



Tranista - Traffic Management

Hitachi's total railway solution is designed to manage speedy and efficient recovery of trains running from unexpected traffic disruptions. It is a well-established highly-automated system taking care of train and traffic management all the way through to the maintenance depot.

Traffic Management System (TMS)

Features timetable based control as its core; integrating railway companies into a unified system. It adjusts dynamically and intelligently when traffic problems occur, exchanging information with related systems to carry out route control operations and timetabling adjustments. The system consists of:

Railway Operations Planning System (ROP)

Integrates all short-term and long-term operation planning data and operation planning processes into a unified system such as train timetables, work schedules and train crew schedules. Cloud-based tool for access from wide range of locations, such as stations, depots and crew offices. No downtime for maintenance and updating. Simple intuitive user interface.

Traffic Control System (TCS) consists of the following sub-systems:

- Train Graph (TG) - presents actual train path as well as predicted train path of upcoming trains in a time/distance graph, allowing operators to make timetable changes easily and efficiently, dynamically rescheduling route control.
- Automatic Route Setting (ARS) - generates the control commands for train routes at the optimal moment and outputs these to the relevant interlockings. This state-of-the-art control technology ensures a smooth, programmed timetable.
- Visual Display Unit (VDU) - presents real-time train location and trackside equipment status in a track layout display, allowing operators to always recognise the latest situation. VDU also enables operators to set routes manually.

Rolling Stock Management and Assignment System

Ensures maintenance activities such as cleaning, inspection and repairs are carried out efficiently and effectively.

- Rolling Stock Management System - integrates various information on rolling stock maintenance, and supports to make an inspection schedule and manage the result.
- Rolling Stock Allocation Scheduling System - supports allocating the correct rolling stock to train diagrams, taking into account factors such as formation length, servicing and maintenance cycles.
- Online Monitoring System - collects and analyse real time data from on-board devices of rolling stock to be utilised for rolling stock management and effective maintenance.

Automatic Train Rescheduling

Hitachi's advanced TMS system automatically and efficiently reschedules train operations in the event of a disruption. The feasibility of our system has been tested using real operation data. Here's how the process works:

- Goal-oriented simulation: Rescheduling solutions are automatically generated taking account of pre-determined rescheduling policy.
- Rescheduling modules: Multiple software modules make customising rescheduling options easier.





Hitachi Information Control Systems Europe

Hitachi Information Control Systems Europe is a provider of software products for railway Command and Control, including simulators and automatic route setting systems. We are also the integrator of Hitachi traffic management systems for the UK and European market, working closely with Hitachi Rail Europe.

Maintaining Safety Standards

Our railway signalling and operations simulation system (TRESim) has a strong record in operator training and is used by Network Rail at signalling centres throughout the UK to train and continuously assess signallers.

Network Modelling

Simulation enables major project schemes to be evaluated before detailed design and implementation. This reduces technical, programme and operational risk. Automated data verification tools provide added assurance that safety integrity levels are consistently maintained.

Traffic Management

In addition to our role as UK systems integrator for Hitachi's Tranista Traffic Management System, our training simulator has been developed specifically for use with multi-vendors' products and solutions. This ensures that the current levels of high fidelity offline training facilities for railway operations are maintained during the introduction of new technology and business change does not compromise safety or performance.