RailSys - 5 -9-5

Developer

◆ **GmbH (RMCon) Rail Management Consultants**

◆ **March 1999 founded company, are a rail transport management and a software development enterprise**

RailSys

◆ **The timetable and infrastructure management program**

◆ **A software system for analysis, planning and optimization of operational procedures and facilities**

Applications

◆ **Timetable construction**

◆ **Running time calculation**

◆ **Planning of capacities**

◆ **Infrastructure planning**

◆ **Validation of nationwide basic interval timetables**

◆ **Investigation of operational quality, punctuality and guaranteed connections**

Database

◆ **Exact microscopic display of all data sectors:**
- **Infrastructure**
- **Vehicles and train types**
- **Timetable and operational data**
- **Routing rules**

RailSys Modules
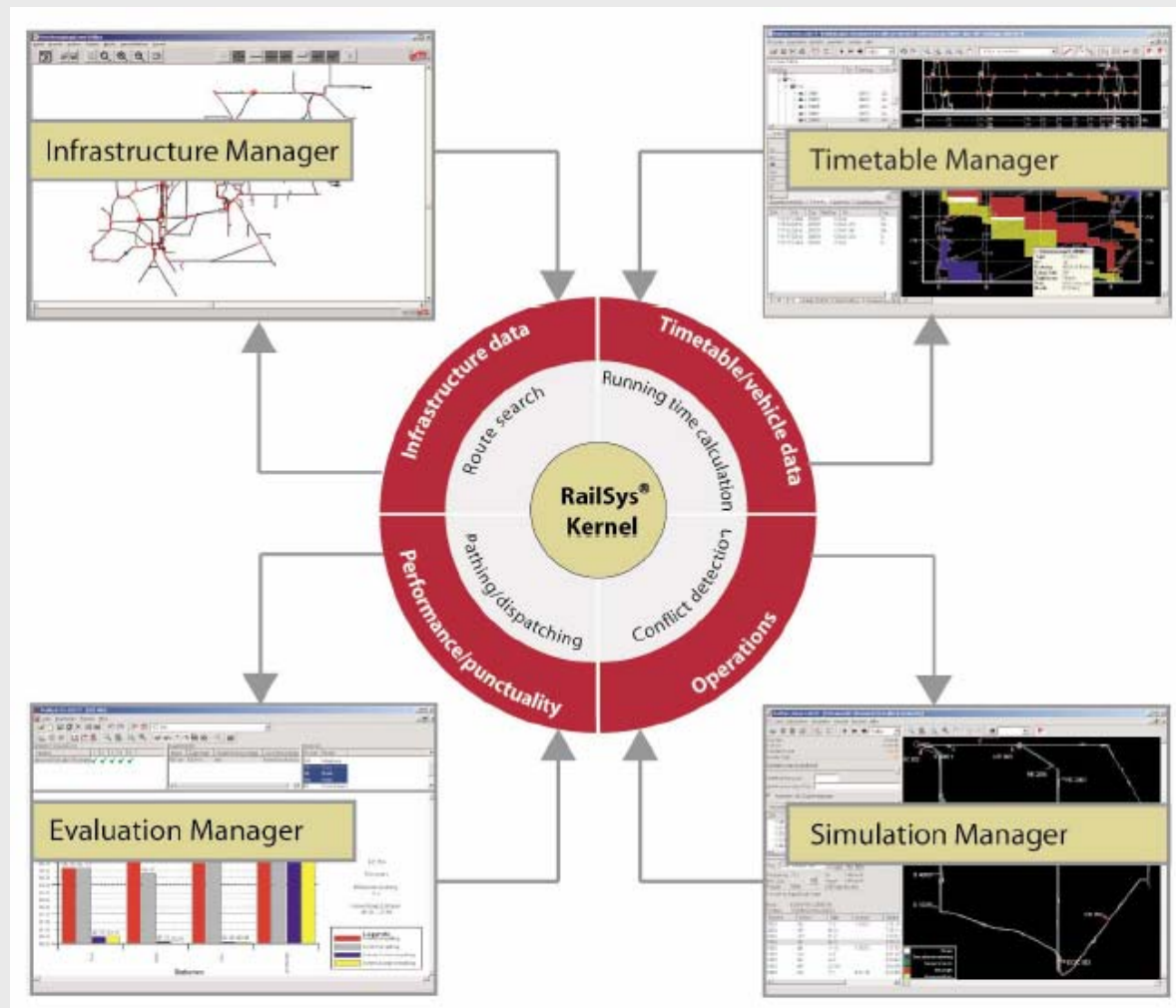
Infrastructure Manager

◆ **All data may be entered with an accuracy of one meter.**

◆ **Configuration parameters for every element of track include**
  - **Length**
  - **Maximum speed**
  - **Gradient**
  - **Curvature/Radius**
  - **Electrification**
  - **Tunnel cross-section**
  - **Superelevation**

Infrastructure Manager

◆ **Any size of networks**

◆ **Macroscopic display**

◆ **A multitude of modern signaling systems:**
  – M/P signalling system including PZB (German automatic train protection)
  – Automatic train control (ATC)
  – Multiple aspect/section signalling
  – Running at sight (e.g. tram)
  – Moving block (running in absolute braking distance)
  – Transfer of signal terms via shortloops and balises (e.g. ATC system Denmark/ETCS)

Infrastructure Manager – Macroscopic Network

Infrastructure Manager

Tabular data processing

Tool bar

Error list
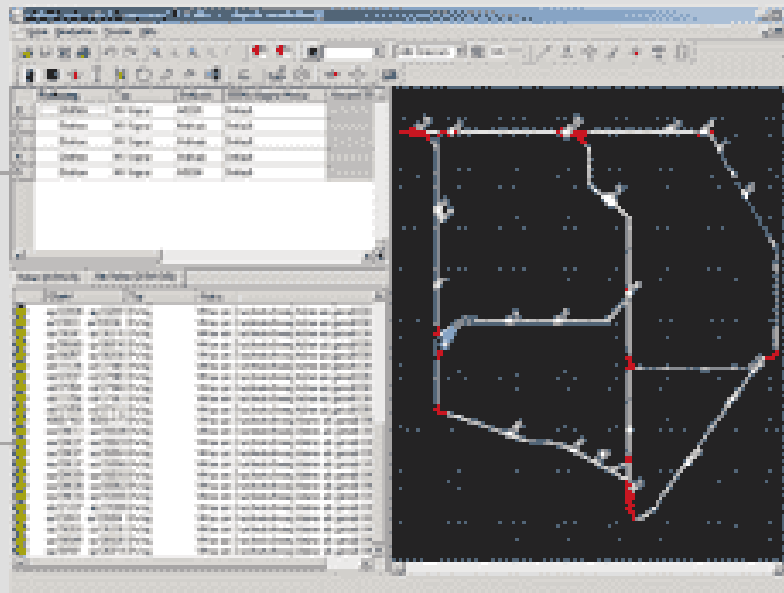
Interactive graphic window

Infrastructure Manager - Microscopic network

Infrastructure Manager - Zoom on microscopic network

Timetable Manager

◆ **From the Timetable Manager you can enter a train and its timetable data**

◆ **The timetable data may be edited interactively in large tables or in simple graphical manner**

◆ **Every modification concerning the train route causes a new calculation of the minimum running time**

Timetable Manager

◆ **When creating a timetable or change an existing timetable some conflicts happen. These conflicts will be displayed for the entire network.**

◆ **The results of the timetable construction may be printed as graphical timetables and track occupation plans. Furthermore, all tables may be exported into Excel or ASCII formats.**
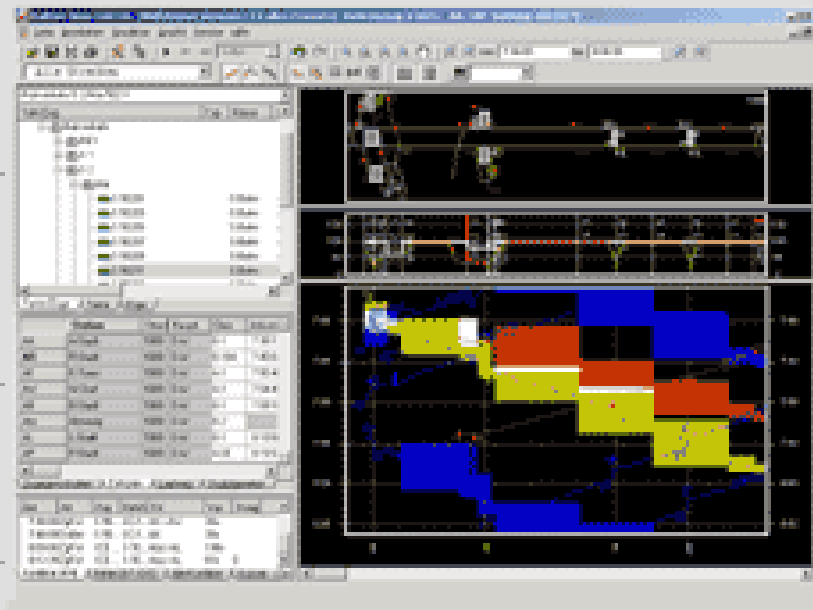
# Timetable Manager

Timetable Manager – Track Occupation
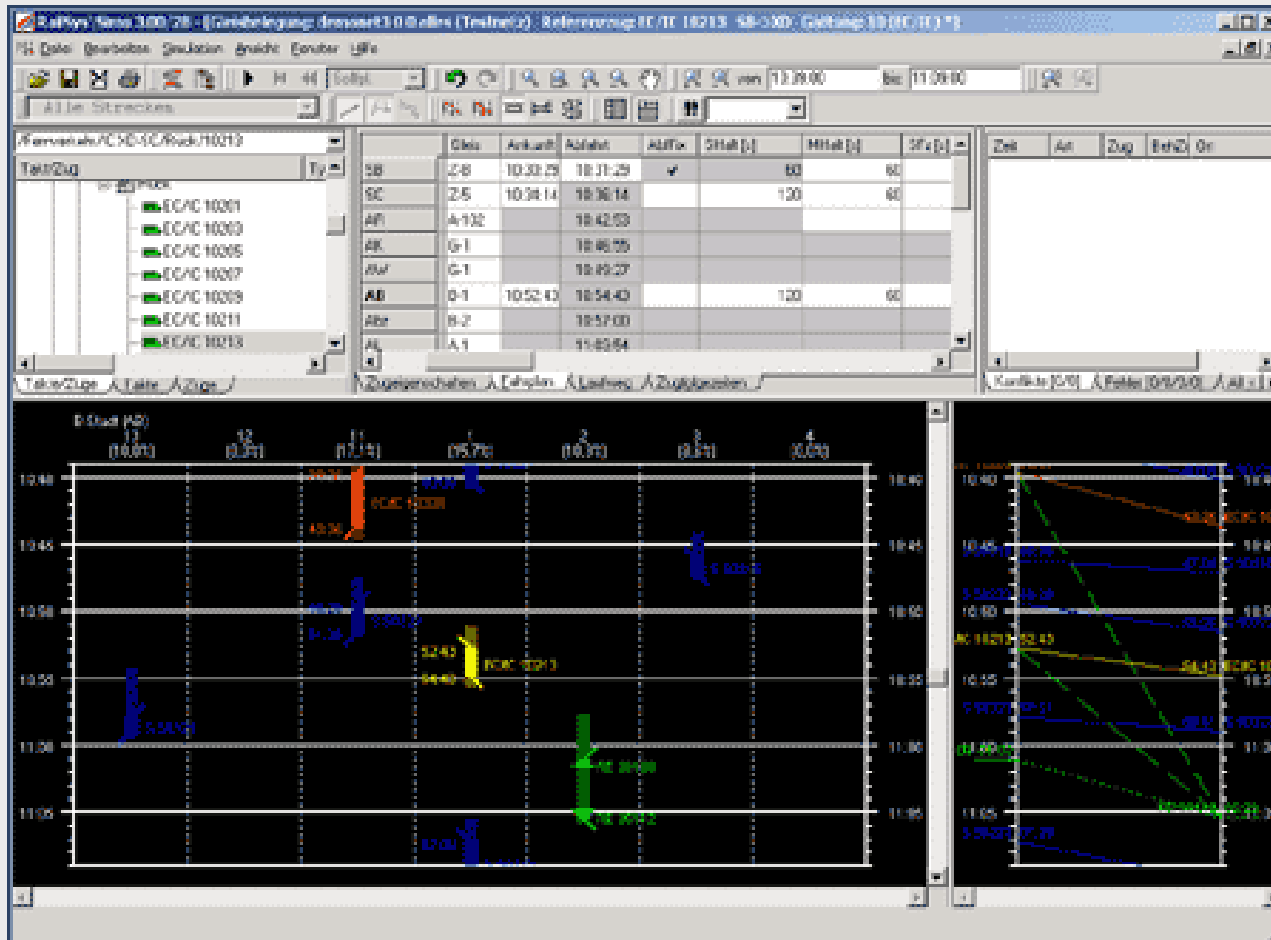
Simulation

◆ **Synchronous and event orientated simulation**

- The position of all trains in the network is calculated simultaneously. Its advantage is that all trains run in interaction with the signaling system as in reality including the influence of other trains.

Actual speed graph and time distance graph after the simulation
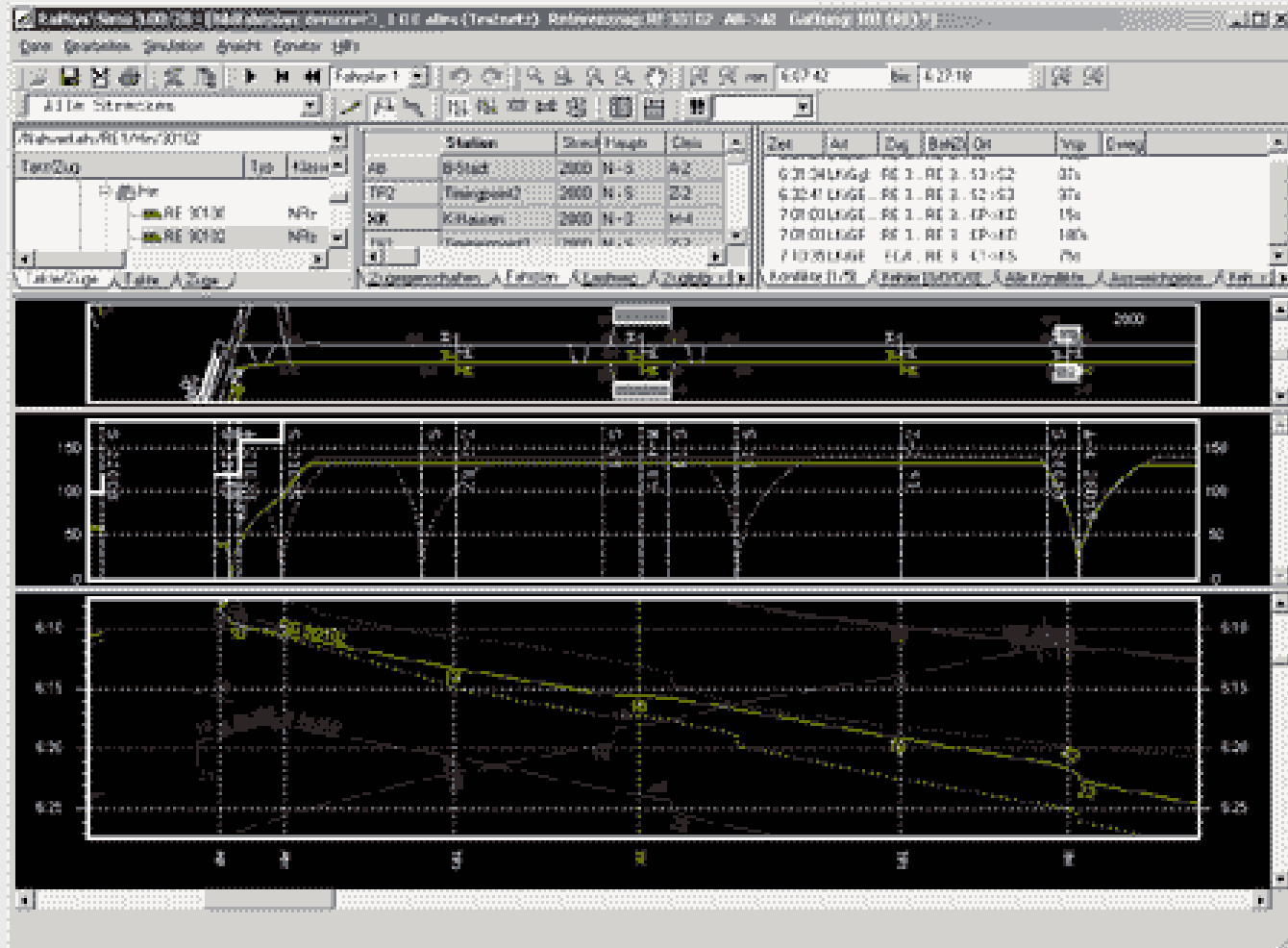
Track occupated timetable and operational simulation
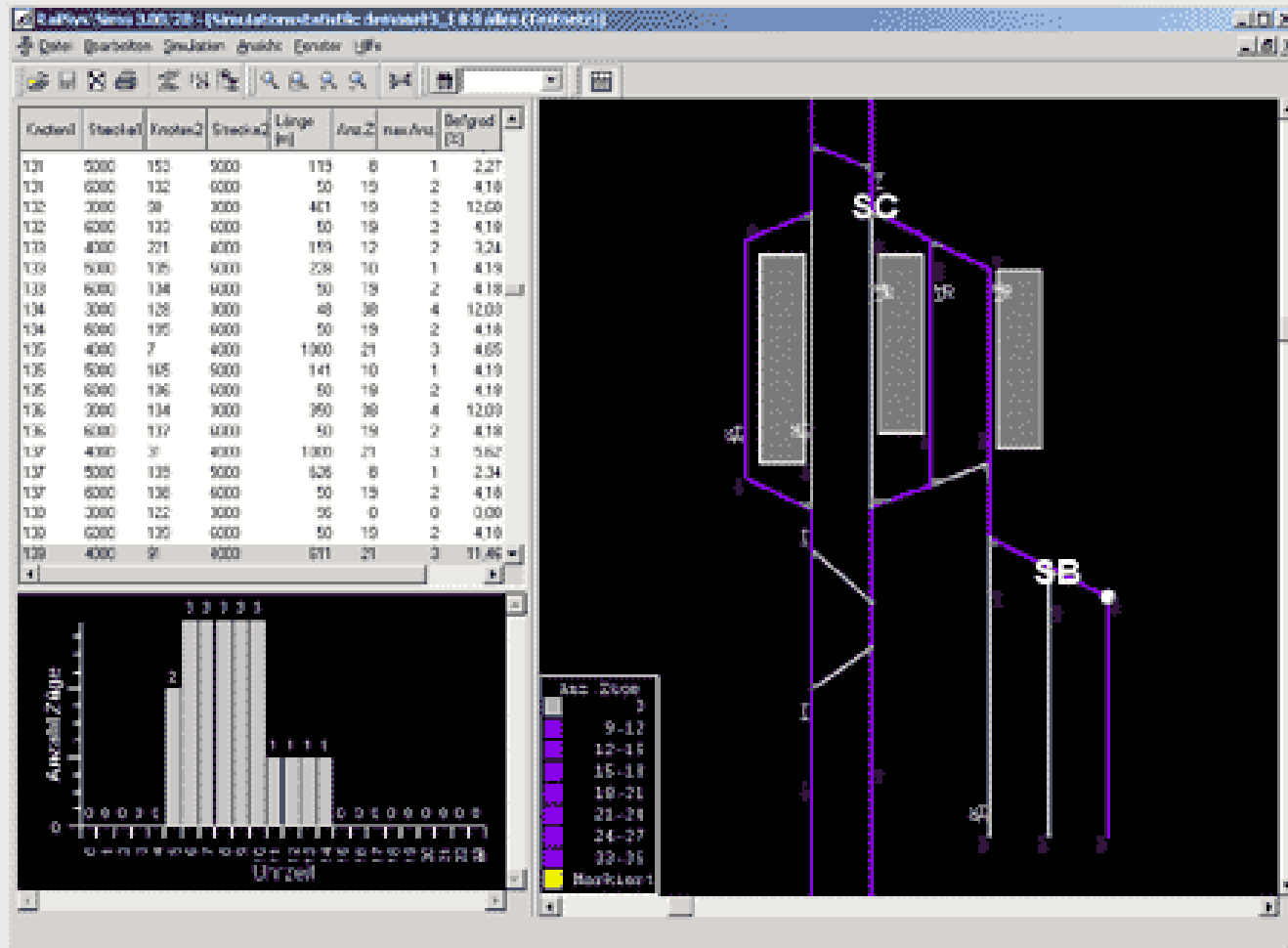
Statistical Evaluations

◆**Data to evaluate**

– Average delay per train (at arrival and/or departure)

– Number of delayed trains (at arrival and/or departure)

– Rate of delayed trains (at arrival and/or departure)

– Distribution of delays (at arrival and/or departure)
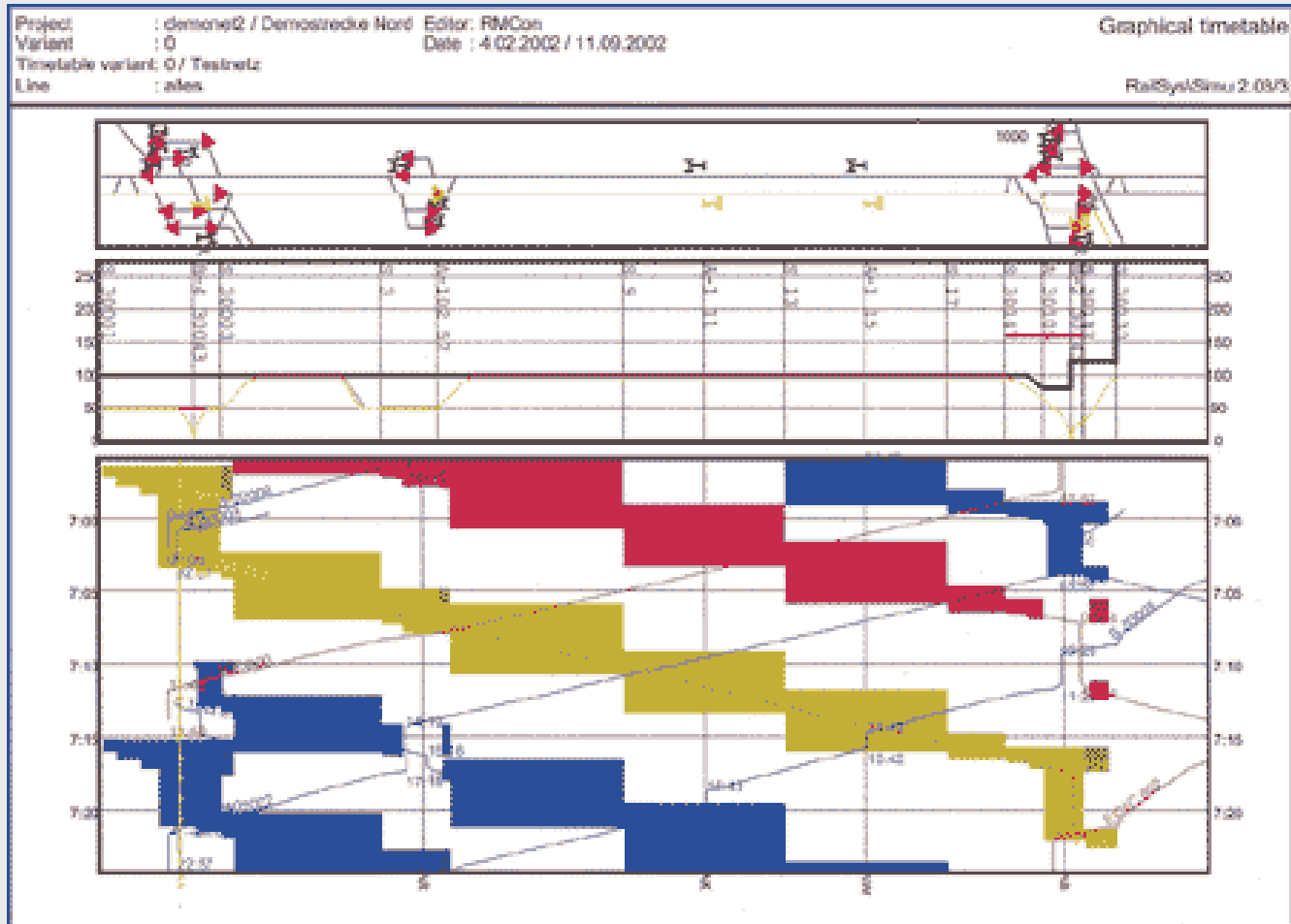
– Delays between two stations

System requirements

◆ **Windows NT/2000/XP**

◆ **Memory: 256 or 512 MB (according to size of project)**

◆ **Hard disc: 300 MB**
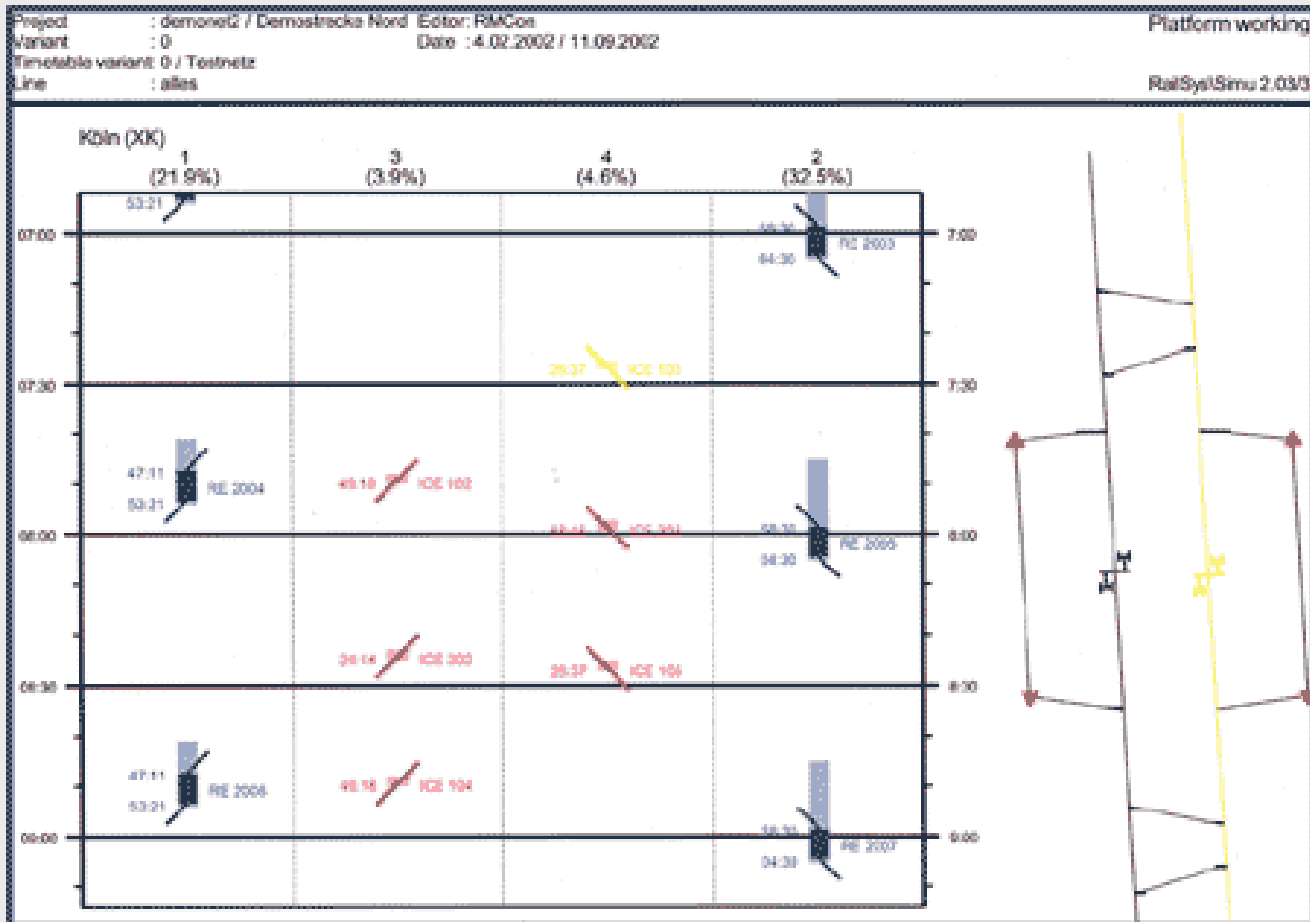
◆ **Screens: resolution of 1,024 x 768 or more**

Output possibility

◆ **Graphical timetable**

◆ **Track occupation diagram**

◆ **Delay statistics**

◆ **Train lists**

◆ **Running time tables**

◆ **Track networks**

Print of a graphic timetable

Print of track occupation

Print of running Timetable

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5-9- RailSys

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