Trapeze Rail System
Timetable Planning

www.trapezegroup.co.uk

Trapeze™

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 Group Rail's solution

The Timetable Planning module is Trapeze Group's Windows based train scheduling system which provides complete support to the railway operations planning process:

- Advanced train scheduling and timetabling system which provides complete support to the railway operations planning process.

- Powerful graphic and tabular displays with complete display of service schedule information allowing easy modification or addition of services.

- Non-prescriptive infrastructure models.
- Conflict detection and resolution (e.g. TPR's).
- Full validation against Infrastructure & changes (e.g. TSR's).
- Integration with simulations for "what if" scenario planning and Running Time Calculations.
- Data integration with external systems.
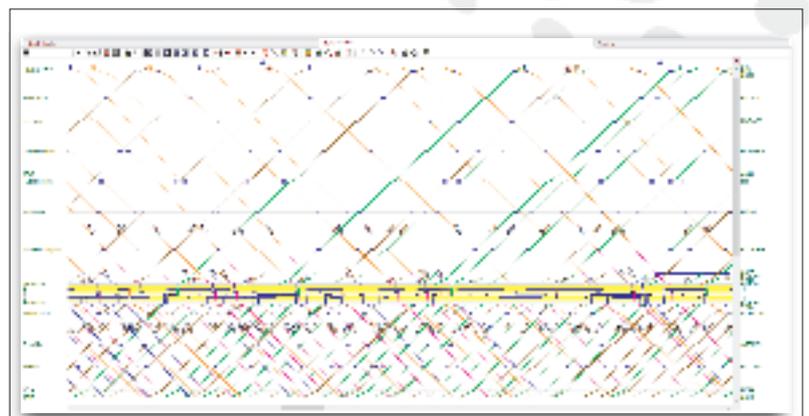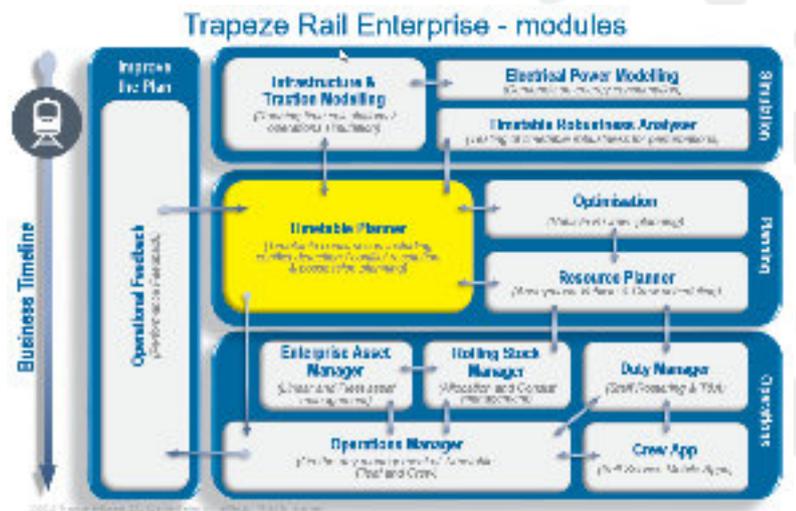- Comprehensive reporting, printing, publishing

Figure 1 Example train graph, the use of color, line thickness and style can be configured.

The Train Planning module is used by infrastructure owners and train operating companies around the world, including the UK, Sweden, Norway, USA, and Australia.

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

Figure 2 Train edit form highlighting differences between a weekday and a weekend service
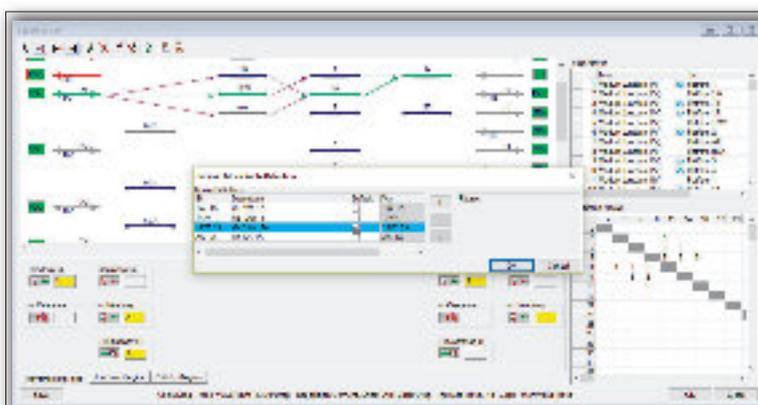
Figure 3 Model direct and indirect moves at a location

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 train 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 changes.

Conflict detection and resolution
Conflicts can be detected and displayed in several ways and Timetable Planning module 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 Timetable Planning module, linking individual track sections to the appropriate dates and times. Possessions are shown on graphic displays for easy visulisation and manipulation of affected trains.

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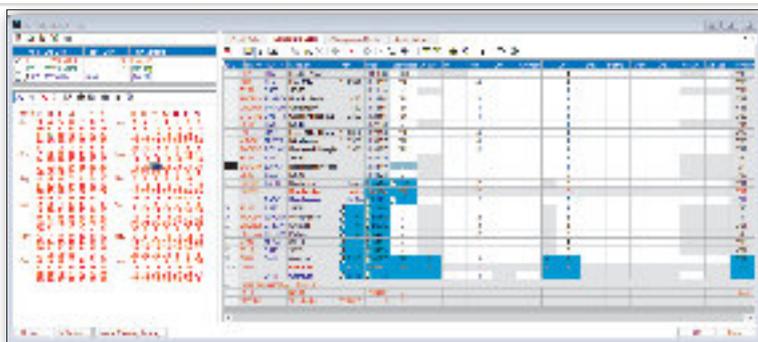
In Brief

- 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 delivers solutions that consider the full 360 degrees of passenger transport. Hundreds of government and commercial organizations across Europe, North America and Asia Pacific have turned to Trapeze to realize efficiencies, enhance the quality and scope of their services, and safely transport more people with less cost.

Trapeze ™

Here for the journey

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