ITS Canada News

ITS Training Workshop in EO&O Region a Major Success

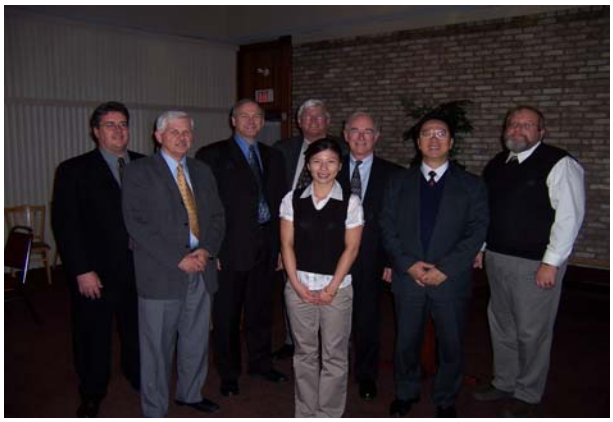
ITS Canada and its members from Eastern Ontario & Outaouais (EO&O) hosted a one-day **ITS Training Workshop** in Ottawa on November 15, 2006. The 68 delegates were welcomed by ITS Canada Chairman Joseph Lam and by Carl Vervoort on behalf of the workshop Organizing Committee. As outlined by Carl, the two objectives of the day were to share Traveller Information Services information and to grow the local ITS community.

This was the first workshop in a new outreach initiative launched by ITS Canada's Education & Training Committee. These workshops focus on the ITS needs and interests of professionals at the municipal and regional levels. The topic of this workshop, **Implementing Integrated Traveller Information Services (TIS) in Eastern Ontario & Outaouais (EO&O),** was selected by the Organizing Committee to examine ways to exploit TIS to improve traveller safety, efficiency and convenience in this region.

The workshop approached the topic in four related sessions. The first one reviewed the state of the art of TIS; the second reviewed the state of TIS practise in the EO&O regions with speakers from the City of Ottawa, MTO, MTQ and OCTranspo. The guest speaker, Judy Yu of the City of Calgary, presented the TIS accomplishments of that city as a benchmark against which to compare TIS progress in EO&O. The delegates then formed breakout groups to consider two issues: alternative business models for TIS in EO&O; and issues and barriers to TIS in EO&O. The discussion results will be documented and published by ITS Canada.

Eight vendors took the opportunity to set up exhibit tables at the workshop. Each one also spoke briefly to delegates during a dedicated 30-minute portion of the lunch hour. John Buck, Manager of Traffic Management, City of Ottawa, who brought 19 of his staff to the workshop, expressed satisfaction with the outcomes. Gregg Loane of IBI Group, a speaker/exhibitor, offered this assessment: "The conference was good. The organizers did a really good job on a very modest scale. It had big conference quality but in a small local event."

ITS Canada will make a CD of the ITS Training Workshop available. For further information, visit www.itscanada.ca/ottawa2006.



A few of the many folks who helped make this event a success:

Left to right:
Mark Pinet,
Bill Johnson,
Phil Masters,
Carl Vervoort,
Judy Yu,
John Buck,
Joe Lam and
Jim Houghton

Inside This Issue

Articles

Features

Newsletter published by ITS Canada.
Submissions or comments can be e-mailed to itscanada@itscanada.ca.

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ITS Canada News

Passenger Amenity Benefits of ITS

By Gregg Loane, IBI Group

In November 2006, the Canadian Urban Transit Association held its annual Fall Conference in Toronto. On November 8th, CUTA held two ITS programs: one on Customer Amenities and the second on Initiatives for Operational Efficiencies. The ITS Customer Amenities session featured three topics:

- Canada 511 – Making Transit a Priority (presented by Gregg Loane, Associate with IBI Group)
- GO Transit's E-News Service (presented by Marion Denney, Transportation Planner with GO Transit)
- VIA Rail Canada – Passenger Amenities (presented by Guy Faulkner, Product Manager - Corridor Services for VIA Rail).

The session began with a presentation by Gregg Loane of IBI Group regarding Canada 511 and how it will support public transit initiatives. Earlier this year, the CRTC approved the use of 511 for weather and traveller information. This will enable provincial, territorial and other agencies to deploy 511 services. Transport Canada has initiated discussion on Canadian traveller information systems by proposing functional requirements that identify design principles and types of transit information content that could be included in a 511 service. Canada 511 will benefit transit by facilitating access to transit and multimodal information for all agencies in a local area, act as a marketing tool for public transit, and provide the media with a centralized access point for transit service news.

The second speaker, Marion Denney, presented on GO Transit's new E-News service. The service provides email announcements to service subscribers for a variety of topics, including real-time schedule changes, construction activity, and particularly service disruptions, related to both their rail and bus services. Subscribers can personalize their services by signing up for announcements for particular stations and lines, and these announcements will be sent to up to three of the subscriber's email accounts.

The E-News service has proven to be very popular with GO Transit customers, with over 10,000 subscribers in the first two months of service, and it continues to grow by 150 subscribers per week.

Guy Faulkner of VIA Rail presented on VIA's on-board amenities, with a focus on their new WiFi service. In-depth marketing has demonstrated that VIA customers are looking for on-board Internet access and will use it for a range of activities, particularly business and entertainment uses. VIA's WiFi service trial began in 2003 in selected flagship trains and Panorama Lounges. The trial was well received, and passengers typically use the service for browsing, VPN connection, email, and corporate Internet usage. In November 2005, VIA Rail Canada became the first passenger railway in the world to introduce wireless Internet on an entire fleet of passenger cars. VIA has established a revenue-sharing partnership to deploy the WiFi service at no cost to VIA Rail.

Bill Cunningham, Director for Mississauga Transit and moderator of this CUTA conference session, then closed the session and thanked all presenters.

Left to right - Marion Denney (GO Transit), Gregg Loane (IBI Group), Guy Faulkner (VIA Rail), and moderator Bill Cunningham (Mississauga Transit)

ITS Canada News

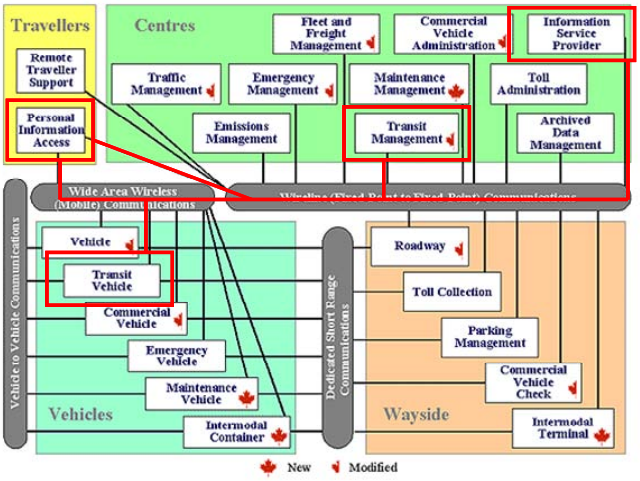
Transit ITS Architecture and Technology

By Kevin Bebenek, IBI Group

CUTA's Fall Conference/ITS Workshop closed with a panel session held on November 8 that dealt with ITS architecture and technology applications for transit. The 75 attendees included representation from transit authorities across Canada, consultants and system providers.

ITS Canada commenced the session with an overview of the ITS Architecture for Canada, with a particular emphasis on the relevance to transit. Most of the representation in the room had limited experience in applying the architecture and the presentation provided a useful introduction regarding how the architecture can serve as a tool to organize and plan for systems, both within a transit agency and among peer agencies. This is particularly important given the current emphasis on interaction among agencies to deliver initiatives, including:

- transit signal priority
- 511
- regional service co-ordination and fare integration.



The session included some real-world examples of transit technology deployments incorporating CAD/AVL, transit signal priority, and passenger information displays, namely:

- York Rapid Transit VIVA express bus service
- Grand River Transit iXpress express bus service.

The session concluded with information on the Transportation Association of Canada's efforts in developing standardized approaches for queue jump lanes and transit signalization at intersections. Also, the University of Toronto Transit Technology Test-bed provided an overview of their micro-simulation and optimization of transit signal priority applications.

The participation and discussion at the session underscores the level of activity and importance of ITS to support various on-going transit initiatives in Canada. There is significant interest in the opportunities to utilize regional architectures to organize and co-ordinate transit ITS initiatives with other relevant initiatives.

Furthermore, the transit ITS applications currently in operation provide an opportunity to showcase the benefits of the technology and provide lessons learned to other agencies as they embark on their programs.

Integrated Regional Signal System (IRSS)

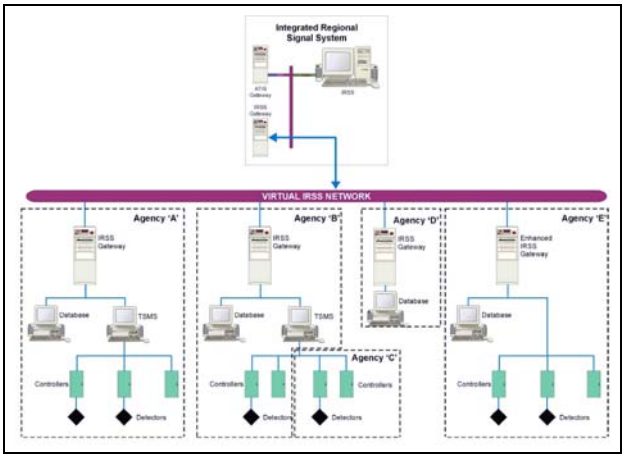
By James Fam, TransLink

Traffic signal management systems have been proven to demonstrate significant benefits from the coordination of traffic signal operations. However, with the continued growth of the various urban areas in the Greater Vancouver region and the installation of an increasing number of signalized intersections, there is a growing need to coordinate the traffic signal operations between adjacent municipalities and agencies.

The goal of the IRSS is to make better use of available information and communications technologies to provide a 'system of systems', that facilitates coordinated operation between individual municipalities and jurisdictional agencies, while also allowing the individual agencies to maintain their autonomy with respect to signal control equipment selection and signal timing plan implementation.

Utilizing centre-to-centre communications protocol that will provide for the integration and interoperability of existing traffic signal management systems, the IRSS will allow individual agencies to:

- Share information and data that will encourage coordinated operations across jurisdictional boundaries
- Enable coordinated operations along regional traffic corridors across jurisdictional boundaries through access to a common time source
- Send and receive event notices to/from adjacent municipalities and/or agencies to trigger special pre-approved timing plans in response to measured traffic flows, incidents and special events
- Clearly demonstrate the potential to realize traffic operation and safety-related benefits from regional coordination
- Be compatible with the ITS Architecture for Canada and the other ITS initiatives set out in the BC Provincial ITS Vision and Strategic Plan.

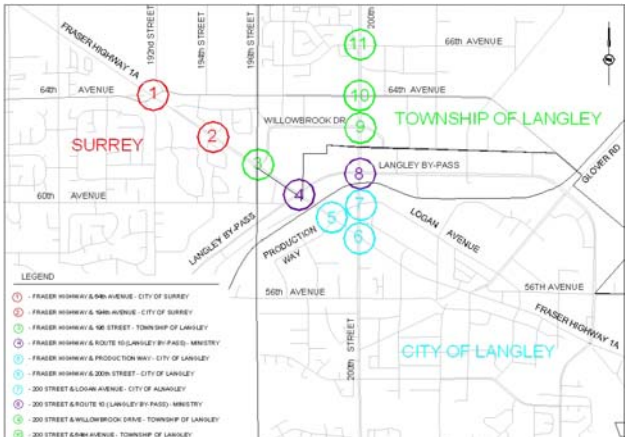


Schematic of IRSS System Concept

An IRSS Pilot System is currently being implemented along two corridors in the Surrey/Langley area:

- 200 Street, from 66 Avenue to Fraser Highway
- Fraser Highway, from 64 Avenue to 200 Street.

The corridors include 11 signalized intersections belonging to 4 jurisdictions (including the Ministry of Transportation, City of Surrey, City of Langley and Township of Langley). The project is mainly funded by Transport Canada under the ITS component of the Strategic Highway Infrastructure Program, TransLink, and the Insurance Corporation of British Columbia (ICBC). Delcan is a private-sector partner for this project. The pilot project, which includes 'before and after' assessments, will be completed by March 2007.



ITS at the University of Calgary

By Alex de Barros, University of Calgary (U of C)

The University of Calgary, through several of its research units, is developing close relationships with Transport Canada (TC), Alberta Infrastructure & Transportation (AI&T), the City of Calgary, Edmonton Police Services and the Centre for Transportation Engineering and Planning (C-TEP) to develop ITS technology and investigate its effects on society. Strategically located in southern Alberta, the U of C is rapidly moving towards becoming a Centre of Excellence for ITS research in Western Canada.

ITS is a multi-disciplinary field involving engineering, information technology, geography and social sciences, among others. ITS research at the U of C involves a broad range of skills and capabilities across several faculties and departments. The following is a sample of the high-quality research projects that are underway at the University.

All three projects outlined below are being funded through a contribution agreement between TC (50% funding) and AI&T (50% funding, with other partners), under the ITS R&D Plan, *Innovation Through Partnership*. The Plan is part of the ITS component of the Strategic Highway Infrastructure Program.

DYNAMIC MESSAGE SIGNS

The objective of this research is to develop an optimal strategy for the utilization of dynamic message signs (DMS) that is grounded in psychological theories, communication paradigms and behavioural change models, as well as scientific evidence of the effectiveness of the various messages and their deployment schemes. The optimal operational strategy will address issues such as:

- what subset of potential messages for DMS is most effective for Alberta
- what is the best psychological approach or communications method to adopt for each type of message
- what behavioural change model is most appropriate for designing each type of message
- how frequently should each message be displayed to maximize its effect
- what relative safety benefits can be expected on these messages.

Dr. R. Tay and Dr. A. de Barros in Civil Engineering are the principal investigators, with funding from TC, AI&T and C-TEP.

INTERSECTION SAFETY CAMERAS

The objective of this research is to develop an optimal strategy for the deployment of intersection safety cameras (also known as red light cameras) that is grounded in criminology, economic principles, psychological theories and behavioural change models, as well as scientific evidence of the relative effectiveness of the various deployment schemes. The aim of the research is to develop a best practice guideline for the deployment or scheduling of intersection safety cameras. The optimal operational strategy will address issues such as:

- the number and location of camera-ready intersections that can be enforced given a fixed number of cameras
- the optimal deployment plan, including frequency and location of the cameras
- how drivers modify their behaviour at the camera sites given the different deployment schemes.

Dr. R. Tay and Dr. A. de Barros are the principal investigators, with funding from TC, AI&T and C-TEP.

AUTOMATIC INCIDENT DETECTION

This project was initiated in March 2005 in cooperation with Transport Canada, AI&T, the City of Calgary and the Laboratory for Integrated Video Systems (LIVS). The goal of the project is to investigate, define, and implement image processing functions to assist and enhance accurate detection of incidents using live video streams received from cameras distributed over different regions of the city. These cameras monitor the roads and broadcast live video streams over fibre optic cables to the traffic management centre and the LIVS laboratory. Currently, there are live video streams from nine cameras scattered over the City of Calgary, to provide the development team with real-time video streams for analysis and testing purposes.

The project is managed by Dr. A. Radmanesh from the City of Calgary and Dr. W. Badawy from the U of C, and funded by TC, AI&T, and the cities of Calgary and Edmonton.

For more information, please contact Dr. Alex de Barros via e-mail at debarros@ucalgary.ca.

Members in the News

In September 2006, **Daktronics Canada** announced that the Nevada Department of Transportation has purchased and installed new signs from the Vanguard® VF-2000 product line. More than 30 signs will be installed throughout the state in the next few years, displaying weather advisories, traffic management information and AMBER Alerts. For more information, visit www.daktronics.com.

In October 2006, **EIS Electronic Integrated Systems Inc.** announced that it has completed the installation of RTMS™ detectors for the SCOOT system in Collier County, Florida. The project involved a total of 181 detectors; a combination of RTMS SPIDER systems and inductive loops. The RTMS SPIDER was installed at 16 intersections with 16 solar powered, wireless DSS radio RTMS sensors monitoring a total of 65 lanes. The Remote Traffic Microwave Sensor (RTMS) is a sensor for the detection and measurement of traffic on roadways, providing per-lane presence, volume, occupancy, speed, and classification information in up to eight user-defined detection zones simultaneously. For more information, visit www.eistraffic.com.

In October 2006, **Raytheon** announced a contract to partner with Florida's Turnpike Enterprise (FTE) to supply electronic toll collection systems over the next ten years. FTE manages 988 kilometers of limited-access toll highways. The present system consists of a mix of lane-based electronic and cash tolling elements. The Turnpike passes through 11 counties from north Miami to Interstate 75 (located in central Florida). FTE also owns or operates other toll road systems in Florida. The project includes 835 lanes of toll equipment, a central processing and audit system, as well as open-road tolling technology. The Florida system will be modelled on the Highway 407 system located in Toronto, Ontario, developed by Raytheon. Installation is scheduled to be completed over the next four years, and Raytheon's contract will continue for the following six years to complete related tasks. For further information, visit www.raytheon.com/htms.

NAVTEQ has announced the availability of complete cartography of South Africa, including more than 450,000 kilometres of roads. The final phase of the Football World Cup will take place in South Africa in 2010, and users of NAVTEQ's digital maps will have access to the entire country. There are more than 25,000 points of interest, including 3,900 restaurants and 2,100 hotels. For further information, please visit www.navteq.com.

NAVTEQ has also announced that it will be acquiring Traffic.com, a leading provider of personalized traffic information in the United States, which will provide NAVTEQ with proprietary traffic content as well as the expertise and technology to deliver data to a wider variety of customers across various industries.

Upcoming Events

IBTTA Technology Workshop
November 12 to 14, 2006 - Santiago, Chile
www.ibtta.org/Events

ITS Canada Training Workshop: Implementing Integrated Traveller Information Services in Eastern Ontario & Outaouais
November 15, 2006 – Ottawa, Ontario
www.itscanada.ca/ottawa2006

5th Chilean Congress / 2nd Pan American Congress on ITS and Exhibition
November 15 to 17, 2006 – Santiago, Chile
www.itschile.cl/congreso_2006/index_en.htm

IBTTA's Transportation Finance Summit
December 3 to 5, 2006 – Washington, D.C.
www.ibtta.org/Events

First Middle-East ITS Conference
December 4 and 5, 2006 – Dubai, UAE
www.its-arab.org

ITS Canada Training Workshop: Intelligent Transportaton Systems and Transit
December 7, 2006 – Montreal, Quebec
www.itscanada.ca/montreal2006

2007

ITS Technology Fair
February 14, 2007 – Washington, D.C.
www.itsa.org/techfair.html

SASITS e-Transport Conference
March 6 to 8, 2007 – Pretoria, South Africa
www.sasits.com

Intertraffic China
March 15 to 17, 2007 – Beijing China
www.intertraffic.com

TAC's Spring 2007 Technical Meetings
April 11 to 18, 2007 – Ottawa, Ontario
www.tac-atc.ca

Smart Moving Conference 2007 / Traffex 2007
April 17 to 19, 2007 – Birmingham, UK
"SMART Solutions for Today" – call for papers
www.its-uk.org.uk

ITS Canada Annual Conference and General Meeting
April 29 to May 1, 2007 – Niagara Falls, Ontario
www.itscanada.ca/niagara2007

CITE 2007 Conference
May 6 to 9, 2007 – Toronto, Ontario
www.itetoronto.ca

Intertraffic Istanbul
May 9 to 11, 2007 – Istanbul, Turkey
www.intertraffic.com

XVII Canadian Multidiscipinary Road Safety Conference
June 3 to 6, 2007 – Montreal, Quebec
www.cmrsc.polymtl.ca

ITS America 2007 Annual Meeting and Exposition
June 4 to 6, 2007 – Palm Springs, California
www.itsa.org/annualmeeting.html

European ITS Congress and Exhibition
June 18 to 20, 2007 – Aalborg, Denmark
www.itsineurope.com/congress/index.cfm

23rd World Road Congress
September 17 to 21, 2007 – Paris, France
www.paris2007-route.fr

14th World Congress on ITS
October 9 to 13, 2007 – Beijing, China
www.itsa.org