



Fall 2005

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President's Message

Greetings and thanks for your support.

The ITS Texas Board Members have worked very hard over the last year to develop the program for the 2005 ITS Texas Annual Meeting. This year the meeting is held in College Station, Texas.

College Station will be host for several informative sessions, training, and tours, as well as, fellowship. As usual, vendors will display the latest technologies and answer your questions.

I encourage members to peruse the links to the Annual Meeting. Discuss topics of interest with fellow members, coworkers, and associates. Make plans to attend and take advantage of the opportunities provided at this event.

I look forward to meeting you at this year's Annual Meeting. As always, please give me a call if you have any concerns, comments, or questions.

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The ITS Texas Annual Meeting
will be
November 16-18, 2005

MARK YOUR CALENDAR 2005 ITS Texas Annual Meeting

The 2005 ITS Texas Annual Meeting is just around the corner! Don't miss joining your fellow ITS Texas members at this exciting meeting. This year's meeting will be held in College Station **November 16-18** at the Hilton Hotel. This year's theme is ***Bridging People and Places With the Future.***

To register, please visit the ITS Texas website at <http://itstexas.tamu.edu/> or visit <http://tti.tamu.edu/conferences/its05/>. Preliminary program information is also available at <http://tti.tamu.edu/conferences/its05/>. Accommodations have been arranged at the College Station Hilton and Conference Center. For details about the Hotel, please visit their web site. See you there!

Fuel Savings, Smarter Travel, Efficiency Roadway (FASTER) Act

Rep. Rush Holt (D-NJ), working closely with ITS America staff, introduced legislation last week that would call on the Secretary of Energy to examine the potential of intelligent transportation systems to conserve fuel and help consumers plan their travel and avoid delays.

Known as the "Fuel Savings, Smarter Travel, Efficient Roadways (FASTER) Act," the yet unnumbered bill would call on the Secretaries of Energy and Transportation to report on the potential benefits associated with using intelligent transportation systems.

The legislation would provide current and future users of these systems with detailed information regarding potential fuel savings, system costs, universal applicability and evaluation of case studies, best practices, and emerging technologies from the private and public sector. The bill was also co-sponsored by Rep. Lee Terry (R-NE). Both Reps. Holt and Terry are active members of the Congressional ITS Caucus.

Article Reference: <http://www.itsa.org/ITSNEWS.NSF/>

ITS Texas has a new home on the web:
www.itstexas.org

12th ITS World Congress to be held in San Francisco

The 12th ITS World Congress is going to be held in San Francisco, California from November 7 through November 10, 2005. The theme for this year will be, "Enabling Choices in Transportation", and is aimed at communicating the emphasis on the end user in transportation. Apart from the usual range of events for industry professionals, the conference will have a variety of events and activities focused on the public and elected officials, and will provide firsthand experiences of the benefits of ITS enabled systems and services. The conference will also have an Exhibitor's Hall featuring a whole range of companies from manufacturers, technology vendors, technology providers, and system integrators.

Partnering with Caltrans, MTC, and U-C Berkeley, the conference will feature an Innovative Mobility Showcase. The ITS technologies being tested and demonstrated are an example of the "working laboratory." Attendees to the conference will discover the advantages of ITS technologies through interactive activities. Attendees may also take a ride in a vehicle equipped with real-time mapping or on a hydrogen-powered bus as they travel through "intelligent" intersections. Also on display are going to be vehicles that can be used as probes for external information, such as temperature, traffic conditions, and roadway hazards.

To register for this event, or for more information, please visit the official website of the 12th ITS World Congress at <http://www.itsworldcongress.org/index.php>

Truck Lane Restrictions Pilot Project

A Regional Truck Lane Pilot Study in the North Central Texas region along the Interstate 20 Corridor in Dallas County and the Interstate 30 Corridor in Tarrant County will restrict heavy-duty trucks from the inside lane(s) as one alternative to improving traffic along sections of the Dallas-Fort Worth region's freeway system. The limits for this project are Hulen Street in Fort Worth to Collins Street in Arlington for I.H. 30 and on I.H. 20 from Cedar Ridge Road to I.H. 45. A similar project implemented along I.H. 10 in the Texas Department of Transportation Houston District was considered successful. Additionally, there are other applications in the State and nationwide.

This project will include a comprehensive look at all safety implications of applying lane restrictions to heavy-duty vehicles that travel across the DFW region. For this pilot project, trucks are defined as those with three or more axles single unit (does not include buses), single trailer, and multi-trailer vehicles. North Central Texas Council of Governments staff and managing partners will evaluate measures of effectiveness for each of four study phases designed to include measuring the effect of increased enforcement under conditions with and without the lane restrictions. Initial data collection began August 1st with the opening day of lane restrictions on November 1st. For more information, contact Greg Royster at (817) 695-9285 or groyster@nctcog.org.

Wi-Fi Technology May Make Cars Smarter

In a few years from now, cars enabled with Wi-Fi technology could potentially help prevent crashes by allowing vehicles to "talk" with each other. The Wi-Fi system for cars, also called Dedicated Short-Range Communications (DSRC), could also help drivers avoid wrecks and collisions on the road, make automatic payments at toll booths, drive-through restaurants, and provide real-time traffic information on the move. The development of this technology is in keeping with the "zero fatalities and zero delays" vision of ITS America.

Japan, with its advanced wireless technology, is the leader in this development and is giving a new dimension to it by emphasizing the convenience angle of smart tags and automatic payments. GM's concept system would warn drivers of stopped or slowed vehicles, collisions, or vehicles that are braking hard ahead of them. It would also alert drivers if they are in danger of hitting other cars around them, and would slow or stop the car if a crash is imminent.

DaimlerChrysler is demonstrating a signal approach warning, which could one day prevent crashes caused by drivers running red lights, said Christopher Wilson, vice president of ITS strategy at DaimlerChrysler. About 2,300 lives and \$19 billion are lost annually in crashes related to intersection violations in the U.S., he said. The systems could also be used to update car maps and to provide speed warnings and alert drivers of upcoming potholes, as well as traffic signals, he added. DaimlerChrysler plans to pay for the DSRC technology by charging customers for map updates.

Aside from safety, Volkswagen said Wi-Fi could be used to add entertainment features, and to integrate portable devices. However, none of these systems are in the production stage yet. According to most automakers, there are a lot of policy and privacy issues that need to be addressed before putting these systems in automobiles.

Article Reference: <http://www.redherring.com/>

A New Highway Bill at Last

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was enacted August 10, 2005. SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009. The new legislation provides a funding increase of 30% over the previous highway legislation, TEA-21.

SAFETEA-LU increases the focus on congestion relief and provides specific opportunities to implement managed lanes, nationwide real-time traveler information, and increased regional and national interoperability of ITS. There is also significant expansion of attention to freight issues and needs.

There is no longer an ITS funding category, all of which had been earmarked in recent years anyway. However, ITS projects are routinely funded with regular federal-aid and SAFETEA-LU specifically clarifies ITS eligibility under the CMAQ program.

Even though the ITS funding category is eliminated, there are a number of ITS earmarks throughout the legislation. Many of these earmarks focus on improving signal systems, traffic flow, freight management, and other systems management and operation improvements.

SAFETEA-LU also promotes the development of a nationwide capability to monitor, in real-time, the traffic and travel conditions of the Nation's major highways and share that information. A performance goal of nationwide deployment of 511 by 2010 has been established.

This new legislation also explicitly allows high-occupancy toll (HOT) lane programs, while increasing emphasis on HOV and tolling programs.

Additional information on SAFETEA-LU may be found at the Federal Highway Administration's website: www.fhwa.dot.gov.



Federal Transit Administration (FTA) Releases Four New Reports

The Office of Research, Innovation and Demonstration of the Federal Transit Administration has released four new reports now available as downloadable documents on its Web site at <http://www.fta.dot.gov>.

"Best Practices for Using Geographic Data in Transit: A Location Referencing Guidebook" is a document for transit managers and technical staff who are interested in planning, implementing and using geographic data in transit. The guidebook discusses issues and best practices for defining and using geographic locations of bus stops, routes and other map data that are needed for successfully implementing Intelligent Transportation Systems (ITS) and Geographic Information Systems (GIS), as well as for obtaining operational efficiencies. To view this document, go to http://www.fta.dot.gov/16734_16869_ENG_HTML.htm.

"Development of Requirement Specifications for Transit Frontal Collision Warning System" defines a system specification for how ITS technologies can be used to help avoid frontal collisions. This document can be viewed at http://www.fta.dot.gov/initiatives_tech_assistance/technology/16864_ENG_HTML.htm.

"Integrated Collision Warning System Final Technical Report" documents technical developments of the Integrated Collision Warning System Program, whose goal it is to integrate the advanced frontal and side collision warning systems into a unified collision warning system, enabling a single display that signals the driver of impending frontal and side collisions to effectively help the driver avoid crashes. For a copy of this report, go to http://www.fta.dot.gov/initiatives_tech_assistance/technology/16864_ENG_HTML.htm.

"Transit Bus Collision Warning System: Integrated Transit Collision Warning Systems Interface Control Document" defines the architecture of the Integrated Collision Warning System (ICWS) and the physical, electrical and electronic interface among different components. This is the final document for the installation of the ICWS on a transit bus. This document can be accessed at http://www.fta.dot.gov/initiatives_tech_assistance/technology/16864_ENG_HTML.htm.

Article Reference: <http://www.itsa.org/ITSNEWS.NSF/4e0650bef6193b3e852562350056a3a7/6becada3ea0040788525709900554d63?OpenDocument>

Model to Devise Pricing Strategies for Managed Lanes

As part of a TxDOT research study (#0-4818), a model has been developed to be used as a decision tool for varying toll prices for single-occupant vehicles (SOV) on managed lanes as a function of the total corridor demand. Considering a travel corridor with parallel managed and general purpose lanes, it is logical to assume that the level of service on both facilities will be affected by the amount of toll charged on the managed lanes. Given a level of demand, if the toll charge for SOVs to use managed lanes is excessive, a smaller fraction of them will use the facility. Thus, the managed lanes (ML) are likely to be underutilized while the neighboring general purpose lanes (GPL) will be congested. On the other hand, if the toll amount is small there may be a larger than desired percent of SOVs switching to the managed lanes, resulting in a degradation in the managed lane quality of service below a desired level.

On the basis of the above principle, a web-based Toll Pricing Model (TPM-2.0) has been developed by the researchers at the University of Texas at Arlington to be used as a tool to assist facility operators to devise pricing policies to improve traffic flow on managed lanes and general purpose lanes along a corridor. TPM-2.0 is developed based on the concept of price elasticity combined with a speed-flow-concentration model. It enables the users to evaluate the effects of variations in demand and toll values on speeds and levels of service. The model can provide pricing strategies to optimize flow, speed, and level of service, for any corridor served by both managed and general purpose lanes.

Toll strategies can be assessed for three different objectives. Firstly, the SOV toll price can be set in order to maintain a specific speed on the managed lanes. Secondly, the SOV toll price can be determined to maintain the flow on the managed lanes at no more than a certain percentage of their capacity. Finally, the SOV toll price may be set to maintain a desired level of service on the managed lanes.

The user is required to supply information such as facility characteristics (number of lanes, corridor length, lane capacity, free-flow speeds, jam density, etc.), user and demand information (corridor demand, vehicle mix, etc.), user sensitivity to price (e.g. percent of SOV users willing to pay a particular toll value based on the expected managed lane travel time savings), and the solution options (managed lane operational objectives). The resulting model output includes the following:

- Recommended Toll
- Traffic Flow on Managed Lanes
- Number of HOVs using Managed Lanes for Free
- Speed on Managed Lanes

- Number of SOVs Using Managed Lanes
- Total Flow on General Purpose Lanes
- Speed on General Purpose Lanes
- Percentage of SOVs using Managed Lanes
- Corridor Travel Time Difference Between the GP and the Managed Lanes

In the event of an infeasible operational performance objective for a given level of capacity and demand, the model will indicate that the managed lane is fully utilized under the stated objective before adding SOVs to the facility. In such cases, the facility operator is encouraged to either prohibit access to the managed lanes by SOVs or consider modifying the desired performance objective to allow for such usage. For example, if initially the LOS C is specified for the managed lanes, the managed lane may already be at that level of service given the volume of HOVs utilizing those lanes. By revising the LOS to D, additional slack may be made available on the managed lanes for use by SOV users.

The model can be accessed on-line at <http://transresearch.uta.edu/MLTollModel/>. Comments and suggestions for improvement are welcome and can be forwarded to project investigators, Dr. Jinaling Li (jjli@uta.edu) or Dr. Stephen P. Mattingly (Mattingly@uta.edu).

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Road Traffic Information Unifies Around Broadcasting Platform

Strategy Analytics, an ITS America member, has reported that road traffic and navigation suppliers are in the process of consolidation around unified broadcast platforms for delivering road traffic information to consumers. This will result in lower costs and a wider range of dynamic navigation products and multi-featured devices that can incorporate RTI, according to a new report from Strategy Analytics, "Navigation Market Status 2005."

T-Mobile Traffic in Europe, as well as XM and Sirius in the US, are market leaders in the promotion of dynamic navigation products based on broadcast technologies. If RTI is integrated in portable devices and automotive systems, consumer demand for navigation will be boosted.

A wide range of traffic information players, encompassing public bodies and private sector companies across Europe and the US, are consolidating around FM based technology for road traffic information and product development. In addition, satellite broadcasters, XM and Sirius, with 7.2 Million Q3-05 subscribers, are now both offering a dynamic navigation service. The integration of FM on cellular handsets is also expected to reach 30 percent of global shipments by 2010.

According to Joanne Blight, Director, Automotive Practice, Strategy Analytics, however, "Although the integration and promotion of RTI using FM and satellite broadcast technology will certainly boost navigation demand, there are serious business model challenges. Over the next 2-3 years, enhanced RTI interlinked with navigation will be a one-off cost borne via the navigation system or device price. But longer term, service based and pay-as-you-go pricing will emerge in consumer markets as wireless operators move into the navigation and location based services space."

Article Reference: <http://www.itsa.org/ITSNEWS.NSF/>

General Motors Develops Vehicles with a Sixth Sense

General Motors has demonstrated a fleet of cars that have a sixth sense. Using vehicle-to-vehicle (V2V) communication, a vehicle can detect the position and movement of other vehicles up to a quarter mile away. In a world where vehicles are equipped with a simple antenna, a computer chip and GPS technology your car will know where the other vehicles are, additionally other vehicles will know where you are too -- whether it is in blind spots, stopped ahead on the highway but hidden from view, around a blind corner or blocked by other vehicles.

The vehicles can anticipate and react to changing driving situations and then instantly warn the drivers with chimes, visual icons and seat vibrations. If the driver doesn't respond to the alerts, the car can bring itself to a safe stop, avoiding a collision.

Today vehicles can be equipped with multiple safety sensors including a long range scanning sensor for adaptive cruise control, forward vision sensors for object detection, mid-range blind spot detection sensors and long-range lane change assist sensors. GM replaces all of these sensors with one advisory sensor that provides all-around, instantaneous traffic intelligence. This promises a better and significantly less costly way of sensing other vehicles around your car while driving.

FHWA Launches Teen Driving Electronic Report Card Program

Traffic crashes are the number one killer of today's teenagers. Teenage drivers are most vulnerable to crashes during their first year after licensure. Contributing factors include inexperience, immaturity, low rate of safety belt use and driver error. One approach that might help novice drivers hasten the development of their skills and safe behaviors is to integrate vehicle-based technologies into a device that can operate in real time to sense, record, evaluate and provide feedback on driving practices. This teen-driving 'tutor' would serve as a learning tool and motivator to help teens identify and modify their unsafe actions. To increase deployment and thus the safety benefit of the tutoring device, its use could be incorporated into parental supervision, driver education, graduated licensing and insurance policies. The goal of this program is to develop and evaluate the usability, effectiveness and acceptability of a vehicle-based Teen Driving Electronic Report Card that prevents crashes by accelerating the learning curve and safety consciousness of teenagers.

ITS America News, the monthly newsletter of ITS America, is now available online at: <http://www.itsa.org/newsletter.html>.

PLACE YOUR AD HERE



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