

infrastructure Magazine for Public Transport and Safety

manager

Content

On The Right Track in Düsseldorf

Rheinbahn's new
Depot Management System 1

Mobile Information with PSItraffic

2

PSItraffic is Now Being Used in Malaysia

PSI Awarded Contract by
Malaysian Railway 4

One Hundred Percent Control of the Depot

Better Quality and Reliability
at Essen Transport AG 5

PSI Solutions for Infrastructure Management

We Protect Critical
Infrastructure – for Sure! 6

Changes in Management

7

Sales Team

New Member 7

Depot Management at the Centre of Focus

User Day in Stuttgart 7

Innovation Award for the FLEXIBUS

PSI Transcom Sponsors
Award Ceremony 7



Tracks in Lierenfeld

Picture: Rheinbahn AG

On The Right Track In Düsseldorf

Rheinbahn's new Depot Management System

Rheinbahn in Düsseldorf has made use of recent internal restructuring to renew its signalling and control system that has been in use for many years.

The Düsseldorfer Rheinbahn AG is the fifth largest local transport company in Germany, serving over one million people across an area of 570 km². In addition to the cities of Düsseldorf and Meerbusch, this area also includes the Mettmann district. The company operates rail routes to Duisburg, Krefeld, Neuss and Ratingen. Bus routes run to Duisburg, Essen, Kaarst, Krefeld, Mülheim, Neuss, Solingen and Wuppertal. In 2010, Rheinbahn carried 214.9 million passengers and employed 2 702 people.

Renovation Requires Computer System Enhancement

Until now, Rheinbahn has always used its 22-year-old signalling and control

system but, after extensive renovations and the ever increasing demand on IT systems, this needed to be replaced with a new depot management system (DMS).

Project Team Draws Up Performance Specifications

“We took the opportunity presented to us and issued a public tender for equipping all depots with a modern management system and consolidating and optimizing their processes.” says Thomas Klein, project manager for DMS and employee of the electronic systems department. For the public tender, a project team, made up of members from all

► Page 3

Newsticker

+++PSI wins new project in Thailand – control system for the electricity distribution network of Bangkok+++PSI receives new orders from the Vallourec-Group – PSImetals for the Youngstown finishing mill and the new forge at Changzhou+++PSI to deliver new network control system for the city of Muscat – Muscat Electricity Distribution Company decides in favour of PSIcontrol+++PSI awarded traction power contract from the Netherlands – New central PSI control system replaces four existing control centres+++PSI Incontrol awarded contract for Kuala Lumpur Monorail – Complete communication package for Fleet Expansion Project+++PSI increases new orders and earnings in first quarter+++

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Editorial



Dear Readers,

This year, the PSI user meeting once again offered customers and interested parties a forum to discuss current problems and solutions regarding depot management. As part of this event, where numerous users of PSI solutions reported on their experience of the system's implementation and use, there was a lively exchange of ideas on how working processes can be improved and how savings can be made through the use of this system.

As a consequence of the current economic and financial crisis, government grants for infrastructure and the operation of public transport have dropped significantly. Higher running costs, including continuously rising fuel prices, make it imperative to develop additional rationalization potential whilst still providing passengers reliable and attractive public transport.

Transparent and unified working processes throughout the entire company help to identify and implement further saving potential. We have developed the PSITraffic depot management system to assist our clients in completing this task. The successful use of this solution with different customers has proved to us that we are on the right track.

On the following pages you can read more about two projects in this area and also, how PSITraffic is being used to provide travel information in Malaysia.

Enjoy reading the latest issue of the infrastructure manager.

Torsten Vogel
General Manager PSI Transcom GmbH

Mobile Information with PSITraffic

With immediate effect, information from the PSITraffic system is also available in mobile form.

The system supports communication with QR (Quick Response) codes. These codes can be independently generated by our customers.

Employees can easily gain access to inter-company information. This function can also be passed on to travelling passengers as mobile journey information.



◀ Page 1

departments, was put together to draw up performance specifications, which would detail the planned processes and procedures; paying particular consideration to the needs of the users.

Based on the results of an evaluation matrix, Rheinbahn chose the DMS PSITraffic from Berlin's PSI Transcom GmbH.

Klein recalls: "Aside from technology and price, it seemed to us that of all the systems on the market PSITraffic offered the most configuration options."

Every depot has its own specific processes and procedures and every process has its own rules and requirements and frequently these can change. If one uses a product that can independently configure these changes in the form of parameters and data, this flexibility alone brings many advantages and saves time and money.

Intensive Performance Specifications Phase

The performance specifications phase for the project team and PSI Transcom pro-

ject manager Frank Fünfstück and his team began after the contract was awarded. The Berlin team's experience of many other DMS projects was brought into play here.

"We placed great importance on not defining the whole thing on a high consultation level, but rather by entering into discussion with those who use it on a daily basis. A long road, but the acceptance shows that it was worth it" says Klein, justifying the extra effort.

Modern Tracking Systems

The two different transportation systems – rail and bus – require different vehicle tracking systems to ensure accurate recording of vehicle positions and to allow for the correct sequencing of circulation or service visits.

Local Positioning Radar (LPR) is now in use in the Rheinbahn depots and communicates with the DMS via an interface. The system was developed by PSI Transcom together with their partner Symeo GmbH, specialists in precise

and contact-free positioning. In Lierenfeld, there are several cells, each with six reference points and a data collector, which report the exact location of the buses to the depot management system (BMS).

Modern IT

The new Depot Management System has a redundant design, with two servers positioned in two different locations. In addition, the Oracle Real Application Cluster is installed in an Oracle database, which allows the implementation of a single database on a server cluster. This installation permits 24/7 availability, the consolidation of the server and avoids costly downtime. This allows PSI Transcom to guarantee 99.8 percent availability.

PSITraffic oversees and controls the entire process from when the vehicle enters the depot to when it leaves. In this way, information from the workshop allows vehicles to be targeted directly upon entrance; spare parts can be acquired early, noticeably reducing downtime and shunting time.

Using PSITraffic in all transport depots allows the scheduler to request replacement vehicles directly from where they are available, without having to search extensively. Consequently, project manager Klein is satisfied: "The good teamwork with our DMS partner and the professional implementation give me the secure feeling that we are on the right track."



Bus workshop Lierenfeld

Picture: Rheinbahn AG

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PSITraffic is Now Being Used in Malaysia

PSI Awarded Contract by Malaysian Railway

As part of an initiative by the Malaysian government to expand the railway infrastructure, the PSI subsidiary PSI Incontrol has been awarded the contract to supply a turnkey passenger information and communication system for use between Seremban and Gemas. By securing this contract, the PSI Group has gained important access to the Asian railway market.



PSI Incontrol and PSI Transcom develop digital, integrated solution for Malaysian railway

Newly industrialized Malaysia is one of the fastest developing countries in Asia.

Malaysia's rail network extends over more than 2 200 kilometres in the western part of the country. Seremban lies a good 100 kilometres to the south of Kuala Lumpur and is currently the end station on the metro line. Gemas lies further to the southeast and is an important intersection of the eastern and western rail networks. The approximately 100-kilometre-long stretch between Seremban and Gemas will become an electrified double-track. Seven stations are situated along this stretch of track, and it is intended to be used by both the metro and long distance trains.

Solution Based on PSITraffic

The PSI subsidiary PSI Incontrol in Malaysia, was awarded the contract after

a rigorous tendering process by the Indian Railway Construction Company (IRCON). The scope of the package includes systems for digital voice and data transmission, private branch exchange, signal telephone, real-time passenger information system, public address systems, video monitoring and SCADA systems. For every subsystem, PSI Incontrol, together with colleagues from Germany, delivered a modern digital, integrated solution on the basis of the system platform PSITraffic, which controls and monitors the trains and the infrastructure on the train stations, as well as informing passengers.

However, the technical requirements were extremely demanding. The passenger information system had to be bi-lingual – English and Malaysian – and the installation of a back-up system was also required. This offers protection in the

case of a connection failure between the network and central control centre, ensuring that all information, such as announcements and display information are available at the stations. Therefore, in addition to the required adjustments to the layout of the TFT displays, their architecture also needed alterations. The web server was therefore moved from the central control centre and installed in the machines onsite, implementing a fall-back solution.

A Comprehensive Approach

An interface to the Samsung CCTV server (Closed Circuit Television) makes it possible to show live videos and to guide the cameras in the central control centre. The functions were integrated into the PSITraffic user interface. SCADA (Supervisory Control and Data Acquisition) allows the equipment on the stations to be controlled and monitored and also generates an alarm when a fault is reported. The Station View makes the location and the condition of the station equipment and cameras visible on the computer screen in the central control centre.

The tasks presented to PSI and PSI Incontrol and the solutions that were needed offered a new and broader challenge to the employees of both companies. In terms of both the operation and language, it was important that all programs, documentation and instruction material were adapted to local customs.

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One Hundred Percent Control of the Depot

Better Quality and Reliability at Essen Transport AG

The expansion of the depot management system (DMS) has allowed the Essen Transport AG to organise its operational processes even more efficiently and to therefore further improve the quality and reliability of its services.

On behalf of the city of Essen, Essen Transport AG (EVAG) ensures the mobility of its citizens by bus and rail. In 1999, the EVAG decided to optimize vehicle circulation in its depot; the contract for this was awarded to Berlin PSI Transcom GmbH.

BMS is Expanded

In autumn 2010, PSI Transcom added numerous functions to its DMS PSITraffic and improved its existing services. As a result, 100 % allocation of the vehicles to the circulations is now possible even when space is tight. The extended system works across several depots. "To achieve optimal workshop capacity, we are now planning circulation routes that start in one depot and end in a dif-



EVAG-depot "Beuststraße" Picture: EVAG

ferent one. After the repair work, the circulation route ends in the home depot" says dispatcher and DMS administrator Rainer Röhlke.

The Black-Red Solution

A bus can be reported as ready to the DMS when it has been cleaned and filled with petrol after a trip. Until now

large touch screens with integrated computers came into play.

"So, we thought about how a vehicle can be reported as ready in a more 'clumsy' way – whilst wearing gloves, or by using the elbows" explains depot manager Wunn.

The solution: one black and one red buzzer – large, stable metal buttons. A hit with the hand or a strong push reports a clean, fuelled vehicle to the DMS. The exact position where the bus must then be parked appears on the monitor. If the vehicle has a fault, this is reported by using the red buzzer, which transmits the problem to the DMS, triggering a corresponding solution. It is only when the vehicle has been released



Buzzer for the end signal Picture: V. Vorburg

by the workshop that it is allowed back into circulation and is provided with a designated parking area.

Radar Tracking in the Smallest of Spaces

Vehicle tracking enables fast and accurate positioning, ensuring reliable circulation and visits to the workshop. PSI,

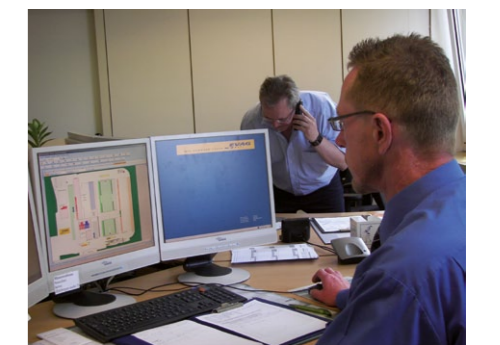
together with its partner Symeo GmbH, has developed a solution allowing the location of a vehicle to be precisely determined by GPS positioning.

One Hundred Percent Success

For Wunn and Röhlke, the most important aspects in the expansion of PSITraffic are automatic scheduling throughout the entire company and one hundred percent accurate circulation assignments.

In addition, many settings can now be configured very simply.

"Even the statistical evaluations have become unproblematic. At the touch of a button, one knows how often a bus has driven a particular route, or how many times it has been to the workshop. To our knowledge, there is no comparable system on the market", states the depot manager, summarizing:



Comprehensive DMS Picture: V. Vorburg

"With the PSITraffic system we were able to optimize our operational processes and dramatically improve our efficiency."

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PSI Solutions for Infrastructure Management

We Protect Critical Infrastructure – for Sure!

PSI supports your efforts to secure your infrastructure. Offer your clients and proprietors a high quality concept to ensure damage limitation and management, including preventive measures.

PSI Transcom has many years of experience in the development of innovative information systems, which are characterized by their reliability and scalability.

structure, record automatic announcements, for example from emergency telephones, smoke detectors or video cameras and, in case of disturbances (fire

and from the utilization of drones can be used to evaluate ad-hoc incidents.

Portal Solution

Today, information portals are often used to ward off threats. As the infrastructure provider, you must be willing to use such portals to inform your customers or closed groups (government agencies) with selected information from your systems. We can help you design and implement your own information portal.

Interfaces

The passing on of information from data management systems is an example of conflicting needs “openness versus security”. ‘Outside’ users must absolutely not be permitted to access your data management system. In such cases, the system has to provide data for other applications. If necessary, data must be acquired from external systems, taking into consideration ever-increasing security demands.

PSI Transcom pursues different approaches to meeting the needs of infrastructure managers:

- Replication of relevant control system data onto a separate system
- Development of new interface functions or
- Integration of adapters and applications based on standard technologies.

We develop innovative information systems to improve your company’s security. Come and talk to us!

► **Information**

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Focus on company safety

Picture: Fotolia

Monitoring own operational data and the integration of external environmental data is the first step. We are also able to establish a network for example, between your company and government agencies and security organisations at your locations, establishing common portals or providing suitable interfaces for fast and secure information flow. This can minimise reaction time in the case of disruption.

Facility Management

Monitor the functional efficiency of the individual security systems in your infra-

etc.), control loudspeaker systems, locking systems, escalators and visual passenger information systems as required (e.g. escape routes from buildings).

Monitoring Environmental Data

Environmental data is crucial in regional and national networks, e.g. local public transport or electricity network.

Take advantage of meteorological or hydrological data in order to assess current threats to your network infrastructure.

If necessary, information derived from sensor technology in the infrastructure

Changes in Management

Since the 30st of August 2011, operations at PSI Transcom GmbH have been managed jointly by Peter Kursawe and Torsten Vogel. Torsten Vogel will also continue to head the traffic engineering department. Thomas Breitwieser, head of controlling and accountancy, has been appointed as authorized representative.

Depot Management as the Centre of Focus

User Day in Stuttgart

The two-day event on the topic of depot management attracted around 40 interested transport companies, partners and longstanding users from Germany and Switzerland. The participants met on a beautiful summer's day in the Stuttgart district of Vaihingen on 26/27th May 2011.

In addition to presentations and discussions, the participants were also treated to an excursion to the bus and tram depot of the Stuttgarter Straßenbahnen AG. There was a lively exchange of experiences that clearly showed the level of

focus that is being placed on the implementation of transparent and uniform operating processes in the transport companies. We would like to thank all our guests for their visit and look forward to seeing you again at the next user forum!

Innovation Award for the FLEXIBUS

PSI Transcom Sponsors Award Ceremony

A congress on the topic of “The Future and City Transport Visions” was held in Berlin on the 30st of June 2011 to celebrate the 25th anniversary of the Germany Transport Club (VCD).

Tomorrow's urban mobility was discussed in presentations, workshops and a podium discussion. The main focus was on generating ideas on how to make mobility more environmentally friendly and as pleasant as possible for the people in the future.

At the prize-giving ceremony for the coveted innovation awards, FLEXIBUS won the prize in the category “Overall systems” for the most innovative and customer-friendly product in the public transportation field. “The FLEXIBUS not only stands for quality of life, it also

shifts the focus on people's mobility needs,” said Torsten Vogel (PSI) in his



Award ceremony in Berlin

Sales Team

New Member

Mrs. Elke Frommann took over the management of sales in the German Rail division at PSI Transcom GmbH on 1st of June 2011.



During her 4 previous years at globits GmbH the main focus of her work lay in the field of project control and sales. As part of her sales responsibilities, she also acted as the project manager for DB Station & Service where she successfully implemented the strategic challenges for the German Rail networks and passenger traffic in close cooperation with DB Systel. At PSI Transcom she will be concentrating on the project business in the field of operations control systems with German Rail.

laudation of the company before handing the prize to Josef Brandner, managing director of the company BBS Schrapfl KG and Fridolin Kerler, honorary managing director of the Central Swabian Vehicle Route Association. Both companies were responsible for the successful public transportation model. In 2006, the company PSI Transcom launched the regional RBL System at Omnipart GmbH, a network of 10 medium-sized bus companies in the district of Schwaben in Bavaria and northern Upper Bavaria.

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