

Converting open access map data to FBS-networks

25 kV 50 Hz

ES 692

ES 693

Platform 1

ES 792

ETCS-balise ES 693

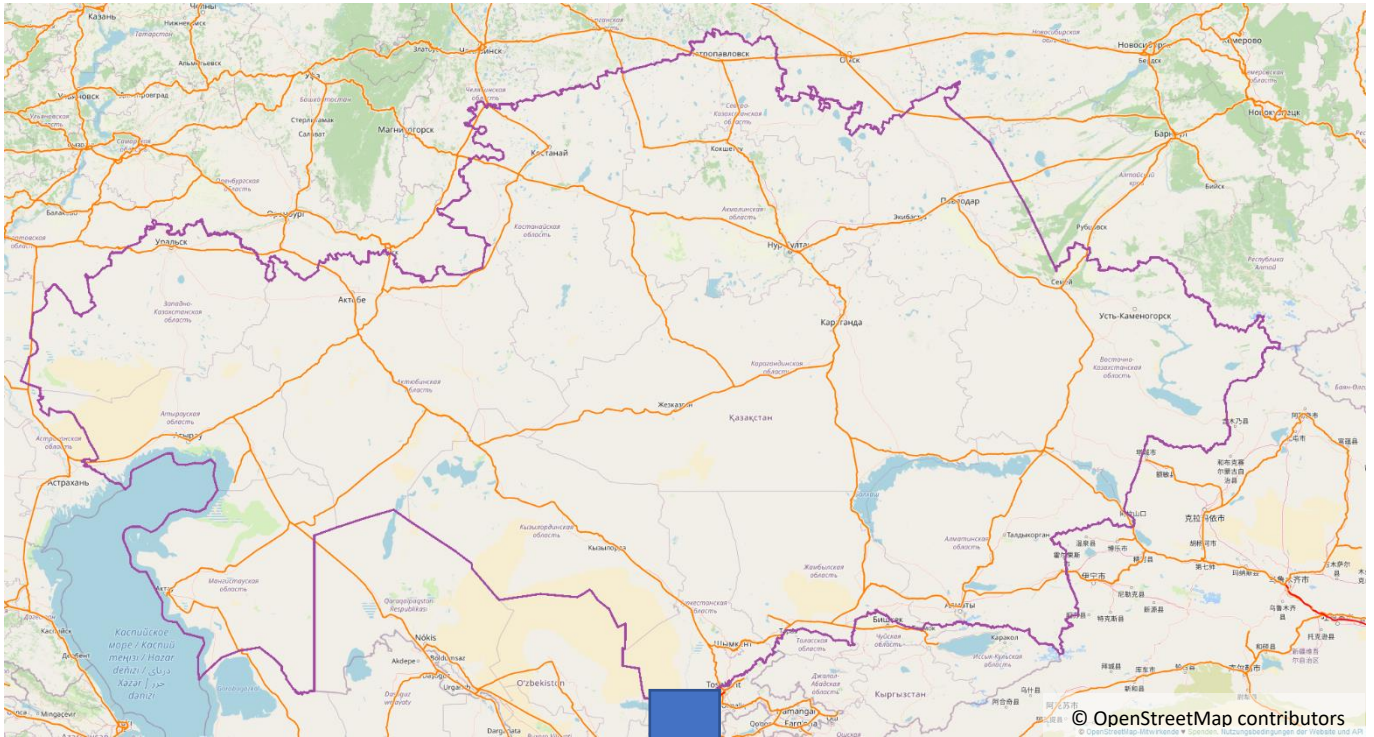
Point P3

iRFP

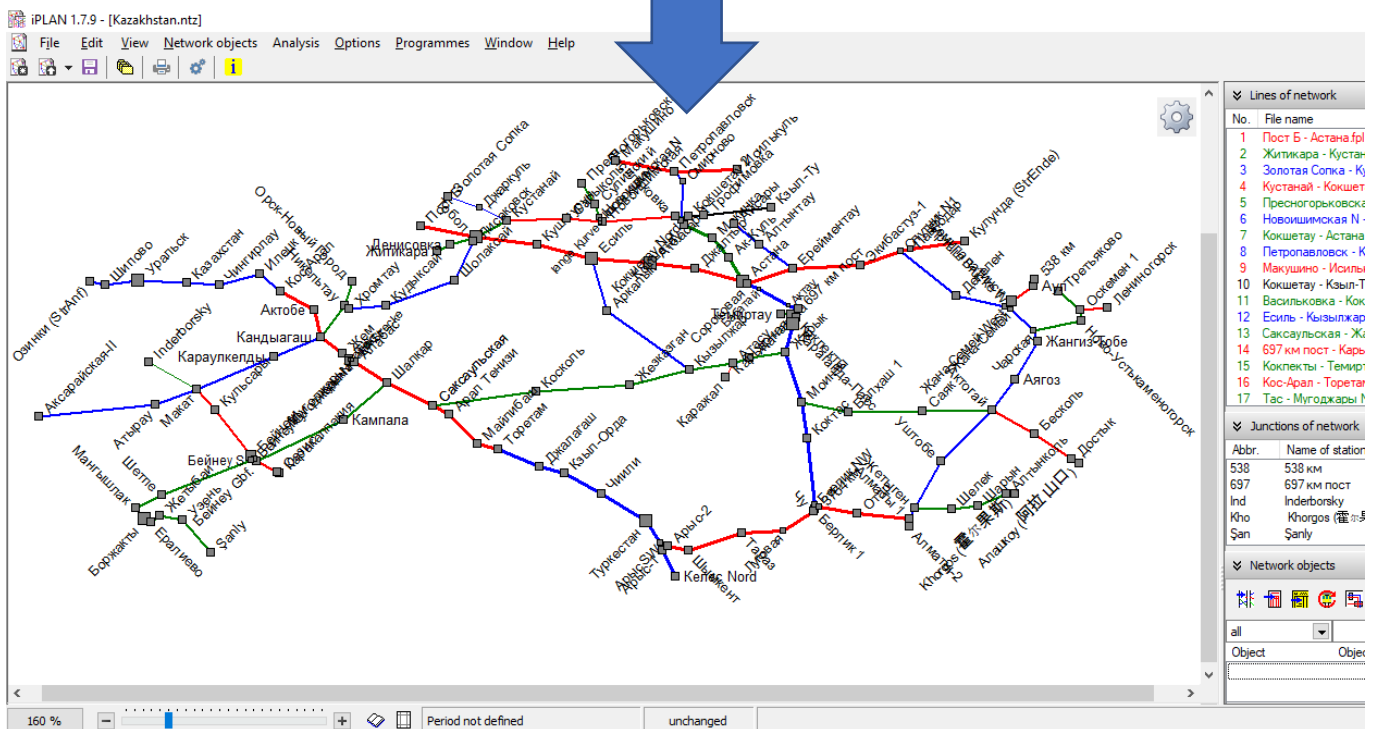
 **FBS**
So macht man Fahrpläne!

Creating new FBS-networks based on open-source data – easier than ever!

By means of our new OpenStreetMap (OSM)-converter we can quickly and easily gather infrastructure data for FBS-networks from open-source map data, which can then be used for timetable construction. This works for railway systems all around the globe. In theory (and practice) the whole railway network of a country can be imported and used.



The entire railway network of Kazakhstan...



...as an FBS-network

Everything that has been added can be converted

The converter is able to automatically incorporate all relevant infrastructure data of a line into a newly created FBS-file. This information can also be included into already existing files retroactively.

Data that can be integrated:

- Stations with abbreviation
- Number of tracks
- Signals, crossovers and platforms
- Curves
- Gradient profile
- Allowed speeds
- Electrification
- And much more

The only requirement for a successful import is, that the respective data has been added to OpenStreetMap.

Converting disused or deconstructed lines

Since data of disused or even deconstructed lines is often entered into OSM, these lines can also be converted into FBS-infrastructure models. This is especially helpful, when analysing potential reactivations of lines, where infrastructure data is needed for scheduling, as there are rarely any possibilities to acquire such needed information quickly. The allowed line speeds can then be extrapolated from historic draft speeds.

Even tram lines etc. may be converted. The possibilities are essentially endless. The limitations are more about the practicability of a conversion.

Map display of lines in FBS

All line data that was created using the converter has access to a map display in FBS, that can be shown via the corresponding button (in a graphic timetable: infrastructure data (Alt + S) → Map). It is also possible to add the map display to already existing FBS-files. The visualisation of the track layout helps at gaining a quick overview about how it fits into the landscape and where certain FBS-infrastructure points like stations, curves or gradient changes are located. This can be used for example to detect narrow curves when planning to increase the allowed line speed and making realistic assumptions about needed upgrades.

(Disclaimer: The general license terms of the data provider apply.)

The screenshot shows the FBS software interface. On the left is a map window titled 'Kartenfenster' displaying a topographic map of the Hell Valley Railway area. A blue line represents the railway track, and several stations are marked. On the right is the 'Infrastructure data' window, which has a tabbed interface with 'Stations & Locations' selected. Below the tabs is a search field and a table of station data.

Name	Abbr.	rel. km	abs. km	Tariff-km	Kind	Stop	No	Line	Arr/Dep	ton	lpp-	lcp-	lcr	ST
Blankenstein (Saale)	UBN	0,000	62,450		PSt. u	T	1	---	Arr/Dep	8	1,0	1,0		2,0
Blankenstein Grenze	UQBL	0,934	63,384		bd.		1	---	Arr/Dep>0	6				
Lichtenberg	NLIBG	1,008	63,458		halt u		1	----	Arr>1]Dep	6				
Hölle	NHÖLL	4,126	66,576		PSt. a	T	1	---	Arr/Dep	8	1,0	1,0	2,0	2,0
Marxgrün	NMX	6,387	68,837		PSt. u	T	1	---	Arr/Dep	8	1,0	1,0	2,0	2,0

At the bottom of the 'Infrastructure data' window, there are several buttons: 'New station', 'Delete station', 'Edit station', 'Insert block posts...', and 'Create abbrev.'. Below these are 'Import/Export', 'Line', 'Profile', and 'Map' buttons. The 'Map' button is circled in red, and a blue arrow points from it to the map window on the left.

Handy map depiction shows position of all stations and the course of track (exemplary: the so called "Hell Valley Railway" at the border of Thuringia and Bavaria in Germany)

Summary of the converter's capabilities:

- Creating FBS-Lines or even whole networks, including
 - o Stations
 - o Curves
 - o Gradient Profile
 - o Line speeds
 - o Coordinates of all stations, curves and gradient changes
- Map depiction of the track of course in FBS
- Incorporating disused and even deconstructed lines
- Further applications based on necessity, usability and quality of data input

You are interested in line data?

Don't hesitate to contact us!