

Preliminary Program



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

April 6 - 8, 2009

Workshops – April 5, 2009

**Renaissance Marriott & Cox Convention Center
Oklahoma City, Oklahoma**

Sponsored by:

American Association of State Highway and Transportation Officials



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The twenty-second annual GIS-T Symposium - *GIS-T 2009 Native Directions of GIS* – 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 April 5, 2009, and three full days of conference activity, April 6-8, 2009.

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 – Steve Gilliland, CSP. – Steve Gilliland, our keynote speaker, is a master storyteller and uses the power of humor to help people understand and embrace serious issues. He reveals the way to face conflicting demands in an unforgiving business environment that keeps getting tougher. From the beginning when he shows people how to reignite their passion, to the end with his compelling challenge to “never lose your focus”, he releases an “explosion of enthusiasm” that is absolutely contagious. It is simple, clear and easy to grasp – yet profound! Fasten your seat belt and hold on as one of America’s most entertaining keynote speakers shows you how to *Enjoy The Ride!*






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

Concurrent Sessions – The Symposium will feature five 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.

GIS Gallery - Successful GIS projects will be showcased through map products and displays. Prizes will be awarded to the Best Representation in each of four categories – 1) Transportation Publication; 2) Information Usage; 3) Public Presentation; and 4) Effective Cartography. All attendees are encouraged to submit multiple GIS products reflecting their own agency’s work to the symposium. For detailed category and submission information please check the www.GIS-T.org website.

Panel Discussion Sessions – The Symposium will feature three panel discussions on Tuesday and Wednesday, Tuesday’s titles are *Transportation for the Nation* and *Emerging Issues* and Wednesday’s title *The Enterprise LRS*.

General Schedule

	Sunday April 5, 2009	Monday April 6, 2009	Tuesday April 7, 2009	Wednesday April 8, 2009	
7:00 AM	Registration Continental Breakfast	Registration Continental Breakfast	Registration Continental Breakfast	(Sleep In!!!)	7:00 AM
8:00 AM	Morning Workshops 1. Using the New FHWA HPMS Geospatial Data Model 2. Developing Quality Assurance Programs for Large Area Geospatial Projects 3. Integrating Civil Engineering and GIS/IT Disciplines 4. Obtaining, Integrating, Maintaining and Sharing Local and State Transportation Data, using a centralized data store and automated processes	Opening Session Welcome To Oklahoma City Keynote Speaker Steve Gilliland	Panel Discussion Transportation for the Nation Dan Widner Moderator	Registration Continental Breakfast	8:00 AM
9:00 AM		Break	Break	Panel Discussion The Enterprise LRS Eric Abrams Moderator	9:00 AM
10:00 AM		Break	Break	Session 5 1. 3-D GIS 2. Environmental 3. Data Integration 4. GIS in Decision Support	10:00 AM
11:00 AM		State Summary & Roll Call of States	Session 3 1. GIS Application 2. Design & Planning 3. Enterprise GIS 4. GPS	Session 5 1. 3-D GIS 2. Environmental 3. Data Integration 4. GIS in Decision Support	11:00 AM
12:00 PM	Lunch - Workshop Attendees Only	Lunch	Lunch	Box Lunch Next Host State Presentation Awards/Drawings	12:00 PM
1:00 PM	Afternoon Workshops 1. Hybrid GIS Solutions 2. Climate Change for GIS-T Professionals 3. Integrating Civil Engineering and GIS/IT Discipline Cont. 4. Introduction to GIS web Services	Session 1 1. GIS Web Tools 2. Student Paper Contest Winners 3. Data Collection 4. LiDAR	Session 4 1. IT 2. Safety 3. Data Sharing 4. Maintenance Management	Symposium Wrap-Up Come join us for a debriefing of this year's symposium and planning for the next. Refreshments Provided!	1:00 PM
2:00 PM		Break	Break	Symposium Wrap-Up Come join us for a debriefing of this year's symposium and planning for the next. Refreshments Provided!	2:00 PM
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!	3:00 PM
4:00 PM		Break	Session 2 1. Google/Virtual Earth 2. Disaster Planning 3. Data Warehouse 4. Developing Road Networks	Emerging Issues	4:00 PM
5:00 PM	Break	GIS Gallery	Free Time	5:00 PM	
6:00 PM	Technology Hall Reception Technology Hall Open	GIS Gallery	Tuesday Night Social 	6:00 PM	
7:00 PM		Technology Hall Reception	Tuesday Night Social 	7:00 PM	
8:00 PM		Technology Hall Reception	Tuesday Night Social 	8:00 PM	
8:30 PM		Technology Hall Reception	Tuesday Night Social 	8:30 PM	
8:30 PM	Technology Hall Reception	Tuesday Night Social 	National Cowboy & Western Heritage Museum	8:30 PM	

GIS-T Workshops – Sunday, April 5

There will be four tracks for workshops presented at the 2009 GIS-T. All workshops are half-day workshops. You may pick one from the morning and one from the afternoon. Continental Breakfast and Lunch are provided to workshop attendees.

MORNING SESSIONS

1. Using the New FHWA HPMS Geospatial Data Model

**Instructor: Tom Roff, FHWA Office of Highway Policy Information
Ben Williams, FHWA Resource Center**

Beginning with the submittal of 2009 data in June 2010, The Highway Performance Monitoring System will use a new data model that has a geospatial component. This has opened up many challenges as we strive to meet customer requirements while at the same time decrease burden to State DOTs. This workshop will focus on methodologies that States will use to meet these challenges.

Topics to be addressed include the overall reassessment of the HPMS, a description of the Data Model, the foundation of a National LRS Network that will be made up of data from State DOTs, Methods to import the Network/Attribute data, and methods for sampling data. Informal discussions are encouraged.

2. Developing Quality Assurance Programs for Large Area Geospatial Projects

**Instructor: Mr. Drew Meren Infotech Enterprises America, Inc.
Mr. Gerhard Sehnalek CP, PLS Infotech Enterprises America, Inc.**

The States of Ohio and Virginia (USA) have yearly digital Orthophoto and Digital Terrain Model (DTM) acquisition programs exceeding 45,000 tiles each for multiple image resolutions and map scales. The State of Ohio selected the ADS40 sensor for imagery and the LiDAR ALS50 for terrain data acquisition; whereas, Virginia selected conventional film and photogrammetric DTM collection. The QA services for the digital orthophotos focused on the geometric and radiometric quality. In order to provide high quality imagery and data to the participating counties, cities, and other users within a short timeframe, all deliveries require compliance with specifications and consistent quality. Infotech was hired for these multi-year programs because of experience, expertise, and the availability to provide a large number of skilled QA specialists. This workshop will describe the development of automated and interactive workflows and review processes for the QA of digital orthophotos, LiDAR, and Digital Terrain data for large area datasets based on different data sources. Various acceptance criteria for multiple resolution digital orthophotos will also be presented with supporting sample imagery to aid in the assessment for acceptance or rejection along with qualitative assessment tools developed to efficiently analyze LiDAR and DTM data.

3. Integrating Civil Engineering and GIS/IT Disciplines

**Instructor: Kurt Lebo, Illinois Tollway Authority and Jeff Siegel, HNTB
Newly Updated for 2009!**

"Wow! I just accomplished in 10 minutes with one program [GIS] what took me two or three days using Micro Station, Excel, and the online Property Appraisers site! I am incredibly impressed by what this program can accomplish." The integration of GIS technology into civil engineering has seen a dramatic increase in recent years. Solutions have become more sophisticated as the usefulness of GIS has become increasingly apparent to civil engineers. GIS and related information technologies are now being used by civil engineers in many aspects of project development and infrastructure management – from preliminary studies thru final design and for day-today operations, facilities maintenance and asset management.

Specific topics include:

- Engineering industry trends and opportunities for integration
- GIS and the infrastructure lifecycle
- CAD interoperability/integration
- GIS fundamentals (in engineering terms)
- Modeling and simulation
- Asset and maintenance management

Intended Audience: This workshop is intended for GIS/IT professionals that support engineering functions within an enterprise; project managers and analysts dealing with both CAD and GIS data; as well

4. Obtaining, Integrating, Maintaining and Sharing Local and State Transportation Data, using a centralized data store and automated processes.

Instructors: Tami Griffin, Michael Leierer Washington DOT

The Washington Department of Transportation (WSDOT) in partnership with the six other departments of transportation is involved in a consortium of public and private entities. The consortiums purpose is the development of computer based tools that facilitates geo-spatial transportation data sharing and integration providing a multitude of business benefits. This workshop will review the technical processes that obtain data and place the data in a centralized database, QA/QC processing and reporting, integration and conflation, production data and serving this data as products to data users. There will be an overview to administrative processes and business needs supporting WA-Trans, but slanted and only enough to support and explain the design, architecture and technical processes.

- 1.) Identifying the administrative processes necessary to support data providers and submittal of data.
 - a. Vetting data providers
 - b. Agreement Points between jurisdictions
 - c. Data Agreements
- 2.) Overview of the architecture needed to support the processes used in the workshop,
- 3.) Obtaining provider data (*This involves a demo of the WA-Trans Data User Portal and the back end translators*),
 - a. Overview of Data Provider Portal requirements,
 - b. Translation of disparate provider data to a centralized database,
 - c. Submittal of data, by a provider, using a Data Provider Internet portal,
- 4.) Change Detection/Change Management (*Includes a demo of the Change Detections and Management processes*),
 - a. Detecting changes to a providers submitted data based on data previously submitted by that provider,
 - b. Manage the detected changes,
 - c. Logging errors
- 5.) QA/QC (*Includes a review of some interesting reports*),
 - a. Review submitted data for types of changes, connectivity and possible errors,
 - b. QA/QC Reports and error logging, some reports being available to the data provider,
- 6.) Integration processes,
 - a. Coincident data at jurisdictional boundaries,
 - b. Differences in geometry,
 - c. Multiple LRS's
- 7.) Promotion to Production,
 - a. QA/QC,
- 8.) Production data and the Data User Portal (*Includes a demo of the WA-Trans Data User Portal*),
 - a. Data structure needs for data products,
 - b. Security,
 - c. Overview of Data User requirements
 - d. Obtaining data

AFTERNOON SESSIONS

1. Hybrid GIS Solutions

Instructors: Casey Donovan, IS Consulting

A hybrid solution is an integrated solution that is the result of combining two different things. Hybrid GIS solutions result from combining or mashing up consumer map services with geographic information systems.

This workshop will describe the new opportunities that have been created for geospatial visualization and analysis by recent changes in the industry. Specifically, we will examine the impact that consumer map services including Microsoft Virtual Earth and Google Maps have had on the demand for advances in geospatial visualization and analysis. Next we will discuss the new concepts that consumer map services have introduced to the GIS professional, and the obstacles that these new concepts present for geospatial visualization and analysis. Prominent among these new concepts is tile based mapping. Tile based mapping systems can provide a much richer user experience over demand-driven, non-tiled map visualization, but they also introduce new obstacles and complexities. For example, a mashup that provides visualization of pre-rendered map tiles overlaid within the VE or Google map control can't easily be extended to provide dynamic symbology. Users can't view parameter driven thematic map overlays, or perform a variety of useful visual analysis.

Fortunately, the obstacles can be overcome. Whether a mashup includes an AJAX user interface, uses a REST API, or access map tiles directly, even the more advanced types of geospatial visualization and analysis are possible in a hybrid solution.

2. Climate Change for GIS-T Professionals

Instructor: Ernie Ott, SDS Inc., Redlands, CA

Applications of Geographic Information Systems in the transportation field, called GIS-T by American Association of State Highway Transportation Officials (AASHTO) and others are now in their 3rd decade of existence. These applications have been applied across the disciplinary and modal spectra found in transportation organizations, including planning, operations, engineering, asset management, as well as environmental and safety assessment.

This presentation will provide a series of vignettes of applications chosen in part to provide a sense of their breadth of use. These have also been chosen for their potential tie-in to use in the monitoring, prediction, and mitigation of potential impacts which may result from the increasing intensity of storms, climate change, or other disturbances in the status quo. This will include applications which can be used to model changes in traffic due to flooding, loss of infrastructure, and population migration.

I took an approach of taking the projected symptoms of Global Warming, and speculated as to how various software applications, in particular GIS and modeling applications, might be used to monitor, guard against, plan and mitigate the potential effects of future climate change. My goal was to make the presentation strictly a-political. The one exception I made an acknowledgement on one slide that there is a political controversy going on, and then listed various forecasts and claims. After that I stuck to how various kinds of software could be applied to those potential problems.

It included some ideas on:

- Monitoring the changes, and speed of change (those pesky old 2nd derivatives!)
- Vulnerability with current design standards (what might need “beefing up”)
- Analyzing modified travel changes
- Identifying changing ecosystems
- Analyzing altered economies, and how to identify those most at risk (e.g. tourism, agriculture)
- Planning for severe weather incursions
- Developing better storm evacuation plans
- Population migration

My 3 “core themes” were:

- Software
- Integration
- Sustainability

3. Continuation of URISA Workshop [*Integrating Civil Engineering and GIS/IT Disciplines*]

Instructor: Kurt Lebo, Illinois Tollway Authority and Jeff Siegel, HNTB

4. Introduction to GIS Web Services

Instructor: Frank Winters, New York State Office of Cyber Security & Critical Infrastructure Coordination

The use of Geographic Information Systems (GIS) and Web Services by State agencies and local government has been growing rapidly. We have witnessed the growth of both GIS and web service uses for emergency services, capital project planning, real property assessment, economic development, health services, environmental analyses, land use planning, facility management, highway safety, and much, much more. In short, both GIS and web services are vital tools for effective decision-making and improving government services.

This workshop will introduce attendees to the fundamental concepts of GIS web services and raise their awareness of how to leverage the Internet to utilize geographic data without having the need to host the GIS data and/or develop necessary tools. Topics to be incorporated in this workshop include an explanation of web services, the various web service types and their application, the basics of data use via web service platforms and current programs and available resources for use in the integration of web service with GIS technologies. Demonstrations will cover the existing methods of integrating GIS data with web services. This is not a hands-on GIS developers’ workshop meant to provide attendees with technical content on how to build web services. The target audience for this workshop is GIS practitioners and those who would like to understand what web services are and how they can be utilized in the workplace.

TECHNOLOGY RECEPTIONS – TECHNOLOGY EXHIBITS OPEN

(SUNDAY 5:30 PM TO 8:30 PM)

(MONDAY 6:30 PM TO 8:30 PM)

The Technology Hall opens on Sunday evening at 5:30 pm with a reception for all Symposium attendees and guests. On Monday, Symposium participants are welcome to attend another reception starting at 6:30 pm.

The Technology Hall will open at 12:00 noon and close at 8:30 pm on Monday.

On Tuesday, it will be open from 7:00 am to 5:00 pm.

On Wednesday, it will open at 7:30 am and end at noon.

Opening Session / KEYNOTE SPEAKER

(MONDAY 8:30 AM TO 10:00 AM)

Steve Gilliland, CSP

Steve Gilliland, our keynote speaker, is a master storyteller and uses the power of humor to help people understand and embrace serious issues. He reveals the way to face conflicting demands in an unforgiving business environment that keeps getting tougher. From the beginning when he shows people how to reignite their passion, to the end with his compelling challenge to “never lose your focus”, he releases an “explosion of enthusiasm” that is absolutely contagious. It is simple, clear and easy to grasp – yet profound! Fasten your seat belt and hold on as one of America’s most entertaining keynote speakers shows you how to Enjoy The Ride!

Steve’s books include: Enjoy the Ride, Mum’s the Word, Performance Essentials in the Work Place, Conversations on Leadership and The Five Principles of Leadership. He has also recorded DVD sets, titled "Enjoy the Ride" and "Teaching with Passion" as well as CD’s and other material. <http://www.stevegilliland.com>

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, state, province, or local agency to briefly mention the status of their GIS implementations and challenges that they face.

STUDENT PAPER SESSION

(Monday 1:30 PM to 3:00 PM)

This year GIS-T presents the fourth annual Student Paper Session. Student winners, selected by the planning committee, will present their technical research papers focused on developing solutions for current GIS-T issues. The students will take home a \$250 or \$500 award.

GIS GALLERY

(Monday 5:00 PM to 6:30 PM)

The GIS-T Symposium provides a showcase for attendees to display GIS-generated mapping and poster products. This is an opportunity to share techniques and applications with peers in the transportation GIS community. A dedicated time will be made available on Monday evening to browse and discuss the various entries. Come see how agencies are using GIS to advance their work. A panel of judges evaluates each submission, and awards are given within each category [Transportation Publication; Information Usage; Public Presentation; and Effective Cartography] during the Wednesday Symposium lunch. Every state and transportation organization is strongly encouraged to submit examples of their work. Attendees will be able to view maps for the duration of the Symposium. You can avoid traveling with a map tube by sending it well in advance to Jay Adams, at the address shown on the back page, no later than March 30, 2009.

EMERGING ISSUES

(Tuesday 3:30 PM to 5:00 PM)

New this year at GIS-T is a session under the heading of *Emerging Issues*. This session is 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 in Transportation niche.

For GIS-T '09 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. **When you register, please take a few minutes to identify those areas of concern or interest that you have, and thank you for your participation.**

SPOUSE TOURS

Monday, April 6 – Oklahoma City National Memorial (8:30 AM to 3:00 PM)



The Oklahoma City National Memorial & Museum was created to honor those who were killed, those who survived and those changed forever by the 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City. The Memorial and Museum are dedicated to educating visitors about the impact of violence, informing about events surrounding the bombing, and inspiring hope and healing through lessons learned by those affected.

Tuesday, April 7 – Oklahoma's Adventure District (8:30 AM to 2:30 PM)

[Remington Park Raceway and Casino](#) - Nothing is more exciting than a day at the races, especially at this race track. While you watch the ponies run, enjoy fine dining inside the park or try your luck at the casino. The Quarter Horse season is held March-June. The Thoroughbred Meet is held August-November.

[National Softball Hall of Fame](#) - The Amateur Softball Association (ASA), a volunteer driven, not-for-profit organization based in Oklahoma City, OK, was founded in 1933 and has evolved into the strongest softball organization in the country. The growth and development of the association led the United States Olympic Committee (USOC) to name the ASA the National Governing Body of Softball, pursuant to the Amateur Sports Act of 1978. ASA Hall of Fame Stadium is home to over 40 hours of live nationally televised coverage attracting over 18 million households watching softball "LIVE from Oklahoma City". The ASA conducts over 100 National Championships on an annual basis in which 30,000 players compete across the US. The ASA Hall of Fame Stadium in Oklahoma City has served as host of the NCAA Women's College World Series and the World Cup of Softball more than any other site in the US.

[Oklahoma City Zoo](#) - The Oklahoma City Zoo is a fully accredited member of the Association of Zoos and Aquariums and the American Association of Museums as both a living museum and a botanical garden. The Zoo participates in numerous cooperative Species Survival Plan projects and is dedicated to the conservation of rare and endangered wildlife.

[Omniplex](#) – The Omniplex was established in 1958 as the Oklahoma Science and Arts Foundation with a mission to improve the cultural and educational standards of Oklahoma City. Over the years the museum's mission has continued to evolve and the focus has sharpened, emphasizing science and technology. Experience the world of science with hands on exhibits and demonstrations.

[Bricktown Entertainment District](#) - Throughout the conference, just a few blocks away, is the Bricktown Entertainment District. The Bricktown Entertainment District, Oklahoma's most unique entertainment destination and neighborhood, is the vibrant home to many restaurants, nightclubs, sporting facilities, shops, attractions, condos, and a spectacular canal. Located in the heart of downtown Oklahoma City, Bricktown, as it now stands, was once a warehouse neighborhood that has been magnificently restored. It has enjoyed a physical revival and gained immense popularity since the early 1980s, becoming a hot spot, known for its diverse and often varied entertainment options. Be it enjoying a baseball game at its AAA stadium, catching a movie at the Harkins Theatre, or drinking and dining at its many fabulous restaurants and nightspots there is always fun for the entire family.

PANEL DISCUSSIONS

Transportation For The Nation (Tuesday 8:00 AM to 10:00 AM)

Moderator: Dan Widner– Virginia DOT

In this panel discussion we will cover a variety of issues dealing with the states' initiative "Transportation For The Nation" (TFTN), which refers to a collaborative effort to support the development of a publicly available transportation data set that would support each state's Spatial Data Infrastructure (SDI) and the National Spatial Data Infrastructure (NSDI). A coordinated approach to developing comprehensive street network data would be comprised of the best available local data, containing current and accurate address information (e.g. 911 addressing), state highway data managed by the State DOT, and other data sources such as regional (Metropolitan Planning Organizations), tribal and federal. TFTN needs to consider all modes of transportation but will initially focus upon the street network. The usefulness of transportation data goes beyond transportation applications such as maintenance, safety and security requirements. For example, many states have applications to help apportion tax revenues using address geocoding supported by the streets layer. Governments are increasingly working on problems, such as emergency response and economic development, which do not stop at municipal, county, or even state borders. Today it is necessary to take the "long view" on the development and maintenance of transportation geospatial data in these times of difficult budgets and limited resources to meet multiple needs. NSGIC is about to begin a strategic planning activity that will bring all the stakeholders together to identify the right mechanisms and resources to move Transportation for the Nation from the talking stage to reality.

Panelists include:

- NSGIC representatives - "For The Nation" informational summary (e.g. Imagery For The Nation)
- Tom Roff, USDOT - HPMS Geospatial Requirements
- Reg Soulyrette - Summary of TRB workshop "Improving National Transportation Geospatial Information"
- Tami Griffin, WA - TRANS - Success factors from a proven regional transportation collaboration effort
- Steve Lewis, USDOT GIO - Description of the Strategic Plan development effort for TFTN

Enterprise Linear Referencing System (LRS) (Wednesday 8:30 AM to 10:00 AM)

Moderator: Eric Abrams – Iowa DOT

AASHTO Technology Implementation Group (TIG) has awarded Iowa a grant to promote ML LRS, based upon the NCHRP 20-27 model. With this grant a LRS lead states team has been formed to provide assistance, education and experiences with other states. The lead states team is comprised of Iowa, California, Wisconsin, Minnesota, North Carolina and Ohio.

Panelists will share their experiences in the forty-five minutes and the second forty-five minutes will be a discussion based forum.

Panelists include:

- Iowa: Steve Kadolph
- California: Oscar Jarquin
- Wisconsin: Jonathan Duchateau


TUESDAY NIGHT SOCIAL
National Cowboy & Western Heritage Museum
(Tuesday 5:30 PM to 10:00 PM)

The [National Cowboy & Western Heritage Museum](#) is America's premier institution of Western history, Native American history, art and culture. Founded in 1955, the museum in Oklahoma City collects, preserves and exhibits an internationally renowned collection of Western and Native American art and artifacts while sponsoring dynamic educational programs and ground-breaking scholarly research to stimulate interest in the enduring legacy of our American West. More than 10 million visitors from around the world have sought out this unique museum to gain better understanding of the West: a region and a history that permeates our national culture. Museum and Gift Shop will be open from 5:30pm to 10:00pm for viewing.

We will depart from the hotel at 5:30 pm and arrive at the Museum approximately 5:45 pm. A barbeque buffet dinner will be served in the Sam Noble Room at approximately 7:30 pm and the Jim Anque Tribal Dancers will perform at 8:00pm. Beverages will be available throughout the evening. Buses will depart from the Museum beginning at 9:00 pm returning to the hotel by 9:30 pm.

CONCURRENT SESSION 1

1:30 PM MONDAY, APRIL 6

1.1 GIS Web Tools			
Moderator:			
1.1.1	Tool Chest Approach to In-house Application Development	Jim Patterson TxDOT Austin, TX	
1.1.2	Obtaining local transportation data and processing this data in order to serve a current Transportation Framework over the Internet	Michael Leierer Washington State Department of Transportation Olympia, WA	
1.1.3	Roadway Accident Management Systems	Jackie Magnant ESRI Alpharetta, GA	Hossam Sayed ESRI
1.2 Student Paper Contest			
Moderator:			
1.2.1	Winners To Be Announced		
1.2.2	Winners To Be Announced		
1.2.3	Winners To Be Announced		
1.3 Data Collection			
Moderator:			
1.3.1	 Linear Based Pavement Data in a Spatial World: Integration of the City of Oklahoma City's Automated Pavement Evaluation Program and Videolog to the Enterprise GIS.	Allan Venema Fugro Roadware Inc. Paris, ON	Schad Meldrum City of Oklahoma City
1.3.2	Implementing an asset and pavement management system in Alexandria, VA	Craig Schorling Transmap Corporation Columbus, OH	
1.3.3	From Paper to TDOT's automated inventory	John Hicks TDOT Nashville, TN	Jessica Kubik Navstar Mapping Corporation
1.4 LiDAR			
Moderator:			
1.4.1	Iowa DOT LiDAR	Eric Abrams Iowa DOT Ames, IA	Michael Umansky Applied Imagery
1.4.2	The New Tools & Technologies of Mobile Mapping	Dana Brown GEO-3D Brossard, Quebec	Eric Botting GEO-3D
1.4.3	LiDAR Analysis of Obstructions to Navigable Airspace at Delaware Airports	Joshua Thomas Delaware Department of Transportation Dover, DE	



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

CONCURRENT SESSION 2


3:30 PM MONDAY, APRIL 6

2.1 Google/Virtual Earth Applications			
Moderator:			
2.1.1	FLYOVER MARYLAND : Bridging the GAP with Google Enterprise	Kaushik Dutta Maryland Transportation Authority Baltimore, MD	Lanna Jones Onix Networking
2.1.2	Google Earth Enterprise in the State DOT	Bill Naddy Caltrans Sacramento, CA	
2.1.3	Kansas Traveler Information with Virtual Earth Map	Mary Beth Pfrang KDOT Topeka, KS	Sherry Coatney Intergraph
2.2 Disaster Planning and Response			
Moderator:			
2.2.1	GIS Dashboard for the Florida Statewide Regional Evacuation Study Program	John Wisdom Wilbur Smith Associates Columbia, SC	
2.2.2	National Incident Management System (NIMS)	Richard Coates, P.E Fulton County Government Atlanta, GA	
2.2.3	NYS DOT's Road Status and Damage Assessment Tool	Kevin Hunt NYS Dept of Transportation Albany, NY	
2.3 Data Warehouse			
Moderator:			
2.3.1	Safety Data Mart - An Excel 2007/GIS Integration	Jim Conlon GIS Solutions, Inc. Springfield, IL	Mark Kinkade IDOT
2.3.2	KDOT's Spatially Enabled Data Warehouse	Tamela (Tammy) Kerwin KDOT Topeka, KS	William (Bill) G. Schuman GeoDecisions
2.3.3	Building West Virginia DOT's geospatial capabilities: The GIS web portal and straight-line diagram application	Sean K. Litteral West Virginia DOT Charleston, WV	Don Kiel GeoDecisions
2.4 Developing Road Networks			
Moderator:			
2.4.1	DVRPC's Dynamic Conflation Tool	Albert Sarvis GeoDecisions Camp Hill, PA	Will Stevens DVRPC
2.4.2	Web enabling VDOT's Roadway Network System GIS data	David Robison Open Roads Consulting, Inc. Chesapeake, VA	
2.4.3	NHPN Improvement Project	Mark Sarmiento FHWA Washington, DC	Greg Yarbrough Wilbur Smith Associates

CONCURRENT SESSION 3


10:30 AM TUESDAY, APRIL 7

3.1 GIS Applications				
Moderator:				
	3.1.1	ODOT GRIP adds VideoLog to the Web Enterprise	Jay Adams Oklahoma DOT Oklahoma City, OK	Jesse Jay GeoDecisions
	3.1.2	Colorado DOT's Web Application for Transportation Information System	Kim Hubble CDOT Denver, CO	
	3.1.3	Highway Route Log	Thomas L. Quattromani, Jr. Executive Office of Transportation Boston, MA	
3.2 Design and Planning				
Moderator:				
	3.2.1	GIS Applications and Integration on Transportation Planning and Design Projects	Jaime Crawford CH2M HILL Bellevue, WA	
	3.2.2	Improving Silver Dollar City Theme Park Area Traffic Flow with GIS	Josie Bock, GISP Great River Engineering of Springfield Springfield, MO	
	3.2.3	CADD and GIS Interoperability	Dan Meyer Bentley Systems Bennington, NE	
3.3 Enterprise GIS				
Moderator:				
	3.3.1	Bridging the Gap: Enterprise GIS Solutions for the Navajo Nation	Allen Ibaugh, GISP, AICP Data Transfer Solutions Orlando, FL	
	3.3.2	Mississippi DOT's Approach to Image Distribution and Management	Michael A. Cresap, P.E. MS DOT Jackson, MS	Bruce Aquila Intergraph Corp.
	3.3.3	GIS: A Tool For Managers	Wayna Adams AMEC Earth and Environmental Lexington, KY	
3.4 GPS				
Moderator:				
	3.4.1	NDGPS and HA-NDGPS - Tools for Today and tomorrow	James A. Arnold FHWA McLean, VA	Rudy Persaud FHWA
	3.4.2	Successful Implementation of A GPS Enabled Handheld-based Pavement Coring and Condition Evaluation System	Zhaohua Wang GA Institute of Technology Atlanta, GA	Yichang (James) Tsai Steve Pahnno GA IT & GA DOT
	3.4.3	Managing a Statewide Transportation Inventory	Brann Greager Jacobs Denver, CO	Joe Kyle Oklahoma DOT

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

CONCURRENT SESSION 4

1:30 PM TUESDAY, APRIL 7

4.1	IT		
	Moderator:		
4.1.1	Efficient Enterprise Operations: The Role of Geospatial Information Management Tools at The Pennsylvania Turnpike Commission	James E. Vitale, Ph.D. W.E.C. Engineers, Inc. Bridgeville, PA	
4.1.2	Tracking, Mapping, and Analysis of Operational Assets	John Pylant GeoDecisions Camp Hill, PA	
4.1.3	GIS/ITS Tools to Improve Mobility	Wayne Spaulding GeoDecisions Philadelphia, PA	
4.2	Safety		
	Moderator:		
4.2.1	A web-based Geographic Information System for Crash Data Analysis	Hojong Baik Missouri University Rolla, MO	Daxiao Liu Missouri University
4.2.2	Using GIS to prioritize Pedestrian Safety Improvements	Jason Hahn, PE Michael Baker Jr., Inc. Hamilton, NJ	
4.2.3	Locating Crashes Spatially from the National Park Service Servicewide Traffic Accident Reporting System (STARS) Database	Daniel W. Van Gilder FHWA – EFLHD Sterling, VA	
4.3	Data Sharing		
	Moderator:		
4.3.1	All Roads Do Not End at the State Line: Methodologies for Enabling Geodata Sharing Across Boundaries	Julie Chizmas Cambridge Systematics, Inc. Cambridge, MA	
4.3.2	Developing, Maintaining and Using Ohio's Location Based Response System	Ron Cramer Digital Data Technologies, Inc. Columbus, Ohio	
4.3.3	Integrating Digital Media into your GIS-T	Sarah Jackel Jacobs Denver, CO	Mr. Joe R. Kyle Jr. OK DOT
			
4.4	Maintenance Management		
	Moderator:		
4.4.1	Change Detection of regularly submitted provider data in order to maintain a current statewide Transportation Framework.	Michael Leierer WA DOT Olympia, WA	
4.4.2	MTO Northeast Corridor Assessment	Debbie Burns Stantec Consulting Ltd. Hamilton, Ontario	Paul Church Ministry of Transp. Ontario
4.4.3	Linking GIS and Transportation Applications: MMS and GIS	Simon Lewis AgileAssets Media, PA	

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

CONCURRENT SESSION 5

10:30 AM WEDNESDAY, APRIL 8

5.1	3-D GIS		
	Moderator:		
5.1.1	Peer Exchange on Application of 3 D Viewers and Visualization Technologies in Transportation	Ben Williams FHWA Resource Center Atlanta, GA	Mark Sarmiento FHWA
5.1.2	From a Hurricane Evacuation Map Series to a 3D Analytical Approach to Emergency Response by SHA Road Maintenance Crews	Mike Sheffer Maryland State Highway Administration Baltimore, MD	Erin Lesh
5.1.3	Incorporating 3D Into Transportation Solutions: The Role of Spatial Databases	Xavier Lopez Oracle Corp Nashua, NH	
5.2	Environmental		
	Moderator:		
5.2.1	GIS Data and Technology to Support Transportation and MPO Decision-Making and Planning using an Eco-Logical Approach within the Kansas City Region	Tom Gerend Mid-America Regional Council (MARC) & MPO Kansas City, MO	
5.2.2	GIS Data, Technology, and Models to Integrate Information and Improve Transportation Decision-Making within the Eco-Logical Framework for Oregon	Kimberly Majerus FHWA Resource Center Olympia Fields, IL	Jimmy Kagan Oregon State University
5.2.3	Environmental Software at the Colorado Dept. of Transportation (CDOT)	Lou Henefeld Colorado DOT Denver, CO	
5.3	Data Integration		
	Moderator:		
5.3.1	Displaying And Analyzing Automated Passenger Count Transit Data	Michael Grant TransLink Burnaby, BC	
5.3.2	South Carolina DOT's Approach to Integrating and Automating the Permit and Routing Process for Oversize/Overweight Vehicles	Bruce Aquila Intergraph Corp. Harvest, AL	
5.3.3	Interactive Detour Route Mapping (IDRuM): Linking GIS, Cartographic Design, and Web Development	Matthew West DVRPC Philadelphia, PA	
5.4	GIS in Decision Support		
	Moderator:		
5.4.1	Location Intelligence: Delivering Actionable Analysis for Decision Making	Xavier Lopez Oracle Corp Nashua, NH	
5.4.2	Business Models for Implementing Geospatial Technologies in Transportation Decision-Making	Carson Poe US DOT Volpe Center Cambridge, MA	Alisa Zlotoff
5.4.3	Improved Information and Decision Support for Safety Analysis	Jesse Jay GeoDecisions Bradenton, FL	Jim C. Willis MDOT

GIS-T Participant Registration Form

Please use our easy On-line Registration at:

<http://www.gis-t.org>, available on 1/2/2009

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 3/10/09	After 3/10/09	Total
GIS-T 2009 Symposium ¹	\$275	\$325	\$
GIS-T 2009 Workshops ²	\$150	\$175	\$
Student - Symposium ³ & Workshops	\$100	\$125	\$
One Day-Symposium ⁴ <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed	\$150	\$175	\$
AMOUNT ENCLOSED			\$

Note on Fees

1. Does not include workshop fees.
2. Workshop fee covers entire day (Sunday, April 5, 2009) and includes lunch. This is not a per-workshop fee. Please select choice of workshops below.
3. 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.
4. 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"/> Using the New FHWA HPMS Geospatial Data Model	<input type="checkbox"/> Hybrid GIS Solutions
<input type="checkbox"/> Developing Quality Assurance Programs for Large Area Geospatial Projects	<input type="checkbox"/> Climate Change for GIS-T Professionals
<input type="checkbox"/> Integrating Civil Engineering and GIS/IT Disciplines	<input type="checkbox"/> Integrating Civil Engineering and GIS/IT Disciplines Cont.
<input type="checkbox"/> Obtaining, Integrating, Maintaining and Sharing Local and State Transportation Data, using a centralized data store and automated processes	<input type="checkbox"/> Introduction to GIS web services

CHECK IN WILL BEGIN ON SATURDAY, APRIL 4th, FROM 3-6 PM FOR EARLY ARRIVALS and CONTINUES THROUGHOUT THE SYMPOSIUM

Please check one:

Polo Shirt XSmall Small Medium Large XLarge XXLarge

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

Send Registration & Check 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

Guest(s) Registration Form

Please use our easy On-line Registration at:

<http://www.gis-t.org>, available on 1/2/2009

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 the Tuesday day trip.

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 for Each Child	\$
	TOTAL AMOUNT *	\$

GRAND TOTAL ENCLOSED FOR ALL REGISTRANTS*	\$
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Send Registration & check 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

Please check one:

Polo Shirt XSmall Small Medium Large XLarge XXLarge

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.



Oklahoma City, Oklahoma – Lodging and Logistics

Hotel Accommodations

Primary Hotel:

The Renaissance Oklahoma City Convention Center Hotel by Marriott
10 North Broadway
Oklahoma City, Oklahoma 73102
405-228-8000
405-228-8080 fax

Hotel Information

Symposium hotel rates valid until 3/10/09:
\$124.00 + Tax for Single or Double
Be sure mention the group code: gisa

Secondary Hotel:

The Courtyard by Marriott
2 West Reno Avenue
Oklahoma City, Oklahoma 73102
405-232-2290
405-232-2202 fax

Hotel Information

Symposium hotel rates valid until 3/10/09:
\$119.00 + Tax for Single or Double

Airport Information

Will Rogers World Airport is approximately 16 miles from the hotel.

Shuttle Services

Oklahoma DOT will provide airport shuttle service to and from the Renaissance Hotel and Will Rogers World Airport. ODOT check in desk will be located in the baggage claim area. Please see the representative at the table and they will help coordinate your transportation.

GIS in Transportation Symposium 2009



GIS-T Symposium Affiliates

- American Society for Photogrammetry and Remote Sensing
- Association of Metropolitan Planning Organizations
- Highway Engineering Exchange Program
- National Association of Regional Councils
- Transportation Research Board
- U.S. Department of Transportation
 - Federal Highway Administration
 - Federal Transit Administration
 - Research & Innovative Technology Administration
- Urban and Regional Information Systems Association

GIS-T 2009

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