

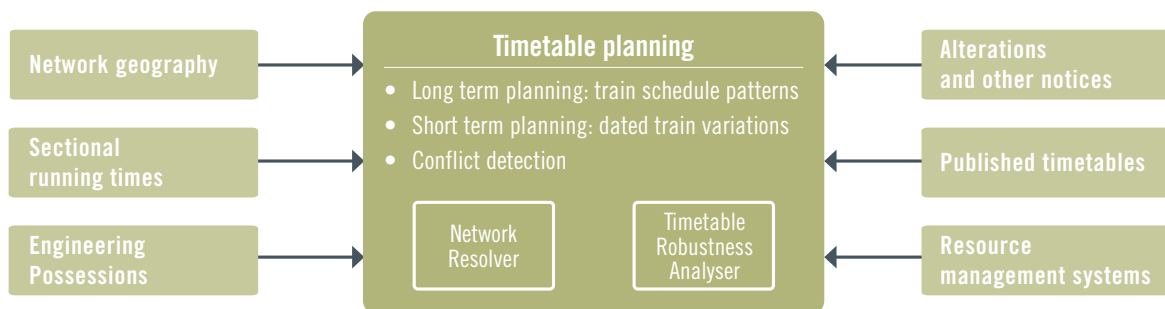


TRAPEZE RAIL SYSTEM TIMETABLE PLANNING

Planning timetables to maximise capacity, assure connections and for resilience to disruption

THE CHALLENGE

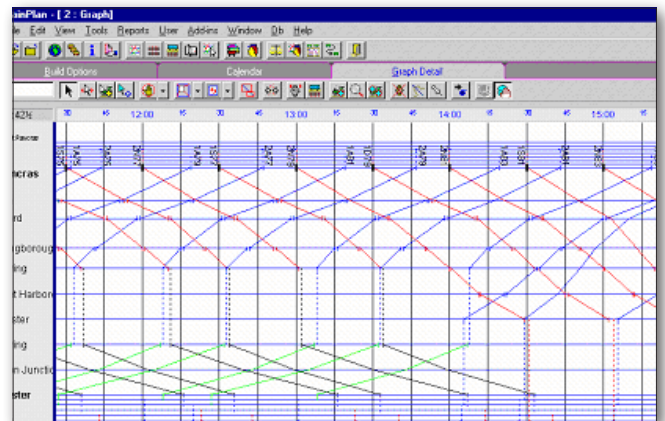
Timetable planning is becoming increasingly complicated. Planners are constantly under pressure to fit additional trains into busy schedules whilst at the same time maintaining connections and increasing punctuality. Timetables need to be adjusted to cope with possessions scheduled for engineering work and unexpected incidents. Infrastructure provider planners need to negotiate with different Train and Freight Operating Companies for short and long-term changes to schedules. End users demand the rapid publication of changed timetables and operating plans, and there are many down-stream systems relying on regularly updated information. The pressures of modern business demand a single business-wide timetable database and tools customised to support each organisation's business processes.



TRAPEZE IT'S SOLUTION

TrainPlan is Trapeze Groups Windows based train scheduling system which provides complete support to the railway operations planning process:

- Quick and reliable train service scheduling using a geographical database and sectional running times for all train types in operation.
- Validation of plans, including conflict detection and resolution and timetable robustness analysis
- Short and long term planning, taking into account track possessions and blockages.
- Preparation and publication of the operating plans to staff and customers



TrainPlan is used by infrastructure owners and train operating companies around the world, including First ScotRail (UK), Trafikverket and GreenCargo (Sweden), JBV and NSB (Norway), Amtrak and New Jersey Transit (USA), Israel State Railways and CFR (Romania).

Planning timetables to maximise operational efficiency

Example scenario: The introduction of new rolling stock enables the revision of the timetable to give a more frequent, consistent and reliable service pattern:

- New point-to-point timings allow the planners to adjust running times of existing services.
- The time-distance graph is used to identify white space where extra services could be added.
- The system is used to check that headways, platform reoccupation allowances, train turn-rounds etc. conform to planning rules.
- The new service pattern is checked for conflicts and the robustness of the timetable analysed to minimise potential penalty payments.

Using TrainPlan, service planners have created an efficient, robust timetable that will improve customer satisfaction and increase return on assets.

KEY FEATURES

Graphical displays

Time/distance graphs allow full on-screen interaction so planners can retime trains using 'drag and drop' for all or part of their journeys. Other graphical views include platform graphs, corridor graphs and track schematics.

Tabular data display

Train details can be input and edited in spreadsheet format, where key information such as point-point timings and dwell times at stopping points can be easily validated or changed.

Conflict detection and resolution

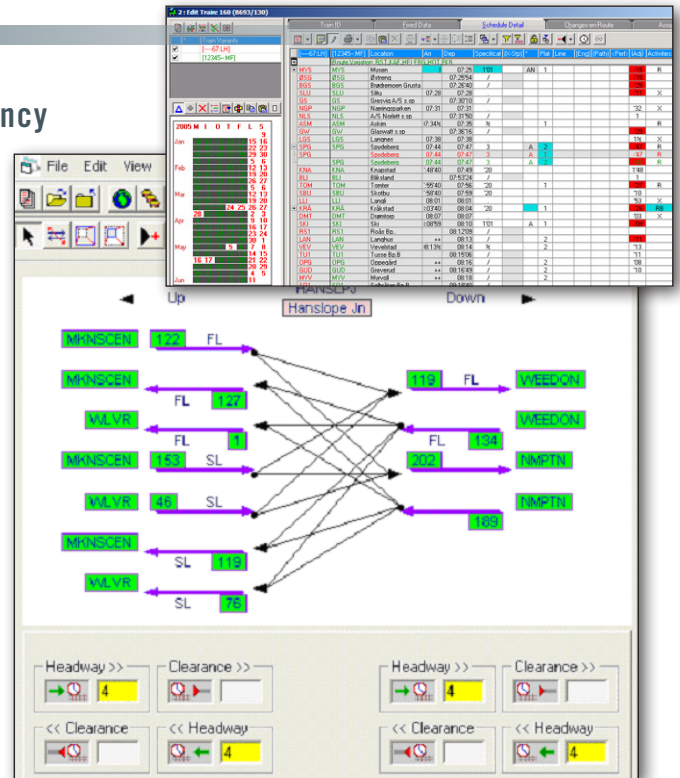
Conflicts can be detected and displayed in several ways and TrainPlan provides tools for both manual resolution (in accordance with planning rules) and, where possible, automated resolution.

Possession planning

Details of scheduled track 'possessions' can be stored within TrainPlan, linking individual track sections to the appropriate dates and times. Possessions are shown on graphic displays for easy visualisation and manipulation of affected trains.

Short and long term planning

Several independent timetables may be managed and maintained within the system, for planning of new timetables or for short-term planning.



Track schematic

IN BRIEF

- Advanced train timetable management and update
- Powerful graphic and tabular displays with complete display of service schedule information
- Advanced customisation to fit with existing business processes
- Comprehensive reporting, printing, publishing and data export to downstream systems
- Bid/offer support for infrastructure providers and train operating companies
- Multi-user, multi-site system, using an Oracle® database
- Access permission controls
- Automated network conflict resolution (optional)
- Integrated resource planning module – ResourcePlan (optional)
- Advanced timetable robustness analysis module (optional)

TRAPEZE GROUP:

Trapeze Group supplies reliable, scalable and innovative solutions for the rail and road transport sector. Hundreds of private and public organizations in Europe, North America and Asia-Pacific have selected software solutions from the Trapeze Group in order to improve and broaden the efficiency, quality and scope of their transport solutions, thus enabling them to provide their customers with even more services in a more reliable and cost-effective manner.



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