



GERMAN PUBLIC TRANSPORT COMPANIES DRIVE LONG-TERM PERFORMANCE OF THEIR MOTOROLA SOLUTIONS TETRA NETWORK

WITH A COMPREHENSIVE MOTOROLA SOLUTIONS ESSENTIAL SERVICES PACKAGE INCLUDING A DIMETRA™ X CORE UPGRADE



RHEINBAHN AG / RUHRBAHN GMBH / DVG

Rheinbahn AG is a public transport provider in North Rhine-Westphalia, operating in and around Düsseldorf. It employs about 3,300 people and manages a fleet of trains, buses and trams in a commuting area of 570km². Ruhrbahn GmbH, meanwhile, is the local transport company of Essen and Mülheim an der Ruhr, and the Duisburger Verkehrsgesellschaft AG (DVG) provides efficient transport in and around the city of Duisburg. Between them, these three companies operate over 1,400 vehicles along 210 lines and carry over 1.3 million passengers daily in the Rhine-Ruhr region. They also share a communal Motorola Solutions DIMETRA™ TETRA network, with TETRA two-way radios to enable effective communications between staff in buses, trams and urban trains, as well as for supervisors, managers, technical and operational teams; numerous talkgroups all with very different configurations have been created for this purpose. The original system was installed in 2012, in conjunction with Motorola Solutions long-term partner INIT GmbH. INIT is a world leader in ITS solutions for the public transport sector. It has worked closely with Rheinbahn, Ruhrbahn and DVG to also deploy an Operations Control System and has developed and overseen the integration of this system with the DIMETRA TETRA network, to great benefit.

CHALLENGE

The Rheinbahn, Ruhrbahn and DVG DIMETRA TETRA network, which is a large system comprising 58 base stations, has been delivering reliable, secure communications for the companies' drivers and mobile teams for nearly ten years; however, the companies wanted to ensure its longer-term viability, durability and performance. They were looking for ongoing support and updates, which would effectively protect and double the life cycle of their system, extending its usage by a further

ten years. Indeed, as transport operators, Rheinbahn, Ruhrbahn and DVG also have a legal obligation to keep their communications systems up to date and operational, to meet passenger safety requirements, they were looking to sign a long-term contract with a trusted partner and supplier. After lengthy discussions with INIT and the Motorola Solutions services team about their requirements, they decided on a 10-year Essential Services package managed by INIT.

CUSTOMER PROFILE

Organisations:

- Rheinbahn AG
- Ruhrbahn GmbH
- Duisburger Verkehrsgesellschaft AG

Partner:

INIT GmbH

Industry:

Public Transport

Location:

Germany

Motorola Solutions Products:

- 10-year Essential Services package for existing DIMETRA™ TETRA system comprising:
- 24/7 Technical Support via Motorola Solutions Service Desk
- Network Hardware Repair
- Software and Hardware Updates: upgrade to DIMETRA X Core and Minor Releases
- Security Patches
- On-call Service Engineers and Named Customer Support Manager

CASE STUDY

RHEINBAHN / RUHRBAHN / DVG

“Our TETRA network is a complex, very high usage, 24/7 mission-critical system; for example, we’re not allowed to run any railway operations, unless communication channels are open between our drivers and our control centres. Therefore, the maintenance of this infrastructure is a top priority. And, although our teams are trained, we are not system experts, which is why we signed up to the Essential Services Package. Once our standard warranty came to an end, this was an obvious step for us. Any failures or faults continue to be resolved as soon as possible and our system is maintained and kept as secure and as up to date as possible. In summary, the contract ensures the continuity of high-quality service and support we have always benefited from.”

Reinhard Renja, System Manager Operational Radio and ITCS, Rheinbahn AG



SOLUTION

The Essential Services package, which supersedes the previous maintenance contract, started with an initial upgrade to a new geo-redundant DIMETRA X Core system, including a refresh of the switching technology. The DIMETRA X Core system offers the possibility of automatic switching of the SDS servers and provides fully redundant dispatch communication system connections. The upgrade was achieved without extensive work at Rheinbahn, Ruhrbahn or DVG, as the new switches were completely preconfigured and commissioned at the factory. INIT was also able to use the switch as a test platform, so it didn’t have to carry out any on-site tests which further minimised disruption. And, as DIMETRA X Core is a flexible platform, any other parts or individual components of the old system that are getting outdated, or fail during the contract, can be repaired or seamlessly replaced, or updated with the latest versions of supported software and hardware. As well as this access to software repairs and performance improvements between upgrades, there is also another full upgrade planned in the middle of the contract period. Reinhard Renja, System Manager Operational Radio and ITCS, Rheinbahn, comments: “Despite the added reliability, security and capacity that DIMETRA X Core delivers effectively behind the scenes, our users have seen no change in how the system operates day-to-day at their level, so the upgrade has also been seamless from this point of view.”

In case of any queries or issues, Rheinbahn, Ruhrbahn and DVG have access to 24/7 remote technical support via the Motorola Solutions Support Centre (SSC), on-call assigned service engineers and a named customer support manager. As Jens Michaelis from Motorola Solutions explains: “Keeping Rheinbahn, Ruhrbahn and DVG’s system up-to-date with current and more powerful technology not only means that they have access to the latest features and enhancements, but it also means

we can provide the very best support.” However, it is not just the hardware and software which is being kept up to date: the services contract also includes regular security updates. This includes the tracking of all available anti-malware definitions and software patches, before implementing them in Motorola Solutions’ local Information Assurance lab, to identify any potential risks or issues, before validating them for regular roll-outs to the three companies. And this enhanced cybersecurity is essential in view of the public nature of transport companies, the risk of terrorist attacks and the potential sensitivity of the information being communicated.

BENEFIT

Rheinbahn, Ruhrbahn and DVG’s system upgrade agreement will ensure their DIMETRA TETRA network continues to deliver robust secure communications into the 2030s; however, beyond this, the constantly evolving, fully supported platforms the companies now benefit from will actually increase the reliability, security and efficiency of their system, so they can meet their obligations with regard to passengers and the general public, whilst simultaneously achieving an excellent ROI. The three companies can also budget accordingly, with clearly calculable annual costs for the next ten-year period, and benefit from the increased engagement and ownership stemming from this long-term, collaborative successful partnership with INIT and Motorola Solutions.

Benefits:

- Motorola Solutions and INIT will work alongside Rheinbahn, Ruhrbahn and DVG effectively and collaboratively for many years, to keep their DIMETRA TETRA network operating efficiently into the 2030s
- Software and hardware upgrades and repairs, an evolving design, continued failover and ongoing support will ensure the mission-critical communications system keeps working optimally, whilst the three transport companies also benefit from the latest technology
- Regular security updates, meanwhile, deliver enhanced cyber security, which is essential in view of the public nature of transport companies
- Rheinbahn, Ruhrbahn and DVG are benefiting from a long-term lower total cost of ownership (TCO), predefined budgeting and maximum return on investment (ROI), whilst lowering their environmental footprint through the continued use of existing infrastructure and hardware



MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the stylised M logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under licence. All other trademarks are the property of their respective owners. ©2022 Motorola Solutions Inc. All rights reserved.