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Oregon Department of Transportation
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URS Corporation
Utah Department of Transportation
Utah Transit Authority
Western Transportation Institute, MSU
Westwood One
Wyoming Department of Transportation

Message from the President



Welcome to our Spring newsletter. The mission of the Rocky Mountain Chapter is to “develop partners for the effective deployment of ITS across all surface transportation modes, thus providing a viable and sustainable system for the Rocky Mountain region that will benefit all users”.

This newsletter includes articles about an integrated multi-state 511 alert system, an update of information for our annual

meeting and an article on work zones from the Western Transportation Institute.

Mark your calendars. We are currently preparing for our 2004 Annual Meeting in conjunction with the 2004 Joint Engineers Conference, November 4-5 in Helena, Montana. The JEC Conference will be held at the Red Lion Colonial Hotel. Vendor information as well as reservation information is available on our web site. As further details of the program are finalized the information will be available on the web as well. Just visit the ITS Rocky Mountain website and follow the “Meeting and Events” link. Also on the website, our new student section is dedicated to providing information on supporting student efforts in the region including details on our 2004 Paper Award and Scholarship Competition. Go to www.itsrn.org/studentinfo.htm.

I'd like to acknowledge the efforts of two ITS Rocky Mountain Chapter members, Meridian Environmental and the Utah Department of Transportation, for the recognition they received at the ITS America Annual meeting in San Antonio the last week of April. Meridian was a finalist in the “Best of ITS” category and UDOT took home the award in the “Return on Investment” category. This is the second year in a row that ITSRM members have won the “Return on Investment” category.

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I'd also like to recognize our past President Steve Albert for all of the efforts he has made over the last several years. In San Antonio he completed his term as Co-Chair of the ITSA State Chapter Council. His dedication and hard work have been of great value as the structure and activities of ITS America have evolved in the last two years. I think every ITS member in the nation and our Chapter are in his debt.

Finally, we would like all members to become involved in the chapter and help get the word out about the quality of work being done in our region. Please phone, fax or email any comments, suggestions and opportunities to me or to our Chapter web site www.itsrm.org.

- Richard Hodges, Chapter President (RHodges@uta.cog.ut.us)

Annual Conference Update...

Planning for the 2004 ITS Rocky Mountain Annual Meeting continues to move forward. Welcomed by the 2004 Montana Joint Engineers Conference, the Chapter has been developing a ITS short course and several ITS specific tracks to complement the myriad of sessions already offered at the conference. These include a half-day short course entitled *How is Advanced Technology Changing Transportation Infrastructure, Driving and Training Needs?*, as well as four additional 90 minute ITS sessions entitled:

- *ITS Development: Turning Ideas into Actions;*
- *ITS Operations: Maximizing Effectiveness;*
- *ITS Implementation and Technology: Tools;* and
- *Operating Signalized Arterial Corridors for Small to Medium Cities.*

All together, over 12 continuing education credits will be available at the conference and will be administered through Montana State University. Initial estimates indicate an attendance of approximately 350-400 individuals from Montana and the surrounding states.

Full session descriptions as well as information relating to the vendor show can be found online at www.itsrm.org/meetings.htm. We look forward to seeing you there!



Ali Kamyab
Western Transportation
Institute

WTI to Test Work Zone Traveler Information System on Rural Highways

In recent years, there has been a substantial increase in reconstruction and rehabilitation activities on urban and rural highways. The frequency of maintenance activities and the potential severity of work zone crashes have intensified the importance of safe and efficient handling of traffic in work zones.

Traditional methods of controlling traffic in work zones have included speed control techniques, such as posting regulatory and advisory speed limit signs and using radar technologies to enforce speeds within the zones. Intelligent Transportation Systems (ITS) are providing additional tools to enhance work zone safety. The Western Transportation Institute (WTI) at Montana State University is currently investigating the applications of **Traveler Information Systems** in the work zone environment.

The goal of Traveler Information Systems is to decrease motorist frustration by providing drivers with accurate information about expected delays and potential alternative routes when approaching a work zone. The ongoing success of such a safety program, however, relies on establishing public confidence in the *reliability* and *timeliness* of the information. As a part of the Rural California/Oregon Advanced Transportation Systems (COATS) Showcase evaluations, WTI is preparing to field test a travel messenger system (TMS) in an actual work zone located in a rural mountainous section of northern California during the summer of 2004.

System Description

The purpose of this TMS is to provide accurate and valuable information to the rural traveling public who are affected by significant delay due to a long work zone lane closure (i.e. more than two

miles in length). To address the specific needs of a rural environment, the system will be deployed on an undivided two-lane highway wherein a pilot vehicle escorts traffic through the work zone.

The initial design for this traveler information system, as proposed by International Road Dynamics (IRD) Inc., was to equip the pilot vehicle with a GPS/AVL (global positioning system/automatic vehicle location) device, which communicates to a GIS (graphical information system) program. Under this proposal, as the pilot vehicle navigates the work zone, the estimated delay for the stopped vehicles waiting to enter the closure from each direction is calculated and posted to portable CMS (changeable message sign) trailers located at each end of the work zone. However, concerns regarding the system's cost, inadequate satellite coverage at site, and other specified requirements, have resulted in a modified system that will be more affordable and practical for local

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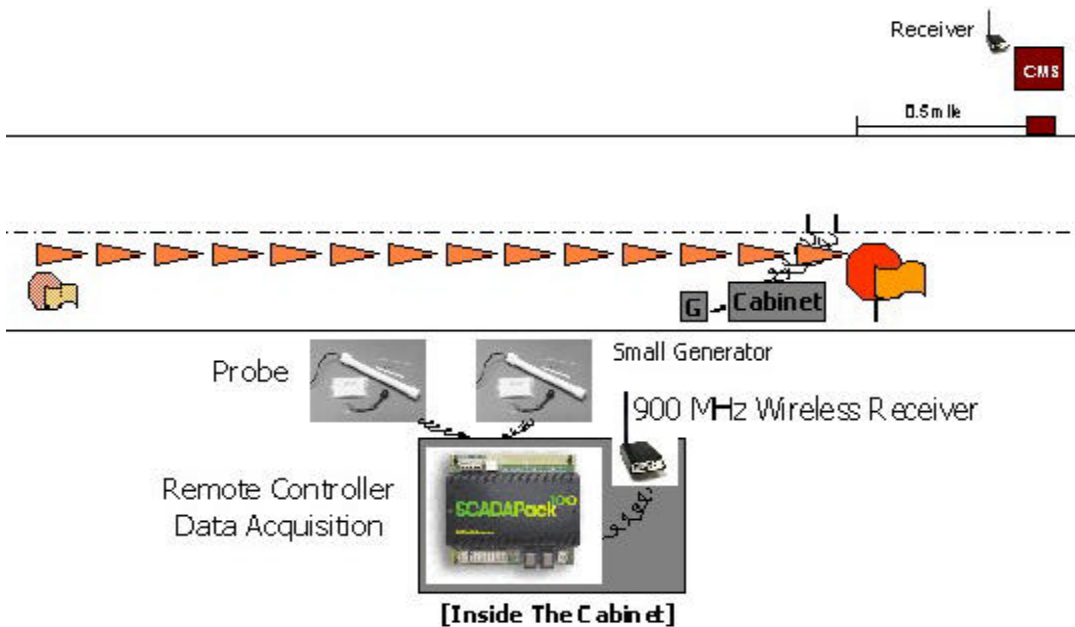
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agencies to deploy.

WTI is developing the new design in cooperation with the Division of Research and Innovation (DRI) and District 2 of the California Department of Transportation (Caltrans). Rather than relying on cellular and satellite communications, the system uses 900 Mhz wireless receivers to communicate delays to the CMS and a remote data acquisition controller powered by a small generator.

As shown in the schematic of the proposed system, the two probes detect the end of the platoon behind the pilot car inside the closure and send a signal to the controller (placed in a small cabinet on the roadside) to start counting time. The

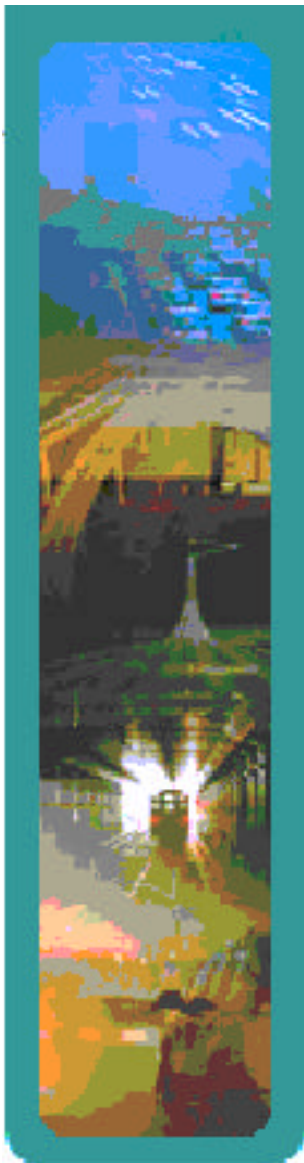


timing stops after the pilot car returns to the same location, pulls over to the side to let vehicles behind it exit the closure, makes a U-turn and restarts the cycle by leading the vehicles waiting in the queue through the closure. Once the next cycle starts, the controller updates the CMS (located about a half mile upstream of the closure) via the receivers of the expected delay observed in the last pilot car run (cycle).

Current status

The new design for the prototype TMS is near completion. The system will go through extensive testing in one of Caltrans' facilities in Sacramento before WTI conducts the actual field test in northern California later this summer. The system performance will be measured based on its accuracy and reliability. WTI will also evaluate its effectiveness through a survey of motorists, maintenance workers and management.

WTI is considering expanding the scope of the project to include simulation modeling of traffic operations in and around the configured work zone impacted by such a traveler information system. Using an advanced traffic simulation modeling package, the system logic could be fine-tuned off-site prior to the actual system deployment. This high fidelity computer simulation model with an animation interface could also be used as a tool to virtually demonstrate the system's operation and identifying the benefits and limitations of its use in a specific environment. ■



Meridian includes an Integrated Multi-State Alert System for Amber, Homeland Security and General Transportation for 511

The innovation continues at Meridian Environmental Technology, Inc. In 2003, Meridian introduced the nation's first, Multi-state 511 Alert System. This system allows authorized state officials the ability to issue a statewide alert message for Amber, Homeland Security or General Transportation for a maximum of two minutes immediately across the statewide 511 system.

Begun in 1996, the original #SAFE system established the prototype for statewide and regional Advanced Traveler Information Systems. The #SAFE technology was conceived and constructed during a period of scarce telecommunications infrastructure, limited reporting systems, and no lessons learned to rely upon to create the nation's first regional Traveler Information System.

The merging of numerous database systems, file formats, input systems, and vocabulary files created a cross-jurisdictional system available to all travelers across the region. In the beginning, a number of partnerships were formed to develop and provide proof of concept. These partnerships included state agencies within transportation, networking, and Information Technology, plus private companies and telecommunication providers. The emphasis was on cross-jurisdictional partnerships, which resulted in a highly successful ITS deployment.

#SAFE was the forerunner to 511, years before 511 became a reality. The system was recognized by the US DOT in publication FHWA-JPO-99015 as "the first rural road condition information and weather forecast system in the US". The #SAFE technology now covers all state, US, and interstate highway systems across a multiple-state region providing information for more than 55,000 road miles updated as frequently as every five minutes for over 6.7 million Midwestern Americans. The route specific nature of the system access and control, and even some of the basic philosophy of system operations, became the basis of the USDOT 511 National Guidelines.

Meridian Environmental
Technology, Inc.

[mowens@meridian-
enviro.com](mailto:mowens@meridian-enviro.com)

The system designed was based on a number of key factors:

- 24-hour-per-day operations for timeliness,
- high resolution detailed site-specific weather forecasts,
- a central database location accessible by the public,
- clear direct lines of communication between the operational center and all weather and road condition data sources available,
- complete highway information for commercial vehicles,
- load, weight and roadway restriction for commercial vehicle operators,
- expandable to include new technologies, information sources, and data at cost effective expense.

The innovation within the #SAFE technology has continued to develop leading-edge application and business models with unsurpassed results for both. At the end of 2003, Meridian constructed a new alert system to provide state officials another avenue for the dissemination of information.

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The Alert System

- The new alert system provides each state the ability to issue a statewide alert over the 511 system for Amber Alerts, Homeland Security Alerts or General Transportation Alerts.
- Each alert type is separate and specific for the corresponding state agencies.
- Both Homeland and Amber alerts last six hours, while General Transportation Alerts can be scheduled for up to 25 hours.
- Alerts may be manually cancelled prior to the end of their lifecycle.
- Alerts may be extended for longer than their lifecycle.
- Only one of each alert type may be active at any one time; however, one of each may be active at the same-time.
- Each time an alert is activated, the system will notify state officials of the alert type and activation.
- Officials can listen to and activate a neighboring states alert within their own 511 system.
- The system is inter-operable between states.

While planning a test of the Amber Alert system statewide to include the new 511 Alert System, NDDOT experienced an Amber Alert on March 4, 2004. Public safety officials praised the system during the Alert.

In North Dakota, NDDOT had posted on their Dynamic Message Sign during an Amber Alert “Amber Alert - Tune to your local radio station”, but radio stations played the Amber Alert only every 15 minutes during the first two hours followed by hourly updates. As a result, NDDOT is changing their DMS policy to “Amber Alert - For Information Call 511”. The alert information will be on 511 continuously during the alert for every traveler.

During this same Amber Alert, a regional radio station was receiving complaints from listeners that the Emergency Alert System (EAS) recording was too hard to understand. The management of the radio station re-recorded the Amber Alert from 511, began broadcasting the copy and complaints disappeared.

Meridian’s innovative approach to development allows for the continued growth and enhancement of system functionality and efficient economic operation while focus remains on the needs of the traveler, state and taxpayer. ■

Submit an Article...

You can submit an article for publication in the ITS Rocky Mountain Newsletter! Articles must be no more than 3 pages in length and must contain contact information for the author. While any article may be submitted, publication priority will be given to articles that match the respective Newsletter’s theme. Graphics and photos are welcome!

2004 submission deadlines are as follows;

July/August/September (Summer) - July 23rd. Theme: “Traveler Information”

October/November/December (Fall) - Theme: “Conference Proceedings” **no articles accepted**



News from around the Region...

CITE Now Offering ITS Project Management Certificate

The Consortium for ITS Training and Education (CITE) is now offering a certificate in ITS Project Management. In today's world, there is a significant need for transportation professionals to understand the most effective ways to manage advanced transportation projects. These projects have unique aspects that make them different from managing a conventional highway project. CITE has developed this ITS Project Management certificate specifically to address the unique nature of managing ITS projects.

The ITS Project Management Certificate is the third one that CITE now has available. CITE also offers certificates in ITS Systems and Traffic Engineering & Operations. Each CITE certificate contains three core courses, two electives and one bonus course. CITE provides students with several electives so they can select the courses that emphasize their specific interests and career choices.

CITE itself is unique since all of its courses have been developed in an interactive web-based format that makes them accessible 24 hours a day, 7 days a week. The courses provide interactivity through a stimulating mix of participatory activities, such as self-study quizzes, drag-and-drop exercises, 'click-on' tasks and animations. These activities help support and reinforce the text-based information and keep students engaged and active in the learning process. Students can take CITE's courses from anywhere as long as they have a computer and internet access. Upon completion, students will receive a certificate and CEUs from the University of Maryland.

Demonstrate your career dedication or possible advance your career by earning one of CITE's advanced transportation certificates!

For more information, visit <http://www.citeconsortium.org> or contact Kathleen Frankle, CITE Program Manager at 410-414-2925 or kfrankle@umd.edu.

Meridian Finalist for 2004 Best of ITS Award at ITS America's Annual Meeting

GRAND FORKS, ND -- Meridian, the forerunner for statewide Advanced Traveler Information System (ATIS) applications, was recognized for yet another innovative application to current statewide ATIS 511 systems under the Public Safety category. Meridian 511 Alert System allows state officials to process and release General Transportation, Homeland Security and Amber Alerts across a statewide 511 in as little as 2 minutes.

Meridian is a finalist in the Public Safety category this year for its Integrated Multi-state Alert System. This Alert system allows authorities in each state to process an Amber, Homeland Security or General Transportation Alert statewide for immediate release through the statewide 511-traveler information system. The Public Safety award is given to the program, product or service that has achieved impressive technical innovations or ITS public safety functionality with either proven or potential ability to save lives, reduce injuries, speed emergency response, or prevent accidents.

Meridian Environmental Technology, Inc. is the Midwest's fastest growing advanced technology company, bringing leading-edge technology solutions to surface transportation, agriculture, emergency management and other industries nationwide. Meridian's cutting-edge technologies are designed to provide a modern approach to the processing, analysis, forecasting, application and dissemination of high-end weather information, allowing Meridian to develop and deliver products that both enhance productivity and improve the quality of everyday life. Visit www.meridian-enviro.com for more information, or contact a

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Meridian representative at (701) 792-1800, or write:
Meridian Environmental Technology, Inc.
PO Box 14178, Grand Forks, ND 58208-4178

Ralph Jackson, Transportation Industry Expert, Joins UTA

SALT LAKE CITY, UT -- Utah Transit Authority (UTA) is pleased to welcome Ralph Jackson as the agency's Deputy Chief of Major Program Development. Jackson has more than 40 years of experience in transportation and is well known throughout the industry as the designer and manager of several major capital projects. In his new position, Jackson will oversee the development of several UTA projects such as commuter rail, light rail and bus rapid transit.

Jackson has managed light rail projects in Missouri and Kentucky, the 16th Street Mall in downtown Denver and the I-15 reconstruction project in Salt Lake City. He also worked with UTA in the early phases of planning for the development of light rail.

Notable highlights in Jackson's career include:

- Intermodal Hub and TRAX light rail extension, Salt Lake City, Utah
- Weber County to Salt Lake City commuter rail, Salt Lake City, Utah
- Central Area LRT Connector, Denver, Colorado
- South Central Corridor light rail project, Louisville, Kentucky
- Wasatch Front commuter rail feasibility study, Salt Lake City, Utah
- West/East LRT preliminary engineering and final environmental impact statement, Salt Lake City, Utah
- I-15 reconstruction project, with ISO 9001 certification, Salt Lake City, Utah
- Conference Center parking design and engineering, Church of Jesus Christ of Latter-day Saints, Salt Lake City, Utah

Skyline Products Announces Executive Appointments

COLORADO SPRINGS, CO -- Skyline Products™, a leading developer, manufacturer and provider of ITS-Grade dynamic message sign (DMS) solutions for the transportation industry and electronic gas price displays for the petroleum marketing industry, announces the appointment of **Vance Brown** as **vice president of business development**. In this role, Brown will have worldwide responsibility for developing and implementing new products and new markets for Skyline Products' high-quality products and technology.

From 1996 to 2000, Brown was president and CEO of GoldMine Software Corporation (currently FrontRange Solutions), a worldwide developer of software solutions for customer relationship management and service desk solutions for small-to-medium-sized businesses. Brown has a broad spectrum of expertise in computer/internet technology, business strategy, executive management, and business law. Brown has been very successful growing companies from start-up to maturity.

Greg Stadjuhar has been appointed **national director of sales**. In this role, Stadjuhar will be responsible for national sales development and growth for all product lines sold into both electronic sign markets serviced by Skyline Products.

Stadjuhar joins Skyline Products from Boston Scientific, a worldwide developer and marketer of highly technical medical devices headquartered in Natick, Mass. While there, Stadjuhar managed the Southeast region while developing the corporate account program and building key accounts. He had increasing levels of responsibility while managing an extensive team of territory managers and sales trainers.