

RAIL AUTOMATION

# TrainMaster Dispatching Software

A safe, efficient and reliable train dispatching solution  
[www.siemens.ca/mobility](http://www.siemens.ca/mobility)



# A smarter way to control rail traffic

TrainMaster from Siemens Mobility is a state-of-the-art train dispatching software. This custom Windows™ application suite integrates all rail operations and accommodates each client's operating rules. Robust and flexible, TrainMaster provides solutions specific to each client's requirements and is based upon experience working with clients across the United States and Canada including freight, intercity, commuter and transit operators.

TrainMaster is designed to meet a wide range of operational configurations for customers of all types. Key features include:

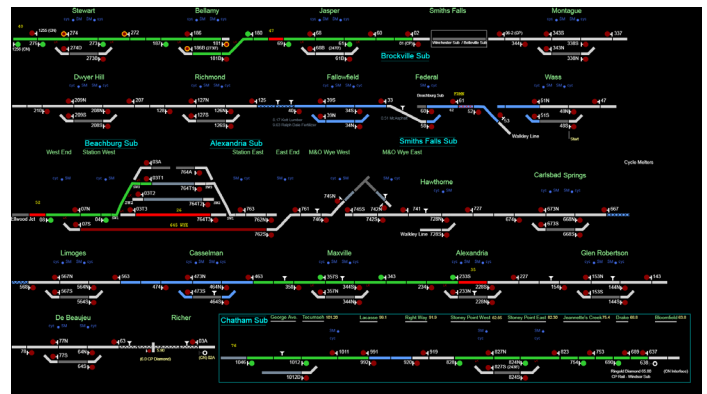
- Easy-to-configure, control topology uses Client/Server design and TCP/IP application messaging, providing scalable solutions as operational requirements evolve
- Seamless CTC, dark territory and yard control integration within a multi-user environment
- Simultaneous availability of multiple track topologies, subdivisions and railroads
- Multiple Rule Sets (CROR, GCOR) supported simultaneously, and customized Form/Rule tailoring services
- Real-time web-based graphic displays including Trackline, Trainsheet and Train Graph
- Multiple integrated field communications protocols
- Integrated DOB, GBO, TGBO with CTC and dark territory authority application
- Operations reports and event log information available for management and maintenance personnel
- Multiple language support: Bilingual interfaces available for all displays and forms

## Emergency backup service

Our emergency backup services go beyond industry standards. An off-site data backup protects information from hardware malfunctions. The dual-server architecture (redundant server) ensures that no data is lost. With multiple dispatch offices, Siemens Mobility provides real-time emergency backup.

## Cybersecurity

Siemens Mobility is committed to robust and cybersecure railway communications and IT infrastructures.



TrainMaster features an easy-to-configure control topology



# Digital Movement and Protection Authorities

TrainMaster's digital authority system increases productivity and enhances safety by replacing voice communications between dispatchers and field personnel with digital data exchange.

## Increase productivity

- Avoid on-hold wait times by personnel
- Eliminate time for voice data exchange
- Field personnel define request
- Dispatcher data-entry greatly reduced
- Dispatcher interruptions reduced

## Enhance safety

- Eliminate voice communications errors
- Secure digital data exchange
- Web interface eliminates paper legibility errors
- Field personnel specify unalterable limits
- Robust data validation processes
- Dispatcher fatigue reduced
- Improved situational awareness by field personnel

## How TrainMaster Digital Authority works

- Field personnel request authorities through a web interface over the Internet (or Intranet)
- The request is registered on the dispatcher's screen
- The dispatcher reviews and accepts or rejects the request
- The system applies applicable blocking for an accepted request
- Status of the request is then displayed on both the dispatcher's control screen and the remote tablet
- Field personnel subsequently request the authority be cancelled
- The dispatcher accepts or rejects the request
- An accepted request is confirmed by the field personnel
- The system removes the authority and associated blocking

The screenshot displays the 'Digital Forms' web interface. It features several sections for requesting authorities:

- Conflicts:** A form with two rows for '1) Foreman' and '2) Foreman', each with 'between' and 'and' fields. Below are buttons for 'Conflicts are acknowledged' and 'No TOP conflicts are acknowledged'.
- Track occupancy permit:** Includes fields for 'TOP No.' (123456), 'to foreman' (Vincent Vega), and 'Date' (2020-01-01). It also has a 'TOP No.' (123456) and 'superceded' field. Below are fields for 'This is authority to' (start track), 'end track', 'between' (100 at Belmont), and 'signal' (100 at Dwyer Hill). There is a 'Call RTC' field, 'Complete at' (10:29), 'RTC' (LOU), 'Ack by foreman' (Christopher Peters), and an 'Initials' field with an 'Add' button.
- Separated work groups:** Includes fields for 'Foreman in charge', 'Time requested', and 'Reported clear', with an 'Add' button.
- Cancellation:** Includes a 'TOP No.' (123456) and 'to foreman' (Vincent Vega) field.

Field personnel request authorities through a web interface

## Additional features

- A secure protocol between office and field applications ensures data integrity between the two systems during planned and unplanned connection interruptions
- Automatic server validation rejects invalid requests, (wrong data points, conflicting movements, etc) providing users with the rejection reason without involvement of the dispatcher
- Dispatchers may optionally activate server algorithms to provide a hands-free or dispatcher free automated authority issuing and/or cancellation service - for example: at times when no trains are scheduled to run on the line
- Compatible with Siemens Mobility's GPS based Authority Adherence Monitoring System and Proximity Warning System

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