



Project Property

Singapore Land Transport Authority (LTA)

Turnkey ITCS solution providing common management facilities

In March 2014 Trapeze were awarded the contract in Singapore to implement a new fleet management system for the Singapore Government Agency LTA (Land Transport Authority).

LTA are undertaking a massive reorganisation of the way public transportation is funded and delivered in Singapore. They are changing from an operator led, revenue based, service delivery model to a model where the operators contract with the LTA to deliver services to a defined quality level.

During 2016 two additional operators have been introduced into the Singapore environment. The Trapeze system is at the heart of this reorganisation providing a common bus quality management and monitoring platform across all operators with facilities for LTA to monitor and measure the performance.

The functionalities

- _ Intermodal transport control system type LIO
- _ Integrated voice over cellular voice radio
- _ On-board computer, integrated 9 port network switch
- _ Interface to existing GPS location device and data transmitter
- _ Fallback communications through internal modem
- _ Map matching and satnav functionality for Bus Captain
- _ Bus Captain user interface in English and Mandarin
- _ Importing data supply from multiple operators
- _ Recording of all trips and events with reconciliation and operational quality statistics
- _ User and ad hoc reporting capabilities

The system at a glance

Control centre

- _ Hosted system with disaster recovery site using virtualised environment
- _ Dedicated operator workstations and LTA overview workstations
- _ Support for 300 interactive users

Radio system

- _ Redundant data communications over VPN using LTA data transmitter and integral modem
- _ Voice communications via VoIP over cellular using enhanced codec

Vehicles

- _ Initial rollout: 5400 vehicles with expansion capability

Dynamic Passenger Information

- _ Feed to the LTA real-time bus dissemination system
- _ Predictions generated using dynamic statistical history-based prediction engine

Depots

- _ Support for WPA2 Enterprise WLAN in depot with MIMO
- _ Automatic failover to 3G where WLAN is not available

Equipment interfaces

- _ VDV, Ethernet, J1708, CAN BusFMS and digital IO

Software interfaces

- _ Interface to operators' real-time bus dispatch systems providing external trip adjustment capabilities
- _ SIRI interfaces

Support and Operations

- _ 24/7 third level support provided to LTA