Advanced Public Transport Management System (APTMS)
MyCiTi Bus Cape Town

Overview

3 bus depots

5 dispatcher workplaces

130 trunk and feeder buses

Industry
Bus

Challenge
To provide quicker transport to Cape Town's citizens.

Solution
Trapeze Intelligent Transport System (ITS)

Results

✓ Automatic vehicle location and control

✓ Real-time passenger information

✓ Video monitoring, emergency buttons

Background

For the new MyCiTi Integrated Rapid Transit (IRT) Service of the City of Cape Town, Trapeze set up an Advanced Public Transport Management System, combined with passenger information. This project in South Africa's most iconic city started in early 2011.

The MyCiTi service aims to provide quicker transport to Cape Town's citizens on main routes like the airport link or the table view trunk route. Fast articulated buses provide priority transport offering facilities such as electronic contactless ticketing for quicker boarding times, traffic light preemption at main junctions, and real-time passenger information in vehicles, at stops and via the Internet.

The Solution

In the first stage, the MyCiTi system involves a total of up to 350 vehicles on 2 trunk routes with stations, and currently 5 feeder routes. The number of routes and stops will continuously increase to 5 trunk, 24 feeder and area routes and a total of a few hundred bus stops. The infrastructure for the additional stages is currently under construction.

The Trapeze APTMS also integrates TFT passenger information signs at bus stations and terminals and improves passenger safety by virtue of video monitoring and emergency (panic) buttons in the buses.

The functionalities

- LIO automatic vehicle location and fleet management system

- IBISplus on-board computers

- GPS-based location

- Voice and data communication via GSM/GPRS

- Passenger information: Web Display Feed – real-time communication with signs at the stops

- Real-time passenger information for all bus stops via Internet enquiry

- Data supply via LIO-Data

- Transfer of video data (CCTV cameras)

- Uploading software and data into vehicles via Wi-Fi

The system at a glance

Control centre
Currently 5 dispatcher workplaces with VoIP voice communication in the Cape Town Traffic Management Centre (TMC), 16 screens video wall, GIS-map for bus monitoring, data supply via LIO-Data, Depot Data Management (DDM) and Business Intelligence (BI) reporting workplaces

Radio system
GPRS data and GSM voice communication system

Vehicles
Currently about 130 trunk and feeder buses operating; 350 buses planned

Depots
3 bus depots and one staging area with DDM front end and Wi-Fi infrastructure

Third-party components
About 200 TFT stop signs with Trapeze Web Display Feed providing real-time passenger information; onboard video transmission

Software interfaces
To planning and scheduling program for route and timetable planning

Trapeze SOAP route path interface to ticket validation and distance-based fare and ticketing system

On-board CCTV system

To a mobile phone timetable enquiry system

Results:

- Automatic vehicle location and control

- Real-time passenger information

- Video monitoring, emergency buttons

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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