

ITCS & TICKETING SYSTEMS FOR BAVARIA

INIT has established a region-wide, operations control and real-time passenger information system with integrated electronic fare management for four Bavarian bus companies of Deutsche Bahn (DB, German Rail). As a result, more than 3,000 vehicles from Franconia to East Bavaria and from Upper Bavaria to the Allgäu will soon be controlled by a single, multi-client system.



Innovative technology

The project aims to introduce standardised ticket sales and to optimise information and operational procedures across organisations. The integration of the four DB subsidiaries, as well as several private bus operators, will create a synergy that will benefit not only the companies in question, but especially passengers. They can expect a definite improvement in service quality, especially where schedule adherence, passenger information and guar-

anteed connections are concerned. By opting for MOBILE-ITCS from INIT, the DB companies realised a better dovetail connection of public transport services, and are able to meet the need for greater efficiency at the same time.

Crucial for the DB companies has been the multi-client capability of the INIT system, which meets their requirements for a sophisticated system concept with open architecture. This allows for easy integration of further DB subsidiaries or subcontractors in the future. The main

control centre for all the companies is located in Nuremberg, the home of DB Frankenbus. In addition, dispatchers at more than 50 workstations at different locations within the service area can use the ITCS functionality. The ingenious user management of the ITCS allows dispatchers to access the data authorised for their company only. This ensures that all relevant company data remains secure and therefore permits the integration of competing companies into one system.

The comprehensive range of dispatching measures provides dispatchers with the tools to react flexibly to incidents. These include connection protection, vehicle changes, diversion management or ad hoc detours.

Unique integration of driver dispatch

Additionally, the integration of PERDIS®, the personnel assignment software, with the MOBILE-ITCS provides the Bavarian bus operators brand new functionality. Every morning, PERDIS® automatically transfers duties as well as the driver data to the ITCS. In the course of the day, data is synchronised at intervals of less than three minutes. As a result, the driver data available in the ITCS enables the dispatcher to monitor planned driver changes and take them into account when executing dispatching measures.



“The transport companies can guarantee a better coordination of bus and train services, and provide real-time travel planning for passengers”

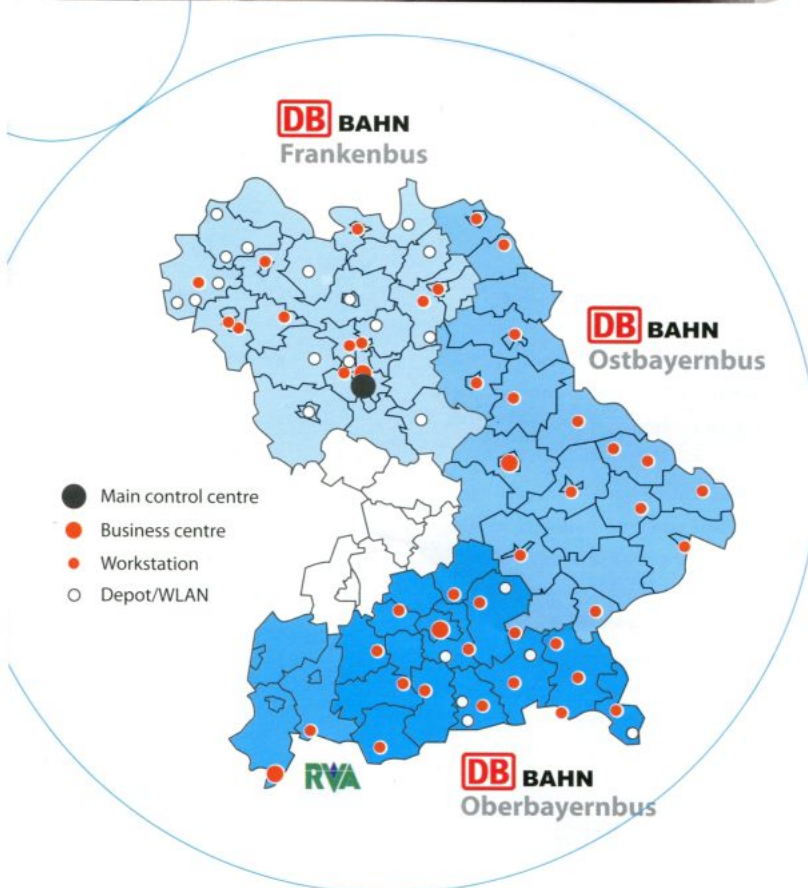
Also a driver's working hours can be collected much more efficiently, since MOBILE-ITCS can automatically transfer the drivers' login and log-out data to the personnel assignment software, where it is accepted for accounting.

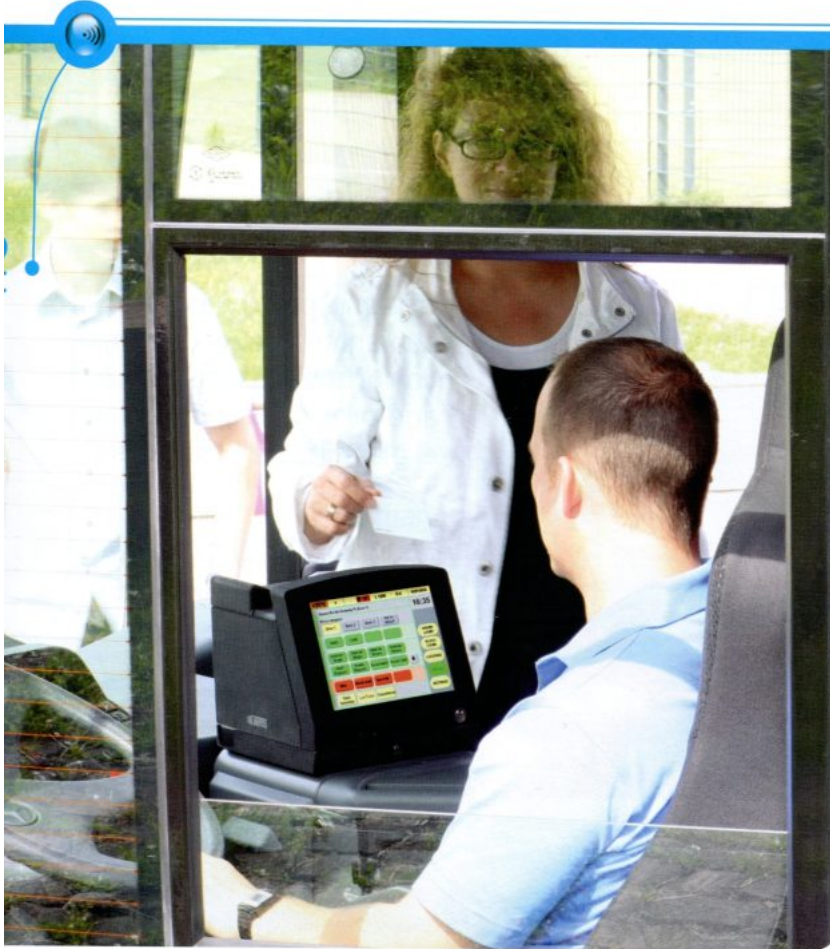
Area-wide information coverage

Reliable real-time passenger information is provided by the dynamic passenger information system MOBILE-STOPInfo. This calculates precise real-time arrivals using a sophisticated prediction algorithm based on the exact determination of the positions of the vehicles. The real-time passenger information is exported via VDV interfaces to DB's Information System for Travellers (RIS), as well as to the Bavarian railway company BEG's Bavaria-wide Information Management System (BYIMS). Thus the transport companies can guarantee a better coordination of bus and train services, and provide real-time travel planning for passengers. The integrated VDV interfaces also enable future data transfer to the Bavaria-wide, real-time information system (DEFAS).

Mobile - on demand

The DB Bavarian bus operators took services one step further by establishing an on-demand transport system. INIT's on-demand module MOBILEcall supports a number of flexible transport modes such as on-demand route-based operation and direction-bound service mode.





➤ *EVENDpc also supports validation of barcoded tickets. Passengers swipe their previously purchased barcoded paper or mobile tickets past the integrated scanner*

The module supports the operators through the planning and servicing stages of an efficient, demand-oriented transport system.

Says DB Frankenbus: "By implementing a region-wide ITS system we achieved a closer networking of public transport in Bavaria. Due to its multi-client capability we are able to offer further transport providers a platform to easily integrate and take advantage of the ITS, to jointly extend a modern and customer-oriented public transport service for Bavaria."

State-of-the-art vehicle equipment

In addition to the improvements at the various control centres, the use of INIT's innovative solutions also benefits the companies' fleets. Some

3,000 vehicles have been equipped with INIT's newly developed EVENDpc. This PC-based, on-board computer has full ticketing functionality and is capable of using all smartcard schemes or barcoded tickets.

With the EVENDpc's easy-to-grasp driver navigation, INIT opens new avenues for public transport companies. Thanks to the navigation support on the large touch display, operators can also deploy drivers for routes they have never driven before. For on-demand services that often include different driving routes, EVENDpc is the perfect solution.

The multi-client-capable background system MOBILEvario is used for ticket management and clearing. MOBILEvario seamlessly integrates with the MOBILE product suite. Transport com-

panies can individually execute all tasks, from the clearing of driver and device accounts to the statistical analysis of revenue, solely on the basis of their own data.

Maximum integration

All important ITS functions, including ITCS data management, passenger information, on-demand services, statistical analysis, reporting and fare management are covered by the comprehensive INIT product range. Thus INIT installs a solution with a maximum depth of integration that, thanks to the integrated data management, offers enormous savings potential. With this region-wide ITCS, real-time passenger information and ticketing installation, INIT implements the largest Intelligent Transportation System (ITS) in Germany to date, including more than 3,000 vehicles, 500 companies, 100 tariffs and 25,000 stops •

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