

Preliminary Program



Twentieth Annual

GEOSPATIAL INFORMATION SYSTEMS FOR TRANSPORTATION SYMPOSIUM

To provide a forum for transportation officials from State, Province, Federal, and
Municipal Agencies to discuss GIS and transportation issues

March 26 - 28, 2007

Workshops - March 25, 2007

**Nashville Airport Marriott
Nashville, Tennessee**

Sponsored by:

American Association of State Highway and Transportation Officials



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The twentieth annual GIS-T Symposium - *GIS-T 2007 Mileposts to Milestones* - provides a forum for professionals interested in the design and use of GeoSpatial Information Systems for transportation. It brings together individuals from education, the private sector, and all levels of government for a full day of workshops March 25, 2007, and three full days of conference activity, March 26 - 28, 2007.

WHO SHOULD ATTEND?

- ❖ Transportation professionals who need to know how to better utilize GIS and related systems.
- ❖ Executives and managers concerned with management and institutional issues.
- ❖ Information Technology and GIS professionals from both public and private organizations:
 - Transportation Engineers and Planners
 - City, County & Regional Planners
 - Educators
 - Elected Officials
 - Environmental Scientists & Regulatory Specialists
 - GIS and Information Systems Specialists
 - Consultants and Service Providers

SESSIONS

Keynote Speaker – Andy Andrews – Join our keynote speaker, on an exciting adventure through the “Seven Decisions”. In his keynote address, Andy pokes fun at our perceptions of the “ordinary” themes and proceeds to explain these principles in a way that you have never heard before. Andy brings new insights to dealing with problems, outlining the essential steps to greater individual fulfillment and increased corporate profitability. He explains how to eliminate mental safety nets that keep us from reaching our goals.

State Summary & Roll Call of States – Summary results from a survey sent to GIS representatives in each state are presented and one representative from each country, province, or state are asked to briefly mention the status of their GIS implementations.




Concurrent Sessions – The Symposium will feature six concurrent sessions, each consisting of four tracks of presentations. During the first concurrent session, the Symposium will host the Student Paper Contest, open to technical research papers written by students currently enrolled in a university or college.

Poster Session - Successful GIS projects will be showcased through their map/poster products. Prizes will be awarded to the best map/poster presentation in each of three categories: Analytical Presentation; Cartographic; and Official Transportation Map (Published only). All attendees are strongly encouraged to submit a poster for the Symposium.

Panel Discussion Sessions – The Symposium will feature two panel discussions: on Tuesday morning, titled **Transportation for the Nation**, and on Wednesday morning, titled **Sharing and Integrating GIS Transportation Data between Local and State Jurisdictions**.

Cyber Security Presentation – This session gives Symposium attendees an opportunity to explore **Cyber Security**. William F. Pelgrin presents a dynamic, multi-media presentation focusing on the cyber security and critical infrastructure initiatives underway in New York State through CSCIC, and nationally through the MS-ISAC.

General Schedule

	Sunday March 25, 2007	Monday March 26, 2007	Tuesday March 27, 2007	Wednesday March 28, 2007	
7:00 AM	Registration Continental Breakfast	Registration Continental Breakfast	Registration Continental Breakfast	(Sleep In!!!)	7:00 AM
8:00 AM	Morning Workshops 1. 3D Geospatial for Transportation: Best Practices and Project Implementation Methods 2. Blazing the Trail: The Transportation Component of Emergency Management 3. The National Geodetic Survey's CORS Network and RTK GPS 4. Visualize Your Assets with HERS-ST	Opening Session Welcome Keynote Speaker <i>Andy Andrews</i>	Panel Discussion Transportation for the Nation John Auble - Moderator	Registration Continental Breakfast	Technology Hall Open
9:00 AM				Panel Discussion Sharing and Integrating GIS Transportation Data Among Jurisdictions Tami Griffin - Moderator	
10:00 AM		Break	Break	Break	
11:00 AM		State Summary & Roll Call of States	Session 3 1. Enterprise Data & GIS 2. Asset Management 3. Management Systems 4. Environmental	Session 6 1. GIS Databases 2. Web GIS 3. Geocoding & Routing 4. Planning	
12:00 PM	Lunch - Workshop Attendees Only	Lunch	Lunch	Box Lunch Awards/Drawings	12:00 PM
1:00 PM	Afternoon Workshops 1. Using LIDAR Workshop: The Basics 2. Geography, the Census Bureau and Transportation -- Where it all Begins 3. Dynamics of Environmental GIS - Persuading Information to Multitask Through Applied Technologies and Methods 4. A Powder Keg of Usability - Implementing Ajax in Web-based Mapping Applications, Analysis Techniques, and GIS Modeling	Session 1 1. State of Tennessee 2. Student Paper Contest Winners 3. Web Portals 4. Data Collection	Session 4 1. Google Earth GIS 2. GIS-T Research 3. LRS / LRM 4. MPO GIS	Next Host State Presentation	Technology Hall Open
2:00 PM				Session 2 1. GPS / GIS 2. Web Applications 3. Federal Data 4. Enterprise GIS	
3:00 PM		Break	Break	Symposium Wrap-Up Come join us for a debriefing of this year's symposium and planning for the next. Refreshments Provided!	
4:00 PM		Break	Break		
5:00 PM	Break	Poster Session	Break		5:00 PM
6:00 PM	Technology Hall Reception  Technology Hall Open	Technology Hall Reception 	Tuesday Night Social 		Technology Hall Open
7:00 PM					
8:00 PM		Birds of a Feather			8:00 PM

GIS-T Workshops – Sunday, March 25

There will be four tracks for workshops presented at the 2007 GIS-T. All workshops are half-day workshops. You may pick one from the morning and one from the afternoon. Lunch is provided to workshop attendees.

MORNING SESSIONS

1. 3D Geospatial for Transportation: Best Practices and Project Implementation Methods

Instructor: Tim Case, Parsons Brinckerhoff

The convergence of new technologies and business requirements is fostering a new wave of 3D applications. Implementing these systems in state and local agencies requires a new set of skills and knowledge that most professionals have yet to develop. This course is a great way to get started or expand your 3D know-how.

A wide range of users may create, navigate, and analyze entire metropolitan regions or a single city block within these systems. Transportation agencies are using 3D data and visualization tools to support public involvement, planning and design, construction management, emergency preparedness, and many other business practices.

This course introduces the data, systems, and processes to be considered when implementing 3D applications including Google Earth, ArcGIS Explorer, 3ds Max, and over 30 other software tools. Using extensive case studies, attendees will learn how to navigate the dizzying array of options and prepare for a sustainable 3D geospatial practice.

2. Blazing the Trail: The Transportation Component of Emergency Management

Instructor: Jo Jordon, FEMA

In this presentation, Jo Jordon of FEMA will give the students the working knowledge of how FEMA and the Federal government are organized for emergencies and how to coordinate with them. Students will learn the procedures, terminology and expectations of an EOC (Emergency Operations Center) and how it ties in with Transportation. Topics to be covered include:

- What is the difference between "Emergency Management" and "Emergency Response"?
- The Emergency Management Cycle
- Who participates in emergency management and response – and their roles
- ICS (the Incident Command System), why it is applied in emergency situations and by whom
- Where does geospatial technology fit in?
- Transportation as part of emergency management
- Broken Bridges, Washed-Out Roads, Constraining Culverts and Dumpsters of Debris: The PA Perspective
- Data requirements, sharing and coordination methods
- Preparation: Plans, Models, Agreements and Exercises
- The Fourth Dimension

Classroom exercises will reinforce the topics covered.

3. The National Geodetic Survey's CORS Network and RTK GPS

Instructors: Bill Henning & Bill Stone, National Geodetic Survey

This workshop presents the National Geodetic Survey's network of GPS Continuously Operating Reference Stations (CORS), the CORS-based Online Positioning User Service (OPUS) utility, and the theory and practice of GPS Real-Time Networks (RTN). The material presented should be of interest to professionals involved in surveying, mapping, GIS, and related geospatial disciplines.

The CORS system comprises a network of about a thousand sites, each containing a geodetic-quality GPS receiver whose data are freely available via the Internet for post-processed applications. Presentation topics include the development of the CORS network, CORS applications, and CORS data access.

OPUS is an automated utility that processes submitted GPS observation data with respect to the CORS network and provides the results

to the submitter via email. We describe and demonstrate various versions of OPUS and will present its forthcoming enhancements.

There are over 40 Real-Time Networks (RTN) operating in the continental United States, with many others under development. These networks are administered by many diverse groups in the private, public and academic sectors, such as: equipment manufacturers and vendors; state DOTs; conglomerates of surveying and engineering companies; consortia of universities with regional quasi-public organizations and private firms; and almost any imagined combination thereof. Various versions of RTN technology will be explained along with the rationale for their use, especially in comparison to classical real-time positioning. The envisioned role of the NGS in support of RTN positioning will be addressed with an eye on imminent future enhancements to this exploding technology.

4. Visualize Your Assets with HERS-ST

Instructors: Simon Lewis, ITIS, Inc and Robert Mooney, Federal Highway Administration

The HERS-ST software is an asset management decision tool used to analyze highway "needs" for programming & planning at the State and MPO level. HERS-ST answers questions such as:

- What level of capital expenditure is justified on benefit-cost grounds?
- What user cost level will result from a given stream of investment?
- What investment level is required to achieve a certain level of performance?
- What is the cost, over 20 years, of correcting all existing and accruing highway deficiencies?

This HERS-ST workshop will provide a hands-on demonstration to the software and will focus on utilizing the decision tool's GIS capability to visualize highway infrastructures. The class will demonstrate and instruct the participant on how to utilize and display asset management data in a GIS forum.

Participants should bring their own laptops if they desire to actively participate.

AFTERNOON SESSIONS

1. Using LIDAR Workshop: The Basics

Instructors: Brian Stevens and Qian Xiao, Woolpert

Brian Stevens and Qian Xiao of Woolpert will be covering some of the basics about working with LIDAR data and creating digital elevation models from it. The latest in airborne laser mapping technology, this workshop will focus on the Light Detection and Ranging (LiDAR) data acquired to support the development Digital Elevation Models (DEMs) and Digital Terrain Models (DTMs). The workshop will discuss LiDAR acquisition, processing and core LiDAR formats and products.

Topics will include:

- generation of contours
- line-of-sight analysis
- volume calculations
- bare earth and non-ground data
- canopy and vegetation analysis

A sample LiDAR dataset will be provided to participants. Participants are encouraged to bring their laptops with ArcGIS 3D Analyst installed for the workshop. Short-term licenses of ARCGIS and 3D Analyst will be available for free if someone doesn't already have a copy.

2. Geography, the Census Bureau and Transportation--Where It All Begins

Instructors: Michael Ratcliffe, the Census Bureau, and Bruce Spear and Ed Christopher, FHWA.

The 20th anniversary of the GIS-T conference would not be complete without a workshop on the latest innovations at the Census Bureau, especially those with a transportation flavor. How many GIS-T attendees can say that they know all about the 2010 Census Local Update of Census Addresses (LUCA) Program, Participant Statistical Areas (PSA) Program or even the Master Address File / Topologically Integrated Geographic Encoding and Referencing system (MAF/TIGER) Accuracy Improvement Project? Sound exciting? Toss in a discussion of the interrelationships between the Census defined urban and urbanized areas, FHWA "adjusted" urban and metropolitan planning areas and you have the makings of a top notch workshop. The only thing missing would be the latest developments in the preparation of your Traffic Analysis Zones (TAZs) for the Census Transportation Planning Products (CTPP) that will

be coming from the new American Community Survey (ACS). Come to this workshop and you will learn about it all.

Wait! There's more. Instructors will be on hand to demonstrate a new tool that FHWA has developed for its staff and others known as HEPGIS. HEPGIS is an interactive, web-based GIS that enables users to access transportation-related geo-spatial data using their web browser. Simple navigation tools allow users to locate and zoom-in to a geographic area of interest, and to create maps showing various geographic features and themes. And it is now available to the public.

This workshop is a must for the GIS analyst, manager or even casual user who wants that spatial edge. Our exciting instructors for the workshop are Michael Ratcliffe from the Census Bureau, Bruce Spear and Ed Christopher from FHWA.

3. Dynamics of Environmental GIS- Persuading Information to Multitask Through Applied Technologies and Methods

Instructor: Robert Fuhler, of the Arkansas State Highway and Transportation Department

Robert Fuhler of the Arkansas State Highway and Transportation Department will lead this session with an interactive discussion of environmental GIS data and how it can be used to aid the NEPA process. GIS is a science that is multi-faceted and has come to the forefront of many disciplines. One of the most dynamic and diversified is the Environmental/Planning relationship for transportation.

This workshop will be informal and discussion-based, and will delve into 1) The methodology for effective coordination and data sharing between State, Federal, Local and Private agencies; 2) The collection, portrayal and analysis of field data (the GPS/GIS relationship) and; 3) Multitasking those data into a variety of formats. There will also be examples of several successful projects developed by the Environmental Division at the Arkansas State Highway and Transportation Department.

Resources will be provided throughout the workshop to allow participants to follow-up with additional contacts after the workshop.

4. A Powder Keg of Usability: Implementing Ajax in Web-based Mapping Applications

Instructors: Fred Riethmiller, Steve Korzekwa, and Brendan Carroll, GeoDecisions

In this session, we will discuss why there is so much talk about Ajax (Asynchronous JavaScript and XML). We will explain where this technology came from, how it has evolved, who is adopting it and whether it is right for your enterprise. Discussion will focus on best-practices when implementing Ajax-solutions, overall design strategies and real-world case-studies. Demonstrations will walk-through employing Ajax-based solutions in both Java and .Net. This session will be divided into two distinct parts:

Part 1 of the session will focus on the practical implications of using Ajax. The instructors will answer the following questions.

- Is it more than just a popular buzzword?
- What are the advantages of using Ajax?
- What does it mean from the user's perspective?
- How can Ajax be leveraged in a GIS/Mapping application?
- What is the value of the technology in business terms?
- Can deployed applications be retrofitted?

Instructors will demonstrate practical, non-technical examples to show the dramatic differences Ajax can bring to a web application.

Part 2 of the session will provide more technical information. A discussion of the available tools and implementation techniques will provide guidance to avoid common pitfalls while reaping the benefits discussed earlier in the session. Topics will include:

- The basic components of the Ajax technology
- Language specific implementations and tools
- Top 10 Ajax mistakes
- Design considerations for the typical GIS environment
- Lessons learned through multiple implementations

**TECHNOLOGY SHOWCASE
(SUNDAY 5:30 PM TO WEDNESDAY 12 NOON)**

Please join us in the Nashville Ballroom for a showcase of technology and applications from a variety of exhibitors. The Technology Showcase opens on Sunday evening at 5:30 pm with a reception for all Symposium attendees and guests. During this event, we will begin the 20th GIS-T Symposium celebration. On Monday, the formal reception from 6:00 pm to 8:00 pm will give attendees a chance to see the exhibits and socialize with colleagues.

In addition, the technology showcase will be open at these times:

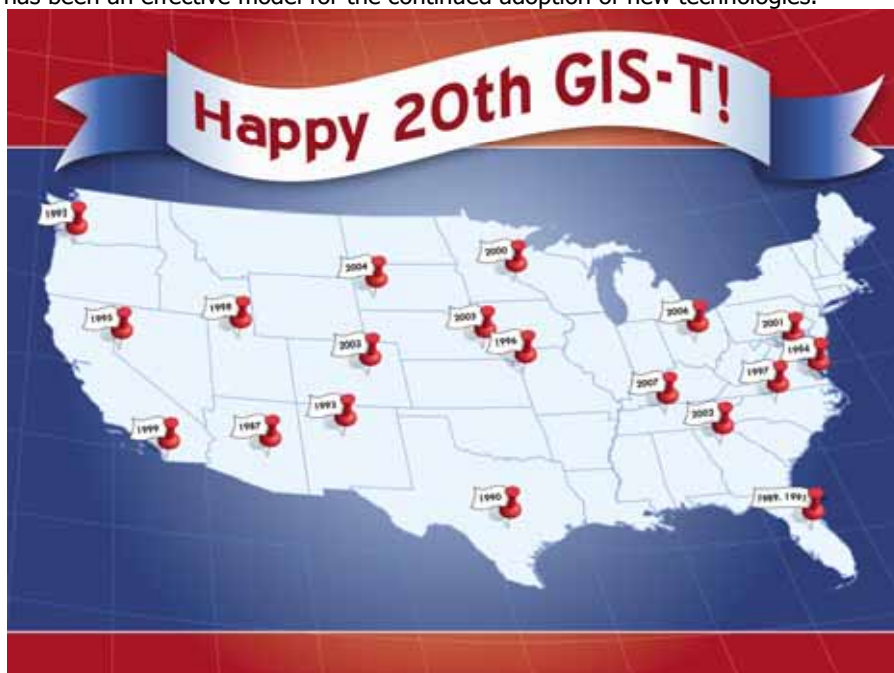
- Monday—12 noon to 8:00 pm
- Tuesday—7:00 am to 5:30 pm
- Wednesday—7:30 am to 12 noon

GIS-T 20TH SYMPOSIUM

The 2007 GIS-T in Nashville, Tennessee marks the 20th Symposium. During the Symposium this year special activities and registration gifts are being planned to celebrate this historic milestone.

The first GIS for Transportation meeting was organized by the American Association of State Highway and Transportation Officials (AASHTO) Computer Subcommittee in 1986 in Phoenix, AZ and was chaired by Mike Bacon from Wisconsin DOT. Mr. Bacon was assisted by others from the Wisconsin DOT which included David Moyer and David Fletcher. The first meeting in Tempe, Arizona in 1987 was convened to better understand this new GIS technology and understand how it could be applied to better manage our transportation system. After this first meeting a Task Force on Geographic Information Systems was formed by the AASHTO Subcommittee and it was decided to have annual Symposiums to share information on this new technology starting in 1989. The AASHTO Subcommittee Task Force was chaired by Mike Bacon, Wisconsin DOT until his retirement. The Task Force was taken over by Jim Dolson, Florida DOT and consisted of three members David Moyer, Program Chair assisted by David Fletcher, Jim Dolson, Local Arrangements chair, Roger Petzold Vendor Chair and Jack Stanton, AASHTO Staff. After Jim Dolson left Florida DOT in 1996 the Task Force was chaired by Diane Pierzinski from California DOT. Under Diane's leadership the Task Force was expanded to include one representative from each AASHTO region and a FHWA liaison. The Task Force then established a Symposium Planning Committee of over 20 people to divide up the work and to get more people involved. In 2004 the Chairmanship of the AASHTO Subcommittee Task Force on GIS in Transportation was transitioned to Daris Ormesher of the South Dakota DOT and Diane took on the chairmanship of the Planning Committee. The Symposium continues to grow and share information. The attendance at the 2006 Symposium in Columbus, Ohio was over 500 people.

The GIS for Transportation Symposium has been one of the most effective tools over the last 20 years at promoting the application of location-based technologies (GIS, GPS, Remote Sensing, etc.) to better manage our transportation system. The AASHTO Task Force on GIS in Transportation has been an effective model for the continued adoption of new technologies.



KEYNOTE SPEAKER
ANDY ANDREWS
(MONDAY 8:30 AM TO 10:00 AM)

A turning point occurs when a profound principle enters your consciousness, and in that moment, your life changes course. Every decision you make and action you take from that point on catapults you into an entirely new realm of possibility. Perhaps you've noticed this shift in one of your colleagues at work. Something is different about him or her – demeanor, attitude, productivity – something shows evidence of a life-altering inner change.

Join our keynote speaker on an exciting adventure through the "Seven Decisions". In his keynote address, Andy pokes fun at our perceptions of the "ordinary" themes and proceeds to explain these principles in a way that you have never heard before. Andy brings new insights to dealing with problems, outlining the essential steps to greater individual fulfillment and increased corporate profitability. He explains how to eliminate mental safety nets that keep us from reaching our goals. Plus, Andy shares the life-changing principles found in his international best seller "The Traveler's Gift".

STATE SUMMARY AND ROLL CALL OF STATES
(MONDAY 10:30 AM TO 12:00 NOON)

Summary results from a survey sent to GIS representatives in each state will be presented. The Roll Call of States features one representative from each country, province, or state to briefly mention the status of their GIS implementations and challenges that they face.

STUDENT PAPER CONTEST
(MONDAY 1:30 PM TO 3:00 PM)

This year GIS-T presents the second annual Student Paper Contest, open to technical research papers written by students enrolled in a university or college. These papers focus on developing solutions for current GIS-T issues. The top entries selected by the planning committee will present their papers at the conference and will take home a \$250 or \$500 award.

POSTER SESSION
(MONDAY 5:00 PM TO 6:00 PM)

The GIS-T Symposium provides a unique opportunity for attendees to display posters showcasing their work during the Symposium. Please take advantage of this opportunity to share techniques and applications with your peers in the transportation GIS community. The Poster Session will display the Official Transportation Maps submitted by each State, Territory, or Province. Come explore the variety of features represented on their official maps along with the creativity applied to GIS analysis. An expert panel of judges will evaluate each poster. Awards will be given within the categories of - Analytical Presentation, Cartographic, and Official Transportation (Published) during the Wednesday Symposium lunch. To include your poster or map, please identify the category of entry with appropriate contact information and send to Ray Tucker, at the address shown on the back page by March 21, 2007 or bring to the registration desk at the Symposium.

BIRDS OF A FEATHER
(MONDAY 8:00 PM TO 9:00 PM)

Each year at GIS-T the planning committee schedules concurrent sessions under the heading of *Birds of a Feather*. These sessions are designed to give Symposium participants an opportunity to present questions as well as issues of concern to some of the leading technology companies that serve our GIS for Transportation niche. Past Symposiums have featured two or three of these companies.

For GIS-T '07 we would like to encourage participants to submit their questions and concerns in advance of the Symposium. The GIS-T Symposium planning committee will then forward those questions to the technology companies. The planning committee will also be able to determine how many concurrent sessions we should accommodate, based upon the number of questions directed at each technology company. When you register, please take a few minutes to identify those areas of concern or interest that you have, and enter them at: <http://www.surveymonkey.com/s.asp?u=329343032099>. Thank you for your participation.

SPOUSE TOURS

MONDAY, MARCH 26 - VISIT VIBRANT DOWNTOWN NASHVILLE

You'll start your day at the historic Ryman Auditorium, the home of the Grand Ole Opry from 1943 to 1974 and "The Mother Church of Country Music." Step onto the historic stage and have your photo taken, then stroll through the halls filled with fascinating memorabilia from the Ryman's storied past. Afterwards, the tour moves a few blocks to Hatch Show Print, a letterpress print shop where you can get your vintage old western concert posters featuring the likenesses of Willie Nelson, Dolly Parton, Johnny Cash, Garth Brooks, and other country Hall of Famers. Get your music-to-go at the Ernest Tubbs record shop on Broadway and enjoy shopping for souvenirs in The District. A quick lunch at Jack's Barbecue and then we're off to tour the Hermitage, Andrew Jackson's 1837 mansion. Guides in period costume will lead us through this gorgeous Greek Revival house, garden, and farm.

TUESDAY, MARCH 27 - DISCOVER HISTORIC FRANKLIN

Site of the Battle of Franklin during the Civil War, Franklin, Tennessee is rich in history and small town charm. Start your outing at the Carter House, a Registered National Historic Landmark. Built in 1830, The Carter House was caught in the swirling center of one of the bloodiest battles of the War Between the States. Your tour includes a video presentation and battlerama, museum, and guided tour of the house and grounds. Next we'll visit the beautifully renovated downtown district with its historic buildings and mix of elegant boutiques, gift and bookstores, antiques shops, art galleries, and wonderful restaurants. After a delicious southern-style meal, we'll conclude our tour with a trip to the Factory at Franklin, a historic site offering 35 shops, restaurants, antiques, gifts, art, pottery, and more.

ANYTIME - OPRY MILLS

Opry Mills brings "Shoppertainment" to life in a retail, dining, and entertainment complex. Enjoy over 200 of the best names in manufacturers' and retail outlets. Need a break? There are several restaurants on site or you can take in a movie or IMAX feature at the theater. Hotel shuttles are available.

PANEL DISCUSSION TRANSPORTATION FOR THE NATION (TUESDAY 8:00 AM TO 10:00 AM)

Moderator: John Auble - TeleAtlas

State DOT's are increasingly being asked to expand their roles and responsibilities regarding transportation data. The demand may be internal such as the new requirement to locate accidents on all roads rather than just state highways. Much of the demand is from other agencies, such as those wishing to use the transportation network for address geocoding to correctly apportion tax revenues. In this session three state DOT's will provide insight on the political, cultural and technical challenges associated with moving toward a single transportation database for all government agencies. Also, Stu Davis, president of the National State Geographic Information Council (NSGIC) will provide a brief outline of NSGIC's charge as well as NSGIC's specific interest in transportation data. Panelists include:

- Stu Davis – NSGIC
- Frank Winters – New York State, CSCIC
- Oscar Jarquin - California DOT
- Matthew Laick- Delaware DOT

TUESDAY NIGHT SOCIAL THE COUNTRY MUSIC HALL OF FAME AND MUSEUM (TUESDAY 6:00 PM TO 10:00 PM)

The Country Music Hall of Fame® and Museum has been the home of America's music since 1967. In keeping with the cultural significance of the music and the heroic achievements of those who form its membership, the Museum opened in a \$37 million landmark, new building in May 2001. Inside, the Museum presents the crown jewels of its vast collection to illustrate country music's story as told through the turns of two centuries. A treasure trove of historic country video clips and recorded music, dynamic exhibits and state-of-the-art design, regular menu of live performances and public programs, museum store, live satellite radio broadcasts, on-site dining and fabulous public spaces all contribute to an unforgettable museum experience.

PANEL DISCUSSION
SHARING AND INTEGRATING GIS TRANSPORTATION DATA BETWEEN LOCAL AND STATE
JURISDICTIONS
(WEDNESDAY 8:30 AM TO 10:00 AM)

Moderator: Tami Griffin – GIS Manager, Washington State DOT

The growing need to share common data between all forms of government is being undertaken by a pool fund study in many different states. This panel will discuss:

1. Developing effective collaboration between jurisdictions.
2. How the state is working with local governments to translate their data into a centralized data source and the political and administrative efforts as well as some technical efforts necessary to prepare each dataset in each jurisdiction. These processes are designed for initial data submission and for the periodic maintenance of their data by the local jurisdiction. (Agreement Points, MOU, Data sharing agreements, and working with surrounding jurisdictions to obtain an inclusive dataset.)
3. The data submission processes and where we are in the development of software for Internet Portals for a data provider and data user as well as requirements for integration.

Participants Include:

- Michael Leierer – Washington State DOT
- Dave Blackstone – Ohio DOT
- Steve Brown – Nebraska DOR
- Kim McDonough – Tennessee DOT
- Dennis Schofield – Oregon DOT




CYBER SECURITY
WILLIAM F. PELGRIN
DIRECTOR OF THE NEW YORK STATE OFFICE OF CYBER SECURITY AND
CRITICAL INFRASTRUCTURE COORDINATION, AND
CHAIR OF THE MULTI-STATE INFORMATION SHARING AND ANALYSIS CENTER
(WEDNESDAY 1:30 PM TO 3:00 PM)

The growing evolution of technology and its increasing volume and complexity, combined with the ever-increasing cyber security threats and attacks (such as worms, hackers and data breaches), have brought a new awareness of and need for response to these issues. William F. Pelgrin, Director of the NYS Office of Cyber Security and Critical Infrastructure Coordination (CSCIC) and Chair of the Multi-State Information Sharing and Analysis Center (MS-ISAC), presents a dynamic, multi-media presentation focusing on the cyber security and critical infrastructure initiatives underway in New York State through CSCIC as well as nationally through the MS-ISAC.

As Director of the New York State Office of Cyber Security and Critical Infrastructure Coordination (CSCIC), William Pelgrin is responsible for leading and coordinating New York State's efforts regarding cyber readiness and resilience and geographic information systems. Under Director Pelgrin's leadership, the CSCIC has established a 7x24 Cyber Security Center; deployed intrusion detection architecture for critical segments of the State's network and computing infrastructure; conducted risk assessments for state agencies; and released statewide cyber security polices on incident reporting and baseline cyber security requirements.

CONCURRENT SESSION 1


1:30 PM MONDAY, MARCH 26


1.1	State of Tennessee	
	Moderator:	
 1.1.1	GIS And Source Water Protection	Thomas A. Moss TN Division of Water Supply Nashville, TN
 1.1.2	Upgrading The Tennessee DOT TRIMS Application To A New GIS Platform	Rick Hammond Woolpert, Inc Indianapolis, IN
 1.1.3	A Sign Of The Times? Metro Nashville's Automated Sign Inventory	Clifton Ogden Civic Engineering & Information Technologies, Inc. Nashville, TN
1.2	Student Paper Contest	
	Moderator:	
1.2.1	Analyzing Satellite Imagery to Develop Freight Generation Data	Subhro Mitra North Dakota State University Fargo, ND
1.2.2	A Critical Review and Integration of GIS-Based Spatial Databases for Multi-Commodity and Multi-Mode Freight Movement Modeling and Security Analysis in USA	Justin LeBeau University of Oklahoma Norman, OK
1.2.3	Modeling Transportation-Related Emissions Using GIS	Peng Wu University of California Davis, CA
1.3	Web Portals	
	Moderator:	
1.3.1	Oklahoma DOT's Geographical Resource Intranet Portal, A Technology Upgrade (Gripv3)	Tim Callahan Oklahoma Department of Transportation Oklahoma City, OK
1.3.2	Kanroad Support Of Kansas ITS Efforts	JoAnn Mattson Intergraph Corporation Westminster, CO
1.3.3	A Traffic Flow WEB Portal Proof Of Concept With ArcGIS Server 9.2	Alan Smith Washington State Department of Transportation (WSDOT) Olympia, WA
1.4	Data Collection	
	Moderator:	
1.4.1	Alaska DOT&PF Photolog / GPS Data Collection And Integration	Larry Mattke Mandli Communications, Inc. Oregon, WI
1.4.2	A Systematic Approach To The Efficient Collection Of Ramps, A Case Study – Louisiana DOT	Michael Nieminen Roadware Group Inc. Paris, Ontario, Canada
1.4.3	Enhanced Transportation Asset Data Collection Using Video Log Image Pattern Recognition	James Tsai Georgia Tech Atlanta, GA

The  symbol indicates a session from Tennessee, the Host State.

CONCURRENT SESSION 2

3:30 PM MONDAY, MARCH 26

2.1 GPS / GIS		
Moderator:		
2.1.1	TDOT's Past, Present and Future Experience with their Continuously Operating GPS Reference Network	Jim Waters Tennessee Dept. of Transportation Nashville, TN
		
2.1.2	Using GPS For Travel Time Study	Rakesh Sharma Belomar Regional Council Wheeling, WV
2.1.3	Mobile Mapping: New Technologies And Methodologies	Rob McCuaig Geo-3D Inc. Brossard, QC, Canada
2.2 Web Applications		
Moderator:		
2.2.1	Winter Weather Information On Web GIS	Xiangyi Zhu NYS Thruway Authority Albany, NY
2.2.2	PennDOT's Road Closure Reporting System (RCRS) Phase II	Doug Tomlinson Pennsylvania DOT Harrisburg, PA
2.2.3	North Dakota DOT GIS Web Portal And Video Log - Spatial Data Portal And Video Log Viewer Project	Brian Bieber North Dakota Department of Transportation Bismarck, ND
2.3 Federal Data		
Moderator:		
2.3.1	Nextmap USA - A National Digital Elevation Mapping Program And Its Applications In Transportation	Robert Eadie Eastern US Intermap Technologies, Inc. Englewood, CO
2.3.2	Feeding Your HPMS	Rick Akana Hawaii DOT Honolulu, HI
2.3.3	Image Based Road Inventory System	Jason Dong Enterprise Information Solutions, Inc. Columbia, MD
2.4 Enterprise GIS		
Moderator:		
2.4.1	Colorado Department Of Transportation GIS Integration With Enterprise Resource Planning (ERP) Implementation	Marvin Koleis Colorado DOT Denver, CO
2.4.2	GIS Enabling HPMS – Unstovepiping the Pipes	Diane Pierzinski California Department of Transportation Sacramento, CA
2.4.3	Web-Based LRS Editing And Dynamic Segmentation Using ArcGIS Server At Rhode Island DOT	David Weinstein Geonetics Boston, MA

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CONCURRENT SESSION 3


10:30 AM TUESDAY, MARCH 27

3.1	Enterprise Data & GIS	
	Moderator:	
3.1.1	South Dakota Department Of Transportation Business Intelligence Using GIS	David Wagner Cost Technology, Inc. Allentown, PA
3.1.2	Washington DOT Upgrading Basemap Data - The Path To GIS Maps, A Modern LRS, And Local Roads Data	Shawn Blaesing-Thompson Washington Department of Transportation Olympia, WA
3.1.3	Beyond A Strategic Plan, Developing An Enterprise Geospatial Information Management System	Oscar Jarquin Caltrans Sacramento, CA
3.2	Asset Management	
	Moderator:	
3.2.1	GIS-Centric Roads Asset Management System	Ali Roshannejad City of Calgary Calgary, AB, Canada
3.2.2	Web-Based Management Services For Infrastructure Corporation Of America	Keith Tolison Woolpert, Inc. Portsmouth, VA
3.2.3	Massachusetts Road Inventory - LRS Based, Data Rich, And An Asset Management Tool	Mark Berger Massachusetts Executive Office of Transportation Boston, MA
3.3	Management Systems	
	Moderator:	
3.3.1	Adding Spatial Data To Existing Information Systems	Eric Abrams Iowa Department of transportation Ames, IA
3.3.2	PennDOT's Statewide Strategy For Traffic Management Centers	Doug Tomlinson Pennsylvania DOT Harrisburg, PA
3.3.3	Integrating GIS And ERP: The Pennsylvania Turnpike Commission's Experience	James E. Vitale W.E.C. Engineers, Inc. Bridgeville, PA
3.4	Environmental	
	Moderator:	
3.4.1	Fulfilling EPA Requirements For Storm Water Mapping Using GIS	Michael P. Benedict, GISP HNTB Corporation Milwaukee, WI
3.4.2	A Rural Roadway Vegetation And Blowing Snow Susceptibility Index	Damon Grabow Regional Weather Information Center Grand Forks, ND
3.4.3	Advancements In GIS And Tools To Include Environmental Factors In Transportation Program And Project Delivery	Kimberly Majerus FHWA-Resource Center Fields, IL

CONCURRENT SESSION 4


1:30 PM TUESDAY, MARCH 27


4.1	Google Earth GIS	
	Moderator:	
4.1.1	Enterprise Wide Imagery Access & Management Technology For Transportation Agencies	Tom Schoblaski Intergraph Englewood, CO
4.1.2	Displaying Collected Pavement Distress And Asset Data Using Google Earth Provides Accurate Visual Representation And Spatial Analysis Capabilities	Michael Nieminen Roadware Group Inc. Paris, Ontario, Canada
4.1.3	Google Earth Implementation At Caltrans	Roger Ewers California Department of Transportation Sacramento, CA
4.2	GIS-T Research	
	Moderator: Bruce Spear	
4.2.1	TRB Grand Challenge in GIS-T	Reg Souleyrette Iowa State Univ. Ames, IA
4.2.2	State Research Needs in GIS	Robert Fuhler Arkansas DOT Little Rock, AR
4.2.3	Surface Transportation Environment and Planning Cooperative Research Program (STEP), for GIS	Mark Sarmiento FHWA Washington, DC
4.2.4	Exploratory Advanced Research (EAR) Program on GIS-T	Roger Petzold FHWA Washington, DC
4.3	LRS / LRM	
	Moderator:	
4.3.1	The Next Generation Transportation Road Network	Ron Cramer Digital Data Technologies, Inc. Columbus, OH
4.3.2	Corridor-Wide Transportation Management: Development Of An LRS Based Network	Yushuang Zhou Cambridge Systematics Oakland, CA
4.3.3	Discussion Of Iowa DOT's Linear Referencing	Eric Abrams Iowa DOT Ames, IA
4.4	MPO GIS	
	Moderator:	
4.4.1	Using 3D Stereo Data In The Estimation Of Construction Quantities And Costs	Donald Reid The Metropolitan Government of Nashville – Davidson County, Public Works Department Nashville, TN
4.4.2	Factors Affecting The Quality And Accuracy Of A Street Centerline Dataset, And The Impact On Public Works And ROW Operations In Metro Nashville - Davidson County	Donald Reid The Metropolitan Government of Nashville – Davidson County, Public Works Department Nashville, TN
4.4.3	Development Of An Automatic Conflation Tool To Integrate Transportation Line Layers	Francisco J. Torres, P.E. North Central Texas Council of Governments Arlington, TX

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CONCURRENT SESSION 5

3:30 PM TUESDAY, MARCH 27

5.1 Database Design		
Moderator:		
5.1.1	Integrating Transportation Models And GIS-T Applications: Challenges And Opportunities	Ernest K. (Ernie) Ott Citilabs, Inc. Redlands, CA
5.1.2	Using Oracle Spatial To Address Today's Transportation Issues	George Nace PennDOT Harrisburg, PA
5.1.3	Migrating To ArcGIS Server	Teague Buchanan Georgia Department of Transportation Atlanta, GA
5.2 Safety / Traffic		
Moderator:		
5.2.1	Developing A "One Stop" ArcIMS Application For High Accident Location (HAL) Management	Darin Herle Latitude Geographics Victoria, BC, Canada
5.2.2	New York State Accident Location Information System – Analyzing The Past To Provide A Safer Future	David Lewis ESRI Redlands, CA
5.2.3	Managing Roadway Networks And Assessing The Impact Of New Developments - Cartesoft's Concurrency Management Pro.	Louis Steenson Cartesoft, LLC Jacksonville, FL
5.3 Web Data Integration		
Moderator:		
5.3.1	 Integrating Highway Data Into TDOT's TRIMS GIS Database	Ray Mandli Mandli Communications, Inc. Oregon, WI
5.3.2	Providing A Multi-State GIS Based Cost Estimate System For Building The Appalachian Development Highway System	Jason Wang Appalachian Regional Commission Washington, DC
5.3.3	Virginia DOT's New Roadway Network System: An Integrated Approach To Managing And Leveraging GIS And LRS For Enterprise Data Analysis	Scott McCombe PMP VDOT Information Technology Applications Division Richmond, VA
5.4 GIS Analysis		
Moderator:		
5.4.1	Colorado DOT's Straight-line Enhanced Automated Mapping (Steam) System	Allen Ibaugh Data Transfer Solutions, LLC Orlando, FL
5.4.2	Straight Line Diagramming For Transportation Linear Data	James O. Brown Intergraph Brandon, MS
5.4.3	Multilevel Linear Referencing And Temporal Data Management	Bruce Aquila Intergraph Corporation Huntsville, AL

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CONCURRENT SESSION 6

10:30 AM WEDNESDAY, MARCH 28

6.1	GIS Databases		
	Moderator:		
6.1.1	GDOT Metadata Explorer – Configuration, Customization And Management	Jennifer L. Ba Georgia DOT Atlanta, Ga	
6.1.2	HAS-GIS Interface: Build An Enterprise Geodatabase At Alaska DOT&PF	Hong Yu Cambridge Systematics Oakland, CA	
6.1.3	Implementing CDOT's Roadway Geodatabase - Theory And / Versus Reality	Lou Henefeld Colorado Dept. of Transportation Denver, CO	
6.2	Web GIS		
	Moderator:		
6.2.1	Statewide Image Access Through Easy-To-Use Web Portal	Karin Goodwin Intergraph Corporation Huntsville, AL	
6.2.2	The Integrated Transportation Enterprise - South Carolina DOT's Answer To The Need For Enterprise Data Access	MaryGail Wallace Intergraph Corporation Huntsville, AL	
6.2.3	Digitizing And Thematic Mapping On Web	Jian Chen Georgia DOT Atlanta, GA	
6.3	Geocoding & Routing		
	Moderator:		
6.3.1	Building A Unified Roadway Database For The Illinois DOT	Robert Lindquist GIS Solutions, Inc. Springfield, IL	
6.3.2	Maryland Federated Centerline Data Synchronization Project – State And County's Joint Venture	Michel Sheffer Maryland State Highway Administration Baltimore, MD	
6.3.3	Investigation Of Routing Options For The Nova Scotia Road Network (NSRN)	David Loukes Opus International Consultants Canada Lt Fredericton, NB, Canada	
6.4	Planning		
	Moderator:		
6.4.1	GIS Project Planning	Jim Pugh, GISP EMH & T Columbus, OH	
6.4.2	Moving GIS Forward At Montana DOT: How Strategic Planning Is Supporting New Initiatives	Marlin Sander Montana DOT Helena, MT	
6.4.3	Mapping Transportation Improvement Projects For The Use Of Planning And Public Knowledge	John Parker PENNDOT Harrisburg, PA	

GIS-T Participant Registration Form

Please use our easy On-line Registration at:
<http://www.gis-t.org>, available on 1/17/2007.

ONE REGISTRATION PER PAGE PLEASE

NOTICE: IF YOU HAVE GUEST(S) ATTENDING, PLEASE SEE OUR GUEST REGISTRATION FORM

Name (Mr. Ms.) _____ Nickname _____
First Last

Address _____
Street City State ZIP

Business Name _____

Business Phone _____ Fax _____

Email: _____

FEES	Before/on 3/2/07	After 3/2/07	Total
GIS-T 2007 Symposium ¹	\$250	\$300	\$
GIS-T 2007 Workshops ²	\$135	\$160	\$
Student - Symposium ³ & Workshops	\$100	\$125	\$
One Day-Symposium ⁴ <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed	\$135	\$160	\$
	AMOUNT ENCLOSED		\$

Note on Fees

- Does not include workshop fees.
- Workshop fee covers entire day (Sunday, March 25, 2006) and includes lunch. This is not a per-workshop fee. Please select choice of workshops below.
- Student Fee covers attendance at the Symposium, Workshops, Lunches, and Exhibit Hall Receptions. **Does not cover the Tuesday social.** Please select choice of workshops below.
- One Day Registration Fee covers attendance for one day at the Conference, Lunch, and Exhibition Hall Reception. **It does not include the Tuesday social.**

Workshops (IMPORTANT: REGISTRATION FEE FOR THE SYMPOSIUM DOES NOT INCLUDE WORKSHOPS, SEE FEE LIST ABOVE)

Morning Session - Pick One	Afternoon Session - Pick One
<input type="checkbox"/> 3D Geospatial for Transportation: Best Practices and Project Implementation Methods	<input type="checkbox"/> Using LIDAR Workshop: The Basics
<input type="checkbox"/> Blazing the Trail: The Transportation Component of Emergency Management	<input type="checkbox"/> Geography, the Census Bureau and Transportation -- Where it all Begins
<input type="checkbox"/> The National Geodetic Survey's CORS Network and RTK GPS	<input type="checkbox"/> Dynamics of Environmental GIS - Persuading Information to Multitask Through Applied Technologies and Methods
<input type="checkbox"/> Visualize Your Assets with HERS-ST	<input type="checkbox"/> A Powder Keg of Usability: Implementing Ajax in Web-based Mapping Applications

CHECK IN WILL BEGIN ON SATURDAY, March 24, FROM 5 TO 7 PM FOR EARLY ARRIVALS and CONTINUES THROUGHOUT THE SYMPOSIUM

Send Registration to

Rose Braun
 Nebraska Department of Roads
 Business Technology Support Division
 PO Box 94759
 Lincoln, NE 68509

Phone: 402-479-3696
 Fax: 402-479-3884



PAYMENT BY CHECK, MONEY ORDER OR REGISTER ON-LINE USING CREDIT CARD

Make checks Payable to "GIS-T". Check <http://www.gis-t.org> for the most up to date information

Guest(s) Registration Form

**Please use our easy On-line Registration at:
<http://www.gis-t.org>, available on 1/17/2007.
 This registration is for Guest(s) of Symposium Participants**

Symposium Participant's Name(Mr. Ms.) _____
First Last

ADULT GUEST REGISTRATION

Adult Guest Name (Mr. Ms.) _____
First Last

Address _____
Street City State ZIP

Business Name _____

Business Phone _____ Fax _____

E-mail: _____

Fee includes Social on Tuesday night, Day trips on Monday and Tuesday and Continental breakfast each morning. Lunch will be provided on day trips.

FEES

	Number of Registrants	Total
\$165.00		\$
	TOTAL AMOUNT	\$

CHILD(REN) REGISTRATION (Under age of 18)

Child(ren)'s Name(s)/Age(s) _____
 M/F _____ M/F _____
 M/F _____ M/F _____

FEES

	Number of Registrants	Total
Children Ages 6 & under	Free	\$
Age 7 - 18	\$35.00	\$
	TOTAL AMOUNT	\$

GRAND TOTAL ENCLOSED FOR ALL REGISTRANTS	\$
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Nashville, Tennessee – Lodging and Logistics

Hotel Accommodations

Nashville Airport Marriott
600 Marriott Drive
Nashville, Tennessee 37214 USA
Phone: 1-615-889-9300
Fax: 1-615-889-9315

GIS-T conference rate:
Single: \$96.00 + tax
Double: \$96.00 + tax
Guaranteed until March 2, 2007
Contact the hotel directly to request GIS-T rate
<http://marriott.com/property/propertypage/BNATN>

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There is a complimentary hotel shuttle to and from the Nashville Metropolitan Airport.

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GIS in Transportation Symposium 2007



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GIS-T 2007
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