

ITS Canada Updates Industry Flyer

Under the direction of the Chair of ITS Canada's Export Committee, Scott Stewart, the four-page flyer that advertises the Canadian ITS industry is now being updated. All members were contacted requesting submissions for this brochure that was originally developed by the Department of Foreign Affairs and International Trade. The latest version provided by DFAIT was dated October 2005, so it is timely to undertake an update.



In the past, this brochure has been shared with Trade Commissioners around the world in order to promote ITS exports in their markets, and it has been translated into several languages, including French and Chinese. This opportunity is available to paid ITS Canada Corporate and Sustaining Corporate members only. Thanks to IBI Group for donating significant resources to complete the graphics work in time for ITS Canada's mission to New York, in conjunction with the ITS World Congress in November.

Would you like to expand your organization's opportunities for export?

During a recent member survey, almost one in three members reported that they were unaware of opportunities to participate in missions. Each year, ITS Canada undertakes a number of missions that help promote Canadian ITS expertise, products and services. In this regard, members are encouraged to suggest potential target markets, events and opportunities that can be pursued. ITS Canada's Export Committee also works to identify opportunities and to organize missions; members are welcome to join this committee. Upcoming missions are advertised by emails sent to all members. For information, see the Export Committee's web page or contact ITS Canada at itscanada@itscanada.ca.

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Submissions or comments can
be e-mailed to
itscanada@itscanada.ca.



Visit ITS Canada's website at
www.itscanada.ca

Mission to Malaysia

For many years, ITS Canada and the ITS Committee of the Road Engineering Association of Malaysia (REAM) have worked in partnership to further ITS initiatives in both countries. This Committee has since become independent as ITS Malaysia and representatives from the new Society felt it was important to continue working closely with ITS Canada.

An official inauguration ceremony for the newly-formed Society was held on Monday, November 3, in Kuala Lumpur, as part of their first-ever ITS seminar. The event was very well attended by over 450 delegates, including Dato'lr Mohd. Zin Bin Mohamad, the Malaysian Minister of Works.

ITS Canada's Chairman Joseph Lam was invited to the event to sign a new Memorandum of Understanding between the two Societies and to provide a keynote address on building public-private partnerships. Signing on behalf of ITS Malaysia was inaugural President, Dato'lr Mohamad Husin. Witnessing the signing were the Malaysian Minister of Works and Canada's High Commissioner to Malaysia, David Collins.

ITS officials noted that, by personally inaugurating the seminar and witnessing the signing of the MOU, the Minister has demonstrated a significant emphasis on ITS and on the value of the relationship with Canada. They hope this will signal a surge in ITS activity in Malaysia, which will benefit ITS Canada members. The signing also generated significant media coverage in Malaysia.



News clipping from Malaysian media

After the signing ceremony, Mr. Lam personally invited the Minister to attend ITS Canada's Annual Conference and noted that, while visiting Edmonton next spring, his delegation can also tour various ITS installations in both Alberta and BC. A delegation is expected to travel along with the Minister.

While in Malaysia, Mr. Lam also met with the High Commissioner, briefing him on ITS Canada, our members, mission and objectives, etc. The High Commissioner pledged the support of his office to help develop closer ties with suppliers and clients in Malaysia.

“Malaysia continues to have a strong market in freeway traffic management systems, as the country continues to push for more privatized toll routes”, notes Mr. Lam. “At the same time, they are considering standardizing their toll systems to achieve interoperability. Some of the local suppliers and consultants have developed to a stage where they feel they are capable of exporting their expertise or products to neighbouring countries such as India and Thailand, while some are already active in the Middle East. In this regard, they would welcome cooperation with Canadian companies.”



ITS Canada News

ITS Research and Development in Canada

A summary of projects planned or in progress for 2008-2009

Information included below was submitted to ITS Canada in response to our queries. In addition to this data, a report has also been compiled by Transport Canada. Available this month, it is entitled "*Inventory of Transportation-Related Research Institutes and Programs at Canadian Universities*" and covers a wider array of transportation initiatives. For a copy, please contact ITS Canada.

CARLETON UNIVERSITY

Faculty of Engineering and Design, Department of Civil & Environmental Engineering, Transportation Program

ITS Focus

- Urban, intercity, transborder, and rural
- Road traffic and public transportation
- Safety, mobility, efficiency, energy and environment.

Current and Recent ITS-Related Projects

Optimizing the efficiency and equity of traffic flow: development of an integrated traffic control strategy for freeway-arterial corridors (in progress)

- Adaptive management of multimodal traffic network under saturated and over-saturated conditions (in progress)
- Risk analysis of ITS investments (in progress)
- Bayesian artificial intelligence-based collision avoidance system (completed)
- Border crossing delay prediction system (completed)
- Priority crossing programs at land border crossings (completed)
- Emergency vehicle prioritization (completed)
- Bus arrival prediction system based on statistical pattern recognition (completed)
- Advanced traffic and traveller information system (completed)
- Control of HOT lanes (completed)
- Smart work zones (completed).

Current Researchers

Ata Khan, Jennifer Armstrong, Kornel Mucsi

Project Partners/Funding Agencies

- Natural Sciences and Engineering Research Council (NSERC)
- Ministry of Transportation, Ontario (MTO)
- AUTO21 Network of Centres of Excellence

ITS-Related Course Offerings

- Directed Studies on Advanced ITS
- ITS Coverage in Traffic Engineering (graduate course)
- ITS Coverage in Urban Transportation (graduate course)

Contact Information

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UNIVERSITY OF CALGARY

Department of Civil Engineering, Transportation Engineering Program

ITS Focus

Urban Traffic Control and Management, ITS and Safety, Advanced Public Transportation Systems, Vehicle Infrastructure Integration (prospective).

Current ITS-Related Projects

Traffic-responsive signals, adaptive ramp metering, real-time bus location, passenger information and scheduling for public transportation in Calgary

Current Researchers

Lina Kattan, Richard Tay, Fred Hall, Chan Wirasinghe, Ahmad Radmanesh (Adjunct Professor)

Project Partners

- City of Calgary, Alberta Transportation

ITS-Related Course Offerings

Fundamentals of ITS & Transportation System Performance

Contact Information

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ITS Research and Development in Canada

A summary of projects planned or in progress for 2008-2009

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UNIVERSITY OF BRITISH COLUMBIA

Faculty of Applied Science, Department of Electrical and Computer Engineering

ITS Focus

Vehicle-to-vehicle communications, vehicle-to-roadside communications, vehicle-infrastructure integration

ITS-Related Projects

- Vehicular Telematics over WiFi and WiMax Multihop Networks (current, funded by AUTO21 NCE)
- Reliable and trusted networking for data-centric wireless access with applications to vehicular telematics (current, funded by BC-China ICSD program).

Researchers

Victor Leung (Principal Investigator), Vincent Wong, Garland Chow (University of British Columbia's Sauder School of Business), Oliver Yang (University of Ottawa), Jelena Masic (University of Manitoba), Ekram Hossain (University of Manitoba), Bob McLeod (University of Manitoba), Sathish Gopalakrishnan, Matei Ripeanu, Vincent Wong

Project Partners

Transport Canada ITS Office, Nokia, Telus, Communications Research Centre, TRILabs, Novax Industries, Methusala Microcells Inc., Vansco Electronics, University of British Columbia's Bureau of Intelligent Transportation Systems and Freight Security, Jilin University, China.

Contact Information

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UNIVERSITY OF NEW BRUNSWICK

Faculty of Engineering, Department of Civil Engineering – Transportation Group

ITS Focus

Rural ITS, rail safety, highway safety, wireless

ITS-Related Projects

UNB-led Research, conducted under the Canada-New Brunswick Contribution Agreement for Rural ITS Research (except for (*), funded by Transport Canada):

- Using a radar display to manage vehicle speeds in highway work zones (completed)
- Testing a cost-effective electronic device to identify railway track switch position from a train (completed)
- A low-cost alternative to railway level crossing warning systems for high consequence traffic unprotected level crossings (completed)
- Review of remote emissions sensing technology (completed)
- Research platform for spring weight restriction technology (completed)
- Applicability of Vehicle Infrastructure Cooperation to Low-Density and Rural Rail Grade Crossing Safety(*) (completed)
- Intelligence Gathering and Requirements Development for the Establishment of a Vehicle-Infrastructure-Cooperation Testbed for Rural and Low-Density Transportation Applications at the University of New Brunswick (*) (in progress)

NBDOT-led Research:

- Developing a plan to coordinate the deployment of ITS technology to help Commercial Vehicle Operations (CVO) efficiency in the province (completed)

ITS R&D in Canada

UNIVERSITY OF NEW BRUNSWICK *Continued*

- New Brunswick traveller information needs assessment (completed)
- Collecting and analysing pavement condition information using digital video and Geographic Information Systems (GIS) (completed)
- Phase 2: New Brunswick traveller information needs assessment (completed)
- In-Vehicle Technology Assessment (Winter Road Conditions) (completed).

Researchers

Dr. Eric Hildebrand, Trevor Hanson, Dr. Eldo Hildebrand, Dr. Ming Zhong

Project Partners

- Transport Canada
- New Brunswick Department of Transportation
- NB Southern Railway
- Maritime Road Development Corporation
- Global Rail Systems
- Ontrack Systems

ITS-Related Course Offerings

- Intelligent Transportation Systems
- Road Safety Engineering
- Geographic Information Systems
- Traffic Engineering

Contact Information

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edh@unb.ca

More profiles of university research to be included in the next issue



ITS Canada Welcomes New Members

CORPORATE

Continental Public Transit Solutions
ESRI Canada

News bITS

TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) is the use of policies, programs, services and products to influence whether, why, when, where and how people travel. Intelligent transport systems can impact on TDM in a variety of ways, including providing travel information that is easy for travellers to access, understand and use. The benefits are wide and varied, including reduced traffic congestion and cleaner air, a greater return on investments in transit, cycling and carpooling facilities, and more.

A new resource is now available from the Federation of Canadian Municipalities: *Improving Travel Options with Transportation Demand Management (TDM)*, which includes:

- a publication that includes profiles of Canadian communities that have benefited from TDM, discussions of four key areas of municipal action (commitment, planning, services and promotion), and additional information sources
- a customizable PowerPoint presentation, complete with speaking notes, to introduce TDM to your council, staff or peers.

To access this publication, as well as a library of other valuable resources, please visit:

http://sustainablecommunities.fcm.ca/Capacity_Building/Sustainable_Transportation/default.asp

ELECTRIC VEHICLE ROAD MAP FOR CANADA

There is an aggressive but achievable vision for the use of electric vehicles in Canada by 2018. In support of the Canadian Electric Vehicle Technology Road Map (evTRM), a new website is now available. Led by industry and coordinated by a federal government secretariat, the evTRM is identifying critical energy technology requirements, gaps and milestones needed to advance electric vehicles in Canada. The website will facilitate communication and information sharing for the evTRM consultative process. For more information, visit http://www.evtrm.gc.ca/index_e.html. The user name for participants is **ev_user** and the password is **evTRM**.



ITS Canada News

Canadian ITS Centres of Excellence

The first in a series of profiles

UNIVERSITY OF TORONTO ITS TESTBED

By Baher Abduhai, University of Toronto

Funded by a consortium of public, academic and private-sector partners, the University of Toronto founded a unique-to-Canada \$5 million ITS research centre in 2001 (www.torontoitscentre.ca). The centre houses scientific research equipment connected to the physical transportation network in Toronto via dedicated fibre optic links to the two major traffic operations centers in the city. Researchers in the centre use the city of Toronto as a live 'testbed' to develop advanced ITS solutions and decision support tools, including large-scale simulations; visualization, data reduction and data summarization capabilities; and diagnostic, estimation, prediction, and real-time traffic control software tools.

The establishment of the ITS Centre and Testbed (ICAT) seeded a fertile environment for collaborative, multi-disciplinary research. It also led to the creation of a Canada Research Chair (CRC) dedicated to ITS (Prof. Baher Abduhai). However, the ITS Centre, as it stands today, has several limitations. It is limited to the University of Toronto and the geographical city of Toronto. Although it is the only such facility in Canada and one of only a few worldwide, it is still limited in size to less than 10 professors and some 40 graduate student researchers at steady state. It lacks the diversity and critical mass that a pan-Canadian research cluster would have. All the above limitations further limit the centre's capacity for international collaboration.

ONE-ITS: Canadian ITS Without Borders

As transportation problems continue to soar, Transport Canada envisions a comprehensive strategy for mainstreaming ITS across the country. "*En Route to Intelligent Mobility*", a strategic direction for Canada, promotes stakeholder participation and ITS technology integration.

With this national strategy in mind, ONE-ITS was born in 2008. Funded by CANARIE, this project creates an unprecedented pan-Canadian, internationally-reaching Online Network-Enabled ITS (ONE-ITS) Platform.

ONE-ITS will use the proven principles of IT production, namely, collaborative web 2.0 and SOA technologies, to build such participatory and integrative environments. Harnessing the true power of the web, ONE-ITS will democratize innovation in transportation in Canada, creating a "socio-technical" Virtual Organization (VO) that brings together stakeholders from the academic, private, and public sectors.

ONE-ITS has international membership that includes Canada, the U.S., North Africa and Asia. Using open portals and interfaces allows member stakeholders to exchange and share ITS information, knowledge, resources, expertise and services.

Combining SOA and VO is the height of what IT promises in terms of flexible application integration in response to changes in requirements. The collaborative efforts of communities of practices and interests will help build and maintain the development of ITS services, and business and data models. This comprehensive, participatory and integrative research requires the usage of national communication infrastructure and computational resources.

Successful deployment of comprehensive ITS requires computationally-intensive applications applied to massive amounts of traffic information in real time. ONE-ITS will rely on using the computational resources provided by Compute Canada Inc. and CANARIE's high bandwidth optical networks to support such research.

The National ONE-ITS Vision

The vision is to create an unprecedented pan-Canadian, internationally-linked, multi-disciplinary research cluster in ITS by establishing an Online Network Enabled ITS (ONE-ITS) Platform. ONE-ITS is a double-sided coin, having a service-oriented technological side and a Virtual Organization side.

Canadian ITS Centres of Excellence

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ONE-ITS will amalgamate experts from various branches of science and engineering. It will bring together stakeholders from the academic, private and public sectors, and from physically dispersed geographic regions using modern web technologies. ONE-ITS will also revolutionize the state of the art of ITS while emphasizing near-term deployment in the field, and will establish Canadian universities and their international collaborators as unified leaders in ITS research that collectively transform into a premier virtual centre for ITS research worldwide, the focal point for public, private, and academic research in the growing and vital ITS sector.

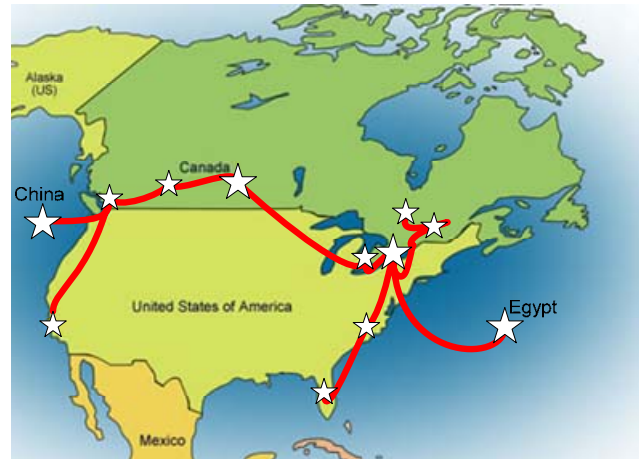
From the Toronto ITS Centre to ONE-ITS

ONE-ITS builds on the strength of, and the experience gained from, the Toronto ITS Centre and Testbed. It also learns from the limitations of the ITS Centre. The Toronto ITS Centre is arguably Canada's largest such centre. However, while the ITS Centre created a cluster of multi-disciplinary ITS researchers under "one roof" (i.e., a central hub), ONE-ITS casts the net much wider, crossing provincial and national geographical boundaries.

Summary

The success of the ITS Centre to date reinforces the importance and potential of multidisciplinary research in ITS. The limitations clearly point to the need for re-thinking the future of ITS innovation. It is becoming clearly evident that the Canadian ITS community needs to unite to have a substantial presence in the global ITS market. It is, therefore, our objective to establish a pan-Canadian Online Network Enabled ITS virtual research organization (ONE-ITS) using next generation Internet technology to directly capture and harness ITS expertise across the nation and potentially the globe.

Each participating organization brings an established excellence and presence in ITS research. Each organization is a beneficiary and a contributor of expertise, data, systems, computing resources and services.



In the development phase of ONE-ITS, participants will assist the development team throughout the system requirements, development, evaluation and roll-out phases of the project. The development team will provide participants with adequate documentation and training to facilitate roll-out at their sites.

On behalf of the ONE-ITS team (see map), your organization is welcome to participate. It is a two-way street model, i.e., we all give and take, share risk and benefits, and we each retain our individual intellectual property (IP) that we bring to the pot.

Although the project is officially less than two months old, the vision has been crystallized, the road map has been defined, and development is underway.

For More Information

Please contact:

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Upcoming Events

2008

8th International Transport Systems Telematics Conference

November 5 to 8, 2008 – Katowice-Ustroń, Poland
www.tst-conference.org

CUTA Fall Conference and Trans-Expo 2008

November 8 to 12, 2008 – Windsor, Ontario
www.cutaactu.ca

15th World Congress on ITS and ITS America's 2008 Annual Meeting & Exposition

November 16 to 20, 2008 – New York, USA
www.itsa.org/worldcongress.html

Road Pricing Conference 2008

December 9 and 10, 2008 – London, England
www.theiet.org/events/2008/road-pricing.cfm



Are you coming to Edmonton for
ITS Canada's 2009 Annual Conference?

CALL FOR ABSTRACTS
Deadline: January 16, 2009

**THEME: ITS - Transportation Solutions for
Growth and Sustainability**

Event: May 10 to 13, 2009

16th World Congress on Intelligent Transportation Systems

Stockholm, Sweden
September 21-25, 2009

CALL FOR PAPERS
Deadline: December 1, 2009
www.itsworldcongress.com

2009

Transport Ticketing 09 Conference

January 27 and 28, 2009 – London, England
www.transport-ticketing.com/64/index.php

ATEC-ITS France International Congress

February 4 and 5, 2009 – Versailles, France
www.itsfrance.net

Incident Management In The Fast Lane

March 12, 2009 – Niagara Falls, NY
www.NITTEC.org/IMConference09

Intertraffic China

March 18 to 20, 2009 – Shanghai, China
www.intertraffic.com

e-Transport

March 24 and 25, 2009 – Johannesburg, S. Africa
www.itssa.org

6th International Workshop on Intelligent Transportation

March 24 and 25, 2009 – Hamburg, Germany
<http://wit.tu-harburg.de>

TAC Spring Technical Meetings

April 16 to 20 – Ottawa, Ontario
www.tac-atc.ca

Traffex 2009

April 21 to 23, 2009 – Birmingham, England
www.traffex.com



ITS CANADA ANNUAL CONFERENCE AND GENERAL MEETING

May 10 to 13, 2008 ~ Edmonton, Alberta
www.itscanada.ca/edmonton2009

Intertraffic Istanbul 2009

May 27 to 29, 2009 – Istanbul, Turkey
www.intertraffic.com

ITS America's Annual Meeting 2009

June 1 to 3, 2009 – Fort Washington, Maryland
www.itsa.org/annualmeeting.html

National Rural ITS Conference 2009

August 23 to 27, 2009 – Seaside, Oregon
www.nritsconference.org