

Train Radio Dispatch System

Introduction

The Train Radio Dispatch System (TRDS), is one of the key components in the modern day Communications Control Centres. The system provides voice and data communications through the use of fast computer networks and efficient radio communication resources and has been implemented for Radio communications using Motorola's Dimetra.



Features

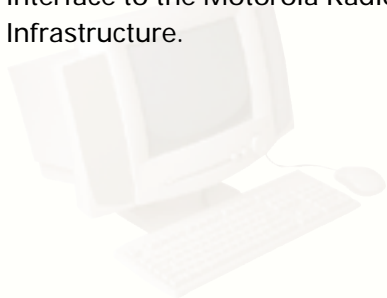
The CAD system enables efficient and reliable dispatch operations for the fleet of passenger trains and maintenance vehicles while the digital radio communications system provides efficient use of communication resources by sharing resources amongst the radio users.

The system consists of 3 main components:

- The **CAD System** at the Control Centre that facilitates communication between the Controller, Train Driver, Station Master, Wayside Maintenance personnel, etc
- The **Motorola Radio Infrastructure** which forms the backbone for the RAIL communications
- The **Trainborne System** that provide the interface to the Train Mobile Radio for the Train Driver to communicate to the controller or the station master.

CAD System

It consists of the CAD Clients at the control centre and station that provide the dispatching function, the CAD and Proxy Server that handles the system level features and provides the interface to the Motorola Radio Infrastructure.



Radio Infrastructure

This forms the backbone of the communications system. It consists of the backend server through which the CAD system performs the Voice and Data dispatching.



Trainborne System

This forms the interface between the radio mobile on the train and the Train driver. It consists of the Train Controller Interface (TCI) and the Train Radio Control Panel (TRCP).



Standard Features:

- Security Functions such as Login/Logout, Access Levels, Zoning, Event Logging, Audit Trail, etc
- Dispatch Functions include call & data dispatching to Train, Station & Wayside.
- External Interfaces to Signalling System, Passenger Information System, etc
- The Train Driver Panel comes with:
 - a. LCD Display
 - b. Function Buttons
 - c. Numeric Keypad
 - d. Handset
- The Train Controller Interface provides the interface to on-board systems such as train PA, PIS, ATC, etc.



System features:

- Silicomp's APPLIBUS middleware that provides Server and Network redundancy
- All modules developed in compliance to IEC60158 SIL 2 standard
- Layered design catering to easy modification / expansion

Benefits

- Improved service quality and safety
- Open standard tools have been used to ensure that the system is easily maintainable.
- Built-in high availability features
- Built-in components to integrate with other communication mechanism
- Configurable GUI layout and Colors
- Easy to navigate features on the GUI to react to emergency situations

Partnership with Motorola

The TRDS product has been developed in joint partnership with Motorola. Silicomp is one of Motorola's Dimetra Application Partner.

The system has been deployed in several of Motorola's Dimetra system in this region. This includes the SMRT in Singapore, KLERL in Malaysia, Taiwan High Speed Rail, KCRC West Rail and many more...



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