



## Project Property

# Zurich Transport Authority (ZVV) Multi-agency control system with six participating transport agencies

“The ZVV control system links up the transport agencies within the Zurich Transport Authority. 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 for VBZ and the entire ZVV Control System

The city and canton of Zurich attaches great importance to public transport and has the world’s most modern multi-agency system. The complex system was planned, supplied and commissioned in four phases between 2004 and 2009. 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  
VICOS-LIO
- \_ Hybrid analogue/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
- \_ VICOS-LIO-Data data supply
- \_ Loading the vehicles with software and data using WLAN (wireless LAN)
- \_ Geographic information system (GIS)
- \_ Traffic light preemption
- \_ ActiveForms+
- \_ Transfer protection to third-party systems (SBB)
- \_ Business Intelligence

### The system at a glance

#### **Control centre**

- \_ 12 dispatcher workstations in 4 control centres,
- 25 information workstations, 8 IT workstations

#### **Radio system**

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

#### **Vehicles**

- \_ more than 1,000 vehicles (buses and trams)

#### **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

#### **Depots**

- \_ 46 depots with WLAN IEEE802.11g

#### **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.)

### Zurich Transport Authority

The area covered by Zurich Transport authority encompasses 1,839 km<sup>2</sup> with 1.27 million inhabitants. The ZVV control system includes altogether 6 participating transport agencies operating more than 1,000 vehicles in all.