Modernise and Integrate Communications

Light Rail and Bus Parity system, transfer protection, multi-functional displays

Overview

Bernmobil

165
buses

48
trams

RBS

35
buses

9
trams

Postauto

65
buses

Industry
Tram and Bus operator, Bern, Switzerland

Challenge
Improve communications across the network

Solution
Trapeze Intelligent Transport System (ITS)

Results

✓ Enabled Automatic Vehicle Location and Control (AVLC)

✓ Provides Smart Real Time Passenger Information (RTPI)

✓ Traffic Light Preemption

Background

BERNMOBIL carries 90 million passengers every year with 165 buses and 48 trams. In the Swiss capital, the transport service provider serves more than 200 bus and tram stops on more than 20 routes in the greater Bern area. BERNMOBIL has a workforce of round 720 employees.

Challenge

BERMOBIL in Switzerland sought an efficient control system to enable capabilities including Automatic Vehicle Location and Control (AVLC), advanced data management and Real Time Passenger Information (RTPI). The end goal was to provide more efficient tools to control centre staff, more visibility across the network and better service to customers.

Solution

The functionalities

- Automatic vehicle location and control system type LIO

- Analogue radio system and GSM/GPRS

- Modern on-board computers IBISplus in mixed operation with IBIS2

- Logical positioning with infrared beacons (urban), GPS-based positioning (region)

- Real time passenger information: SmartInfo stop signs, MFD G2 multifunctional displays

- Timetable information via the Internet

- Advanced data management

- Data supply LIO-Data

- Traffic light preemption

- Software and data loaded to the vehicles using wireless LAN (WLAN)

- Statistics evaluation with ISAS2

- Transfer protection G2The system at a glance

THE SYSTEM AT A GLANCE	
Control centre	
4 dispatcher workplaces, 1 remote info workplace, 2 statistics workplaces	
Radio system	
Analogue, Digital (GSM/GPRS) and Hybrid (Analogue respectively GSM/GPRS), 2 voice channels, 2 data channels, 2 base stations, voice radio	
Vehicles	
Bernmobil: 165 buses, 48 trams	
RBS: 35 buses, 9 trams	
Postauto: 65 buses	
Dynamic passenger information	
165 SmartInfo acoustic stop signs, controlled by	
analogue radio	
160 MFD multifunctional displays	
Depots	
Altogether 13 (10 equipped with WLAN, 3 with DATIR)	
Third-party components	
DIVA planning system, Apricot route path display	
Software interfaces	
DIVA planning system	

Introduction of the parity system has clearly simplified the work of the dispatcher in mixed radio traffic. We are also satisfied with the way the new transfer protection G2 has been implemented. It illustrates the great expertise that Trapeze has acquired in this field.

Harald Orth, Project Manager Control System, Bernmobil

Results

- Integration across the network
- Transfer protection
- Increase on-time performance

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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