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Knoxville, TN
October 7-9, 2009
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Dear Conference Attendee,

On behalf of the Board of Directors of the ITS Tennessee Chapter of ITS America, I welcome you to our third annual conference here in beautiful downtown Knoxville, Tennessee. I am pleased to see all our participants from across Tennessee and also from our surrounding states. I hope you will find this conference an excellent opportunity to learn more about intelligent transportation systems while making new friends and acquaintances in the industry.

Some of the highlights of this year’s conference include the golf outing, ITS communications seminar, technical tours, social events, and many technical presentations. A special thanks to all of our sponsors whose financial support is critical to making this conference successful.

And don’t forget to spend time in the exhibit area on Thursday and Friday to learn about the latest ITS technologies, applications, and services. Please spend some quality time with our exhibitors and let them know how much you appreciate their participation.

We would also like to thank the Tennessee Department of Transportation (TDOT) and Oak Ridge National Laboratory (ORNL) for letting our meeting participants experience the latest in ITS applications by touring the TDOT SmartWay Transportation Management Center and the ORNL transportation laboratory facilities.

Last, I would like to express my heartfelt thanks to the Conference Planning Team, led by Brad Dennard, for making this meeting a success. The outstanding program is a result of many long hours and hard work by a great group of volunteers dedicated to the advancement and success of ITS Tennessee.

Enjoy your time here at the meeting!

Marshall Elizer
President, ITS Tennessee, 2009

Schedule at a Glance

**Wednesday, October 7**
1:00 – 5:00  ITS Communication Technologies Training
1:00 – 6:00  Golf at Three Ridges Golf Course
4:00 – 6:00  Registration Open (2nd floor mezzanine)
4:00 – 11:00 Exhibitor Set-up

**Thursday, October 8**
7:00 – 8:30  Breakfast
8:00 – 12:00 Exhibit Hall Open (Great Smokey Mountain Center B and C)
8:30 – 10:00 Opening Plenary Session
10:00 – 10:30 Break in Exhibit Hall
10:30 – 12:00 Technical Program (Tracks 1A & 1B)
12:00 – 1:30 Lunch with keynote speaker
1:30 – 7:00  Exhibit Hall Open
1:45 – 4:00  TDOT Region 1 Traffic Mgmt. Center Tour
1:45 – 5:00  Oak Ridge National Laboratory Tour
5:00 – 7:00  Social in the Exhibit Hall

**Friday, October 9**
7:00 – 8:30  Breakfast
8:00 – 12:00 Exhibit Hall Open
8:30 – 10:00 Technical Program (Tracks 2A & 2B)
10:00 – 10:30 Break in Exhibit Hall
10:30 – 12:00 Closing Plenary Session
1:00 – 3:00  TDOT Region 1 Traffic Mgmt. Center Tour
**TDOT Region 1 TMC Tour**

When: Thursday, October 8  
1:45 - 4:00 p.m.  
Friday, October 9  
1:00 - 3:00 p.m.

Holding with our trend from previous annual meetings, there will be a tour of the local Tennessee Department of Transportation (TDOT) Traffic Management Center (TMC). TMCs are the hubs of Smartway, TDOT's Intelligent Transportation System. The Knoxville system consists of 50 miles of fiber optic backbone, 17 dynamic message signs, 75 closed-circuit television cameras, 213 vehicle detectors, and 4 highway advisory radio transmitters. The tour will consist of a power point presentation highlighting all aspects of the Smartway system, a walkthrough of the operations and communications room, and a look at an incident response HELP truck.

**Oak Ridge National Lab Tour**

When: Thursday, October 8  
1:45 - 5:00 p.m.

The Oak Ridge National Laboratory (ORNL) tour will consist of visits to a selected number of transportation laboratories and demonstrations at the ORNL main campus. The tour will involve four venues dealing with advanced communications technologies, geographic information systems technologies for planning, a unique composite material test facility, and a knowledge discovery framework for the US transportation system.

**Please be on time!**

Transportation for all tours will depart from the hotel entrance on Walnut Street (near Starbucks) promptly 15 minutes after the posted tour start time.

**Communications Training**

When: Wednesday, October 7  
1:00 - 5:00 p.m.

Where: Sequoyah 3

Instructors: Jon Chambers, Kimley-Horn and Associates, Inc.  
Ed Turbyfill, Gresham, Smith and Partners

Communications has undergone vast changes as we moved from serial circuits over copper wire to Ethernet transmissions over fiber optic cable. This training session will bring participants up-to-date on current trends and terminologies. It will be beneficial to personnel responsible for selection or approval of the technology choices made in planned new systems or system upgrades. Traffic and communications engineers and technicians are responsible for the design, evaluation, and implementation of intelligent transportation systems (ITS) solutions. ITS installations occur with vast differences in requirements, expectations, and constraints. This training will help participants to ask the right questions and make the proper choice for a particular system communications application.

**Join Us For Breakfast!**

When: Thursday and Friday, October 8 and 9  
7:00 - 8:30 a.m.

Where: Cherokee – Salon C

**Don’t Miss Lunch**

with our keynote speaker

When: Thursday, October 8  
12:00 - 1:30 p.m.

Where: Cherokee – Salon C

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Plenary Sessions—Meet the Featured Speakers

**Opening Plenary Session**
When: Thursday, October 8 — 8:30 - 10:00 a.m.
Where: Cherokee - Salon C

- **John Augustine, USDOT Joint Program Office**
  John Augustine is the current Deputy Director of the Intelligent Transportation Systems (ITS) Joint Program Office (JPO), a position he has held since October of 2007. As JPO Deputy Director, Mr. Augustine is responsible for a $110 million annual budget to advance research and operational demonstration of ITS technology, in support of the USDOT’s goals: improving safety, reducing congestion, and improving the environment and economic productivity. The ITS JPO is a principal research agency within USDOT’s Research and Innovative Technology Administration.

- **Joe Carpenter, Jr., Tennessee DOT**
  Joe Carpenter, Jr. is the Assistant Chief Engineer of Design and is responsible for the coordination of the project development process and specific problem resolution for the Bureau of Engineering. He has direct oversight for the three divisions of Design, Right-of-Way and Structures.

- **Dana C. Christensen, Oak Ridge National Laboratory**
  Dana Christensen is the Associate Laboratory Director of the Energy and Engineering Sciences Directorate of the Oak Ridge National Laboratory (ORNL), with responsibility for more than $350M of programs for a variety of government and industrial sponsors in all dimensions of energy science and technology. Included are improvements in energy efficiency, renewable energy concepts, transportation, electricity distribution, fossil energy, hydrogen economy, fusion energy, nuclear technology and nuclear nonproliferation.

- **Bill Lyons, City of Knoxville**
  Bill Lyons is the Senior Director of Policy and Communications for the City of Knoxville. The Department of Policy and Communications’ policy mission is to enhance the climate for quality growth through the strategic development of incentives and the involvement of appropriate organizations, individuals, and the public in the policymaking process. A Memphis native. Bill received his Ph.D and M.A. in Political Science from the University of Oklahoma.

**Luncheon Keynote Speaker**
When: Thursday, October 8 — 12:00 - 1:30 p.m.
Where: Cherokee - Salon C

- **Burkhard Huhnke, Ph.D, Volkswagen Group of America**
  Burkhard Huhnke is the Director at Volkswagen of America, Inc.’s Electronics Research Laboratory (VW ERL) in Palo Alto, CA. Since March 2007, he has been leading this group of highly motivated employees. The VW ERL staff includes a team of 50 engineers, social scientists, product designers, and up to 20 interns.

**Closing Plenary Session**
When: Friday, October 9 — 10:30 a.m. - 12:00 p.m.
Where: Cherokee - Salon C

- **Thomas E. Kern, ITS America**
  Thomas E. Kern joined the Intelligent Transportation Society of America in December 2007, and serves as its executive vice president. He also serves as an adjunct professor at Johns Hopkins University in its Graduate Business School where he teaches knowledge management and organizational learning.

- **Stephen Novosad, PBS&J**
  Stephen Novosad is an ITS Software and Systems Manager in PBS&J’s National ITS Sector. Over the last year, Mr. Novosad has become actively involved in analyzing how climate change legislation will affect transportation—specifically ITS—in the future. He is the co-chair for the State Chapter Council Committee to ITSA’s Environmental Task Force. In his current role at PBS&J, he is working with PBS&J’s 511 systems to look for opportunities to improve the quality and reliability of traveler information which in turn can be used by the traveling public to make better decisions potentially leading to some reduction in greenhouse gases.

- **Ali Farhangi, Tennessee DOT**
  Ali Farhangi has been working with the Tennessee Department of Transportation for 28 years—8 years in Highway Design and 20 years in Traffic Engineering and ITS. He has Bachelor of Science in Civil Engineering and is a registered Professional Engineer. Mr. Farhangi is the Tennessee DOT representative in the National Transportation Management Center Pooled Fund Study and vice president of the ITS Tennessee chapter.
### ITS Partnerships

**Moderator:** Donald Gedge, Federal Highway Administration Tennessee Division

**Speakers:**
- **Partnership Opportunities - Thinking Outside the Box** — John Benditz, Kimley-Horn and Associates, Inc.
- **TDOT and Agency Partnering - Integrating with Local Cities and Adjacent States** — Mark washing, Gresham Smith & Partners
- **The Power of Information Sharing** — Ahmad Sedegh, Telvent

### Current ITS Activities in Tennessee

**Moderator:** Ali Farhangi, Tennessee Department of Transportation (TDOT)

**Speakers:**
- **ITS in Johnson City** — Anthony Todd, Johnson City
- **ITS in Franklin, TN** — Eric Gardner, City of Franklin
- **Update on 511** — John Hall, TDOT

### Advancing Operations to the Next Level

**Moderator:** David Stansell, Stansell Electric Company, Inc.

**Speakers:**
- **Deployment of ITS Nationally in Support of Operations** — Steve Gordon, Oak Ridge National Laboratory (ORNL)
- **Traffic Management Centers - The Next Generation** — Bob Edelstein, AECOM
- **ITS Applications for Work Zones** — Todd Foster, Traffic Technologies
- **Technology Choices, Procurement Options, and Lessons Learned in Portable Traffic Monitoring** — Craig Franklin, Trichord

### ITS Research and Emerging Technology

**Moderator:** Diane Davidson, ORNL, National Transportation Research Center

**Speakers:**
- **Survey of Emerging Broadband Communications Technologies** — Mostofa Howlader, ORNL
- **Leveraging Bandwidth and Media Strategy for Implementation of Future ITS Backbone Technologies** — Tom Bennett, Stansell Electric
- **The Potential Role of Software Defined Radio/ Cognitive Radio Technology in ITS** — Paul Ewing, ORNL
- **Coming to America - European Style Advanced Traffic Management Systems** — Bruce Winner, Telegra
ITS Partnerships

Date: Thursday, October 8
Time: 10:30 a.m. - 12:00 p.m.
Where: Cherokee • Salon A & B
Moderator: Donald Gedge, FHWA Tennessee Division

Strong inter-agency partnerships are the underpinning of successful ITS initiatives. These efforts produce a regional impact not contained by jurisdictional boundaries. Further, the ITS community has a track record of reaching out to the private sector for mobility solutions. This track will feature multi-agency or public/private partners and their collaborative efforts to improve the travel experience in our communities.

Advancing Operations to the Next Level

Date: Thursday, October 8
Time: 10:30 a.m. - 12:00 p.m.
Where: Cherokee • Salon D & E
Moderator: David Stansell, Stansell Electric Company, Inc.

Enhancing operations is the litmus test for a successful ITS solution, and being able to prove it may well be necessary to sustain or expand a program. This session will highlight operational practices, approaches and tools that have the potential to elevate system management and operations.

Current ITS Activities in Tennessee

Date: Friday, October 9
Time: 8:30 - 10:00 a.m.
Where: Cherokee • Salon A & B
Moderator: Ali Farhangi, TDOT

Tennessee is hard at work at applying ITS across the state. This track will feature TDOT and local government ITS efforts currently underway.

ITS Research and Emerging Technology

Date: Friday, October 9
Time: 8:30 - 10:00 a.m.
Where: Cherokee • Salon D & E
Moderator: Diane Davidson, Oak Ridge National Laboratory, National Transportation Research Center

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