



INIT's Technology Passes the Test in Vancouver. CUTA recognizes exceptional system performance.

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INIT set the bar high and took home the gold during the 2010 Winter Olympics in Vancouver. The South Coast British Columbia Transportation Authority (TransLink) confirmed a record 1.6 million people daily used TransLink's bus services, including the city's rapid-transit lines, bus routes, trains and SeaBuses. With a daily

ridership average reaching 60% above normal, TransLink mastered all challenges thanks to their meticulous planning, the competency and commitment of their staff and INIT's outstanding transportation technology.

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Dear Transportation Professionals,

As the Sales Order and OEM Project Manager, I am responsible for ensuring that purchase orders are delivered on time to INIT's customers and bus manufacturers.

When I started with the company six years ago, I was a temporary employee. As the company has grown, so has my role. From a temporary employee, I became Office Manager, and then moved into the

role of Logistics Manager and finally Sales Order and OEM Project Manager.

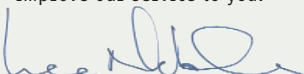
Part of my job is to manage and oversee the purchasing and warehouse team. Each day, the two full-time and two part-time employees meticulously inventory and move parts through our warehouse. Overseeing the process gives me the unique advantage of improving our logistics process. My team works tirelessly at expediting orders, keeping accurate records and maintaining good customer relations.

Two of our part-time employees are technical student interns who are learning the logistics of INIT while being trained on how to repair equipment in our on-site lab.

Together, we are always looking for new ways to improve our service to you.



> Lee Nobles
OEM Project Manager



Lee Nobles

Editorial

Advanced Sensor Technology with 3-D Imaging: For extreme accuracy demands in automatic passenger counting (APC).



> **INIT automatic passenger counting technology** can be used on any public transport vehicle (low-floors, with or without entry steps or handrails and narrow and wide entrances).

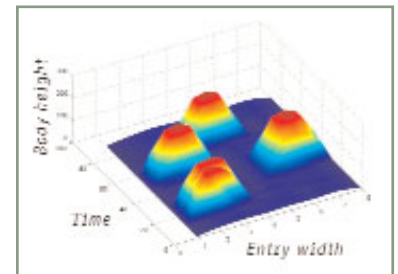
For their automatic passenger counting system, **MOBILE-APC**, INIT has depended on the leading counting technology on the market today — **IRMA**. **IRMA** provides the most precise counting accuracy using a combination of active and passive sensor components.

With the new 3-D photo-optic sensors, even higher accuracy results are guaranteed at 96% accuracy. INIT makes use of an innovative new detection method with pulses of laser light which are sent out in quick succession using the invisible IR range. These are reflected by objects and detected by the sensor. The distance to the object is then calculated by taking into account the period of time between transmission and reception of the light pulse. In this manner, the system generates a 3-D image of the door space, so that individual persons are detected even in tightly packed crowds.

Guaranteed accuracy at 96% or better.

INIT's advanced sensor technology has the ability to reliably distinguish between people and objects and even allows the determination of human

characteristics such as body height. Raw data accuracy is guaranteed to be at least 96% regardless of any environmental conditions. In addition to statistical controls, the 3-D sensor technology also allows for absolute control of transit service performance and revenue control, i.e. reconciliation between fare revenues and number of passengers.



> 3-D graphic of door area.

Advanced Features of INIT's APC Technology:

- > High-resolution IR laser 3-D sensor
- > Ability to distinguish directional movements (entering or exiting passengers)
- > Profile rather than contrast recognition
- > Can distinguish between people and objects (backpacks, strollers, bikes)
- > Support of standard system interfaces for connection to existing ITS systems (e.g., tracking unit, on-board computer, ticket printer)



> The next generation of laser sensors.

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TransLink Takes Gold during Winter Olympics.

INIT supports smooth operations.

Continued from page 1



> TransLink covers the largest transportation service region in Canada.

In 2006, TransLink partnered with INIT to provide an advanced fleet management system, as well as on-board computers on over 1,500 of their vehicles in preparation for the winter games.

Running a transit system during a major world event is no small task, but having the advanced communication and fleet management tools provided by INIT certainly made the job easier.

According to Canada Newswire, the 2010 transportation plan was “an unqualified success.”

CUTA Award Recognition.

Because of the outstanding performance of the INIT system in Vancouver,

the Canadian Urban Transit Association (CUTA) chose INIT to receive the 2010 National Transit Corporate Recognition Award. This esteemed award recognizes corporate accomplishments in four key areas: innovation, exceptional performance, outstanding achievement and safety. INIT’s nomination was submitted under the exceptional performance category and chosen for their exceptional system performance during the 2010 Winter Olympics. The award is set to be given on May 18 during the CUTA Annual Conference in Ottawa.

During the 2010 Winter Olympic Games, Canadian athletes earned 26 medals while the U.S. took home 37. But, the highest reward went to the

“behind the scenes” people from TransLink and INIT, who together managed this world-class event with first-class service.

TransLink.

TransLink is Metro Vancouver’s regional transportation authority and is responsible for regional transit, cycling and commuting options as well as Intelligent Transportation System programs. TransLink is the first North American transportation authority to be responsible for the planning, financing and managing of all public transit in addition to major regional roads and bridges. Vancouver is the third largest metropolitan area in Canada, with a population of 2.1 million (2006 census).

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> The city of Vancouver provided an excellent transportation strategy during the 2010 Winter Olympics.

Identify, Evaluate, Report.

New functionalities in MOBILEstatistics: the evaluation and statistics software.

In the course of their continued product development, INIT has considerably enhanced the statistics and evaluation application, **MOBILEstatistics**. A number of new functionalities have been added and an intuitive operational concept has been implemented. Below are some of the most important developments.

Search function.

A major innovation is the integration of the “search” function within **MOBILEstatistics** which simplifies the processing of complaints that management must process. Now the user can easily find the incident described by the passenger and can take corresponding action or provide additional information to solve the issue.

Analysis results in daily reports at the push of a button.

Schedule adherence and block duration are valuable factors for quality assessment. The daily report “Depot pull in/out” not only gives an overview of when the vehicles are leaving and returning to the depot, but with the conditional cell formatting in **MOBILEstatistics**, the user can define the events to be highlighted making it easy to recognize late running trips that are caused by delayed depot exit. This increases efficiency as it identifies and allows agencies to eliminate the cause of the delay.

The daily report “Stop punctuality evaluation grid” gives an overview of the departures at all stops. This helps to find out whether a non-recoverable delay might have been caused by tight scheduling of layover time or delayed relief, and allows for the schedule to be adjusted accordingly. The report can be grouped according to the following criteria:

- > Line, line and route, line and direction

No	Type	Stop	Actual arr	Actual dep	Sched arr	Sched dep	Diff arr	Diff dep	Sched. distance	Distance	Impact	Longitude	Latitude
350	+	Route TEAL, Block 121	9:18:55	9:19:55	9:18:00	9:18:00	0:00:55	0:00:55				-88.211268	40.006803
351	+	Cocharld Downs South 2	9:18:55	9:18:55	9:18:00	9:18:00	0:00:55	0:00:55				-88.211435	40.002818
352	+	Cocharld Downs Mid/Blk	9:20:18	9:20:48	9:18:30	9:18:30	0:01:48	0:04:18	0.14	0.13	20.14	-88.211518	40.004403
353	+	Cocharld Downs Mid/Blk	9:21:06	9:21:28	9:17:10	9:17:10	0:03:56	0:04:18	0.26	0.26	22.82	-88.211518	40.004403
354	+	Cocharld Downs North 2	9:22:07	9:22:31	9:17:45	9:17:45	0:04:22	0:04:45	0.50	0.49	21.90	-88.214210	40.006410
355	+	Florida & Orchard,2	9:23:05	9:23:05	9:18:20	9:18:20	0:04:45	0:04:45	0.62	0.60	14.88	0.000000	0.000000
356	+	Florida & Bussey,1	9:23:33	9:23:33	9:18:55	9:18:55	0:04:38	0:04:38	0.79	0.81	23.33	0.000000	0.000000
357	+	Florida & Lincoln,1	9:24:00	9:24:00	9:19:30	9:19:30	0:04:30	0:04:30	0.87	0.88	9.70	0.000000	0.000000
358	+	Lincoln & Delaware,2	9:24:10	9:24:10	9:20:15	9:20:15	0:03:55	0:03:55	0.92	0.93	16.58	0.000000	0.000000
359	+	PA&Z	9:24:31	9:25:18	9:21:00	9:21:00	0:03:31	0:04:18	1.00	0.99	10.23	-88.220559	40.004428
360	+	Virginia & College Ct.,1	9:26:32	9:26:32	9:21:28	9:21:28	0:04:04	0:04:04	1.08	1.09	25.89	0.000000	0.000000
361	+	Virginia & College Ct.,2	9:26:35	9:26:44	9:21:56	9:21:56	0:03:39	0:03:48	1.12	1.11	22.37	-88.222806	40.006401
362	+	Perin & Newland,2	9:28:00	9:28:15	9:22:25	9:22:25	0:05:35	0:05:50	1.20	1.19	17.48	-88.222830	40.100080
363	+	Perin & Dorner,2	9:28:30	9:28:30	9:22:54	9:22:54	0:05:36	0:05:36	1.25	1.25	15.22	0.000000	0.000000
364	+	Plant Sciences Lab,2	9:28:44	9:28:44	9:23:32	9:23:32	0:05:12	0:05:12	1.33	1.34	22.21	0.000000	0.000000
365	+	Gregory & Dorner,2	9:27:09	9:27:22	9:24:10	9:24:10	0:02:59	0:03:12	1.45	1.48	20.23	-88.221961	40.104183
366	+	Crossin & Gregory,1	9:27:29	9:28:03	9:24:48	9:24:48	0:02:51	0:03:15	1.55	1.59	21.88	-88.222818	40.104288
367	+	Crossin & Newland,2	9:28:28	9:28:46	9:25:26	9:25:26	0:03:02	0:03:20	1.68	1.69	15.45	-88.222821	40.105046
368	+	Crossin & Gregory,2	9:28:59	9:28:18	9:26:01	9:26:01	0:02:58	0:03:12	1.74	1.76	18.10	-88.222855	40.105883
369	+	Newland,2	9:29:42	9:29:50	9:26:42	9:26:42	0:03:00	0:03:08	1.89	1.86	13.80	-88.222825	40.108271
370	+	Crossin & Matthews,1	9:31:12	9:31:26	9:27:20	9:27:20	0:03:52	0:04:06	2.07	2.09	18.82	-88.225523	40.110588
371	+	Bus Union Engineering St	9:31:44	9:32:05	9:28:00	9:28:00	0:03:44	0:04:05	2.18	2.19	20.88	-88.227571	40.110428
372	+	Green & Wright,1	9:32:50	9:32:50	9:28:28	9:28:28	0:04:22	0:04:22	2.27	2.30	8.90	0.000000	0.000000
373	+		9:32:54	9:33:22								-88.228821	40.111858

> The daily report “Depot pull in/out” signal.

- > Vehicle or vehicle type
- > Stops

All departures are grouped in predefined grids like “much too early,” “too early,” “on time,” “too late,” and “much too late”. This report helps agency personnel to get acquainted with the simultaneous analysis of one or multiple operating days since the departures are displayed for all stops and arranged by schedule adherence.

With the daily report “Radio quality,” it is possible to locate areas with poor coverage so questionable spots can be located on a map via standardized GIS export (Geographic Information System). These areas can then be substantiated for suppliers or transit districts to help improve service.

A picture says more than a thousand numbers.

In general, exporting the collected data into a GIS display is perfect for management reports and visual display of data such as:

- > Vehicle speeds and problematic areas
- > Passenger load compared to schedule adherence

- > Impact of traffic sign control
- > Radio quality as well as satellite reception quality (GPS coordinates)

Identifying the position of all vehicles (cyclic events) e.g. every five seconds, guarantees reliable positioning and localization of the vehicles. These short transmission intervals also allow for a correct and clear display of the positions on a map.

Evaluation by means of frequency distribution.

Using asymmetric quantiles can eliminate extreme values from the evaluation that would lead to incorrect statistics both in the early and late



> Geographical Information System.

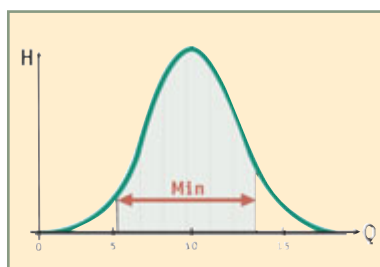
range. That way only the most frequent and the most representative values are evaluated. **MOBILEstatistics** offers informative evaluations for:

- > Schedule adherences and shifts
- > Running times, transportation times, theoretical running times, and speeds
- > Running times with traffic signal control
- > Waiting times and layover times

Another benefit of the new features in **MOBILEstatistics** is the grid display of the results distributed throughout the operating day. This may be used to analyze the traffic situation during peak hours. For instance, if it becomes apparent that the planned targeted running time is too tight for this period, this will be shown in the display and a more realistic targeted running time can be assigned to the respective route.

Reporting with **MOBILEreports**.

With the complete revision of the database interface in **MOBILEreports** it is possible to easily access statistical data and use it for reports with distinctive graphics in the customer's individual layout. The exhausting manual linking of database views is no longer necessary since the functions collected in a library now provide immediate information.



> The **INIT** quantiles improve the results.

These reports can be published in a web-based application making them available to all authorized employees throughout the company. The report generation can be set up so that it is triggered automatically and event driven, (e.g. if a fixed threshold of delays is exceeded) and can be emailed to the persons in charge.

A new highlight of **MOBILEreports** is the "Dashboard." A dashboard offers enough room to arrange various quality indicators like completed trips, passenger load, revenues and dead run times in order to get a clear and visual overview.

Prospects for future developments.

MOBILEstatistics is in continuous development. In the near future, it will be possible to consolidate and group various evaluation modes directly in **MOBILEstatistics** without having specific data base knowledge. For instance, passenger counts can be evaluated along with schedule deviations.

An additional feature that will be available is to compute distribution and raster gathered not only by the operational day but also by other criteria like routes, stops, weekdays etc. Thus varied information like passenger load, running time, or schedule adherence can be displayed in a matrix.

Extended periods are automatically checked with the trend analysis to detect and report information on discrepancies caused by unannounced road works.

Moreover, it is checked whether technologies like OLAP, Data Warehouse, Cubes, and Data Mining might be used for system enhancements. The goal is to achieve higher performance, flexibility, and data availability.

The future development of **MOBILEstatistics** is greatly enhanced by our customers' feedback and operational experience. With the initiation of the bi-annual Working Group meetings, designed to enhance customer relations and improve product functionality, the opportunities for advanced ITS technology and productive change are ongoing.

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Flexible Solutions Give INIT Customers the Advantage.

INIT customer orders high for equipment migration.

Urbana, Illinois.

In 2002, INIT delivered a complete ITS solution for 105 of Champaign's fixed route buses and 11 paratransit vehicles. The technology included a CAD/AVL system, mobile data terminals with on-board computers, automatic passenger counting, planning and statistics software, along with numerous interfaces to third party systems. The initial project was one of a kind due to it being the first installation in North America of INIT's scheduling, block building and run cutting software **MOBILE-PLAN**, and the personnel dispatch software **PERDIS**.

Today, Champaign Urbana Mass Transit District (CUMTD) has chosen to upgrade their fleet with new on-board computers (**COPILOTpc**) from INIT and INIT's latest generation of mobile data terminals (**TOUCHmon**).

The **COPILOTpc** with Windows XP embedded will provide CUMTD all conventional ITS functions within a compact, single-board layout. It provides vehicle health monitoring, organizes voice and radio data traffic, calculates vehicle location and automatically activates peripheral devices such as traffic signal priority (TSP), automatic passenger counting (APC) systems and passenger information signs and displays.

The mobile data terminal, **TOUCHmon**, gives CUMTD drivers an easy-to-view 8.4" TFT color touchscreen with graphical turn-by-turn navigation and audible announcements.

The new equipment migration has already begun and will benefit CUMTD by providing more efficient fleet management with increased accuracy of real-time passenger information which will greatly enhance their service to the cities of Champaign and Urbana. And because of INIT's flexible



> In 2009, CUMTD provided nearly 10,000 rides per day to residents and students.

migration options, the system will operate all of the legacy equipment and all of the new equipment simultaneously.

Vancouver, WA.

In 2004, INIT implemented a fleet management system with statistics and planning software and an automatic passenger counting system for 119 of Clark County Transportation's (C-Tran) fixed route fleet. As with the Champaign project, C-Tran opted for system hardware and software upgrades as well as new technology installations. Currently 58 paratransit vehicles are being retrofitted with new on-board computers with integrated touch screens, **COPILOTtouch**, while 120 of C-Tran's fixed-route fleet are getting the high-end vehicle amplifier, **PAmobil**, for next stop announcements and LED passenger information displays, **PIDmobil**, for on-board visual stop information.

With the increase in passenger boardings in 2009 to over 6.5 million, C-TRAN opted to implement these needed equipment upgrades to help them increase safety and convenience for riders while lowering operating costs and streamlining service for their customers.

Seamless Migration.

System upgrades or migrations for aging ITS projects can be a hard to find solution with other vendors; however INIT works together with their customers for a seamless and trouble-free migration driving public transit forward and keeping them ahead of the times.



> C-TRAN operates 12 electric-hybrid buses which use over 30% less fuel and further reduce their carbon footprint.

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INIT continues to grow in North America.
 Welcoming new employees to the INIT family.



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 (Seattle Office)



Amy Feldkamp
 Project
 Accountant/
 Financial Analyst



Daniel Mason
 Project Manager



Eddie Murphy
 Warehouse Clerk



Joe Ormsby
 APC Field Service
 Technician



Chris Neidig
 Project
 Administrator



Patrick Neumann
 Project Engineer



David Rowe
 Project Manager



Danielle White
 Proposal
 Coordinator



Rebecca Wolfmaier
 Business
 Development Manager



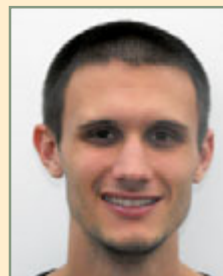
Chris Brito
 Technical Intern



Brittney Brown
 Administrative
 Assistant Intern



Steven Gillespie
 Project Manager



Jordan Medlin
 APC Intern



Curtis Wright
 Technical Intern

Join us at these upcoming events:

- May 15 — 19, 2010 "CUTA Annual Conference" in Ottawa, ON
- June 6 — 9, 2010 "APTA Rail Conference" in Vancouver, BC

Events

NEW:

Watch INIT, Innovations in Transportation video on youtube!



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