



Full AVLC System Upgrade

Parity system, transfer protection, multi-functional displays

Overview

Stadtwerke Augsburg
Bus and Tram



100 buses



85 trams

Industry

Tram and Bus operator,
Augsburg, Germany

Challenge

Update automatic vehicle location and passenger information capabilities

Solution

Trapeze Intelligent Transport System (ITS)

Results

- ✓ Automatic Vehicle Location and Control (AVLC) capabilities
- ✓ Upgraded Real Time Passenger Information signs (RTPI)
- ✓ Traffic Light Preemption



Background

With their 200 or so vehicles, the German company Stadtwerke Augsburg Verkehrs GmbH conveys around 54 million passengers annually on a network consisting of 6 tram lines and 20 bus routes spanning 200 kilometres with around 700 stops.

Challenge

The Stadtwerke Augsburg Verkehrs GmbH commissioned Trapeze to upgrade their vehicle location system to a modern and fully automatic vehicle location and control system (AVLC). This included the need to obtain better visibility across their network, reduce the amount of missed transfers by customers and provide more informative, real-time information to customers, while upgrading an existing legacy system.

Solution

The new control system includes around 350 passenger information signs, modern on-board equipment as well as a hybrid radio system comprising analogue and GSM-GPRS radio.

Installation was carried out in three stages. Stage one involved migrating the existing control system from LIO-1000 to LIO and exchanging the IBIS1 on-board computers for the new IBISplus models.

Our information signs from Trapeze allow us to keep our passengers fully updated at all times. In this way, our customers can experience the advantages of the new AVLC system with their own eyes. We have also effectively extended the service by networking with external passenger information systems.”

Ludwig Nerb, Head of Traffic Telematics, Stadtwerke Augsburg

THE FUNCTIONALITIES

The LIO AVLC system

Hybrid radio system, analogue radio / GSM / GPRS

Modern on-board computers, IBISplus

Transfer protection, interfaces to third-party systems

Passenger information (350 stop signs; linking to the

Bavarian information system DEFAS)

Data supply using LIO-Data

GPS-based location

Geographic Information System (GIS)

Traffic light pre-emption via radio and IMU

Loading the vehicles with software and data via WLAN

Business Intelligence BI

SAS2 statistics programme

Trouble management system ActiveForms+



THE SYSTEM AT A GLANCE

Control centre

5 dispatcher workstations, 1 data supply and/or statistics workstation, 3 info stations

Radio system

Hybrid radio system, analogue radio / GSM/GPRS

Vehicles

Around 200 vehicles (100 buses, 85 trams)

Dynamic passenger information

Circa 320 SmartInfo signs, circa 30 third-party signs

Depots

2 depots with WLAN/Wi-Fi

Third-party components

EPON planning programme, passenger counting, ticket printer (Scheidt & Bachmann), depot management (PSI)

Software interfaces

Data supply, planning programmes, DEFAS, VDV, transfer protection, statistics programme, ticketing

Results:

- Better on-time performance of trams
- Increased control to the operator
- Communication with dispatch and driver
- Critical transfer protection

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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