

Welcome...

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WELCOME

This year's conference hosts, the Michigan Department of Transportation and ITS Michigan, would like to welcome you to the beautiful shores of Michigan's Golf Coast and the *2007 National Rural ITS Conference*. This year's conferences includes many firsts. Poster and roundtable sessions will encourag increased interaction between attendees and presenters, ensuring that participants can bring something back they can use and apply within their own community. Add to this the scenic area surrounding Traverse City and you can see why we think you will find this conference as enjoyable as it is informative.

SPECIAL THANKS

Planning Committee - Many individuals have come together to help make this event a success. In addition to those individuals speaking and moderating at the conference, we want to extend a special thank you to our conference planning committee:

- Steve Albert, Western Transportation Institute
- Steve Clinger, Federal Highway Administration
- Steve Fern, Suburban Mobility Authority for Regional Transportation (SMART)
- Morrie Hoevel, Federal Highway Administration
- Dan Murray, American Transportation Research Institute
- Suzette Peplinski, Michigan Department of Transportation
- Robert Powers, Michigan State Police
- Jim Schultz, Michigan Department of Transportation
- Jill Sullivan, Alaska Department of Transportation
- Heather Young, ITS America



The following individuals assisted by reviewing abstracts:

- Steve Albert, Western Transportation Institute
- Stephanie Aldighieri, Michigan Department of Transportation
- Roemer Alfelor, Federal Highway Administration
- John Berg, Federal Highway Administration
- Michael Berman, PBS&J
- Mike Bousliman, Montana Department of Transportation
- Steve Clinger, Federal Highway Administration
- Pam Couch, Modoc Transportation
- Dean Deeter, Athey Creek Consultants
- Joe Finch, Michigan Department of Transportation
- Karen Gilbertson, Kansas Department of Transportation
- Dawn Gustafson, Michigan Department of Transportation
- Mike Haas, Open Roads Consulting
- Brandi Hamilton, Montana Department of Transportation
- Alan Hansen, Federal Highway Administration
- John Hansen, Adaptive Micro Systems, LLC
- Morrie Hoevel, Federal Highway Administration
- Bruce Hunt, Federal Highway Administration
- Pat Kennedy, Federal Highway Administration
- Frank Kinder, Kinder Enterprises
- Chris Lane, ITS America
- Bill Legg, Washington State Department of Transportation
- Mac Lister, Federal Highway Administration
- Ray Murphy, Federal Highway Administration
- Dan Murray, American Transportation Research Institute
- Larry Orcutt, California Department of Transportation
- Suzette Peplinski, Michigan Department of Transportation
- Paul Pisano, Federal Highway Administration
- James Pol, Federal Highway Administration
- David Ridgley, ITS America
- Ed Ryen, North Dakota Department of Transportation
- Jim Schultz, Michigan Department of Transportation
- Marc Start, URS Corporation
- Jack Stickel, Alaska Department of Transportation
- Jill Sullivan, Alaska Department of Transportation
- Greg Thompson, ThomTech Design, Inc.
- Ian Turnbull, California Department of Transportation
- David Van Stensel, Michigan Department of Transportation
- Heather Young, ITS America

Sponsors - This year's conference hosts, the Michigan Department of Transportation and the Michigan Chapter of ITS America, would like to extend a warm thank you to the following sponsors:

- Carrier & Gable
- Federal Highway Administration
- GE MDS, LLC
- ITS America
- Open Roads Consulting, Inc.
- US Department of Transportation

Schedule at a Glance... National Rural ITS Conference 2007

Sunday, October 7th

1:00 pm - 6:00 pm	Golf Scramble Tournament
2:00 pm - 6:00 pm	Vendor Setup
6:00 pm - 9:00 pm	Registration Desk Open, Governors Prefunction
7:00 pm - 9:00 pm	Welcome Reception & Vendor Showcase

Monday, October 8th

7:15 am/7:30 am	Registration/Vendor Area Opens			
7:30 am - 8:30 am	Breakfast			
8:30 am - 9:30 am	Opening Session			
9:30 am - 10:00 am	Break (Sponsored by Carrier & Gable)			
10:00 am - 11:30 am	A1: Standards Based Reporting Systems - Examples and Applications	A2: Rural Components of Incident Management	A3: ITS Planning - Where do we begin?	A4: VII Applications in Non-Urban Areas
11:30 am - 12:30 pm	Lunch (Sponsored by GE MDS, LLC)			
12:30 pm - 2:00 pm	B1: MDSS Part 1 - Where Technology Meets the Winter Highway	B2: Incident Response in Rural Areas	B3: Using the ITS Decisionmakers' Resources (Part A)	B4: Optimizing Your Funding to Create Success
2:00 pm - 2:15 pm	Break			
2:15 pm - 4:00 pm	C1: MDSS Part 2 - The MDSS Advantage: Current and Future Benefits	C2: Rural Applications of ITS to Improve Safety	C3: Using the ITS Decisionmakers' Resources (Part B)	C4: Examples of Integrating Data Across Jurisdictions
5:00 pm & 7:00 pm	Individual Activity Night (Wine Tasting, Monday Night Football, etc.)			

Tuesday, October 9th

7:15 am/7:30 am	Registration/Vendor Area Opens			
7:30 am - 8:30 am	Breakfast			
8:30 am - 10:00 am	D1: USDOT CLARUS Initiative Updates	D2: Enabling Technologies - Helping Rural ITS Systems be more Reliable and Accurate	D3: Broad Applications of ITS in Rural Safety	D4: Travel Times - Applications and Best Practices
10:00 am - 10:15 am	Break			
10:15 am - 11:45 am	E1: Rural Technologies and Solutions on Display	E2: Applying Advanced Computing Techniques and Theories to Data	E3: Rural Transit - Determining the Appropriate Technology	E4: ITS Partnerships: Lessons Learned and Next Steps
11:45 am - 1:00 pm	Lunch (sponsored by ITS Michigan)			
1:00 pm - 2:30 pm	F1: Road/Weather Applications - In Depth and Up Close	F2: Systems Engineering	F3: Rural Transit - Examples and Case Studies from Successful Programs	F4: Border Security
2:30 pm - 2:45 pm	Break			
2:45 pm - 4:15 pm	G1: Data Collection for Traveler Information	G2: ITS Deployment - Identification, Installation and Integration	G3: Communications for Rural Areas	Session G4: CVO Enforcement - Using Technology and Partnerships to Solve Problems
4:30 pm	Group Activity Night at Ranch Rudolf (dinner, outdoor activities, fun!)			

Wednesday, October 10th

7:30 am - 8:30 am	Continental Breakfast			
8:30 am - 10:00 am	H1: 511 Implementation	H2: Partners in CVO - Enhancing Commercial Vehicle Safety and Security	RWIS Training: Introduction to RWIS Equipment and Operations	
10:00 am - 10:30 am	Break/Guest checkout			
10:30 am - 12:00 pm	Closing Session (CVFM Meeting begins at 1:00 pm)			
4:30 pm	RWIS Training Course Concludes			

VENDORS

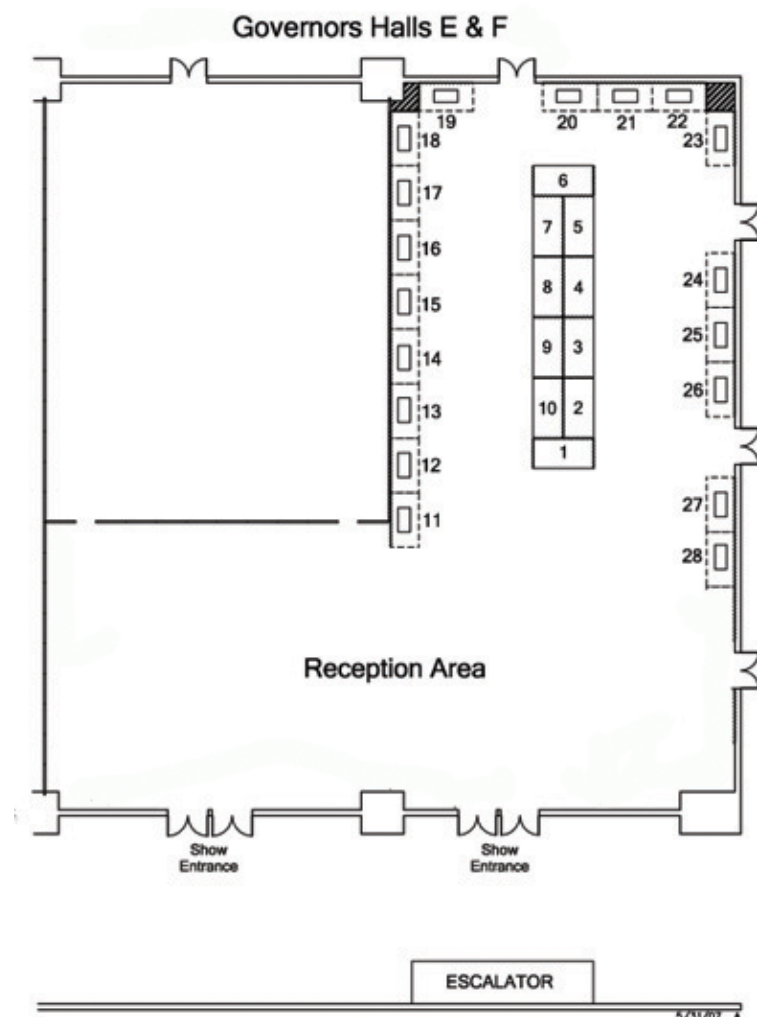
The following vendors will have displays setup in sections E & F of the Governors Hall beginning Sunday, October 7th and continuing through Tuesday, October 9th.

Numeric Listing

- Booth 1 - Open Roads Consulting, Inc.
- Booth 2 - Intelligent Devices, Inc.
- Booth 3 - RuggedCom, Inc.
- Booth 4 - Campbell Scientific, Inc.
- Booth 5 - DTS
- Booth 6 - GE MDS, LLC
- Booth 7 - Traffic & Parking Control Company, Inc.
- Booth 8 - High Sierra Electronics, Inc.
- Booth 9 - GeoDecisions
- Booth 10 - Skyline Dynamic Message Signs
- Booth 11 - USDOT/FHWA
- Booth 12 - Atlantic Scientific Corporation
- Booth 13 - Western Transportation Institute
- Booth 14 - EIS, Inc.
- Booth 15 - ADDCO, Inc.
- Booth 16 - Carrier & Gable
- Booth 17 - International Road Dynamics
- Booth 18 - Trapeze Group
- Booth 19 - Mentor Engineering, Inc.
- Booth 20 - Traffic Control Corporation
- Booth 21 - Trafficland, Inc.
- Booth 22 - ITS America & NRITS 2008
- Booth 23 - ENCOM Wireless Data Solutions, Inc.
- Booth 24 - Fiberoptic Display Systems, Inc.
- Booth 25 - Daktronics, Inc.
- Booth 26 - Daktronics, Inc.
- Booth 27 - Adaptive Micro Systems, LLC
- Booth 28 - Garrett Com, Inc.

Alphabetical Listing

- Adaptive Micro Systems, LLC - Booth 27
- ADDCO - Booth 15
- Atlantic Scientific Corporation - Booth 12
- Campbell Scientific, Inc. - Booth 4
- Carrier & Gable - Booth 16
- Daktronics, Inc. - Booths 25 & 26
- DTS - Booth 5
- ENCOM Wireless Data Systems, Inc. - Booth 23
- EIS, Inc. - Booth 14
- Fiberoptic Display Systems, Inc. - Booth 24
- Garrett Com, Inc. - Booth 28
- GE MDS, LLC - Booth 6
- GeoDecisions - Booth 9
- High Sierra Electronics, Inc. - Booth 8
- Intelligent Devices, Inc. - Booth 2
- International Road Dynamics - Booth 17
- ITS America & NRITS 2008 - Booth 22
- Mentor Engineering - Booth 19
- Open Roads Consulting, Inc. - Booth 1
- RuggedCom, Inc. - Booth 3
- Skyline Dynamic Message Signs - Booth 10
- Traffic Control Corporation - Booth 20
- Traffic & Parking Control Company, Inc. - Booth 7
- Trafficland, Inc. - Booth 21
- Trapeze Group - Booth 18
- USDOT/FHWA - Booth 11
- Western Transportation Institute - Booth 13



Important Notes & Conference Site Map

IMPORTANT NOTES

Assistance - If you have questions, or need assistance during the conference, please look for your "hosts" wearing nametags with blue ribbons. They will be happy to assist you.

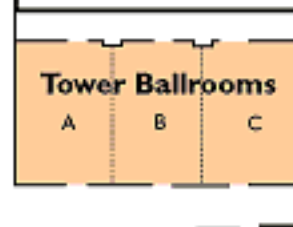
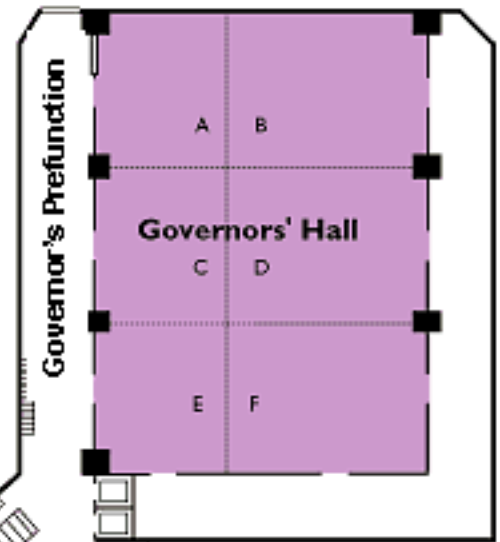
Registration Desk - The registration desk will be open all 4 days of the conference (see the agenda for times). If you have questions regarding sessions or activity meeting times/places, please feel free to stop and ask for assistance. You can also phone us (toll-free) at 1-866-633-8110.

Nametags - Nametags allow attendees and guests entrance to all applicable conference sessions, meals and activities. Please have your nametag with you at all times.

Activities - If you wish to attend an activity, but did not sign up previously on your registration form, please speak to the staff at the registration desk. A limited number of seats are still available for some activities. However, attendance will be granted on a first-come, first-served basis.

Proceedings - Presentations from the conference will be made available on the conference website-<http://www.nritisconference.org>. It is anticipated that proceedings will be available by November 15, 2007.

Lower Level







Lobby Level



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KEY

-  Sessions marked with a circle will be presented as a roundtable discussion. Panelists will discuss subject matter as well as answer predetermined and audience questions. Audience participation is highly encouraged.
-  Sessions marked with a semicircle will be presented as a combination lecture/roundtable discussion. Speakers will give up to two presentations which will be followed by a roundtable discussion with the speakers and additional panelists (industry experts).
-  Sessions marked with a rectangle are poster sessions. Project (poster) displays will be setup throughout the designated day, but attendees wishing to meet the authors and ask questions should plan on attending the designated session.
-  Sessions marked with a "M" are mega or two-part sessions with a break halfway through the session.

SUNDAY, OCTOBER 7TH

1:00 pm

GOLF SCRAMBLE TOURNAMENT

The golf scramble tournament will be held on the Spruce Run Golf Course at Grand Traverse Resort. Designed by former University of Michigan golf coach William Newcomb, Spruce Run was partly named to reflect the numerous fir and spruce trees that line its fairways and undulating greens. The course gracefully winds among the rolling hills overlooking East Grand Traverse Bay.

2:00 - 6:00 pm

VENDOR SETUP, *Governors EF*

6:00 pm

REGISTRATION, *Governors Prefunction*

7:00 - 9:00 pm

WELCOME RECEPTION/VENDOR SHOWCASE, *Governor's EF*

Attendees and guests are invited to attend the Welcome Reception and Vendor Showcase. Hors d'oeuvres and a cash bar will be offered. This event is included in both attendee and guest registration. So come, have fun, and enjoy the evening.

MONDAY, OCTOBER 8TH

7:15 am

REGISTRATION, *Governors Prefunction*

7:30 am

VENDOR AREA OPENS, *Governors EF*

7:30 - 8:30 am

BREAKFAST, *Governors EF*

8:30 am

OPENING SESSION, *Governors A*

Welcome: Jim Barbaresso, HNTB Corporation (representing ITS Michigan)

KEYNOTE SPEAKERS

Larry Tibbits, Michigan Department of Transportation

Steve Vaughn, California Highway Patrol

Kate Hartman, USDOT ITS Joint Program Office

9:30 am

BREAK, *Governor's EF*

This break sponsored by Carrier & Gable.

10:00 am

CONCURRENT SESSIONS



Session A1: Standards Based Reporting Systems - Examples and Applications

Tower A

Moderator: Bill Gouse, ITS America

Tomas Guerra, OZ Engineering, LLC

HCRS - Real World Implementation of SAEJ2354

Peter Davies, Castle Rock Associates

Michael Ball-Marian, Castle Rock Associates

The Convergence of Computer-Aided Dispatch and ITS Systems

This session will highlight two different standards based reporting systems in use today - CARS (Condition Acquisition and Reporting System) and HCRS (Highway Condition Reporting System). Candid details on the successful and effective use of these standards will be given.

Session A2: Rural Components of Incident Management

Tower B

Moderator: Mike Haas, Open Roads Consulting

Pei-Sun Lin, CUTR, University of South Florida

A Leading Interstate Route Diversion in Rural Areas

Jeff Dale, Kimley-Horn & Associates

Statewide Incident Management NCHRP Study

John Corbin, Wisconsin Department of Transportation

(Chair, National Traffic Incident Management Coalition)

A National Unified Goal for Traffic Incident Management

Historically, incident management in rural areas has received very little attention. However, there are several national initiatives that are striving to change this. This session introduces the National Traffic Incident Management Coalition as well as practical lessons of incident management in rural areas.



Agenda

MONDAY, OCTOBER 8TH continued...

10:00 am

CONCURRENT SESSIONS

Session A3: ITS Planning - Where do we begin?

Tower C

Moderator: Martha Morecock Eddy, PB

Matthew Schiemer, GeoDecisions

Don Kiel, GeoDecisions

PennDOT's Statewide ITS Telecommunications Master Plan

Ivana Lucic, Jacobs Edwards & Kelcey

Development of a Rural M&O/ITS Strategic Deployment Plan

Marthand Nookala, Hennepin County

Hennepin County ITS Strategic Plan

How do other agencies address the need for ITS planning?

Examples from Pennsylvania's Statewide ITS Telecommunications Master Plan, Maryland's Rural M&O/ITS Strategic Deployment Plan and Minnesota's Hennepin County ITS Strategic Plan will be given. Learn how proper planning can lead to better outcomes and greater success in meeting ITS system goals.

Session A4: VII Applications in Non-Urban Areas

Mackinac Room

Moderator: Greg Krueger, Michigan Department of Transportation

Ram Kandarpa, Booze-Allen-Hamilton

VII Deployment in Non-Urban Areas - Not "Business as Usual"

Kevin Petty, National Center for Atmospheric Research

Mitigating Road Weather Hazards through Vehicle Infrastructure Integration (VII)

Jeff Brummond, Iteris, Inc.

Enabling VII-based Weather Information

Vehicle Infrastructure Integration (VII), which involves vehicle-to-vehicle and vehicle-to-infrastructure communications, is an exciting ITS tool. While widely conceptualized in urban areas, the non-urban or rural applications are only now beginning to emerge. A discussion of deployment issues surrounding VII infrastructure as well as road/weather applications will be presented.

11:30 am

LUNCH, *Governor's CE*

This lunch sponsored by GE MDS, LLC.



12:30 pm

CONCURRENT SESSIONS

M

Session B1: MDSS Part 1 - Where Technology Meets the Winter Highway

Tower A

Moderator: Steve Palmer, Michigan Department of Transportation

Bob Hart, Meridian Environmental Technology

MDSS Development and Deployment: Accomplishments of the Maintenance Decision Support System

David Huft, South Dakota Department of Transportation

Development and Deployment of NTCIP-Compliant Mobile Maintenance Data Collection

John Mewes, Meridian Environmental Technology

Use of Mobile Data Collection in Maintenance Decision Support

The Maintenance Decision Support System (MDSS) Pooled Fund Study is a ten-state research program intended to provide reliable information to aid transportation agencies in meeting their winter maintenance challenges. This session (MDSS Part 1) addresses the technologies used in MDSS. Attendees should also plan on attending MDSS Part 2 to see how MDSS is providing benefits in the road/weather arena.

O

Session B2: Incident Response in Rural Areas

Tower B

Moderator: Capt. Robert Powers, Michigan State Police

PANELISTS:

Capt. Tim Rod, Michigan State Police, *Law Enforcement*

Chief Patrick Parker, Grand Traverse Metro Fire, *Fire Service*

Roy Meis, North Flight Grand Traverse, *EMS*

Bobbi Welke, Michigan Department of Transportation, *Engineering*

Michael Ball-Marian, Castle Rock Associates, *Enterprise E-911*

The rural environment presents first responders with many challenges in conducting a timely and effective response to roadside crashes and other emergency incidents. A panel of experts from law enforcement, fire service, EMS, engineering and E-911 will discuss these challenges and current and future solutions.

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M Session B3: Using the ITS Decisionmakers' Resources - Part A *Tower C*

Moderator: Steve Gordon, Oak Ridge National Laboratory
Speaker/Instructor: Cheryl Lowrance, Noblis, Inc.

"Congestion in my area is bad and getting worse. How can ITS help me address this growing problem?" "Every time there is a football game at the stadium, traffic backs up on the freeway. What can we do about this and where do we start?" "I'm the director of a small, rural transit agency. Is CAD/AVL right for me?" Help in answering these questions lays in the ITS Decisionmakers' Resources, databases that contain a wealth of information on the benefits, costs, extent of deployment and lessons learned about ITS technologies. This session will present a tour of these online databases and show how they can be used to answer questions typically posed by the ITS community. This session offers something for everyone. Absolute beginners will come away with an understanding of how these databases work and how to use them, and even experienced "power users" will learn a new trick or two. This session will also provide an opportunity for audience members to give feedback on how to improve the databases and what enhancements they would like to see in the future. Attendees should plan on attending both Part A and Part B.

Session B4: Optimizing Your Funding to Create Success *Mackinac Room*

Moderator: Steve Albert, Western Transportation Institute

John Krause, Idaho Transportation Department, Division of Public Transportation

Applying Funding Strategies to APTS Deployment Projects

Dave Marsh, Capital Area Rural Transportation System

Michelle Mitchell, MJM Innovations
Development of the CARTS System

PANELISTS:

Joy Uniat, Mentor Engineering

Jerry Douglas, Trapeze Group

Find out how two agencies obtained the funding to implement ITS technologies in their rural operations. Examples will be given of the Capital Area Rural Transportation System (CARTS) in Austin, Texas and Idaho's Advanced Public Transportation Systems (APTS) project.

2:15 pm
BREAK, *Governors EF*



2:30 pm CONCURRENT SESSIONS

M Session C1: MDSS Part 2 - The MDSS Advantage: Current and Future Benefits *Tower A*

Moderator: Steve Palmer, Michigan Department of Transportation

Chris Strong Western Transportation Institute
Analysis of MDSS Benefits and Costs

Ray Murphy, USDOT/FHWA
Extending MDSS Beyond Winter Maintenance

This session concludes the two-part MDSS mega session.

Session C2: Rural Applications of ITS to Improve Safety *Tower B*

Moderator: Suzette Peplinski, Michigan Dept. of Transportation

Eric Gibbons, High Sierra Electronics, Inc.

Advance Flood Warning Systems for Low Water Crossings Saves Lives and Property

Thomas Jensen, Alliant Engineering, Inc.
Bus Stop Warning System

From Advance Warning Stations for low water crossings, to school bus stop warning systems, ITS is being used in rural areas on a daily basis. Learn how each of the stated safety concerns were identified, a solution designed, and the resulting conclusions.

M Session C3: Using the ITS Decisionmakers' Resources - Part B *Tower C*

Moderator: Steve Gordon, Oak Ridge National Laboratory
Speaker/Instructor: Cheryl Lowrance, Noblis, Inc.

This session concludes the two-part mega session on ITS Resources.

Session C4: Examples of Integrating Data Across Jurisdictions *Mackinac Room*

Moderator: Jim Schultz, Michigan Department of Transportation

Mike Haas, Open Roads Consulting

ATMS Integration in Support of Improved Traffic Incident Management: RTIMIS

David Veneziano, Western Transportation Institute
Applying Integrated Corridor Management to the Rural COATS Region

How do you work with the neighboring county to share weather information? What is the best way to integrate traveler information across state lines? This session will address these issues and many more related to inter- and intra-jurisdictional data sharing. From policy to the more technical side of coordinating individual network operations under an Integrated Corridor Management Plan, this session highlights problems and solutions from projects in Virginia, Iowa and California.

Agenda

MONDAY, OCTOBER 8TH continued...

4:00 pm
Adjourn for Day

5:00 pm WINE TASTING AT CICCONE VINEYARD

(To attend this event, individuals must have previously registered. Check at the registration desk for openings.)

Cicccone wines are handcrafted from estate grown grapes planted and tended by the Cicccone Family. Fifteen acres of rolling vineyards straddle the steep slopes of the terrain south of Suttons Bay, while providing a picturesque panorama of the west arm of Grand Traverse Bay and Leelanau Peninsula. The bus begins loading from the main entry at 4:45 pm and final departure is at 5:00 pm. Appetizers will be served. Wines sold at the winery include: Gewurztraminer, Cabernet Franc, Pinot Noir, Chardonnay, Pinot Grigio, Dolcetto, Lee La Tage (Cabernet Frank, Cabernet Sauvignon, Merlot blend), Ciliegio Mela Noir (cherry, apple, Pinot noir blend, and Eve (apple fruit blend).

TALL SHIP SCHOONER RIDE

(To attend this event, individuals must have previously registered. Check at the registration desk for openings.)

The Tall Ship Manitou is a replica of an 1800's "coasting" cargo schooner, similar to those that sailed the Great Lakes and the Atlantic Ocean. Specifically designed for passenger service, her hull was constructed in Portsmouth, New Hampshire in 1983 and finished by Vermont carpenters on Lake Champlain. With a 62 passenger capacity, there is plenty of space for sitting and moving around the decks while under sail. Her overall length of 114 feet, beam of 21 feet, and displacement of nearly 100 tons ensure a comfortable, relaxing motion, soothing to both landlubbers and "old salts" alike. The bus begins loading from the main entry at 4:45 pm and final departure is at 5:00 pm. The sailing time is 2 hours and a light dinner will be provided.

7:00 pm MONDAY NIGHT FOOTBALL - DALLAS AT BUFFALO *Michigan AB*

Sponsored by **Open Roads Consulting!** Beginning at 7:00 pm, the ballrooms of Michigan AB will be transformed into a Sports Bar for this themed event. The game will be projected on a large 8 foot screen surrounded by couches, easy chairs and coffee tables (just like home, but someone else cleans up the mess!). Snacks will be available and a cash bar will be open to attendees (participants who registered previously get 1 free drink!). Thanks to our generous sponsor, there is no cost to attend this event.



TUESDAY, OCTOBER 9TH

7:15 am
REGISTRATION, *Governors Prefunction*

7:30 am
VENDOR AREA OPENS, *Governors EF*

7:30 - 8:30 am
BREAKFAST, *Governors EF*

8:30 am
CONCURRENT SESSIONS

Session D1: USDOT CLARUS Initiative Updates

Tower A

Moderator: Ray Murphy, Federal Highway Administration

Brenda Boyce, Mixon/Hill, Inc.
CLARUS Weather System

Leon Osborne, Meridian Environmental Technology
Northwest Passage Multi-State Regional CLARUS Demonstration

Jack Stickel, Alaska Department of Transportation and Public Facilities
The Alaska-Canada Highway Multi-State Regional CLARUS Demonstration

Established in 2004, the USDOT CLARUS Initiative was intended to develop and demonstrate an integrated surface transportation weather observation data management system, establishing a partnership to create a nationwide surface transportation weather observing and forecasting system. The goal was to create a robust data assimilation, quality checking, and data dissemination system that can provide near real-time atmospheric and pavement observations of a variety of road/weather infrastructure. This session will highlight progress (and breakthroughs) made in the last 3 years as well as highlight new steps yet to be taken as this initiative - and corresponding system - progresses toward its goal.

Session D2: Enabling Technologies - Helping Rural ITS Systems be More Reliable and Accurate

Tower B

Moderator: Dawn Gustafson, Michigan Dept. of Transportation

Willy Sorenson, Iowa Department of Transportation
Absorbent Glass Mat (AGM) Battery Use for Portable ITS Devices

Bill Cook, Atlantic Scientific Corporation
Lightning and Surge Protection for ITS and Traffic Operations Cameras

Ryan Weidemann, University of Minnesota-Duluth
Experiments with Solar/Wind Integrated Renewable Light Pole

An ITS data system component is only as good as the power used to drive it. If a power link in the system is broken, data will not be generated or passed on for integration into the greater system. This session focuses on some of the complimentary technologies now available to promote and support power stabilization in ITS systems - particularly in rural areas.

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Session D3: Broad Applications of ITS in Rural Safety *Tower C*

Moderator: Chris Strong, Western Transportation Institute

Jack Stickel, Alaska Department of Transportation and Public Facilities

A Roadmap for Rural Traffic Records Improvement - Electronic Vehicle Crash Reporting

Lonnie Burklund, Iteris
NDOR Work Zone Traffic Management System

Clint Gregory, California Department of Transportation
Ferguson Rockslide (Gateway to Yosemite National Park)

How do you apply ITS in such a way that it has a meaningful impact on safety in rural areas? This session will highlight three (3) different applications of ITS to rural safety. Examples will be given of Work Zone Traffic Management Systems, Real-Time Warning Systems (applied to the Ferguson Rockslide at Yosemite National Park) and Electronic Vehicle Crash Reporting and the corresponding impacts of SAFETEA requirements.



Session D4: Travel Times - Applications and Best Practices *Mackinac Room*

Moderator: Bill Gouse, ITS America

Dean Deeter, Athey Creek Consultants
ENTERPRISE Program - Travel Times Best Practices Study

Peter Davies, Castle Rock Associates
Case Study in Travel Times: Minnesota's Experience in Expanding 511 to include Travel Times in Metro Areas

Hear how Minnesota is providing the public with customized point-to-point travel times. The ENTERPRISE Group will also provide a synopsis of their Travel Time Best Practices Study. Topics to be covered include contracting procedures, ownership of equipment and systems, dissemination technologies and approaches, accuracy of results, and users' perceptions and feedback. For those interested in developing a travel time reporting system or upgrading an existing system, this session is not to be missed.

10:00 am

BREAK, Governors EF



10:15 am

CONCURRENT SESSIONS



Session E1: Rural Technologies and Solutions on Display *Governor's EF*

Moderator: Suzette Peplinski, Michigan Dept. of Transportation

AUTHORS/PRESENTERS:

Daniel Benhammou, Hamilton Signal

A Low Cost Incident Detection System for Rural Roadways

James Bittner, National Center for Freight and Infrastructure Research and Education (CFIRE) at Univ. Wisconsin-Madison
Mississippi Valley Freight Coalition - Commercial Vehicle Operations

Peter Davies, Castle Rock Associates
National Data Exchange Hub for Traveler Information

Sedat Gulen, Indiana Department of Transportation
Evaluation of Radar (Radio Detection and Ranging) Sensing in Reducing Vehicle-Deer Collisions on the Indiana Toll Road

Dr. Olufemi Omitaomu, Oak Ridge National Laboratory
Pattern Detection and Decision Support from Heterogeneous Sensor-Based Information at Truck Weigh Stations

Rudy Persaud, Federal Highway Administration
Nationwide Differential Global Positioning System (NDGPS)

Brian Scott, SRF Consulting Group, Inc.
Network Technologies and Low Cost, Active Animal Collision Warning Systems

Robert Somers, 3M Traffic Safety Systems
ITS Solutions for Local Traffic Engineering Problems: Driver Speed Feedback Signs for Site Specific Speed Management

Robert White, Vermont Agency of Transportation
Vermont's Itinerary Planner

The Conference Planning Committee would like to introduce poster sessions - new to the NRITS Conference! This session is designed to encourage attendees to conduct a more in-depth review of a project and interact one-on-one with the author (presenter). While project (poster) displays will be setup throughout this day, attendees wishing to meet the authors and ask questions should plan on attending this "Meet the Author" session.

Agenda

TUESDAY, OCTOBER 9TH continued...

10:15 am

CONCURRENT SESSIONS



Session E2: Applying Advanced Computing Techniques and Theories to Data

Tower B

Moderator: Jeffrey Tilley, University of North Dakota, Surface Transportation Weather Research Center

Gregory Thompson, ThomTech Design, Inc.

Chaos vs. Applied to Data Collection - Session II

Francois Dion, University of Michigan Transportation Research Institute (UMTRI)

Advanced Computing and Modeling has a Place in Rural ITS

You need data but are unsure what methodology to follow or how best to analyze it once collected - what to do? Learn about new and innovative ways to apply advanced computing and modeling techniques to data collection in rural areas. This session will also present different theories that can be applied to data collection. Which is best? Come to this session and we'll let you decide! A roundtable discussion with presenters and other industry experts will follow.

Session E3: Rural Transit - Determining the Appropriate Technology

Tower C

Moderator: Richard Hodges, Hodges Transportation Consulting, LLC

Yehuda Gross, USDOT ITS Joint Program Office

Gwo-Wei Torng, Noblis

Demonstration of ITS-Enhanced Human Service Transportation in Rural Communities: Federal Government's Perspective

John Krause, Idaho Transportation Department

Selecting and Rightsizing APTS Technologies

Tom Coogan, RouteMatch Software

ITS Moves the Coordination Needle

One of the biggest challenges in rural transit is taking technology - largely designed for urban areas - and applying it in a meaningful and efficient manner to a rural transit system. This session will highlight several transit systems across the US and demonstrate the different ways they are addressing these - and other - challenges. A roundtable discussion with presenters and other industry experts will follow.



Session E4: ITS Partnerships - Lessons Learned and Next Steps

Mackinac Room

Moderator: Dennis Foderberg, SEH, Inc.

Robert White, Vermont Agency of Transportation

ConnectVermont Cooperative Multi-Agency Funding for Traveler Information

Pam Couch, Modoc County Transportation Commission

Defining and Deploying ITS Solutions for Coordinated Rural Transportation: Modoc Mobility Management Center and CALnections.com

Jeff Hochmuth, Wilbur Smith Associates

I-10 National Freight Corridor ITS Architecture

Want to learn how to create successful partnerships and coordinate multi-agency ITS programs? AT this session you will hear about three diverse projects in transit, freight operations and traveler information. If you are developing a multi-agency project, you won't want to miss this session on how to establish and maintain those important partnerships.

11:45 am

LUNCH, *Governors CE*

This lunch sponsored by ITS Michigan.

1:00 pm

CONCURRENT SESSIONS



Session F1: Road/Weather Applications - In Depth and Up Close

Governors EF

Moderator: Ray Murphy, FHWA

AUTHORS/PRESENTERS:

Brenda Boyce, Mixon-Hill, Inc.

Implementation of Road Weather Information System (RWIS) Sensor Siting Guidelines

Dawn Gustafson, Michigan Department of Transportation

A Case Study for RWIS Deployment in Northern Michigan USA

David Huft, South Dakota Department of Transportation

Development and Deployment of NTCIP-Compliant Environmental Sensing Stations

Brad Kelly, Iteris, Inc.

Idaho RWIS Build Out

Mohammad Smadi, North Dakota State University - ATAC

Evaluating Automated Anti-Icing Systems

Chris Strong, Western Transportation Institute

The Value of Customized Weather Forecasts to Winter Maintenance Personnel: The UDOT Experience

Gregory Thompson, ThomTech Design, Inc.

Beta, Data, Strata & Errata - Surface Temperature & Anti-icing Options

take me there... to Traverse City

Jeffrey Tilley, Surface Transportation Weather Research Center, University of North Dakota
Measurements of Pavement Condition and the Road Weather Environment utilizing a Road Grip Test Unit and a GPS-Video System

David Veneziano, Western Transportation Institute
Before and After Comparison of Fredonyer Summit Icy Curve Warning System

The Conference Planning Committee would like to introduce poster sessions - new to the NRITS Conference! This session is designed to encourage attendees to conduct a more in-depth review of a project and interact one-on-one with the author (presenter). While project (poster) displays will be setup throughout this day, attendees wishing to meet the authors and ask questions should plan on attending this "Meet the Author" session.

Session F2: Systems Engineering Tower B

Moderator: James Arnold, Federal Highway Administration

Alexis Mousadi, URS Corporation
IP Multicast Design Pitfalls

Sam Sherman, Iteris, Inc.
Cottonwood Canyons Parking Management System

This session will underscore both the technical and applied sides of systems engineering. A description of the systems engineering process, alternatives evaluated and subsequent design of a parking management system will be presented as well as communication protocols used within the ITS industry - specifically Internet Multicast IGMP and IGMP Snooping protocols (useful to engineers implementing digital video CCTV ITS projects).

Session F3: Rural Transit - Examples and Case Studies from Successful Programs Tower C

Moderator: Richard Hodges, Hodges Transportation Consulting, LLC

Yehuda Gross, USDOT ITS Joint Program Office
Gwo-Wei Torng, Noblis
ITS-Enhanced Human Service Transportation Systems: Case Studies of Two Rural Communities

Dean Deeter, Athey Creek Consultants
Kansas Rural Transit AVL Evaluation

For each rural transit program, there are unique challenges, lessons learned and successes. Come and learn about several initiatives that are being deployed, and listen as speakers identify how, and to what, extent intelligent transportation systems (ITS) applications have contributed (or may contribute) to the improvements of overall system performance and quality of service.



Session F4: Border Security Mackinac Room

Moderator: Capt. Robert Powers, Michigan State Police

PANELISTS:

Chief Ronald Smith, US Customs and Border Protection
Chief Tamara Allard, Canadian Border Services Administration

A panel of experts from law enforcement and both United States and Canadian Customs agencies will present on the challenges of providing a safe and secure border environment that does not impede commerce. Of special interest is the application of various technology based programs such as FAST, C-TPAT, and NEXUS, to enhance safety, security, and the free flow of commerce at international borders.

2:30 pm

BREAK, Governors EF

2:45 pm

CONCURRENT SESSIONS

Session G1: Data Collection for Traveler Information Tower A

Moderator: Brandi Hamilton, Montana Dept. of Transportation

Daniel Benhammou, Hamilton Signal
Using Design of Experiments for ITS Infrastructure Optimization

Doug Finlay, Speed Info
Travel Information Business Models

Michael Berman, PBS&J
Traveler Information Data Needs

What are the best methods for collection data to be used in traveler information systems? How do transportation agencies achieve greater flexibility and interoperability between vendor systems? Are there cost effective business models for traveler information? This session will touch on these questions and many more. Learn how greater choices, better operations and lower costs can improve your traveler information system.

Session G2: ITS Deployment - Identification, Installation and Integration Tower B

Moderator: Mia Silver, Michigan Department of Transportation

Dennis Foderberg, SEH, Inc.
Minnesota Guidestars Program: Deployment Assessment

Daryl Taavola, URS Corporation
Minnesota ITS Design and Deployment in Districts 2, 3A, 4 and 8

Dean Deeter, Athey Creek Consultants
Defining Rural Warranted ITS Parameters to Support Cost/Benefit Analyses

As rural ITS deployment projects continue to mainstream into agency plans, additional tools are emerging for evaluating and integrating the various projects. This session highlights several different ITS deployments as well as tools used for determining if ITS deployments are appropriate.

Agenda

TUESDAY, OCTOBER 9TH continued...



Session G3: Communications for Rural Areas *Tower C*

Moderator: Chris Lane, ITS America

Dan Szgatti, ENCOM Wireless Data Solutions
Municipal Wireless Broadband Mobile Networks

Erin Flanagan, Cambridge Systematics
FHWA's Communications Study

Barry Ensig, Tyco Electronics
Wireless Network Solutions

New technologies and advances in communications are broadening the options for wireless users and agencies. This session will highlight many of these new advances and their applications in the rural environment.

Session G4: CVO Enforcement - Using Technology and Partnerships to Solve Problems *Mackinac Room*

Moderator: Dan Murray, ATRI

Yang Pang, International Road Dynamics
Technology for CVO Enforcement and Highway Preservation on Rural Roads

Leslie Spencer Fowler, Kansas Department of Transportation
CVO Enforcement from the DOT Perspective

Capt. Robert Powers, Michigan State Police
Commercial Vehicle Operations from the Law Enforcement Perspective

Increasingly, economic activity, trade and changes in transportation logistics are driving growing numbers of commercial vehicles onto our rural and secondary highways. These roadways, many built several decades ago, are experiencing truck volumes and weight that exceed their original design. How do we work to enforce weight requirements to lessen this impact? Technology and cooperation hold the answer. This session will provide examples of how public and private sector transportation entities and law enforcement are working together to solve CVO enforcement issues.

4:15 pm
Adjourn for Day

4:30 pm EVENING AT RANCH RUDOLF

(To attend this event, individuals must have previously registered. Check at the registration desk for openings.)

Attendees and guests should meet in the main lobby of the resort for loading onto the buses. Final departure is at 4:30 pm. Upon arrival at Ranch Rudolf and before dinner, participants can go horseback riding, canoeing, fly fishing or relax on a hayride. Those who want to pursue other activities can play volleyball, horseshoes or polish horseshoes. Entertainment will begin at 6:00 pm and dinner will be served at 7:00 pm.

WEDNESDAY, OCTOBER 10TH

7:30 am
REGISTRATION, *Governors Prefunction*

7:30 - 8:30 am
BREAKFAST, *Governors CD*

8:30 am
CONCURRENT SESSIONS & TRAINING



Session H1: 511 Implementation - Lessons Learned and Next Steps *Tower B*

Moderator: Brandi Hamilton, Montana Dept. of Transportation

PANELISTS:
James Pol, Federal Highway Administration
Jim McGee, Nebraska Department of Roads
Tomas Guerra, OZ Engineering, LLC

The assignment of 511 for traveler information delivery services has solidified the way traveler information services around the country organize their content. This session will take a look back to the pre-2000 FCC assignment, and consider the growth in number of consumers served, sophistication in services, and web tie-ins. The session will also look ahead toward the future of traveler information services including the growth in personalized services and in the private sector market. A roundtable discussion with 511 representatives will follow.



Session H2: Partners in CVO - Enhancing Commercial Vehicle Safety and Security *Tower C*

PANELISTS:
Capt. Robert Powers, Michigan State Police (providing introductions)
Bobbi Welke, Michigan Department of Transportation
William Tansil, Michigan Department of Transportation

In October 2005, the Michigan State Police and the Michigan DOT entered into a new and unique partnership to leverage their resources to enhance commercial vehicle safety, security and protection of the infrastructure in Michigan. An interagency team called Commercial Vehicle Strategy Team CVST was formed and continues to meet and collaborate. One of the main focuses of this team is to promote the use of existing and emerging technologies such as wireless weigh-in-motion for CMV enforcement. This initiative has been very successful. This session will be presented as a roundtable allowing interaction from the audience.

8:30 am- 4:30 pm
RWIS TRAINING: **RWIS Equipment and Operations, *Tower A***
(To attend this event, individuals must have previously registered. Check at the registration desk for openings.)

10:00 am
BREAK/Guest checkout, *Governors Prefunction*

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10:30 am
RURAL STAKEHOLDER INTEREST GROUP (SIG) MEETING
Governors A

If you are interested in listening and learning from national leaders in the rural ITS industry, you should plan on attending the Rural SIG meeting. Attendees are invited to participate in this ITS America meeting.

A tentative agenda follows:

Welcome & Introductions - Steve Albert, Chair

Federal Rural ITS Initiatives Reports:

- Federal Highway Administration
- Federal Transit Administration
- National Highway Traffic Safety Administration
- ITS Joint Program Office

US DOT ITS Advisory Board Status Report

Rural ITS Themes Discussion

ITS America Forum Liaison Reports

- Public Transit (PT) Forum
- Transportation Information (INFO) Forum
- Commercial Vehicle & Freight Mobility (CVFM) Forum
- Public Safety Advisory Group (PSAG)

CLARUS Initiative Update

Feedback on 2007 NRITS Michigan Conference

2008 National Rural ITS Conference Promo and Update

Future Conference Selection Committee Report

ITS America Update

12:00 pm
ADJOURN (NRITS Conference adjourns, CVFM Meeting starts)

Wednesday, October 10th
CVFM FORUM FALL MEETING, *Tower C*

- 1:00 pm** **Welcoming and Opening Remarks**
 Steve Vaughn, California Highway Patrol,
 CVFM Forum Chairman
- 1:30 pm** **Road Weather and Commercial Vehicles**
 Michael Rossetti, VOLPE
- 2:15 pm** **Rural ITS and Commercial Vehicles**
 Steve Albert, Western Transportation
 Institute, Rural SIG Chairman
- 3:00 pm** **BREAK**
- 3:15 pm** **Smart Roadside & CVISN from a Federal Standpoint**
 Julie Lane, FMCSA
- 4:15 pm** **Questions and Answers**

5:00 pm **Networking Reception, *Mackinac BC***
 (Refreshments provided, cash bar available)

Thursday, October 11th
CVFM FORUM FALL MEETING continues, *Tower C*

- 7:00 am** **Breakfast**
- 8:00 am** **IVBSS for Commercial Vehicles**
 Jim Sayer, University of Michigan
 Transportation Research Institute
- 9:00 am** **Michigan Dept. of Transportation**
 Tim Hoeffner, Administrator, Intermodal
 Policy Division, Michigan Department of
 Transportation
- 9:45 pm** **California Dept. of Transportation**
 Jeff Spencer, CALTRANS
- 10:30 am** **BREAK, *Tower Prefunction***
- 10:45 am** **Driver Fatigue Research**
 Doug Wiegand, Virginia Technical Institute
- 11:45 am** **Lunch (provided)**
- 12:45 pm** **Topic Pending**
 Skip Yeakel, VOLVO
- 1:30 pm** **Safety Incentive Showcase**
Facilitator: Kate Hartman, ITS Joint
 Program Office

Presenter: Julie Lane, FMCSA
Federal Safety Incentive Research

Presenter: Bill Gouse, ITS America
Safety Incentive Legislation

Additional Panelists: Skip Yeakel, VOLVO
- 3:15 pm** **Panel & Town Hall Discussion**
- 3:30 pm** **BREAK, *Tower Prefunction***
- 5:00 pm** **ADJOURN**

“State of the Forum”
 Topics include Public Safety, Proposed
 Forum Projects & World Congress 2008
 TMC of the Future

