RailSys® Suite
Innovative IT solution for railway transport

a product by
Rail Management Consultants International GmbH
Timetable construction Simulation Innovation Working timetable Remaining capacity Railway Redundancy-free Graphical timetable Punctuality Time-distance-graph Asset management Database Access Power consumption Administration Information portal Robustness Train characteristics European train control Workflow Low speed sections Usable capacity Perturbation Strategic planning Calculation Track occupation table Incident management IT solution Operational costs Position plan Traffic management Energy saving Platform allocation Train classes Network graphs Signalling systems Variant management Track blocking Lateness development Feasibility Business rules Documentation Availability Running times Construction management Reliability Time stamp Path management Rolling stock Evaluation Manager
Using railway infrastructure requires planning and disposition processes, which support an operative cooperation of all parties involved, especially in today’s time of a growing traffic density.

Achieving a smooth and failure-free operation requires the sharing of information between all involved parties to make essential information available wherever and whenever needed. As the different systems that are operated by individual partners are often incompatible, it is either costly or impossible to exchange data.

With RailSys® it is possible to bundle all the information in one system and exchange it with other systems.

There are several system components available to realise your goals with RailSys®, depending on your scope of work and the tasks that need to be handled. Everything is possible, from the application to the planning to the routing, information output and controlling.

It is easily possible to configure the software and its functional scope for the various users. This enables your employees to enter and access information depending on their field of activity.

The following processes can be executed in the integrated cross-process timetable and infrastructure management:

- Application
- Planning
- Order
- Information
- Operation
- Documentation

RailSys® links the systems for a smooth operation of your train connections.

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Workflow oriented

RailSys® enables the technical as well as operational planning for railway transport. The workflow of our software is demonstrated on these two pages. It directly corresponds to actual planning and process steps that are known from the railway business so that each action in the system follows your processes and is transparent to you. The new and improved appearance of the graphical user interface that we introduce in RailSys® 10 accentuates this and its design supports the workflow.
During all of your planning steps, we can respond to your individual solution finding as the parameters are adapted.

On the following pages, we will give a detailed explanation of the possibilities that RailSys® may offer to your company.
RailSys® is not just a simple program, but a software system that supports you in solving your daily project challenges and fulfilling many tasks according to your questions. You cannot only manage your existing infrastructure, but also maintain and display different variants during work phases.

First, you gather the standard infrastructure of the network with all its parameters such as track lengths, speed, gradients and stations. Route blockings and speed restrictions can also be entered according to the planned infrastructure works. With an increasing level of detail of all data collected, your results are becoming more and more reliable as well.

Additionally, you have the option to publish information about the daily infrastructure, timetables and operational data to a selected audience via RailSys® MapPortal.

Identifying remaining capacities is essential for the planning, especially for long-term planning processes. You can e.g. determine the amount of train paths that are available for alternative routes in case of works that are executed on the track. RailSys® assists you in finding the right balance between over- and undercapacities.

A unique feature within the system is the link between each graphic and the associated tables – our customers are convinced of the easy handling. For instance, if you change the departure time of a train within a station in the timetable, all correspondent graphics such as the time distance graph and platform working are updated simultaneously and vice versa. This enables your employees to discover an ergonomic and user friendly software that is tailor made for their individual use depending on their habit, the current requirements and the availability of data and documents.

RailSys® links information of train operating companies and rail infrastructure companies.

Railway infrastructure companies
Train operating companies

As a train operating company it is your aim to transport goods or to bring passengers to their destination comfortably and on time. RailSys® enables you to perform these tasks successfully and to find the most reliable connections.

Therefore, train characteristics of your rolling stock are used to calculate journey times and plan your rides in detail.

With the help of the integrated timetable and operational simulation, all of your timetable planning can be verified by you and its quality and robustness can be determined immediately. This outlook into the future enables you to determine any difficulties that might occur in reality in advance. Delays and bottlenecks are displayed and identified in time to prevent you from investing money in the wrong measure.

All of your data, from timetables to statistics, can be exported in various file formats or directly printed from RailSys®.

Punctuality brings confidence. Be on time with RailSys®.
Software systems of RailSys®

**Infrastructure Manager**
Record your network infrastructure in a detailed infrastructure model that is accurate to the meter. Adjustments are possible at any time and are transferred into all other systems. The size of the track network is unlimited because of the flexible and resource friendly data model. The macroscopic view of your network gives an overview of the network. If you would like to go into detail, you can navigate through either a schematic or a GIS-based display of the infrastructure.

**Timetable and Simulation Manager**
Drag-and-drop technology in a graphical and interactive user interface allows for an easy and quick planning. All of your changes are tested by the integrated running time calculation and conflict detection, supporting you to create a successful and reliable solution. Checking the use of alternative rolling stock immediately provides you with fresh and updated running times. Any changes to the infrastructure base can be modelled and processed in this system. With the simulation you can directly verify the quality and robustness of your planning.

**Evaluation Manager**
Statistics show how well your planning works and enable you and your colleagues to communicate the results with your stakeholders. Our Evaluation Manager offers printable graphic results of your planning that can easily be integrated in your reports and presentations. Maps of the entire investigation area give you information about punctuality and bottlenecks. Detailed results can be found in various bar charts, line graphs and tables.

**Print Manager**
You can put your planning down to paper with the aid of our Print Manager. It supports the output of documents which are generally used in railway companies, such as TSR booklets, position plans and working timetables. The information used in the print documents is directly based on your planning results from other RailSys® software modules. Of course, you can adjust the layout to your liking.

**Database Manager**
When working with our multi-user solution, our Database Manager is important for you. As the key interface between your project data in the database and the user, it enables you to manage your system, your data and users with a graphical and user friendly interface. You can comfortably manage the access rights to your data with the help of the group, role and right management. The Database Manager is the central access point to your RailSys® Enterprise.
With RailSys® we can offer software off the shelf for a fair price. However, from many years of experience, we know that clients might have their own requirements and needs. Hence, we appreciate your wishes and are happy to develop new functions or customise them accordingly.

While it is possible to use RailSys® intuitively, we would like to offer to teach your employees the handling of our software. Thus, they learn how to use RailSys® properly and can bring your results to perfection.

It is often the case that users notice during their work with the program, what kind of adaptations would make the handling even more comfortable for the individual. As a matter of course, an adjustment and extension of the program for your personal needs is also possible afterwards.
Technical characteristics

The user interface of RailSys® is based on the interface technologies of well-known and commonly used software. We followed this idea even more and improved this concept in version 10 to make our system even simpler and more intuitive to use.

RailSys® offers the possibility to work with one or several screens, depending on your liking and working habit.

Working online or offline does not matter in RailSys® Enterprise anymore. You can work on your data offline and smoothly synchronise it with the database afterwards. That way, you can push forward your projects wherever and whenever you want.

RailSys® has a modern and flexible user and access rights administration, so you can give every employee the respective information and user rights that are required to solve tasks successfully. The software is deployable as a single user solution as well.

We value the possibility of a communication between RailSys® and other programs you might use, no matter if these are up- or downstream systems and therefore offer plenty of export and import interfaces.

Not only can you operate your own planning with RailSys®, but also establish an interface to your clients with the web-based RailSys® MapPortal, to include them in the process and to transparently communicate your decisions.

RailSys® is usable on the standard operation system MS Windows.

The satisfaction of our customers is our priority. For software development, we focus on an integrated quality management corresponding to the standards.
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