Zurich Transport Authority (ZVV)

Multi-agency control system with six participating transport agencies

Overview

- 1000 vehicles
- 6 transport service providers
- 1839km2 coverage area
- 12 dispatcher workstations
- 31 information workstations

Industry

Bus, Tram, Cable Car

Challenge

Implement a single control system for multiple transport agencies

Solution

Trapeze Intelligent Transport System (ITS)

Results

- Single system for multi-agency control
- Multifunction on-board displays
- Transfer protections

Background

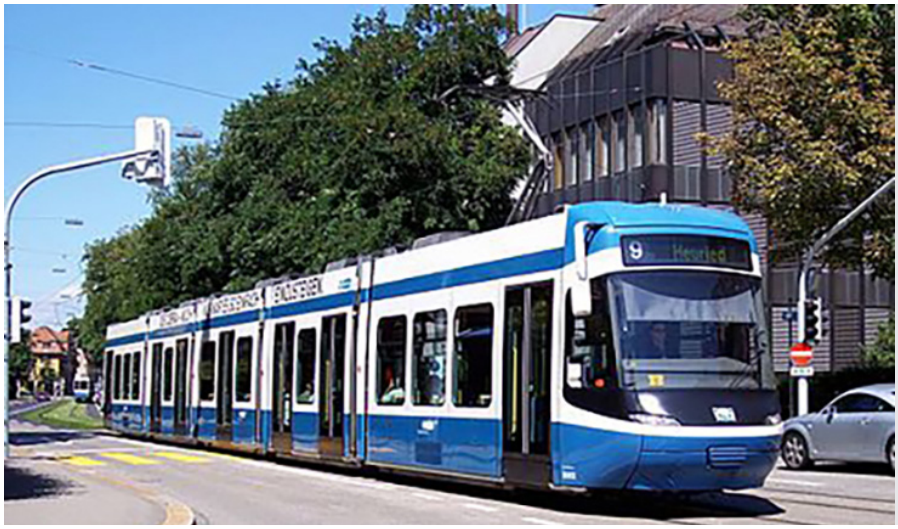
The city and canton of Zurich attaches great importance to public transport and has the world's most modern multiagency system. The area covered by Zurich Transport authority encompasses 1,839 km^2 with 1.27 million inhabitants. The ZVV control system includes altogether 6 participating transport agencies operating more than 1,000 vehicles in all. The complex system was planned, supplied and commissioned in four phases.

The Solution

Multifunctional displays on buses and trams show among other things transfer connections to the SBB. Comprehensive, up-to-date information helps to make the journey time seem shorter for the passengers and gives them more flexibility in reacting to any delays or disruptions.

The functionalities

- Automatic vehicle location and control system LIO
- Hybrid analogue and digital radio (GSM/GPRS) Voice radio communication via VoIP
- On-board computer IBISplus with touchscreen user terminal (MTT)
- GPS based positioning
- SmartInfo G4 passenger information system at stops
- Passenger information by means of multifunctional displays (MFD) in the vehicles
- LIO-Data data supply
- Loading the vehicles with software and data using WLAN (wireless LAN)
- Geographic information system (GIS)
- Traffic light preemption
- Form Management and Workflow Management ActiveForms+
- Transfer protection to third-party systems (SBB)
- Business Intelligence



The system at a glance

Control centre

12 dispatcher workstations in 4 control centres, 31 information workstations, 9 IT workstations

Radio system

Hybrid radio system (analogue radio partly with quasi synchronous radio and GSM/GPRS); 19 voice channels, 24 data channels, 16 base stations, 133 data/ voice radio transmitters/receivers

Vehicles

More than 1,000 vehicles (buses, trams and cable cars)

Depots

46 depots with WLAN IEEE802.11g

Dynamic Passenger Information

300 SmartInfo G4 via analogue radio or GSM/GPRS, 10 TFT display signs via GPRS, more than 2,000 multifunctional displays (MFD) in the vehicles

Third Party Components

Radio (Jöhl & Köferli as the radio system supplier or TAIT as the radio system manufacturer)

Software Interfaces

Interface to DIVA (mdv), integration of third-party vehicle signs (LAWO, Gorba, etc.)

Results:

- Single system for multi-agency control
- Multifunction on-board displays
- Transfer protection

"The benefits for the customer include not only a 'one ticket for all' system but also transfer information across the borders of the individual transport agencies."

Rolf Spring, Project Manager
VBZ and the entire ZVV Control System, Zurich

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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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