



ITS PULSE

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2003 ITS Annual Meeting

by Steve Bahler, Olsson Associates, and Jim McGee, Nebraska Dept. of Roads (NDOR)

ITS Heartland's Annual Meeting is one of the premier ITS events outside of ITS America's Annual Meeting. This year's Meeting will be held March 12-13 and over 200 people interested in ITS in the Heartland will attend. Over 30 vendors will display and demonstrate their services and products. Attendees will have opportunities to meet and interact with peers in local, state, and federal agencies; elected representatives; consultants; vendors; and university staff and researchers.

Congressman Lee Terry, (NE), who is on the Congressional ITS Caucus, is planning to be present for at least one day of the Conference. Also attending will be Jeff Paniati, FHWA, and Neil Schuster, ITS America President and CEO.

The Omaha consultants are sponsoring a reception at the Western Heritage Museum, formerly the Grand Union Station, adjacent to the Old Market. This event promises to be well-attended and an



Omaha, Nebraska (top photo), home to the Henry Doorly Zoo (bottom photo) and other national attractions, will be the site of this year's Annual Meeting.

excellent opportunity to meet and network with ITS practitioners, vendors, consultants, and stakeholders in a casual and friendly atmosphere.

Other opportunities for entertainment are available in Omaha, including the Henry Doorly Zoo with its Lied Jungle, Desert Dome, Aquarium, and IMAX Theater. Other entertainment venues include the Old Market, the Peter Kiewit Institute at the University of Nebraska - Omaha, and the Joslyn Art Museum.

For shopping buffs, the Nebraska Furniture Mart is a one-of-a-kind experience. You'll find discount prices on all types and brands of merchandise, from furniture to PDAs.

This year's Planning Committee was chaired by Jim McGee (NDOR). Other planning committee members included Kathy Glenn (UNL-MATC), Lynn DeShon (UNL-MATC), Laura Perkins (NDOR), and Jaimie Huber (NDOR).

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More Information on the ITS Heartland and ITS America Annual Meetings Inside ...



Included in this issue is a look at Iowa's On Track Initiative and the 511 Services offered here in the Heartland.



A Message from the ITS Heartland President



Matt Volz
ADDSCO, Inc.
President, ITS Heartland

As I look over the past year as President of ITS Heartland, there have been changes for many of us, both professionally and in relation to our great Chapter. With the upcoming Annual Meeting and my tenure drawing to a close, I hope you have found the Chapter better able to serve you.

The past year saw me leave the Kansas Department of Transportation, as the State ITS Engineer, and join ADDSCO, Inc., of St. Paul, Minnesota. Since joining KDOT in 1991, and throughout the past

six years as director of the ITS program there, I have been privileged to work with some of the best people in the industry - many of whom will be lifelong friends. This also includes many of you from Missouri, Iowa, and Nebraska, whom I have met through my longtime affiliation with ITS Heartland. I look forward to continuing these relationships in the future.

After last year's great Annual Meeting in Des Moines, Iowa, we developed a list of initiatives we wanted to accomplish as a Chapter in 2002, to better serve our members. They are as follows:

Service Contract for Chapter Administration Provider

I am happy to announce that we finally signed a contract with the Mid-America Transportation Center in January that will allow Kathy Glenn and her staff to act as

our Chapter Administrator. As many of you know, Kathy is one of the hardest working people around and we are very lucky to have her as our Administrator and a devoted member.

Expansion of Membership

The question was posed last year if ITS Heartland should expand to include adjacent states, namely Oklahoma and Arkansas. Presently, Oklahoma has been invited to submit a formal letter of recognition by ITS Heartland and begin the proceedings for becoming a part of our Chapter. This will be considered by the membership as a whole at a future meeting.

Another initiative was set to expand membership in general, especially on the private side. I recently received a report that noted the number of both current and past members of ITS Heartland is over 500

people! That is incredible outreach.

Education and Training Coordination within ITS Heartland

Although we have had a few regional training courses this past year, this is an area that has not seen much growth. I suspect this is due in large part to the budget crunches being faced by everyone. The efforts of MATC and the new Transportation Technology Professional Capacity Building Institute (highlighted on page 6) should assist in accomplishing this goal.

Define Member Needs/Wants and Provide Better Service

To this end, many of you participated in a survey after last year's meeting. We had a great response and received several very good ideas on how to better serve you. I appreciate everyone's efforts in developing the

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vieth2@mail.modot.state.mo.us

More to Come ...

The 2004 Annual Meeting will be held in the Kansas City area and is tentatively scheduled for March 23-24. Look for future announcements in ITS PULSE and at www.itsheartland.org.

ITS Pulse Contributors

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511 in the Heartland

by Steve Bahler, Olsson Associates

The January 31, 2003, report from the 511 Deployment Coalition shows states that have achieved two levels of development for 511. ITS Heartland States in these two categories are:

1. 511 "Live" - Iowa and Nebraska
2. 511 "Live" in 2003 & 2004 - Kansas

The Coalition report classifies 511 as a "work in progress" in the Heartland. For this reason, the *ITS Pulse* contacted each state's 511 Project Manager to get the full story. This is what we learned.

Iowa

Iowa inaugurated their 511 telephone and Internet service on November 22, 2002. In a cooperative effort between the Iowa DOT and the Iowa State Patrol, Iowa 511 currently provides winter road conditions for Interstate and US Highways across Iowa. Giving motorists the opportunity to check current weather and road conditions before they travel focuses Iowa 511 on traveler safety. They can make travel timing and route decisions based on current information. Road conditions are reported by Iowa State Patrol Troopers to their communication centers,

where the communication center personnel enter the current road conditions into the Condition Acquisition Reporting System (CARS). Data from CARS automatically updates the 511 telephone system and the Internet websites. Beginning this spring, IDOT personnel will provide construction and maintenance information as well.



Iowa's 511 service also utilizes a voice recognition system to allow for hand's-free operation.

Winter Road Conditions:

www.iowaroadconditions.org

511 Phone Service Info:

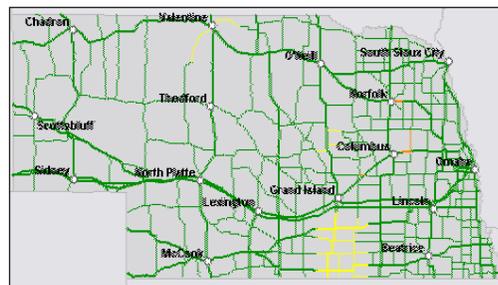
www.dot.state.ia.us/511
Toll free number for out of state travelers: 1-800-288-1047

Program Manager:

Michael Jackson
(515) 239-1192

Kansas

The first phase of the 511 system in Kansas will convert the current road Condition Hotline (1-800-585-ROAD) to 511 and will provide road specific weather (current and forecast) and road condition information via landline and cellular phones. To use the system, motorists will simply dial 511 from a landline or



cellular phone and be connected to a computerized voice message system. The system will offer voice response and/or touch-tone options for users to request road specific travel information and conditions.

The system will be deployed for internal testing in February 2003. Currently, no target date has been set for public deployment.

Program Manager:

Barb Blue
(785) 291-3818

Missouri

Planning for 511 is getting started in Missouri. The first action by MoDOT will be to develop a 511 plan to address overall goals and provide an indication of how coverage and data content will be phased into a future statewide system. Early indications from MoDOT's 511 Project Manager, Rick Bennett, are that the first priorities will most likely focus on St. Louis, Kansas City, and the I-70 corridor. Probable first priorities for content will be road conditions and work zone information. The plan is to have the first phase of 511 operating in about two and one-half years.

The details of this first phase will be identified when the 511 plan is developed.

Currently, MoDOT has an Internet website that reports road conditions: <http://www.modot.state.mo.us/roadcond/statemap.htm>. MoDOT also initiated a traveler information website in St. Louis, the Gateway Guide. Please refer to Volume 1, Issue 2, of the *ITS Pulse* for further information. Their website,

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Real World Solutions

Your real world problems need real world results! Get them at ITS America's Annual Meeting.

This premier industry event includes practical information and hands-on experience that can solve your transportation challenges. ITS leaders gather annually to explore technology solutions, exchange ideas, and hear from experts about the advances that fuel the growth of ITS development and deployment. You'll get

everything you need at this meeting, including networking with counterparts from around the country to share information.

The Real World - Real Results Education Program

Our education programming will focus on issues that you face daily. Timely information and solutions will help you be better prepared to lead your team to success. Our education tracks include:

- Infrastructure (Traffic Management/Emergency

& Incident Management)

- Telematics
- Traveler Information
- Commercial Vehicle Operations/Intermodal Freight
- Transit Applications
- Rural Applications
- Intelligent Vehicles and Human Factors
- Electronic Payment Systems/Weather Applications
- Architecture Standards and Interoperability
- Policy, Societal, and Institutional Issues
- Marketing, Outreach, and Public Relations
- Regional Deployment

Showcases from Across the United States

After your sessions, visit the exhibit hall to see real world results at work! You'll get hands-on experience with live demonstrations and working models related directly to your needs.

Register on-line at:

<http://www.itsa.org/annualmeeting.html>

Information obtained from the Intelligent Transportation Society of America's website: (www.itsa.org).



President's Message

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survey and to all who responded.

Better Use of ITS America by State Chapters

ITS America has taken the lead on this issue. With the assignment of Wendy Mann as the new State Chapter's Advocate and Tim Diffley as the new ITS America Manager of Chapter Relations and Strategic Initiatives we are getting a bigger voice within the organization.

ITS Heartland Newsletter

Steve Bahler, Olsson Associates, has taken www.itsheartland.org

the lead on this effort and with the help of contributors, consistently puts together a quality Chapter newsletter, the *ITS Pulse*. Thank you very much to all of those who contribute and to Olsson Associates for the commitment of time and resources to this effort.

Last, but certainly not least, ITS Heartland was recognized at the 2002 ITS America Annual Meeting as the Outstanding State Chapter. This is a very competitive award and the credit definitely goes to you, our members, for

making this such a great Chapter!

Overall, I think we have done an excellent job accomplishing last year's goals. Let's continue to strive in the year ahead to make our Chapter one of the best.

This year's Annual Meeting is quickly approaching. It will be held in Omaha on March 12 and 13. I look forward to seeing all of you there. Thank you for allowing me to serve as your President. Have a great year!

On the WWW

www.itsa.org
and
www.itsheartland.org

For the latest information and Annual Meeting registrations!

FREE MARKETING OPPORTUNITY

If you are a member of ITS Heartland and have an Internet website, please contact Dennis Kroeger (kroeger@iastate.edu) to create a link to your website from the ITS Heartland website. Just send him your URL.

Improving Transportation Through Technology

by Dena Stapelman, Olsson Associates

The Iowa Department of Transportation's (IDOT) On Track Initiative was established to improve transportation through emerging technology and to promote the application of these various technological tools statewide. Focusing on four key areas - convenience, mobility, efficiency, and safety - has produced amazing results for both the DOT and motorists traveling on Iowa roadways.

Taking a non-traditional, broader approach to Iowa's roadway system, On Track doesn't focus primarily on infrastructure. Although adding and expanding roadways can improve travel, it's a solution that only offers more of the same. Instead, by providing motorists with access to travel information, options, and resources, the On Track Initiative creates better quality and more convenient travel.

Travel demand is expected to increase by nearly 30 percent in the next decade. The projected roadway system will be able to accommodate only two-thirds of the anticipated growth. By centering their efforts and technology on capacity and reduced delays and travel times, IDOT will be able to effectively sustain mobility for motorists throughout the state.

The On Track Initiative

www.itsheartland.org

seeks to manage Iowa roadways by utilizing the available technology and taking proactive measures, resulting in a more efficient use of both time and money. New ITS programs are being



ITS technologies allow information to be quickly and easily shared between state agencies.

developed and deployed, in order to increase access and provide greater integration of communications and information between safety/emergency services and law enforcement. According to the US DOT, the estimated cumulative benefits of ITS initiatives exceed the costs by a ratio of 8:1.

However, despite the obvious benefits of ITS advancements in the areas of efficiency, mobility, and convenience, safety remains the most compelling reason to invest in transportation technology; preventing collisions and saving lives is the ultimate goal. As a result, new ITS projects and applications center around three key issues: traveler information, incident management/emergency services, and traffic monitoring/enforcement.

Automated bridge de-icing is one example of the On Track Initiative at work. Winter weather conditions in Iowa and the Midwest can be extremely hazardous. This is particularly true of bridges and overpasses. To combat treacherous roadways, automated de-icing systems use sensors to detect icy conditions and release liquid chemicals onto bridge decks and other areas leading up to bridges to clear the surface. Bridge de-icing helps to keep winter traffic flowing more smoothly by counteracting ice formation on bridges and reducing traffic incidents.

By logging on to the Internet and accessing Weatherview, (www.DOTweatherview.com), motorists can access real-time transportation-related weather updates. The continuously updated travel conditions help travelers plan ahead for local and/or long distance commutes and travel safety. Weatherview combines the Iowa DOT's Road Weather Information System (RWIS) with Automated Weather Observing Stations (AWOS) at Iowa's airports to serve as a powerful resource in assisting site visitors



Motorists can plan ahead by accessing real-time transportation-related weather updates (shown above).



with their safety on Iowa's transportation system.

Public education plays an important role in the success of Iowa's On Track Initiative. For example, when a car speeds through a red light, video sensors can take a picture and process the time, date, vehicle speed, and amount of time the light was red. From the data produced, educational materials will then be developed to emphasize the danger of the issue and, hopefully, reduce the number of crashes at intersections.

check it out! check it out! check it out! check it out!

www.iowaontrack.com

Heartland

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(<http://www.modot.state.mo.us/roadcond/statemap.htm>), reports work zones and road closures will be available in the near future.

Program Manager:

Rick Bennett
(573) 526-4842

Nebraska

On October 1, 2001, Nebraska activated the first statewide implementation of 511. Nebraska 511 provides access to the latest weather forecasts and road conditions for all State-maintained roads. Data for road conditions is primarily collected by NDOR field maintenance staff. Nebraska statewide road conditions are also available on the Internet at: <http://www.safetravelusa.com>

Not satisfied with simply being the first to deploy these services, Nebraska is in the process of making improvements. One of the improvements includes the addition of a voice response system. This system will allow cell phone users to select routes and route segments without having to take their eyes off the road. Along with the voice responsive system, NDOR will also be implementing a reference point interface for users of 511 to supplement the current system with a milepost and route segment interface.

A second improvement will be the pooling of equipment and telephone lines with other states (initially, North Dakota, South Dakota, Kansas, and Montana) to assure there are enough telephone lines available to handle peak demands. In March 2002,

Nebraska 511 experienced 124,000 calls when a blizzard struck the State. The average call volume for 2002 was 29,000 calls per month.

NDOR is developing a new data collection system that will be called "PioneerNet." PioneerNet, a Nebraska trademark, will replace their existing road condition reporting system and will be customized from Arizona DOT's Highway Condition Reporting System (HCRS). PioneerNet will give NDOR the ability to report roadwork, incidents, accidents, and possibly Amber Alerts to travelers through 511. PioneerNet will also include a traveler information website.

Program Manager:

Jaimie Huber
(402) 471-1810

The Heartland is influencing national 511 policy and direction. Many 511 managers from Heartland states are actively involved with ITS America's 511 Deployment Coalition. Barb Blue (KDOR) and ITS Heartland Board Member Jaimie Huber (NDOR) are involved with Coalition Working Groups, such as the Evaluation Panel and the Marketing Panel. These groups are planning to gather information from users of 511 to guide direction of future activities. Jaimie is also working on a committee that will be holding a national 511 conference, tentatively scheduled for October 2003.

Interviews provided by Willie Sorenson, IDOT; Barb Blue, KDOR; Rick Bennet, MoDOT; and Jaimie Huber, NDOR.

New at MATC

The Mid-America Transportation Center (MATC) will soon launch a project to facilitate the building of a Transportation Technologies Professional Capacity Building Institute (PCB) in the ITS Heartland region. The objective of this project is to offer transportation professionals in Kansas, Nebraska, Iowa, and Missouri a series of ITS training and demonstration opportunities designed to enhance their expertise in ITS architecture development and implementation of ITS standards.

MATC will:

1) determine, via surveys to transportation professionals, interest in specific ITS course offerings provided by USDOT and by various transportation-focused organizations, such as ITE;

2) schedule all training opportunities and recruit participants based on survey results;
3) coordinate all details related to the training courses including participant registration, interaction with USDOT staff and trainers, and maintain a database of participants.

In future years, PCB training opportunities may be expanded to offer a broader range of highway-related technical and program courses. In addition, once launched, the program may be expanded to include other states adjacent to the ITS Heartland region. ITS Heartland members are urged to watch for additional information coming soon.

Questions can be directed to Kathy Glenn, MATC, 402-472-6363, kglenn2@unl.edu.

ITS America 2003



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Rochester TOCC, Mayo Dispatch Center To Be Featured

Mn/DOT Operations and Communications Center and the famed Hospital Dispatch Center headline the stellar tour lineup for ITS America 2003.

ITS Minnesota is extremely pleased to host the 13th Annual Meeting of the Intelligent Transportation Society of America (ITSA) at the Minneapolis Convention Center, May 19 through 22, 2003.

This year, the ITSA event conference center will be the Minneapolis Hilton, located in the heart of downtown Minneapolis. You'll be

connected via skyway to the Convention Center and the financial district as well as the secondary hotel, the Minneapolis Hyatt. Orchestra Hall is right next door and the Guthrie Theatre, Walker Art Center, and the Metrodome are only a short stroll away.

Fabulous shopping, superb restaurants, other hotels, and live music are all within blocks. Shuttle, bus, or taxi from the Minneapolis/St. Paul International Airport is just a 12-mile ride.

Information obtained from the Intelligent Transportation Society of America's website: (www.itsa.org).

ITS Research and Education in Nebraska

by Kathy Glenn, UNL - MATC

The University of Nebraska-Lincoln (UNL) is actively involved in ITS-related research through the Mid-America Transportation Center (MATC) and the ITS Information and Infrastructure Laboratory (I³ Lab). MATC, I³ Lab, and the University of Nebraska College of Engineering and Technology faculty collaborate on ITS advanced technologies research including:

- a digital camera accident investigation system
- work zone speed advisory systems
- ground penetrating radar
- self-deploying traffic control devices
- advanced machine vision processing for traffic surveillance
- smart conductive

concrete for de-icing
 • XML applications for improved emergency communications.

Mid-America Transportation Center (MATC)

MATC conducts research and educational activities aimed at improving the design and operation of transportation facilities to maximize mobility, safety, and efficiency and to minimize the negative environmental effects of transportation in Mid-America. MATC is housed within the Department of Civil Engineering at the University of Nebraska College of Engineering and Technology. Major research areas include:

- ITS
- Traffic Engineering
- Highway Design

- Transportation Planning
- Highway Safety
- Work Zone Safety and Efficiency
- Geographic Information Systems and Remote Sensing

MATC has facilitated numerous regional transportation research efforts including the Midwest States Smart Work Zone Deployment Initiative, a FHWA pooled fund study involving Iowa, Kansas, Missouri, Nebraska, and Wisconsin. The project received a 2001 National Highway Safety Award, sponsored by FHWA and the Roadway Safety Foundation.

MATC also works to attract undergraduate and graduate students to transportation-related



(Above) A MATC graduate student plays an integral role in research data and collection.

study at UNL. The MATC Undergraduate Summer Intern Program, for instance, offers civil engineering students firsthand experience working for transportation engineering consulting firms or public transportation agencies in the Midwest.

In addition to its research and educational activities, the Center has

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also assisted local, state, and federal agencies with various types of project facilitation. For example, MATC is working with the Nebraska Department of Motor Vehicles on project documentation and management of the State's digital driver licensing system. In addition, MATC serves under contract with ITS Heartland, providing administrative support for the Chapter.

For more information about MATC go to www.matc.unl.edu.

ITS Information and Infrastructure Laboratory (I³ Lab)

The I³ Lab is a state-of-the-art ITS educational and research facility at the University of Nebraska-Lincoln's College of Engineering & Technology. The I³ Lab is dedicated to providing a research intensive educational environment for undergraduate and graduate students in transportation engineering, computer

and electronics engineering, computer science, and other ITS disciplines. Bringing together faculty and students from these ITS disciplines, researchers conduct multi-disciplinary research to develop innovative models and applications for ITS.

Located in the Peter Kiewit Institute of Information Science, Technology, and Engineering building on the Omaha campus, the I³ Lab is a research facility capable of supporting a wide variety of multidisciplinary ITS research and educational activities including:

- fundamental traffic flow theory research
- advanced machine vision processing capabilities for traffic monitoring
- traffic management center test-bed operations for verification of system designs
- traffic data archiving, warehousing and mining
- development and

testing of communication protocols related to ITS standards and high bandwidth networks like Internet2

- XML applications for improved ITS interoperability

The I³ Lab has several distinguishing characteristics including

- traffic management center for teaching and research related to ITS operations
- real-time ITS data streams from multiple sources including a video detection system with coverage of an arterial street adjacent to the Peter Kiewit Institute
- access to two adjacent signalized intersections through a partnership with the City of Omaha
- single-mode fiber optic communications between street equipment and lab facilities; gigabit networking connecting the I³ Lab with high performance telecommunications labs and computing facilities
- a mobile traffic data collection van equipped with two Autoscope Solo



Interior of the I³ Lab, one of the engineering program's most distinguishing features.

Pro cameras mounted on a 42-foot telescoping mast and connected to a self-contained data storage system. This system is capable of:

- collecting highly detailed traffic data at any location including busy interstates, work zones, rural locations, congested intersections, high usage parking lots, and special events
- monitoring traffic remotely as part of an on-site command center
- wireless transmission of traffic video and data from the mobile lab to a remote location

For more information about the I³ Lab, visit www.i3lab.unomaha.edu.

National Rural ITS Conference

August 9 -14, 2003

"What's Really Happening in Rural ITS and Who's Doing It"

To be held at the Westin Innisbrook Resort, Palm Harbor, Florida.

Sponsored by: ITS Florida, ITS America, FHWA, and FDOT

Contact: Mike Pietrzyk (mcptsi@tampabay.rr.com) or Rob Gregg (gregg@cutr.usf.edu)

See www.itsflorida.org for more information.

Annual Meeting

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Erin Flanigan (TransCore), Kathy Glenn, Jim McGee, and Carlos Sun (UM-Rolla) lead efforts to identify and invite speakers for the various sessions and Laura Perkins made arrangements with vendors for booths and demonstrations throughout the

conference. The 2004 Annual Conference will be held in the Kansas City area and is tentatively scheduled for March 23-24. Look for details in upcoming issues of the *ITS Pulse*.