



MembrainRTC - Mobile Platform 4.0

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THE LEADING STANDARD IN ENTERPRISE MOBILITY & SHOPFLOOR-INTEGRATION

SUCCESS-STORY

Route optimisation and GPS-supported data acquisition

Rock concert or building site - the blue cabins of WMS WC-Mietservice are always present. The Swiss company has been leasing mobile toilets and planning the on-site visits of its service personnel from Reichenburg since 1995. The cleaning and maintenance of more than 2,000 cabins by twenty employees poses a logistical challenge for the company - in short: which driver has to go where when? To be able to calculate the optimal route, it is first necessary to determine the exact location of the cabin using GPS data. Next, it has to be possible to retrieve the current orders, including processing times, in the system. The solution: cutting-edge RFID readers capture and report the data back to the central database system, with the MembrainRTC server ensuring seamless communication.

Project objective

The aim of the project was to introduce a software-supported, automated process for helping to determine the exact location of the cabins and subsequently calculate the route for when it is next due to be cleaned. The employees need to receive current orders on their mobile RFID readers and report back accordingly once an order has been processed, with GPS data being used to communicate the exact location and the processing time. This was to be achieved by fitting each cabin with an RFID tag for enabling data acquisition within a matter of seconds.

At the same time, the central office needs to have remote access to the devices. This is necessary to maintain an overview of the current orders and also to transmit new orders, changes to routes, etc., to the respective mobile device. Reason enough to turn this complex initial situation into a project.

Requirements and system selection

The server lies at the heart of the entire architecture. A server was sought that was capable of processing transactions professionally and securely, but which above all enabled bidirectional communication with the mobile terminals. It had to transmit the time, GPS and order data, etc. from the RFID reader in the central MS SQL database and vice versa. Since a remote construction site often has poor network coverage, it was also necessary to be able to work stably in offline mode. The software had to be intuitive and easy to operate, with it being possible to install updates in house. According to external project manager Tomas Burger, "finding a suitable solution that met our complex requirements turned out to be much simpler than we thought." WMS decided to go with the market-leading technology from Membrain, and for the hardware, with the Motorola MC 75 HF RFID.



Using the MembrainRTC server as an expediting tool

The SAP-certified technology of the MembrainRTC server (Real Time Connector) supports a multitude of interfaces, such as SQL, CRM, proprietary solutions, file and management systems, etc. and is platform independent. In other words, communication can take place between the main system and various clients (smartphones, handhelds, terminals, etc.) and with scanners and web services. For WMS, MembrainRTC now acts as an important expediting tool. Online access to the mobile makes it possible to provide the driver with immediate help in the event of problems and malfunctions. "Since then we have had practically no potential technical problems or navigational errors," says Tomas Burger.

Test phase in normal operation

"Normally," says Tomas Burger, "the testing of software in such complex projects is fairly comprehensive and it usually takes half a year before it is put into normal operation." Since the Membrain software mainly comprises standard modules, the test phase took place during normal operation, which considerably reduced the project expenditure. "Since introducing Membrain software,"



The image displays three screenshots of the MembrainRTC software interface. The top-left screenshot shows a map view with red routes and various data points. The top-right screenshot shows a detailed data entry form with multiple fields and buttons. The bottom-left screenshot shows a large data table with columns for dates and various status indicators. The bottom-right screenshot shows a smaller map view with a yellow route highlighted.

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HIGHLIGHTS

- Route optimisation
- Increased efficiency thanks to transparent processes
- System contains up-to-date data
- Unit traceability (location, time, condition, etc.)
- Remote access to the mobile terminal in the field
- Simple, easy-to-read, user-friendly interfaces
- Cost-effective, high-speed implementation by standard modules

FURTHER INFORMATION

www.membrain-it.com



Tomas Burger is the external IT project manager at WMS WC-Mietservice GmbH. He developed the "Kabine 7.0" solution based on MS SQL 8.0 that is responsible for the entire order processing workflow at WMS.



The ever-present Motorola MC 75 HF RFID

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