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 12 - 14, 2010

Workshops – April 11, 2010

Embassy Suites Hotel
Charleston, West Virginia
Sponsored by:

American Association of State Highway and Transportation Officials

AASHTO
THE VOICE OF TRANSPORTATION

For the most current news about this Symposium, click on **www.GIS-T.org**

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The twenty-third annual GIS-T Symposium - *GIS-T 2010 Mountains of Opportunity* – 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 11, 2010, and three full days of conference activity, April 12-14, 2010.

Check www.gis-t.org for the most current information

GIS-T 2010 PLANNING COMMITTEE

Debra Alfonso Michigan DOT	Dave Blackstone Ohio DOT
Mark Bradford USDOT/BTS	Rose Braun Nebraska DOR
Teague Buchanan Georgia DOT	Van Colebank Tennessee DOT
Frank DeSendi Pennsylvania DOT	Michelle Frame West Virginia DOT
Tammy Lang Colorado DOT	James Mitchell Louisiana DOTD
Daris Ormesher South Dakota DOT	Roger Petzold USDOT/FHWA Liaison
Diane Pierzinski Retiree	Jim Ramsey AASHTO Liaison
Raquel Wright USDOT/FRA	Greg Yarbrough Wilbur Smith

General Schedule

	Sunday April 11, 2010	Monday April 12, 2010	Tuesday April 13, 2010	Wednesday April 14, 2010
7:00 AM	**Registration** Continental Breakfast	**Registration** Continental Breakfast	**Registration** Continental Breakfast	**(Sleep In!!!)**
8:00 AM	**Morning Workshops** 1. GIS Return on Investment 2. Introduction to Agile: Project Management & Development 3. Using LiDAR Project Data for Transportation Applications	**Opening Session** **Welcome To West Virginia** **Keynote Speaker** **Carl "Chuck" Kinder, Jr.**	**Panel Discussion** **How Transportation for the Nation Benefits me?**	**Registration** Continental Breakfast
9:00 AM				**Session 5** **1. Developments in Transportation GIS** **2. National GIS Data** **3. GIS Tools II** **4. Routing**
10:00 AM		**Break**	**Break**	**Break**
11:00 AM		**State Summary & Roll Call of States**	**Session 3** **1. Enterprise GIS** **2. Data Management** **3. GIS in Traffic** **4. GIS in Resource Management**	**Session 6** **1. Safety** **2. Intergrating Legacy Systems** **3. Data Collection** **4. Local GIS**
12:00 PM	**Lunch** - Workshop Attendees Only	**Lunch**	**Lunch**	**Box Lunch** **Next Host State Presentation** **Awards/Drawings**
1:00 PM	**Afternoon Workshops** 4.Census 2010 / New Urbanized Boundaries 5. Iowa's Multi-level Linear Referencing System and Response to Minnesota's LRS RFI 6. Asset Management: Planning, Strategy, and Implementation			
2:00 PM		**Session 1** **1. LRS** **2. ARRA** **3. Web Tools I** **4. Asset Management**	**Session 4** **1. Enterprise Data** **2. Transportation Networks** **3. Web Tools II** **4. GIS in Planning**	**Symposium Wrap-Up** Come join us for a debriefing of this year's symposium and planning for the next year. **Refreshments Provided**!
3:00 PM		**Break**	**Break**	
4:00 PM		**Session 2** **1. Student Paper** **2. HPMS** **3. GIS Tools I** **4. Mobile GIS**	**Emerging Issues Forum**	
5:00 PM	**Break**	**GIS Gallery**	**Free Time**	
6:00 PM	**Technology Hall Reception**		**Tuesday Night Social**	
7:00 PM		**Technology Hall Reception**	**Clay Center for the Arts and Sciences**	
8:00 PM				
8:30 PM				

Technology Hall Open — Sunday 5:00 PM – 8:30 PM; Monday 3:00 PM – 8:30 PM; Tuesday 12:00 PM – 8:30 PM; Wednesday 8:00 AM – 12:00 PM

GIS-T 2010 WORKSHOPS – SUNDAY, APRIL 11

7:00 AM - 8:00 AM		
Workshop Registration		
8:00 AM - 12:00 PM		
Workshop Title	**Presenter**	**Room**
GIS Return on Investment	Dr. Sergei Andronikov, George Mason Univ.	Salon C
Introduction to Agile: Project Management & Development	Dave Bouwman and Brian Noyle, Data Transfer Solutions	Salon A
Using LiDAR Project Data for Transportation Applications	Chris Markel Penn Dept. of Natural Resources, PAMAP Program	Salon B
12:00 PM - 1:00 PM		
Lunch (Workshop Attendees only)		
1:00 PM - 5:00 PM		
Workshop Title	**Presenter**	**Room**
Census 2010 / New Urbanized Boundaries	Ed Christopher, FHWA Resource Center Michael Ratcliffe, Chief, Geocartographic Products and Criteria Geography, Division U.S. Census Bureau	Salon A
Iowa's Multi-level Linear Referencing System and Response to Minnesota's LRS RFI	Eric Abrams, GIS Coordinator, Iowa DOT Steve Kadolph, LRS Tech. Expert, Iowa DOT Ryan Wyle, GIS Quality Admin. Iowa DOT Matthew Koukol and Thomas Martin Minn. DOT	Salon C
URISA Asset Management: Planning, Strategy, and Implementation	Jason Amadori and Allen Ibaugh, Data Transfer Solutions	Salon B

SUNDAY, APRIL 11

TECHNOLOGY RECEPTION – TECHNOLOGY EXHIBITS OPEN – SALON D AND E

(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 5:30 PM

WEDNESDAY—7:30 AM TO 12 NOON

GENERAL SESSIONS

MONDAY, APRIL 12

Opening Session / KEYNOTE SPEAKER – SALON A, B AND C

(8:00 AM TO 10:00 AM)

Carl "Chuck" Kinder, Jr.

Chuck Kinder is an honorable recipient of the 2004 **"Distinguished West Virginian Award"** by Governor Bob Wise. He is a graduate of West Virginia University with a bachelor's degree in psychology and a master's degree in counseling. During college, Chuck was the kicker/punter for the West Virginia University Mountaineer Football team. He played in 31 games, scored more than 100 points in his career, and ranked among the top ten punters nationally. He is the only football player in NCAA history to wear the uniform number 100.

In January 1995, Chuck retired from a twenty-four year career in the United States Army with the rank of Lieutenant Colonel. During this period, he served as a personnel psychologist and more than a decade as a trainer for middle management Army officers. He graduated from the United States Army Command and General Staff College and served as instructor and adjunct faculty until his retirement. Chuck was the General Manager of the Charleston Civic Center and Auditorium for six years, where he managed a budget of $1,500,000 and a full-time staff of 17. In 2006, Chuck retired as the Director of Training for the West Virginia State Auditor's Office.

STATE SUMMARY AND ROLL CALL OF STATES – SALON A, B AND C

(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 #230

(3:30 PM TO 5:00 PM)

This year GIS-T presents the third 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 – VESTIBULE OUTSIDE SALON A & B

(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

Blenko Glass Company Tour

(8:00 AM TO 12:00 PM)

(Meet by the hotel registration desk before boarding the bus)

"Exquisite color, skilled craftsmen, and creative designs have made Blenko famous in the ancient craft of hand-blown glass. Over the years, talented designers have developed contemporary new designs for our skilled artisans, who have learned the difficult techniques of glass blowing through many years of practice." Quote taken from www.blenkoglass.com Blenko Glass Company is one of the last remaining mouth blown glass factories in the US. This family owned and operated company has been in business since 1893. While visiting the Blenko Factory you will be given a guided tour which includes a brief history of the company, notable installations, fun facts and a descriptive tour of the production process. After your tour, you will have a chance to shop at our factory outlet. Visit http://www.blenkoglass.com/ for more information.

The tour will gather in the hotel lobby on Monday at 7:45 AM before boarding the bus for the Blenko Glass Company. Upon your return to Charleston you will have the opportunity to enjoy shopping and lunch, on your own, at the Charleston Town Center Mall. Visit http://www.charlestontowncenter.com/ for store and restaurant information.

TUESDAY, APRIL 13

PANEL DISCUSSION – SALON A, B AND C

How Transportation for the Nation Benefits Me

(8:00 AM TO 10:00 AM)

Moderator: Patricia Solano and Rich Grady

As part of a NSGIC initiative, the US DOT will begin to meet its responsibility under OMB Circular A-16 to advance strategic planning for the realization of a national framework for Transportation for the Nation (TFTN). The TFTN sessions at this conference are a step in a TFTN strategic planning process designed to evaluate the opportunities, interests, best practices, institutional constrains, resource requirements, and benefits of TFTN. The result of this evaluation will address key questions and assumptions about TFTN and will develop a strategic vision for TFTN.

TFTN refers to the goal of coordinating and developing a nationally significant transportation dataset, with particular emphasis on road centerlines. Some of the TFTN challenges are: a) Overlapping transportation dataset that vary in scale, coverage, formats, documentation, geometry and attributes. b) Transportation data developed and maintained by a variety of public and private entities with diverse objectives, requirements, capacities and resources. c) Public and private sectors further aggregating, integrating, attributing, and converting transportation data to serve distinct purposes (routing, planning, performance monitoring, emergency response, on-board navigation.)

Building on the general agreement that TFTN is an important concept and framework data for the nation, this panel discussion will focus on the specific ways in which TFTN is potentially important to various levels of government and the private sector. This panel will introduce the different points of view of these stakeholder groups, introducing the key opportunities, benefits and constraints affecting TFTN from each panelist's perspective.

Panel is scheduled to include representatives from a variety of points of view central to the issue of TFTN - federal transportation agencies, other federal agencies with extensive road networks, state DOT, regional/tribal/county representatives, and the private sector. The panel discussion will be followed by facilitated audience discussion.

Panelists include:

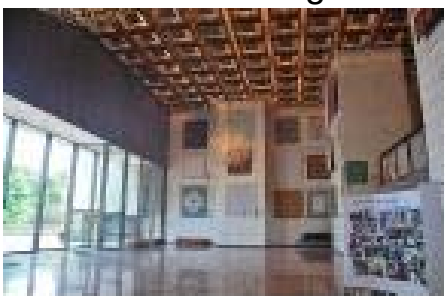
Dan Widner, Coordinator, Virginia Geographic Information Network Integrated Services Program, and Steve Lewis, Geographic Information Officer, United States Department of Transportation and other state representatives

SPOUSE TOURS

Capitol and Museum Tour

(10:00 AM TO 2:00 PM)

(Meet by the hotel registration desk before boarding the bus)



Tour the State Capitol and West Virginia State Museum in this excursion that will allow participants to view and enjoy West Virginia history and culture. The tour will gather in the hotel lobby at 9:45 AM prior to boarding the bus. The tour will include a visit to the West Virginia History Museum and a guided walk through the State Capitol grounds. Lunch will be provided at the Capitol Food Court at 12:00 pm.

At the State Capitol: The West Virginia State Capitol building was dedicated by Governor William G. Conley on June 20, 1932. The buff Indiana limestone exterior and the magnificent 293-foot gold dome, that tops the capitol building, overlook the beautiful Kanawha River. The expansive, tree-shaded grounds include several statues, including Abraham Lincoln on the front plaza and Stonewall Jackson, a native of the state. The Lincoln statue depicts the President walking at midnight, head bowed, wearing a robe over his clothes.

The Capitol Tour starts in the rotunda, on the ground floor; you will hear a brief history and description of the building, including the cost and architectural information. You will proceed to the first floor, or the legislative floor to tour the House and the Senate Chambers. You then will go back to the ground floor and proceed down the hallway with Governor's Portraits and then to the small rotunda of the West Wing. You will see former WV Capitols and hear a brief description of them. The tour ends in the Governor's Reception Room.

At the West Virginia State Museum: The West Virginia Division of Culture and History opened in 1976 to showcase West Virginia's artistic, cultural and historical heritage. Located inside the Cultural Center is the West Virginia State Museum. The history of the state is told, in the newly-renovated 24,000 square-foot museum, through modern educational exhibits that appeals to visitors of all ages. You walk through a chronological journey of West Virginia history, which uses themed settings to highlight pivotal moments. Special effects, narration, surround sound, and dynamic theater lighting provides visitors with the experience of what it was like to be a West Virginian throughout the state's history.

In addition, discovery rooms will offer visitors the opportunity to learn more about the history of West Virginia. The discovery rooms feature artifacts, works of art, stories, music, and film clips. Computer stations provide facts about additional topics related to the show path and discovery rooms. Visit www.wvculture.org for more information.

EMERGING ISSUES FORUM
SALON A, B AND C
(3:30 PM TO 5:00 PM)

This forum will bring together participants from federal and state government to discuss strategies of collecting, collating, and "pushing up" transportation GIS data from local, through state, and to the federal level. State transportation agencies are at the crossroads of this process as they already have well-developed GIS programs, as well as a number of programs that already interact with local and regional levels of government. At the federal-level USDOT, DHS, and USGS all have programs developing national standards for GIS data. Questions for discussion will include:

> Why do we all need to be on the same map? What resources are available to assist local government to develop GIS and GIS data? Who is already successfully moving data from local to federal levels and how are they doing it?

Panelists include: Tom Roff (FHWA), Louis Effa (MARAD), Raquel Wright (FRA), Steve Lewis (RITA/BTS)
Please take a few minutes to identify areas of concern that you have, and e-mail them to Jim Mitchell. Thank you for your participation.

TUESDAY NIGHT SOCIAL
Clay Center for the Arts and Sciences
(5:30 PM TO 10:00 PM)
(Meet by the hotel registration desk before boarding the bus)

The Clay Center is Charleston's own premier special event location. Tuesday's social event will take place in the Benedum Grand Lobby, distinguished by a glimmering, three-story wall of windows, elegant surfaces of granite, steel and West Virginia cherry veneer, coupled with the artistry of the terrazzo flooring and a sweeping grand staircase.

We will depart from the hotel at 5:30 pm and arrive at the Clay Center at approximately 5:45 pm. A "Country Roads" themed dinner will be served in the Grand Lobby at approximately 6:30 pm.

During dinner, you will enjoy the sounds of a native Appalachian style band. After dinner will be an extraordinary play performance. **Coal Camp Memories** is a one-act play, written and performed by Karen Vuranch. Karen researched life in West Virginia coal fields by talking to those who lived in the coal camps. Vuranch ages in front of the audience, growing from an exuberant ten-year-old to a demure teenager, then a young wife, and finally an old woman wise with years. During scene changes, Julie Adams plays traditional Appalachian music. **Coal Camp Memories** is a gentle and poignant story that recreates an era while it delights audiences of all ages.

After the social, the bus will depart from the Clay Center beginning at 9:00 pm.

WEDNESDAY, APRIL 14

SYMPOSIUM WRAP-UP – SALON C

(1:30 PM TO 3:30 PM)

Come join us for a debriefing of this year's symposium and planning for the next.
GIS-T Task Force Chair: Jay Adams

ANNOUNCING THE LOCATION AND DATE OF

THE TWENTY-FOURTH ANNUAL GEOSPATIAL INFORMATION SYSTEMS FOR TRANSPORTATION SYMPOSIUM

CONCURRENT SESSION 1 1:30 PM MONDAY, APRIL 12

1.1	**LRS**		**Room 230**
	Moderator: Jason Watts		
1.1.1	Unifying the Colorado DOT (CDOT) Linear Referencing System	Lou Henefeld Colorado DOT Denver, CO	
1.1.2	Integration of WV DOT Road Data and Addressing Data	Kevin Kuhn WV GIS Technical Center Morgantown, WV	Sanghong Yoo Rahall Transportation Institute
1.1.3	Putting the LBRS and other GIS datasets to Work for Traffic Modeling Networks	Sam Granato Ohio DOT Columbus, OH	Carrie Whitaker Erie County Dept. of Planning and Zoning
1.2	**ARRA**		**Salon A**
	Moderator: Albert Sarvis		
1.2.1	Mapping the USDOT ARRA Projects	Stephen M. Lewis USDOT Washington, DC	
1.2.2	ORSTATS - Oregon's ARRA story	Ed Arabas State of Oregon Salem, OR	
1.2.3	Using Web GIS to Track Government Spending and Performance	Eric Floss ESRI Alpharetta, GA	
1.3	**Web Tools I**		**Salon C**
	Moderator: Jeffrey Volpe		
1.3.1	Geotechnical GIS Website	Pallavi Bhandari Louisiana Transportation Research Center Baton Rouge, LA	
1.3.2	Web based Capital Improvement Application for Public Transit	Martin Catala Center for Urban Transportation Research Tampa, FL	
1.3.3	Iowa DOT Service Layer	Eric Abrams Iowa DOT Ames, IA	
1.4	**Asset Management**		**Salon B**
	Moderator: Katie Zimmerman		
	Geospatial Information Technologies for Asset Management Peer Exchange Katie Zimmerman will summarize key points and findings of the peer exchange during this session. Representatives from California, Virginia, and Washington State will also present specific appropriate examples of their efforts in applying geospatial technologies to asset management.	Katie Zimmerman Applied Pavement Technology Michael Miles Deputy Director Maintenance and Operations CalTrans Jeff Price Assistant Director of Operations Planning Virginia DOT Alan Smith Lead GIS Architect/GIS Applications Development Manager Washington DOT	

The symbol indicates a session from West Virginia, the Host State.

CONCURRENT SESSION 2

3:30 PM MONDAY, APRIL 12

2.1	**Student Paper**		**Room 230**
	Moderator: Raquel Wright		
2.1.1	Estimating Trip Diversion by Using Impedance in the Flooding Region	EunSu Lee PhD North Dakota State University (NDSU) Transportation and Logistics Program	
2.1.2	GIS Network Analysis for Finding the Potential Metro Rail Ridership by Access Modes in Los Angeles County	Bin Mo (Owen) Graduate Program Department of Geography and Urban Analysis California State University, Los Angeles	
2.2	**HPMS**		**Salon A**
	Moderator: John Farley		
2.2.1	HPMS and the Dualing Network	Tom Roff USDOT / FHWA Washington, DC	
2.2.2	Finally: a Way to Create, Standardize and Locally Maintain a Statewide Seamless GIS Transportation and E9-1-1 Repository	Ron Cramer Digital Data Tech, Inc. Columbus, OH	Bruce Autremont Digital Data Technologies, Inc.
2.2.3	Ideas to Help with the HPMS Submittal	Don Kiel GeoDecisions State College, PA	William (Bill) G. Schuman GeoDecisions
2.3	**GIS Tools I**		**Salon C**
	Moderator: Jesse Jay		
2.3.1	Display of Geographic Transportation Data Stored and Integrated in a SQL Server Database	Francisco J. Torres NCTCOG Arlington, TX	
2.3.2	ArcPad a powerful new tool in asset inventory and management at Nevada DOT.	Eric Warmath NVDOT Carson, NV	
2.3.3	Building a National Railroad Bridge Dataset	Derald Dudley USDOT / RITA Washington, DC	Judah Lynam USDOT / FRA
2.4	**Mobile GIS**		**Salon B**
	Moderator: Bruce Aquila		
2.4.1	Web-accessible Metadata Tools	William (Bill) G. Schuman GeoDecisions Nevada, IA	
2.4.2	Use of MobileGIS for Sign Inventories	Dan Paoly HDR Pittsburg, PA	Amy Staud HDR
2.4.3	The Evolution of Mobile Mapping	Jason Amadori Earth Eye, LLC Orlando, FL	

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CONCURRENT SESSION 3

10:30 AM TUESDAY, APRIL 13

3.1	**Enterprise GIS**		**Salon C**
	Moderator: Greg Yarbrough		
3.1.1	A SOA-based Web Map Road Network System Application	Archer Carr Virginia DOT Richmond, VA	Jamie Christensen WorldView Solutions Inc.
3.1.2	E-TRIMS Spatially Enabling the Tennessee Department of Transportation (TDOT) Enterprise for Decision Support	Jeff Murphy Tennessee DOT Nashville, TN	Bruce Aquila Intergraph Corporation
3.1.3	Supporting VDOT's Enterprise GIS	Jackie Magnant ESRI Alpharetta, GA	Melanie Rippon Seigler Virginia DOT
3.2	**Data Management & Integration**		**Salon A**
	Moderator: Larry Mattke		
3.2.1	CAD-GIS integration in highway engineering design projects	Keith Raymond Bentley Canada Toronto, ON	Todd Rothermel HNTB
3.2.2	Gaining More Insight: Integrating GIS with Primavera Project Management at WVDOT	Marshall L Burgess West Virginia DOT Charleston, WV	Jervetta Bruce CDP
3.2.3	Right-of-Way Information Management System	Aaron Ford HNTB Corporation Chicago, IL	Michael Bieberitz HNTB Corporation
3.3	**GIS in Traffic Operations**		**Room 230**
	Moderator: Dave Campanas		
3.3.1	Delaware Valley Regional Planning Commission - Traffic Count Request Application	William Stevens DVRPC Philadelphia, PA	Albert Sarvis GeoDecisions
3.3.2	Using Web 2.0 Mapping Engines in Desktop Applications: Opportunities and Challenges	Yu “Bud" Luo Michael Baker Jr., Inc. Horsham, PA	
3.3.3	Traffic Management Center Master Software	Matthew Schiemer, P.E. GeoDecisions Philadelphia, PA	Connie Gurchiek GeoDecisions
3.4	**GIS in Resource Management**		**Salon B**
	Moderator: James Brown		
3.4.1	Mile Marker Signs and the Linear Referencing System	David DiNocco Massachusetts DOT Boston, MA	
3.4.2	Georeferencing West Virginia DOT's Roadside Assets: An Asset Inventory Case Study	Allan Venema Fugro Roadware Inc. Richmond, VA	
3.4.3	Geo-enabling MN/DOT's Real Estate Management System	Andrew Buck Applied Geographics Boston, MA	Michael Terner Applied Geographics

The symbol indicates a session from West Virginia, the Host State.

CONCURRENT SESSION 4 1:30 PM TUESDAY, APRIL 13

4.1	**Enterprise Data Efforts**		**Room 230**
	Moderator: Don Kiel		
4.1.1	Building a Successful Geospatial Data Sharing Framework: A Ohio DOT Success Story	Fred Judson Ohio DOT Dist. #2 Bowling Green, OH	
4.1.2	Integrating and Stewarding Spatial Data for West Virginia Trails	Evan Fedorko WV University Morgantown, WV	Kurt Donaldson WV University
4.1.3	Illinois Highway Information System 2010	Jim Conlon GIS Solutions, Inc. Springfield, IL	Dan Wilcox Illinois DOT
4.2	**Transportation Network**		**Salon A**
	Moderator: Paul Ricotta		
4.2.1	How Transportation for the Nation Benefits me?	Patricia Solano Koniag Tech. Solutions Fairfax, VA	Richard Grady Applied Geographics
4.2.2	Transportation Data Needs for Federal Agencies	Timothy F. Trainor US Census Bureau Washington, DC	
4.2.3	Building a High Quality Rail Network	Raquel Wright USDOT / FRA USGS Washington, DC	Greg Matthews USGS
4.3	**Web Tools II**		**Salon C**
	Moderator: Eric Floss		
4.3.1	Kansas DOT's new implementation of active Straight Line Diagrams within their GIS web portal.	Jeff Tomlinson Intergraph Bend, OR	
4.3.2	Single Spatial Store Front: Web Enabled GIS Content Portal	Paul Weinberger Minnesota DOT St. Paul, MN	
4.3.3	A GIS Portal for a Multi-State Appalachian Development Highway System	Jason Wang ARC Washington, DC	Sanghong Yoo Rahall Transportation Institute
4.4	**GIS in Planning**		**Salon B**
	Moderator: Brandie Yalniz		
4.4.1	Benefit Cost Analysis of Strategic Provincial Roads in Southern and Eastern Afghanistan	John Wisdom Wilbur Smith Associates Columbia, SC	
4.4.2	Solid Waste Planning and Transportation	Barbara L. MacLennan Monongalia County Morgantown, WV	Laura Stiller Monongalia County
4.4.3	Use of GIS in a transportation recovery plan for disaster response	Sandy Mehlhorn UTenn at Martin Martin, TN	

The symbol indicates a session from West Virginia, the Host State.

CONCURRENT SESSION 5 8:30 AM WEDNESDAY, APRIL 14

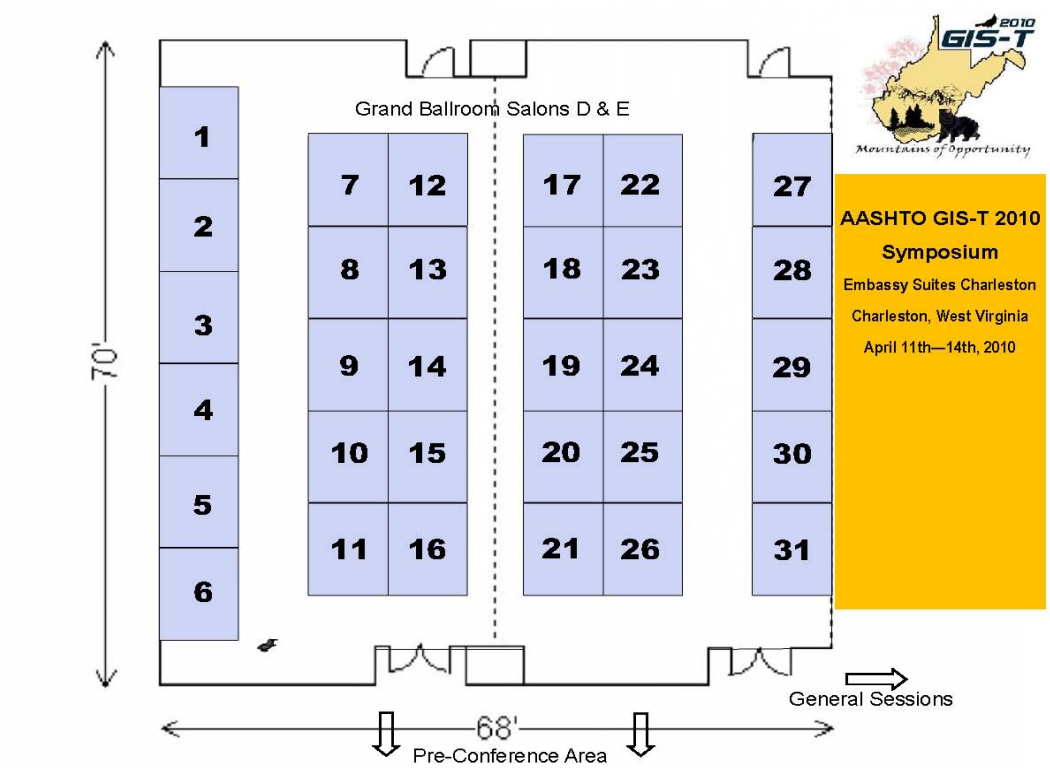
5.1	**Developments in Transportation GIS**		**Salon A**
	Moderator: Simon Lewis		
5.1.1	Role of GIS Technology in Railways	Randall D. Tardy, PE Bentley Systems Inc Madison, AL	
5.1.2	Infrastructure Modeling and Digital Agencies - The convergence of CAD, BIM, GIS, Analysis, Visualization and Collaboration in the Future	Doug Eberhard Autodesk Golden, CO	Connie Gurchiek GeoDecisions
5.1.3	Will your Next TEA come from a Mega Region?	Ben Williams USDOT / FHWA Atlanta, GA	
5.2	**National GIS Data Efforts**		**Room 230**
	Moderator: Bruce Spear		
5.2.1	Mobile LiDAR: Surveys at the Speed of Business	Thomas W. Tiner Michael Baker Jr., Inc Hamilton, NJ	
5.2.2	The National Map	Jean Parcher USGS Reston, VA	
5.2.3	Accessing the National Spatial Reference System	Ross Mackay NOAA / National Geodetic Survey Frankfort, KY	
5.3	**GIS Tools II**		**Salon C**
	Moderator: William Schuman		
5.3.1	South Carolina DOT's Project Screening Tool an effective utility to streamline the project planning process	Bruce Aquila Intergraph Corp. Harvest, AL	Nasser Vakili-Rad South Carolina DOT
5.3.2	NMRoads.com a Configured Off The Shelf ATIS System	Lee Jensen RealTimeSites Albuquerque, NM	Steve Schroeder RealTimeSites
5.3.3	GIS Supporting Winter Operations	Gary A. Waters ESRI Alpharetta, GA	Alan Smith or Tom Clay Washington DOT
5.4	**Routing**		**Salon B**
	Moderator: Matt Schiemer		
5.4.1	Automated Oversized Overweight Permitting and Routing	Jay Adams Oklahoma DOT Oklahoma, OK	James O. Brown Intergraph Corp.
5.4.2	National Oversize / Overweight Preliminary Route Review with Online Mapping Tools	Dan Vogen Bentley Systems, Incorporated Downers Grove, IL	
5.4.3	Green Transport Routing	Dan Gibbons NAVTEQ Chicago, IL	

CONCURRENT SESSION 6 10:30 AM WEDNESDAY, APRIL 14

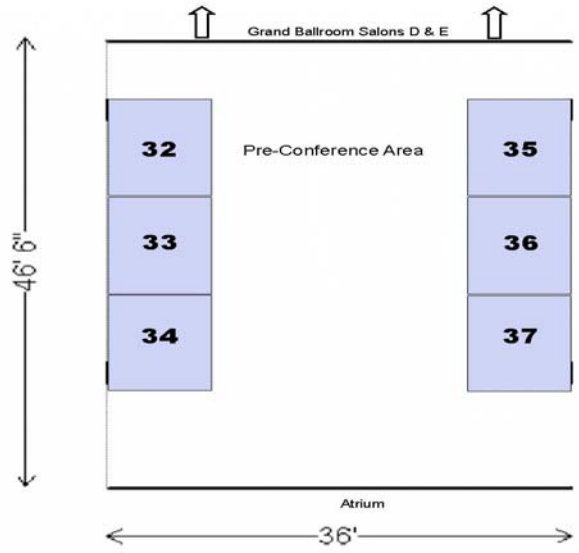
6.1	**Safety**		**Salon A**
	Moderator: Ben Williams		
6.1.1	Tracking Defects Using GPS	Judah Lynam USDOT / FRA Washington, DC	Raquel Wright USDOT / FRA
6.1.2	Application of GIS for a Managed Use Lane Study	Feng Lu Parsons Brinckerhoff New York, NY	
6.1.3	An Example of a Successful State-Wide Enterprise GIS Program and its Impact upon Safety Data Systems	Jeremiah Glascock TSASS, Inc. Grove City, OH	Ron Cramer Digital Data Tech. Inc.
6.2	**Integrating Legacy Systems**		**Room 230**
	Moderator: Connie Gurchiek		
6.2.1	Replacing Legacy Systems with a COTS	Heather King Oregon DOT Salem, OR	Marc Kratschmar Exor
6.2.2	SCDOT Initiates Innovative Project to Capture Local County Road Data	Donald McElveen South Carolina DOT Columbia, SC	David Kingsbury Rolta International
6.2.3	Kentucky's Transportation GIS: An Evolving Enterprise GIS	Will Holmes Kentucky Transportation Cabinet, OIT Frankfort, KY	
6.3	**Data Collection**		**Salon C**
	Moderator: Tamela Lang		
6.3.1	From Photolog to Laser Scanning Scaling up and Maximizing the Utilization of Arizona's DOT Mobile Data Capture System	Rob Huber Trimble Brossard, Quebec	Jim Snow Arizona DOT
6.3.2	Web Enabling VideoLog Viewers	Jesse C. Jay GeoDecisions Austin, TX	
6.3.3	LIDAR Collection and Integration for the Hawaii DOT	Larry Mattke Mandli Comm. Inc. Madison, WI	Goro Sulijoadikusumo HIDOT
6.4	**Local GIS**		**Salon B**
	Moderator: John Wisdom		
6.4.1	Case Study | Designing and Implementing a GIS-Centric Pavement Management System for the City of Alexandria, Virginia	Craig Schorling Transmap Corporation Columbus, OH	L.A. McCracken City of Alexandria, VA
6.4.2	Powerful Integration of GIS, Asset Management, Work Order Management, CRM and Related Technology in Transportation – You can Have it All Without Selling Your Soul!	Ramzi K. Bannura Annew Arundel County Maryland Annapolis, MD	
6.4.3	Leveraging GIS technology to provide a web-based infrastructure asset management system	Craig Gallant LJB Inc. Dayton, OH	

NOTES

TECHNOLOGY HALL EXHIBIT AREA I



TECHNOLOGY HALL EXHIBIT AREA II

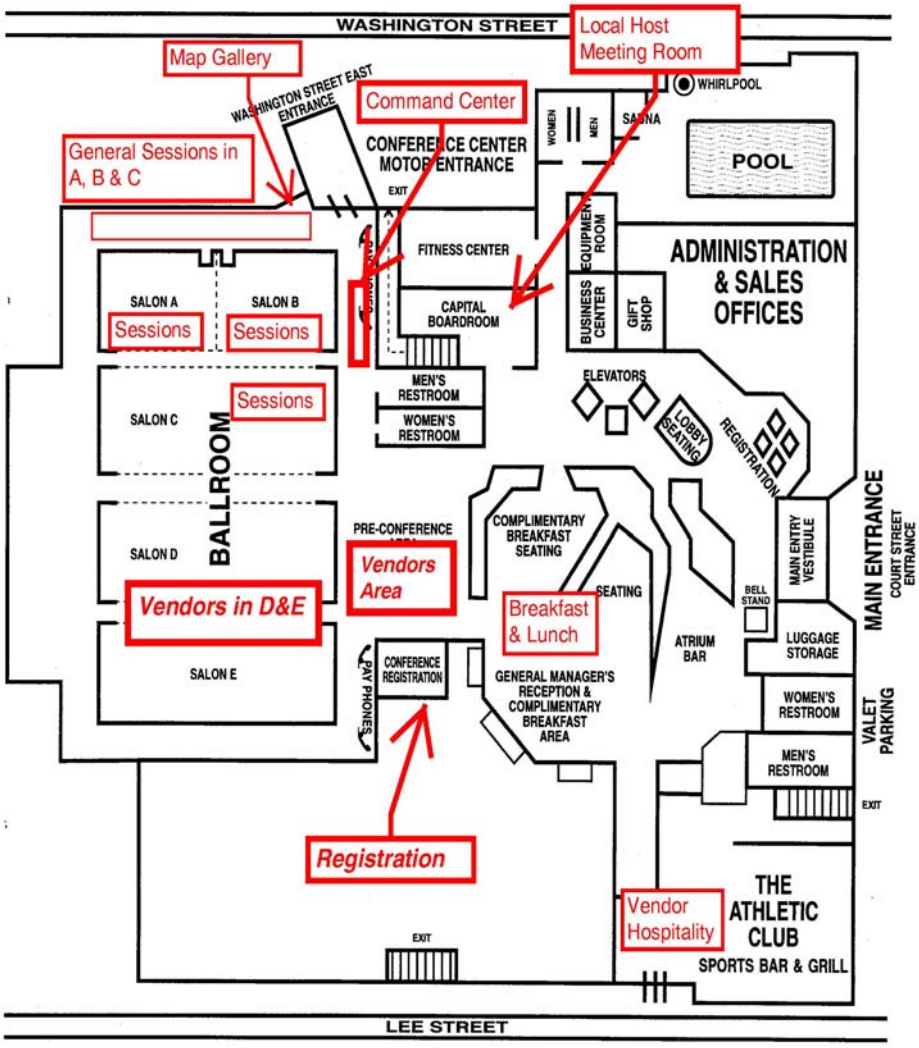


GIS-T 2010 EXHIBITORS

Company Name	Website	Booth
AgileAssets Inc.	agileassets.com	9
Ansrware	ansrware.com	7
Applied Imagery	appliedimagery.com	8
Bentley	bentley.com	27
Bergmann Associates	bergmannpc.com	18
Caliper Corporation	caliper.com	29
Cambridge Systematics, Inc.	camsys.com	13
CDP, Inc.	cdp-inc.com	1
Deighton Assoc. Lt.	deighton.com	17
Delasoft Inc	delasoft.com	3
Earth Vector Systems	evsgps.com	22
ESRI	esri.com	20, 21, 25, 26
Fugro Roadware Inc.	roadware.com	31
GeoDecisions	geodecisions.com	5, 6
Hewlett Packard	hp.com	12
Intergraph	intergraph.com	10, 11, 15, 16
JMT Technology Group	jmttg.com	23
MapText, Inc.	maptext.com	4
Michael Baker Jr., Inc.	mbakercorp.com	24
Microsoft	microsoft.com	28
Safe Software Inc.	safe.com	14
Surdex Corporation	surdex.com	30
TME Enterprises, Inc.	tmeenterprises.com	2
U.S. Geological Survey	usgs.gov	32
Wilbur Smith Associates	wilbursmith.com	19

Vendors Registered as of March 12, 2010

HOTEL FLOORPLAN



COMPLIMENTARY BREAKFAST

Hours: Monday - Friday
6:00 am - 9:30 am
Saturday & Sunday
7:00 am - 10:30 am

COMPLIMENTARY BEVERAGES

Hours: Daily 5:00 pm - 7:00 pm

CHECK IN TIME: 2:00 pm

CHECK OUT TIME: 12:00 noon

THE ATHLETIC CLUB BAR & GRILL

Lunch: 11:00 am - 4:00 pm

Dinner: Sunday - Thursday
4:00 pm - 11:00 pm
Friday - Saturday
4:00 pm - 12:00 midnight

Room Service: 11:00 am - 11:00 pm
Daily

Sunday Brunch: 11:00 am - 2:00 pm

ATRIUM LOUNGE

Sunday - Thursday
11:00 am - 12:00 midnight

Friday - Saturday
11:00 am - 1:00 am

POOL & FITNESS CENTER

Daily: 6:00 am - 11:00 pm

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GIS IN TRANSPORTATION SYMPOSIUM 2010

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, Oklahoma
2010	Charleston, West Virginia

GIS in Transportation Symposium 2010

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 2010 Abstract List

Session

1.1.1 Unifying the Colorado DOT (CDOT) Linear Referencing System

Presenter
Lou Henefeld
GIS Support Unit Manager
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Over many years, the linear reference system (LRS) for CDOT's highways diverged into more than one version. Various business needs, misunderstandings of appropriate maintenance processes, and lack of control caused these different versions to be built at CDOT. One example shows that some highway data could not track maintenance actions all the way out to the rights of way where highways end. This presentation describes a project to unify these different LRSs into a single LRS that meets all business needs and provides a single linear reference framework for all of CDOT's highways. The goals of this project were to provide a product that is more useful to CDOT's customers and to reduce confusion across CDOT's business units. The Unified LRS effort produced matching data segmentation across all highways for project development, field construction, safety, FHWA reporting, as well as asset management and planning. CDOT also is setting in place change management controls, and policy to help keep cross systems in sync. This presentation emphasizes technical methods, such as detailed imagery, CAD drawings, and linear referencing calibration, and examples for unifying the LRS.

1.1.2 Integration of WV DOT Road Data and Addressing Data

Presenter
Kevin Kuhn
GIS Analyst
WV GIS Technical Center
kevin.kuhn@mail.wvu.edu

Co-Presenter
Sanghong Yoo
Research Associate
Rahall Trans. Institute
syoo@njrati.org

The West Virginia Department of Transportation (WVDOT) has completed a project to create a linear referenced road network, using the West Virginia State Addressing and Mapping (WVSAM) unattributed centerline data. High-quality road centerline data is a foundation layer for many GIS-related projects. The same centerline base data was also used in a separate application for the WV Department of Homeland Security and Emergency Management to create a statewide, addressed street data. This addressed dataset consists of all roads in the state, including roads not owned by WV DOT. This data could provide WV DOT with expanded capabilities, such as routing, geocoding, direction and mapping applications. However, the two datasets currently exist in different locations, maintained separately and use different geometric formats.

The WV GIS Technical Center and the Rahall Transportation Institute have teamed up to solve some of the incompatibilities between the existing WV DOT road data and the WV SAM addressed data. The objective of the study is to review technical issues regarding the feasibility of road network integration in West Virginia which incorporates linear referencing, addressing, and routing capabilities. The projects goals of this study will identify and review existing transportation models, as well as WV DOT data needs; create an integrated road network pilot study; and identify requirements for data integration. We will present lessons learned and comments on the process of integrating datasets of this nature.

1.1.3 Putting the LBRS and other GIS datasets to Work for Traffic Modeling Networks

Presenter
Sam Granato
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OHDOT
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Co-Presenter
Carrie Whitaker
Transportation Engineer
Erie County Dept. of
Planning and Zoning

The availability of data from the state of Ohio's Location-Based Reference System (LBRS) program, in particular digital roadway centerline shape files and traffic controls (signals, stop and yield signs) in combination with the Ohio DOT's Roadway Inventory and other data from local, state and federal sources enables the development of routable networks for travel demand modeling that are much more accurate than traditionally used. This leads to both more improved traffic forecasts and improved presentation (or "visualization"), as they more accurately overlay other spatial datasets either for roadways, land use, or other land features.

This presentation will cover work both completed and in progress for such traffic model networks around the state of Ohio, with particular emphasis on the new metropolitan planning region (MPO) in Erie County.

Subject Areas: Transportation Planning/Modeling, Metropolitan Planning Organizations

1.2.1 Mapping the USDOT ARRA Projects

Presenter
Stephen M. Lewis
Geospatial Information Officer
USDOT
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With the passage of the American Recovery and Reinvestment Act (ARRA), the USDOT received $48.1 billion to expend on transportation projects. With the emphasis on transparency, USDOT Secretary Ray LaHood requested that all USDOT ARRA projects be tracked via a mapping application on the USDOT web site. Geospatial Professionals from throughout USDOT worked together to make this vision a realty. This presentation will cover the search for a common data format, the application development platforms, and a demonstration of the web mapping application.

1.2.2 ORSTATS - Oregon's ARRA story

Presenter
Ed Arabas
Senior Operations and Policy Analyst
State of Oregon
edward.p.arabas@state.or.us

2009 has been a challenging year in state government. Oregon's Legislature anticipated the American Recovery and Reinvestment Act (ARRA) with an Oregon stimulus package. Based on the reporting requirements for Senate Bill 338 and built upon work undertaken by the Oregon Dept of Transportation, Oregon created a centralized reporting tool - which was extended to satisfy ARRA requirements. This presentation will describe that effort.

1.2.3 Using Web GIS to Track Government Spending and Performance

Presenter
Eric Floss
Transportation Practice Manager
ESRI
efloss@esri.com

The American Recovery and Reinvestment Act (ARRA) transformed government spending and performance monitoring through the institution of new reporting guidelines that promote transparency and accountability in government. This new set of guidelines transcends ARRA and is now becoming the model used by Transportation agencies, applying it to all Transportation spending.

In this session we will present how an enterprise GIS can support the wide range of needs within a Transportation agency. GIS-based case studies on reporting and performance dashboards will be presented along with project tracking and management solutions. Case studies will focus on examples and best practices for communicating complex information and topics to the public. Web-based mapping solutions developed and implemented for Recovery.gov, Maryland StateStat, USDOT Recovery, Maine DOT, and the City of Lenexa, KS will be highlighted during this session. These GIS-based solutions demonstrate the power of mapping as a way to communicate government policy. They are amongst the best examples that allow people to see their government's decisions and the consequences of those decisions.

Recovery.gov relaunched in Fall 2009 with a specific emphasis on spending maps. The various web mapping pages on the site allow users to navigate all 50 states to show where federal contracts, grants, and loans are going and who's receiving the money. Users can then drill down to see spending for their own county or locality, including zip codes. Maryland's StateStat's performance-measurement and management tool implemented by Governor Martin O Malley was in operation before ARRA. Modeled after the CitiStat program that he developed as Mayor of Baltimore City, the State of Maryland is using this GIS data management approach to make government work more effectively for the residents in Maryland. USDOT and Maine DOT implementations both present Transportation agency examples on delivering project and budget information in an easy to interpret manner. Examples like these offer a preview of what's to come next in the Gov 2.0 era.

1.3.1 Geotechnical GIS Website

Presenter
Pallavi Bhandari
Computer Analyst III
Louisiana Transportation Research Center
pallavi@lsu.edu

The project originated from the Geotechnical Design Section at LADOTD and their need to review geotechnical data prior to new design decisions. This project, conducted by the Louisiana Transportation Research Center (LTRC) for the Louisiana Department of Transportation (LADOTD), created a Geotechnical Information Database for existing and future geotechnical records and data, which benefits LADOTD by reducing or eliminating the need, and time, necessary to conduct new soil borings and test their samples. The database serves as a valuable reference resource to the design sections at headquarters, but also LTRC and other district offices.

Rather than developing a unique and dedicated computer server, review of existing LADOTD databases and storage capabilities revealed only an interface was necessary. Researchers created a Global Information System (GIS) with a user friendly interface and additional links to existing databases within (and outside) the Department to speed access times, compared to hardcopy searches, consolidating vast amounts of information into one online resource. This application is developed using Microsoft Visual Studio 2008 and ArcGIS Server 9.3.1 and operates in a Microsoft Web environment. This application is developed using Microsoft Visual Studio 2008 and ArcGIS Server 9.3.1 and operates in a Microsoft Web environment. Content Manager, an Enterprise Document (Object) Management System, already used within the Department was key to the capture, storage, retrieval, and printing of online documents within the Department.

This GIS website application has been implemented and benefits LADOTD design sections. Specifically it has/will ...enhance the Geotechnical Design Section's ability to select proper boring depths. Additionally, the information attached to the database such as load test data, pile driving logs, and other activity logs will greatly improve the pile resistance prediction. The better pile length prediction may ultimately reduce the cost of foundation construction. (Ching Tsai, LADOTD Geotechnical Design Section).

1.3.2 Web based Capital Improvement Application for Public Transit

Presenter
Martin Catala
Associate Researcher/GIS Manager
Center for Urban Transportation Research
catala@cutr.usf.edu

Managing and maintaining a bus stop inventory is a challenge for many transit properties. Implementing a program for maintaining, updating, and changing the condition and location of bus stops is an important task for transit agencies. This is more important in times of fiscal constraints. To ensure that an agency is able to most effectively utilize the money it has set aside for capital improvements to transit facilities a programmatic approach is necessary. This presentation is about a web based bus stop maintenance tool which includes a systematic capital improvement program. The presentation will address the challenges to coordinating such a system when dealing with multiple jurisdictions. Additionally, it will review the technology and application development, including the data model used to drive the application.

1.3.3 Iowa DOT Service Layer

Presenter
Eric Abrams
Spatial Coordinator
Iowa DOT
eric.abrams@dot.iowa.gov

In spring 2009 Iowa DOT implemented an agency wide service layer called GeoNexus to provide a standard way of retrieving transportation related geospatial data. GeoNexus is on ArcGIS Server, Image Server platform while data comes from Oracle Spatial and MSD files. This session we will review why Iowa DOT implemented GeoNexus, technology used and how Iowa DOT posts and uses data from this system.

1.4 Geospatial Information Technologies for Asset Management Peer Exchange

Presenter
Katie Zimmerman
Applied Pavement Technology

Presenter
Michael Miles
CalTrans

Presenter
Jeff Price
VDOT

Presenter
Alan Smith
WSDOT

State DOTs will share their knowledge and experiences in using geospatial technologies in asset management. The peer will focus on the following areas:

- Representative geospatial products for asset management practices
- Executive level asset management decision making needs and the gap with existing geospatial products
- Tactical decision making needs for middle management
- Institutional issues inhibiting implementation

Katie Zimmerman, who will facilitate the peer exchange, will summarize key points and findings during this session. Representatives from California, Virginia, and Washington State will also present specific appropriate examples of their efforts in applying geospatial technologies to asset management.

2.2.1 HPMS and the Dualing Network

Presenter
Tom Roff
HPMS Database/GIS Applications
USDOT/FHWA
thomas.roff@dot.gov

The latest version of the Highway Performance Monitoring System (HPMS) will be released during the spring of 2010. It has been retooled to move highway data into the Geospatial world at the federal level. During the development discussions leading to this implementation, issues were raised from several states that collect and store information on a dual carriageway geometry. As the current HPMS specification identifies that data should be reported in the inventory direction, the FHWA recognizes that there is a growing trend to collect and represent highway performance data in both directions. Using the HPMS defined Facility Type data item as a starting point, this presentation will lead a facilitated discussion in future possibilities for HPMS to account for Dual Carriageway data reporting.

2.2.2 Finally: a Way to Create, Standardize and Locally Maintain a Statewide Seamless GIS Transportation and E9-1-1 Repository

Presenter
Ron Cramer
President
Digital Data Technologies, Inc.
srutan@ddti.net

Co-Presenter
Bruce Autremont
Sales Manager
Digital Data
Technologies, Inc.

This presentation will showcase how counties and local jurisdictions can essentially replicate Ohio's Location Based Response System, enabling DOTs to comply with the local roadway requirements for the Highway Performance Monitoring System (HPMS) program. ROI for all participants will be discussed and a live demonstration of the solution will be presented.

2.2.3 Ideas to Help with the HPMS Submittal

Presenter
Don Kiel
Senior Project Manager
GeoDecisions
dkiel@geodecisions.com

Co-Presenter
William (Bill) G. Schuman
Senior Project Manager
GeoDecisions

This presentation will share GeoDecisions' experiences on technologies, business needs, data and the Reassessment 2010+ as they directly apply to DOT processes and tools used to prepare annual Highway Performance Monitoring System (HPMS) submittals. GeoDecisions has teamed with several transportation agencies to improve their processes and tools for more easily identifying and correcting data quality issues that specifically apply to assembling and validating their HPMS submittals. We've also partnered with DOTs to provide additional GIS-based visualization and analysis capabilities for HPMS data and facilitate tracking of historical HPMS data trends. Practical experiences from multiple DOT projects will be shared, discussed and compared.

2.3.1 Display of Geographic Transportation Data Stored and Integrated in a SQL Server Database

Presenter
Francisco J. Torres
Principal Transportation Engineer
NCTCOG
ftorres@nctcog.org

Although traditional Geographic Information Systems have been widely used to edit and display spatial data, they do not provide native data management features that have been present in centralized relational databases for many years. Some of these features, among others, are the multi-user simultaneous update of files and an implicit system to enforce relations within associated datasets. In its last version, SQL Server delivered a system that added geographic data types and spatial analysis tools to its database functionality providing a new approach to display and integrate geographic data. This work presents the activities performed by NCTCOG related to the integration and display of geographic data stored in SQL Server. These datasets include items such as traffic counts and inventories of traffic control devices. The geographic datasets stored in SQL Server are displayed over the internet using popular programming and mapping tools that are available as application programming interfaces (APIs).

2.3.2 ArcPad a powerful new tool in asset inventory and management at Nevada DOT.

Presenter
Eric Warmath
GIS Program Manger
NVDOT
ewarmath@dot.state.nv.us

Nevada DOT has developed and continues development of in house ArcPad applications for asset inventory and management purposes. The software, coupled with Trimble GPS units, and leveraging ESRI enterprise SDE geodatabase technology is significantly improving data collection accuracy and safety in the field while saving significant time in the office processing the data. The office time saved is more than offsetting the loss of field time productivity due to mandatory furloughs. Also, under investigation is squeezing even more efficiency out of back office processing by incorporating Bluetooth camera technology for photographs needing geodatabase linkage. ArcPad is currently the primary tool for asset inventory but will in the future be used in conjunction with the Mandli Roadview product for data capture. It will remain the primary tool for inventory auditing and management after initial data capture is completed.

2.3.3 Building a National Railroad Bridge Dataset

Presenter
Derald Dudley
Geographer
USDOT/RITA
Derald.Dudley@dot.gov

Co-Presenter
Judah Lynam
GIS Specialist
USDOT/FRA
judah.lynam@dot.gov

In a joint effort The Federal Rail Road Administration and the Bureau of Transportation Statistics are developing a national database of railroad bridges that cross all modes of transportation. This database has been identified as a gap within the National Spatial Data Infrastructure (NSDI) for Transportation. Once completed this data layer will be used for modeling safety, capacity, and security related transportation issues.

The presentation will review this project and the processes used to develop this data set. Much of the focus will be on data manipulation and the Visual Basic / ArcMap application used to aid in the data sets creation.

2.4.1 Web-accessible Metadata Tools

Presenter
William (Bill) G. Schuman
Senior Project Manager
GeoDecisions
wschuman@geodecisions.com

Metadata has been discussed in the GIS-T profession for many years, but as agencies bring data together into data warehouses and repositories, or even access the data via web services, the need to understand the source of the data and entity/attribute information has become even more important. GIS products have accommodated the ability to store metadata (often FGDC compliant metadata) in their data environments, but other agency data outside the "spatial environment" is often integrated with GIS data in enterprise data stores. Pennsylvania DOT, Kansas DOT, and the San Diego Regional Emergency Geospatial Information Network (SDREGIN) have all developed web enabled tools to better gather and publish metadata for pertinent datasets that may be distributed throughout their agency or region. This presentation will discuss those tools, the benefits of each, and other similar tools developed by other agencies.

2.4.2 Use of MobileGIS for Sign Inventories

Presenter
Dan Paoly
GIS Coordinator
HDR
dpaoly@hdrinc.com

Co-Presenter
Amy Staud
Traffic Engineer
HDR
amy.staud@hdrinc.com

The West Virginia Department of Transportation (WVDOT), Traffic Engineering Division, is in the process of renovating the signing along each of its interstates and major corridors. To create an efficient project for both the consultants performing the work and the contractors, the corridors are broken into large segments for design and construction. HDR Engineering is performing three of these projects:

- I-77 from Ohio State Line to Ravenswood Interchange (40 miles 3348 GIS data points)
- US 50 from Parkersburg to Clarksburg (60 miles 3329 GIS data points)
- I-79 from Charleston to Weston (100 miles project is still being scoped)

As part of these sign renovation projects, a detailed inventory of every sign along the corridor, interchanges, and sideroads is undertaken. In addition, miscellaneous features, such as guardrail, major drainage features, and signal poles, is included in the inventory. In the past, WVDOT has utilized paper forms and a distance measuring device to perform the inventories.

To increase the efficiency and accuracy of the data collected for the sign renovations, HDR utilized Trimble handheld GPS equipment and custom data collection forms created using ArcPad Application Builder. After the data collection was completed, the GIS data was exported to Access to create customized inventory forms for submission to the WVDOT.

2.4.3 The Evolution of Mobile Mapping

Presenter
Jason Amadori
CEO
Earth Eye, LLC
jamadori@edats.com

Mobile mapping has experienced an evolution over time that is typical of the high-tech industry. The first generation systems were bulky, slow and involved massive amounts of post-processing to achieve mapping-grade results. These systems were typically digital video cameras, video tapes and integrated with GPS information that was encoded into the audio track of the VHS tape.

As the systems evolved, additional sensors were added including Distance-Measuring Instruments (DMIs), Inertial Measurement Units (IMUs) and Light Detection and Ranging (LiDAR) scanners. All of these sensors were integrated and added another level of precision to the Mobile Mapping solution, thus making it possible to achieve survey-grade accuracies. This technology is

currently being utilized by many mobile mapping companies to collect engineering-grade information while driving posted highway speeds with impressive results.

This presentation will focus on the evolution of this technology to date and what the future holds for mobile mapping moving forward.

3.1.1 A SOA-based Web Map Road Network System Application

Presenter
Archer Carr
Roadway Network Manager
VDOT
Archer.Carr@VDOT.Virginia.gov

Co-Presenter
Jamie Christensen
Applications Manager
WorldView Solutions, Inc.

The Virginia DOT developed and integrated an ArcGIS Server based web route selection tool within its Road Network System (RNS) program service oriented architecture (SOA). The RNS Map Viewer leverages route measure [m-]values and VDOT's linear referencing system (LRS) to automatically and/or interactively render user and system specified route measures as well as visualize and associate route events, such as crashes, with their appropriate on- or off-route locations. This application is integrated and synchronized with other RNS Section web services, including RNS Search and the Straight Line Diagram. Additional opportunities are anticipated for integration with other VDOT systems and web services. The RNS Viewer operates on ESRI's ArcGIS Server 9.3.1 .NET platform, with an optimized third party application development framework (ADF) from MapsDirect resting atop the ArcGIS Server Web ADF. This platform's functionality was implemented and further enhanced with specialized customizations developed by VDOT partner WorldView Solutions.

3.1.2 E-TRIMS Spatially Enabling the Tennessee Department of Transportation (TDOT) Enterprise for Decision Support

Presenter
Jeff Murphy
Information Systems Manager
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Jeff.Murphy@tn.gov

Co-Presenter
Bruce Aquila
Sr. System Consultant
Intergraph Corporation
bruce.aquila@intergraph.com

TDOT has a rich history of technology deployment with regards to managing critical infrastructure facilities. This has been demonstrated through the traditional usage of the Tennessee Roadway Information Management System (TRIMS). While TRIMS provides tremendous benefit to TDOT in its ability to perform complex data maintenance capabilities as well as roadway analytics, the cost of deploying and maintaining a large-scale client/server based application is a challenge. Based on these considerations, TDOT elected to create E-TRIMS - a new web-based application to provide the analysis capabilities in a modernized format. E-TRIMS provides a customizable map interface with "Road Finder" query capabilities allowing output on the map or as a tabular report as well as thematic maps and charts. In addition, E-TRIMS allows users to perform any number of queries and map settings with the capability to save the session for future use or access by other DOT users. This presentation will address the goals, objectives, challenges and benefits of E-TRIMS to TDOT.

3.1.3 Supporting VDOT's Enterprise GIS

Presenter
Jackie Magnant
Project Manager
ESRI
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Co-Presenter
Melanie Rippon Seigler
VDOT
Adrien Litton
ESRI
Alitton@esri.com

This presentation provides a high level overview of the Virginia Department of Transportation (VDOT) use of two ESRI programs, Enterprise License Agreement (ELA) and Enterprise Advantage Program (EAP), with specific details of how the Enterprise Advantage Program is being used in support of VDOT's Enterprise GIS (EGIS).

For more than 20 years, the Virginia Department of Transportation (VDOT) has partnered with ESRI in the delivery of geospatial services to the agency and the public it serves. Faced with continued demands for GIS products and services with limited staff and budget resources, VDOT signed an enterprise license agreement (ELA) with ESRI which provides a purchasing vehicle that allows VDOT to manage its ESRI Commercial off the Shelf (COTS) costs while maximizing the opportunity to deploy GIS into its business processes. Along with the ELA, VDOT also included the Enterprise Advantage Program (EAP). The EAP is a structured program designed to assist clients in obtaining the maximum value from their EGIS investment while supporting the demanding needs of the operation through technical support, training and consulting resources.

3.2.1 CAD-GIS integration in highway engineering design projects

Presenter
Keith Raymond
Product Manager, Geospatial Desktop Products
Bentley Canada
keith.raymond@bentley.com

Co-Presenter
Todd Rothermel
VP Geospatial
HNTB
trothermel@HNTB.com

Highway engineering design projects depend heavily on survey and mapping data. Much of this data can be found in various company's mapping environments (Owner, Contractor/Consultant, Engineering Firm) in the form of GIS data. Highway design projects also have a requirement for certain analytical processes, most often found in GIS systems.

This presentation will explore how CAD-based GIS interoperability and analytical tools were used in the engineering design process on a design-build highway lane expansion project in a highly sensitive environmental area. Lessons learned and solutions provided will be discussed.

By reducing the "friction" between GIS and CAD design processes, transportation agencies can realize reduced costs and timelines through the value of tighter interoperability.

3.2.2 Gaining More Insight: Integrating GIS with Primavera Project Management at WVDOT

Presenter
Marshall L Burgess
Programmer Analyst 3
WVDOT
Marshall.L.Burgess@wv.gov

Co-Presenter
Jervetta Bruce
Primevera Consultant
CDP

The West Virginia Department of Transportation (WVDOT) operational goal for 2009-2010 is to be the "Best in Program Management." To support this goal, a project is underway to implement the Primavera's Enterprise Project Management (P6) solution integrated with Geographic Information System (GIS) technology. Phase I of the GIS integration into P6 is to supply project definitions to a GIS database to represent the history of work done in a particular geography. This will allow the simple integration of the P6 data with other disparate databases in WVDOT and provide management with a clearer overview of data that they are using to make decisions and to see the results of those decisions sooner and in a crisper more comprehensible format. This integration will consist of a batch process that transfers all project information from Primavera to the GIS SQL Server tables on scheduled bases. Phase II of the GIS Interface integration consists of a web application that will be used by WVDOT users who initiate projects using Primavera to retrieve needed information from the Road Inventory Log (RIL). After the creation of a project in the P6 web application, the user will use the GIS application to identify the road segments and structures (e.g. bridges) in the RIL using geospatial information (e.g. routeid, milepost, etc.) to retrieve the needed information related to the newly created P6 project and transfer the data synchronously upon demand by the users.

The overall scope of this WVDOT project will include using P6 for managing Programmed WVDOT projects. The project's deliverables will include the installation of the hardware and software necessary to support Primavera; defining and establishing enterprise codes, structures and processes; role-based training of WVDOT staff; automated interface with WVDOT's existing accounting and GIS systems, development of a web-based portal displaying Earned Value (EV) metrics in a dashboard format for WVDOT executives; and a web-based tool allowing for customer viewing of reports and basic data inputs.

3.2.3 Right-of-Way Information Management System

Presenter
Aaron Ford
Design/Developer Team Leader
HNTB Corporation
aford@hntb.com

Co-Presenter
Michael Bieberitz
Jacob Huish
HNTB Corporation

In June 2008 the Utah Department of Transportation selected HNTB Corporation as the program manager to provide engineering support for delivery of their $6.3 billion, 43-mile design-build reconstruction of Interstate 15. Current state funding has been established to reconstruct the most congested 21 mile section, known as I-15 CORE. To assist in management of the overall program, the Right-of-way and Utility Information Management System (RUIMS) was developed. RUIMS is a secure web-based GIS application built using ESRI's ArcGIS Server technology for the tracking and reporting of the right-of-way acquisition and utility relocation process for the program. RUIMS has provided improved communications between stakeholders through increased access to utility and ROW information. By placing the information within a central relational database system, all stakeholders are provided with access to up-to-date ROW acquisition and utility relocation information during all phases of the project. ROW data is retrieved from existing program management and scheduling systems as Microsoft Excel spreadsheets or Access databases and directly loaded into the RUIMS relational database system. Utility data is processed from MicroStation design files and associated Microsoft Access attribute database and directly uploaded into RUIMS as GIS features and related attributes. Users are able to search by ROW ID, Taxkey Number, Property Owner, Address, Utility ID, City, Utility Owner, Utility Type and Utility Risk Assessment in addition to being able to graphically select parcels and utilities directly from the map. RUIMS has been in production and actively used within the project since January 2009.

3.3.1 Delaware Valley Regional Planning Commission - Traffic Count Request Application

Presenter
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Co-Presenter
Albert Sarvis
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The Delaware Valley Regional Planning Commission (DVRPC) is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region that includes 5 Pennsylvania and 4 New Jersey Counties. One of DVRP's many functions is to gather and provide traffic count information for DOT, County and Commercial clients throughout the region. Traditionally these counts were received through phone, e-mail and other non-spatial electronic data requests. As part of a project to build a comprehensive regional road centerline database DVRPC has developed a GIS Web Portal to make this regional centerline dataset available to their partner agencies and the public. The first specific application built upon the GIS Portal foundation allows users to submit Traffic Count Requests directly through the Web.

This presentation will demonstrate how users can view and query all existing and pending traffic count locations in the DVRPC region as well as create a traffic count request, select and edit locations for the request and submit the request for processing. By allowing users to select existing or new count locations through direct map interaction DVRPC will no longer need to research and manually enter spatial data such as route, offset, and coordinates. Agencies that submit similar count requests on a recurring basis can choose their last count request, make any necessary changes, and then resubmit the updated request. Functionality has also been developed so users can move a previously defined count location to a new area on the map, with all spatial attributes (route and offset) being recalculated on the fly. The benefits of this automated map based submission process will be discussed.

3.3.2 Using Web 2.0 Mapping Engines in Desktop Applications: Opportunities and Challenges

Presenter
Yu "Bud" Luo
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The Web 2.0 Mapping Engine space is highly dynamic and witnesses more and better APIs and data sources. While most applications that run on top of those engines are Web based, desktop applications can also benefit from them. A desktop application with Web Service integration can offer the best of both worlds: The dynamic APIs and various base data and images offered by the Web 2.0 mapping engines, and the unparallel performance for intense computing needs present at a desktop environment.

NJDOT TMS2Go 2008 is a Single Executable Application that embeds a searchable Traffic Monitoring System database (Station and count data). Users can also query the station and traffic count information through a map interface that is based on a Web 2.0 mapping engine. This presentation will discuss the decision parameters and processes on desktop versus Web application, and which Web 2.0 mapping engine to use. Techniques on how to support multiple Web 2.0 engines and provide self-patching capabilities will also be discussed.

3.3.3 Traffic Management Center Master Software

Presenter
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Co-Presenter
Connie Gurchiek
Vice President
GeoDecisions

Opportunities for improving operations at Traffic Management Centers (TMCs) are emerging as more data becomes available through new sources, such as newly constructed ITS infrastructure. At TMCs, communications and data sharing among various ITS software systems is often difficult, fragmented, and uncoordinated, with redundant systems being utilized. Managing the growing volume of data flowing into TMCs by consolidating and streamlining the processes is only part of the opportunity. Transportation agencies are exploring innovative ways to put this wealth of data to new and better uses.

In response to this need, GeoDecisions has developed GeoTOPS (GeoDecisions Transportation Operations Solution). GeoTOPS is a unique GIS-enabled approach for seamlessly improving situational awareness and providing higher-quality data and information in a traffic management center (TMC) environment. It capitalizes on GeoDecisions' extensive experience in ITS implementation, geospatial data management, software development, and system integration. GeoTOPS can integrate a TMC's multiple data streams into one easy-to-use platform that is graphical and GIS based.

GeoTOPS can be customized to work with existing systems and offers the following functionality:

- Integration of real-time and static transportation data
- Consolidated control of ITS field devices
- Integration of traffic signal systems
- Incident management mapping, reporting, and tracking module
- Text, e-mail, or cell phone notification
- Dynamic detour and diversion selection and routing
- Evacuation routing
- ITS asset management systems
- Third party traffic, weather and incident information
- Freeway service patrol vehicle tracking and routing.

GeoDecisions is currently working with several state-level DOTs to implement GeoTOPS in their TMCs.

3.4.1 Mile Marker Signs and the Linear Referencing System

Presenter
David DiNocco
Transportation Program Planner
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Massachusetts Department of Transportation (MassDOT) implemented a Mile Marker Sign installation program utilizing their Road Inventory Database's Linear Referencing System (LRS). It was determined that new signs would be essential for MassDOT's maintenance needs, State Police and the Enhanced 911 program. The existing mile marker signs were inaccurate, in disrepair, and not tied to the Road Inventory database. Rural areas are affected by these issues more than urban areas, as there are usually no significant landmarks to be found in the event a reference location is needed.

Using the Road Inventory database, initial mile marker points covering all numbered routes (Interstate, U.S. and State) in the primary and opposing direction were generated from the existing LRS measures. The complexity of the Massachusetts route system required additional processing. From here GPS coordinates were generated and sent to contractors who then went to the field to install the signs. Once the signs were installed, final GPS coordinates were sent back to the office to add to the database. A new LRS was generated using these mile marker points which have measures that correspond to the new signs.

Signs have been successfully installed, accurately, with a GPS coordinate assigned to them. Maintenance in the field can be recorded properly in the database. When an incident occurs in the field, it can be reported by using the mile marker sign. Assistance can be provided at the precise location of the incident using the coordinate assigned to the sign.

3.4.2 Georeferencing West Virginia DOT's Roadside Assets: An Asset Inventory Case Study

Presenter
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The West Virginia Department of Transportation's requirement to inventory its roadside assets within the 18,000 miles of its road network poses a significant GPS challenge due to the mountainous West Virginia terrain. The Fugro Roadware solution offers a safe, cost-effective, georeferenced, time saving alternative to the manual cataloguing of WVDOT's roadside assets. Fugro Roadware uses an inertial referencing system with three HD video cameras to collect georeferenced right-of-way video images, while simultaneously collecting pavement condition data for the DOT. WVDOT can easily bring data from these images into its Arc ESRI software to manipulate in any manner required. Georeferenced data on close to half a million assets will be delivered over the 2008-2009 survey.

3.4.3 Geo-enabling MN/DOT's Real Estate Management System

Presenter
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Co-Presenter
Michael Terner
Executive Vice President
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The Minnesota Department of Transportation's (MN/DOT) Office of Land Management (OLM) has developed and deployed the Rights-of-Way Electronic Acquisition and Land Management System (REALMS) as an authoritative, transactional database for transportation land records management. While REALMS provides robust RDBMS and reporting capabilities, it lacked an ability to view maps of rights-of-way and other MN/DOT owned lands. Applied Geographics, Inc. (AppGeo) was contracted to work with MN/DOT to geo-enable" the REALMS system by adding a web-based mapping capability. In essence geo-enabling REALMS involves adding a "Map It" button to various screens in the existing database system. The web-based mapping capability is being delivered by AppGeo's configurable

General Purpose Viewer (GPV) solution. The GPV provides a common map viewing interface that has been configured for the 20 REALMS use cases identified by MN/DOT. The configurability of the GPV will also provide MN/DOT the opportunity and ability to geo-enable additional business systems that currently lack mapping following the conclusion of the REALMS project. This presentation will describe the REALMS system the business case for adding mapping the geo-enabling process and the configuration process for the generic mapping interface provided by the GPV."

4.1.1 Building a Successful Geospatial Data Sharing Framework: A Ohio DOT Success Story

Presenter
Fred Judson
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There is increasing pressure for transportation authorities to share accurate and up-to-date geospatial information with internal, private and public end-users. This presentation will take a look at how District 2 of the Ohio Department of Transportation (Ohio DOT) has enabled the state's geospatial data to be easily accessed by and disseminated to multiple user communities, including government decision makers, consultants and the public. Recognized by the Ohio Geographically Referenced Information Program (OGRIP) with the Ohio GIS Best Practices award in 2008, this Ohio DOT district's award-winning GIS initiative has enabled them to easily contribute accurate and current geospatial information to its internal, private and public entities. It has also enabled the department to conflate and utilize state-wide initiatives, including the Ohio's Location Based Response System (LBRS) and the Ohio State-wide Imagery Program (OSIP, as well as enhance and integrate these initiatives into the district's business practices. The presentation will provide an overview of this initiative and its benefits, as well as highlight achievable strategies for removing common data interoperability challenges that often present a barrier to exchanging geospatial data originating from disparate systems, formats and models. Best practices for enabling easier access, use and dissemination of geospatial data between local, state and federal agencies and with the public and private consultants will also be discussed.

4.1.2 Integrating and Stewarding Spatial Data for West Virginia Trails

Presenter
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Co-Presenter
Kurt Donaldson
Manager
WV University

Even within the relatively small geographic area of West Virginia, there are many agencies, organizations and businesses that collect and manage digital information about trails. Well organized data sharing will enhance the ability of agencies to complete their daily tasks, such as the development of high quality maps, monitoring of their trails and maintenance of their properties. An easily updateable and shareable statewide compilation of trails data will also have enormous benefits for users of the data. No longer will it be necessary for data users to obtain multiple datasets in order to explore trail opportunities.

Currently, the statewide GIS data clearinghouse (http://www.wvgis.wvu.edu) distributes seven different trail datasets. Additionally, the WVDOT State Trails Coordinator maintains a detailed tabular database (http://www.wvdot.com/3_ROADWAYS/rp/3d5_trails.htm) of trails in the state. A disconnect exists between this high quality value added database and the geographic data maintained by trail stewards. Harmonizing these and other databases will result in an overall improvement to spatial data for trails in West Virginia.

We propose a stewardship and data standards (based on the Federal Trails Data Standard) framework for GIS data for West Virginia and utilize those standards to create an integrated trails data product for West Virginia. We present lessons learned and comments on the process of integrating and maintaining datasets of this nature.

4.1.3 Illinois Highway Information System 2010

Presenter
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Co-Presenter
Dan Wilcox
Development Chief
ILDOT

The objective of this project is to develop a version of a roadway inventory management system on a different platform that can provide an efficient means to store transportation-related data elements.

Currently, Illinois DOT's roadway inventory information is stored, updated and maintained in a mainframe environment. While the system has and continues to function, architecture constraints are limiting the ability to expand, adjust, and integrate with other enterprise solutions. In addition, technical and other resources familiar with this technology and system are becoming less available over time.

The new system consists of two major components: an ESRI ArcGIS desktop application for linear reference system editing and management and a Silverlight 3.0 web interface for roadway inventory editing and management. Both components share a common database. The Silverlight 3.0 interface integrates Microsoft's Bing Maps and ESRI's Silverlight API to build a line of business application. Microsoft SQL Server 2008 Reporting Services will be used for data inquiry and reporting. Note: This project is in initial testing and is planned to be in production June 2010.

4.2.1 How Transportation for the Nation Benefits me?

Presenter
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Co-Presenter
Richard Grady
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As part of a NSGIC initiative, the US DOT will begin to meet its responsibility under OMB Circular A- 16 to advance strategic planning for the realization of a national framework for Transportation for the Nation (TFTN). The TFTN sessions at this conference are a step in a TFTN strategic planning process designed to evaluate the opportunities, interests, best practices, institutional constrains, resource requirements, and benefits of TFTN. The result of this evaluation will address key questions and assumptions about TFTN and will develop a strategic vision for TFTN.

TFTN refers to the goal of coordinating and developing a nationally significant transportation data, with particular emphasis on road centerlines. Some of the TFTN challenges are: a) Overlapping transportation dataset that vary in scale, coverage, formats, documentation, geometry and attributes. b) Transportation data developed and maintained by a variety of public and private entities with diverse objectives, requirements, capacities and resources. c) Public and private sectors further aggregating, integrating, attributing, and converting transportation data to serve distinct purposes (routing, planning, performance monitoring, emergency response, on-board navigation.)

Building on the general agreement that TFTN is an important concept and framework data for the nation, this presentation will focus on the specific ways in which TFTN is potentially important to various levels of government and the private sector.

4.2.2 Transportation Data Needs for Federal Agencies

Presenter
Timothy F. Trainor
Chief, Geography Division
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Over the past six months, members of the federal government have been working together to develop a set of requirements for road features and attributes for the purposes of a national transportation data set. This presentation will highlight the efforts of the federal community, including initial planning, development of a straw man document to aid in requirements design, and next steps.

4.2.3 Building a High Quality Rail Network

Presenter
Raquel Wright
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Co-Presenter
Greg Matthews
USGS

The Federal Railroad Administration (FRA) has been collecting data from several geometry track cars for many years, recording the latitude and longitude of every foot of the rail network. The FRA and the United States Geological Survey (USGS) will be partnering to develop these point locations into a network that will be +/- 2 meters. This level of accuracy would potentially be able to support a Linear Referencing System (LRS), by which applications could be developed to support Positive Train Control (PTC), emergency response, assets management, etc. This presentation will cover the collaboration between the FRA and the USGS on creating a highly accurate rail network (1:10,000) that is generated from the FRA's Automated Track Inspection Program (ATIP) data.

4.3.1 Kansas DOT's new implementation of active Straight Line Diagrams within their GIS web portal

Presenter
Jeff Tomlinson
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Straight Line Diagrams (SLD) has long been known as a time-tested method for collecting a large amount of data about linear networks into a user-friendly display. Kansas DOT has taken a fresh new approach to SLDs by integrating them into their KGATE GIS Web portal as SLD Web Services. These newly implemented SLD web services allow for a seamless integration between existing web portal functionality and intelligent Scalable Vector Graphic displays.

This session will cover the various aspects involved in the integration and creation of Kansas DOT's Straight Line Diagram (SLD) web services system. The session will also demonstrate some of the many benefits within the new SLD and how is used to compile and analyze statewide asset data simultaneously.

4.3.2 Single Spatial Store Front: Web Enabled GIS Content Portal

Presenter
Paul Weinberger
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To support Transportation industry needs, the Minnesota Department of Transportation (Mn/DOT) has a new Web Delivered" tool available as the single store front for accessing spatial information. The Enterprise GIS Services Unit (EGIS) in the Office of Information and Technology Services recently deployed a first generation GIS Portal that allows users to search view and analyze spatial information and services. The GIS Portal is a one-stop catalog and map viewer for data and services published from multiple agencies that meet Departmental business needs. You can use either a text or map-based search to query for information. The data may be local or statewide in nature. Metadata about the information identifies area of geographic coverage data steward update frequency and other important information for each data set. Users will find direct links for the information and have the ability to view and save map and text based queries. Users can use the GIS Portal to search for available data from Mn/DOT and other agencies and states. The initial release of the Portal includes some of the more frequently used information in the form of spatial data including; the availability of; data in geographic location of features mapping services applications imagery and static maps. This presentation will include content that covers the business needs analysis technical infrastructure and next generation planning.

4.3.3 A GIS Portal for a Multi-State Appalachian Development Highway System

Presenter
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Co-Presenter
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The Appalachian Regional Commission (ARC) and the Rahall Appalachian Transportation Institute (RTI) have an ongoing project to develop, maintain and update a regional GIS system for the Appalachian Development Highway System (ADHS). After successfully developed a web-based GIS for a major undertaking of the ADHS Cost to Complete Estimate in 2007 used by ARC, Federal Highway Administration (FHWA) and state Departments of Transportation (DOTs) of 13 Appalachian States, with emerging Web 2.0 trends and the release of ESRI ArcGIS Server 9.3, there is a need to update the ADHS Cost to Complete Estimate web-based GIS to the new standards and new functions such as using existing base maps and images well developed and managed by ESRI, Google or Bing.

This success also encouraged the ARC and RTI to look for new ways of leveraging the web-based ADHS GIS towards including economic development aspect in Appalachia. This lead to the vision of extending the ADHS Cost to Complete platform into a new GIS system that would integrate transportation and economic development data into a single web-based GIS - the Appalachian Regional Transportation and Economic Management Information System (ARTEMIS).

To date, RTI has successfully implemented the first phase of implementing these upgrades, creating an updated web-based GIS for the ADHS Cost to Complete and a prototype for the ARTEMIS platform.

4.4.1 Benefit Cost Analysis of Strategic Provincial Roads in Southern and Eastern Afghanistan

Presenter
John Wisdom
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Wilbur Smith Associates, in conjunction with the IRD and the USAID, is currently developing a benefit cost analysis framework to evaluate 32 road development projects in Southeastern Afghanistan. This framework will incorporate traditional project evaluation methodologies, key social and economic factors and the ramifications of road improvements. The main project objectives include the estimation of road construction and maintenance costs, current and future traffic volumes and evaluation of the primary and secondary transport benefits that result from road improvements.

An important component of this project involves the use of GIS to measure secondary benefits. These benefits consist of various social, economic and security improvements such as improved access to government, educational and health facilities; access to urban, agricultural and employment centers, and improved cross-cultural access. A variety of raster and vector GIS techniques including travel-time, connectivity and catchment area analyses were used to evaluate various scenarios related to road improvements. These results, along with the results of other analyses, were used in the benefit cost framework.

The presentation will discuss the GIS methodologies employed in this study, as well as results and challenges encountered.

4.4.2 Solid Waste Planning and Transportation

Presenter
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Co-Presenter
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In many respects, West Virginia is a microcosm of the Appalachian region. The Appalachian region extends from New York to Georgia, and incorporates portions of thirteen different states, and the entirety of West Virginia. Because of the rural nature of Appalachian communities, little or no infrastructure exists for long-term solid waste management. West Virginia and surrounding regions are geographically isolated and lack major interstate transportation routes. Hauling and transportation issues were chief among the main obstacles the Monongalia County and Marion County Solid Waste Authorities faced when they began creating a GIS in 2008. As the MCSWA grows the role of the GIS grows to assist with planning and managing recycling pickup, transportation of materials to regional markets, and planning new facilities, including the development of a small scale digital city initiative. Hauling of solid waste is regulated as a utility through the state Public Service Commission (PSC) using route tariffs which exists only in narrative form. The MCSWA was faced with interpreting these narratives into a working GIS map. Creating a solid waste GIS has created Mountains of Opportunity" because it provides solid waste transportation issues as a layer thus making it part of infrastructure planning. Because it is regulated by the public service commission as a utility solid waste should be considered in the pre-planning stage by government and private planners. "

4.4.3 Use of GIS in a transportation recovery plan for disaster response

Presenter
Sandy Mehlhorn
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Planning is an important part of an effective recovery plan. For areas with little historical data on natural disasters, this planning can be very difficult because the exact damage levels are not easily predictable. By establishing an extensive database in GIS, information is readily available when a disaster strikes.

Research has shown that GIS is becoming an integral part of supporting damage assessment, rebuilding and public education after a disaster. The use of GIS software is ideal for handling all of the data necessary for modeling after a natural disaster because an extensive database, including information such as system facilities, year they were built and current condition, is needed. A database should be able to integrate all of the information and to establish relationships between various attribute data and key infrastructure features. The visualization capabilities also make GIS ideal for natural disaster modeling. GIS mapping allows locations of key facilities to be overlaid with damage estimates for quick visual reference. Widespread use of GIS by emergency management agencies, due to more affordable technologies, can enhance the efficiency and productivity of their efforts. GIS enables an emergency manager to visualize and analyze natural disaster situations more accurately.

This presentation would discuss the use of GIS as an integral part of a transportation recovery plan after a natural disaster. The use of the Network Analyst tool is a vital part of the plan in establishing priority routes to be reconstructed after the disaster.

5.1.1 Role of GIS Technology in Railways

Presenter
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President Obama has raised the bar" on rail passenger transportation in North America. Recent Federal and Local rail funding initiatives will mean significant assets and local compliance will need to be managed to provide unbroken city-center-to-city center traveler experiences. The availability of Google Transit suggests rail also needs geospatial relationships. This presentation will provide an up-to-date role of GIS in managing and connecting international rail transit systems. Rail Transit practitioner's will have an opportunity to meet road practitioner's and share experiences."

5.1.2 Infrastructure Modeling and Digital Agencies - The convergence of CAD, BIM, GIS, Analysis, Visualization and Collaboration in the Future

Presenter
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Co-Presenter
Connie Gurchiek
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As Government stimulus drives more and better infrastructure projects , how will agencies and the industry respond from a data, decision making and delivery side? How can we improve the way we plan, design, construct, simulate and operate more sustainable infrastructure in a digital world before it gets built and maintained in the real world? What role will GIS play as newer model-based tools like Building Information Modeling (BIM) become more mainstream and valuable in the overall process? How will the convergence of these information rich models become deliverables themselves and how will the profession need to change as a result? This presentation will look into the future of Infrastructure Modeling and Digital Agencies and explore the roles that empowered information, technology, people and process will play in the future. It will examine today's trends and successes around converged model-based design, simulation, visualization and collaboration while looking at tomorrow's opportunities for a more systematic and sustainable world.

5.1.3 Will your Next TEA come from a Mega Region?

Presenter
Ben Williams
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The SAFETEA-LU legislation came to an end September 30, 2009. The Federal Transportation programs are in the process of being reauthorized. At the time that this abstract was submitted, it appeared that Congress might work on a short term extension with a more comprehensive bill to be developed later.

One of the ideas that might influence this future legislation is the concept that the country is developing Mega-Regions. This presentation will talk about some of the concepts and how they may interact with the Transportation Programs.

What is a Mega Region?
What are the alternatives?
How might their boundaries be defined?
How might they impact transportation programs?
How would we collect data for or model a Mega Region?
New Census urban boundaries definition & MPO definition

5.2.1 Mobile LiDAR: Surveys at the Speed of Business

Presenter
Thomas W. Tiner
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The application of LiDAR (Light Detection and Ranging) technology within the Geospatial industry over the past decade has revolved around aerial applications. Today, technological advancements have facilitated accurate LiDAR capture from mobile terrestrial platforms. Recent evolutions in sensor design have yielded systems capable of producing survey/engineering grade accuracy on-the-fly, while blanketing areas within 200+ meters of the vehicle with up to 1.6 million laser returns per second. By coupling the advantages of both proximity-to-target and ground-based viewing perspectives, mobile LiDAR delivers far greater accuracy and point-density than airborne platforms, and provides the framework for new applications and uses. This presentation will provide an overview of Mobile LiDAR technology and demonstrate its practical application for: roadway design, asset inventory, bridge / road inspections, corridor mapping and 3D modeling/animation. Additionally, the presentation will review current methodology for rapid feature extraction and point-cloud rasterization, as well as the examination of benefits over traditional surveying and data collection methods.

5.2.2 The National Map

Presenter
Jean Parcher
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As one of the cornerstones of the U.S. Geological Survey's (USGS) National Geospatial Program, The National Map is a collaborative effort among the USGS and other Federal, State, and local partners to improve and deliver topographic information for the Nation. It has many uses ranging from recreation to scientific analysis to emergency response. The National Map is easily accessible for display on the Web, as products and services, and as downloadable data. The geographic information available from The National Map includes orthoimagery (aerial photographs), elevation, geographic names, hydrography, boundaries, transportation, structures, and land cover. Other types of geographic information can be added within the viewer or brought in with The National Map data into a Geographic Information System to create specific types of maps or map views. The National Map is a significant contribution to the National Spatial Data Infrastructure (NSDI) and currently is being transformed to better serve the geospatial community by providing high quality, integrated geospatial data and improved products and services including new generation digital topographic maps.

5.2.3 Accessing the National Spatial Reference System

Presenter
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NOAA's National Geodetic Survey (NGS) defines, maintains, and provides access to the National Spatial Reference System (NSRS) - a consistent coordinate system that defines latitude, longitude, and height throughout the United States and is designed to meet our nation's economic, social, and environmental needs. The reference stations form a network used to accurately position other points of interest. Surveyors and mapping professionals use the NSRS to ensure their positional coordinates are compatible with those determined by others. In this way, when individuals create maps; mark property boundaries; and plan, design, and build roads, bridges, and other structures, everything matches up.

The backbone of the NSRS is a network of Continuously Operating Reference Stations (CORS) which provide Global Positioning System (GPS) data to support three-dimensional positioning. NGS

provides simplified access to high-accuracy NSRS coordinates via a Web service called the Online Positioning User Service (OPUS). A user may submit to OPUS a GPS data file collected with a survey-grade receiver and obtain a NSRS position via email. OPUS requires minimal user input and uses software which computes coordinates for NGS CORS network. The resulting positions are accurate and consistent with other NSRS users.

5.3.1 South Carolina DOT's Project Screening Tool an effective utility to streamline the project planning process

Presenter
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Co-Presenter
Nasser Vakili-Rad
SCDOT

South Carolina DOT wanted to devise a way to streamline the project planning process. They needed a more efficient way to present project planning information and gather inputs from agencies. The Project Screening Tool (PST) was designed to meet that end. The Project Screening Tool (PST) web site makes information available about proposed transportation project that are in the early stages of planning. The PST tool provides a means to input and update information about transportation projects and gather comments and supporting documentation from agencies about the effect that a project would have on resources. At the early stages of planning, the information provided by agencies helps identify the affects of the proposed project on natural and human resources. The intent during the screening process is that agencies provide specific information to identify key project issues early in the planning process. The awareness of potential project effect to important environmental, cultural and community resources can result in modification of project proposals or removal of projects from consideration, ultimately resulting in time and cost savings to the SCDOT project planning process.

5.3.2 NMRoads.com a Configured Off The Shelf ATIS System

Presenter
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Co-Presenter
Steve Schroeder
President
RealTimeSites

NMRoads.com New Mexico's ATIS is an instance of a configured off the shelf product called RealMap. The implementation integrates GIS Data from NMDOT along with modules for 511, road condition reporting, public transportation, tourism information, weather information etc. Services for these modules receive information from and as appropriate send data to roadway sensors and devices including video cameras, Dynamic Message Signs, traffic sensors, GPS locations from transit assets, weather data, Highway Advisory Radios and subsciber updates via SMS email and social networks. The highly available web site and mobile application are Rich Internet Applications that connect to an enterprise Java back end and ESRI's ArcGIS server and rich mapping API39's. In this presentation we will demonstrate the appication and discuss how it was configured for NMDOT meeting their budget constraints in this challenging fiscal environment.

5.3.3 GIS Supporting Winter Operations

Presenter
Gary A. Waters
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Co-Presenter
Alan Smith or Tom Clay
GIS App. Specialist Mgr.
WADOT

Winter operations pose a variety of challenges to the DOT. How much material left the yard may be known, but where it went may not. How many plow trucks are operating is probably known, but exactly where may not. Road conditions may be known, but not through a geographic display. The data to support the effectiveness of the winter operations may be available, but the analysis of that data

spatially may not. Looking at tabular data related to winter operations provides performance measurement information, but the analytics provided by spatially enabling that data significantly increase its value. Learn how GIS technology has been used at Washington DOT to improve live storm event situational awareness as well as historic analysis. See how GIS is used to integrate live truck locations, live camera feeds, road sensors, truck sensors such as blade angle or material release rates, live traffic flow, road characteristics, weather data and others all in a visual, real-time interface. Post storm event performance measurement analysis will be discussed as well.

5.4.1 Automated Oversized Overweight Permitting and Routing

Presenter
Jay Adams
Tribal Coordinator
OKDOT
jadams@odot.org

Co-Presenter
James O. Brown
Industry Consultant
Intergraph Corp.
james.o.brown@intergraph.com

The Oklahoma Department of Public Safety's Size and Weight Permit Division (SWPD) is responsible for issuing Oversized Overweight (OSOW) vehicles a permit to operate within the State of Oklahoma. The Oklahoma Department of Transportation is responsible for operating a safe transportation system and performing engineering analysis of the bridge structures to ensure oversized and overweight vehicles can safely pass under and over a particular structure.

In 2006 SWPD manually evaluated and routed over 194,000 permitted loads using manually-updated paper maps. In 2007 this number increased to over 217,000 and in 2008 this number increased further to 241,000. The time line to receive a permit has been increasing accordingly and delaying the trucking industry in receiving permits. The current process is extremely labor intensive and unsustainable with the level of staff available today. In order to accommodate the increased level of permit requests for OSOW vehicles, the State recognized a need to automate the permitting and routing process.

The Oklahoma Department of Transportation in cooperation with the Department of Public Safety selected Intergraph, partnered with Cambridge Systematics a recognized leader in the commercial motor vehicle community, to deliver an automated OSOW Permitting and Routing solution via the internet. The solution will streamline the workflow for requesting and approving an operating permit for the state of Oklahoma while providing a robust routing application to evaluate alternate routes using existing enterprise roadway and bridge data as constraints on the network. The solution also provides the ability to manage temporary and long term restrictions.

This presentation will provide an overview of the business drivers for implementing such a solution along with the technical approach selected to satisfy the OSOW permitting and routing requirements. A prototype demonstration will be included.

5.4.2 National Oversize / Overweight Preliminary Route Review with Online Mapping Tools

Presenter
Dan Vogen
Director, Software Development
Bentley Systems, Incorporated
dan.vogen@bentley.com

Bentley Systems provides oversize / overweight permitting and routing solutions to state DOTs. Solutions to date have used state GIS, road inventory, bridge inventory, structural models, and maintenance and construction planning data. Using the state data ensures state evaluation of permit moves is in accord with exactly what the state says exists in the field. This results in the best possible evaluation for a single state. However, many OS/OW moves occur between multiple jurisdictions. Using some third party processes, with some state data, a "preliminary" evaluation can be made of a movement across multiple jurisdictions. This presentation will address the use of third party data and processes in conjunction with state data, detailing the pros and cons of each aspect of such processes, along with technical challenges and business benefits.

5.4.3 Green Transport Routing

Presenter
Dan Gibbons
Product Manager
NAVTEQ
dan.gibbons@navteq.com

Describe how routing and route optimization through detailed map technology can save money and lower the carbon footprint of the transport industry.

6.1.1 Tracking Defects Using GPS

Presenter
Judah Lynam
GIS Specialist
USDOT/FRA
judah.lynam@dot.gov

Co-Presenter
Raquel Wright
GIS Program Manager
USDOT/FRA
Raquel.wright@dot.gov

The Federal Railroad Administration (FRA) promotes and regulates safety throughout the Nation's railroad industry. FRA executes safety regulations and inspections with safety inspectors who operate out of eight regional offices. Each region contains five disciplines: Hazardous Materials, Motive Power and Equipment (MPE), Operating Practices, Signal & Train Control, and Track Structures. Currently, the FRA is geocoding inspections using a Digital Track Notebook (DTN) to identify track defects. The FRA is developing a GIS dashboard to show where inspectors have been and where they have not been within their territory. This web application is using the latest technology from ESRI ArcGIS Server 9.3.1 and Microsoft's Silverlight. This presentation will highlight the FRA's track inspections, the development of the web application, and the data collected and used within the GIS.

6.1.2 Application of GIS for a Managed Use Lane Study

Presenter
Feng Lu
Lead Planner/GIS Analyst
Parsons Brinckerhoff
lufe@pbworld.com

Managed Use Lane (MUL) is a concept that focuses on pricing, vehicle eligibility, and access control in order to proactively manage and operate traffic lanes, thereby improving the efficiency of existing highway networks. Since demand has rapidly outpaced infrastructure capacity within many metropolitan areas, MUL strategies have become an ideal solution.

New York State DOT is currently conducting a feasibility study to assess the implementation of MUL strategies on the National Highway System (NHS) in New York City and surrounding Nassau and Westchester counties. GIS is used to integrate and manage databases from various resources; it is employed as a tool to analyze and identify MUL corridors; and it is used to provide a visual presentation of analysis results.

In particular, the author explains the use of GIS in identifying high priority candidate corridors based on congestion, speed, safety, and transit demand criteria.

6.1.3 An Example of a Successful State-Wide Enterprise GIS Program and its Impact upon Safety Data Systems

Presenter
Jeremiah Glascock
Safety Systems Manager
TSASS, Inc.
jglascock@tsass.com

Co-Presenter
Ron Cramer
Owner
Digital Data Tech. Inc.

The goal of this presentation is to describe the LBRS Data Collection Methodology with respect to Ohio's successful state-wide enterprise GIS Program. We will discuss the many benefits to an LBRS system with respect to Traffic Safety Data. When created at these highest of standards, the data can enhance not only your inventory of roadway assets and address points, but it can provide a funding mechanism for your roadway safety needs enabling you to accurately locate crashes and determine high hazard locations; act as the foundation for reliable mapping in Next Generation E9-1-1 applications; streamline workflow via always accurate data at the fingertips of those who need it; Topics we will discuss: What compels local and county government to develop the Linear Referencing System data the DOT needs How the field-verified centerline and address data is maintained at the local level without versioning issues. Why you can expect to achieve crash data location success rates of 95% or better using an LBRS dataset. Why Ohio expects 100% return on a yearly basis from an estimated increase in its share of FHWA safety dollars. The convincing results when examining a side-by-side comparison of crash data processed with and without an LBRS dataset. How using accurate and complete LBRS data results in more efficient crash data processing and analysis.

6.2.1 Replacing Legacy Systems with a COTS

Presenter
Heather King
Manager, Road Inv. and Classification Services Unit
ODOT
heather.l.king@odot.state.or.us

Co-Presenter
Marc Kratschmar
Exor

Oregon DOT (ODOT) is undertaking a project to implement a COTS software package to replace two legacy road inventory databases. The new system, TransInfo, will be the repository for most of ODOT's HPMS data, and will maintain Oregon's state highway network. TransInfo is being set up as a foundation for other asset management data to be added in the future. The system will be in production in mid 2010 and is already paying dividends in the form of improved data quality and better data integration. This presentation identifies lessons learned during the procurement and implementation of the project.

6.2.2 SCDOT Initiates Innovative Project to Capture Local County Road Data

Presenter
Donald McElveen
GIS Manager
SCDOT
McElveenDE@dot.state.sc.us

Co-Presenter
David Kingsbury
Dir. of Info. Solutions
Rolta International

SCDOT is working on a project to work with all South Carolina counties to more accurately capture local County road networks and their continued updates . Currently, local data is collected on an ad-hoc basis and may be provided as paper maps, notes, or GIS data. Most of the South Carolina counties have some degree of GIS and can provide CAD files and/or GIS files, which can be imported into SCDOT's Roadway Information Management System called RIMS. Despite state level initiatives to develop GIS standards, it is expected that each county maintains and structures their data in their own way. This creates a need for conflation efforts to correct attributes and/or geometry to work in the SCDOT systems. The overall result will be more accurate recording of roadway mileage. SCDOT currently has approximately 60,000 miles of roadway in the master database. It is estimated that as much as much as another 10% of miles may not be accurately accounted for.

The accurate recording of mileage benefits the participants by potential increases in funding. SCDOT will in turn have the most accurate information statewide. As part of this effort, SCDOT has agreed to maintain address information collected/created by the counties in the statewide GIS data as part of ongoing collaboration with the State GIS coordinator. This will result in a statewide routable road network.

This presentation will highlight the project and the best practices developed to be shared with all attendees.

6.2.3 Kentucky's Transportation GIS: An Evolving Enterprise GIS

Presenter
Will Holmes
Acting Branch Manager, Engineering & Web Services
Kentucky Transportation Cabinet
Will.Holmes@KY.GOV

GIS technology is a constantly moving target. "Cloud Computing" is replacing "Service Oriented Architecture" as the latest buzz for GIS development. The Kentucky Transportation Cabinet's (KYTC) GIS continues to evolve to serve its internal and external customers. For almost two decades, the Cabinet has grown GIS through a trajectory of base data creation to simple stovepipe solutions to greater and greater data integration across traditional lines (tabular/spatial, agency boundaries, etc.). This presentation discusses our evolution and what we've learned, where we are today, and where our future development is focused.

6.3.1 From Photolog to Laser Scanning Scaling up and Maximizing the Utilization of Arizona's DOT Mobile Data Capture System

Presenter
Rob Huber
Transportation Segment Manager
Trimble
rob_huber@trimble.com

Co-Presenter
Jim Snow
Senior Project Manager
AZDOT

In 2008, the Information Technology Group (ITG) at the Arizona Department of Transport was tasked with replacing their existing photolog data capture system. At that time, the primary purpose of the new system was to solve the following shortfalls of the aging equipment:

- Increase image resolution in order to assess all required roadway conditions and assets
- Reduce highly labor-intensive (ITG staff) data post-processing required to ensure imagery and associated metadata is fully compliant with ADOT's Linear Referencing System
- Improve positional accuracy for each image capture.
- Photolog van has limited lifespan as it currently has logged over 136,000 miles and is a model year 2000.

The current state of the economy is pressuring many DOT agencies to maximize the investments made in mobile data capture technology, and in this regard, ADOT recognized an opportunity to expand the capabilities of the core data capture platform. Specifically, the addition of laser scanners and the calibration of the high resolution digital cameras offered substantial value and return-on-investment to other stakeholders within the DOT. Through internal marketing campaigns, the ITG division was able to provide other divisions within the DOT a comprehensive information solution for:

- Highway Performance Monitoring System (HPMS)
- Feature (Asset) Inventories
- Traffic Logs
- Contract Engineering Firms (planning for construction projects)

This presentation will focus on the current uses and information that is obtained from the Mobile Data Capture System, and how a structured collection program and data deployment method proved essential for ease of use of other divisions in the DOT.

6.3.2 Web Enabling VideoLog Viewers

Presenter
Jesse C. Jay
Director
GeoDecisions
jjay@geodecisions.com

This presentation will share GeoDecisions' experiences on technologies, business needs, data and portal integration as they directly apply to and support VideoLog Viewers for transportation agencies. Practical experiences from four DOT projects will be shared, discussed and compared.

6.3.3 LIDAR Collection and Integration for the Hawaii DOT

Presenter
Larry Mattke
GIS Manager
Mandli Communications, Inc.
lmattke@mandli.com

Co-Presenter
Goro Sulijoadikusumo
Planning Survey Engineer/GIS Admin.
HIDOT
Goro.Sulijoadikusumo@hawaii.gov

Mandli Communications, Inc. has been assisting the Hawaii Department of Transportation with their photolog and road inventory data collection operations since 2003. In 2009, Mandli additionally began a LIDAR data collection project for the state maintained highways. Positional, LIDAR, and imaging data was collected for the entire state-maintained highways network on Oahu. The goal of the Hawaii DOT is to collect, maintain, and use high quality, accurate data to improve their business processes. Mandli is currently working with the Hawaii DOT to create data management workflows that are efficient, intuitive, and compatible with the end user software, such as Bentley's InRoads and Integraph's GeoMedia product suite. The Hawaii DOT is one of the first agencies to utilize the capabilities of this new positional, LIDAR, and imaging data set, and this presentation will show how the process of collection to analysis improves Hawaii's capabilities to make better, more informed decisions on their facilities.

6.4.1 Case Study | Designing and Implementing a GIS-Centric Pavement Management System for the City of Alexandria, Virginia

Presenter
Craig Schorling
Business Development Manager
Transmap Corporation
cschorling@transmap.com

Co-Presenter
L.A. McCracken
City of Alexandria, VA

Situated six miles south of Washington, D.C. along the western bank of the Potomac River, the City of Alexandria is home to approximately 140,000 residents (2007 census estimate). With 15.2 square miles of land area and a resulting population density of 9,200 persons per square mile, the City of Alexandria can be classified as a dense urban city. To support its residents, businesses, and visitors vehicular transportation needs, the City's Department of Transportation & Environmental Services maintains approximately 270 centerline miles of paved roadways and alleys.

This case study will present: 1) the efforts the City of Alexandria undertook to implement its GIS-centric Pavement Management System, 2) how the City and its consultant team adapted industry standard software applications and inspection approaches to accommodate several unique characteristics of the City's street network, associated traffic patterns, and localized M&R strategies, and 3) and how the MicroPaver PCI results were adapted and interpreted to develop a multi-year M&R strategy. Project strategies, critical success factors, outcomes, and lessons learned will be discussed.

Key discussion topics will include:

- Leveraging industry standard / open architecture technology tools and inspection methodologies
  - ESRI ArcGIS (linear reference system, pavement network definition, inspection areas)
  - MicroPaver (distress analysis and PCI calculations)
  - ASTM D 6433 - 07 | Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys

- Developing a consistent / repeatable inspection methodology
  - definition of pavement network (routes, sections, branches) (Network, Branches, Sections)
  - definition of inspection areas (program level vs. project level, locating inspection buffers)
- Establishing inter-rater / reviewer inspection consistencies
- Leveraging High Definition (resolution) and high accuracy (positional location) imagery to support pavement distress detection and evaluation
- Maintaining flexibility in adjusting standard inspection approaches and interpretation of PCI values to accommodate local conditions (road geometry, traffic patterns) and M&R strategies

6.4.2 Powerful Integration of GIS, Asset Management, Work Order Management, CRM and Related Technology in Transportation – You can Have it All Without Selling Your Soul!

Presenter
Ramzi K. Bannura
Geospatial Programs Manager
Annew Arundel County Maryland
rbannura@aacounty.org

Over the past few years, Anne Arundel County has continued to raise the level of the organization-trade's asset management, maintenance management and pavement management programs through the sophisticated use of GIS, such as via dynamic segmentation and geodatabases, and related technology for tracking assets and analyzing problems for the transportation needs of AA County. Anne Arundel DPW Bureau of Highways has successfully re-engineered its systems and processes, and built integrated GIS-based enterprise-wide solutions that offer a valuable real-time view into select County assets. This presentation will address how GIS and related technology is being used as a base-line integrated with various disparate databases to offer value and up-to-date information at the fingertips of the citizens and employees to support good decision-making in a timely manner.

6.4.3 Leveraging GIS technology to provide a web-based infrastructure asset management system

Presenter
Craig Gallant
GIS Specialist
LJB Inc.
cgallant@ljbinc.com

Counties and municipalities are often tasked with maintaining infrastructure, assets, equipment and much more. But, identifying and maintaining these items can be a daunting task, especially with limited budgets and limited resources.

How can this task be more manageable? This presentation will demonstrate how using a web-based infrastructure management system that is based on geographic information systems (GIS) technology is the best option for managing assets such as traffic signs, guardrails, stormwater outfalls, trees, ADA compliance and much more.

During this presentation, participants will learn how GIS can integrate information into one place, how a GIS-based inventory can make maintenance easier, tips for accurate data collection and how the web-based interface can help technical and non-technical users access data.

Why is this important? With limited budgets, limited resources and federal mandates, municipalities need to get the most out of every dollar. A web-based infrastructure management system can not only store information, but allow for multiple users to log in and review, edit and print asset information from any computer with internet connection. Participants will learn time saving and money saving tricks for leveraging existing GIS applications or using web-based options to improve their processes and efficiency.

GIS-T 2010 Speaker Bio List

Session

1.1.1 Unifying the Colorado DOT (CDOT) Linear Referencing System

Presenter
Lou Henefeld
GIS Support Unit Manager
CDOT
louis.henefeld@dot.state.co.us

Presenter: Lou Henefeld supervises the GIS Support Unit with the Colorado Dept. of Transportation (CDOT). This unit is responsible for GIS user technical support, developing and supporting geographic application software, both on desktops and on the web, and for disseminating geographic data throughout CDOT. Lou has nearly 20 years experience with Geographic Information Systems (GIS).

1.1.2 Integration of WV DOT Road Data and Addressing Data

Presenter
Kevin Kuhn
GIS Analyst
WV GIS Technical Center
kevin.kuhn@mail.wvu.edu

Co-Presenter
Sanghong Yoo
Research Associate
Rahall Trans. Institute
syoo@njrati.org

Presenter: West Virginia State GIS Technical Center: To provide focus, direction and leadership to users of geographic information systems (GIS), digital mapping and remote sensing within the State of West Virginia. The State GIS Technical Center was established under Executive Order No. 4-93 in November 1993, which specified that the Technical Center should provide technical support services to support the development and operation of GIS in West Virginia. On April 23 1998, Governor Cecil Underwood dedicated the West Virginia State Geographic Information Systems (GIS) Technical Center in new laboratory facilities in the Department of Geology and Geography at West Virginia University.

Co-Presenter: Mr. Yoo is a Research Associate and Principal Investigator at the Nick J. Rahall Appalachian Transportation Institute (RTI). He received a Master degree in Physical Science and Environmental Engineering and he is currently working on his PhD in Civil Engineering. His responsibilities are GIS deployment, data collection, data analysis, data warehouse, application development, web-based GIS, and training.

1.1.3 Putting the LBRS and other GIS datasets to Work for Traffic Modeling Networks

Presenter
Sam Granato
Transportation Eng.
OHDOT
sam.granato@dot.state.oh.us

Co-Presenter
Carrie Whitaker
Transportation Eng.
Erie County Dept. of
Planning and Zoning

Presenter: Sam Granato works in the Ohio DOT's Office of Multi-Modal Planning, where he is responsible for statewide and metropolitan traffic model development and project impact studies. Prior to that, he was the city transportation planner for Cedar Rapids, Iowa. He has a Bachelor's degree in Civil Engineering from the University of Illinois and a Master's in Urban Planning from the University of Iowa.

1.2.1 Mapping the USDOT ARRA Projects

Presenter
Stephen M. Lewis
Geospatial Information Officer
USDOT
steve.lewis@dot.gov

Presenter: Steve is Director of the Office of Geospatial Information Systems at the Bureau of Transportation Statistics (BTS) and the Geospatial Information Officer for USDOT. Steve got his first exposure to GIS for Transportation while in graduate school and now has more than 22 years of professional experience. In addition to BTS, Steve has worked at the Federal Highway Administration and the National Imagery and Mapping Agency. He holds a B.S. in Systems Engineering and a M.Eng. in Civil Engineering, both from Virginia Tech.

1.2.2 ORSTATS - Oregon's ARRA story

Presenter
Ed Arabas
Senior Operations and Policy Analyst
State of Oregon
edward.p.arabas@state.or.us

Presenter: Ed is a Senior Operations and Policy Analyst with the State of Oregon Department of Administrative Services, where he specializes in enterprise geospatial activities. He began his career in state service at the Oregon Department of Transportation modeling land use, economy, and transportation to forecast future highway needs.

1.2.3 Using Web GIS to Track Government Spending and Performance

Presenter
Eric Floss
Transportation Practice Manager
ESRI
efloss@esri.com

Presenter: Eric Floss is the National Transportation Practice Manager for ESRI. He received a bachelor's degree from the University at Buffalo, New York and has experience in transportation management with local, state and federal agencies. He has worked extensively implementing Safety, Asset, Pavement, and LRS solutions. Most recently, he has been involved in several ARRA-related projects assisting government agencies with the development and implementation of GIS solutions to help meet the reporting and accountability requirements mandated by the Recovery Act.

1.3.1 Geotechnical GIS Website

Presenter
Pallavi Bhandari
Computer Analyst III
Louisiana Transportation Research Center
pallavi@lsu.edu

Presenter: Ms. Pallavi Bhandari is a Computer Analyst, and has been working with Louisiana Transportation Research Center (LTRC) for about three and half years. Prior to joining LTRC, Ms. Pallavi worked as a Senior Software Engineer at Accenture Pvt. Services Ltd for three years. She holds a B.A. in Computer Science from the Bapuji Institute of Engineering and Technology in India.

1.3.2 Web based Capital Improvement Application for Public Transit

Presenter
Martin Catala
Associate Researcher/GIS Manager
Center for Urban Transportation Research
catala@cutr.usf.edu

Presenter: Martin Catala is the GIS Manager at the Center for Urban Transportation Research. He has been conducting transit related GIS research for over a decade.

1.3.3 Iowa DOT Service Layer

Presenter
Eric Abrams
Spatial Coordinator
Iowa DOT
eric.abrams@dot.iowa.gov

Presenter: Eric Abrams works at the Iowa Department of Transportation in the Information Technology Division. Eric is the Iowa DOT Geospatial Coordinator; and has developed many geospatial systems including Aviation, GIMS, geospatial service layer (GeoNexus), and is heavily involved in the Iowa Linear Referencing System. Some current projects include implementation of LRS based systems to reduce cost of data collection and dissemination, state address point layer, Iowa sign inventory, statewide LiDAR and many others. Eric has 20 years DOT experience and 14 years of Oracle/Oracle Spatial database design and GIS experience and has a degree in Business Information Systems.

1.4 Geospatial Information Technologies for Asset Management Peer Exchange

Presenter
Katie Zimmerman
Applied Pavement Technology

Presenter
Michael Miles
CalTrans

Presenter
Jeff Price
VDOT

Presenter
Alan Smith
WSDOT

Presenter: Katie Zimmerman, President, Applied Pavement Technology

Presenter: Michael Miles, Deputy Director Maintenance and Operations, California Department of Transportation

Presenter: Jeff Price, Assistant Director of Operations Planning, Virginia Department of Transportation

Presenter: Alan Smith, Lead GIS Architect/GIS Applications Development Manager, Washington State Department of Transportation

2.1.1 Estimating Trip Diversion by Using Impedance in the Flooding Region

Presenter
EunSu Lee PhD
North Dakota State University (NDSU)
Transportation and Logistics Program
eunsu.lee@ndsu.edu

Presenter: EunSu Lee is a Ph.D. candidate student in Transportation and Logistics program at North Dakota State University joining the program in 2005 after receiving M.S. in Industrial Management Engineering at NDSU. Mr. Lee also holds an M.B.A. from Hanyang University in Seoul, Korea in 1999. Currently, Mr. Lee is a graduate research assistant for the Upper Great Plains Transportation Institute, Fargo, ND. Mr. Lee is currently working on intermodal transportation for the global supply chain and emergency management routing with Geographic Information Systems (GIS) and logistics network simulation.

2.1.2 GIS Network Analysis for Finding the Potential Metro Rail Ridership by Access Modes in Los Angeles County

Presenter
Bin Mo (Owen)
Graduate Program
Department of Geography and Urban Analysis California State University, Los Angeles
binowen@hotmail.com

Presenter: Bin Mo (Owen) earned his B.A in English from Sun Yat-Sen University, Guangzhou, China in 2005, and also earned his B.A from California State University, Los Angeles (CSULA) with a major in Geography Information Systems in 2009. He is currently completing his M.A in Geography Information Systems and Transportation Planning at CSULA. Owen is interning at the Los Angeles County Metropolitan Transportation Authority (LACMTA).

2.2.1 HPMS and the Dualing Network

Presenter
Tom Roff
HPMS Database/GIS Applications
USDOT/FHWA
thomas.roff@dot.gov

Presenter: Tom has been with FHWA since 2001 and leads the HPMS software development team. The past three years has been retooling HPMS and other data programs at FHWA to participate in the spatial world.

2.2.2 Finally: a Way to Create, Standardize and Locally Maintain a Statewide Seamless GIS Transportation and E9-1-1 Repository

Presenter
Ron Cramer
President
Digital Data Technologies, Inc.
srutan@ddti.net

Co-Presenter
Bruce Autremont
Sales Manager
Digital Data
Technologies, Inc.

Presenter: A founder of Digital Data Technologies, Inc., Mr. Cramer assisted in the development of the company's solutions for GIS and E9-1-1, and was a proud collaborator in the original pilot project for Ohio's Location Based Response System (LBRS). To date, DDTI has successfully mapped more than 1.8 million address points and nearly 70,000 centerline miles to meet the high accuracy standards of the LBRS. Clientele across 12 states employ DDTI's proven E9-1-1 solutions, and more than 30,000 users around the world have downloaded DDT's AccuGlobe GIS software. Mr. Cramer is actively involved in intelligent transportation systems and was nominated and appointed to the ITS mid-America Executive Committee for the years 1997 to 2003. He has been a guest speaker at numerous conferences discussing topics related to GIS, emergency response location mapping and transportation engineering. Mr. Cramer has chaired the Urban and Regional Information Systems Association (URISA) Street Smart and Address Savvy Conference, now known as the URISA and NENA Addressing Conference. Mr. Cramer is a member of URISA, the National Emergency Number Association (NENA) and has affiliations with numerous other organizations. He has written feature articles that have appeared in The Ohio Engineer, Roads & Bridges, Illinois Engineer, Michigan Engineer, P.O.B. and Photo Electronic Imaging. Mr. Cramer studied Civil Engineering and Computer Science at Michigan Technological University, and has a degree in Business from Eastern Michigan University.

2.2.3 Ideas to Help with the HPMS Submittal

Presenter
Don Kiel
Senior Project Manager
GeoDecisions
dkiel@geodecisions.com

Co-Presenter
William (Bill) G. Schuman
Senior Project Manager
GeoDecisions

Presenter: Mr. Kiel has been active in GIS and transportation work since 1984. Since 1993 he has been with GeoDecisions, State College, PA, and is Senior Project Manager. He served nine years as the GIS Director at Johnson City, TN. Mr. Kiel earned an M.S. degree in Geography from Virginia Tech in 1983 and a B.A. degree in Geography from the University of Akron in 1981. He has taught GIS classes at the collegiate level, published numerous papers, and given many presentations on GIS applications. He is a lecturer for the NHI Course "Applying GIS and Spatial Data Technologies to Transportation." His current interests in the GIS-T field include strategic planning, representation of linear networks, integration of GIS and intelligent transportation systems, and Web-based applications of GIS in transportation.

Co-Presenter: Mr. Schuman has worked for a variety of private and public organizations, including the Wyoming Department of Transportation and the Iowa Department of Transportation. At Iowa DOT, Mr. Schuman was their GIS Coordinator from 1997-2005 where he was the project manager for the development of the Iowa DOT's Linear Referencing System (LRS). He has worked for GeoDecisions as a Senior Project Manager since 2005, and provides transportation GIS/LRS subject matter expertise to several transportation organizations.

2.3.1 Display of Geographic Transportation Data Stored and Integrated in a SQL Server Database

Presenter
Francisco J. Torres
Principal Transportation Engineer
NCTCOG
ftorres@nctcog.org

Presenter: Francisco J. Torres is a Professional Engineer for the State of Texas. He holds a M.S. in Computer Science Engineering from the University of Texas at Arlington. He also obtained a M.S. in Civil Engineering with emphasis in Transportation Planning and Traffic Engineering from the Virginia Polytechnic Institute and State University. He received his B.S. in Civil Engineering from the Universidad Nacional Autonoma de Mexico in Mexico City. He has 22 years of experience as a transportation planner and traffic engineer working for public agencies and private firms both in the US and Mexico. Currently he is a Principal Transportation Engineer at the North Central Texas Council of Governments (NCTCOG).

2.3.2 ArcPad a powerful new tool in asset inventory and management at Nevada DOT.

Presenter
Eric Warmath
GIS Program Manger
NVDOT
ewarmath@dot.state.nv.us

Presenter: Eric Warmath has been the GIS Program Manager at NDOT for the last 8.5 years. Prior to working at NDOT he had over 13 years experience with the USGS and DOD. He has significant technical experience with GIS and Remote Sensing and has received several awards in these areas including awards from ASPRS. He has also been a project manager on several GIS based projects at NDOT and a team member on several other projects with a GIS component.

2.3.3 Building a National Railroad Bridge Dataset

Presenter
Derald Dudley
Geographer
USDOT/RITA
Derald.Dudley@dot.gov

Co-Presenter
Judah Lynam
GIS Specialist
USDOT/FRA
judah.lynam@dot.gov

Presenter: Derald has been with the US Department of Transportation since 2001 where he concentrates is efforts towards building applications that automate data generation and cartographic production. Before that he worked at the National Oceanic and Atmospheric Administartion's Marine Chart Division as a cartographer. He received his M.S. in Computer Science from Hood College in 2001 and B.S. in geography from Towson University in 1995.

Co-Presenter: Judah is GIS Specialist at the USDOT's Federal Railroad Administration (FRA). Judah has worked with the FRA for a little over two years as both a contractor previously, and as a Federal employee, currently. He has a Bachelor's degree in Geography from the University of Delaware.

2.4.1 Web-accessible Metadata Tools

Presenter
William Schuman
Senior Project Manager
GeoDecisions
wschuman@geodecisions.com

Presenter: Mr. Schuman has worked for a variety of private and public organizations, including the Wyoming Department of Transportation and the Iowa Department of Transportation. At Iowa DOT, Mr. Schuman was their GIS Coordinator from 1997-2005 where he was the project manager for the development of the Iowa DOT's Linear Referencing System (LRS). He has worked for GeoDecisions as a Senior Project Manager since 2005, and provides transportation GIS/LRS subject matter expertise to several transportation organizations.

2.4.2 Use of MobileGIS for Sign Inventories

Presenter
Dan Paoly
GIS Coordinator
HDR
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Co-Presenter
Amy Staud
Traffic Engineer
HDR
amy.staud@hdrinc.com

Presenter: Mr. Paoly is responsible for all aspects of GIS design, development, utilization, maintenance and training. Mr. Paoly has managed a variety of successful GIS projects ranging from asset management, environmental, municipal, utility, and planning applications. He has extensive experience in data automation, analysis, high quality cartographic output, and field data collection using Global Position Systems (GPS). His recent experience includes the development of a MobileGIS application using ArcPad to facilitate the data collection for the US 50 Sign Renovation and I-77 Sign Renovation inventory phases. Mr. Paoly is a certified Geographical Information Systems Professional (GISP).

Co-Presenter: Amy Balmer Staud, P.E., PTOE is a Senior Traffic Engineer and Professional Associate at HDR, Inc. in Weirton, WV. Her background includes conducting traffic studies and the development of traffic design plans including signing, pavement markings, and traffic signals. She is a graduate of West Virginia University with a B.S. and M.S in Civil Engineering.

2.4.3 The Evolution of Mobile Mapping

Presenter
Jason Amadori
CEO
Earth Eye, LLC
jamadori@edats.com

Presenter: Jason Amadori originally hails from Rochester, NY and began his career as a Biologist for the Reedy Creek Improvement District in Orlando, FL. His work with Asset Management, Water Quality Sampling and NPDES permitting support led him to employ the use of GIS and GPS technology for the creation of maps and databases. This experience has earned him spots on Asset Management committees, client advisory boards as well as many speaking appearances at National conferences.

3.1.1 A SOA-based Web Map Road Network System Application

Presenter
Archer Carr
Roadway Network Manager
VDOT
Archer.Carr@VDOT.Virginia.gov

Co-Presenter
Jamie Christensen
Applications Manager
WorldView Solutions, Inc.

Presenter: Archer Carr is the Roadway Network Manager for the Virginia Dept. of Transportation. He has a B.S. in Geography from Radford University, with a specialty in Technical Cartography. He has 15 years of experience as GIS and Database Developer, DBA, and Architect. Past positions include designer/developer of VDOT's Statewide Planning System GIS, Technical Lead on the VDOT Comprehensive Environmental Data And Reporting System (CEDAR) project, Oracle DBA, and Technical Architect/Data Modeler for VDOT's Roadway Network System (RNS).

3.1.2 E-TRIMS Spatially Enabling the Tennessee Department of Transportation (TDOT) Enterprise for Decision Support

Presenter
Jeff Murphy
Information Systems Manager
TDOT
Jeff.Murphy@tn.gov

Co-Presenter
Bruce Aquila
Sr. System Consultant
Intergraph Corporation
bruce.aquila@intergraph.com

Presenter: Jeff Murphy is an Information Systems Manager in the GIS Mapping and Facilities Data Office of the Tennessee Dept. of Transportation. He manages the Tennessee Roadway Information Management System (TRIMS). The TRIMS application provides user with a view of roadway data, traffic, bridges, crashes, railroad grade crossings, pavement conditions, and photolog images. Jeff has over 25 years of information systems experience combined in transportation, mining, distribution, manufacturing, and banking. He holds a B.S. degree in Information Systems Management from Aquinas College in Nashville TN.

Co-Presenter: Bruce has been with Intergraph for 25 years. He is currently serving as a Senior Transportation consultant in the Government and Transportation Business Unit. Among his responsibilities are business development, consulting, industry conference presentations and product requirement collection. His prior responsibilities included product planning, technical training and software testing. He works exclusively with State Department of Transportation's, Metropolitan Planning Organization's (MPO), Local Governments and Transit agencies in the areas of linear referencing, network and data modeling, and surface transportation analysis applications.

3.1.3 Supporting VDOT's Enterprise GIS

Presenter
Jackie Magnant
Project Manager
ESRI
jmagnant@esri.com

Co-Presenter
Melanie Rippon Seigler
VDOT
Adrien Litton
ESRI

Presenter: Jackie Magnant joined the ESRI Professional Services Transportation and Logistics Team in July of 2006. She has spent over twenty years in the field of GIS and Information Technology and has expertise in both transportation and local government arenas. As VDOT's Enterprise Advantage Program (EAP Technical Advisor, she is responsible for providing focused, proactive technical advisory on demand, guidance in planning EGIS architecture and design, product selection, training requirements and overall EGIS strategy.

Co-Presenter: Melanie Rippon Seigler has worked in the GIS Industry since 1988 in federal, state and local government across a wide variety of fields including natural resources, public health, economic development, E911 and transportation. Melanie has worked for the Virginia Department of Transportation since 2000, and currently serves as GIS Program Manager for the Department.

Co-Presenter: Adrien Litton has been with ESRI for 19 years and works as a senior technical consultant and project manager in ESRI's Professional Services Division where he specializes in database design and implementation for state and local governments. Mr. Litton's particular expertise is in building databases to support highway management, streets and addresses. Mr. Litton acted as a consultant for the Federal Highways Administration (FHWA) to provide database design and implementation guidance for the Highway Performance Monitoring System (HPMS) 2010+ Reassessment. He has architected database designs on at state and local levels including an integrated enterprise GIS data model for the Eastern Band of Cherokee Indians (EBCI), the New York State Accident Location Information System (ALIS), and the City of Los Angeles Traffic Asset Management System (TAMS). Mr. Litton also served as the technical reviewer of ESRI's recently published ESRI Press book *Designing Geodatabases for Transportation* by J. Allison Butler.

3.2.1 CAD-GIS integration in highway engineering design projects

Presenter
Keith Raymond
Product Manager, Geospatial Desktop Products
Bentley Canada
keith.raymond@bentley.com

Co-Presenter
Todd Rothermel
VP Geospatial
HNTB
trothermel@HNTB.com

Presenter: Keith has been with Bentley for over 14 years in a variety of positions, most recently product manager for geospatial desktop products.

Co-Presenter: Todd Rothermel is the director of operations for HNTB's in-house Incubation Center, a group of professionals who create unique technology solutions for the firm's design and engineering practices. In this role, Todd oversees the planning, development and implementation of tools and processes that support the organization's technology strategy and vision. He is also responsible for managing personnel, budgets and the day-to-day operations of various technology teams within the Incubation Center.

3.2.2 Gaining More Insight: Integrating GIS with Primavera Project Management at WVDOT

Presenter
Marshall L Burgess
Programmer Analyst 3
WVDOT
Marshall.L.Burgess@wv.gov

Co-Presenter
Jervetta Bruce
Primevera Consultant
CDP

Presenter: Mr. Burgess is a Graduate of WVU with BS in Computer Science. He has worked 12 years for WVDOT. The first 9 years was in the IT department setting up programs and databases for the many division within

WVDOT. The last 3 years has been with the GTI section of the planning division. Under the guidance of Hussein Elkhansa this section has dedicated itself to implementing GIS technologies at WVDOT. We have redesigned the road inventory log database into a geo spatially enabled SQL database, converted 37000 miles of road from CAD drawings and straight lines into base layer maps, did quality control on the conversions, help support the implementation of several GIS related projects in other divisions including Federal STIP, environmental, State STIP, Stimulus reporting application etc and help train new users.

3.2.3 Right-of-Way Information Management System

Presenter
Aaron Ford
Design/Developer Team Leader
HNTB Corporation
aford@hntb.com

Co-Presenter
Michael Bieberitz &
Jacob Huish
HNTB Corporation

Presenter: Aaron is a certified Geographic Information System Professional with more than ten years of management, consulting, and technical expertise in the information and geospatial technology industry. He has designed, developed, and implemented GIS based information management solutions for numerous DOT's and Tollway organizations across the country to assist in overall program management by providing improved communications between stakeholders through increased centralized access to tabular and spatial data. Aaron currently serves as the Design/Developer Team Leader for HNTB Corporation located in the Chicago, Illinois office.

Co-Presenter: Michael serves as Design/Developer Team Leader in HNTB's Great Lakes Technology group in Chicago. Michael's primary technical experience lies in the design and development of custom GIS/IT solutions for transportation and real estate acquisition projects.

Co-Presenter: Jacob is GIS Analyst for HNTB's Lehi, Utah office and the I-15 CORE freeway reconstruction project. Jacob is in charge of management of the project's Right-of-Way and Utility Information Management System (RUIMS), a web-based GIS transportation program.

3.3.1 Delaware Valley Regional Planning Commission - Traffic Count Request Application

Presenter
William Stevens
GIS Manager
DVRPC
wstevens@dvrpc.org

Co-Presenter
Albert Sarvis
Project Manager
GeoDecisions
asarvis@geodecisions.com

Presenter: Will Stevens is the GIS Manager at DVRPC where he guides the development of mapping and GIS services in support of the Commission and provides coordination among member governments. Will has over 20 years of professional experience and was involved in the transition from manual to digital cartography and the migration from Intergraph to ESRI. He assisted in the design of the Region-wide Transportation GIS project in 2000 and has been the project manager since 2004.

Co- Presenter: Albert Sarvis is a Project Manager and Business Analyst for GeoDecisions working with Government and Transportation clients. Albert is a certified Project Management Professional (PMP) and GIS Professional (GISP) with over 15 years in the GIS Industry. His project experience includes data conversion and application development for city government, utility and transportation clients. He is also an active "corporate" faculty member teaching Geospatial Technology at the new Harrisburg University of Science and Technology.

3.3.2 Using Web 2.0 Mapping Engines in Desktop Applications: Opportunities and Challenges

Presenter
Yu "Bud" Luo
Project Manager
Michael Baker Jr., Inc.
yluo@mbakercorp.com

Presenter: Dr. Bud Luo has more than 15 years of experience in providing innovative geospatial solutions in the transportation, safety, and emergency management sectors. He specializes in creating scalable enterprise solutions.

3.3.3 Traffic Management Center Master Software

Presenter
Matthew Schiemer, P.E.
Director of Intelligent Transportation Systems
GeoDecisions
mschiemer@geodecisions.com

Co-Presenter
Connie Gurchiek
Vice President
GeoDecisions

Presenter: Matt has been working on transportation and Intelligent Transportation Systems (ITS) initiatives since 1996. He joined GeoDecisions in 2000 as a project engineer and currently serves as Gannett GeoDecisions' Director of ITS, working on a wide range of ITS planning, engineering and software initiatives. Matt earned a Bachelor of Science in Civil Engineering from Clarkson University in 1995 and a Master of Business Administration (MBA) from the Pennsylvania State University in 2003. He is a member of ITS Pennsylvania, ITS America and ITS Mexico.

3.4.1 Mile Marker Signs and the Linear Referencing System

Presenter
David DiNocco
Transportation Program Planner
MADOT
david.dinocco@eot.state.ma.us

Presenter: Mr. DiNocco's professional background combines GIS Implementation and Analysis with Information Technology. He has over 12 years experience in the domain, with over 5 years of transportation experience. His GIS software experience includes ArcGIS, AutoCAD, AutoCAD Map, MicroStation, MGE and NEEGIS, a customized version of Vision*Electric. Mr. DiNocco has in-depth knowledge of user interface requirements between GIS and relational database systems. He has experience in user needs analysis and documentation. Additionally, he has experience with Oracle and Microsoft Word, Excel and Access on Windows 95/NT/2000/XP. Mr. DiNocco graduated from Bridgewater State College in January of 1997 with a Bachelor of Science degree in Geography. He currently works for Massachusetts Department of Transportation (MassDOT).

3.4.2 Georeferencing West Virginia DOT's Roadside Assets: An Asset Inventory Case Study

Presenter
Allan Venema
Project Manager
Fugro Roadware Inc.
info@roadware.com

Presenter: Allan Venema has extensive experience managing the collection and processing of the pavement and asset data necessary to infrastructure management professionals. Mr. Venema's civil engineering background gives him valuable expertise to successfully manage pavement/asset projects. Mr. Venema has become a critical member of Fugro Roadware's project management team, and has gained much experience in dealing with some of Fugro Roadware's largest and most technically demanding projects.

3.4.3 Geo-enabling MN/DOT's Real Estate Management System

Presenter
Andrew Buck
Senior Project Manager
Applied Geographics
abuck@appgeo.com

Co-Presenter
Michael Terner
Executive Vice President
Applied Geographics
mterner@appgeo.com

Presenter: Mr. Buck is a Senior Project Manager at Applied Geographics, Inc. (AppGeo) where he managed the MN/DOT REALMS project deployment of the GPV. He regularly manages and implements other statewide, regional and local GIS strategic planning, application development, and data management projects. He is experienced with ArcGIS, web services, and database and business system integration. Mr. Buck has more than 22 years experience in information technology management and implementation. He has a broad background in GIS planning, business process analysis and design, database and application development and integration, and network management.

Co-Presenter: Michael Terner, GISP, Executive Vice President and founding partner.

4.1.1 Building a Successful Geospatial Data Sharing Framework: A Ohio DOT Success Story

Presenter
Fred Judson, GISP
GIS Coordinator
Ohio URISA, Chair
OGRIP Forum, Vice Chair
OHDOT
fred.judson@dot.state.oh.us

Presenter: Fred Judson is a certified GIS Professional from the Geographic Information System Certification Institute (GISIC). He has a Bachelors of Science from Excelsior College and a Post-baccalaureate Certification in GIS from Pennsylvania State University. With over 8 years of experience in Geographic Information Systems, Fred is works at the Ohio DOT where he is responsible for the execution and the integration of district enterprise GIS standards, including GIS web implementations and applications. His current affiliations include Chair for the Ohio Chapter of URISA and Vice-Chair of the Ohio Geographically Referenced Information Program Forum as well as several other GIS committees.

4.1.2 Integrating and Stewarding Spatial Data for West Virginia Trails

Presenter
Evan Fedorko
GIS Analyst
WV University Morgantown, WV
evan.fedorko@mail.wvu.edu

Co-Presenter
Kurt Donaldson
Manager
WV University

Presenter: Evan Fedorko is a geographer, researcher and GIS analyst. He received a BA in geography from West Virginia University in 2001 and an MA in GIS for Development and Environment from Clark University in 2004. He lives and works in Morgantown, WV.

4.1.3 Illinois Highway Information System 2010

Presenter
Jim Conlon
Senior Consultant
GIS Solutions, Inc.
jconlon@gis-solutions.com

Co-Presenter
Dan Wilcox
Development Chief
ILDOT

Presenter: Jim Conlon is a Senior Consultant with GIS Solutions, Inc. working as a Project Manager. He serves as the point of contact for all non-technical communication regarding contract performance issues: goal-setting, staffing, personnel performance, and financial considerations. Has been working in the GIS field for over eleven years and served as a project manager for more than five years. Much of his work is

focused on transportation solutions. Project Management Professional certification from the Project Management Institute was received in August 2005. Before Project Management responsibilities, he worked as a GIS Applications Developer responsible for the development of custom applications for private and public agencies.

4.2.1 How Transportation for the Nation Benefits me?

Presenter
Patricia Solano
Geospatial Practice Lead
Koniag Tech. Solutions
psolano@ksikoniag.com

Co-Presenter
Richard Grady
President
Applied Geographics
grady@appgeo.com

Presenter: Ms. Solano has more than 19 years experience in the architecture, design, implementation and full life cycle management of geospatial projects as Program, Project and Technical Manager. Efforts include agency enterprise geospatial programs, geospatial Internet and desktop application development, geodatabase design and management and geospatial analysis and business intelligence for transportation, environment, resource management and geologic solutions. Ms. Solano holds a PMI Project Management Professional (PMP) certification and has successfully managed transportation geospatial programs for more than 6 years.

Co-Presenter: Richard K. Grady is President of Applied Geographics, Inc. (AppGeo) and directs the Principal Management Team and strategy for the company at-large. In 15 years at AppGeo, he has also provided project planning and management on major geospatial projects, and is directly involved in project performance, working closely with customers and consulting teams. Mr. Grady's body of work over his 30 year career has included strategic projects for federal and state agencies, universities, and private sector companies, including initiatives to implement standards and new technology. In recent years, Mr. Grady has been a leader of AppGeo engagements in GIS strategic and business planning projects for states, state agencies, and regional levels of government. Mr. Grady was Principal in Charge and co-author for the development of state GIS Strategic and Business Planning Guidelines for the National States Geographic Information Council (NSGIC) on behalf of the FGDC in 2006, and led the 2008-09 FGDC effort to evaluate progress in statewide GIS strategic planning, nationwide. Mr. Grady has led or participated in statewide strategic and business planning projects in nine states. Prior to joining AppGeo, Mr. Grady was a Vice President at LaserData Corporation, a software developer for document imaging and workflow management tools, and served in several executive management positions at Intergraph Corporation over a 10 year period, including senior program management roles within the Federal Systems Division, Executive Manager of Mapping and Energy Products, and Applications Manager for Mapping. Mr. Grady earned an MBA from Suffolk University in Boston and received his BS cum laude in Resource Economics from University of Massachusetts, Amherst. He has served as a member of the Federal Geographic Data Committee's (FGDC) Facilities Working Group, and participates in the Homeland Infrastructure Foundation Level Database (HIFLD) Working Group, and is a certified GISP.

4.2.2 Transportation Data Needs for Federal Agencies

Presenter
Timothy F. Trainor
Chief, Geography Division
US Census Bureau
timothy.f.trainor@census.gov

Presenter: Timothy Trainor is Chief of the Geography Division of the U.S. Census Bureau. As the Census Bureau's chief geographer, he is responsible for directing all aspects of the division's work related to development and implementation of geographic and cartographic activities necessary to support the Census Bureau's data collection, processing, tabulation, and dissemination programs for the United States and its territories. These activities revolve around the Census Bureau's TIGER (Topologically Integrated Geographic Encoding and Referencing) automated geographic data base and the MAF (Master Address File) digital address list. Included in this is collecting, maintaining, and developing criteria and reference files for geographic entities in the United States and assigning addresses to the correct geographic locations, fostering partnerships between the Census Bureau and Federal, state, local, and tribal

governments and commercial companies, preparing maps to support the Census Bureau's data collection and dissemination operations, and developing standards and defining cultural and demographic features to meet Census Bureau obligations to the Federal Geographic data Committee (FGDC), the requirements of Executive Order 12906, and the submission to and acceptance of these standards by the American National Standards Institute (ANSI) and the International Standards Association (ISO) committees on geospatial data. He is a member of the Association of American Geographers, Cartography and Geographic Information Society (CaGIS), the National States Geographic Information Council, the Urban Regional Information Systems Association and the Senior Executive Association. Mr. Trainor currently is a Vice President of the International Cartographic Association and chairs the Census Cartography Working Group.

4.2.3 Building a High Quality Rail Network

Presenter
Raquel Wright
GIS Program Manager
USDOT/FRA
Raquel.wright@dot.gov

Co-Presenter
Greg Matthews
USGS
GDMatthews@usgs.gov

Presenter: Raquel is the GIS program manager at the USDOT's Federal Railroad Administration (FRA). Raquel has been with FRA for over 3 years, but has been with the USDOT for 9 years. She has a Master's degree in Geography with a certification in Geographical Information Sciences from George Mason University and a Bachelor's degree in Geography Old Dominion University.

4.3.1 Kansas DOT's new implementation of active Straight Line Diagrams within their GIS web portal

Presenter
Jeff Tomlinson
GIS Transportation Consultant
Intergraph
jeffrey.tomlinson@intergraph.com

Presenter: Jeff has worked in the GIS Transportation industry for the past 15 years. Most recently serving as a GIS Transportation Consultant for Intergraph Corporation.

4.3.2 Single Spatial Store Front: Web Enabled GIS Content Portal

Presenter
Paul Weinberger
Enterprise GIS Unit Supervisor
MNDOT
paul.weinberger@state.mn.us

Presenter: Enterprise GIS Unit Supervisor for the Minnesota Department of Transportation since 2009. Prior to being with MN/DOT was Business Information Systems Manager with the City of Minneapolis.

4.3.3 A GIS Portal for a Multi-State Appalachian Development Highway System

Presenter
Jason Wang
Senior Transportation Specialist
ARC
jwang@arc.gov

Co-Presenter
Sanghong Yoo
syoo@njrati.org
Brad Cains
bcains@njrati.org
Rahall Trans. Institute

Presenter: Mr. Wang is a senior transportation specialist at the Appalachian Regional Commission (ARC) an independent U.S. federal agency with a partnership to 13 Appalachian States -- to foster economic and social development in the Appalachian region. In this position, he works with Federal Highway Administration (FHWA) of USDOT to administer the Appalachian Development Highway System (ADHS) program with annual federal funding of $470 million under SAFETEA-LU. He is also a program director

for Appalachian Local Access Road (LAR) program responsible for review, recommendations to the Commission, and coordination with FHWA and State DOTs for implementation of LAR projects throughout 13 Appalachian states. In addition to his management duties at ARC, he also leads and directs a multi-state GIS system for ADHS developed and operated by the Rahall Transportation Institute (RTI) located in Huntington, WV. In this capacity, he oversees over $1 million federal funds to the project and makes strategic and technical decisions with the project team at RTI. The system is now advanced to an Internet-based enterprise GIS system using client/server technology which allows 13 State DOTs and FHWA to access, update and retrieve ADHS cost estimate information and the program development data.

Co-Presenter: Mr. Yoo is a Research Associate and Principal Investigator at the Nick J. Rahall Appalachian Transportation Institute (RTI). He received a Master degree in Physical Science and Environmental Engineering and he is currently working on his PhD in Civil Engineering. His responsibilities are GIS deployment, data collection, data analysis, data warehouse, application development, web-based GIS, and training.

Co-Presenter: Brad Cains is a software developer at the Nick J. Rahall Appalachian Transportation Institute specializing in web-based GIS application development.

4.4.1 Benefit Cost Analysis of Strategic Provincial Roads in Southern and Eastern Afghanistan

Presenter
John Wisdom
Sr. GIS Analyst
Wilbur Smith Associates
jwisdom@wilbursmith.com

Presenter: Mr. Wisdom has over 21 years of experience in working with geospatial technologies in transportation, planning, and natural resources. He holds a BA in geography from Virginia Tech and an MS in geography from the University of South Carolina. He is one of the firm's key GIS analysts and has been involved in developing various geospatial applications and enjoys conducting geospatial analyses.

4.4.2 Solid Waste Planning and Transportation

Presenter
Barbara L. MacLennan
Outreach Coordinator
Monongalia County
Solid Waste Authority
moncoswa@verizon.net

Co-Presenter
Laura Stiller
Recycling Coordinator
Monongalia County
Solid Waste Authority
moncoswa@gmail.com

Presenter: Barbara L. MacLennan works for the Monongalia County Solid Waste Authority. The mission of the Monongalia County Solid Waste Authority is to provide the residents of Monongalia County with the facilities and services to adequately deal with solid waste and litter control. The facilities and services provided by the Monongalia County Solid Waste Authority (MCSWA) include the clearing of illegal dumps, removal of roadside litter, managing garbage hauler concerns, and providing recycling facilities.

Co-Presenter: Laura Stiller has worked as the Monongalia County Solid Waste Authority (MCSWA) Recycling Coordinator since 2003. She has been instrumental in overseeing the development and implementation of special recycling events, recycling drop-offs, and regular recycling programs in Monongalia County. She is co-founder of the IMPACT E.A.R.T.H (Environmental Awareness and Respecting Tomorrow's Home) and Earth Day 5K. Stiller coordinated the reconstruction of the Monongalia County Comprehensive Solid Waste and Litter Control Plan. As part of several USDA solid waste management grants, she has created workbooks and software tools on creating financially self-sustaining rural solid waste management and recycling. She is the chief liaison between the MCSWA, the public, and the solid waste haulers.

4.4.3 Use of GIS in a transportation recovery plan for disaster response

Presenter
Sandy Mehlhorn
Lecturer
UT at Martin, TN
smehlhorn@utm.edu

Presenter: Ms. Mehlhorn recently completed her doctoral work at the University of Memphis where she began research on disaster recovery. She specifically is interested in recovery of the transportation networks and the identification of roadways to be given priority for reconstruction to allow accessibility to the local region. She is currently a lecturer and coordinator of the Land Surveying and Geomatics Certificate Program at the University of Tennessee at Martin.

5.1.1 Role of GIS Technology in Railways

Presenter
Randall D. Tardy, PE
Global Civil Marketing Manager
Bentley Systems Inc.
randy.tardy@bentley.com

Presenter: Mr. Tardy is a Transportation Engineer practitioner with over 40 years experience including 15 years with Michigan DOT, 20 years with Intergraph and 9 years with Bentley. His experience spans Road and Rail projects. His first GIS-T conference was 1990 in Florida. He is registered in Michigan and Alabama. He has a BS in Civil Engineering from Michigan Technological University and a MS in Transportation Engineering from Michigan State University.

5.1.2 Infrastructure Modeling and Digital Agencies - The convergence of CAD, BIM, GIS, Analysis, Visualization and Collaboration in the Future

Presenter
Doug Eberhard
Sr. Director
Autodesk
doug.eberhard@autodesk.com

Co-Presenter
Connie Gurchiek
Vice President
GeoDecisions
cgurchiek@geodecisions.com

Presenter: For over 20 years, Doug Eberhard has created and implemented innovative IT solutions on over $120 Billion of Capital Planning, Design, Engineering, and Construction projects around the world. Doug helped pioneer numerous unique and award-winning solutions to visually and virtually communicate and manage proposed projects using Building Information Modeling (BIM), advanced Computer Modeling and Simulation, Geospatial Visualization, Web-based Project Management Systems, and Digital Collaboration Technologies. Doug has been a featured speaker at numerous industry, media and academia events and is a founding member of the National Academy of Sciences Transportation Research Board - Geometric Visualization Committee. Doug was named to the Carnegie Mellon Presidents Advisory Board in 2007 and has been an advisor to several AEC companies and industry consortia.

5.1.3 Will your Next TEA come from a Mega Region?

Presenter
Ben Williams
USDOT/FHWA
ben.williams@dot.gov

Presenter: Ben Williams has Bachelors and Masters degree in Civil Engineering from the Ohio State University and is a licensed Engineer in Ohio. He has worked for FHWA for 30 years and has been involved with planning for 28 of those years. During his tenure with FHWA, he has served in the Ohio Division and Georgia Division Offices, the Region 4 Office and is now assigned to the Planning Technical Service Team of the Resource Center, stationed in Atlanta. In his job as a Metropolitan Planning Specialist he is

charged with helping States and MPOs, nationwide, with technical assistance and training within planning. He has been the Workshop Chair for the AASHTO GIS-T Symposium for 10 years and a past instructor for the National Highway Institute's Spatial Technologies Class. Currently he is teaching the FHWA Resource Center and FHWA Office of Environmental Reviews' workshop on "GIS for Environmental Streamlining and Stewardship", the Resource Center's workshops on the Congestion Management Process and the Use of Visualization Technology in Planning.

5.2.1 Mobile LiDAR: Surveys at the Speed of Business

Presenter
Thomas W. Tiner
GIT Department Manager
Michael Baker Jr., Inc
ttiner@mbakercorp.com

Presenter: Over the past twenty-one (21) years, Tom has been gained a wealth of diversified experience in many aspects of the digital mapping industry. Tom is a certified photogrammetrist, as well as a certified GIS professional. Research and application of innovative data development technologies has always been an area of interest since the beginning of his career. Being well versed in both aerial and mobile data collection techniques, Tom has been the technical lead and project manager on numerous aerial mapping and terrestrial asset management projects. Involvement in the GIT community is an important aspect of his overall career objectives and he currently maintains a seat on Board of the Mid-Atlantic Chapter of URISA, represents the private sector on the New Jersey Geospatial Forum Executive Committee, as well as supports his local community's as a member of the Planning Board.

5.2.2 The National Map

Presenter
Jean Parcher
Federal Geospatial Liaison
USGS
jwparcher@usgs.gov

Presenter: Jean Parcher is the Federal Geospatial Liaison for the U.S. Geological Survey's, National Geospatial Programs. Jean is currently focusing on Federal Partnerships for The National Map and the US TOPO. She has more than 25 years experience with the U.S. Geological Survey as a geographer, cartographer, and computer specialist. She holds a Masters Degree in Geography from the University of Texas.

5.2.3 Accessing the National Spatial Reference System

Presenter
Ross Mackay
Kentucky Geodetic Advisor
NOAA/National Geodetic Survey
ross.mackay@noaa.gov

Presenter: Mr. Mackay has been with the National Geodetic Survey for over three decades. He started out as a field geodetic technician, then moved into the office as a data analyst, and finally relocated to the Bluegrass State as the Kentucky Geodetic Advisor. He provides technical advice and assistance for public and private geodetic activities, promotes the geodetic policy of NGS, and advocates the concerns of Kentucky's surveying and mapping professionals. On his watch National Spatial Reference System monumented control was expanded and a network of Continuously Operating GPS Reference Stations has been established. His Geodetic Control in Kentucky website (ngs.ky.gov) provides easy access to everything geodetic in the Commonwealth.

5.3.1 South Carolina DOT's Project Screening Tool an effective utility to streamline the project planning process

Presenter
Bruce Aquila
Sr. System Consultant
Intergraph Corp.
bruce.aquila@intergraph.com

Co-Presenter
Nasser Vakili-Rad
SCDOT

Presenter: Bruce has been with Intergraph for 25 years. He is currently serving as a Senior Transportation consultant in the Government and Transportation Business Unit. Among his responsibilities are business development, consulting, industry conference presentations and product requirement collection. His prior responsibilities included product planning, technical training and software testing. He works exclusively with State Department of Transportation's, Metropolitan Planning Organization's (MPO), Local Governments and Transit agencies in the areas of linear referencing, network and data modeling, and surface transportation analysis applications.

5.3.2 NMRoads.com a Configured Off The Shelf ATIS System

Presenter
Lee Jensen
CTO
RealTimeSites
lee@realtimesites.com

Co-Presenter
Steve Schroeder
President
RealTimeSites

Presenter: Lee is a computer scientist / software engineer with a broad range of experience in commercial, government and scientific software development efforts. He is responsible for the tech vision required to keep RealTimeSites on the cutting edge of web development and information technologies.

5.3.3 GIS Supporting Winter Operations

Presenter
Gary A. Waters
National Account Executive
ESRI
gwaters@esri.com

Co-Presenter
Alan Smith or Tom Clay
GIS App. Specialist Mgr.
WADOT

Presenter: 20 years of GIS experience working with a variety of markets. Currently focused on supporting State DOT's.

5.4.1 Automated Oversized Overweight Permitting and Routing

Presenter
Jay Adams
Tribal Coordinator
OKDOT
jadams@odot.org

Co-Presenter
James O. Brown
Industry Consultant
Intergraph Corp.
james.o.brown@intergraph.com

Presenter: Jay Adams attended the University of Oklahoma and began his career with the Oklahoma Department of Transportation in 1985. Through his 24 years with OKDOT, he has worked in Roadway Design, Maintenance and was the Assistant Planning & Research Division Manager where he managed the GIS Operations for ODOT, Road & Traffic Data Collections, and Long Range Corridor Planning. Mr. Adams is currently the Director for Tribal Coordination for ODOT, working with all 38 Federally Recognized Tribes in the State of Oklahoma. He is still manager of ODOT's GIS Operations, member of the State GIS Council and the Chairman of the National GIS for Transportation Task Force. He is also the Executive Sponsor and Project Manager for the Oklahoma Permit & Routing Optimization System Project.

Co-Presenter: James Brown began his career with the Mississippi Department of Transportation where he spent 18 years performing CADD, Mapping, and GIS related duties. Before leaving the DOT, he managed the GIS Program for 9 years and served on the GIS-T Task Force as the Region II representative. Mr. Brown is

currently employed with Intergraph Corporation as the Transportation Industry Consultant working to architect and deliver spatial solutions for the Transportation Industry.

5.4.2 National Oversize / Overweight Preliminary Route Review with Online Mapping Tools

Presenter
Dan Vogen
Director, Software Development
Bentley Systems, Incorporated
dan.vogen@bentley.com

Presenter: Dan is the Director of Software Development in the Civil Operations and Maintenance group at Bentley Systems. He has a Master's of Science in Computer Science degree from the Illinois Institute of Technology. Dan is currently responsible for all oversize / overweight systems development and implementation. This work includes the use and integration of GIS data from numerous state agencies for use by the company's SUPERLOAD routing and analysis system. He has been involved in various phases of the development and maintenance of AASHTOWare BARS and IGrds. He has also participated in several other ventures including work for the Environmental Protection Agency and the U.S. Air Force.

5.4.3 Green Transport Routing

Presenter
Dan Gibbons
Product Manager
NAVTEQ
dan.gibbons@navteq.com

Presenter: Global Product Manager for Enterprise and Transport at Navteq. 16 year veteran at Navteq; based in Chicago.

6.1.1 Tracking Defects Using GPS

Presenter
Judah Lynam
GIS Specialist
USDOT/FRA
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Co-Presenter
Raquel Wright
GIS Program Manager
USDOT/FRA
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Presenter: Judah is GIS Specialist at the USDOT's Federal Railroad Administration (FRA). Judah has worked with the FRA for a little over two years as both a contractor previously, and as a Federal employee, currently. He has a Bachelor's degree in Geography from the University of Delaware.

Co-Presenter: Raquel is the GIS program manager at the USDOT's Federal Railroad Administration (FRA). Raquel has been with FRA for over 3 years, but has been with the USDOT for 9 years. She has a Master's degree in Geography with a certification in Geographical Information Sciences from George Mason University and a Bachelor's degree in Geography Old Dominion University.

6.1.2 Application of GIS for a Managed Use Lane Study

Presenter
Feng Lu
Lead Planner/GIS Analyst
Parsons Brinckerhoff
lufe@pbworld.com

Presenter: Feng Lu, a Lead GIS Analyst in PB New York Office, posses extensive experiences with geographic information systems (GIS) for transportation, urban and regional planning applications. He develops several GIS applications with ESRI products.

6.1.3 An Example of a Successful State-Wide Enterprise GIS Program and its Impact upon Safety Data Systems

Presenter
Jeremiah Glascock
Safety Systems Manager
TSASS, Inc.
jglascock@tsass.com

Co-Presenter
Ron Cramer
Owner
Digital Data Tech. Inc.

Presenter: With Traffic Safety Analysis Systems & Services for over four years acting as GIS program lead and currently the Crash Data and GIS Manager, Mr. Glascock has over four years ex-perience with the integration of Linear Based Referencing Systems (LBRS) and non-LBRS base files for crash data location processing and is responsible for developing GIS / Web-based Mapping extensions to the Ohio Safety Information System (OSIS). To date, TSASS scrubs and locates 15 county and three Metropolitan Planning Organiza-tions consisting of Mid-Ohio Regional Planning Commission , Lima-Allen Regional Planning Commission and Erie Regional Planning Commission; all which represent up to half of all crashes per year in the sate of Ohio. Mr. Glascock oversees day-to-day crash data scrub-bing and location work on Ohio's statewide crash data. In addition, Mr. Glascock has spoke at several national and local conferences on the importance of a comprehensive LBRS. As a NASA fellow, Mr. Glascock studied Civil Engineering, Surveying and Geomatics Engineering at The Ohio State University where he received his bachelor's degree in 2006.

Co-Presenter: A founder of Digital Data Technologies, Inc., Mr. Cramer assisted in the development of the company's solutions for GIS and E9-1-1, and was a proud collaborator in the original pilot project for Ohio's Location Based Response System (LBRS). To date, DDTI has successfully mapped more than 1.6 million address points and nearly 60,000 centerline miles to meet the high accuracy standards of the LBRS. Clientele across 12 states employ DDTI's proven E9-1-1 solutions, and more than 30,000 users around the world have downloaded DDTI's AccuGlobe GIS software. Mr. Cramer is actively involved in intelligent transportation systems and was nominated and appointed to the ITS mid-America Executive Committee for the years 1997 to 2003. He has been a guest speaker at numerous conferences discussing topics related to GIS, emergency response location mapping and transportation engineering. Mr. Cramer has chaired the Urban and Regional Information Systems Association (URISA) Street Smart and Address Savvy Conference, which is now known as the URISA and NENA Addressing Conference. Mr. Cramer is a member of URISA, the National Emergency Number Association (NENA) and has affiliations with numerous other organizations. He has written feature articles that have appeared in The Ohio Engineer, Roads & Bridges, Illinois Engineer, Michigan Engineer, P.O.B. and Photo Electronic Imaging. Mr. Cramer studied Civil Engineering and Computer Science at Michigan Technological University, and has a degree in Business from Eastern Michigan University.

6.2.1 Replacing Legacy Systems with a COTS

Presenter
Heather King
Manager, Road Inv. and Classification Services Unit
ODOT
heather.l.king@odot.state.or.us

Co-Presenter
Marc Kratschmar
Exor

Presenter: Mr. Kratzschmar has over twenty years of experience in designing and implementing GIS applications and systems for state departments of transportation. His background is in civil engineering and transportation planning. He is responsible for managing the project to replace the ODOT legacy network data management system with an integrated COTS system.

6.2.2 SCDOT Initiates Innovative Project to Capture Local County Road Data

Presenter
Donald McElveen
GIS Manager
SCDOT
McElveenDE@dot.state.sc.us

Co-Presenter
David Kingsbury
Dir. of Info. Solutions
Rolta International

Presenter: Donny McElveen has over 38 years of total service with the State of South Carolina, 36 of which have been with the South Carolina DOT. Mr. McElveen has managed the GIS/Mapping Office since 1999. As part of the GIS/Mapping Office, Donny has played an integral role in the development of many enterprise applications, including the Hurricane Evacuation System, the Roadway Information Management System, the Integrated Transportation Management System, Local Agency Data Collection, Planning Screening Tool, Over Size Over Weight and the Statewide Mapping Project.

6.2.3 Kentucky's Transportation GIS: An Evolving Enterprise GIS

Presenter
Will Holmes
Acting Branch Manager, Engineering & Web Services
Kentucky Transportation Cabinet, OIT
Will.Holmes@KY.GOV

Presenter: Will is the Acting Branch Manager of the Web & Engineering Services Branch in the Office of Information Technology. He has worked for over a decade with the GIS Team to provide guidance on GIS use and building integrated systems using desktop and web-based GIS. He has also worked in academic, private and public sectors using GIS in environmental, economic development and transportation fields. He has participated on state and international technical committees working to build and share spatially enabled information. Educational Information: BA in Anthropology, the University of Alabama; MA in Anthropology, the University of Kentucky; Some additional Ph.D. work @ UK.

6.3.1 From Photolog to Laser Scanning Scaling up and Maximizing the Utilization of Arizona's DOT Mobile Data Capture System

Presenter
Rob Huber
Transportation Segment Manager
Trimble
rob_huber@trimble.com

Co-Presenter
Jim Snow
Senior Project Manager
AZDOT

Presenter: Rob has been involved with mobile mapping since 1996 with tenures as a field manager and operation manager for a fleet of mapping vehicles, and most recently, involved with product and portfolio direction as Transportation Segment Manager for Trimble's Geospatial division. His experience is primarily based around mobile technologies for Asset Management, Pavement Management, and Survey applications. Rob holds a Bachelor of Applied Science in Civil Engineering.

6.3.2 Web Enabling VideoLog Viewers

Presenter
Jesse C. Jay
Director
GeoDecisions
jjay@geodecisions.com

Presenter: Jesse Jay is the Director of Transportation for GeoDecisions. In this role, he is responsible for project management, project oversight, and business development. He is currently managing the Mississippi DOT Safety Analysis Management System (SAMS) and the Oklahoma DOT Geographical Resource Intranet Portal (GRIP) Maintenance projects. He is also currently the Project Director the Georgia DOT

Geospatial Services Support project. Jess has more than 25 years of experience working with GIS and business solutions and has extensive knowledge of the day-to-day processes of a transportation agency.

6.3.3 LIDAR Collection and Integration for the Hawaii DOT

Presenter
Larry Mattke
GIS Manager
Mandli Communications, Inc.
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Co-Presenter
Goro Sulijoadikusumo
Planning Survey Engineer/GIS Admin.
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Presenter: Larry Mattke is the GIS Manager for Mandli Communications, Inc. in Madison, WI. He is a graduate of Marquette University with a degree in Electrical Engineering. In 17 years with Mandli, Larry has assisted many different transportation entities in incorporating new collection processes and data into their enterprise GIS.

Co-Presenter: Goro Sulijoadikusumo is the Planning Survey Engineer / GIS Administrator at Hawaii State DOT, in the Highways Planning Survey Section. He is responsible for the principal highway data, traffic and roadway information programs. Goro has a B.S. in Construction Engineering & Management from Purdue University, and an M.S. in Transportation Planning & Systems Engineering from Cornell University.

6.4.1 Case Study | Designing and Implementing a GIS-Centric Pavement Management System for the City of Alexandria, Virginia

Presenter
Craig Schorling
Business Development Manager
Transmap Corporation
cschorling@transmap.com

Co-Presenter
L.A. McCracken
City of Alexandria, VA

Presenter: Craig has been in the GIS transportation business for over 12 years. He has also been with Transmap for 11 of those 12 years. He has extensive background and knowledge pertaining to roadway infrastructure. Craig has been part of the GIS community for over 16 years and has received his GISP status. Craig's main focus is helping Cities and Counties track and maintain GIS infrastructure. Craig helped win stimulus funding for Cities and Counties like El Paso, Texas who put to work 171 people with 8 million dollars of stimulus money. Craig is a graduate of the State University of New York, Albany with a major in Geography.

6.4.2 Powerful Integration of GIS, Asset Management, Work Order Management, CRM and Related Technology in Transportation – You can Have it All Without Selling Your Soul!

Presenter
Ramzi K. Bannura
Geospatial Programs Manager
Anne Arundel County Maryland
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Presenter: Mr Bannura has been an IT and GIS professional for nearly 20 years while primarily focused on applying GIS and related-technology to the civil engineering and transportation sector. His professional background includes managing shrink-wrap GIS software development while with Intergraph Corp. in the early 1990s as well as leading technology development during his role as Director of Technology and Development in the commercial remote sensing industry for what is known today as DigitalGlobe Inc. Today, Mr Bannura, after over a decade exclusively as a transportation GIS consultant, leads Anne Arundel County-trade's geospatial and asset management programs as a public servant under the DPW-trade's Bureau of Highways. Mr Bannura holds a Computer Science/Math degree from Gordon College and a Masters in Business Administration from the University of Colorado. Mr. Bannura is also a published author and has been active in local and national transportation, GIS and Remote Sensing industry associations for many years.

6.4.3 Leveraging GIS technology to provide a web-based infrastructure asset management system

Presenter
Craig Gallant
GIS Specialist
LJB Inc.
cgallant@ljbinc.com

Presenter: Mr. Gallant is a GIS specialist with LJB who has more than 15 years of experience. He specializes in GIS applications, C# and visual basic programming, and 3D visualizations. Mr. Gallant programs and creates custom software tools within ArcMap to allow additional flexibility for the end user. He is also certified to use ESRI ArcMap software. Mr. Gallant developed LJB Inc.'s web-based infrastructure management system using GIS technology.