

Industry

Bus, Light Rail

Objective

Implement AVLC System

Solution

Trapeze's Intelligent Transport System

Overview



205 buses



200 trams



28 bus routes



12 tram routes



153 million passengers annually

Results

- ✓ Upgrade to digital radio system
- ✓ Automatic Vehicle Location and Control (AVLC)
- ✓ Traffic Light pre-emption
- ✓ Systems integration



Dresdner Verkehrsbetriebe AG commissioned Trapeze with the upgrade of their operations control system.

Background

Dresdner Verkehrsbetriebe AG (DVB) has around 1750 employees. In addition to their 151 buses and 166 low-floor light rail vehicles, DVB also operates two funiculars, three Elbe River ferries and a freight tram. DVB transports around 153 million passengers on its 28 bus routes and 12 tram routes each year.

The Challenge

At the end of 2008, DVB commissioned Trapeze with the upgrade of their operations control system. Over the following years, DVB's buses and low-floor light rail vehicles were equipped with Trapeze IBISplus G2 on-board computers. The driver terminals installed were Mobile Touch Terminals in the light rail vehicles and integrated ticket printers in the buses.



Image supplied by Dresdner Verkehrsbetriebe AG

The radio system is a digital trunk radio system. The existing control centre and DPI system were also integrated. Firstly, the digital radio network and the Depot Data Management system were set up, followed by their connection to the passenger information system and control system integration. The last step encompassed retrofitting of the vehicles.

What is special about this project is the integration factor, which saw various separate systems joined together to form one composite system. The components on-board computer, ticket printer, radio, DPI, and depot were all provided by different suppliers. Trapeze's task was to supply various subsections and interfaces to the third-party systems.



The functionalities:

- Interface to the third-party control computer
- TETRA radio system
- On-board computer IBISplus G2 with an MTT terminal
- GPS-based location
- Interface to passenger information
- Data supply with LIO-Data
- Traffic light pre-emption
- Loading vehicles with software and data using Wi-Fi

The system at a glance



Control centre

7 dispatcher workstations, 1 info station, 2 data supply and/or statistics workstations



Radio system

TETRA digital radio with 7 radio locations



Vehicles

205 buses, 200 trams



Depots

4 in total, equipped with Wi-Fi, RFID for the fuelling recording system



Third-party components

Control computer, TETRA radio system, Stop DPI signs, planning program, passenger counting, ticket printers in buses, video surveillance, RFID fuelling recording

Results

- Upgrade to digital radio system
- Automatic Vehicle Location and Control (AVLC)
- Traffic light pre-emption
- Systems integration

“After setting up a digital radio system, upgrading vehicle components and migrating the control centre software, DVB now boasts a comfortable platform for secure management of operations and passenger information at stops, in vehicles and through new media.”

Ullrich Funk, Centre Manager of Transport Operations, Dresdner Verkehrsbetriebe AG

TRAPEZE GROUP

Trapeze Group works with public transport agencies and their communities to develop and deliver smarter, more effective public transport solutions. For more than 25 years we have been Here for the Journey, evolving with our customers around the world to helping them move people from point A to Z, and everywhere in between.

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