

# Final 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



For the most current news about this symposium, go to [www.GIS-T.org](http://www.GIS-T.org)

## AASHTO GIS-T

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### Moderator Chair

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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.

Check [www.gis-t.org](http://www.gis-t.org) for the most current information

## GIS-T 2009 PLANNING COMMITTEE

Debra Alfonso Michigan DOT	Dave Blackstone Ohio DOT
Mark Bradford BTS	Rose Braun Nebraska DOR
Teague Buchanan Georgia DOT	Van Colebank Tennessee DOT
Frank DeSendi Pennsylvania DOT	Eric Foster Missouri DOT
Dick Genrich Retiree	Connie Gurchiek GeoDecisions
Tammy Lang Colorado DOT	Ronda Lindsay Oklahoma DOT
James Mitchell Louisiana DOTD	Cindy Owings Maine DOT
Roger Petzold FHWA Liaison	Diane Pierzinski California DOT
James D. Ramsey AASHTO Rep.	Raquel Wright FRA
Greg Yarbrough Wilbur Smith	

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	<b>Morning Workshops</b> 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	Opening Session Welcome To Oklahoma City  Keynote Speaker Steve Gilliland	Panel Discussion Transportation for the Nation Gene Trobia Moderator	Registration Continental Breakfast	Technology Hall Open
9:00 AM				Panel Discussion The Enterprise LRS Eric Abrams Moderator	
10:00 AM		Break	Break	Break	
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	
12:00 PM	Lunch - Workshop Attendees Only	Lunch	Lunch	Box Lunch  Next Host State Presentation  Awards/Drawings	
1:00 PM	<b>Afternoon Workshops</b> 1. Hybrid GIS Solutions 2. Obtaining, Integrating, Maintaining and Sharing Local and State Transp. Data, using a cent. Data store and auto. Poc. 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. ITS 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!	
2:00 PM					Break
3:00 PM		Session 2 1. Google/Virtual Earth 2. Disaster Planning 3. Data Warehouse 4. Developing Road Networks	Emerging Issues GIS and Visualization Jim Mitchell Moderator		
4:00 PM		Break	Free Time		
5:00 PM	Technology Hall Reception	GIS Gallery	Tuesday Night Social   National Cowboy & Western Heritage Museum		
6:00 PM	Technology Hall Reception				
7:00 PM					
8:00 PM					
8:30 PM					

## GIS-T 2009 Workshops – April 5

7:00 AM - 8:00 AM

## Registration

8:00 AM - 12:00 PM

Workshop Title	Presenter	Room
Using the New FHWA HPMS Geospatial Data Model	Ron Vaughn, FHWA Office of Highway Policy Information Ben Williams, FHWA Resource Center	<b>16</b>
Developing Quality Assurance Programs for Large Area Geospatial Projects	Drew Meren, Infotech Enterprises America, Inc. Gerhard Sehnalek, Infotech Enterprises America, Inc	<b>17</b>
 Integrating Civil Engineering and GIS/IT Disciplines	Jacob Merriman P.E. First Energy Corp. Jeff Siegel, HNTB	<b>18</b>

12:00 PM - 1:00 PM

## Lunch

1:00 PM - 5:00 PM

Workshop Title	Presenter	Room
Hybrid GIS Solutions	Casey Donovan, IS Consulting	<b>16</b>
Obtaining, Integrating, Maintaining and Sharing Local and State Transportation Data, using a Centralized Data Store and Automated Processes	Michael Leierer, Washington DOT Russel deGrove	<b>17</b>
<b>Continuation of URISA Workshop</b> [Integrating Civil Engineering and GIS/IT Disciplines]	Jacob Merriman P.E. First Energy Corp. Jeff Siegel, HNTB	<b>18</b>
Introduction to GIS Web Services	Frank Winters, New York State Office of Cyber Security & Critical Infrastructure Coordination	<b>19</b>

## GIS-T 2009 PROGRAM April 6 – April 8

### **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.

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

**Monday—12 NOON to 8:30 PM**

**Tuesday—7:00 AM to 5:00 PM**

**Wednesday—7:30 AM to 12 NOON**

## GENERAL SESSIONS

### **Opening Session / KEYNOTE SPEAKER – BALLROOM D&E**

**(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 – ROOM 16**

**(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 – PREFUNCTION C**

**(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 States 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.

## **SPOUSE TOURS**

### **Oklahoma City National Memorial (Monday 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.

### **Oklahoma's Adventure District (Tuesday 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 DISCUSSION – BALLROOM D&E**  
**Transportation For The Nation**  
**(Tuesday 8:00 AM to 10:00 AM)**

**Moderator: Gene Trobia – AZ State Cartographer**

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*: Gene Trobia NSGIC representative - "For The Nation" informational summary (e.g. Imagery For The Nation);  
*USDOT*: Ron Vaughn - HPMS Geospatial Requirements; *MD State Highway Administration*: Mike Sheffer - Success factors from a proven regional transportation collaboration effort; *USDOT GIO*: Steve Lewis - Description of the Strategic Plan development effort for TFTN

**GIS and Visualization - Where Do We Draw the Line?**  
**(Tuesday 3:30 PM to 5:00 PM)**

**Moderator: Jim Mitchell - IT GIS Manager Louisiana Dept. of Transportation & Development**

This panel will explore the difference and similarity between GIS and visualization technologies. Vendors, consultants, and DOTs will discuss where these technologies are headed and best practices in deploying these solutions.

**Panel 1: Where Is the Technology and Where Will It Take Us?**

*ESRI* - Terry Bills; *Google* - Michael Evanoff; *Intergraph* - Bruce Aquila; *Microsoft* - Chitra Subramaniam

**Panel 2: Consultants and DOTs - Best Practices and Success Stories**

*CalTrans* - Bill Naddy; *GeoDecisions* - Fred Riethmiller; *Georgia DOT* - Teague Buchanan; *Kansas DOT* - Mary Beth Pfrang; *Michael Baker* - Bud Luo; *New Mexico DOT* - Lee Jensen; *Oklahoma DOT* - Jay Adams

**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**  
**(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 5:30 pm to 10:00 pm 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 8:00 pm. 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.

**SYMPOSIUM WRAP-UP - BALLROOM D&E**  
**(WEDNESDAY 3:00 PM TO 5:00 PM)**

Come join us for a debriefing of this year's symposium and planning for the next

**Refreshments Provided!**

***ANNOUNCING THE LOCATION  
AND DATE OF***


**THE TWENTY-THIRD 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**



# CONCURRENT SESSION 1

1:30 PM MONDAY, APRIL 6

<b>1.1 GIS Web Tools</b>		<b>Ballroom D</b>	
Moderator: Richard Rybka, Topcon Positioning Systems			
1.1.1	Development and Implementation of a Web-Based Visual Transportation Improvement Program (TIP) Tool	Allen Ibaugh, GISP, AICP Data Transfer Solutions Orlando, FL	
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
<b>1.2 Student Paper Contest</b>		<b>Room 16</b>	
Moderator: Raquel Wright, USDOT/FRA			
1.2.1	Alternative Impedances for Shortest Path Network Analysis for Cycling	Mike Martello Portland State University, Oregon	
1.2.2	Utilizing GIS to Assess Built Environment Investment Impacts on Travel Behavior, Public Health and Air Quality	Sasanka Gandavarapu University of Wisconsin, Madison	
<b>1.3 Data Collection</b>		<b>Ballroom E</b>	
Moderator: Jesse Jay, GeoDecisions			
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 GISP Transmap Corporation Columbus, OH	
1.3.3	From Paper to Tennessee DOT's Automated Inventory	John Hicks TDOT Nashville, TN	Jessica Kubik Navstar Mapping Corporation
<b>1.4 LiDAR</b>		<b>Room 17</b>	
Moderator: Jamie Crawford, CH2M HILL			
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	Mobile LIDAR Mapping is the Next Generation of Field Data Capture for GIS	Tim Gaulden WHPacific Albuquerque, NM	

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

**CONCURRENT SESSION 2**

3:30 PM MONDAY, APRIL 6

<b>2.1</b>	<b>Google/Virtual Earth Applications</b>		<b>Ballroom D</b>
	Moderator: Joe Bima, GeoCue		
 2.1.1	Developing a Custom GIS Desktop Application to Support Administration of a Statewide Railroad Crossing Inventory.	Brett Kunde Jacobs Denver, CO	Johnson Bridgewater ODOT Rail Div.
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
<b>2.2</b>	<b>Disaster Planning and Response</b>		<b>Ballroom E</b>
	Moderator: Andrew Meren, Infotech Enterprises America Inc.		
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)	Judy Workman C.E.M FEMA Colorado	
2.2.3	Mississippi crash data cleansing & Road Network Integration	Babu Krishnasamy GISbiz Inc. Nashville, TN	Matt Smith Smart Data Strategies
<b>2.3</b>	<b>Data Warehouse</b>		<b>Room 16</b>
	Moderator: Eric Ebers, InfoUSA		
2.3.1	Safety Data Mart - An Excel 2007/GIS Integration	Jim Conlon GIS Solutions, Inc. Springfield, IL	Dan Pratt IDOT
2.3.2	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
2.3.3	KDOT's Spatially Enabled Data Warehouse	Paul Bayless KDOT Topeka, KS	William (Bill) G. Schuman GeoDecisions
<b>2.4</b>	<b>Developing Road Networks</b>		<b>Room 17</b>
	Moderator: Bruce Spear, Cambridge Systematics, Inc.		
2.4.1	DVRPC's Dynamic Conflation Tool	William (Bill) G. Schuman GeoDecisions Camp Hill, PA	
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




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# CONCURRENT SESSION 3

10:30 AM TUESDAY, APRIL 7

<b>3.1 GIS Applications</b>		<b>Ballroom D</b>	
Moderator: Michael Sheffer, MD State Highway Administration			
	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	Allen Ibaugh GIS,AIP Data Transfer Solutions
3.1.3	Highway Route Log	Thomas L. Quattromani, Jr. Executive Office of Transportation Boston, MA	
<b>3.2 Design and Planning</b>		<b>Room 16</b>	
Moderator: Yushuang Zhou, Cambridge Systematics, Inc.			
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	Mohammad Masud Bentley Systems Bennington, NE	
<b>3.3 Enterprise GIS</b>		<b>Ballroom E</b>	
Moderator: Brad Nesom, Meshek & Associates, PLC			
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	Ray Barksdale MS DOT Jackson, MS	Bruce Aquila Intergraph Corp.
3.3.3	GIS: A Tool For Managers	Wayna Adams AMEC Earth and Environmental Lexington, KY	
<b>3.4 GPS</b>		<b>Room 17</b>	
Moderator: Eric McRae, UGA: Carl Vinson Institute of Government			
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 Pahno GA IT & GA DOT
	3.4.3 Managing a Statewide Transportation Inventory	Brann Greager Jacobs Denver, CO	Joe Kyle Oklahoma DOT

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# CONCURRENT SESSION 4

1:30 PM TUESDAY, APRIL 7

<b>4.1 ITS</b>		<b>Room 16</b>	
Moderator: James Brown, Intergraph			
4.1.1	Evolution in Planning: Using Information Technology to Enhance the Process	Jeff Terstriep LEAMgroup, Inc. Champaign, IL	Laura Kinsell-Baer LEAMgroup, Inc.
4.1.2	Tracking, Mapping, and Analysis of Operational Assets	Tony Pietropola GeoDecisions Camp Hill, PA	
4.1.3	GIS/ITS Tools to Improve Mobility	Connie Gurchiek GeoDecisions Philadelphia, PA	
<b>4.2 Safety</b>		<b>Ballroom D</b>	
Moderator: Mitch Stephens, Rolta International, Inc.			
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	Kirk Weaver, PMP, GISP 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	
<b>4.3 Data Sharing</b>		<b>Ballroom E</b>	
Moderator: Don Kiel, GeoDecisions			
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
<b>4.4 Maintenance Management</b>		<b>Room 17</b>	
Moderator: Bruce Aquila, Intergraph Corporation			
4.4.1	GIS for Tribal IRR Program	Tim Gaulden WHPacific Albuquerque, NM	
4.4.2	MTO Northeast Corridor Assessment	Richard Garcia Stantec Consulting Ltd. Hamilton, Ontario	Paul Church Ministry of Transp. Ontario
4.4.3	Urbanization of Rural Cross Sections Within Urban Boundaries	Richard Garcia Stantec Consulting Ltd. Hamilton, Ontario	



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**CONCURRENT SESSION 5**

10:30 AM WEDNESDAY, APRIL 8

<b>5.1</b>	<b>3-D GIS</b>		<b>Ballroom D</b>
	Moderator: Matthew Schiemer, GeoDecisions		
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 SHA Baltimore, MD	
5.1.3	Incorporating 3D Into Transportation Solutions: The Role of Spatial Databases	Xavier Lopez Oracle Corp Nashua, NH	
<b>5.2</b>	<b>Environmental</b>		<b>Room 16</b>
	Moderator: Bill Schuman, GeoDecisions		
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	Kimberly Majerus FHWA Resource Center Olympia Fields, IL	
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	
5.2.3	Environmental Software at the Colorado Dept. of Transportation (CDOT)	Lou Henefeld Colorado DOT Denver, CO	
<b>5.3</b>	<b>Data Integration</b>		<b>Room 17</b>
	Moderator: Sherry Coatney, Intergraph Corporation		
5.3.1	Roadway Information Management System (I-RIMS)	Phil Hardy Intergraph Corp.	
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	
<b>5.4</b>	<b>GIS in Decision Support</b>		<b>Ballroom E</b>
	Moderator: Richard Garcia, Stantec Consulting Ltd.		
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	
5.4.3	Improved Information and Decision Support for Safety Analysis	Jesse Jay GeoDecisions Bradenton, FL	

# NOTES

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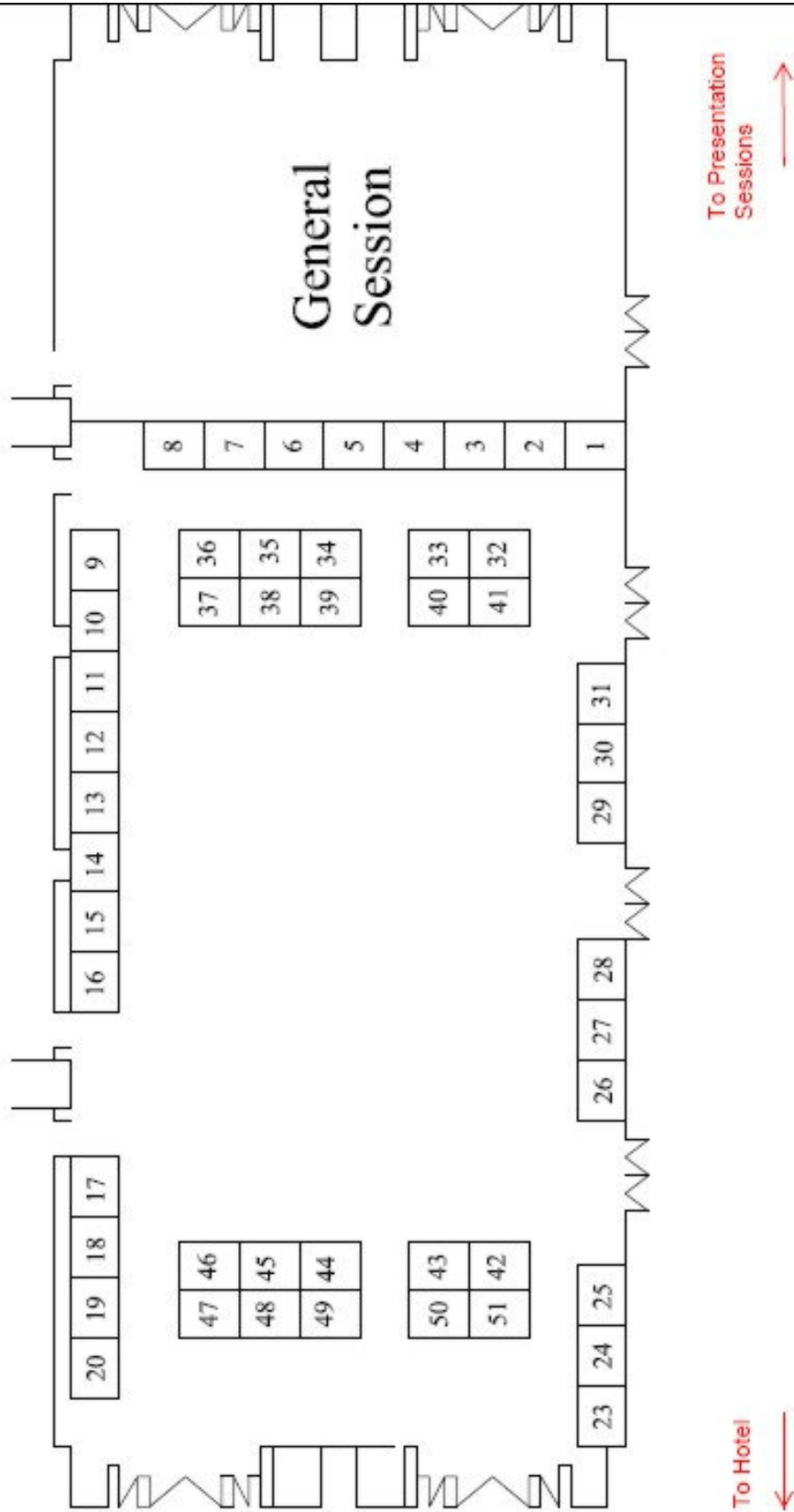
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# TECHNOLOGY HALL EXHIBIT AREA

AASHTO GIS-T 2009 Symposium  
Renaissance Oklahoma City Convention Center Hotel  
Oklahoma City, Oklahoma  
April 5 - 8, 2009





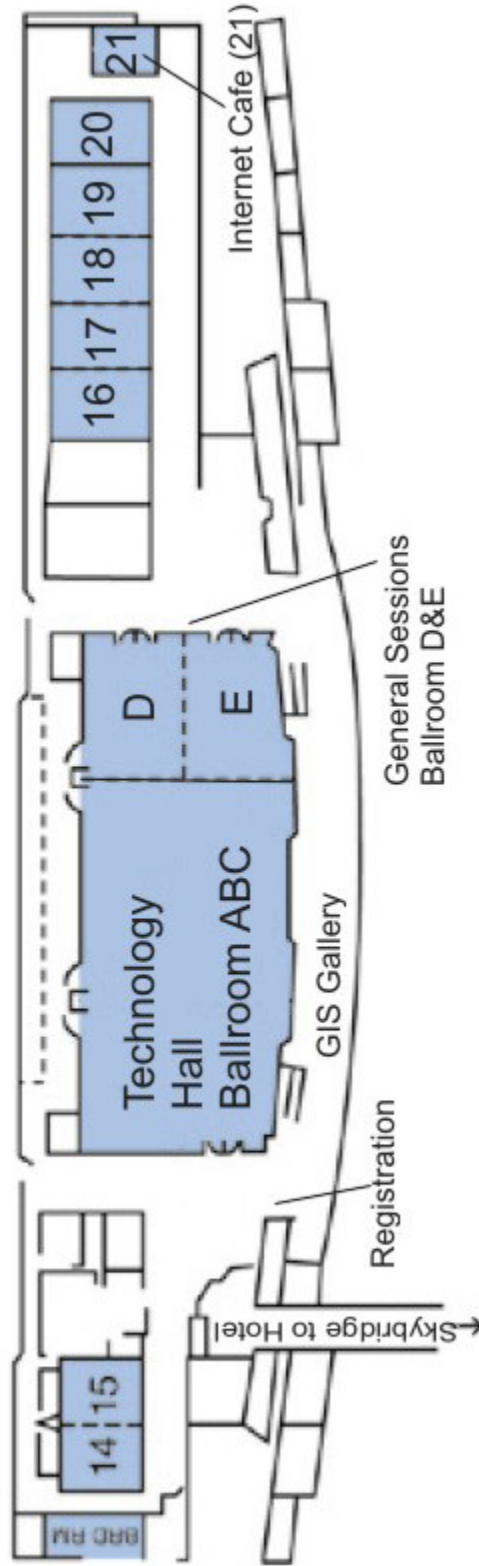
## GIS-T 2009 EXHIBITORS

Company Name	Website	Booth
3001, Inc.	<a href="http://www.3001inc.com">www.3001inc.com</a>	38
AgileAssets Inc.	<a href="http://www.agileassets.com">www.agileassets.com</a>	44
Aerial Data Service, Inc.	<a href="http://www.aerialdata.com">www.aerialdata.com</a>	4
Applied Imagery	<a href="http://www.appliedimagery.com">www.appliedimagery.com</a>	34
Bentley Systems	<a href="http://www.bentley.com">www.bentley.com</a>	6
Cambridge Systematics, Inc.	<a href="http://www.camsys.com">www.camsys.com</a>	26
Data Transfer Solutions	<a href="http://www.edats.com">www.edats.com</a>	13
Delasoft Inc.	<a href="http://www.delasoft.com">www.delasoft.com</a>	5
Downtown Design Services	<a href="http://www.downtown-design.com">www.downtown-design.com</a>	27
Enterprise Information Solutions	<a href="http://www.enterinfo.com">www.enterinfo.com</a>	35
ERDAS	<a href="http://www.erdas.com">www.erdas.com</a>	28
ESRI	<a href="http://www.esri.com">www.esri.com</a>	32, 33, 40, 41
Federal Highway Admin.	<a href="http://www.fhwa.dot.gov">www.fhwa.dot.gov</a>	30
Fugro - Roadware Inc.	<a href="http://www.roadware.com">www.roadware.com</a>	31
Geo-3D	<a href="http://www.geo-3d.com">www.geo-3d.com</a>	39
GeoDecisions	<a href="http://www.geodecisions.com">www.geodecisions.com</a>	15-16
Hewlett Packard	<a href="http://www.hp.com">www.hp.com</a>	10
InfoUSA	<a href="http://www.infousa.com">www.infousa.com</a>	14
Intergraph	<a href="http://www.intergraph.com">www.intergraph.com</a>	42, 43, 50, 51
Latitude Geographics	<a href="http://www.latitudegeo.com">www.latitudegeo.com</a>	17
MapText, Inc.	<a href="http://www.maptext.com">www.maptext.com</a>	36
Michael Baker Jr., Inc.	<a href="http://www.mbakercorp.com">www.mbakercorp.com</a>	29
Microsoft Virtual Earth	<a href="http://www.microsoft.com">www.microsoft.com</a>	25
Onix Networking Corp.	<a href="http://www.onixnet.com">www.onixnet.com</a>	37
Pinnacle Mapping Tech.	<a href="http://www.pinnaclemapping.com">www.pinnaclemapping.com</a>	12
Safe Software Inc.	<a href="http://www.safe.com">www.safe.com</a>	45
Smart Data Strategies	<a href="http://www.sds-inc.com">www.sds-inc.com</a>	18
Tele Atlas	<a href="http://www.teleatlas.com">www.teleatlas.com</a>	2
Vieux & Associates, Inc.	<a href="http://www.vieuxinc.com">www.vieuxinc.com</a>	3
WHPacific	<a href="http://www.whpacific.com">www.whpacific.com</a>	46
Wilbur Smith Associates	<a href="http://www.wilbursmith.com">www.wilbursmith.com</a>	11

*Vendors Registered as of March 17, 2009*

# CONFERENCE FLOORPLAN

## Cox Business Services Convention Center — Second Level



# GIS FOR TRANSPORTATION SYMPOSIUM 2009



1987	Tempe, Arizona
1989	Orlando, Florida
1990	San Antonio, Texas
1991	Orlando, Florida
1992	Portland, Oregon
1993	Albuquerque, New Mexico
1994	Norfolk, Virginia
1995	Sparks, Nevada
1996	Kansas City, Missouri
1997	Greensboro, North Carolina
1998	Salt Lake City, Utah
1999	San Diego, California
2000	Minneapolis, Minnesota
2001	Arlington, Virginia
2002	Atlanta, Georgia
2003	Colorado Springs, Colorado
2004	Rapid City, South Dakota
2005	Lincoln, Nebraska
2006	Columbus, Ohio
2007	Nashville, Tennessee
2008	Houston, Texas
2009	Oklahoma City, OK



## GIS FOR 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
  - Federal Railroad Administration
- Urban and Regional Information Systems Association