initiativ

Company newsletter of init AG, Karlsruhe for customers, business partners, investors, employees and friends

INIT takes a bite of the Big Apple.

Contract to equip NYC Transit Paratransit signed.

INIT signed a contract with the Metropolitan Transportation Authority of New York to outfit Access-a-Ride vehicles operated by MTA New York City Transit's Department of Buses Paratransit Division with Intelligent Transportation Technology.

INIT received the $16+ million dollar contract because INIT met the submission criteria and has over 20 years experience in Automatic Vehicle Location and Monitoring (AVLM). The AVLM installation is projected to take 30 months.

The AVLM system allows more efficient real-time control and optimisation of the paratransit service using the Global Positioning Satellite System (GPS) and a wireless data communication network.

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Spring 2006

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Dear transportation professionals,

The kick-off for the Football World Championship recently took place! Millions of football fans around the world were eagerly awaiting this moment. At INIT we have been infected by the "football fever" since our World Cup themed User Group Meeting in March. We chose the theme not only due to the fact that we discussed some authorities' preparations for the World Cup but also because of the international group of participants. 135 attendees from nine countries made this year's conference the most international INIT User Group Meeting ever.

> **Dr. Jürgen Greschner**, Chief Sales Officer

Nothing is more important for INIT than to build long-term and positive relationships with our customers. To stick to the football theme: Together with our customers, we want to build strong teams - teams that can deal successfully with highly complex projects and that are winners also in the long run.

In this INITiativ we are reporting about some new INIT projects from around the world and about substantial change orders from our customers in Oslo and Stockholm. Altogether places where INIT winning teams are established.

Enjoy watching exciting World Cup games as well as reading our INITiativ!

Dr. Jürgen Greschner

INIT will equip the Paratransit fleet of NYC.

Access-a-ride vehicles with intelligent transportation technology.

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> **Manhattan, one of the tallest and busiest cities** in the world can be a big challenge for ITS technology. INIT has developed an ingenious location system to solve this problem.

The Paratransit Division provides door-to-door transportation for people who can't ride accessible busses or subways, and has an average weekday ridership of 14,732 trips (All Boardings). Initially, 1,329 Access-a-Ride vehicles will be equipped with COPILOTpc, the latest generation of on-board computers, using Windows XP embedded® technology. Mobile Data Terminals provide drivers with an easy to use graphical colour touch screen. Accurate vehicle positioning in urban canyons, much like lower Manhattan, is a challenge due to limited visibility of GPS satellites and signal reflections of tall buildings. To solve this problem INIT combines GPS with a gyroscope sensor. In addition, a highly sophisticated algorithm matches the computed position to the street network. This allows for accurate positioning even when GPS signals are obstructed.

The vehicle's location will be transmitted over a Wireless Data Communication network, updating at regular intervals. That information in turn is translated into an explicit street level map displayed on Command Centre terminals. The on-board MDT will display a map showing the route the driver will follow based on the trip manifest. Visual and audible turn-by-turn navigation support is given to the driver. The MDT will also be used for two-way text messaging and display updates between the driver and the Paratransit Command Centre. In addition, the real time information provided on the location of the entire fleet by the AVLM system will provide dispatchers with the ability to re-route vehicles in response to customer, driver and vehicle emergencies.

Technical advantages.

The technical advantages are convincing: INIT is offering a state-of-the-art mobile data terminal with a touch screen which uses Windows XP®. The vehicle logic unit allows for add-ons and fleet expansion and is enhanced by a state-of-the-art dead reckoning system that has been tried and proven in Manhattan's "urban canyons" and solves the issue of losing signals due to tall buildings.

This system will also record mileage, fares and passenger pick-up and drop off times. The MDT will provide drivers with multi-functional mapping capabilities that will assist in reducing pick-up point confusion and missed appointments due to no-shows. INIT believes that the AVLM installation will help to improve quality of service and customer satisfaction.

> **Contact:**
Norbert Trembacz
Tel. +49.721.6100.114
ntrembacz@init-ka.de

The story of success continues...

Copenhagen — the third Scandinavian capital to rely on INIT telematics systems.

How is it possible to make public transportation more attractive and efficient with ITS technology? In Scandinavia, word has got around that INIT offers innovative technology and intelligent solutions. Following Oslo and Stockholm now also Copenhagen relies on INIT's ITS technology.

DSB S-tog, a subsidiary of DSB (Danish State Railway), placed an order with INIT for the delivery of an integrated communication management system with the objective of optimising the DSB S-tog communication processes. The contract includes the vehicles' equipment with on-board computers and additional hardware components as well as the installation of central software.

DSB S-tog operates 12 railway lines with a total of 81 stations in the Greater Copenhagen area. With the present project, all 135 trains of the latest generation are to be equipped with an integrated wireless communication system that connects various systems on board the vehicle with central applications.

On-board computer controls intelligent communication system.

INIT's latest on-board computer **COPILOTpc** is the core of the system. It is the central information broker that collects data of preceding systems like the train's control computer, video monitoring systems or the passenger counting devices. The **COPILOTpc** also computes current positioning information, which is then transferred to the control centre through various communication methods. Depending on availability, urgency and data volume the system automatically selects the most convenient mode of transmission either WLAN or GPRS (in the future, also TETRA and UMTS). The collected data is then available for further processing in already existing DSB applications.

> **INIT is sought-after** in Scandinavia.

Intelligent Messaging System.

The **COPILOTpc** software logic determines the data to be transmitted, the time and the transmission mode. It is up to the software logic to decide on priority by data contents and assign appropriate communication channels — depending on availability and capacity. The intelligent messaging system **MOBILEims** then makes sure that the data is transferred correctly. The complete configuration can be conveniently generated and easily adapted in the central software.

MOBILEic, INIT's version of management and download statistics software, organises the complete data flow from the control centre to the vehicles. Software and firmware updates as well as configuration data are distributed automatically. **MOBILEic** generates the necessary tasks, which are then carried out by the transport application **MOBILEims** via the appropriate communication channels.

For this project INIT implements an overall solution consisting of communication management, data transfer (also third party data), and positioning based on the modular design of the integrated telematics system **MOBILE.** Therefore few customisations and prompt realisation are guaranteed.

> **Contact:**
Norbert Trembacz
Tel. +49.721.6100.114
ntrembacz@init-ka.de

International user group gathered for a "World Cup themed" conference in Karlsruhe.

Customers from nine countries reported on improved public transportation.

> **Specialists for planning, fleet management** as well as vehicle and fare management meet in Karlsruhe, Germany from March 14 to 16, 2006.

135 participants from nine countries met in Karlsruhe March 14 through 16, 2006 for INIT's fourteenth user group meeting to compare notes about the latest developments in ITS and electronic fare collection systems. Not only the transport authorities professionals were attending, but also numerous INIT associates from product development and sales that added comprehensive competence to a lively discussion.

What has a user group meeting in common with a soccer game?

"A time to make friends" — the ubiquitous theme of the World Cup also provided the guideline for this superlative User Group Meeting.

> **Exciting football matches** were outstanding part of the welcome reception.

Never before there were so many attendants from so many countries and never before there were so many practical field reports. Besides the international discussions, the World Cup theme was also reflected in the social activities: goal shooting, numerous themed surprises and specifically two foosball tables caused thrilling encounters and much fun beside the presentations and discussions.

How to use optimisation potential?

INIT informed in specialised sessions about interesting new developments, for example the optimisation potential offered by the planning system **MOBILE-PLAN** that provides vital advantage for duty building with overlapping operational days. The easy way of collecting planning data and their quality improvement has been considered by many as an approach to increase efficiency. This also applies to data management and data administration in **MOBILE-PLAN** by the tremendous reduction of any interface issues.

Chief Sales Officer Dr. Jürgen Greschner reported on INIT's successful busisness internationalisation strategy over the last years. He could show that valuable product enhancements made in one part of the world can be easily transfered to other cities and countries. An international User Group ist clearly a benefit to everbody involved.

E-ticketing caused a sensation as well. In addition to post billing, INIT presented the latest generation of ticket printers and ticket terminals.

What are the advantages of an intensive dialogue?

The decision to establish international workshops for various subjects was a major result of the meeting. This will allow the specialists of the transport authorities to share their experience more intensely with the INIT specialists and among themselves. Their goal is to increase the transport authorities' productivity by using INIT products best possible.

What are the experiences in day-to-day operations?

A substantial part of the user group meeting were the many customers who reported on their interesting projects, troubleshooting and experiences in daily operation. Once again, thank you all.

Wolfgang Eilers of KVG Stade and Heiko Bratschik of BT Berlin described how to save on timetable and duty planning in urban and regional public transport with the new tools of **MOBILE-PLAN.** Markus Würtz of RVG Gotha explained the advantages of an integrated data supply and Karl Gnadt of MTD Champaign-Urbana added American experience to the planning subject.

Ralf Messerschmidt of VBK Karlsruhe explained the renaming of Computer Aided Dispatch/Automatic Vehicle Location system in ITCS (Intermodal

Transport Control System). Kurt Stern of Stadtwerke (public services) Munich described their getting ready for the expected stampede of international visitors for the Soccer World Cup with INIT's new ITCS.

Christian Kindinger explained how WSW Wuppertal could increase the efficiency of their work routine with the introduction of computer aided reporting and Wilhelm Kellner of RAB Ulm presented the results of the research project RUDY concerning "Flexible Public Transport Modes".

Gunnar Alenius of SL Stockholm informed the experts of the other transport authorities on his experience with the integration of the mobile radio standard TETRA into the Stockholm ITCS. According to his words the installation of the onboard computer **COPILOTpc** as in-vehicle IT platform was a prerequisite.

> **Ralf Messerschmidt** working with the Karlsruhe transport authority gave a ride to the social event in person.

Project manager Mel Johns provided an insight into the set-up of a bus rapid transit system (BRT) in the York region (Greater Toronto) from drawing table to commissioning. One of the fastest growing economic areas in Canada ensured their mobility with BRT.

David Wright of LCC Leicester in Great Britain and project manager of the "Star Track" system described how to expand a control and passenger information system from an initially small to a successful regional and intercity system. Magne Bentzen of Trafikanten Oslo provided information on the introduction of the new ITS system in a record time of seven months only. Bentzen's conclusion: "We have realised this milestone project within schedule, within budget and without critical errors."

> **The experts dealt with technical questions and troubleshooting** in the interactive planning workshop.

Morell Predoehl of VWG Oldenburg informed about the electronic fare management system called "BOB" (meaning conveniently cashless), which has been established by the transport association Bremen-Niedersachsen (VBN) together with INIT. Passengers buy their electronic tickets with a smart card at the touch screen terminals onboard the vehicle. The ticket is then billed at the most favorable tariff at the end of the month. This system makes public transport not just more economic, but also more attractive.

> **Contact:**
Andrea Mohr-Braun
Tel. +49.721.6100.113
amohr-braun@init-ka.de

The North-American

INIT

User Group Meeting 2006

will take place

Sept. 13 - 15, 2006

in Toronto, Canada

TORONTO iNiT Sept. 13-15 2006

Please Mark Your Calendar!

Informative

First project in the Netherlands.

Planning, operation, optimising: The Hague counts on INIT-Technology to improve public transport.

> **INITs integrated telematic system** is to enhance public transport service in The Hague.

In March 2006 HTM, one of the biggest transport authorities in the Netherlands, decided to introduce an INIT ITS system. The Light Rail Vehicle (LRV) network in The Hague will be equipped with an Intermodal Transport Control System **MOBILE-ITCS** (formerly Computer Aided Dispatch / Automatic Vehicle Location system - CAD/AVL). Also, approximately 50 two-directional LRVs will be equipped with the vehicle IT-platform **COPILOTpc** and a touch screen mobile data terminal.

In future, the transport authority of The Hague controls and dispatches their fleet with the new ITCS. Moreover, the ITCS provides real-time data to the existing passenger information system via standard VDV interface (VDV = German transport association). The system under contract will be the basis for upgrading the complete HTM fleet (400 vehicles approximately).

The system ordered also includes the planning and data management system **MOBILE-PLAN** as well as the personnel dispatch software **PERDIS**. Optimised scheduling, block and duty building will be the result of this coordinated planning concept.

Operational data will be analysed for the HTM management with **MOBILEstatistics** and processed with the reporting system **MOBILEreports**. This ensures a solid tool base to analyse and optimise all operations.

Data communication between vehicle and control centre is done via GPRS. TETRA, the digital radio system, is used for audio communication between driver and dispatcher.

With the INIT system, HTM intends to optimise operation, improve vehicle and personnel dispatch, and lower administrative costs in the very near future. The Hague is one more European city with the seat of government following the capitals Stockholm, Lisbon, London, Oslo and Copenhagen to rely on INIT ITS-systems for public transportation.

> **Contact:**
Jens Mullak
Mobile +44.7908.730.666
jmullak@init-ka.de

COPILOTpc marked a complete success in Stockholm.

Stockholm relies on proven vehicle equipment.

> **More than 2,000 buses** run with the COPILOTpc.

The successful customer relation between the transport authority of the Swedish capital Stockholm and INIT is going to be continued. Storstockholms Lokaltrafik AB (SL), an enthusiastic INIT customer since 1990 placed an order to equip another 116 buses.

The contract, which has been signed in the beginning of March, is the fifteenth follow-up order since the start of the BusPC project in 2002. The scope of supplies includes the INIT on-board computer **COPILOTpc**, the mobile data terminal **TOUCHit**, GPS positioning as well as the dynamic next stop display **PIDmobil**. This well-proven configuration is already installed in more than 2,000 buses.

> **Contact:**
Olaf Henrixon
Mobile +46.709.772.661
ohenrixon@init-ka.de

Oslo expands INIT system.

Follow-up order to equip several hundreds of vehicles.

Since 2004 Trafikanten Oslo, the transportation authority of Greater Oslo, is using INIT technology to set up one of Europe's state-of-the-art Intelligent Transportation Systems. In addition to the control centre, also bus stops, traffic signals and approx. 500 vehicles have been equipped so far.

Follow-up order shows superb customer satisfaction.

Now, INIT received the follow-up order to equip another 280 vehicles and to integrate another seven depots into the system.

The on-board computer **COPILOTpc**, based on the operating system Windows XP embedded®, is the core of the vehicle-IT system supplied to Trafikanten Oslo. In Oslo the entire communication between control centre and vehicles is done via public mobile radio standard GPRS (General Packet Radio Service). This saves a lot of costs. The current decline in mobile radio tariffs confirms the decision for this communication technology.

ITS system implemented in record time.

In 2004 INIT has implemented this ITS system within the record time of only seven months. This included the implementation of a new Computer Aided Dispatch / Automatic Vehicle Location system (now called Intermodal Transport Control system - **MOBILE-ITCS**) as well as the installation of wayside Passenger Information Displays at stops. Traffic signal priority is an important part of this project to enhance the quality of service. Green light requests via data radio ensure that the vehicles of Trafikanten Oslo have the right of way at more than 100 crossings.

> **Faster, more reliable and more attractive.** That's what public transport is like in Oslo after one and a half years of operation.

Also, the new ITS system considerably improved passenger information. On-board announcements and LED displays inform passengers conveniently about the next stop. All the important downtown stops have been equipped with wayside passenger information displays, hundred **PIDstation** of INIT were part of it. Now passengers always know the exact arrival time of the next bus or tram. This information is not only available at bus stops, but also at home or in the office through a system-integrated Internet interface. Moreover passengers can receive the requested information about the next departures even via mobile phone.

> **Hundred stops are already** equipped with the wayside display PIDstation.

Improved quality increased demand.

Increased customer satisfaction, new information and services offered, higher efficiency in planning and operation, more satisfied passengers — this is the result in Oslo after one and a half years of operation.

> **Contact:**
Olaf Henrixon
Mobile +46.709.772.661
ohenrixon@init-ka.de

INIT was awarded 35 Million Dollar (CAD) contract.

Keep Greater Vancouver moving with state-of-the-art ITS technology.

INIT was awarded its biggest contract in company history in British Columbia, Canada, with an amount exceeding 35 mio. Canadian Dollars (approx. 25 mio. Euro) by the transportation authority in Vancouver, TransLink. INIT was chosen to supply the Intelligent Transportation System (ITS) after an international call for tenders. Translink's operating company Coast Mountain Bus Company (CMBC) will operate the contracted Bus Communication System (BCS).

INIT, the specialist in ITS and electronic fare collection systems will equip 1,296 vehicles, initially, with the COPILOTpc, INIT's latest generation of Windows XP embedded® based on-board computers. Global Positioning Satellite System (GPS) and a state-of-the-art fully digital private mobile voice and data radio system that will allow for more efficient real-time control and optimisation of service. The installation is planned to be completed by the end of 2007.

Greater Vancouver with its 21 municipalities and covering more than 1,800 square kilometres is a fast growing area and the largest transportation service region in Canada. With more than 200 million system boardings, TransLink is also one of the most important key accounts in Northern America. INIT's system will support TransLink in their mission to "Keep Greater Vancouver Moving". Public Transport is also key when Vancouver hosts the Winter Olympic Games in 2010.

> **The preparation for the winter olympic games** in 2010 is one of Vancouver's goals.

For INIT, this is yet another major step in the extension of its North American business.

> Contact:
Norbert Trembacz
Tel. +49.721.6100.114
ntrembacz@init-ka.de

Interesting

Events

June 20 — 22, 2006	**"5th UITP Asia-Pacific Mobility & City Transport Exhibition"** in Seoul, Korea
June 29 — 30, 2006	**"ATCO Summer Conference"** in Nottingham, United Kingdom
September 13 — 15, 2006	**"INIT North American User Group Meeting"** in Toronto, Canada
September 19 — 22, 2006	**"Innotrans"** in Berlin, Germany
October 8 — 11, 2006	**"APTA Annual Meeting"** in San Jose, California/USA
November 7 — 9, 2006	**"Transport Innovations 2006"** in Birmingham, United Kingdom

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Editors:
Andrea Mohr (Editor-in-chief),
Alexander Baudendistel
Anke Baldauf
Gisela Krieger

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Editorial Office:
init AG, Kaeppelestrasse 6
76131 Karlsruhe - Germany
Tel. +49.721.6100.113
Fax +49.721.6100.399
www.init-ka.de / www.initag.de
redaktion@initag.de