



Issue: January 2019

### General: Network objects adapted to layers and groupings

In many cases, the layers and groupings still had to be rearranged. It has also been shown that layers and groupings should be more separated from each other. As a result, there are always two separate fields for selecting the layer and the groupings. From now on, train number, train number index and layer belong together. These three elements form the primary key of a train. Groupings and train category are independent of this. The train category can change during the course of the train.

### iPLAN function "Copy trains from other FBS-networks": Function unlinked from timetable period

The iPLAN-function "Copy trains from other FBS-networks" has become very popular. Here, you can now select the layer into which the train is to be transferred. In addition, it is now possible to transfer trains even if the timetable periods of the source and target networks do not match. In any case, a postprocessing of the traffic days is necessary here, but for the most applications the transfer of the correct arrival and departure times to the target network is most important.

### Statistic module : New table and improved filter options

You can find the new evaluation in iPLAN statistics under the tab page "Tariff and recordation zones" as "Sums per Line". Also the filter settings have been adjusted that it can be more clearly defined which

- layer
- groupings
- train category
- product
- line
- user-defined fields

should be evaluated or not.

## Customer's timetable: Layer comparison enabled

It is now possible to display several layers in the timetable. The trains are highlighted with the background color of the layer. Trains, that run on all selected layers, get the background color of the sheet. Individual background colors of a train overwrite the color defaults from the layer selection. Of course, the display of the background colours must be activated in the settings of the table timetable. To make it easier to create long-distance traffic tables, several entries can now be marked for deletion in the window in which the stations of the customer's timetable are selected.

Train	R 80610	R 80612	R 80612	R 80614	R 80614	R 80614	80
from							
Sonneberg (Thüringen) Hbf.	9.32	10.06	10.32	11.06	11.32		1:
Sonneberg (Thüringen) Ost	x 9.35	x10.09	x10.35	x11.09	x11.35		x1:
Sonneberg (Thüringen) Nord	x 9.38	x10.12	x10.38	x11.12	x11.38		x1:
Hüttengrund	x 9.40	x10.14	x10.40	x11.14	x11.40		x1:
Blechnammer (Thüringen)	9.44	10.18	10.44	11.18	11.44		1:
Steinach (Thüringen) Süd	x 9.49	x10.23	x10.49	x11.23	x11.49		x1:
Steinach (Thüringen)	9.51	10.25	10.51	11.25	11.51		1:
Lauscha (Thüringen)	10.01	10.35	11.01	11.35	12.01		1:
Oberlauscha	x10.06	x10.40	x11.06	x11.40	x12.06		x1:
Ernstthal am Rennsteig	10.12	10.46	11.12	11.46	12.12		1:
Neuhaus-Igelsieb	x10.15	x10.49	x11.15	x11.49	x12.15		x1:
Neuhaus am Rennweg	0	10.16	10.50	11.16	11.50		1:
to							

Green = Timetable Version 1  
Red = Timetable Version 2

Using this update CD, the installation of the driver under the Windows 10 operating system has been simplified. This makes it easier for you to switch to a new computer.

## Graphic timetable: Calculation of the occupancy rate

The occupancy rate is calculated for the active layer. Therefore, please select the layer to be calculated before choosing the function. You can also use a right mouse click on the list of evaluation sections to activate a visualisation of the trains after the calculation. In this case, the trains are copied to a new separate layer and can then be displayed accordingly.

The RailML® import now also supports XML files with several timetable periods.

## Graphic timetable: Energy demand calculation significantly expanded in FBS

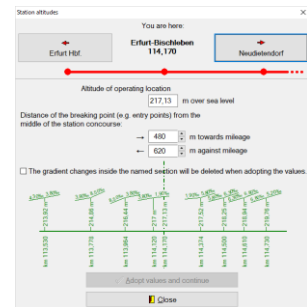
So far, FBS has only calculated the energy demand at wheel. All efficiency ratios were not taken into account in this calculation. With the new version of FBS it is now possible to also calculate the energy demand at the pantograph (with efficiency ratios). In the future, calculations will also be possible with consideration of energy storage device of a vehicle (battery). These functions can now be found in the train diagram of the train data window (Button "Energy").

For this purpose, it is first determined once how much energy can be fed back by the scheduled braking process. The current version is only a look into the software development. More detailed information follows after the completion of the function.

You can now also view graphic timetables for direct connections at the train overview.

### Infrastructure: Easily set altitudes

The function for setting station altitudes has been simplified. This function also allows experts to easily revise the gradient profile of a line. It is now easy to switch back and forward between operating points without having to change anything in the data.

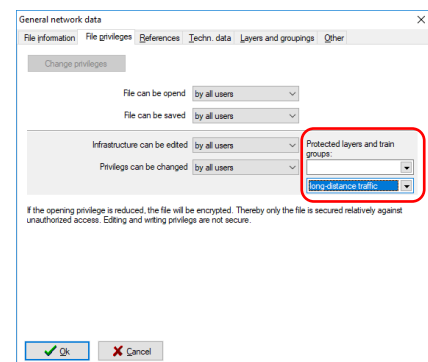


### Circulation plan: Adaptation to the new functionalities of layers

When synchronizing older circulation plans, too many train parts appeared in the circulation plan because the FBS-circulation plan was not yet adapted to the new functionality of the layers. With the new version of FBS this phenomenon has been fixed. When creating new circulation plans, the system asks you for the layer from which the data is to be taken. Each circulation plan can be assigned to only one layer.

### Graphic timetable – Protect groupings

In connection with the revision of layers and groupings, the philosophy was adapted after which trains are protected or not. From now on no trains can be added to a protected grouping. It is also possible to copy elements from a protected grouping to use them in other grouping. A train is protected even if it is contained in several groupings and only one grouping of it is protected.



### Graphic timetable: Import connections into graphic timetable

In the traffic input data of the graphic timetable, connections can now also be exported and imported again accordingly. This means that this data can be exchanged quickly between different networks.

### Graphic timetable: View settings

It is now possible to switch on and off the background color for the margin of the graphic timetable, depending on the selected layer, in the layer selection window. The coloured margin can't be printed, but it helps to orientate when working with several layers. The selected layer and the selected traffic days are displayed in the status bar. The layer will have the background color of the layer and the traffic days will have a red color if it is not set as daily. Also all settings of this window can now be transferred to all other open and future open timetables with one click of "Ok for all". The "ok for all" button has also been added to the window for selecting the displayed traffic days



**Institut für Regional- und  
Fernverkehrsplanung**

iRFP e.K.  
Hochschulstraße 45  
D-01069 Dresden

Tel: +49 351 470 68 19  
Fax: +49 351 476 81 90

Internet: [www.irfp.de](http://www.irfp.de)  
E-mail: [info@irfp.de](mailto:info@irfp.de)