ITS Canada News

ITS Canada Welcomes Delegates to Annual Conference in Whistler

June 4 to 6, 2006
Fairmont Chateau Whistler Hotel
Whistler, British Columbia, Canada
www.itscanada.ca/whistler2006

ITS Canada's 2006 Annual Conference is certain to be a spectacular event! From the incredible scenery to the wide range of speakers and topics, delegates will surely enjoy the experience of hearing the latest about the Canadian intelligent transportation systems industry. British Columbia's Minister of Transportation, the Honourable Kevin Falcon, will provide Monday's keynote address. An international session with a full complement of speakers will focus on ITS research and deployment around the world.

The theme of the Conference is "Achieving ITS Excellence ... 2010 and Beyond". A cocktail reception will be held Sunday evening, following ITS Canada's Annual General Meeting, to officially welcome guests and companions to Whistler. The exhibition begins Sunday evening and runs concurrently with conference sessions on Monday and Tuesday.

A wide rage of optional social events are included in the program:

- A golf tournament (Sunday morning)
- Lunch at the peak of Whistler Mountain (Sunday)
- A bicycle tour of Whistler Valley (Sunday)
- A banquet (Monday evening)
- A companions' program that includes a number of interesting activities, including a guided village stroll to visit art galleries and shops.

British Columbia's mountains beckon … enjoy!

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

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

ITS Canada News

Goods, Ports, Borders and Corridors Workshop

By Kevin Bebenek, IBI Group

On March 27 and 28, 2006, ITS Canada and the UBC Sauder School of Business hosted a **Goods, Ports, Borders and Corridors** workshop in Vancouver. This was the third in a series of sessions sponsored by Transport Canada. Previous sessions were conducted in Montreal (September 2005) and Halifax (December 2004).

The Vancouver workshop attracted over 100 participants representing private and public sector agencies, who engaged in a discussion of the experiences and opportunities in applying ITS solutions to address the security and efficiency of goods movement at ports of entry and along trade corridors.

Sessions provided insights into various technology initiatives underway among regional stakeholders, including the British Columbia Ministry of Transportation, TransLink, the Vancouver Port Authority, P&O and the International Mobility and Trade Corridor. Of particular interest is the supply chain process mapping and modelling work being undertaken by the UBC Sauder Bureau of ITS and Freight Security.

The workshop concluded with tours of the P&O Centerm facility, as well as the FedEx and Aeroground air cargo facilities.

News bITS

THE COST OF URBAN TRAFFIC CONGESTION

Transport Canada has released the findings of a study entitled *The Cost of Urban Congestion in Canada.* The study reviewed costs of traffic congestion in nine of Canada's major urban areas: Quebec City, Montreal, Ottawa-Gatineau, Toronto, Hamilton, Winnipeg, Calgary, Edmonton and Vancouver.

Findings indicate that recurrent congestion in urban areas costs Canadians between $2.3 billion and $3.7 billion per year (in 2002 dollar values.) More than 90 percent of this cost is associated with the time lost in traffic to drivers and passengers; 7 percent occurs because of fuel consumed; 3 percent is from increased greenhouse gas emissions.

Estimates are considered conservative as there was insufficient information on the costs related to non-recurrent congestion, such as that caused by random events (bad weather, accidents, stalled vehicles and other incidents), freight transportation, off-peak congestion, etc.

For full details, visit:
www.tc.gc.ca/mediaroom/releases/nat/2006/06-h006e.htm

ITS IN HONG KONG

ITS Hong Kong, the Wireless Technology Industry Association and the Hong Kong Information Technology Federation have established a joint working group on intelligent systems. Along with Legislator Sin Chung-kai, the group has compiled a report that explores:

- the trends involving ITS development taking place in other countries (Europe, Australia, Japan, South Korea, Singapore and China)
- an overview of ITS development in Hong Kong
- what opportunities and challenges ITS may present
- how Hong Kong can leverage its competitive advantage to further improve and modernize ITS development over the long term.

To view the report:
www.sinchungkai.org.hk/demo/eng/scks_publication/policy_paper/ITS_policy_paper.pdf

ITS Canada News

Intelligent Transportation Systems Project Funding

In January 2005, a total of $5 million in funding for twenty-five new projects was announced under Transport Canada's Intelligent Transportation Systems (ITS) Plan. The winning projects will take place in various locations across Canada. Details on all of the projects are available at www.tc.gc.ca/mediaroom/releases/nat/2005/05-h001e.htm.

By Bruno Peters, IBI Group
Funding awarded: $100,000
Total cost of proposal: $450,000

IBI Group, co-funded by Transport Canada and in partnership with Parks Canada, Alberta Infrastructure and Transportation, the Alberta Motor Association and Drive BC, have developed and deployed a multi-agency web-based traveller information system pilot project called Drive West (www.drive-west.ca).

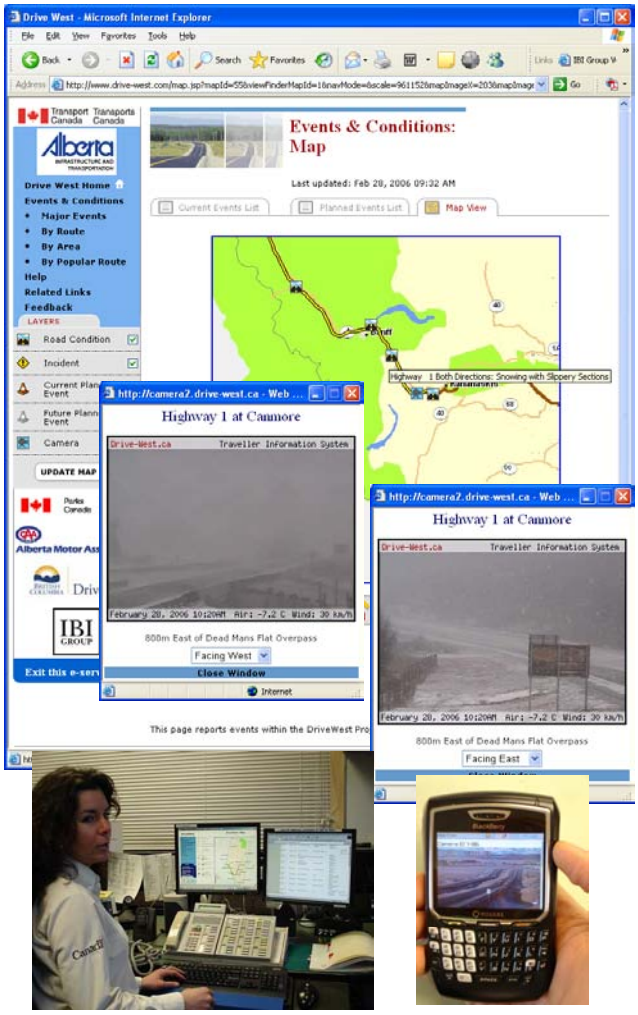
The live data entry of information covers the Queen Elizabeth II Highway between Edmonton and Calgary and Trans Canada Highway 1 from Calgary's city limits through Banff National Park to the British Columbia border. The Drive West site also acts as a map-based portal to the Drive BC website and all other surrounding provinces and states. The Drive BC site displays information in a common format with Drive West for B.C.'s major highways.

Phase 1 of the Drive West website included information regarding highway closures, delays, incidents, construction zones and real-time information on road conditions. Motorists use this information to better plan their trips and avoid delays caused by construction, weather, collisions or other incidents. The system included a common simple data entry interface that allowed for each agency to enter and maintain road conditions and event information for their respective regions. The system also automatically notifies subscribers by email on a scheduled or event-driven basis regarding any changes of conditions for their area of interest.

Phase 2 of the project included the integration of data from 25 sites of Alberta's newly deployed RWIS system. Camera images for multiple views, temperature and wind conditions were integrated into the map interface to allow motorists to access near real-time conditions as confirmation of the posted road conditions or events.

The camera information, as expected, is an extremely popular feature of the system.

Phase 3 of the implementation included the development and trial of data exchange with Alberta Motor Association Road Reports web site and testing of PDA access to camera and weather data.



Regional Updates

ALBERTA

By Donna Lee,
Alberta Infrastructure and Transportation

As reported in this newsletter previously, construction of Alberta's Road Weather Information System (RWIS) was launched in April 2005. Twenty-five stations were successfully installed and operating during the 2005/06 winter season. The next phase is to build another thirty stations for 2006/07. Transport Canada is contributing $652,000 to the first phase of this ten-year multi-million dollar project as part of the national RWIS initiative.

Under the Canada-Alberta contribution agreement for ITS General Deployments, Alberta has equipped another 160+ private contractor snowplows with Automated Vehicle Location Systems (AVLS) and will begin rolling out a custom-built automated billing system in October 2006 that will take the outsourced maintenance work to another level of efficiency.

Another project that is being cost-shared with Transport Canada under the ITS General Deployments agreement is the commercial vehicle electronic pre-clearance system using Automated Vehicle Identification (AVI) technology. Alberta will deploy AVI technology at twelve vehicle inspection stations for commercial vehicle pre-clearance, six of which will be cost-shared with Transport Canada.

The project will enable electronic bypass of low-risk commercial vehicles using vehicle-mounted transponders and AVI readers. This ITS solution will enhance the efficiency and productivity of commercial vehicle operations, and allow the refocus of government resources on higher-risk vehicles. Construction will commence in spring 2006 and is expected to be completed by late summer 2006.

Demonstrating the diversity of ITS activities and with funding support from Transport Canada's ITS Research and Development (R&D) program, Alberta has initiated two ITS R&D projects with the University of Calgary. One project is entitled Optimal Deployment Strategy for Dynamic Message Signs (DMS) Utilization.

The objective is to evaluate the effectiveness of safety messages on DMS and whether strategies can be modified to enhance the messages' impact on drivers. Speed and driver behaviours are being monitored to measure the effects.

The other R&D project is entitled Optimal Deployment Strategy for Intersection Safety Cameras. While there are currently no intersection safety ("red light") cameras on provincial highways, there may be potential of using such ITS technologies to enhance intersection safety. The University of Calgary works with the Edmonton Police Service to develop an optimal strategy (duration and location) to rotate the limited, expensive resource of 28 cameras around 60 camera-ready locations. The research team will determine from collision statistics and driver behaviours whether the strategy will have a lasting beneficial influence while maximizing the use of a limited resource.

The two R&D projects are funded by three partners: 50 percent from Transport Canada, 25 percent from Alberta Infrastructure and Transportation, and 25 percent from the Centre for Transportation Engineering and Planning (C-TEP). The final reports for both R&D projects are expected to be completed by mid-April 2006.

Alberta is also in discussion with Saskatchewan Highways and Transportation to jointly build a prototype of a remote control weigh station at an existing unattended weigh scale near the Alberta-Saskatchewan border. The project is to use existing and proven technologies such as video cameras, message sign boards and high-speed Internet to remotely monitor and operate unattended vehicle inspection stations from a distant office. The pilot project is a proof of concept for an efficient and less costly alternative for operating weigh stations. Construction of the prototype is scheduled to start in spring 2006.

Regional Updates

ALBERTA

By Ryan Vanderputten, City of Calgary

The City of Calgary has been extremely active in implementing many projects outlined in their ITS Strategic Plan. Some of the recent project highlights are as follows.

Highway Advisory Radio (HAR)

As part of Calgary's traveller information initiative, the City launched its first Highway Advisory Radio (HAR) system in April 2006. Initially proposed to inform motorists of localized construction information for a large three-year construction project, the system has the ability to cover almost 25 percent of Calgary's broadcast area. Information such as real-time construction delays, lane closures, collisions and other incidents can now be provided to motorists while in their vehicle. This supplements the existing system currently available on the web (www.calgary.ca/trafficinfo). A formal evaluation study will be undertaken later in the year.

Intelligent Work Zone

As part of the Glenmore Trail Corridor Project, an Intelligent Work Zone system has been deployed to monitor traffic conditions within the construction zone and to disseminate information as required to the public via dynamic message signs. The project uses video-based traffic data collection and is coordinated through the Traffic Management Centre.

Transit Trip Planning

In March 2006, Calgary Transit launched its new online transit trip planning tool (http://tripplanning.calgarytransit.com). Customers can enter where they wish to go and where they will be leaving from and receive up to five itineraries on how to travel there by Calgary Transit bus or CTrain. Also included in the itineraries will be the schedule times of when to leave, the time they will arrive at their destination and any transfer connections they will need to make, as well as the duration of their trip. Along with trip planning information, customers can find the closest bus stops to where they live, work or play and route schedules that will provide times for a single stop, the main time points or all stops along the route.

ePayment

Recently formed as a subcommittee to the ITS Coordination Committee, the ePayment Working Group's purpose is to ensure communication between various departmental ePayment projects and efforts, and to investigate and make recommendations for a corporate-wide ePayment strategy. One current project underway is testing the use of cell phones (text messaging) for transit fares.

ITS Strategic Plan Update

The City's ITS Strategic Plan was approved by City Council in September 2003. To ensure that ITS investments are appropriate for the stakeholders' needs, an update to the Strategic Plan will be undertaken in 2006. The objective of the update is to confirm stakeholder needs and refine the deployment program (projects prioritization, organizational structure and cost estimates).

SASKATCHEWAN

By Ted Stobbs,
Saskatchewan Highways and Transportation

The Saskatchewan Department of Highways and Transportation is working together with the City of Regina and SGI to install Variable Message Board Signs along Regina's Ring-Road/Highway 1. These signs will be used to warn motorists of hazardous situations and provide general information.

The Department's Northern Region has installed three ADDCO Brick signs on Highway 2 north of Prince Albert, Highway 55 east of Prince Albert, and Highway 3 west of Prince Albert for the purposes of communicating road condition information such as road closures due to northern forest fires, flooding/washouts, as well as extreme weather conditions such as wind/snow/ice. Prince Albert considers itself as the gateway to Northern Saskatchewan. It is a gateway to northern tourism such as hunting, fishing and northern lakes; it is also a transportation hub for forestry and mining.

Regional Updates

Saskatchewan

Highways and Transportation

Saskatchewan Highways and Transportation has implemented a network of thermistors to assist in decisions on when spring weight restrictions should be placed on the thin membrane highway network. There are 16 thermistor sites located strategically in different geographic and climatic areas across the province. The thermistors are placed under the surface to a depth of two metres. The sensors are placed at various increments, from 60 cm apart at the bottom to 5 cm apart near the surface. As the temperature profile changes in the spring and frost leaves the grade, decision makers will implement spring weight restrictions to reduce the thaw-related damage to non-structural roads, with consideration for minimizing the cost and inconvenience to industry.

Regina
CITY OF REGINA

The City of Regina is continuing work on a multi-year traffic signal upgrade. The upgrade work includes the replacement of the City's old traffic controllers and cabinets with NEMA TS2 Type 1 NTCIP-compliant units. Additionally, the City is replacing an old central software system with a new central server, including software and hardware. The new controllers, cabinets and software will increase the reliability of the system and afford the City the opportunity to re-time the entire signal corridor to be more reflective of current traffic trends.

To complement the new system, the City is also upgrading the communications system to the traffic controllers to a user-owned system. The City is using existing City-owned copper cabling in the downtown core area and is investigating the use of wireless devices for the remainder of the traffic controllers.

Stage II of the overall upgrade is the installation of significant numbers of non-intrusive detection devices to aid in making the traffic system more responsive and more efficient. Approximately 85 percent of the City's intersections will make use of either video or microwave detection. Due to the installation of vehicle detection, the City is also adding pedestrian push buttons at the majority of intersections to provide pedestrians with a way to let the controller know they are there. With the use of detection, the City anticipates a more adaptive system that will allow more flexibility than in a fixed time system.

The final piece of the overall system upgrade is the addition of optical fire pre-emption devices along many of the key corridors throughout the City. Fire pre-emption is a welcome addition and more convenient to add because of the new control equipment. The bulk of the work is anticipated to be completed by the end of the year.

Virtual Weigh-In-Motion

The City of Saskatoon, in partnership with International Road Dynamics (IRD) and the University of Saskatchewan (U of S), has been awarded cost-shared funding from Transport Canada under the Intelligent Transportation Systems (ITS) Research and Development Plan, part of the Strategic Highway Infrastructure Program (SHIP). The contribution agreement will allow the City of Saskatoon to install two Virtual Weigh-in-Motion (WIM) Systems in the City and enable further research and development on the application and use of the systems.

City of Saskatoon

A Virtual WIM System is a tool to monitor vehicle weights and dimensions at full highway speeds. The system captures an image of those vehicles that are overweight for further inspection, allowing compliant vehicles to proceed uninterrupted.

... continued next page

Regional Updates

SASKATCHEWAN *... continued*

The data collected from the system can be incorporated into asset management and truck route optimization programs to protect investment in the city's road infrastructure.

The new systems will enable further enhancement of the video technology to include license plate readers and create customized reporting. The project will also allow continued research by evaluating the relationship between enforcement strategy, effort and effectiveness in an urban environment. These systems are a unique approach to monitoring commercial vehicle weights in an urban environment, and Saskatoon is becoming a showcase for such technology.

The total cost of the project is $452,000; Transport Canada's share is $226,000.

MANITOBA

By Ed Pacholok, City of Winnipeg

The City of Winnipeg is continuing in the process of implementing its traffic signal management system (TSMS). The system has been operating on a number of traffic control signals. Together with this system, the City is using wireless technology to communicate between traffic signals and the TSMS. The city is testing the implementation of video and radar vehicle detection equipment as an alternative to loop detection technology.

Traffic signals assets and information (e.g., traffic signal timing plans, controller type, maintenance schedule, etc.) continue to be converted to an information management system based on a GIS-T platform. Once completed, this data will be linked and analyzed, together with other traffic-related data such as collisions and traffic volumes.

ONTARIO

By Tom AppaRao, Region of Peel

The Peel Region Long Range Transportation Plan (LRTP) was developed last year, which included a recommendation on ITS in its Implementation Section. Also, Regional Council adopted the Regional Official Plan Amendment 16, representing a major update of transportation policies. ROPA 16 includes policies that promote the use of ITS.

LRTP and ROPA 16 documents are available at peelregion.ca/planning/transportation/LRTP/index.htm

By Doug MacKay, Region of Durham

The Region of Durham recently completed an ITS Strategic Plan for the purpose of setting the direction, pace and priorities of ITS investments in the Region. The deployment plan reflects an aggressive but achievable plan over a 10 year period, in a co-ordinated and focused manner. Initially, ITS elements were deployed in a random fashion, without the benefit of planning or integration. From this point forward, the Region is well positioned to continue deploying ITS projects, taking advantage of the availability of both public and alternate funding.

The Region's Traffic Operations Centre (TOC) opened in 2005 to house not only the Traffic Control Centre, but also all field services, in one building. Regional forces are responsible for not only administrating various programs, but the design and maintenance of all traffic control signals in the Region. Fleet vehicles, including pavement marking equipment, are operated from the TOC. Another unique feature of the TOC is that it houses one of the few municipally-owned sign manufacturing facilities in Ontario.

The Region of Durham is planning a number of major ITS initiatives. In 2006, we expect to significantly expand the municipally-owned underground infrastructure, including fibre optic communication media. Our significant data management program will also expand with an expected consolidation in 2006. Another major work area of significance is that to support emergency management, specifically with regard to the two nuclear generating stations in Durham.

Regional Updates

ONTARIO

By Steve Erwin, Ontario Ministry of Transportation

Total Monitoring Station Study

Monitoring traffic and weather conditions for remote areas can be an expensive proposition – both for installing the equipment and for ongoing communications costs.

To address this, the Ontario Ministry of Transportation, in partnership with the ENTERPRISE Group, Transport Canada and York Region, and with the services of Delcan, undertook an evaluation of the new digital PCS wireless 1xRTT technology in 2003-04. Based on the promising results of this evaluation, it was decided to couple this technology with solar power to evaluate their potential to support a Total Monitoring Station (TMS) to provide traffic and visibility information.

Highway 21 in Kincardine, Ontario, made an ideal location to evaluate the effectiveness of the station, since frequent poor visibility conditions caused by drifting snow occur on this section of the highway.

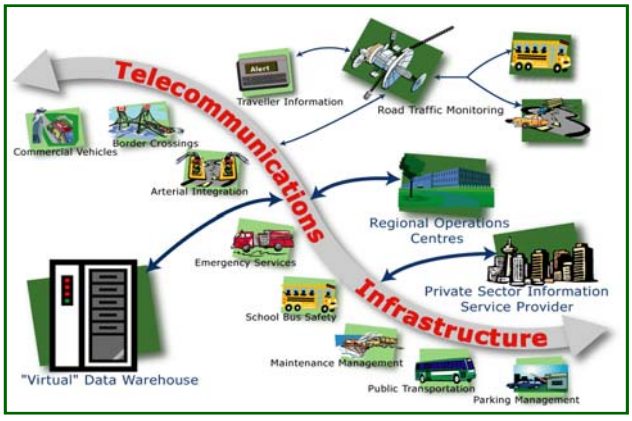
The study is demonstrating that wireless (1xRTT) combined with solar power is a flexible, portable, faster and economical alternative for deploying TMS stations. While additional development is needed to fully operationalize the technology and interpret the visibility monitors, it shows great promise. Further information on the study is available by contacting Henry.Wong@mto.gov.on.ca or at Tel 416-235-3850.

ITS Integration

Growth continues to place greater and greater strain on the transportation network in the Greater Toronto Area and Hamilton (GTAH), as it does in most major urban centres. The resulting congestion reduces quality of life and makes the economy less productive.

ITS plays a major role in current efforts to manage the movement of people and goods, with systems such as COMPASS and traffic signal control systems playing an important part in moving traffic effectively – but more can be done to make cross-boundary movements more efficient and to integrate different services such as transit, traffic, maintenance and emergency response.

Discussions are underway among the various governments in the GTAH to look at how ITS services can be better integrated, and to assess what the benefits might be. The study will be co-funded by Transport Canada, through the Strategic Highway Infrastructure Program.



Regional Updates

NEW BRUNSWICK

By Trevor Hanson,
New Brunswick Department of Transportation

Weigh-in-Motion

The New Brunswick Department of Transportation completed the installation of two mainline pre-clearance weigh-in-motion (WIM) systems on the Trans Canada highway in the fall of 2005, bringing the total number of mainline systems in the province to three. The systems are located at Longs Creek (eastbound), Deerwood (westbound) and Salisbury (westbound), and operate in conjunction with the existing scale facilities at these locations. The Deerwood and Salisbury installations were co-funded by Transport Canada under the Intelligent Transportation Systems component of the Strategic Highway Infrastructure Program.

Update on Rural ITS Research

Work is progressing well on projects undertaken through the National Rural ITS Research Program. The National Rural ITS Research Program was established through a contribution agreement with Transport Canada and the Province of New Brunswick in September 2004, and includes a partnership with the University of New Brunswick's Transportation Group. Transport Canada's funding comes from the Intelligent Transportation Systems component of the Strategic Highway Infrastructure Program.

Projects that are complete or nearing completion include those in the area of work zone safety, traveller information and highway condition data collection. There are four ongoing projects, including two rail safety projects (one highway/rail intersection technology project and a switch safety project) and two commercial vehicle operation-related projects.

New Nouveau Brunswick CANADA

Weigh-in-motion in New Brunswick >
Photo courtesy of New Brunswick Department of Transportation

NEWFOUNDLAND AND LABRADOR

By Doug Shea, Newfoundland and Labrador Department of Transportation and Works

The Government of Newfoundland and Labrador, represented by the Department of Transportation and Works in partnership with Transport Canada, have completed the installation of 18 Road Weather Information System (RWIS) sites on the National Highway System within the province. The sites are presently operational. The province has a three-year agreement with AMEC Earth and Environmental to provide weather forecast services from the information gathered at these sites. Maintenance personnel throughout the province have access to the information and forecasts through Internet and voice communications in order to carry out winter maintenance activities on the provincial highway network.

An update to the Department of Transportation and Works - Transportation GIS (GIS-T) Implementation Plan has been completed. The updated plan has been submitted to Transport Canada for funding. Negotiations are presently ongoing, with an agreement anticipated soon.

Variable message signage is being investigated for the southwestern area of the island of Newfoundland, commonly known as "Wreckhouse". This area is located approximately 20 kilometers west of Port aux Basques on a stretch of flat land between the Atlantic Ocean and the Long Range Mountains. Winds can range from 90 km/hour to over 200 km/hour in this area.

Regional Updates

YUKON

By Wally Hidinger, Government of Yukon

The Yukon Government has five projects in the planning or delivery stages:

1. Remote Data Gathering
   - transport of traffic count data obtained by loop counters in field installations to Whitehorse using satellite technology
   - beta site installed July 2004 and successfully tested since summer 2004
   - four solar-powered sites now operating successfully
   - additional sites to be installed as funds are available.
2. Road Weather Information System
   - three sites will be installed in 2006
   - all sites are near Whitehorse where traffic volumes are high enough to warrant installation, and electricity and telephone service is available
   - work originally planned for 2005 but delayed for a variety of reasons
   - local contractor now in place
   - completion scheduled for September
   - co-funding is provided by Transport Canada through the Intelligent Transportation Systems component of the Strategic Highway Infrastructure Program.
3. Highway Condition Reporting System
   - continued participation in the 511 Consortium
   - significant funds included in current budget to convert existing system to 511 access.
4. Broadband Communications to Remote Highway Maintenance Camps
   - satellite-enabled communications technology to provide high-speed voice and data communication with remote maintenance camps
   - a demonstration project was successfully completed in 2004
   - equipment installed at ten camps in 2006 for less than $3,000 per site.
5. ITS Strategy for Yukon
   - development of a guidance document for future ITS work
   - most work by consultant resources
   - completion by late 2006.
6. Variable Message Signs
   - purchase of two portable VMS for use on short-term construction sites
   - initial purchase will be on a trial basis
   - additional signs may be acquired pending successful experience
   - installation of fixed VMS at key locations where winter road closures are common also under consideration.

CUTA CONTINUES TO PROMOTE ITS

By Philippe Bellon, CUTA

Since signing a cooperation agreement with ITS Canada, the Canadian Urban Transit Association has been actively promoting ITS in all of its core activities. The most visible aspect of this work has been two one-day workshops held during our 2004 and 2005 fall conferences.

The Vancouver workshop attendance reached eighty people from transit and government, as well as the private sector. The workshops organized with ITS Canada enabled our members to hear the latest developments concerning smart cards, AVL, TSP and ATIS. The question of ITS planning and project management was also addressed.

It is important to note that ITS is also an important part of our recurring conference programs. It will be featured during our upcoming 2006 Saskatoon annual conference during Session 8 on Transit Security and Video Surveillance and Session D of the Accessible Transit Workshop on Technology and ITS Applications for Paratransit Services.

CUTA continues to be involved with ITS Canada in the 511 Consortium and has been promoting 511 to its members as well as liaising with the American Public Transport Association on the subject. On the training side, our one-week transit planning course features a module on ITS. On the government relations level, CUTA has shown support for the MTO's recent announcement on traffic signal pre-emption technology in buses and streetcars. Finally, a Technical Services sub-committee on Planning and ITS meets at least twice a year to advise CUTA on ITS-related research projects and activities.

Road Weather Information Network Now Operational

Adapted with permission from the Environment Canada publication Zephyr, Spring 2006

Major advances have been made on both the administrative and technical sides of Canada's Road Weather Information Network (RWIN) since the last update was published in ITS Canada's newsletter, including the completion of a growing number of data-sharing agreements with the provinces and the launch of the first operational version of the RWIN.

RWIN will serve as a central repository for quality assured/quality controlled observational data collected through a network of automated Road Weather Information Systems (RWIS) located predominantly at key points along the National Highway System. Once completed, the RWIN will be composed of several hundred of these RWIS.

Several data-sharing agreements have already been signed between Environment Canada (EC) and several provincial governments and additional agreements are expected to be completed by year's end. The agreements give EC access to this data, augmenting its current observation networks and potentially improving its forecast production systems. Partner provinces and territories are also eligible for Transport Canada funding to install new road weather information stations or upgrade existing ones along national highways in their jurisdiction.

EC is responsible for developing and maintaining RWIN, which is designed to collect and archive the data, provide quality control, issue alerts and deliver data in real time to provincial and territorial transportation agencies for use in forecasting pavement temperatures and conditions.

The launch of RWIN Version 1.0, which took place in early March 2006, is the result of a collaborative effort involving EC, Transport Canada, the provinces and the private sector. It was preceded by an intense period of acceptance testing by EC staff in Downsview, Ontario, and Kelowna, BC.

Data from the provinces of Alberta and BC are now flowing into RWIN, with data from Quebec to be added over the coming summer. The data is transmitted between the RWIN servers and the provincial servers using a communication protocol developed in Canada: the Canadian Meteorological Markup Language, or CMML.

Over the next two years, other provincial data sets will be integrated and the RWIN's quality control algorithms and metadata further refined. The final version will be fully operational by March 2008.

The RWIN project team continues collaborating with their U.S. counterparts on their Clarus Initiative, the U.S. equivalent of RWIN. An update on the project was recently presented at the World Road Association (PIARC) congress that was held in Turino, Italy.

ITS Canada Welcomes New Members

SUSTAINING CORPORATE
Applied Electronics Limited

CORPORATE
Sierra Systems

Upcoming Events

- **Intertraffic Amsterdam**
  April 4 to 7, 2006 – Amsterdam, The Netherlands
  www.intertraffic.com
- **AQTR's 41st Annual Congress**
  April 9 to 11, 2006 – Quebec City, Quebec
  www.aqtr.qc.ca
- **Public Meeting on the Benefits of Advanced Crash Avoidance Systems**
  April 20 to 21, 2006 – Ypsilanti, Michigan
  www.itsa.org/capm.html
- **ITS America's 2006 Annual Meeting and Expo**
  May 7 to 9, 2006 – Philadelphia, PA
  www.itsa.org/annualmeeting.html
- **Traffic and Road Safety Third International Congress and Exhibition**
  May 17 to 19, 2006 – Ankara, Turkey
  www.trodsa.org
- **CUTA 2006 Annual Conference**
  May 27 to 31, 2006 – Saskatoon, Saskatchewan
  www.cutaactu.on.ca
- **ITS Canada's Annual Conference**
  June 4 to 6, 2006 – Whistler, B.C.
  www.itscanada.ca/whistler2006
- **1st International Symposium on Freeway and Tollway Operations**
  June 4 to 7, 2006 – Athens, Greece
  www.citycongress.com/1_ISFO/
- **ITS New York Thirteenth Annual Meeting and Technology Exhibition**
  June 8 and 9, 2006 - Saratoga Springs, NY
  www.its-ny.org/whatsnew.html
- **International Bridge, Tunnel and Turnpike Associations Spring Technology Workshop**
  June 11 to 13, 2006 – Halifax, Nova Scotia
  www.ibtta.org
- **Canadian Telecom Summit**
  June 12 to 14, 2006 – Toronto, Ontario
  www.telecomsummit.com
- **ITST 2006 - 6th International Conference on ITS Telecommunications**
  June 21 to 23, 2006 – Chengdu, China
  www.itst2006.uestc.edu.cn
- **8th Asia-Pacific ITS Forum 2006**
  July 10 to 14, 2006 / Hong Kong, China
  www.itshk.org
- **National Rural ITS Conference 2006**
  August 13 to 16, 2006 / Big Sky, Montana
  www.2006nrits.org
- **11th IFAC Symposium on Control in Transportations Systems**
  August 29 to 31, 2006 – Delft, The Netherlands
  www.rws-avv.nl/ifac-cts2006
- **9th International Level Crossing Safety and Trespass Prevention Syposium**
  September 10 to 14, 2006 – Montreal, Quebec
  www.levelcrossing2006.com
- **9th Annual International IEEE Intelligent Transportation Systems Conference**
  September 17 to 20, 2006 – Toronto, Ontario
  www.itsc2006.org
- **XIV Pan-American Conference of Traffic and Transportation Engineering**
  September 20-23, 2006 – Canary Islands, Spain
  www.panam06.com (in Spanish)
- **World Roads Conference**
  September 27 to 29, 2006 – Singapore
  www.worldroads2006.com
- **13th World Congress and Exhibition on Intelligent Tranport Systems and Services**
  October 8 to 12, 2006
  www.itsworldcongress.com
- **CUTA 2006 Fall Conference and Trans-Expo**
  November 4 to 8, 2006 – Toronto, Ontario
  Trans-Expo – November 7
  www.cutaactu.on.ca
- **Pan-American ITS Congress and Exhibition**
  November 15 to 17, 2006 – Santiago, Chile