trenissimo

tutorial - part 2: Hands on TRENO

How does this tutorial work?

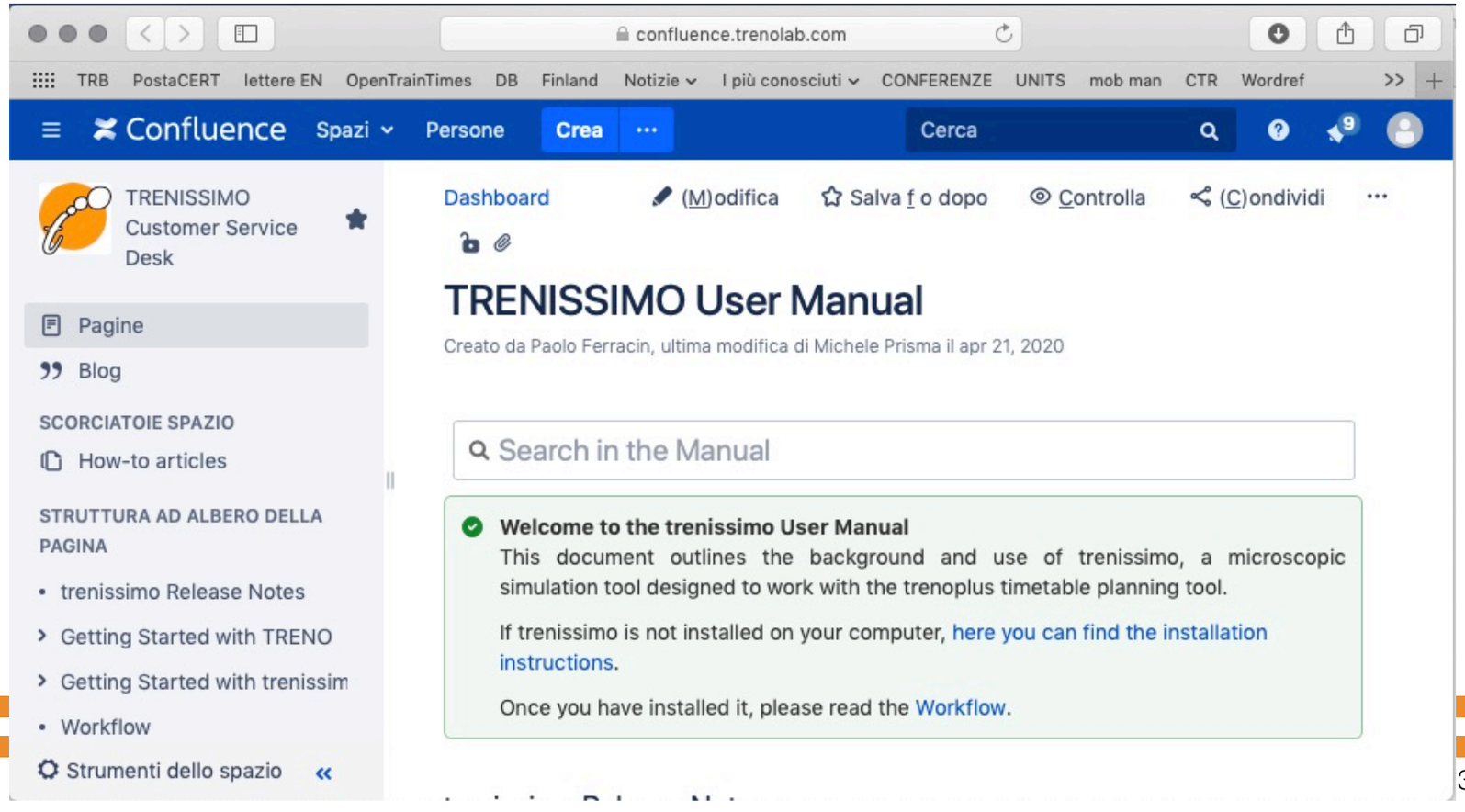
- This tutorial is formed by a set of slides and not by a video. This allows more easily going back and forth in the instructions.

- Normal text is in black on white background.

- A light blue rectangle indicates the actions you should repeat on your computer

Before starting: Online Manual

- Please get a look at our online manual at:
  - **https://confluence.trenolab.com/display/TRENISSIMO/**
- if you don't have the credentials to access, please send a message to support@trenolab.com
- The manual covers all functions of the tool. Please don't hesitate to ask for clarifications or more detail in the explanations!



what do we find in TRENO?

- Following what we saw in introduction, TRENO stores the following data:

item	TRENO	trenissimo
Train Categories	✔	-
Timetable	✔	-
Macroscopic Infra	1. in TRENO 2. in trenissimo: Sync infra 3. in trenissimo: edit infra micro accordingly	
Microscopic Infra	-	✔
Rolling Stock	X (only list)	X (All characteristics)
Simulation Areas	✔	-
Simulation settings	✔	-
Delay distributions	✔	-

Agenda

In this presentation we will get a look at the following actions:

- The first time you run TRENO
- Start and run TRENO
- Scenarios
- Duplicate a scenario

- General commands, Menus
  - Edit, Rolling Stock, Timetable, Network views, *trenissimo*

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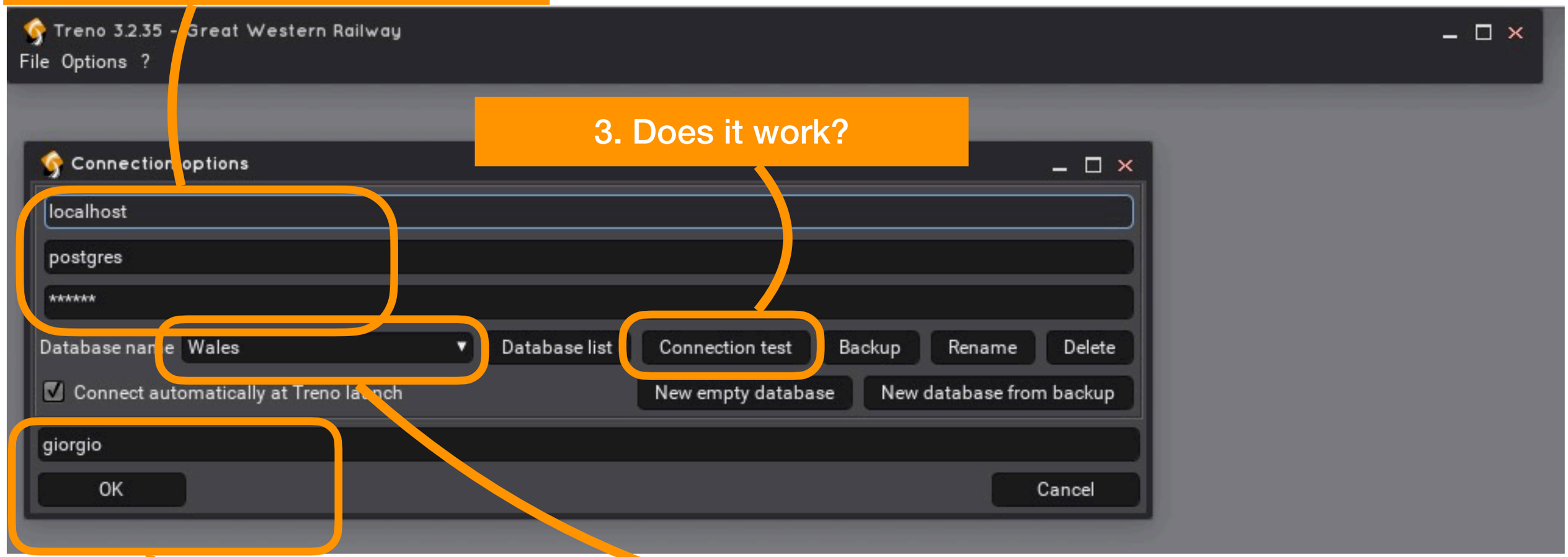
the first time you run TRENO (1)

- The first time you run TRENO you see the main bar at the top-left of your desktop:

- Select Options->Connection

the first time you run TRENO (2)

1. Connection settings:
- localhost
- postgres
- the password you inserted when you installed postgresql



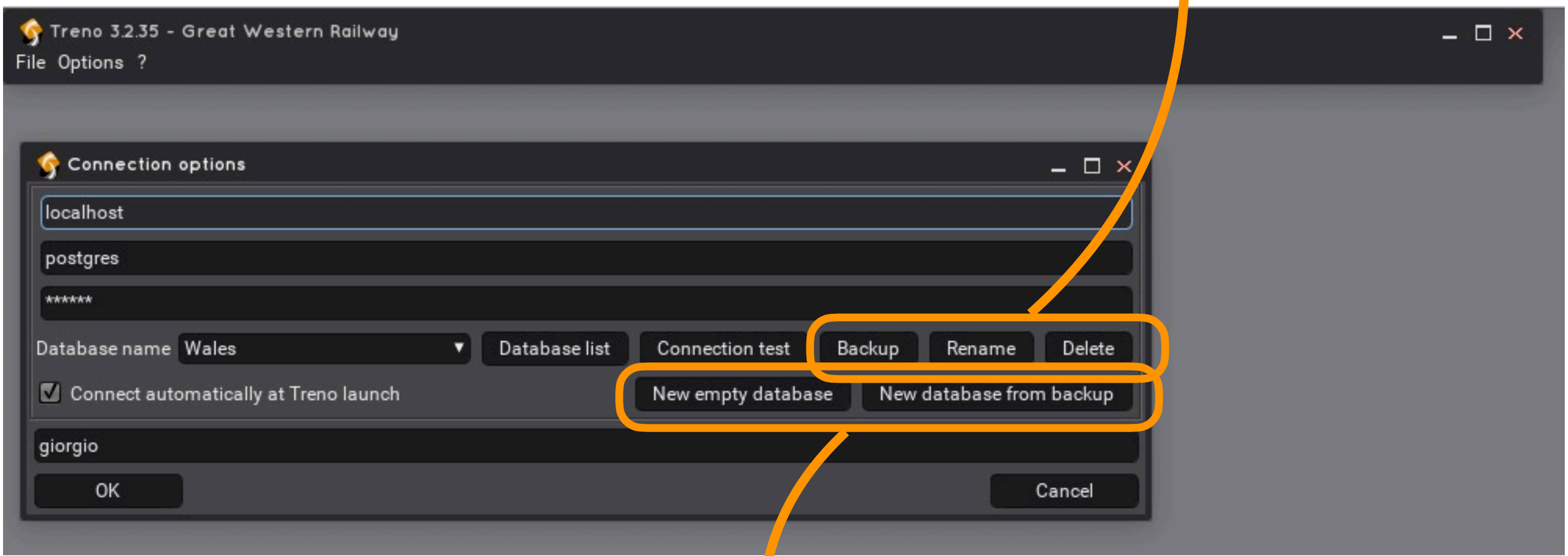
3. Does it work?

2. Select a database, such as METROBEO

4. insert your nickname, then click OK

other functions in the Connections panel

Create a backup copy, Rename or Delete a databasa



Load an existing database or create a new empty one. Use:

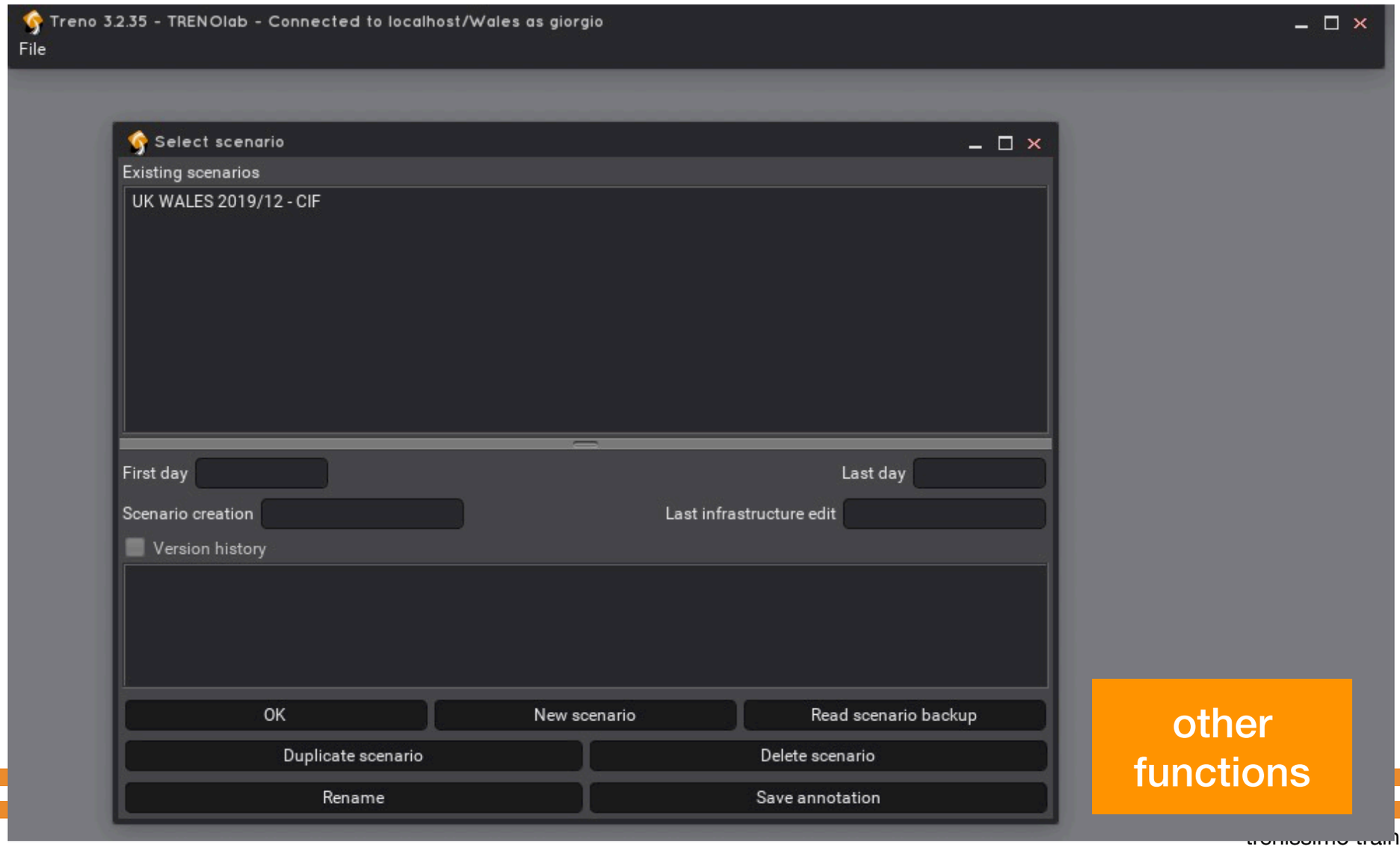
New database from backup when you want to use a ".backup" file:
https://confluence.trenolab.com/pages/viewpage.action?pageId=22446840

New empty database when you want to insert a ".scenarioBackup" in a new database.
In this case, first create a database (click New empty database and assign a name) and then use the "Read scenario backup" function in the main panel (next slide)

Start and run TRENO

- Select File->Connect

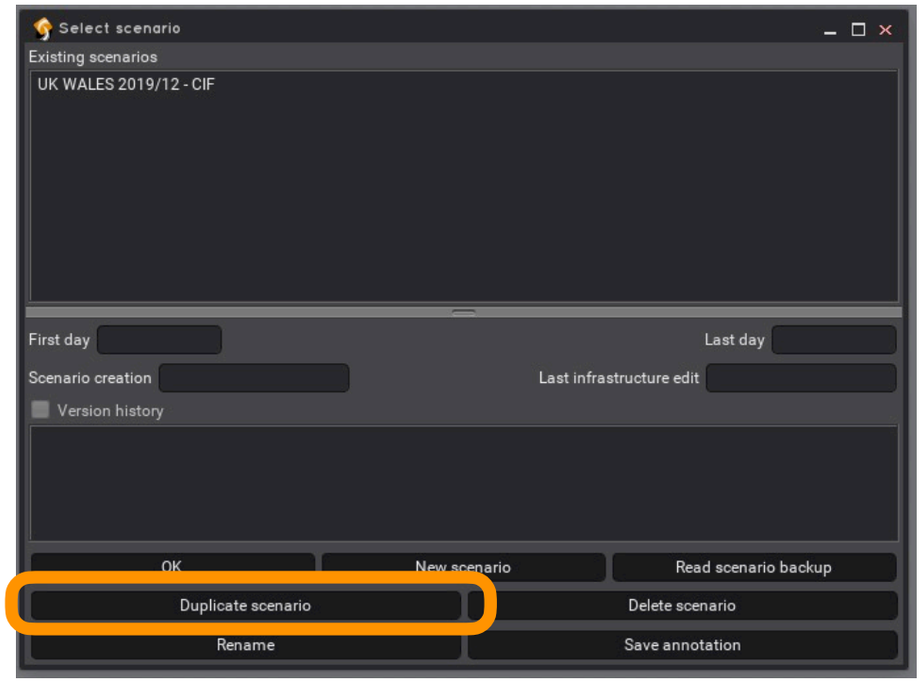
- the Select scenario panel is displayed:



other functions

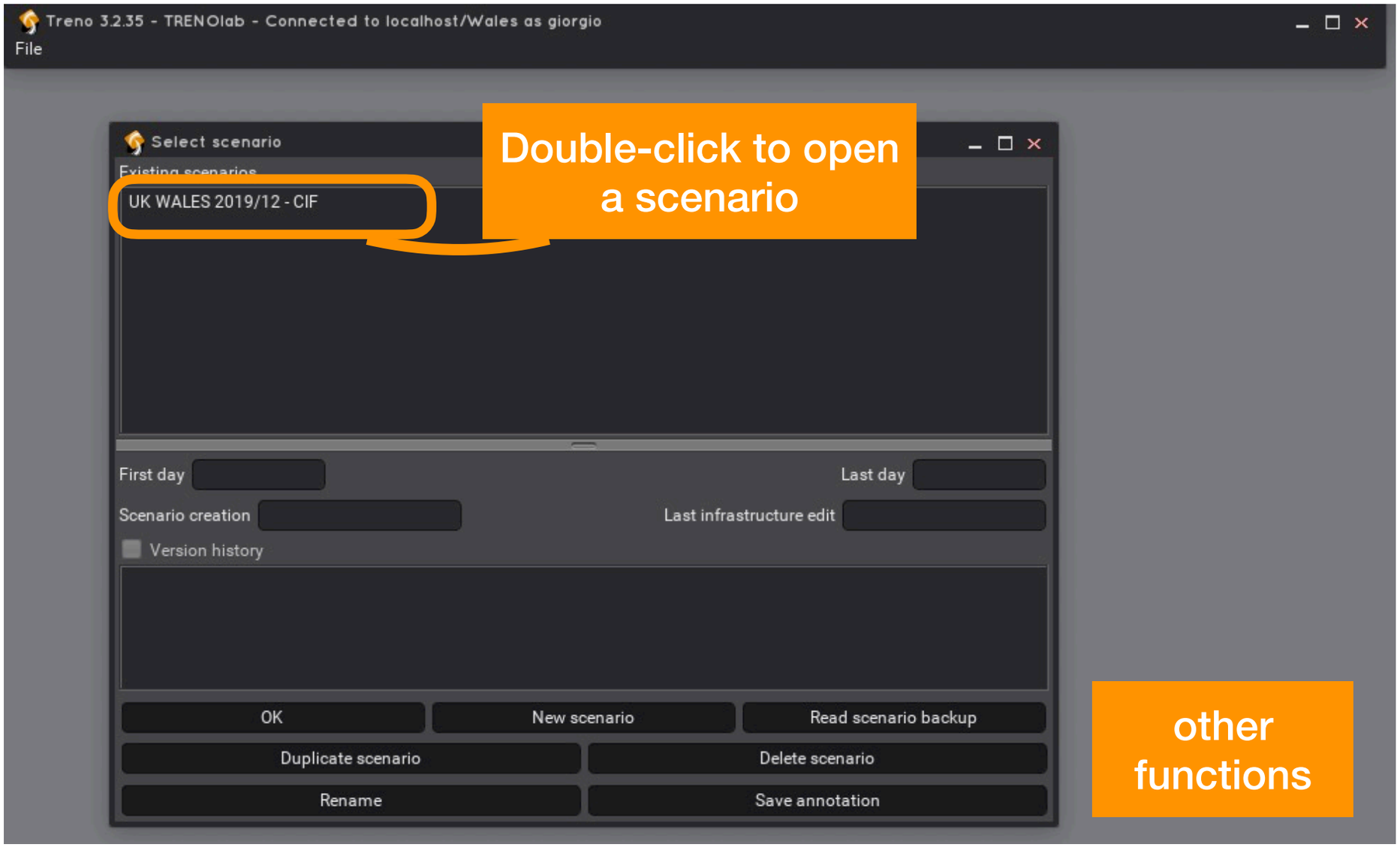
Multiple scenarios, Duplicating a scenario

- A database contains multiple scenarios, each containing its timetable and macroscopic infrastructure. As we see in a moment, other data, such as train categories, or the list of trainsets, are shared among all scenarios of a database.
- To create a copy of a scenario, simply click “Duplicate scenario”



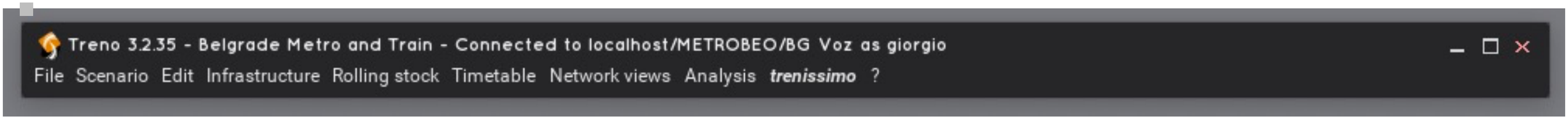
- You can rename the scenario, simply clicking on Rename.
- The Read scenario backup function allows importing a .scenarioBackup file.

Open a scenario



The main bar

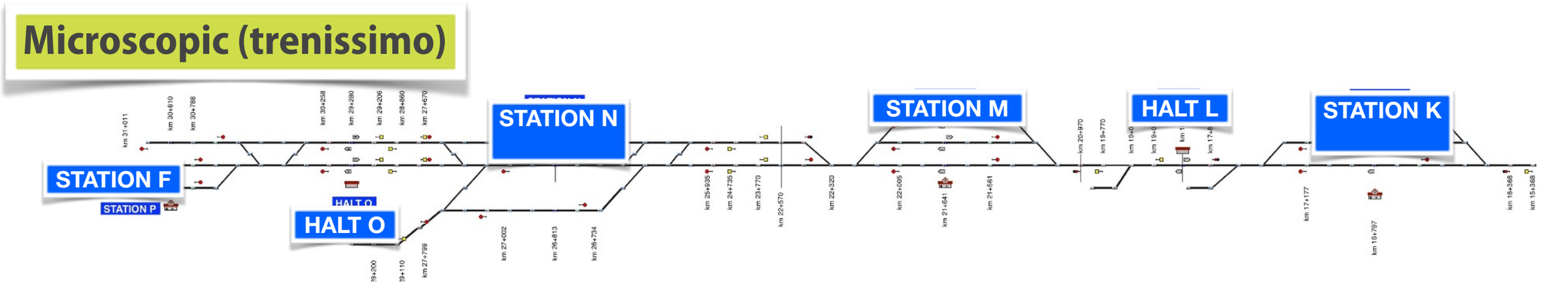
- After opening the scenario, you see the main bar with the following menus:



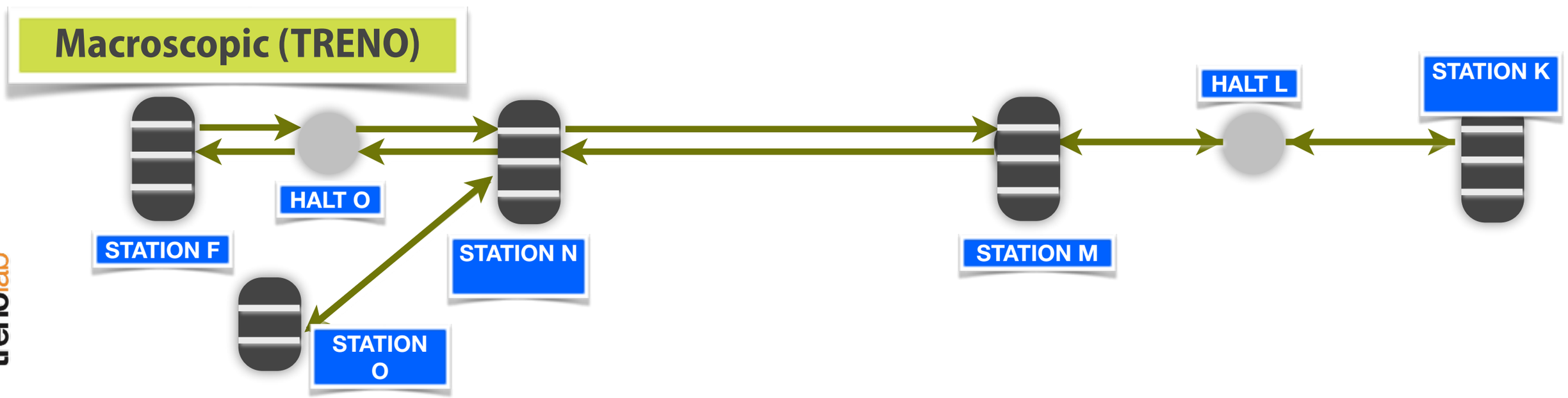
Menu	Main functions
File	Log off from the scenario / Exit TRENO
Scenario	Import / Export scenario
Edit	Settings shared among all scenarios
Infrastructure	(Macroscopic) infrastructure: Lines / Stations / Corridors
Rolling Stock	List of trainsets and train parts, trainsets available for rostering [Shared among all scenarios]
Timetable	All timetable-related items, such as the graphic timetable.
Network views	Geographi map, UIC405 and the schematic map needed for it, rostering.
Analysis	All analysis tools, usable to visualise the results of stochastic simulations
trenissimo	Export to trenissimo

Infrastructure models

- *trenissimo* contains a microscopic model of the infrastructure, including the complete layout (switches, tracks, etc), signals, speed limits, etc.

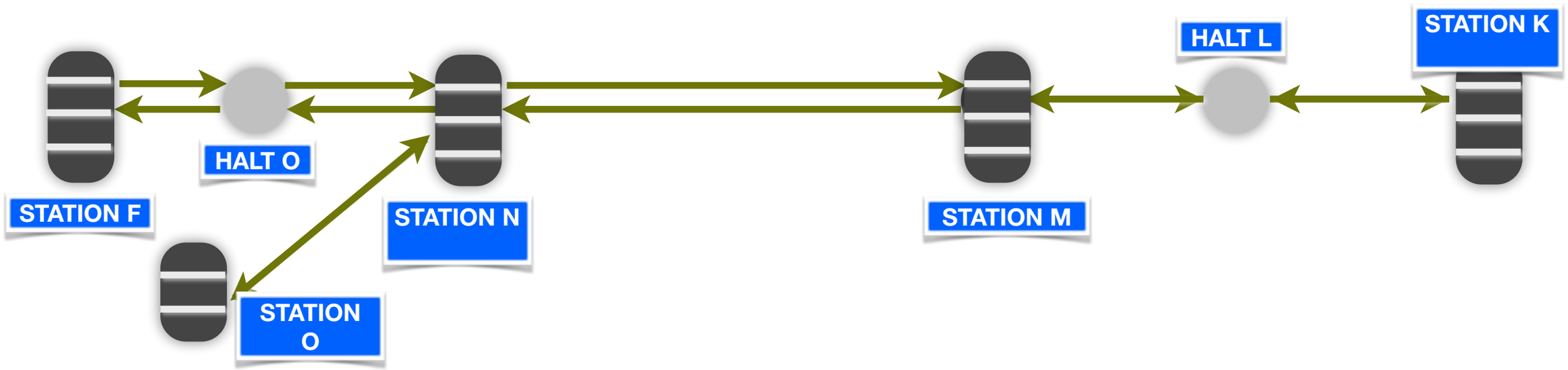


- TRENOplus instead contains a much simpler macroscopic model, which contains only the distance and number or tracks between and at stations.



The infrastructure menu

- The infrastructure menu contains the panels used to insert and edit the network model:



Lines	A table showing the list of stations and relative km points, single/double track
Station Layouts	The relative position of lines at a station, the number and order of platforms, and the default platform used for the most common services
Junction Layouts	Similar to the station layout, but without station platforms.
Simulation Area	Part of the network that the user selects on the map for simulation.
Corridors	Any sequenc od stations/lines that is useful for timetable planning. It is allowed to crate any number of corridors on the same line sections

The timetable menu

- The timetable menu contains the panels used to insert and edit the timetable:

Timetable	A table listing all services, a number of filters + the possibility to order by any colum allow quickly identifying any service. The “New Train” / “New Train Group” button is used to create a new train. Double-click on any train to open its editor
Collections	A *collection* of trains is visualised using the same graphical settings, and can be switched on and off with just a click
Groups of collections	Multiple collections can form a group of collections, used to select all trains of a timetable variant in one click.
Graphic Timetable	The most common way to edit the timetable and check for conflicts, with several options.
Platform Occupations	View and edit the assignment of trains to platforms, create the turnback connections.
Passenger Timetable	To export the timetable (or part of it) as an easy-to-read excel table to be used by passengers
and more….	…

The network views menu

- The network views menu contains the panels used to view the network as map, to estimate capacity usage using the UIC405 method. and the usage of trainsets (rostering)

Line Concept	Used to create the diagram of hourly services (also called Netgraph)
Geographic Network	Geographic map, of the network, used to define the simulation area.
Schematic Network	Schematic map, of the network, used for the UIC405 capacity estimation
UIC 405	Timetable-independent capacity estimation based on the UIC 405 leaflet
Rostering	Create the rostering, estimating the number of units needed to run a timetable and the corresponding daily mileage

The trenissimo menu

- The trenissimo menu contains the functions needed to push data to trenissimo:

Rush Hours	To define the rush hours. They are used in stochastic simulation to represent the longer dwell times in the peak hours.
Sim Setup	Here you select the area and date/time interval that you are going to simulate. Then you assign all relevant parameters to be considered in the simulation, either deterministic or stochastic.