

Carl's Corner

The 17th Annual ITS World Congress in Stockholm will be history by the time this hits your desks. Canada was well-represented, with numerous technical papers presented, a dozen or more Canadian companies present on the exhibit floor, and ITS Canada representing you more effectively as part of the Americas Planning Committee of the “Big Three” – ERTICO (ITS Europe), ITS America and ITS Japan. We are reviewing the possibility of holding the World Congress in Canada at the next North American opportunity, 2014, and would welcome your views on that. Although a significant amount of work, it brings a whole new level of recognition to the host, as it did for ITS Canada in 1999 (Toronto), a very successful event. It is also financially rewarding if done well.

Your ED and five members were front and centre at the National Rural ITS Conference (NRITS) in Seaside, Oregon, from August 23 to 26. Image Sensing Systems, International Road Dynamics, the LEA Group, RuggedCom and Intelligent Imaging Systems intrigued the over 300 delegates with their technologies, and an ITS Canada Board Member, Rob Shirra, presented the Canadian experience at the session on Next Generation Traveller Information Systems. The Conference ended with lunch sponsored by our members and ITS Canada, and it was a great success. Perhaps the clearest challenge that came out of the Conference is the integration of data with the emerging technologies that are hitting the market daily.



Executive Director Carl Kuhnke at ITS Canada's booth

A strategic start to the autumn was the 511 Summit in Ottawa that a number of your Board Members, your Secretariat, and your ED attended. Again, this is an opportunity for all of Canada to unite and develop a national consensus on 511, as well as an opportunity for ITS Canada to play a significant role in the development of that consensus. A separate article is included in this issue devoted specifically to that Summit, which brought together over 120 individuals representing organizations from across Canada.

Carl Kuhnke
Executive Director

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Sommet
le 8 septembre 2009, Ottawa



September 8, 2009, Ottawa
Summit

By Heather Navarra, ITS Canada

On September 8 and 9, Transport Canada and ITS Canada co-hosted a 511 Summit that brought together interested parties in Ottawa. The event was well attended by those who seek to move forward on 511 implementation in Canada, as well as those who have expertise in deployment.

On the first day, **Kristine Burr** (ADM-Policy, Transport Canada) and **Susan Spencer** (Director, ITS Office, Transport Canada) welcomed participants and shared a historical overview to update participants on the current status in Canada. An interactive panel discussion followed that covered a variety of topics of interest to those deploying a system:

Goals and challenges

- design—weather/traveller versus origin/destination
- importance of quality and reliability of data to ensure a credible system
- need for the system to be seamless and fast
- free or low cost (for users of higher tier services)
- integration between regions and across borders (regional, provincial, international)
- dissemination – telephone, web, PDAs, disability networks such as TTD/TTY, languages, etc.
- demand/volumes
- tailoring services to individual needs
- links to emergency alert systems for advisories
- benefits
- performance measurement – surveys, feedback, user satisfaction
- funding and apportioning costs
- consensus building
- governance.

With thanks to panel participants:

Panel 1

Heather Neish, Nova Scotia
Bruce Zvaniga, City of Toronto
Ken MacDonald, Env. Canada
Michael De Santis, AMT

Panel 2

Ray Senez, Telenium
Rob Shirra, ITS Canada
Muthanna Subbaiah, Telus

A second panel, providing an industry perspective, led a discussion that touched on the following topics:

- building the business plan – commercial versus public?
- demand/cost structures/increasing call volumes
- revenues from advertising and subscriptions for higher tiered services
- role of service delivery providers
- one-platform design that services all technologies and dissemination modes
- user-generated content (e.g., Twitter) to provide real-time updates
- updating data in the field (e.g., by Blackberry)
- standards
- integration/data sharing/collaboration with other agencies
- partnerships and strategic alliances for service delivery
- satisfying expectations of users (“techies”)
- technology advancement/cell and text bans that will drive voice-enabled systems for drivers (XML)
- cross-Canada uniformity/differing needs (e.g., rural versus urban)
- next-generation systems planning
- what is the role for government?

The afternoon focused on identifying obstacles and challenges under eight themes:

1. What should 511 look like?
2. Who should own/operate the front-end menu?
3. National standards
4. Emerging trends/technologies
5. Integration – within/between jurisdictions and internationally
6. Language policies
7. Who should champion 511?
8. Data needs/integration/role for government?

Participants were placed into eight working groups, each focusing on one of these topics. Active interaction led to a comprehensive list of “what works/benefits” and “challenges”. *Continued >>*

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September 8, 2009, Ottawa

Summit

Continued from Page 2



Barry Pekilis (Transport Canada) led participants in a discussion on "Who Should Champion 511?"

A summary discussion touched on a number of additional topics:

- Is part or all of 511 going to be considered an "essential service"? If so, that may entail responsibility, accountability and perhaps liability.
- An incremental approach and transition is expected to achieve the "ideal" 511 service.
- Will there be a minimum standard to use the 511 brand?
 - How to capture the required data?
 - Incentives to share data where available
 - Marketing/branding
 - Lack of a policy blanket (framework) to drive answers to issues
 - Consistency across different regions
 - Sharing best practices.

The following guiding principles were proposed:

1. Common focus/scope/standards (e.g., language)
2. Stakeholder involvement/participation/buy-in
3. Seamlessness
4. Integration
5. Accessibility
6. Basic level of service is free.

Implementers were invited to participate in the second day's session, which built on the results of the first day. Six key areas were identified:

1. Partnerships
2. Technology
3. Resources
4. Service delivery
5. Data collection/maintenance
6. Communications/marketing.

Participants were again divided into groups to brainstorm issues and solutions, and a list of potential action items was developed in each of the above areas.

The afternoon session was devoted to discussion of governance models: what characteristics the governance model should have, potential models, and evaluation of advantages and disadvantages of each.

It was clear from the high level of involvement and active discussions that participants represented a dedicated crowd of keen, enthusiastic proponents, and that there is much work to be done to ensure a quality 511 system across Canada. It was generally agreed that, although there are technological challenges, there are also solutions. The most important need is for an action plan and the first step would be to determine a valid governance model.

The 511 Task Force, co-chaired by **Susan Spencer** and **Nancy Lynch** (NB DOT), will continue to provide feedback to the Council of Deputy Ministers (through PPSC) to keep the momentum going.

Susan welcomed the continuing commitment and assistance from industry participants, and promised a transparent process that includes sharing of information. Briefing reports from the two-day event will be made available to participants in due course.

ITS Opportunities in the Philippines

*By Evelyn Rothery, Trade Commissioner,
Embassy of Canada, Makati, Philippines*

Following is a brief summary of the Tollways Development Project in North Luzon. The tollways system in North Luzon is owned and operated by the Metro Pacific Corp. thru its subsidiaries the Metro Pacific Tollways Corp. and the Manila North Tollways Corp. (MNTC).

MNTC is planning two new tollway projects worth a combined P10 billion that will connect the North Luzon expressway (NLEX) to MacArthur Highway and Letre in Malabon. The first road (segment 9) is a 3.85-km, six-lane expressway linking NLEX to MacArthur Highway and the other (segment 10) is a 5.85-km, four-lane expressway linking MacArthur Highway to Letre, Malabon, which is in turn a gateway to the port area. Travel time from MacArthur Highway to the port area is expected to be shortened by about an hour. Projects still need to get board approval. These two segments will be done on the MNTC level.

There are P38 billion worth of new projects on the table, which include a P16-billion new NLEX-to-SouthLuzon Expressway connection road, where new sources of funds are being studied. MNTC plans to go to the market, both through debt and equity.

Phase 1 of NLEX is already in commercial operations and rehabilitation, expansion, operation and maintenance of the existing 84-km NLEX that connects Metro Manila to Clark and Pampanga are ongoing, as well as the ongoing construction, operation and maintenance of the 8-km Subic-Tipo road segment.

Phase 2 is referred to as the C-5 loop and has four segments that include segments 9 and 10. The two segments currently under implementation are the 2.27-km Mindanao Avenue to NLEX six-lane expressway (segment 8.1) and the 10.3-km six-lane expressway between CP Garcia Avenue and Mindanao Avenue (segment 8.2). These two segments are being financed under a seven-year loan from the Philippine National Bank and are expected to be completed by April 2010 at a cost of P2.1 billion.



Foreign Affairs and
International Trade Canada

Affaires étrangères et
Commerce international Canada

The two segments will be equipped with toll collection systems similar to NLEX and other vital services, including traffic management and communication, median lighting, lane markings, signage, and emergency call boxes.



*ITS Canada
Welcomes New Members*

CORPORATE

CS Systems
Grey Island Systems

Do you have an ITS employment opportunity?

ITS Canada provides a service to promote industry employment opportunities, both through ITS Canada's website and via email to all members. This valuable service reaches a targeted audience of over 750 transportation professionals. Fees to post are quite reasonable; for each opportunity:

- ▶ Sustaining Corporate members No charge
- ▶ Corporate members \$100 plus GST
- ▶ Non-members \$200 plus GST

Each posting must include a closing date for applications, after which the entry will be deleted.

To post an employment opportunity, please forward to itscanada@itscanada.ca.

Please note that resumés will not be posted.

A Primer on Weigh-in-Motion Sensors

WHAT IS “WEIGH IN MOTION”?

Weigh-in-motion (WIM) is a key component of modern road management. Weigh-in-motion devices capture and record the weight of a commercial vehicle as it drives over a sensor. Trucks are equipped with an RFID-based transponder to communicate the truck's identification to the weigh station, allowing a review of historical data on permits, previous violations, etc. The primary benefit is that vehicles that are weight and size-compliant do not have to pull into weigh stations, increasing efficiency as well as safety (by eliminating truck queues that spill out onto the main roadway). Primarily used for enforcement, WIM sensors can also be used to prevent excessively heavy vehicles from crossing smaller bridges, and in monitoring pavement installations. WIM is also used for speed advisories: in locations where there is a history of incidents due to load combined with speed, advisories via message signs recommend a safe truck speed based on weight and conditions (grade, curve, width of road). Railway systems and aircraft also use WIM technologies.

TYPES OF IN-ROAD SENSORS

Bending Plate sensors have various WIM applications, ranging from traffic monitoring, overload detection and toll applications, to road maintenance and planning. Two bending plates are commonly installed per lane and the speed of vehicles traveling over the scales can vary between 5km/h to 200km/h.

Single Load Cell (SLC) Scales are extremely accurate, durable, and low-maintenance. They can be used at all speeds, from slow speeds on ramps to highway speeds. Applications involving SLCs include medium- and high-speed enforcement screening and data collection, as well as on automated toll highways. Generally, two SLC scales are installed per lane, allowing each wheel of the vehicle to be weighed individually, axle by axle.

Slow Speed Weigh-in-Motion (SSWIM) Scales are a high-accuracy, low-speed weigh scale suited for commercial fleet axle weight monitoring and axle weight compliance. Typically used for speeds between zero and 20km/h, they offer low lifecycle and system operation costs. Used in exterior lanes at toll plazas, port facilities and border crossings, the

weights of heavy trucks and other commercial vehicles passing over the SSWIM scales in extra-wide lanes are recorded and monitored for overweight detection. Being approximately 10 feet wide, only one scale is needed per lane.

A Lineas Quartz Sensor is used to measure the wheel and axle loads, as well as determine the gross vehicle weight under rolling traffic conditions. The sensors have excellent long-term stability with a wide measuring range from slow to high traffic speeds. Applications range from traffic data collection for statistical purposes, overload detection for weight enforcement and bridge protection, road research and pavement management systems.

Piezoelectric sensors are used for permanent or temporary installation into or onto the road surface for collection of traffic data. These sensors are available both as a Class I sensor offering the highest level of uniformity and sensitivity needed in performance for WIM applications, as well as a Class II sensor that is more cost effective for counting and classifying vehicles based on axle detection.

SUMMARY

The number of trucks and the number of miles travelled is increasing, and trucks are increasing in size. Increases in efficiency in the industry mean that there are relatively few empty trucks on the road. The way that roads are built/managed and affected by truck traffic makes WIM and associated technologies more important now than ever before.

SO WHICH IS WHICH?

... answers next month



Thanks to International Road Dynamics for their contributions to this article



ITS Canada News

News bITS

ROAD WEATHER MANAGEMENT

Further to the announcement in the July issue of new fall courses, CITE has also made available the following course for fall:

Principles and Tools for Road Weather Management

This course provides transportation professionals in highway maintenance and/or highway operations with training to develop tools and strategies for addressing road weather problems. The course begins with an overview of the types of road weather problems and their associated costs, as well as basic meteorology for non-meteorologists. Through this course, participants are exposed to various strategies for addressing road weather problems, including Road Weather Information Systems (RWIS) and the development of crosscutting decision support systems to respond effectively to weather situations. In addition, road weather solutions unique to maintenance management, traffic management, traveller information, and emergency management are discussed.

For more information, visit www.citeconsortium.org.

ROAD USER CHARGING

The **GNSS Metering Association for Road User Charging (GMAR)** has been established to create the GMAR Performance Analysis Framework (GPAF) to quantifiably address performance issues related to road-use metering. Experts from Britain, Canada, Belgium, France, Germany, Netherlands, Spain, and Sweden have drafted a body of criteria, characterizations, tests and analyses specific to *Charging Reliability*. The measurement criteria are related only to charging data, as opposed to distance or other accuracy metrics. Hence, GPAF analysis is independent of on-board technology, algorithms, processing or interconnection to vehicular systems.

The document can be downloaded at www.gmaruc.com. A second draft, scheduled for early fall 2009, will incorporate feedback from advisers. A third draft to follow will address *Security*, including a component to protect road users (*privacy*) and another to protect the operator (*tamper protection*).

MTO RESEARCH CATALOGUE

The Ministry of Transportation of Ontario maintains an online research catalogue hosting a number of interesting publications, with full text access to the Ministry's Technical Manuals and extensive research collection. For example:

Integrating Freeway and Arterial Transportation Management: Highway Infrastructure Innovation Funding Program (Access code: HIIFP-030)

Abstract:

Objectives of this two-year research project:

1. Develop a realistic integrated freeway and arterial network model for testing ITS applications
2. Analyze and evaluate ITS-based transportation management measures
3. Identify the most suitable traffic-responsive ramp metering system (RMS) for Ontario regions, based on efficiency as well as equity criteria.

To access the catalogue index, visit:

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

MTO USING MICROSIMULATION FOR TRAFFIC PLANNING AND PROJECTS

Don't miss this informative article in *Traffic Technology Today* that details MTO's use of microsimulation, which also comments on ramp metering, HOV and HOT lanes. Visit:

www.trafficechnologytoday.com/features.php?BlogID=316

TRANSIT AND CONGESTION PRICING

The Federal Highway Administration of the U.S. Department of Transportation has made available a primer on *Transit and Congestion Pricing*. Visit the following web link, which also contains documents on managing HOV lane performance and much more:

ops.fhwa.dot.gov/publications/publications.htm#tol



ITS Canada News

Members in the News

AECOM Technology Corporation has acquired LAN Engineering of California. LAN provides engineering services, including program/project management, design development and construction management consulting. The acquisition of LAN will strengthen AECOM's transportation practice.

International Road Dynamics Inc. (IRD) has announced that the New York State Department of Transportation has awarded a long-term contract for IRD to install, upgrade, repair, operate and maintain traffic data collection sites located in New York City, Nassau, Suffolk, Rockland and Westchester Counties. The Department collects, summarizes and interprets information about the traffic on their highways that is used to assess needs and evaluate system performance to develop recommendations for improvements. There are four different types of data collection sites within the contract: continuous count, automatic vehicle classification, weigh-in-motion and permanent short-count sites. The scope is to provide overall repair and maintenance services for these existing sites, as well as installation of new sites.

IRD has also signed an extension to a contract with Alberta Transportation for the supply, installation and maintenance of pre-clearance equipment at four additional locations in the Province of Alberta. Upon completion, IRD will have supplied and installed a total of 20 pre-clearance systems at 16 commercial vehicle inspection and weigh station locations in the Province. The equipment to be provided consists of an RFID system, which allows commercial vehicles enrolled in the provincial "Partners In Compliance" (PIC) program to bypass weigh stations. Under the voluntary program, qualifying PIC carriers can elect to carry an electronic identification transponder in each truck. The transponder will issue a "green light" to those trucks that are authorized to bypass each weigh station. Commercial vehicles belonging to the PIC program will not have to stop at a vehicle inspection station 98% of the time, thus saving US\$2,800 per vehicle in travel time and fuel consumption, based on 300 trips per year. The remaining 2% are randomly sampled. The additional systems are planned to be installed and operational in the spring of 2010 and, under this contract, IRD will provide maintenance for the subsequent three years.

NAVTEQ has announced its selection by Nextar for their new GPS navigation unit. Nextar is working with NAVTEQ to provide users lifetime free traffic with advertising and special promotions that are offered to users based on their location. **NAVTEQ** has also announced that its Motorway Junction Objects application is now available for 10 countries in Europe, enabling navigation systems to flexibly generate 3D junction animations and help guide drivers through decision points at complex intersections on roads through visual cues.

As a result of a proprietary research study designed to assess the impact of everyday use of navigation devices, **NAVTEQ** reports that traffic-enabled navigation can save drivers four days per year. The addition of real-time traffic on the driver experience points to the use of traffic information as a primary influencer in time savings for the average driver.

The City of Sudbury, Ontario, has selected **Nova Bus's** ITS4mobility application to retrofit their current bus fleet. The systems will subsequently be installed on vehicles delivered as part of a multi-year agreement that ends in 2011. The ITS4mobility system provides multiple functions, including next-stop auditory and visual announcements, GPS for real-time location and scheduling, text messages for two-way communication, and diagnostics.

Sirit Inc. has announced that it has been awarded a number of contracts to install RFID ETC systems in Latin and South America, including Columbia and Buenos Aires, which will lead to improved travel times and efficiencies.

Telvent, included in Fortune's list of the top 100 fastest-growing global companies (published on August 31 by *Fortune* magazine), has announced that it will install the toll management system for the new Bilbao southern bypass in Spain, which was built to avoid the traffic congestion caused by the more than 100,000 vehicles that pass through Bilbao along the A8 every day. Telvent has also announced the signing of a new contract to modernize the Vessel Traffic Management and Information System maritime traffic control systems for five Mexican ports. The project will enable enhanced security and increased efficiency in port operations in Lazaro Cardenas, Manzanillo, Mazatlan, Progreso and Tampico, Mexico.



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

5th International Congress on Sustainable Transportation and Sustainable Urbanism
October 12 to 14, 2009 – Mexico City, Mexico
www.congresotransportesustentable.org

TAC Annual Conference & Exhibition
October 18 to 21, 2009 – Vancouver, British Columbia
Transportation in a Climate of Change
www.tac-atc.ca

9th International Conference on Telecommunications for ITS
October 20 to 22, 2009 – Lille, France
<http://itst2009.inrets.fr>

IntelliDriveSM Workshop for HOT Lane Operations
October 21, 2009 – Oakland, California
Email: jbanner@mtc.ca.gov

2nd World Roads Conference
October 26 to 28, 2009 – Suntec, Singapore
www.wrcsingapore.sg

IntelliDriveSM Working Group Meeting
October 29 and 30, 2009 – Detroit, Michigan
Email: bwhitty@itsa.org

CUTA Fall Conference and Trans-Expo
November 7 to 11, 2009 – Montreal, QC
www.cutaactu.org

2009 Toll Road Summit of the Americas
November 15 to 17, 2009 – São Paulo, Brazil
www.ibtta.org/Events

TranspoQuip 2009
November 17 to 19, 2009 – São Paulo, Brazil
www.transpoquip.com

Australian Intelligent Transportation Systems Summit 2009
November 18 and 20, 2009 – Melbourne, Australia
www.itssummit.com.au

ITS for Mobility and Safety Management
December 1 to 2, 2009 – India
www.itsindia.org/ap2009/prograame.htm

Gulf Traffic
December 6 to 8, 2009 – Dubai, UAE
www.gulftraffic.com

Viet Transport
December 9 to 11, 2009 – Hanoi, Vietnam
www.viet-transport.com

Annual Polis Conference
December 10 and 11, 2009 – Brussels, Belgium
www.polis-online.org

Road User Charging Conference
January 13, 2010 – London, England
www.its-uk.org.uk/events

SIRWEC: Standing International Road Weather Commission Conference
February 8 to 11, 2010 – Quebec City, Quebec
www.sirwec.org/en/index.php?page=next_conference

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

FISITA World Automotive Congress
May 30 to June 4, 2010 – Budapest, Hungary
www.fisita2010.com



Save the date! ITS Canada's 2010 Annual Conference will be held on June 13 to 16, 2010, in Ottawa, the nation's capital. It's sure to be an exciting year leading up to the Conference, with the expected widespread infrastructure spending. Be sure to be a part of this exciting event to hear first-hand about the latest in ITS deployments as well as research and development initiatives. Mark your calendar and stay tuned for more details to come!