



ITS Canada News

Carl's Corner

Happy New Year!

It is going to be an exciting year for ITS Canada and its members. In planning are a number of educational workshops across the country that will assist our members, whether private sector, government, agencies or academics, with their planning and execution of ITS projects. This outreach program will commence in the next few months.

Internationally, the International Transport Forum is being Chaired by Canada this year and our Minister of Transport, Infrastructure and Communities, the Hon. John Baird, will be Chairing the meeting itself in Leipzig, Germany (May 26-28). The theme of the conference is “**Transport and Innovation: Unleashing the Potential**”, and it could not be more pertinent to our ITS community in Canada, or elsewhere in the world. Over a thousand global senior decision-makers will be in attendance, and they are expecting Ministers of Transportation from over 60 countries.

Closer to home, we are gearing up right now for ITS Canada's **Annual Conference and General Meeting**, which this year is being held in the National Capital Region (June 13-16). Not only are we planning for a bigger and better technical program and exhibition, but key speakers from Canada and the USA that will be outlining the future growth of ITS here and around the world. So, too, the Ottawa/Hull area is a fantastic location for delegates and their families in the month of June – the weather could not be better and the golf is outstanding, and yes we are resurrecting the highly successful golf tournament – so stay tuned! ITS Canada will also be at the **8th Annual Urban Transportation Summit** in Toronto (March 2-3). Members receive a 20 percent discount on registrations before February 5 by mentioning VIP Code ITS-20A.

For those of you in the business of rural ITS, we will be taking part in the **National Rural ITS Conference** in Huntington, West Virginia (August 1-4), and our successful participation last year bodes well for 2010. Watch for a call for mission members that will receive incentives to participate. West Virginia is a beautiful place to be in August!

In the autumn we hope to lead members back to the **ITS World Congress** in Busan, Korea (October 26-29). The form of our participation is yet to be decided, but you should mark it on your calendars. Don't forget that being in Asia this year means a predominance of Asian decision-makers in the fastest growing transportation infrastructure region of the world! You cannot afford to miss out!

We will keep you posted with both domestic and international initiatives! Call me if you are interested!

Carl Kuhnke
Executive Director

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ITS Canada News

ITS: The Future of Trucking

By Paul D. Larson, Transport Institute

Leading North American trucking and related industry experts are coming to Winnipeg (February 17-19) to discuss vehicle technology, road infrastructure, and public policy at *The Future of Trucking Symposium*. How will the industry respond to shifting freight movement patterns, concerns over greenhouse gas (GHG) emissions, rising and volatile fuel prices, lingering cabotage restrictions, increasing traffic congestion, excess capacity, global recession and tighter security requirements during the next 20 years? A couple of panel discussions at the Symposium will focus on various aspects of ITS in the trucking industry. ITS Canada is supporting this exciting event and will be in attendance. For further details and to register for the Symposium, visit www.futureoftrucking.ca.

What a time to be in the trucking business! While truckers face many challenges, there are solutions, including intelligent transportation systems (ITS). ITS technology is applied to roadway infrastructure and vehicles to improve efficiency, safety, security, and sustainability; as well as to ease congestion, which increases transit time, harmful emissions, and fuel consumption. The goal is to get more out of current fleets and infrastructure via improved use of available resources. It's a shift from building new infrastructure to optimizing the current transportation system.

Examples of ITS applications for trucking include transponders, electronic license plates, and "smart cards", which enable open road toll collection, truck weigh-in-motion/pre-clearance, and non-stop border crossing. Traffic conditions data gathered by vehicle detection technology, combined with global positioning systems (GPS), can be provided to drivers, fleet managers, and truck dispatchers to support dynamic decision-making on routing and vehicle scheduling. Another example is *freight matching*, the electronic linking of loads with equipment, which reduces the excess vehicle capacity moving along our roads.

While the road ahead will be loaded with challenges, ITS makes us optimistic about the future of trucking! Join us in Winnipeg, February 17 to 19!

ITS Strategic Planning for Municipalities

By Keenan Kitasaka, TransLink

An ITS Strategic Plan is an important tool that can coordinate the efforts of the local municipality or region with other transportation agencies and users. Municipal engineers sometimes wonder whether there is value in developing an ITS Strategic Plan for their town, city or region. They may have a number of intelligent transportation initiatives in place – traffic signal coordination, transit signal priority, goods movement systems – but can't see the value of the strategic planning exercise.

In areas where a Transportation Plan has been developed, an ITS Strategic Plan often builds on that base. As new applications and user services are deployed across different transportation modes, it becomes increasingly important to develop strategies to guide each implementation. An ITS Strategic Plan helps knit together these initiatives through a cohesive plan that improves the ability to integrate new services, while promoting interoperability. Long-term thinking is required – engineers must understand current and future needs to develop a strategic plan that solves existing problems while addressing the long-term goals of the transportation system. The ITS Strategic Plan will set the direction, pace, and priorities of integrated technology deployments in the network, while ensuring interoperability throughout the region.

The ITS Architecture for Canada provides the overarching structure for ITS strategic planning. It is important to move away from planning ITS projects in isolation, and toward coordinated project implementation. A strategic vision guides the application of technology toward a fully integrated system that has maximized the use of both technology and infrastructure.

An ITS Strategic Plan can also support budgeting by providing a solid understanding of core elements currently installed and opportunities to improve service. For more information and to view sample ITS Strategic Plan documents, visit ITS Canada's website: www.itscanada.ca/english/stratplan.htm

Rural ITS Market

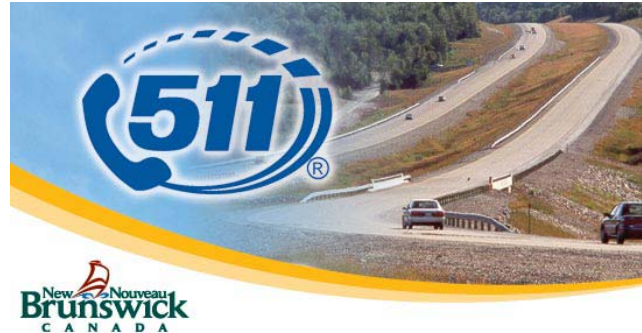
By Carl Kuhnke, ITS Canada

The market for rural ITS systems is growing rapidly as people continue to move from the pressures and complexities of dense urban environments to the suburbs, from where they still commute on a daily basis. Whether by car or some form of mass transit, there are a growing number of highways and byways that all require coordination and management.

The field of rural ITS is recognized as one of the key challenges by governments. Although many agencies in rural areas have not implemented ITS technologies (partly because they believe they are too expensive), the need for ITS in these regions of limited resources is significant. Rural accident fatality rates are much higher than in urban areas; fatal crashes are more prevalent in rural areas and, mile-for-mile, rural travellers are more likely to be in a fatal crash. Lack of mobility is also a major problem; rural populations typically have no access to public transportation. Additionally, rural telecommunications systems are often more limited, making incident management and traveller information dissemination difficult.

No longer do small rural communities have simple traffic signals with set timing; they, too, are adapting traffic management systems that move with and sense traffic. There are an increasing number of sensor applications that connect to larger centres. Snow plough operators in rural settings once looked out the window to see if it was snowing enough to plough; the installation of simple snow sensors or cameras a few kilometres away, with a link to the operator's computer, now permits the measurement of snow at multiple locations instead of one.

The fastest growing segment of the rural ITS market appears to be Traveller Information Systems and associated "511" systems: 39 states and 4 provinces/territories have fully operational 511 systems that permit the dialling of a number or look-up of a website for current weather, road and general traffic information. This sector is booming with advances in communication technologies, and a well-funded U.S. program, IntelliDriveSM, will be driving these systems commercially over the next few years. It is probably the most dynamic segment of ITS in general as well as rural ITS, given the applications it will permit for traveller information.



The Province of New Brunswick has launched a year-round, bilingual 511 service, providing information about traffic incidents, delays due to road construction, ferry service delays, and more. Information can be accessed by telephone, cell phone and via the Internet (www.511nb.ca). The public can also use the system to alert officials about incidents or sudden weather changes they encounter.



About \$83,500 to implement, costs are being shared by New Brunswick's Department of Transportation and Transport Canada.

New Brunswick is now the fourth jurisdiction in Canada to offer 511 service, following implementations by the Yukon, Quebec and Nova Scotia. The new system provides three contiguous provinces with 511 service, a boon for eastern Canada. For more information:

www.gnb.ca/cnb/news/tran/2009e1977tr.htm

Be in
the know
before you go.



News from the United States

ITS TECHNOLOGY DEMONSTRATION SITES

The U.S. Department of Transportation has announced that the Dallas and San Diego areas will receive \$14 million (all figures U.S.) as the first U.S. demonstration sites for new ITS technologies that will help fight congestion and enhance travel. The Integrated Corridor Management (ICM) initiative will form a basis for the Dallas and San Diego metropolitan areas to become 'living laboratories' in the fight against congestion. Initiated in 2005, the ICM initiative has laid the groundwork for transportation agencies to use existing roads, intersections and other elements of urban transportation networks more efficiently.

The demonstrations will build on past findings about ICM to provide a first-hand evaluation of the real-world impact. Dallas Area Rapid Transit (DART) will contribute \$3 million toward a \$8.3 million project. It will use a transportation management model to predict travel conditions 30 minutes into the future, enabling diversion of traffic to other routes during freeway incidents and special events along US-75. Travellers will have access to real-time information about traffic, public transit and expected travel times through wireless and web-based alerts.

The San Diego Association of Governments (SANDAG) and its partnering agencies will contribute \$2.2 million toward a \$10.9 million project. San Diego will use ITS investments along I-15 to enable a 'smart' traffic management system that will combine road sensors with video and traveller information to help reduce congestion. Information will be delivered to commuters via the Internet and message signs, and will enable the adjustment of traffic signals and ramp meters to direct travellers to HOV lanes, HOT lanes, bus rapid transit and other options.

The initiative is jointly sponsored by the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Research and Innovative Technology Administration (RITA).

Source:
US Department of Transportation Press Release
December 7, 2009

REAL-TIME TRAFFIC MANAGEMENT

Reno, Nevada, is planning the development of a "cooperative traffic management project" that will incorporate cutting-edge technology, traffic signal synchronization, traffic cameras, on-ramp meters, electronic information signs and emergency dispatching to keep traffic flowing as smoothly as possible, particularly when incidents occur. Data would be fed to the center from state highways, city streets and county roads. When necessary, traffic could be diverted to another route, with signals timed to help diverted traffic keep moving. Electronic message signs would inform motorists about what's happening. The project mirrors a system in place in Las Vegas as well as other cities. In 2004, Las Vegas opened the Freeway and Arterial System of Transportation, or FAST, billed as one of the first truly integrated ITS organizations in the country. FAST is jointly operated out of a single building by the Regional Transportation Commission of Southern Nevada, the Nevada Department of Transportation and the Nevada Highway Patrol. The center also involves Las Vegas and North Las Vegas.

TRAFFIC CONTROL DEVICES - MANUAL

The 2009 edition of the Manual on Uniform Traffic Control Devices (MUTCD) is now available, providing U.S. standards for all traffic control devices, including traffic signs, pavement markings, signals and any other devices used to regulate, warn or guide traffic. It regulates uniformity of traffic control devices – from their messages and placement to their sizes, shapes and colors – to reduce crashes and traffic congestion. Visit: <http://mutcd.fhwa.dot.gov>

NEW PUBLICATIONS FROM U.S. DOT

ITS Strategic Research Plan 2010-2014
www.its.dot.gov/strat_plan/index.htm

Road Weather Management Performance Metrics: Implementation and Assessment
http://ops.fhwa.dot.gov/resources/news/news_detail.asp?ID=595

Incorporating Weather Impacts in Traffic Estimation and Prediction Systems
http://ops.fhwa.dot.gov/resources/news/news_detail.asp?ID=596



ITS Canada News

News *bITS*

NEW TECHNICAL REPORTS NOW AVAILABLE

The Ministry of Transportation of Ontario has recently made a number of technical reports available through their virtual library, including “*Managing Traffic through Highway Work Zones: Role of ITS*”. MTO’s online library contains more than 1,400 technical publications and over 50 Highway Infrastructure Innovation Funding Program (HIIFP) reports on a wide range of highway infrastructure topics. Visit:

www.mto.gov.on.ca/english/transrd/index.shtml

INTERESTING VIDEO AVAILABLE ONLINE

This 8-minute video demonstrates testing of intelligent vehicle systems in Europe using real roads, 1,000 real drivers, and real conditions. The vehicles incorporate speed regulation systems, a fuel efficiency advisor, adaptive cruise control, curve speed warning and lane departure warning systems, and blind spot monitoring, among other technologies. Visit:

www.youtube.com/watch?v=IREvNUVkJ2Ao

Live stream of the Ancaster roundabout, located in Hamilton, Ontario. It has an inscribed circle diameter of 40 metres (131 feet) and a capacity of 2,500 vehicles per hour. Visit:

www.roundabouts.ca/orc_webcam.htm

ECONOMIC COSTS OF TRAFFIC CONGESTION AND HOW CITIES CAN IMPROVE MOBILITY

Tackling traffic jams has become a top priority for city municipalities around the world, with 70 percent of the world’s population expected to live in cities by 2050. To help cities cope with congestion challenges, IBM suggests solutions centered around advanced thinking, strategic planning, and integrated execution. For a copy of IBM’s reports, please contact ITS Canada via email (itscanada@itscanada.ca).

ROAD WEATHER INFORMATION SYSTEMS

Transcript and presentations of *Best Practices For Developing An Integrated And Effective Road Weather Information System (RWIS)*, from the Research and Innovative Technology Administration (RITA) - visit:

www.pcb.its.dot.gov/t3/s091013/s091013_rwis_intro.asp

DATA WAREHOUSING

The Intelligent Transportation Systems Institute at the University of Minnesota has released a report that examines the development of a data warehouse that will manage the information stored in 29 Vehicle Classification sites and 12 Weigh-in-Motion sites installed on various Minnesota roadways. For a copy of the PDF, please contact ITS Canada.

Did you know?

International Benefits Evaluation and Costs

An ITS working group that exchanges information and techniques to evaluate the costs and benefits of Intelligent Transport Systems

IBEC has an e-mail discussion group through Yahoo! that provides a valuable resource: members can pose questions to the group and get quick answers back from many of IBEC’s 400+ members in over 50 countries. Join IBEC (it’s free!), then ask your question of the IBEC Yahoo! Group by sending an e-mail message to: ibec-its@yahoogroups.com

BENEFITS OF ITS: Tolling Statistics

New data shows **open road tolling systems** improve safety at toll plazas. The data from Florida’s Turnpike Enterprise, Orlando-Orange County Expressway Authority and the Texas Turnpike Authority (a Division of the Texas Department of Transportation) shows that conversion to open road tolling systems reduces tolling location accidents by over 60 percent.

A Florida Department of Transportation report also shows that the **new toll express lanes** northbound on I-95 in Miami-Dade have significantly increased traffic speed, now averaging 90 km/h during rush-hour, which is 58 km/h faster than before the lanes opened. Even drivers who use the four free lanes are travelling faster at peak times: 68 km/h instead of 32 km/h. Speeds on I-95 have improved both because of the express lanes and because of the introduction of an **entrance ramp signaling** system that delays vehicle entry onto the expressway depending on congestion levels. Ramp signaling began in February 2009.

Members in the News



Alcatel-Lucent has been chosen to modernize the communications infrastructure in the Channel Tunnel. The new system will raise the railway communications capacity in the Tunnel to the highest technological standard, improving safety and reliability of the system. The introduction of digital technology, together with the addition of the latest information system innovations, will help improve operations and will provide better service quality. The new equipment will be operational in 2012, in time for the Olympic Games in London, England.



The New Jersey Turnpike Authority has awarded a \$25.6 million contract to **Daktronics Inc.** to build up to 240 variable-message signs and 160 variable-speed-limit signs. It is part of a longer-term project that will use cameras and weather sensors to monitor conditions. The New Jersey Turnpike Authority is replacing 153 signs on the turnpike and 36 signs on the parkway with variable message signs (VMS). The new signs will allow the agency to give motorists more detailed, real-time updates about road conditions, from oil spills and crashes, to congestion and closures.



Delcan Corporation has been awarded the *Global Road Achievement Award for Traffic Management and ITS* by the International Road Federation. Presented in recognition of Delcan's development and implementation of the iMove™ system for the South Coast British Columbia Transportation Authority ("**TransLink**"), iMove is a one-stop transportation portal providing multi-modal, multi-jurisdiction, and static as well as real-time traveller information to the public with the use of the Internet. The iMove website enables the public to access information on transit and cycling routes, construction, event information, current incidents, airline arrivals, border crossing wait times, as well as ferry loading times.



Global Traffic Technologies has announced the availability of the Opticom Infrared System Model 794 LED Emitter and Model RC790 Remote Coding Unit for emergency vehicle preemption and transit signal priority applications. The emitter offers the advantages of LED technology, which include more consistent performance over the life of the product and 90 percent less power consumption that helps conserve power for other critical needs onboard a vehicle. It is designed to be used with any of the installed base of Opticom Infrared Systems, making an easy transition for existing customers.



INIT Innovations in Transportation Inc. has been awarded a contract by the Tri-County Metropolitan Transportation District of Oregon (TriMet) to provide an advanced CAD/AVL system, including on-board computers, mobile data terminals, an automatic passenger counting system and, in cooperation with General Electric Transportation LLC, a digital mobile radio system to support their fixed-route bus operations. The contract calls for the complete INIT system to be installed on 660 of TriMet's fixed route vehicles, while another 350 paratransit and 117 light rail vehicles will be equipped with mobile radios. In addition, portable radios will be included on 144 non-revenue vehicles and a mobile dispatch system will be provided to 8 supervisor vehicles.



NAVTEQ real-time traffic coverage in Canada now encompasses more than 13 million people, or more than 40 percent of Canada's total population. Available in seven of Canada's major metro areas, Canadian commuters are being provided with comprehensive real-time traffic information. **NAVTEQ** is also rolling out its new mapping collection system technology in its U.S. fleet of field collection vehicles, enhancing the company's ability to deliver a growing range of high-quality digital map data. **NAVTEQ** has also announced a partnership under which it will supply 3D map data for Microsoft's newly expanded online mapping services. For the first time, **NAVTEQ's** Traffic Service is now available through an on-board turn-by-turn navigation application for the iPhone.

Geospatial Data

*Reproduced with the permission of the
Canadian General Standards Board*



Canadian General Standards Board Committee on Geomatics (CGSB-COG) and GeoConnections are proud to announce the publication of:

CAN/CGSB-171.100-2009
North American Profile of ISO 19115:
2003 Geographic Information – Metadata
(NAP – Metadata)

The North American Profile of ISO 19115:2003 Geographic information, Metadata is intended to identify geospatial metadata that are needed for North American organizations to describe their geospatial data, including dataset and dataset series, and related web services. The included metadata elements have been selected to enhance discovery of geographic information within North America. Some optional elements in the international standard have been made mandatory, and code lists used to provide consistency.

The profile is presented in a manner to support the consistent capture and use of geospatial metadata. As such, it includes a best practices guide for data providers for the capture of geospatial metadata. It also provides a mechanism to support cultural and linguistic adaptability by enabling representation of free text in multiple languages and by introducing a metadata register describing metadata in multiple languages (e.g., English and French).

For more information please refer to:

[www.tpsgc-
pwgsc.gc.ca/ongc/info/news/geographic_info_2009_07_07-e.html](http://www.tpsgc-pwgsc.gc.ca/ongc/info/news/geographic_info_2009_07_07-e.html)

[www.techstreet.com/cgi-bin/joint.cgi/cgsb/cgi-
bin/detail?product_id=1632325](http://www.techstreet.com/cgi-bin/joint.cgi/cgsb/cgi-bin/detail?product_id=1632325)

Plan Now for Ottawa!



A number of exciting events are in store for you at ITS Canada's Annual Conference, being held June 13-16, 2010, in Canada's National Capital Region. The theme of the event will be:

"ITS: For Efficient, Safe and Clean Transport"

recognizing the important role that intelligent transportation plays in moving people and goods efficiently, safely and sustainably across the country. The Conference is your opportunity to hear invited Canadian and international speakers, learn about new policy and program developments, and find out about the latest innovations and how they are being creatively integrated and successfully implemented.

Sponsor and exhibitor information is now available online.

Register online today to enjoy all the benefits of this event that draws nation-wide and international participation!

Be sure to check the website regularly for the latest updates on tours and social events, and join us in Ottawa!

www.itscanada.ca/ottawa2010





Upcoming Events ... Visit ITS Canada's website for more events

15th SIRWEC Conference 2010 (road weather)
February 5 to 7, 2010 – Quebec City, Quebec
www.sirwec.org

2010 International Winter Road Congress
February 8 to 11, 2010 – Quebec City, Quebec
www.aipcrquebec2010.org

NW Transportation Conference
February 9 to 11, 2010 – Corvallis, Oregon
<http://kiewit.oregonstate.edu/nwtc>

European Telecommunications Standards Institute (ETSI) ITS Workshop
February 10 to 12, 2010 – Sophia Antipolis, France
www.etsi.org/ITSWORKSHOP

American Traffic Safety Services Association Annual Convention and Traffic Expo
February 14 to 18, 2010 – San Antonio, Texas
www.atssa.com/cs/atssa_2010_traffic_expo

Future of Trucking Symposium
February 17 to 19, 2010 – Winnipeg, Manitoba
<http://umanitoba.ca/faculties/management/ti/futureoftrucking.html>

IT-Trans: IT Solutions for Public Transit
February 24 to 26, 2010 – Karlsruhe, Germany
www.it-trans.org

8th Annual Urban Transportation Summit
March 2 and 3, 2010 – Toronto, Ontario
www.strategyinstitute.com/dsp_conferences.php

Intertraffic Amsterdam 2010
March 23 to 26, 2010 – Amsterdam, Netherlands
www.amsterdam.intertraffic.com

AQTR Annual Conference
March 29 to 31, 2010 – Quebec City, Quebec
www.aqtr.qc.ca

ITS America Annual Meeting and Exposition
May 3 to 5, 2010 – Houston, Texas
www.itsa.org

CUTA 2010 Annual Conference
May 15 to 19, 2010 – Ottawa, Ontario
www.cutaactu.ca

16th International Road Federation (IRF) World Road Meeting
May 25 to 28, 2010 – Lisbon Portugal
www.irf2010.com

International Transport Forum
May 26 to 28, 2010 – Leipzig, Germany
www.internationaltransportforum.org

Intertraffic China 2010
May 26 to 28, 2010 – Beijing, China
www.china.intertraffic.com

Canadian Multidisciplinary Road Safety Conference
June 6 to 9, 2010 – Niagara Falls, Ontario
www.carsp.ca

2010 Canadian Telecom Summit
June 7 to 9, 2010 – Toronto, Ontario
www.telecomsummit.com

Canadian Society for Civil Engineering Annual Conference
June 9 to 12, 2010 – Winnipeg, Manitoba
www.csce.ca/2010/annual

 **ITS Canada Annual Conference and General Meeting**
June 13 to 16, 2010 – Ottawa, Ontario
www.itscanada.ca/ottawa2010

National Rural ITS Conference
August 1-4, 2010 – Huntington, West Virginia
www.nritsconference.org

TAC Annual Conference and Exhibition 2010
September 26 to 29, 2010 – Halifax, Nova Scotia
www.tac-atc.ca

17th ITS World Congress
October 25 to 29, 2010 – Busan, Korea
www.itsworldcongress.kr