeling	Session 4 Web Mapping	Session 5 Remote Sensing	Session 6 Student Track	Product Demos ESRI
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Noon Awards Luncheon

1:30 p.m. Concurrent Sessions

Session 8 Federal Programs	Session 9 Data Management	Session 10 Data Modeling	Session 11 Web Mapping	Session 12 Remote Sensing	Session 13 Student Competition	Product Demos Nazca Solutions, ESRI
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3 p.m. Refreshment Break

3:30 p.m. Concurrent Sessions

Session 15 Field Computing	Session 16 Data Management	Session 17 Data Modeling	Session 18 Web Mapping	Session 19 Transportation	Session 20 Student Competition	Product Demos MN DNR, ThomTech Design, Inc.
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5 p.m. Vendor Reception and Poster Session – Exhibit Hall
 Prize Drawings (must be present to win), Complimentary Hors d'oeuvres and Cash Bar

7:30 p.m. Beer Tasting Gathering — hosted by GeoComm at the Lahr building

Wednesday, October 5

7:30 a.m. Conference Registration and Materials Pick-Up
 8 a.m. Exhibit Hall Opens – Refreshments Served

8:30 a.m. Concurrent Sessions

Session 22 Community GIS	Session 23 Natural Resources	Session 24 Parcels	Session 25 Homeland Security	Session 26 Water Resources	Session 27 Student Competition	Product Demos Pro-West & Associates, Plansight
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10 a.m. Refreshment Break

10:30 a.m. Concurrent Sessions

Session 29 Community GIS	Session 30 Natural Resources	Session 31 Parcels	Session 32 Homeland Security	Session 33 Remote Sensing	Session 34 Education	Product Demos Pro-West & Associates, Taylor Technologies, Douglas County
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Noon Closing Luncheon (Exhibit Hall closes) — Rob Nurre, The Surly Surveyor

1:30 p.m. Minnesota GIS/LIS Consortium Business Meeting and Year-End Review

2 p.m. Prize Drawings (must be present to win)
 Adjournment

Monday Workshops

All workshops will be held on Monday, October 3 at the Atwood Memorial Center, Spatial Analysis Research Center (SARC) and the Miller Center Library, all on the St. Cloud State University Campus.

Check-in for workshop participants begins at 7:30 a.m. Monday morning at the St. Cloud Civic Center. Be aware that all **workshop participants (morning and afternoon) must check-in at the Civic Center** prior to going to St. Cloud State University. Please arrive at the St. Cloud Civic Center no later than 1 hour prior to the beginning of your workshop to allow for registration and transportation. Transportation to and from St. Cloud State University will be provided throughout the day. There is no available parking at the University.

- The morning workshops begin at 9 a.m. and will conclude by 12:15 p.m.
- The afternoon workshops begin at 1:15 p.m. and will conclude by 4:30 p.m.

Your registration fee includes lunch. Lunches for all workshop attendees will be provided at the Atwood Memorial Center at 12:15 p.m.

Full-Day Workshops

GPS Data PostProcessing Workshop (lecture & hands-on)

Following the field-work and collection of GPS data, what tools and techniques are necessary to create a working GIS? Participants will work with tools in this hands-on workshop to manipulate, parse, tag and import downloaded data into a variety of the GIS data types. Participants should bring an example of GPS data they've collected on a CD or jump drive.

Audience: Intermediate

Instructor: Thomas Martin, Minnesota Department of Transportation

Getting Started With MapServer (lecture)

This hands-on workshop is intended as an introduction to Web mapping with the University of Minnesota MapServer. The participants will go through the process of setting up a MapServer environment, which includes configuring a Web server and creating a MapServer application. The creation of a MapServer application will include step-by-step examples of building a map file, including defining the WEB object, the LAYER objects, and assigning symbology to these objects. Examples for several important data formats and Web services protocols will also be provided. Once a map file is created, the participants will then go through the process of creating a Web-based interface. Important MapServer and Web mapping concepts will be discussed throughout the workshop.

Audience: Beginner

Instructors: David Fawcett, Minnesota Office of Environmental Assistance

Steve Lime, Minnesota Department of Natural Resources

Perry Nacionales, Department of Forest Resources, University of Minnesota

Enterprise Addressing Systems (lecture)

Government agencies are discovering that addresses and addressing are an organizational resource requiring care and maintenance equal to other mission critical data and need to be managed from an enterprise perspective. This full day workshop will discuss the core points of enterprise addressing. Discussion will include concepts and best practices for enterprise address system implementation, technical strategies for database creation and data maintenance, and organizational considerations for strengthening of address system management, guidelines, and ordinances.

Audience: Beginner

Instructor: Louis Schoolkate, GeoAnalytics

Spatial Databases (lecture & hands-on)

This advanced full day workshop will take a look at the alternatives major database vendors offer for storing spatial data in databases. We will look at relational and object-relational vector and raster data models offered by Oracle Spatial, IBM Spatial Extender, and ESRI's Spatial Database Engine and the alternative spatial indexing methods offered by each vendor. We will include a discussion of ESRI's Enterprise Geodatabase and its relationship to spatial databases. Finally, we will design and build a spatial database using Oracle as a group project. This workshop will consist of presentation, lecture, hands-on work and demonstrations.

Audience: Advanced

Instructor: Kirk Breen, Minnesota Department of Transportation

Morning Workshops

Hands-On Overview of ArcGIS 9.1 (hands-on)

This workshop will demonstrate the newest functionality in ArcGIS 9.1. Topics will include expanded geoprocessing tools, annotation and labeling improvements, mobile mapping toolbars, interoperability toolbar and more shortcut keys. We will also cover some of the tips and tools that will make you a proficient ArcView 9.1 user, such as, toolbar customizations, working with tables, cartography tips, georeferencing images and advanced editing. A manual with step-by-step instruction will be provided. ArcGIS ArcView experience is required.

Audience: Intermediate

Instructors: **Annette Theroux**, Pro-West & Associates, Inc.

Jennifer Ward, Pro-West & Associates, Inc.

Getting Started with Crystal Reports (hands-on)

Crystal Reports is a comprehensive Web and Windows reporting solution that lets you access, analyze, report, and share data. This workshop is for those who are new to Crystal Reports and would like to create their own reports from scratch. Topics covered will include creating report templates such as mailing labels for use with ArcGIS, linking reports to other databases, and report distribution strategies.

Audience: Beginner

Instructor: David Brandt, Washington County

What's New in Autodesk Map 3D 2006 (hands-on)

This class will explore many features of Autodesk Map 3D 2006. Topics covered will include the new Map Books Interface, Dynamic Input Interface, creating workspaces, creating database links from object data, Map Display Manager enhancements including better theming and annotation, and a brief discussion of the new ESRI ArcSDE and many more of the new features from the last two releases of Autodesk Map.

Audience: Intermediate

Instructor: Scott Hameister, Taylor Technologies

Beginning Programming in ArcGIS 9.1 (hands-on)

This workshop will cover functions, procedures, modules, error handling, debugging, and using the object browser in the ArcMap VBA environment. Students should be familiar with basic programming constructs. Students will create a form with controls and write VBA code to automate a simple ArcGIS task. We will introduce the ArcMap Object model and programming with interfaces by using sample code from the online help. Prerequisite: Students should view the free workshop "Exploring the VBA Environment" on the ESRI Virtual Campus to become familiar with the ArcGIS VBA Editor.

Audience: Intermediate

Instructor: Rose Erickson, Pro-West & Associates, Inc.

Introduction to Geodatabases (hands-on)

If you are an ArcGIS user who has heard about geodatabases but don't know what they are, this hands-on workshop is for you. We'll talk about personal and enterprise geodatabases and work with a personal geodatabase. Learn about storing annotation for use across multiple maps, performing data validation using sub-types and domains, moving data into/out of a geodatabase and more. We will also discuss functions included with the various ArcGIS licenses.

Audience: Intermediate

Instructor: Terese Rowekamp, Rowekamp Associates, Inc.

Spatial Statistics (lecture)

The workshop on spatial statistics covers both descriptive and inferential methods that are used for the analysis of geographically-referenced data. Descriptive methods covered include basic geostatistics, measures of central tendency and dispersion, and cartometrics. Spatial interpolation, including distance-based methods and kriging, will be covered. Inferential methods include point-pattern analysis, joint count statistics, and spatial autocorrelation. Methods of testing spatial significance using Monte Carlo methods are also reviewed. For this advanced workshop participants should have a basic knowledge of both statistics and geographic information science/systems.

Audience: Advanced

Instructor: Robert McMaster, Professor of Geography and Associate Dean for Planning in the College of Liberal Arts, University of Minnesota

Parcel Management with Geodatabases (lecture)

The objective of this workshop is to introduce users to the capabilities of ArcGIS 9 and the Geodatabase for Parcel Management. The workshop includes a lecture, demonstrations, and a question and answer session. Topics include an overview of parcel geodatabase

design, applying subtypes, domains, and topology rules to manage data integrity, data loading, labeling and annotation, and Advanced Editing enhancements using ArcGIS 9 COGO tools. 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. Familiarity with Geodatabase is helpful but not required.

Audience: Advanced

Instructor: Chris Liske, ESRI

Integrating CAMA with GIS (lecture)

Integration is more than joining a map to CAMA data: it's about enforcing business rules to ensure consistency between data bases while respecting the autonomy of individual applications. Real time integration will be described and demonstrated, wherein the CAMA application knows about the parcel immediately upon creation in the GIS. Methods for integrating with commercial vendors and in-house CAMA applications will be presented, including options for simple and enterprise installations. Demonstrations will be ESRI based.

Audience: Advanced

Instructor: Brent Mainzinger, The Sidwell Company

Afternoon Workshops

Cartography and Visualization (lecture)

Geographic and data visualization have significantly changed the way that spatial data is viewed and understood. From its roots in theoretical cartography, geographic visualization has emerged as a major paradigm within geographic information science/systems. This workshop is designed for practitioners who want a better understanding of the potential for GIS-based visualization, and to better understand the fundamental concepts in cartography. Topics will include basic principles of cartographic symbolization, classification and generalization. There will be an emphasis on principles of design and the graphic hierarchy, and also on color theory and application to mapping. The workshop will also review multivariate symbolization and advanced techniques of data visualization.

Audience: Beginner

Instructor: Robert McMaster, Professor of Geography and Associate Dean for Planning in the College of Liberal Arts, University of Minnesota

Urban & Indoor 3D GIS: Infrastructure for Location-Based Services in Populated Areas (lecture)

The state of the art in GIS today includes the ability to locate people and property to the level of one street address and closer. Due to limitations of GPS, in particular, much of the indoor world (e.g., room-level detail) is inaccessible to most GIS mapping and spatial analysis methodologies. This presentation will discuss aspects of GIS as they relate to the built environment, such as 3D geolocation, complex building spaces, and the relationships of indoor spaces to outdoor ones. Also, a novel system will be described for indoor location-based services (LBS) and applications that assist with public safety, emergency response, and other critical facilities management and protection issues. James Beal has developed this indoor geolocation system professionally and as a component of his master's thesis, and collaborated with several researchers from across the U.S.

Audience: Beginner

Instructor: James Beal, UCIT, Inc.
Roksolana Antonyuk, Thomson West

Introduction to Geoprocessing using Models and Scripts (lecture)

Geoprocessing is the processing of geographic information, one of the basic functions of a GIS. ArcGIS 9 presents a comprehensive set of geoprocessing tools that work with all the supported data formats, including geodatabase features. It also offers a completely new framework for working with these tools that enables you to launch them individually, combine them together in a visual modeling environment, write scripts in standard scripting languages, and run the tools as commands in a command line window. This workshop will introduce ArcGIS users to building workflow models, creating and using scripts and deploying these models and scripts as tools.

Audience: Intermediate

Instructor: Jason Grootens, ESRI

GIS for Utilities (lecture)

This workshop will deal mainly with utilities managed by municipal public works departments. We will discuss practical, real world scenarios for creating, managing, tracking and maintaining sanitary, storm and water utilities. The students will come away from the class with knowledge of how to create GIS utility data using several input devices. Some of these methods are, GPS, tablet digitizing and heads up digitizing. Other topics will cover attributing, linking scanned utility plans, tracking maintenance and other ways of using GIS for daily tasks. We will discuss advanced topics such as dynamic segmentation, geodatabase structure and geometric networks.

Audience: Intermediate

Instructor: Blaine Hackett, GIS Rangers

Working with Topology & Relationship Classes in Geodatabases (hands-on)

Expand your knowledge of geodatabases by learning how to create and edit topologies (spatial rules). You will work with map topology and persistent topology and the topology toolbar. You will also learn how to create relationship classes between feature classes and tables or between multiple feature classes and see how relationship classes can be used in ArcMap when exploring or editing data. A personal geodatabase will be used for workshop exercises.

Audience: *Advanced*

Instructor: Terese Rowekamp, Rowekamp Associates, Inc.

Intermediate VBA Programming in ArcGIS 9 (hands-on)

Students will learn how to navigate the ArcObjects Object Model Diagram and explore on-line code samples. The fundamentals of the VBA development environment in ArcGIS will be covered as we create an automated mapping application. Students will write VBA code to add a map date and attribute data to a layout in a map template. Registrants should be experienced users of ArcMap software. This course will not cover advanced topics such as creating dlls.

Audience: *Advanced*

Instructor: Rose Erickson, Pro-West & Associates, Inc.

Advanced Editing in ArcGIS 9.1 (hands-on)

During this half day workshop, participants will perform several advanced editing exercises via the advanced editing, editor, and topology toolbars. Tools such as traverse, inverse, rotate, extend/trim, proportion, and construct features will be covered, including exercises in creating, populating and using COGO fields. In addition, participants will perform editing tasks via a geometric network. A manual with step-by-step instruction will be provided. ArcGIS ArcView or ArcInfo experience is required.

Audience: *Advanced*

Instructors: Lisa Schaefer, Pro-West & Associates, Inc.

Kendis Scharenbroich, Pro-West & Associates, Inc.

Poster Gallery

The following posters will be on display in the Exhibit Hall throughout the conference. Poster presenters, including student competitors, will be on hand to answer questions regarding their posters during the Vendor Reception and Poster Gallery at 6 p.m. Tuesday, October 4.

- “Conservation Planning for Minnesota’s Shallow Lake” — **Ann Zdroik, Ducks Unlimited, Inc.**
- “What’s In My Neighborhood? Agricultural, Interactive Ag-Chem Incident Investigation Mapping” — **Gary Elsner, Minnesota Department of Agriculture APPD**
- “Alaska Fire Season 2004 — Mapping the Millions” — **Paul Olson, Minnesota Department of Natural Resources-Forestry**
- “Using GIS to Balance Wetland Preservation and Public Drainage Rights within the Rice Creek Watershed District” — **Jason Naber, Emmons and Olivier Resources**
- “Displaying Stream Sampling Data for Managed Streams in Minnesota” — **Jamie Schulz, DNR Fisheries**
- “150 years of Land Use Change in St. Cloud Area, Minnesota” — **Chad Yost, St. Cloud State University**
- “LaCrosse Encephalitis Prevention using GIS” — **Chris Stevens, Metro Mosquito Control District**
- “City of Minneapolis GIS Map Gallery” — **John Janzen, City of Minneapolis**
- “Indexing Features to the 24K National Hydrography” — **Sandi Kuitunen, LMIC**
- “A Restaurant Location Problem in the Twin Cities” — **Christina Freiberg, University of St. Thomas**
- “Minnesota’s Geographic Data Clearinghouse” — **Nancy Rader, LMIC**

**Register online for the 2005
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Conference & Workshops.
To register go online to
www.mngislis.org.**



Tuesday

7:30 a.m. Conference Registration and Materials Pick-Up

8:30 a.m. Opening Plenary Session

**10:00 a.m. Refreshment Break
Exhibit Hall Opens and Poster Display Begins**

10:30 a.m. Concurrent Sessions

Session 1 — Management Strategies

- Panel Discussion: The role of GIS in a Statewide Service-Oriented IT Architecture ~ **Linda Finley**, Minnesota Department of Administration; **David Arbeit**, Minnesota Department of Administration; **Robert Maki**, Minnesota Department of Natural Resources; **Pat Cummins**, ESRI

Session 2 — Data Management

- Streamlining Wetland Management with GIS ~ **John Mackiewicz**, WSB & Associates Inc
- One-Button Migration ~ **Mark Kemper**, The Sidwell Company
- Geographic Marketing and Analysis for Rural Business ~ **Jim Ramstrom**, LMIC

Session 3 — Data Modeling

- Predicting forest dynamics: moving from stand to landscape simulation models ~ **John Snyder**, Voyageurs National Park
- Calculating Total Water Volume for Lake Embayments Using GIS-Derived Bathymetry Data: An Evaluation of Spatial Data Uncertainty ~ **James Quinn**, Computer Sciences Corporation
- Evaluating Variability in Stream Slope Estimates ~ **Matthew Kocian**, Minnesota Department of Natural Resources

Session 4 — Web Mapping

- ArcIMS Acetate Rendering: Displaying Multi-Jurisdictional Police Data Live ~ **Zachary Christoff**, LOGIS
- Centralized Data Serving using Web Mapping Services and Web Feature Services ~ **Tim Loesch**, Minnesota Department of Natural Resources
- Introduction to Web-based editing using ArcGIS Server ~ **Ryan Kiefer**, GeoSpatial Services

Session 5 — Remote Sensing

- Estimating and Mapping Percent of Impervious Surface Area: A Comparison of Different Methods ~ **Fei Yuan**, Minnesota State University-Mankato
- Statewide Estimation and Mapping of Impervious Surface Area by Landsat Remote Sensing ~ **Brian Loeffelholz**, University of Minnesota
- Land Cover Assessment Using High-Resolution, Multi-Spectral Digital Aerial Imagery: A Comparison of Object-Based and Pixel-Based Classification ~ **Steve Kloiber**, Metropolitan Council

Session 6 — Student Track

- Spatial Decision Support Integration to Current GIS for Location Analysis and Strategic Planning in Minneapolis-St. Paul Metro Area ~ **Piush Mani Dahal**, Minnesota State University-Mankato
- Bedrock Mapping Techniques in GIS Used for Future Aggregate Resources Forecasting ~ **Ross Hoffmann**, Minnesota Department of Natural Resources-Lands and Minerals
- Supporting Humanitarian Relief Operations in with GIS ~ **Jay Meehl**, Saint Mary's University of Minnesota

Session 7 — Product Demos

- Panel Discussion: Mobile Applications in GIS ~ **ESRI**, **Trimble Navigation**, **Bullberry Systems** and **Pro West**

Noon Awards Luncheon

1:30 p.m. Concurrent Sessions

Session 8 — Federal Programs

- The National Geospatial Programs Office and Geospatial One-Stop - *Ronald Wencl, U.S. Geological Survey*
- MAF/TIGER Accuracy Improvement Program Update - *Craig Best, U.S. Census Bureau*
- Implementation of a Cohesive GIS at the U.S. EPA Mid-Continent Ecology Division, Duluth, Minnesota: An ArcSDE/Oracle Approach - *James Quinn, Computer Sciences Corporation*

Session 9 — Data Management

- Soil Survey Information-accessing digital and tabular soils data - *Kim Steffen, U.S. Department of Agriculture-Natural Resource Conservation Service*
- Real-time data connections between a Geodatabase and AS/400 - *Mark Sloan, Clay County*
- Minnesota's Geographic Data Clearinghouse - *Chris Cialek, LMIC*

Session 10 — Data Modeling

- Identifying Potential Wetland Restoration Sites in Ramsey County - *David Bauer, Ramsey Conservation District*
- Resource Suitability Model, Stearns County - *Susan McGuire, Stearns County Environmental Services*
- The study of the balance between jobs and housing in GIS framework: In the case of the seven county metropolitan area in Minnesota - *Woo Jang, Minnesota State University-Mankato*

Session 11 — Web Mapping

- Internet Mapping Application Presentation — Manifold GIS - *Jim Dahl, Douglas County*
- Internet Mapping Application Presentation — MapServer - *Brian Fisher, Huston Engineering*

Session 12 — Remote Sensing

- National Wetlands Inventory Delineation and Classification Using eCognition Remote Sensing Software - *Jeff Knopf, GeoSpatial Services of St. Mary's University of Minnesota*
- NEXTMap USA - *Robert Eadie, Intermap Technologies, Inc*
- Use of Remote Sensing Imagery for Assessment of Minnesota's Water Resources - *Leif Olmanson, University of Minnesota*

Session 13 — Student Competition

Session 14 — Product Demos

- Nazca Property Management Portal - *Ted Mondale, Nazca Solutions*
- What's New in ArcGIS 9.1 and Network Analyst - *Dan Falbo, ESRI*

3 p.m. Refreshment Break

3:30 p.m. Concurrent Sessions

Session 15 — Field Computing

- Wireless & Mobile Technologies in Agriculture - *Josh Marsh, Pro-West & Associates*
- Washington County ISTS Program and GIS/GPS - *Chris LeClair, Washington County*
- Mapping Without a Net: GIS Compilation Strategies - *Mark Kemper, The Sidwell Company*

Session 16 — Data Management

- Mapping Easements in GIS - *John Mackiewicz, WSB & Associates Inc*
- Geoids, Ellipsoids, Datums and Projects - *Chuck Bryant, Minnesota Department of Transportation*
- Minnesota Department of Transportation's Geodetic Control Database - *Chuck Bryant, Minnesota Department of Transportation*

Session 17 — Data Modeling

- Student Enrollment Study - *Charles Parson*
- Using GIS to Find Optimal Locations for New Ethanol Plants in Southern Minnesota - *Lyle Petrick, Minnesota State University-Mankato*
- Site Location Decision for Chain Restaurants Using GIS and Spatial Analysis - *Sajan Dhakal, Minnesota State University-Mankato*

Session 18 — Web Mapping

- Internet Mapping Application Presentation-ArcIMS ~ presenter TBA
- Internet Mapping Application Presentation — Autodesk - *Carl Dunn, City of Williston*

Session 19 — Transportation

- *Travel Demand Forecasting in a GIS-T Context* ~ Changjoo Kim, Minnesota State University-Mankato
- *GIS Opportunities in Design Build at Minnesota Department of Transportation* ~ Brad Henry, URS
- *Was that a robot driving that machine? (What does GIS have to do with Machine Control in Construction* - Brad Henry, URS

Session 20 — Student Competition

Session 21 — Product Demos

- DNR Garmin Version 5.0 Software ~ *Chris Pouliot, Minnesota Department of Natural Resources*
- Wildlife Survey Extension ~ *Chris Pouliot, Minnesota Department of Natural Resources*
- Real Time Automated Vehicle Location using OpenSource Web-based Technology ~ *Bruce Shriver, ThomTech Design, Inc.*

**5 p.m. Vendor Reception and Poster Session – Exhibit Hall
Prize Drawings (must be present to win), Complimentary Hors d'oeuvres and Cash Bar**

7:30 p.m. Beer Tasting Gathering – hosted by GeoComm at the Lahr building

Wednesday

7:30 a.m. Conference Registration and Materials Pick-Up

8:00 a.m. Exhibits Open – Refreshments Served

8:30 a.m. Concurrent Sessions

Session 22 — Community GIS

- GIS for Everyone ~ *Richard Rice, City of Chanbassen*
- Panel Discussion: Promotion of GIS in Broad Based County Government ~ *Judson Freed, Emergency Services Director, Ramsey County; Mary Hagerman, Dakota County GIS Specialist, Dakota County Office of GIS; Bill Swing, IT Director, Wright County*

Session 23 — Natural Resources

- Habitat Improvement GIS: Examples from the Minnesota DNR ~ *Paul Wickman, Minnesota Department of Natural Resources Fish and Wildlife*
- Minnesota GAP Analysis: Utilizing GIS to Establish Gaps in Biodiversity ~ *Bruce Anderson, Minnesota Department of Natural Resources-Fish and Wildlife*
- GIS Approach in Determining Factors of Ring-necked Pheasant (*Phasianus colchicus*) Populations ~ *Michelle Imes, Minnesota State University-Mankato*

Session 24 — Parcels

- Panel Discussion: Examining the Parcel Management Workflow ~ *Dan Falbo, ESRI*

Session 25 — Homeland Security

- Emergency Preparedness: Are You Prepared? ~ *Todd Lusk, Dakota County*
- MetroGIS and GCGI Emergency Preparedness Committees - Recent Activities ~ *Randy Knippel, Dakota County*
- A Collaborative Model For Capturing Local Emergency Preparedness Knowledge And Data - A Twin Cities Metropolitan Area Example ~ *Keith Anderson, LOGIS*

Session 26 — Water Resources

- Building a Repository to Share Hydrologic Event Data ~ *Mark Olsen, Minnesota Pollution Control Agency*
- EPA's Uses of the National Hydrography Dataset ~ *Thomas Dewald, U.S. Environmental Protection Agency*
- Using the National Hydrography Dataset ~ *Jeff Simley, U.S. Geological Survey*

Lodging Accommodations

A block of rooms has been reserved for conference participants at the following hotels. Room blocks will be released on September 3. Reservations made after the room blocks have been released are still eligible for the discounted room rates listed below if Minnesota GIS/LIS Consortium is mentioned when making the reservation. Please make your reservation early.

Best Western Kelly Inn

100 Fourth Ave. S. • St. Cloud, Minnesota
For reservations — 320-253-0606
Single: \$74 • Double: \$80
The Best Western Kelly Inn is connected
to the St. Cloud Civic Center.

Radisson Suite Hotel St. Cloud

404 St. Germain W. • St. Cloud, Minnesota
For reservations — 320-654-1661
\$89 Single/Double

General Information

Location: The conference will be at the St. Cloud Civic Center in St. Cloud, Minnesota.

Meals: Conference registration includes lunch and refreshment breaks on Tuesday and Wednesday, and the Vendor Reception on Tuesday night. Workshop Registration includes lunch and refreshment breaks on Monday.

Materials: Conference attendees will receive a copy of the conference proceedings, which will include abstracts for all presentations. Workshop attendees will receive workshop materials for each workshop attended. The information contained in this program should be considered preliminary and as such, could be subject to change in the final proceedings.

Continuing Education: Forms for Continuing Education Units will be available from the registration desk at the St. Cloud Civic Center.

Fees: All registration fees are to be made payable to Minnesota GIS/LIS. Payment can be made by check, Visa or Mastercard, or purchase order. Remember to register before September 10 to receive the lowest registration rate for the conference and workshops.

Registration: Please register for the conference by going to the following Web site: www.mngislis.org. If you are unable to register via the Web site, please e-mail us at conference2005@mngislis.org or call the MN GIS/LIS office at 651-203-7242 . Registrations must be completed prior to September 26, 2005 to be considered as preregistrations. Registrations completed after September 26 will be considered walk-on registrations; payment or purchase order must be provided at the time of registration.

Refunds: With written cancellation notice, received by September 10, you will receive a full refund, less a \$40 administrative charge. Cancellations after September 10 will not be refunded. Notices of cancellation must be faxed to the Minnesota GIS/LIS Office at 651-290-2266. No-shows at the conference will not receive refunds.

2005 Minnesota GIS/LIS Annual Conference & Workshops

To register go online to www.mngislis.org.

For the second year, the conference is using a Web-based registration system. We hope that the Web-based format we have selected will allow you greater control and access regarding your conference and workshop selections. To access the Web registration site, please go to the GIS/LIS Web site at www.mngislis.org and look for the registration icon.

The registration process will allow you to enter credit card information directly into a secure system for direct payment. Alternately, you can include a purchase order number with the registration or pay by check separately. Upon completion of the registration process, an invoice will be prepared based on your registration selections. Please mail a copy of the invoice along with your check or purchase order to:

Minnesota GIS/LIS Consortium
1000 Westgate Drive, Suite 252
St. Paul, MN 55114

If you are paying by a means other than credit card, your registration will not be considered complete until either a check or purchase order is received. If you encounter problems registering for this event via the Web site, please contact us at conference2005@mngislis.org.

Directions to the Civic Center

I-94 from the east

Take I-94 to County Road 75. Follow it toward St. Cloud. Continue toward St. Cloud until Washington Memorial Drive and turn right. Follow to Highway 23 and turn right. Continue to Fourth Avenue and turn left. The Civic Center will be on the right side, next to the Best Western Kelly Inn.

I-94 from the west

Take I-94 to County Road 75. Stay on County Road 75, and it will turn into Highway 23. Take Highway 23 until you come to Fourth Avenue. Turn left on Fourth Avenue. The Civic Center will be on the right side, next to the Best Western Kelly Inn.

2005 Minnesota GIS/LIS Annual Conference & Workshops Entertainment

Monday Evening Welcome Reception/Social Hour

Join fellow conference-goers on Monday evening in the Martini Lounge at the Red Carpet Bar and Restaurant, located within walking distance of the St. Cloud Civic Center. The Martini Lounge serves a full selection of beer and wine in addition to specialty drinks (martini's of course) coffee and soda in a cozy, up-scale, and smoke-free environment with an attached outdoor patio. The Minnesota GIS/LIS Consortium will have space designated for conference attendees and will provide complementary appetizers. Free pool will also be available. So, whether you're just pulling into town, or finishing up a day of workshops, come by and see old friends or meet some new ones.

Beer Tasting Gathering

Please join us for what has become a tradition at the conference, the GIS/LIS beer-tasting event. For the 2005 beer sampling social, GeoComm will be hosting the event at the historically renovated Lahr building. As always, the Boreal Brewers Club of Bemidji is kind enough to provide the fruit of their labors to be sampled by those present. In addition, samples from commercial breweries will be provided, as available. Home brewers are strongly encouraged to bring their own fermented beverages to share with others, but a designated GIS/LIS host will do all pouring. Along with many delicious brews of beer, snacks will be provided as well as some fun prizes. You must be at least 21 years of age to attend this event and identification will be checked at the door.

The Lahr building is within easy walking distance of the civic center and will provide a wonderful atmosphere for the beer tasting. Thank you to the Boreal Brewers, Ayres Associates and GeoComm for their generous donations to the Mn GIS/LIS Conference entertainment fund and helping to put on great events for 2005!

• The first 70 people to register get complimentary beer glass!

• All proceeds from event go to scholarship fund!

2005 Minnesota GIS/LIS Beer Tasting Gathering Registration – Tuesday, October 4

Name _____

Organization _____

Address _____

City _____ State _____ ZIP _____

Phone _____ Fax _____ E-MAIL _____

I would like to attend: Beer Tasting Gathering \$10 (attendees and guests) # of tickets _____

Total Amount Enclosed \$ _____

Payment Information

Check (made payable to MN GIS/LIS) VISA MasterCard Purchase Order

Credit Card Number _____

Cardholder Name (print) _____

Cardholder Phone _____ Exp. Date _____

Signature _____

Send completed registration form, with payment to:
MN GIS/LIS
1000 Westgate Dr., Suite 252
St. Paul, MN 55114
or fax to 651-290-6279
Phone: 651-203-7242
www.mngislis.org

Registration: Please complete this registration form and mail or fax to the address or number indicated. You can also download the registration form from the Web site. Full payment must accompany your registration form and be postmarked by September 26 to be preregistered. Any available tickets remaining will be sold on-site. No refunds will be issued for this event.



1000 Westgate Drive, Suite 252
St. Paul, MN 55114
651-203-7242
www.mngislis.org

Minnesota GIS/LIS Conference and Workshops
Join us for the 15th Annual
October 3-5 2005
St. Cloud Civic Center

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