



INIT opens up a new market. First US-Ticketing System for Sacramento.

Innovative

- 2 > A new generation:
from MOBILEartist to MOBILEvario.

Informative

- 3 > Denver opts again for INIT solution.
- 4/5 > Syntus trusts INIT for their new concessionary areas in the Netherlands.

International

- 6/7 > First US-Ticketing System for Sacramento.

Interesting

- 8 > Automatic passenger counting in Neuchâtel.
- 8 > Events

Imprint

3/2011

Index

Recently, INIT received an order from the Sacramento Area Council of Governments (SACOG) for the area-wide integration of a comprehensive smart card-based electronic fare collection solution on over 500 vehicles and at more than 80 stations. All the hard- and software for the system called "Connect Card" is being provided by INIT. This includes the passenger terminals **PROXmobil** which

will automatically calculate the price of fare or validate time cards. A comfortable solution, which makes getting the right fare much easier and contributes to a faster and smoother service flow. Since the drivers do not have to sell tickets or wait for correct cash fare anymore boarding and stop times are reduced significantly.

Continued on page 4-5

Dear Transportation Professional,

When you do a good job, the word gets around. This is true for INIT, where on the US west coast several transportation companies have chosen our ITS solution. This is the same place where we have recently won our first North American E-Ticketing project.

For six operators in the greater Sacramento area, we will implement a state-of-the-art region-wide E-Ticketing system. The distinguishing marks of our solution

include the multi-client capable back-office system, the utilization of credit and debit cards payment systems and passenger terminals that are designed to meet the needs of disabled passengers. To fulfil these requirements we will customize a brand new passenger terminal that includes Braille markings and audible instructions for the visually and hearing impaired.

Like Sacramento, the city of Denver also strives to meet the needs of disabled passengers. In fact, during the entire planning phase of their ITS project, representatives from associations for the blind were involved in making fundamental decisions on the design of the announcement system which will be implemented as a component of Denver's new INIT ITS system. Denver illustrates yet another good example of how INIT works with our customers to provide customized solutions.



> Dipl.-Ing. (BA) Andreas Mörder
Vice President, Mobile Telematic and
Fare Collection Systems


Andreas Mörder

The Next Generation of E-Ticketing Management: From MOBILEartist to MOBILEvario.

Smooth migration leads to comfortable E-Ticketing management at reasonable costs.

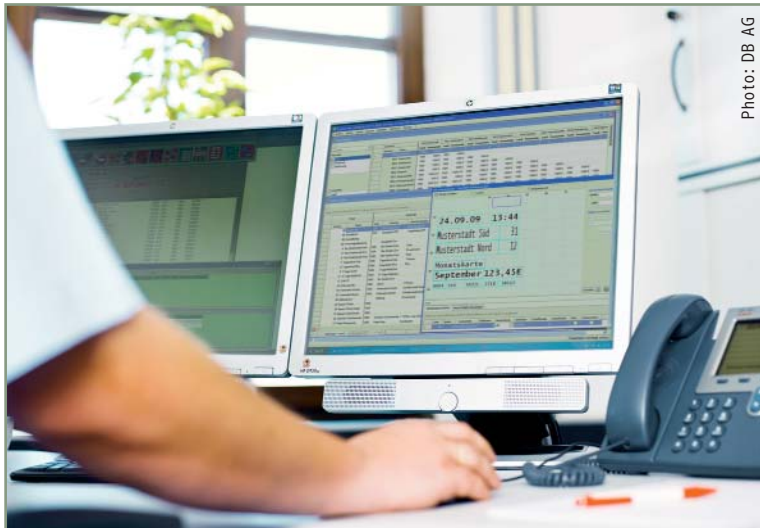


Photo: DB AG

> **MOBILEvario** provides a full clearing and customer relation management system.

For more than 15 years, INIT has provided premium solutions regarding electronic fare management. An efficient back-office fare management system has always been part of the comprehensive product range from INIT and is one of the most beneficial elements of a modern intelligent transportation system.

In the past few years, technological progress offered many new opportunities for ticketing, and consequently initiated new requests regarding back-office systems. To meet current and future requirements, INIT decided to develop the next generation of back office systems. **MOBILEvario** includes all the main features of its predecessor **MOBILEartist**, but also many new features and functions.

MOBILEvario's multi-client capability and its full clearing and customer relation management system make it one of the most modern systems on the market today, supporting all aspects of E-Ticketing. INIT presents the best solution for cross-linked transportation companies or public transport associations because

MOBILEvario provides multi-client solutions and combines different fare structures in just one single system. In this way, every client manages its own specific data with privacy from other clients who are not able to access this information. This feature demonstrates one of the great benefits of working with **MOBILEvario**. Also the IT infrastructure for all associated companies must be purchased just once, so the expenses are kept as low as possible.

The usability of **MOBILEvario** resembles common office software tools reflecting an easy to learn approach.

Successful in use.

A perfect example of **MOBILEvario's** capability is the system INIT implemented together with four Bavarian bus companies of the Deutsche Bahn. The common ticketing system includes more than 3,000 buses and has proven very successful for the transport companies.

Many other clients have made the change from **MOBILEartist** to

MOBILEvario with good results. The VGB Bremerhaven has implemented the back-office system **MOBILEvario** installing the combined on-board computer and ticketprinter **EVENDpc**, at the same time.

In Thuringia, the MBB Meiningen, the PNG Bad Salzungen and the KVG Eisenach are going to use a common **MOBILEvario** as a multi-client back-office system. At the same time, they upgraded their vehicle equipment to the **EVENDpc**.

INIT highly recommends that all clients change to **MOBILEvario** so they can benefit from the new range of functions and get more flexibility. For a smooth changeover process, INIT has developed a simple migration concept making it possible to deploy the existing vehicle equipment, or to use it in an balanced mode.

> **Contact:**
Armin Fettingner
Tel. +49.721.6100.117
afettingner@init-ka.de

Denver Opts Again for INIT Solution.

Integrated ITCS and radio system follows successful APC implementation.



> Denver aims for: better communication, better dispatch and better information.

INIT has been awarded a major contract by the Regional Transportation District (RTD) of Denver, USA to supply an integrated ITS solution and radio system. The turnkey solution comprises the Intermodal Transport Control System **MOBILE-ITCS**, a data and speech radio solution, on-board computers **COPILOTpc** and mobile data terminals **TOUCHmon** as well as passenger information displays **PIDmobil** and on-board announcement modules **PAmobil**. The contract calls for the setup of a fleet management and passenger information system comprising about 1,000 buses.

Better Service Through Improved Communication.

Along with the new technology on the buses, 170 light rail vehicles and more than 320 paratransit vehicles will be equipped with digital voice radios for increased communications and safety. In addition, an automatic location service will be realised for 150 support/security vehicles and approx. 370 support personnel,

providing them with GPS enabled portable radios. With the new radios, support personnel cannot only be easily located, but RTD dispatchers can also send emergency assistance much faster, as they will be able to precisely determine which supervisor is closest to an incident point.

Benefits for Dispatchers, Drivers and Passengers.

The installation of the new system will support RTD's daily operations by providing powerful tools to help track and monitor the location of vehicles within their multi-modal network. RTD drivers will benefit from the full-colour, graphic-capable mobile data terminals that will serve as a navigational and communications tool increasing schedule adherence and providing added security. On-board passenger information displays and audio announcements will greatly enhance services to RTD's customers with clearly audible next-stop announcements.

After a successful automated passenger counting system installation in 2005, INIT and RTD look forward to a continued and successful relationship.

About RTD

The Regional Transportation District operates and maintains a mass transportation system for 2.8 million people in the Denver area. RTD's District encompasses a 2,348 square mile area and includes all or parts of eight surrounding counties. RTD has nearly 100 million boardings annually.

> Contact:

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

Successful Collaboration to be Continued. Syntus trusts INIT for their new concessionary areas in the Netherlands.



> The Intermodal Transport Control System **MOBILE-ITCS** facilitates the integration of new service areas.

Dedicated to supplying state of the art ITS solutions and being a long term partner for its customers, INIT has once again demonstrated success by winning a notable follow up order from the Dutch public transport operator Syntus.

Perfect conditions.

When INIT and Syntus first worked together in 2007 to implement an integrated ITS system for Syntus' concessionaries in Achterhoek, as well as in the ZHO region (Zutphen, Hengelo, Oldenzaal), the contract was highlighted by the record breaking time it took to implement the planning software **MOBILE-PLAN**. For Syntus, this provided a smooth transition from its previous planning system averting possible hindrances to its fleet's operation. The project involved the implementation of the fleet management system **MOBILE-ITCS**, the on-board computer **COPILOTpc**, accompanied by the user interface **TOUCHit** as well as the back office analysis and reporting programs **MOBILEstatistics** and **MOBILEreports**.

The first-hand experience with INIT's supportive competence and advanced technology gave Syntus the confidence to commission INIT for this follow-up project.

New service areas.

The new order from Syntus focuses on expending the turnkey ITS system to new service areas. The investment, which arose from Syntus' accomplishment in gaining new concessions in the regions of Veluwe and Middle Overijssel, implicated a very short time frame (six months) for the system expansion to go live.

The 330 Syntus vehicles operating within Veluwe, Middle Overijssel and ZHO have been equipped with the Windows XP embedded based on-board computer **COPILOTpc**. For drivers, the mobile data terminal **TOUCHit**, which perfectly complements the **COPILOTpc**, provides an easy to operate touch screen user interface. With the excellent colour display, drivers will have the ability to access essential trip and vehicle information in one easy glance.

Real time information on transfers.

PIDvisio, INIT's on-board passenger information display, will automatically function under the **COPILOTpc**'s control. The state-of-the-art TFT display keeps passengers up to date with real time information of their journey details. For Syntus, this includes for the first time intermodal real-time transfer information as the **PIDvisio** will also present the NS Rail (Dutch railways) connections that can be reached at the approaching stops. The INIT system goes even one step further and imports possible changes of tracks as well.

Finally the **COPILOTpc** will provide Syntus with accurate real-time information. This allows dispatchers to track all vehicles via INIT's Intermodal Transport Control System **MOBILE-ITCS**. Hence, dispatchers are kept well informed of the fleet's performance. Moreover, **MOBILE-ITCS** provides dispatchers with the tools for reacting immediately to disturbances, ultimately allowing a



> With the integrated ITS system **MOBILE**, INIT supports Syntus in increasing their productivity.

more efficient and flexible operation. The link between the vehicles and the central software is established via UMTS for data and voice communications.

Based on the actual vehicle locations, **MOBILE-ITCS** calculates the real-time departures for all stops and spreads this information via all connected channels including wayside signs and the Internet. To improve service quality for Syntus' passengers, INIT facilitated data exchange between the Syntus ITCS and the systems of the local authorities which also provide transport service in the regions of

Veluwe and Middle Overijssel. Hence, passengers can expect reliable intermodal real-time passenger information as well as a better dovetailed service due to the transfer protection that is now possible. In addition, **MOBILE-ITCS** imports real-time information from the NS rail system and feeds the national passenger information platform 9292 with the Syntus departures.

Syntus has also opted for **MOBILE-PLAN**, the planning and data management system. **MOBILE-PLAN** assists Syntus with scheduling and block building. Additionally, the



> The future-oriented planning and data management system **MOBILE-PLAN** supports Syntus in increasing their productivity.

implementation of **MOBILEstatistics** gives Syntus the ability to conveniently carry out extensive evaluation as well as clearly present its operating data such as schedule adherence, passenger statistics, etc. Finally, Syntus' decision to utilise the personnel assignment software **PERDIS** will facilitate the streamlining of its rostering processes.

The turnkey solution from INIT provides Syntus a powerful platform to manage their operation efficiently and facilitate the envisioned gain of new concession areas within the Netherlands.

> **Contact:**

Jens Mullak
Tel. +44.870.890.4648
jmullak@init.co.uk

Stationary Passenger and Ticket Terminals Complement INIT's Product Suite.

Sacramento decides for an innovative solution for comfortable ticket sales and a smooth service flow.

Continued from page 1



> Mobile passenger terminals will automatically calculate the price of fare.

With the order from Sacramento INIT has realised a successful tender for a major electronic fare collection project in the USA for the first time.

The contract for a turnkey e-fare management system includes the implementation of stationary passenger terminals **PROXstation**, ticket terminals **TOUCHfare** retail sales terminals **EVENDpc** as well as the sophisticated back-office fare management system **MOBILEvario**.

The electronic balance and time cards will be based on the cost-efficient and safe card technology from MIFARE-DESfire. Using INIT's **PROXmobil** smart card reader passengers will tap their fare cards when boarding buses or at platforms before boarding trains.

PROXmobil will be customized for the American market to meet their specific requirements as the US government requires equal access for disabled passengers. This will be taken into consideration by INIT with the revision in the form of a large clear legible display and a clearly audible signal.

Presentation of the stationary terminals.

The train stations will be equipped with validators **PROXstation** and ticket terminals **TOUCHfare**. As the devices will be situated on the railway platform they will be built with a weather and vandalism-proof case. The **PROXstation**, which is similar to the proven mobile terminal **PROXmobil**, has a large and bright display which is also easy-to-

read in direct sunlight. In addition to the operation via the touch screen monitor terminals will feature buttons with Braille markings making the usability for the visually impaired easier. At the ticket terminal **TOUCHfare** the passengers are able to load credits or tickets fast and comfortably on their Connect Card. The terminal accepts credit and debit cards for payment. Operation is easily handled with a large well-lit touch display or with the use of Braille marked buttons. Besides the visual user guidance on the displays of the **PROXstation** and **TOUCHfare** terminals, a user guidance read out will be implemented.

Customer centres equipped with INIT's retail terminals **EVENDpc** and PC-based customer service workplaces complete the system. Passengers can buy or reload their smart cards at numerous sales locations in the region.

Convincing back-office system.

Besides the reliability of the front-end devices the INIT system especially distinguishes itself with



> Six operators integrate an area wide E-Ticketing system in the metropolitan region Sacramento.



Concept Design

> Stationary passenger and ticket terminals complete INIT's E-Ticketing portfolio in Sacramento.

the back-office system **MOBILEvario**. The multi-client capability of **MOBILEvario** will allow an efficient operation of all accounting and clearing processes. Since there are several transit operators working together in the metropolitan region of Sacramento common fare structures can be implemented once for all the clients. However company-specific data can only be updated from the individual operators and will not be accessible for the other clients.

The central back-office system not only provides the usual standard modules such as rate and account management but also handles a customer relationship management module and the integration of ticket sales via the internet and a call centre. The customer can buy SACOG e-fares or recharge the credit on the smart card on the internet site or at the call centre. The transactions will be registered from **MOBILEvario** in

an action list and transmitted via WLAN or the network to the passenger terminals in the vehicles and at the stops. As soon as the customer uses the smart card at the terminals the data will be transmitted to the card and the transaction completed.

Further development for more comfort.

The smart card terminals are built ready to accept contactless credit cards such as Mastercard®, Paypass™ and VISA® Paywave™ should SACOG implement this type of payment in the future. Hence, INIT demonstrates their ability to develop the devices according to the requirements of the international credit industry (EMVCo, PCI-DSS).

With the state-of-the-art e-fare system from INIT, SACOG and the six partner operators want to improve transfers between systems and

increase ridership. This is part of their mission to offer a comprehensive transport system for the six counties encompassing 22 cities and 2 million inhabitants in the Sacramento region.

> Contact:

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

Automatic Passenger Counting in Neuchâtel. First project with MATRIX 3D Sensors.

Recently the public transport company "Transports Publics du Littoral Neuchâtelois" – Neuchâtel, Switzerland, contracted INIT to build an independent automatic passenger counting system in 7 solo buses, 3 articulated buses, 12 articulated trolley buses, 10 trams and 4 cable car stations with 2 vehicles.

It is the first project for INIT and its partner IRIS GmbH deploying the new Matrix 3D Sensor. Additionally, it is the first time that INIT has won a project in Switzerland. Consequently, INIT founded a new branch office in the city of Schaffhausen to be closer to their new customer.

IRMA Matrix sensor works according to the innovative detection principle of the **IRMA** 3D sensor. The measuring principle is based on a matrix of 500 pixels (sensor array) with which the sensor gauges the distance to the object and detects it three-dimensionally. This is made possible by the Time-of-Flight (TOF) technique. Time-of-Flight works when the system sends out pulses of laser light in quick succession using the invisible IR range. These pulses 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 3D-image of the door



Photo: TN, Neuchâtel

> **Innovative technology and reduced installation efforts** made the decision for INIT easy.

space, so that individual persons are detected even in tightly packed crowds. With TOF, the presence and movement of persons within the visual field can be determined with very high accuracy.

IRMA Matrix is characterised by its direct connection to Ethernet or CAN with no further system component. In addition, you need only one **IRMA** Matrix sensor per standard door. This new innovative technology together with the significant reduction of installation efforts was finally the crucial argument for the Transports Publics du Littoral Neuchâtelois choosing INIT.

The **IRMA** Matrix sensors, together with INIT's on-board computer **COPILOTpc**, the GPS receiver **GPSgo2** and the radio modem **GSMdata** form the vehicle equipment. Due to the fact that no driver input shall be

required, the system works completely automatically. With a later implementation of INIT's driver interface **TOUCHit** a full ITCS integration could be realised.

> **Contact:**
Armin Fettingner
Tel. +49.721.6100.117
afettingner@init-ka.de

> **Contact for APC:**
Georg König
Tel. +49.721.6100.292
gkoenig@init-ka.de

19 – 20 January 2012

15 – 17 February 2012

27 – 30 March 2012

25 – 26 April 2012

"Fachtagung Fahrgastinformations- und Kommunikationssysteme" in Frankfurt, Germany

"IT-TRANS - IT Solutions for Public Transport" in Karlsruhe, Germany

"Intertraffic" in Amsterdam, The Netherlands

"INIT International User Group Meeting" in Dresden, Germany

Published by:

init innovation in traffic systems AG

Editors:

Andrea Mohr-Braun (Editor-in-chief),
Alexander Baudendistel, Ann Derby, Andrea
Engel, Petra Faltermeier, Jürgen Glöggler,
Gisela Krieger, Simone Kulke, Bettina
Lisbach, Martin Thyssen

Design:

Ücker & Partner Werbeagentur GmbH

Print layout:

Alexander Baudendistel

Print:

E&B engelhardt und bauer
Druck und Verlag GmbH

Editorial Office:

init AG, Kaeppelestrasse 4-6
76131 Karlsruhe - Germany
Tel. +49.721.6100.113
Fax +49.721.6100.399
www.init-ka.de / www.initag.de
redaktion@initag.de