

RKP EAST-SANSEK Network



Version 2.1 – October 2019

I dedicate this project, this network, this fictional world to my dear beloved Mum, who left us suddenly on Monday, January the 21st 2019. For her unfailing support, her limitless love, and because now she is a never fading star...

Louis Nardavac

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WARNING !

Legal notice and acknowledgements

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Please be aware that further updates may be released for this network, and so they will make your modifications out of use.

Please read carefully this manual before using the network to avoid any possible inconveniences. We cannot be hold accountable or prosecuted for malfunctions on your simulator that has been caused by this network. Furthermore, Dovetail Games, distributor and owner of Train Simulator 2020, does not support the use of this network, and cannot be hold accountable for its creation, monitoring or support.

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INSTALLATION INSTRUCTIONS

1. Download the network .zip file.
2. Unzip it thanks to a relevant software (WinZip, WinRar, 7zip...)

THEN :

3. Copy the Content and Assets folders into your Railworks folder.
4. Select the scenarios pack that you want to install (Complete or Light), open its folder.
5. Copy the Content folder into your Railworks folder.

DEPENDENCIES

To ensure this project is working properly, you will need to own several elements in your Assets directory. They are listed below. Dependencies followed by an asterisk are essential for the correct functioning of this network. They include tracks, track rules, signals and platforms.

Payware requirements

- DTG Midland-Main Line : Bedford to St Pancras *
- DTG East Coast Main Line South : London to Peterborough *
- DTG Riviera Line : Exeter to Paignton *
- DTG Liverpool to Manchester via Warrington Central *
- DTG Kent High Speed : London to Faversham *
- DTG West Coast Main Line Over Shap : Preston to Carlisle
- DTG Pacific Surfliner : Los Angeles to San Diego
- DTG Hamburg – Hannover
- DTG Semmeringbahn : Mürzzuschlag to Gloggnitz
- DTG LGV Marseille – Avignon
- European & American Assets if you bought Train Simulator after 2012 and if you do not own WCML Over Shap. *

Freeware requirements

- Téléphones, Elements de Voie RW3 and Caniveaux from Papinic (available at <http://www.railsim-fr.com/forum/>)
- UKTS Freeware Packs, Blocks-Lofts-Bridges #1, Clutter #1, Commercial #1, Foliage #1, Housing #1, Industrial #1, Railway Buildings #1 (available at = <http://www.uktrainsim.com/FreewarePacks/>)
- Freeware Dutch assets (NS Station Objects & scenery from Chris Trains (available at http://www.christrains.com/ts_scenery.html)

Textures

Textures used by this network are basic Kuju textures. The texture used underneath the tracks is a dark ballast texture, but it does not fit very well with the Midland Main Line and/or AP Track Enhancement Pack tracks used by this network. We advise you to replace this Kuju texture by the Midland Main Line one. Here is how to process :

1. Unzip the .ap file that is in this directory : Railworks/Assets/DTG/BedPanLine after making a backup of it.
2. In the inside directory Environment/Terrain, copy the file named GravelTrackBed000.TgPcDx.
3. Paste it in Railworks/Assets/Kuju/RailSimulator/Environment/Terrain and

renamed it GravelTrackBed_dark.TgPcDx **after** making a backup of the original file.

WARNING : This texture change will apply to every line using this set of texture.

Important notice

This line is fully compatible with AP Track Enhancement Pack and/or RW Enhancer. It is however not totally compatible with Radiomaster Vegetation Replacement Pack. The line will still be working but some slender vegetation type won't match anymore.

It is advised to deactivate the Procedural Flora in Train Simulator 2020 option to ensure an optimum finish of the network.



A double C161/4 set in Floeta CS station after an international service from Wroclaw.

INFORMATIONS ABOUT THE NETWORK

This network is an old project that began during the Rail Simulator area. It was extensively reworked and modernised to match the current standard, but some aspect of its age still remains and cannot be modified. It explains the use of original Kuju textures along with the lack of reliefs on the original portions of the line (it does however not concern the entirety of the network). The following aspects have been updated :

- Track replacement.
- Implementation of superelevation where possible.
- Suppression of the outdated OHLE and replacement with a modern one.
- Rebuilt modern and efficient signal system for the whole network.
- Upgrade of almost all scenery elements to make everything more interesting and more modern.

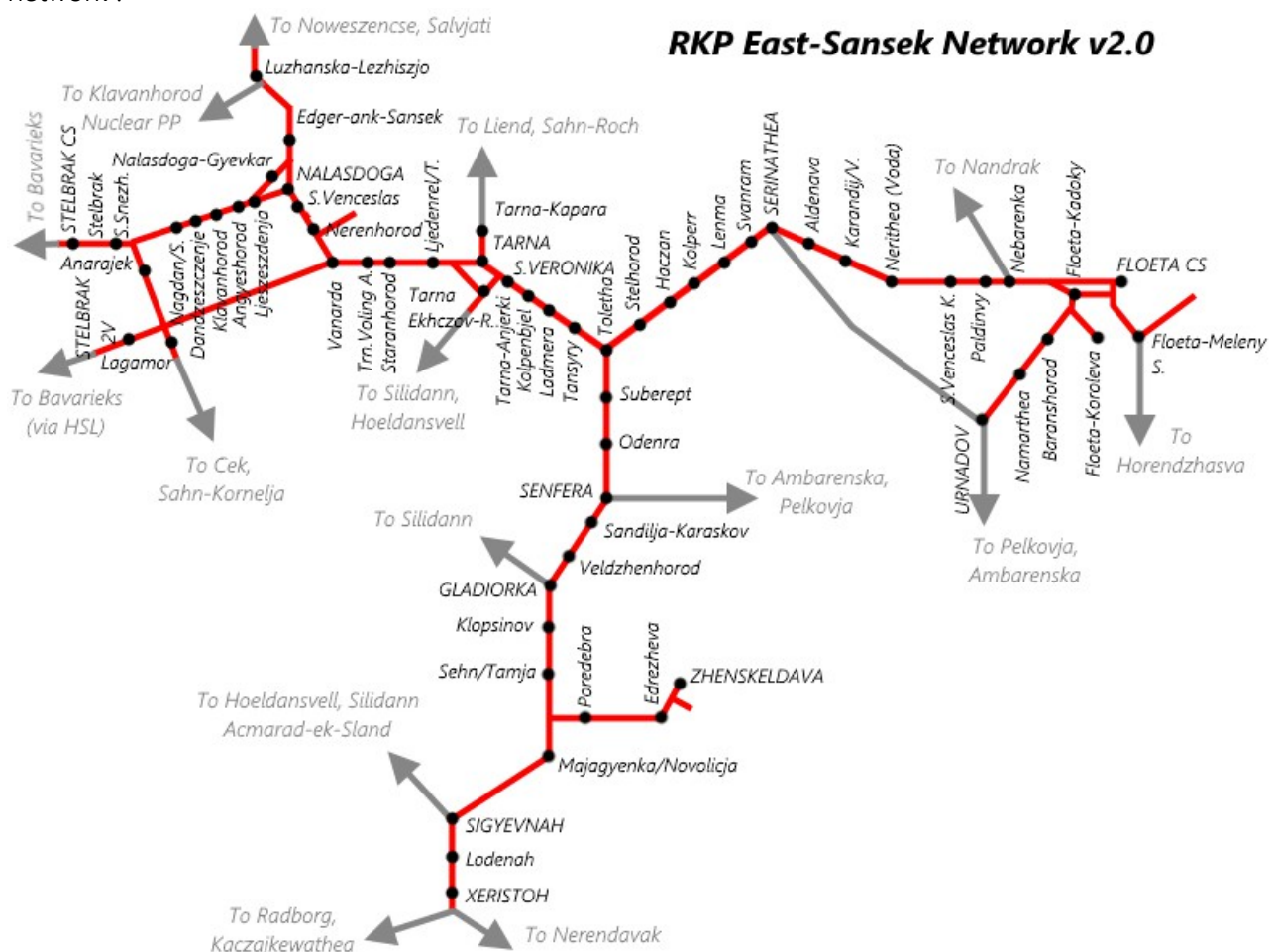
Please keep in mind that this work is a personal work, made in an amateur way. It's a freeware work and it cannot be perfect. We are here for every comment, criticism, observations, but do not forget that this network is a hobby and there are more important things in life. It is also the achievement of many years of work.

PRESENTATION OF THE NETWORK

The RKP East-Sanse network included in this package contents the following elements :

- 155 km from Floeta CS to Stelbråk CS.
- 193 km from Tolethą to Xeristoh depot.
- 35 km HSL from Vanarda Junction to Stelbråk 2V.
- 20 km from Floeta to Urnadov via Floeta-Koroleva.
- 16 km from Nalasdoga CS to Lezhiszjo plant.
- 10 km of Zhenskeldava branch line.
- 10 km from Floeta to Floeta Intermodal Port.
- 6 km from Stelbråk CS to the HSL at Lagamor Junction.
- 5 km of Tarna freight overpass, from eastern depot to western one via Tarna-Ekhezov-Rajon.
- 2 km from Kalorag Cement Works to Markhorod Junction.

It makes a total of 452 km (281 miles) of lines. You can find here a schematic map of this network :



CONFEDERATION OF NOCTURNAN RUTHENIA

Introduction

The RKP East-Sansek network, totally fictional, represents in fact a part of the rail network of the Confederation of Nocturnan Ruthenia (CNR), often called Ruthenian Confederation or simply Ruthenia. Personal creation, this land does not aim to represent a real state, but is more like a blank canvas, devoid of preconception. In the following descriptions, I will try to make my best to describe it and to make it seem like a "real" state, in order to make you feel the complexity of the construction of this land, but also to make you understand the realities of this country, its concerns and issues. My aim is that you can drive through this country with the feeling of living in an authentic world and not a synthetic scenery without background.



The Edger Bridge that crosses the Sansek near Nalasdoga. The Sansek river marks the border between the eponymous state and the state of Hosdregoh.

Presentation

The Ruthenian Confederation is a state hypothetically located in Central Europe, surrounded on the north by the Baltic sea. It is a large country, with a total surface area of 771 013 km² (297 690 mi²), namely three times UK's one, so much that its southern end would have been located in northern Greece. The country also owns a group of islands located off the coast of Norway, Ajkalavs Islands (*Ajkalavs Ostrovi* in Ruthenian, *Æjkælæfavek Ensaln* in Ajkalan).

Geography

With a total surface area of 771 013 km², the CNR has a large variety of landscapes and climates that are at once a great natural wealth but at the same time a human challenge. The northern part of the country, which contains the regions of Rekjinav, Aşyry, Valdmor and Beldland (*Beldlaneda* in Ruthenian) forms large plains broken by hills that are never higher than 700 meters. The whole region is sometimes referred as *Subaltika* by geographers, and has a wet oceanic climate, with mild winters rarely snowy, rainy autumns and springs and sunny and warm summers, punctuated by regular and heavy showers. This is a region that lends itself to farming. At the centre-east of the country, where the Sansek is located, the climate is harder, being continental and mountainous into the Denekecziv and Eskann mountain ranges, with very cold winters where temperatures can stay under zero for days or even weeks in a row. Autumns and springs are often foggy, and summers are warm and dry, sometimes hot and interspersed by strong thunderstorms. The western part of the country is lined with the Big Dağonara Salt Lake (*Dağonara velikaja saltackaja Sq* in Ruthenian), a huge sea surrounded by lands that offers more than 800 kilometers of coasts. Along this coasts, on a thirty to sixty kilometers wide strip, there is the "Vermilion Coast" or *Vergmaskaja Kosta*, that has a very pleasant mediteranean climate. This is the most touristic region of the country, especially during summer, well known for its sunsets on the lake. The Ejet mountain range forms the eastern end of the Vermilion Coast, also famous because of its numerous ski resorts.

The southwestern part of the country is more temperate, formed of rolling landscapes and watered by the river Qdormojak. The southeastern part, for its part, is the driest and hottest region of the CNR. The desert of Lodargas (*Lódärgää* in Princenan), an inhospitable reg, occupies a wide part of the state and has an arid climate throughout the year, but with sporadic strong thunderstorms. Last but not least, the southern end of the country is noticeable because of its three mountain ranges, the North-Sera, the Great-Sera and the Okson Cordillera (Iron Cordillera in ruthenian). The Sera valley, watered by the eponymous river, separates the North and the Great-Sera and forms a warm and temperate area, particularly luxuriant in comparison of the Lodargas desert. The east of the Okson Cordillera ends on the Akapathea plateau which is located six hundreds meters above sea level. It is rather warm and dry, but more green and less arid than the Lodargas desert, thanks to several rivers.

The whole country is watered by several important rivers. The main one is without a doubt the Noberek river, that is also the longest one. It begins in the eastern Okson and crosses the country from south to north until the city of Molnja, where it joins the Sansek river. Officially, none of the rivers flows itself into the other, but in terms of hydrology, the Noberek is a bit more powerful than the Sansek. The last hundred kilometers from the confluence to the estuary of Dağonara are called Nosan (for Noberek and Sansek) for administrative purposes, but this name does not match the historic one ; as a testimony, there are several places on the edge of the Nosan that have 'Noberek' in their names. Nevertheless, the Sansek is also a very powerful river, beginning in the Androka Lake in the extreme east of the country, which is the larger freshwater lake of the country. This flow is due to three large rivers that feed the Sansek : the Darasvuczi, the September (*Sarvatkann* in Ruthenian) and the Kaczajkewa (that feeds the September before). The Noberek is also watered by other powerful rivers like the Labra, the Sera, the Gyab and the Esmal. By the way, the Nosa between Molnja and the Dağonara forms the most powerful river in Europe, being more than 1 kilometer wide with very hard currents and a flow at the estuary of 6 900 cubic meter per second. The country contains also two other important rivers : The Qdormojak who flows itself into the Dağonara Lake, forming the Delta of Aeroba, and the Drusandleszem, into the north, who flows itself into the Baltic Sea.



Steppe landscape, typical of north Lodargas.

Administration

There were in 2017 a little more than 61 millions of inhabitants in the country, which means that it is less densely populated than most other countries in central and western Europe. Nevertheless, there are serious inequalities with the distribution of population ; there are places and cities intensely populated and some regions almost uninhabited. Administratively, the country is cut into twelve states (*estat* in Ruthenian), eleven of them being on the mainland and the twelfth forming the Ajkalavs Islands. States are large territories (on the mainland, the wider one is the Rejkinav state with 126 043 km², namely the surface area of Greece, and the smaller being the Okson state with 40 120 km², almost the size of Switzerland). They have a large autonomy in administration and politics. Laws and regulations change from a state to another. There are wide disparities of population between each state, the most populated being the Okson state with a little less than thirteen millions of inhabitants, as the less populated is the Hosdregoh state with a little bit more than two millions of inhabitants for a total size equivalent to Ireland's one. Ajkalavs Islands are seen as exception with a size and population far below the states of the mainland.

The states are themselves cut into *oblasti* (*oblast* in the singular). Unlike states, *oblasti* do not normally have their own law, and thereby obey the laws of the state to which they belong. In fact, however, some *oblasti* may have additional laws or changes to certain laws, usually related to geographical features. The country has a total of 93 *oblasti*. Here again, the size and the population of *oblasti* are very variable. If the two smaller ones are located on the Ajkalav Islands, on the mainland, the variations are very strong. The smaller is Labra-u-Noberek with 2,499 km², the area of the island of Reunion, while the largest is Beldlaneda with 17,700 km², almost the size of Wales. Each state has a capital, called *estathorod* in Ruthenian, and each *oblast* has a prefecture, called *oblashorod* in Ruthenian. The states are headed by a governor, called *governor*, and the *oblasti* by a prefect called *oblaskapitan*.

Politics

The country's politics is organized according to a four-headed system, called the Four Great Instances (*Czedyra Velikj Stakuži* in Ruthenian). Each of the instances has what is called an absolute voice (*tovlenaja vjedxa*), that means it has a vote on every proposed law or amendment submitted to the government. The four major bodies include:

- The Emperor (*Imperator*), sometimes improperly called president (the official title of Emperor being a legacy of the country's monarchical past), which is actually the president of the majority party in number of oblasti.

- The Confederate Coordinator (*Konfederasko Koordinator*), nicknamed 2K (*dvaka* in Ruthenian), elected by the judges of the country.

- The Senate (*Sjenat*), composed of 279 senators (*senatori*, *senator* singular), elected by the population.

- The Council of Ministers (*Kanclari Hosnor*), formed by the ministers (*kanclar*) appointed by the Prime Minister (*Edikanclar*), himself elected by the senators.

Citizens of the country, of voting age - the majority is 18 years old - directly elect the oblaskapitans, mayors, senators and judges of their constituency. It is the mayors and oblaskapitans who elect the governor of each state.

The government's four-heads system confers to the Emperor and the Confederate Coordinator a very great individual power, which can however be held back by the weight of the Senate and the Council of Ministers. If the four major bodies fail to reach an agreement, it is up to the people to decide by referendum on the future of a bill or amendment.

Ruthenian political life is animated by different parties. In recent years, the majority party is the *Ruthenjesko Naresnovko Gyazcev* (RNG), the Conservative Ruthenian Party, a right-wing party focused on sovereignty, security and national economic liberalism, but nevertheless quite open on social issues. The president of the RNG, Ivan Volodymyr Serestov, who is also the Emperor, became famous for his slogan: " *Da laneda pravorutj marevnek, no samojenki livorutj* ", " Govern the country by the right, but the individual by the left ". Serestov and his government are behind some progressive reforms despite the country's conservative features: same-sex marriage, care and reimbursement of women's health protection, equal pay ... The two main opposition parties are *Socjalno Folzcomrevko Soluz* (SFS), the Social Democrat Union, and *Nacionalno Marev Pson Ruthenja* (NMPR), The National Power for Ruthenia. The SFS is a socialist left-wing party, which for some years has been moving towards the radical left, led by Anita Lenkervak. The NMPR is a far-right, ultra-conservative party, chaired by Eherg Lasvenski. But one of the most famous parties is the *Prinkersko Adnasrevko Soluz* (PAS), the Prinkereks Independent Union, a political party that promotes the independence of the ancient cultural and historical region of Prinkereks (on horseback on the states of Lodargas and Eskann). The party has only limited importance in the national debate, but is very famous for the vocal outbursts and the setbacks of its president, Aopkaa Salanok, as well as for the sometimes stormy management of the party, accused of corruption at multiple times. The NKZ, finally, is also an influential regional party that advocates the recognition of Katchachkewa, not as an independent country but as a separate state from Sansek and Eskann.



Landscape of southern Qdormojak, near the Okson Cordillera

Currently, the Emperor is Ivan Volodymyr Serestov, in office since April 18, 2009, re-elected for a second term in 2015 (oblaskapitans being elected every six years). The Confederate Coordinator is Pol Ormjav since 2009 also, the Prime Minister is Mara Ženewskocs (since 2015) and the Senate Speaker is Alešej Ludworżawy (since 2015 also).

In general terms, the country is relatively independent compared to other countries with which it has cordial relations. It is part of the UN and the Council of Europe, but not the European Union. However, it benefits from a cooperation and free passage agreement with its direct neighbors. The CNR enjoys relative neutrality and autonomy in terms of resources. The Lodargas desert has significant oil reserves that allow it to be self-sufficient. Local production products are also zero-rated for purchase, which makes them particularly attractive to customers. This legislation has led to the creation of numerous production areas throughout the country. One of the most notable examples is that several major car brands have set up production plants in Ruthenian territory, creating additional jobs. On the other hand, foreign products are heavily surcharged - 35% for the majority - with the exception, however, of "foreign cultural heritage" products, which are taxed at only 11%. Thus, a car model at 20,000 euros will be sold 20,000 if it is produced in the CRN, but 27,000 if it is produced abroad. Companies also have lower taxes on sales made with locally created products.

History

We will only discuss here the recent history of the country, from 1850 to now. At the time, the CNR was still divided into four different states: Maponia, Batoria, Princenia and the Ajkalan Autonomous Kingdom. The Maponia was then an emperor-controlled monarchy that encompassed the current states of Sansek, Noberek, Qdormojak, Dağonara, Okson, West Prinkereks and Eskann and southern Rejkinav. The official language of Maponia was Ruthenian, which is still the official language of the entire country. The capital was Akapathea. Batoria was a democracy set up by Asan Korek, which included the states of Arkecek, Hosdregoh, Aşyry and northern Rejkinav. The official language was Batoran, which is still the official language in the aforementioned states. The capital was Terekhristy (then called Jedina, which is still his Batoran name). The Princenia (English translation of Prinkereks) was a semi-autonomous territory because attached to the Maponia but enjoying a strong political independence. It encompassed the eastern states of Lodargas and Eskann. Its capital was Saas-Avlek and its official language the princepan, which is still co-official language in the states concerned. The Ajkalan Autonomous Kingdom, finally, was an island kingdom, formed by the Ajkalav Islands and some other ultramarine dependencies, with Æjkælæfavek as capital and Ajkalan as official language. Today, even if Ajkalan and Ruthenian are officially the two official languages of the islands, it is clear that only Ajkalan is really spoken and used. Most people do not understand Ruthenian.

Maponia and Batoria were rival states of long standing. The Batoria had been unified in 1848 by Asan Korek (it was previously composed of various fiefs and independent kingdoms), and the Maponia in 1786, also composed of several kingdoms, the most powerful being the Serl Kingdom (whose former capital was Valkanslav) and the Kingdom of Okson. After two consecutive wars (1865-1867 and 1891-1896), the situation stabilized between the two countries for nearly thirty years, before suffering a new escalation of hostility which eventually led to the war of 1931-1937, named War of Cultures, and which will result in the complete invasion of Batoria by Maponia. For three years, the occupation of Batoria is going very badly, with many revolts and a strong demand from the ex-Batorans, but also from the Maponians to return / access to democracy. In 1939, Emperor Serge Tavlicev finally abdicated and, after a series of assassinations in the government, Horg Selenek became Emperor. He will set up the current political system and unify the Maponia-Batoria ensemble under the name of the Ruthenian Confederation. The date of validation of the constitution of this new state, April 17, 1940, will become the date of the national holiday.

In 1942, the situation became extremely tense in Princenia, which was then still governed as an autonomous province. A great economic crisis was then shaking the country and causing a considerable increase in unemployment and poverty, leading to a revolt among the population. Horg Selenek sent food and financial support to the country as from the winter of 1942, but that was not enough and the state was recognized as failing. The poverty of Princenia was then essentially attributable to the tyrannical regime still in place which was concentrating all the wealth. Faced with this situation, Horg Selenek prepared a coup and regained control of Princenia. The former semi-autonomous country was fully attached to the Confederation in 1944. This episode is still culturally painful for the Princepan people who see it as a form of failure and at the same time a form of colonialist superiority on the part of the Ruthenians, which leads, even today, to frequent tensions between the two cultures. This tension is much more marked than between Batorans and Ruthenians.



The Cathedral of Kavilhoxev, in the north of the country.

The Ajkalan Autonomous Kingdom, finally, was historically a Batoran colony dating back to the 16th century. The colony depended on the mainland for subsistence, and for many years was supplied regularly by boat, since the Ajkalav Islands did not bring much to the country at the time, and served mainly as an advanced post in the Atlantic and same time as place of exile. From 1763, the fleet captain Aruż Łudrewy, responsible for communications between the mainland and the island, set up a dishonest system and resold goods to another country, so that for eight years Islands was remaining deprived of resources. Soon, the inhabitants, persuaded to have been forgotten, revolted and overthrew the governor. The leader of the revolt became the leader of the island and was soon called "New King". Thanks to fishing and agriculture, he managed to make his community self-sufficient. In 1771, however, the Łudrewy traffic was discovered and the captain was arrested and sentenced to exile, ironically, on the Ajkalav Islands. There is no trace to indicate what has become of him, but the most likely remains that he suffered a collective lynching once there. At the end of the judgment, the Batorans try to regain control of the island but face the hostility of the people who want to create their own nation. Some sort of tacit agreement will then remain for more than 150 years, and the islands will enjoy relative independence, even if they are still officially attached to Batorie. In 1937, however, the Maponia is again interested in these territories which have reserves of fish but also of consequent oil. Occupying the Batorie, Tavlicev considers that the islands come back to him by right, but does not wish to prolong the war, besides that the resources necessary for the transport of the armed forces up to there are considerable and require to encroach on the territorial waters of other countries in the Baltic Sea. A trade agreement is finally reached between the two territories, which continues until today and ensures the relative independence of the Ajkalan Islands, which enjoy a remarkable safeguard of their culture but must respect the rules and taxes of the Confederation in exchange for substantial financial support.

Economy

Ruthenia is a powerful and prosperous state, whose wealth comes mainly from high-tech industry and commerce. Valkanslav, the economic capital of the country, is the third largest financial centre in Europe; Akapathea, without being outdone, is the fourth. High-tech industries have spawned powerful companies such as the aircraft producer Oprok or Hapka.net, a manufacturer of computers, phones and multimedia devices. Nationalist economic policy has led to the establishment of numerous automobile production plants in the country, sometimes leading to the creation of models specifically dedicated to the Ruthenian market. The country also enjoys significant reserves of raw materials, including oil, coal and natural gas, and produces in excess electricity, which allows it to export to the neighboring countries. Tourism is also a flourishing sector.

But while the country enjoys overall economic prosperity, it is clear that there are significant local disparities. Some regions are particularly hard hit and poverty is being felt in some disadvantaged areas. Eskann remains one of the poorest states in the country, with the bulk of its economic activity being based on manufacturing and mining industries, industries that declined significantly in the 1990s.

Not part of the European Union, the CNR has its own currency, the Serl (divided into Venters). As an indication, the exchange rate on 1 March 2019 was 1 euro for 0.874 serli. The minimum wage is set by state, not nationally, to reflect significant variations in the cost of living within the country. For example, on the mainland, Okson is the most expensive state, and the minimum wage for a full-time job is 1,397 serli, or 1,221 euros per month. On the other hand, in Hosdregoh, which has the lowest cost of living, the monthly minimum wage is 1,116 serli, or 975 euros. The Ajkalav Islands are once again an exception, with a minimum monthly salary of 1,754 serli, or 1,533 euros, reflecting the high cost of living on the island. These different financial policies also reflect different working policies from one state to another. The maximum duration of working time is indeed set statistically, even if at national level the statutory weekly working time is limited to 41 hours of work per week. In fact, no more states apply the rule of 41 hours, and the maximum working time now oscillates between 39 and 32 hours per week.

Culture

The CNR does not really present an united culture, but rather a set of cultures depending on the different regions of the country. Cultural differences generally coincide with the former constituent countries of the Confederation, but there are disparities within these groups. Thus, the west of the country and particularly the states of Qdormojak and north-west Rejkinav are under strong Germanic influence, both in terms of architectural, culinary or musical, while the east of the country has a more Slavic culture. There are also some regions with more strongly marked cultures than others, sometimes stereotyped, such as Kavil, Katchachkewa or Okson.

It is interesting to note that the CNR is not a secular state, but that there is a national religion that goes back to the time of the Maponian Empire. This religion, called Ruthenism, is a form of Protestantism akin to Evangelicalism. If nearly 78% of the population claims this confession, it should be noted that only a small proportion of them actually practice religion. It is not uncommon for churches to be full on Sunday mornings, especially in rural areas. There is also a large Jewish

community in Ruthenia, with almost 5% of Jews. Catholic, Muslim and Buddhist communities are also present, but to a much lesser extent.

The Ruthenians are of a generally calm and serious temperament. The CNR is indeed one of the countries with the lowest crime rate in the world, and it is also one of the least dangerous countries. It is quite possible to walk around a city, even late at night, without fear of being attacked. Some places are still exceptions, including major cities of ancient Princenia (Saas-Avlek, Sarvatkann-Zaboh or Brodeskann) who are known for their delinquency and drug trafficking. Akapathea, the capital, is also a bad example in this area since the city has several neighborhoods at risk, even if the hypercentre remains safe. Valkanslav, on the other hand, is probably the largest and most secure city in the country, and its crime rate is the lowest in the world for a city of over three million people, so much so that it is often said that is possible to leave a laptop on a bench in the city and find it the next day at the same place ...

The pace of life of the population is a little different from other countries. Work usually starts early in the morning, as civil servants start their days between 7 am and 8 am, depending on the state. The employees of the companies start a little later, between 8 and 9 am. Most of the time, full-time workers do not have equal five-day weeks, that is, they work three "big" days in the week, and two mornings or, more rarely, afternoons. Many people work on Saturday morning but enjoy a free day in return, in the week. This arrangement was put in place at the end of the 1980s to allow for greater opening hours of administrations, but also to allow everyone to have free time on weekdays and therefore to avoid a too important influx in the shops on Saturdays. In addition, spreading the week over six days instead of five has reduced unemployment and generally increased business income.

The country is culturally complex linguistically, since different languages are used in the country. If Ruthenian is the only official language on the whole territory, it is clear that it is not spoken everywhere. Thus, for example, the signage is written entirely in princepan in Saas-Avlek. There are currently four official national languages in the country:

- Ruthenian, the ancient language of Maponia, which is a Slavic language with a strong Germanic influence. It is the only official language in the entire territory, and is the working language of the government. It is spoken as a mother tongue in the territories of ancient Maponia, as well as by minorities in other territories of the country. Until 1940, the Ruthenian was called Maponian, but the language was renamed following the will of Horg Selenek to make the "language of all the people" and not that of a "dominant minority". Ruthenian is a rich language of a rich literature; it is run by the Ruthenian Academy (*Ruthenjeskaja Jezika Akvademja* in Ruthenian) which is based in Valkanslav. The language undergoes strong variations from one region to another.

- Batoran, the ancient language of Batoria, is the official language in all historically Batoran territories. It is a Slavic language too, related to Polish. It is the mother tongue of most inhabitants of the northern states, and, outside major cities, most people do not speak Ruthenian fluently, but only Batoran.

- The Princepan is the official language in the ancient regions of Princenia. It belongs to the family of Finno-Ugric languages (which are not Indo-European languages), which includes Finnish, Estonian or Hungarian. The Princepan is mainly divided into two different "languages", the High-Princepan (spoken in the Saas-Avlek region), very similar to Finnish, and the Eskannian, spoken north of Brodeskann, in the Koblenja and Sarvatkann-Zaboh regions, and which also looks like Finnish, but with larger Slavic loans. The differences between the two variants are mainly phonological and lexical, so that there is intercomprehension, though often difficult. The administration only uses High-

Princepan. The princepan remains a language of regional pride, so that many inhabitants of these territories refuse to learn Ruthenian or even refuse to speak it if they can.

- Ajkalan is the official language of the Ajkalan Islands. It is a Germanic language halfway between Norwegian and Icelandic. It should be noted that although Ruthenian is also the official language on the islands, most people speak only Ajkalan and possibly English. Ruthenian is almost totally absent.

In addition to these four official languages, there are more than 26 recognized regional languages. The most known and widespread are the Cachevian, the Kavilian, the Oksonnan or the Daygonaran. Regional languages are not recognized as official languages and are therefore not used by the administration or the professional environment. However, they can be taught in the school curriculum. The regional languages also include the languages of the neighboring countries that are spoken on the Ruthenian territory (this is for example the case of German or Czech). Finally, it should be noted that the Cachevian (which is the language of the historic Katchachkewa region) is currently subject to contention, since the population wants it to be recognized as a national official language. Spoken by more than 400,000 people as a mother tongue, the Cachevian is a linguistic isolate, that is, a language that does not belong to any family.



The Oldenaa – Saas-Avlek trunk road in the desert of Lodargas.

Transports

As the CNR is a vast territory, transport is a major issue for the country. All the territories are connected by a vast motorway, rail and air network. However, there are certain aspects specific to the country. Thus, highways are public, but not free. There is no vignette system as in Switzerland, but tolls are put in place along the whole network. It is the states that set the prices on their territory (the use of the motorway is charged per kilometre, around 2 to 5 venters per kilometre travelled for cars and

two-wheelers, triple that for heavy goods vehicles). It is also the states that set speed limits on the road network. In most cases, motorways are limited to 120 km/h, secondary roads to 100 km/h and city traffic to 40 km/h. There are, however, exceptions, the most notable being Lodargas where several sections of motorways have no speed limits. However, a distinction must be made between real motorways, called *Velokitastrav(i)*, which are charged for, and free express roads. Expressways can also be limited to 120, but more generally to 100 or 110. Motorways are also free in the vicinity of major cities. Speed controls are moderately frequent and there are few automatic radars along the roads compared to other European countries. In addition, if the speed limit is exceeded by less than 20 km/h, there is no contravention, but a warning letter (three letters received over a 12-month period result in a contravention). As a result, most residents drive slightly above the speed limits, but the accident rate remains very low (less than 3,500 deaths per year) due to the demanding nature of the driving licence examination, frequent prevention campaigns and the excellent condition of the network's roads. On the other hand, there is no tolerance by law enforcement agencies for drunk driving or dangerous or unsociable behaviour. It should be noted for information that the Ajkalav Islands does not have a motorway, simply an expressway connecting the capital to the airport.



Typical urban landscape of the Estat Dqgonara, here between Naraskalvind and Aeroba.

The aerial network is not among the most developed in the CNR. There is a semi-national airline, Elsair, which offers many long or medium-haul flights, but national offers remain limited. Indeed, the state does not subsidize airlines when they can be replaced by viable, more environmentally friendly alternatives (usually the train), so that an air ticket between two CNR cities generally costs four times the equivalent train ticket. On the other hand, flights to foreign countries are subsidised, as are some medium-distance domestic flights (Akapathea - Kavilhoxev for example, since the equivalent train journey takes more than 10 hours compared to 1.5 hours by plane). The country's busiest airport is Valkanslav Livrodda Airport, which offers flights to all over the world, and is

generally used as a transfer point to other cities in the country, either by plane or train. In second place is Akapathea Horg Selenek Airport, which also offers flights to the whole world. Other major airports are Asan Korek Airport in Terekhristy, Nasiila Airport in Saas-Avlek, Voling Airport in Tarna, Kostorka Airport in Aeroba, Ogosenkov Airport in Akapathea and Jusvarna-Sansek Airport in Dand-Molnja, which all offer flights to the whole of Europe. The other airports mainly offer domestic flights or flights to Æjkæælæfavek Renfeik airport in the Ajkalavs Islands. Elsair also has two subsidiaries, Elsair Nicy, a low-cost airline, and Elsair Xcel, a luxury airline offering long and medium-haul flights.

Finally, there are three ferry lines connecting the mainland to the Ajkalan Islands. There are two connections per week between Stålek and Æjkæælæfavek, three between Karlavers and Æjkæælæfavek and one between Kavilhoxev and Svelbrid. The crossing takes between 35 and 41 hours, but remains widely used because it allows the transport of personal vehicles, but also because the boats offer many activities on board during the two nights of the crossing. Moreover, since it is subsidized, the route is not too expensive (but still more expensive than the plane).

The rail network is described in the next part of this presentation.

THE RUTHENIAN RAIL NETWORK

The RKP

The RKP, for *Ruthenjeskaja Konfederaskaja Pojesdalenka* or Ruthenian Confederate Railway Company, is the national public company of the CNR that operates the country's rail passenger traffic. Founded in 1937, it is responsible for operating the physical rail network and infrastructure in almost the entire country, with the exception of the Ajkalan Islands - whose network is managed and operated by another regional public company. RKP also operates the overwhelming majority of passenger trains throughout the country. Some private companies operate passenger trains in certain areas, for example Akapathea's peri-urban services, the airport express connections around Akapathea, or the suburban trains of the city of Stąlek. It also manages all night trains and high-speed intercity or intercity trains, sometimes in cooperation with foreign networks - DB, PKP... - with the exception of the Livrodda Express service from Molnja to Valkanslav's Livrodda International Airport, which is operated by a private company but uses equipment leased from RKP. In addition to maintaining the network, stations and passenger traffic, RKP also operates some freight services. However, the majority of freight services are provided by private international companies, such as Freightliner, EWS, Colas or Direct Rail Service.

RKP divides its passenger trains into different categories: VHP, RP, VRP, IP, I2V, NP. VHP services, for *Velokitaskaja Horodaskaja Pojesda*, or Urban Express Train, are trains connecting large cities to their immediate surroundings, generally serving all intermediate stops, sometimes only a few hundred metres away. Their speed is generally low - below 120/100 km/h - and their journey rarely exceeds 50/60 km for a maximum duration of 50/60 minutes. Medium-sized cities sometimes have only one line - which is the case of Tarna and Floeta - while large cities can have a very large number - Terekhristy has 11 for example. Sometimes, VHP services connect two points in the suburbs, whether or not they pass through the city centre; this is the case in Valkanslav or Saas-Avlek. RP services, for *Regjonalnaja Pojesda*, or Regional Train, generally refers to services connecting two medium-sized or large cities by serving all or most of the stations along the route. Their journey is longer than VHPs and can go up to 200 km for travel times of up to 2 hours. They are also faster - up to 140/160 km/h in general - but can also be used for suburban services in small and medium-sized cities - this is the case around Stelbrąk, Tarna and Floeta. The VRP, or *Velokitaskaja Regjonalnaja Pojesda*, services are regional services that connect two major cities over distances that are generally greater than those of RP, and serve only medium to large stations. They can have long journeys, with distances approaching 200-300 km for 2 to 3 hours of travel. Their speed can reach 180 km/h - 250 km/h for special VRP250 services - and the trains are generally equipped with food and drink dispensers. IP services, for *Interthea Pojesda*, or Intercity Train, refers to trains operating long distances between major cities. Their journeys can be very long, sometimes exceeding a thousand kilometres for travelling times of up to 10-11 hours - although there are relatively short IP services, sometimes only two hours. Their speed does not exceed 200 km/h and they only serve important stations. It is mandatory to book a journey on IPs, and seats are numbered. I2V services, for *Interthea Velika Velokitaskaja (Pojesda)*, or Intercity High Speed (Train), are similar to IP services except that they use high-speed lines and therefore reach 250 km/h on at least part of their journey. Their journeys can be very long, some reaching 1600 km for 12 hours of travel time. They are all equipped with a restaurant car accessible to first-class passengers, the meal must be booked in advance when the ticket is bought. Other passengers have access to the

bar to buy a meal, drinks or snacks. Reservation is again mandatory with numbered seats. Some I2V services are international and connect Germany, Poland or the Czech Republic. It should be noted that some services using the LGV over very short distances compared to the total length of their journey are nevertheless classified as IP in order to keep the rates correct. Finally, NP services for *Nocza Pojesda*, or Night Train, are special IPs that generally cross the entire country, leaving in the evening from one point and arriving the next morning at the other, without serving any stations during the night. Their speed is low - not exceeding 140 km/h -, sometimes voluntarily in order not to arrive too early. Passengers have a choice of reclining seats, standard or first class berths. The NP also always include a dining car.

It should be noted that all trains except for VHP - except for certain specific services - and some RP trains have a standard class and a first class, which is more expensive but more comfortable and generally benefits from superior services - electrical outlets, restaurant access for I2V and some IP, WiFi access for some I2V and IP.

VHP, RP and VRP are always managed by local RKP entities. Indeed, the company is divided, at the regional level, into specific subsidiaries, generally one, two or three per state depending on the size of the state. Thus, the state of Sansek, which is of significant size, includes three of them: the RKP East-Sansek, the RKP Sland and the RKP Kaczajkewa. IP, I2V and NP are managed directly by RKP. Each subsidiary owns its own rolling stock and independently manages its own stations and stops, with the exception of the largest stations which remain managed by RKP - for example, Tarna Sahn-Veronika and Floeta CS stations, but not Stelbrąk CS which was transferred to RKP East-Sansek in 2009.

The East-Sansek network

The RKP East-Sansek is the regional subsidiary of RKP that handles local passenger traffic management in the northeast of Sansek State. It is mainly structured around two central axes: the East-West axis - corresponding to the Sansek Line from Molnja to Floeta - which runs from Stelbrąk to Floeta for 155 km, and the North-South axis - corresponding to the Denekecziv Line from Tolethą to Kaczajkewathea - which runs from Tarna to Xeristoh for 180 km.

Story of the network

The regionalization of the networks was carried out between 1972 and 1978. RKP East-Sansek was one of the last subsidiaries to be created, in 1977. The network at the time already no longer had steam locomotives, but a very large stock of diesel locomotives as well as some railcars and diesel multiple units (DMU). At that time, the network was not electrified. Speed limits were, at most, 140 km/h throughout the network. In 1986, electrification began on the Sansek Line from Molnja, reaching Tarna in 1988 and Floeta in 1989. The RKP East-Sansek then acquired numerous electric locomotives, ARK381 and ARK382 (equivalent to Class 86 and 87) to provide its regional services. Between 1990 and 1992, the RKP received 24 CRK161 electric multiple units (EMU) (similar to Class 319 but with 3 cars), which enabled it to develop a very efficient suburban system. The RKP East-Sansek multiplies by three the number of people using its network in a few years, mainly thanks to these EMUs. Between 1992 and 1993, it also received the delivery of 18 CRK161/4 trains (equivalent to Class 319 too), including 14 trains suitable for circulation in Poland, to run on the newly electrified Floeta to Wroclaw line, or to

provide regional services between Floeta and Tarna. In 1994, the line from Stelbråk to Silidann via Cek and Sahn-Kornelja was completed. It corresponds to an initial project to electrify the Stelbråk - Xeristoh axis via Silidann and Hoeldansvell in order to ensure the complete electrification of services between Molnja and Sarvatkann-Zaboh. However, the project will, after lengthy discussions, be abandoned in favour of electrification of the Tarna to Xeristoh line - the North-South axis - as the move of the Intercities through Tarna was considered more economically attractive. In 1997, electrification was complete between Tarna and Kaczajkewatheia via Xeristoh. It joins the Xeristoh - Sarvatkann-Zaboh section, which is already electrified with 1,500 V. The electrical system of the time, in a sorry state, was replaced by alternating current at Xeristoh station, but the direct current was maintained and repaired south of Hokenah. At the time, the RKP did not have dual-current trains capable of operating at both 25,000 and 1,500 V, which means that trains operating between Xeristoh and Kaczajkewatheia were diesel trains. The situation continues to this day. At the same time, the city of Xeristoh decided to set up an urban service linking Gyecsenah to Sigyevnah, via Xeristoh. The aim is then to create a system that allows workers to get to Xeristoh quickly. However, the RKP refuses to set up this system, and the city will decide to do so on its own. It buys three C161 trains from the RKP and initially plans to have them transformed into dual-current trains. Nevertheless, the deplorable state of the 1,500 V power lines, plus the fact that the small branch of Gyecsenah was not electrified, prompted the RKP to refuse to set up these services. Fearing premature wear and tear on the catenaries (then used only by a few IP services per day), the RKP finally decided, after several political pressures from the town hall and the region, to install a third rail electric system, so that the services could start with the help of the C161. At the same time, most of the C161s are being redeployed on the Tarna - Xeristoh axis as VRP. They are replaced on the old lines they provided by the delivery, in 1995, of eleven CRK164 trains (similar to the English Class 365 but composed of three cars instead of four). These new trains, equipped with automatic announcements, real-time information, first class and air conditioning, considerably increased the comfort level of the network's regional trains and increased its popularity among users. RP services between Tarna and Xeristoh are then carried out mainly by ARK381 locomotives.

In 1999, the first ARK381 locomotives began to be withdrawn. To make up for their disappearance, the RKP East-Sansek receives 10 additional CRK164 trains, in their /8 variant, i.e. they are composed of 4 cars instead of 3. They correspond to a second wave of construction of these units after the initial success of the first wave. They also replace some CRK164 3 cars trains on the busiest schedules, and these are redeployed on the Tarna to Sahn-Roch line.

In 2004, the construction of the East-Sansek high-speed line between Bavarieks and Tarna began, with completion scheduled for 2008. This requires significant reductions in speed between Tarna and Vanarda, due to the elimination of the four-lane portion in favour of a two-lane portion - the two eliminated tracks becoming the HSL tracks. This choice was made in an economical way, but also because the arrival of the HSL led to a postponement of part of the traffic on this new line. In 2005, the management of the Tarna to Sahn-Roch line was transferred to the RKP Hosdregoh - the overwhelming majority of the line is located in Hosdregoh and not in Sansek. The electrical units used on this line are redeployed to the rest of the network and allow the last ARK381 to be removed. However, at that time, the RKP Hosdregoh did not have any electric trains to operate the line and deployed BRK123 (Class 150) diesel trains even though the line was electrified. In 2007, a violent winter storm broke out and destroyed the catenary on the bridge over the Sansek River between Tarna and Liend. RKP Hosdregoh decides not to request the repair of the catenary, and it will be completely removed in 2008 between Tarna and Sahn-Roch. The decision then makes a scandal, both from an economic and ecological point of view; it is the sign of a line that will continue to decline until today. In parallel, in 2007, a mythical train, the *Androka Express*, which connects Sahn-Aldreja-ank-Sansek to

Akapatheia via Sahn-Roch, Tarna, Acmarad-ek-Sland, and Anders every day, was modified. It now ends and begins in Sahn-Roch instead of Sahn-Aldreja-ank-Sansek. In March 2009, the HSL East-Sansek was opened. The first I2V services to operate in the East Sansek RKP network are emerging - although I2V services have existed elsewhere in the country since 1992. Some of the IP services are being replaced by these new I2V services to Molnja, Karlavers, Valkanslav and Akapathea. This is the case, in the same year, of the *Androka Express*, which is definitively withdrawn. In the same year, RKP Hosdregoh was split into two different entities, and RKP Androka was created to provide services in the area from Salvjati to Sahn-Aldreja. Also in 2009, the RKP Est-Sansek received 14 CRK168/4 trains with 3 cars (similar to the English Class 350) which were immediately appreciated by the public for their modernity, computer display and faster acceleration and braking time. They provided VRP services between Tarna and Nerendavak and greatly improve comfort on this journey, including the addition of first class, more comfortable seats, better lighting and air conditioning. As a result, the 14 CRK161 trains that had been modified to carry out this services were reformed and stored. They were stored for many months on Floeta's marshalling yard. In 2011, two major changes took place on the network: the RKP Est-Sansek received 7 CRK168/6 4-body trains to replace the last ARK382 locomotives in RP service - with the exception of two of them which will provide RP services on the Stelbråk - Silidann line until 2017. They are then transferred to the Tarna - Gladiorka RP links in spring 2018, when the RP link is shortened to Gladiorka (previously from Xeristoh, the VRP service has also been redesigned). In addition, the RKP East-Sansek inaugurated the VRP250 service, an unique service at the time in the country where VRP used the HSL between Tarna and Stelbråk to travel at 250 km/h. To provide these services between Floeta and Bavarieks, the RKP received 7 CRK251 trains manufactured for the occasion. They are very similar to the English Class 395 but cannot use third rail and are therefore single current.



The town of Sahn-Venceslas-Kaniga, on the edge of Androka Lake, located on the East-West axis.

In 2012, the Kaczajkewa high-speed line opened between Kaczajkewathea and Opleon, and this was the beginning of I2V services between Floeta, Tarna and Aeroba. The same year the HSL between Terekhristy and Stąlek was inaugurated, with the creation of I2V services between Floeta and Stąlek via Bawarieks. In 2013, important work began in the vicinity of Tarna, with the aim of creating a VHP line - similar to the one in Floeta. The initial project mentioned a line between Kolpenbjel and Tarna Voling Airport. However, this project was initially considered too economically burdensome and it was decided to shorten the line to finish it at Tarna-Kapara. A bypass road is added around the East depot, as well as a third road between Tarna-Anjerki and Kolpenbjel. The Kolpenbjel station is extended by two dead-end tracks, and the Tarna Sahn-Veronika station receives the addition of a fourteenth track, also dead-end. The works require the opening of two new stations, Tarna-Horkova-Strav and Tarna-Lodvonaja, but also the re-electrification of the portion from Tarna to Tarna-Kapara - located on the line from Tarna to Sahn-Roch, which then caused teeth to grind... The VHP system opened in 2015, with three C164/8 trains assigned to it. The VHP system is a real commercial success and sees a frequency of 2 trains per hour in off-peak hours and 4 trains per hour in peak hours. This results in the closure of Kolpenbjel and Tarna-Anjerki stations to RP service - formerly they were served by RP between Tarna and Serinathea - with the exception of a few trains per day, during rush hour, which serve both stations, both to and from Serinathea.

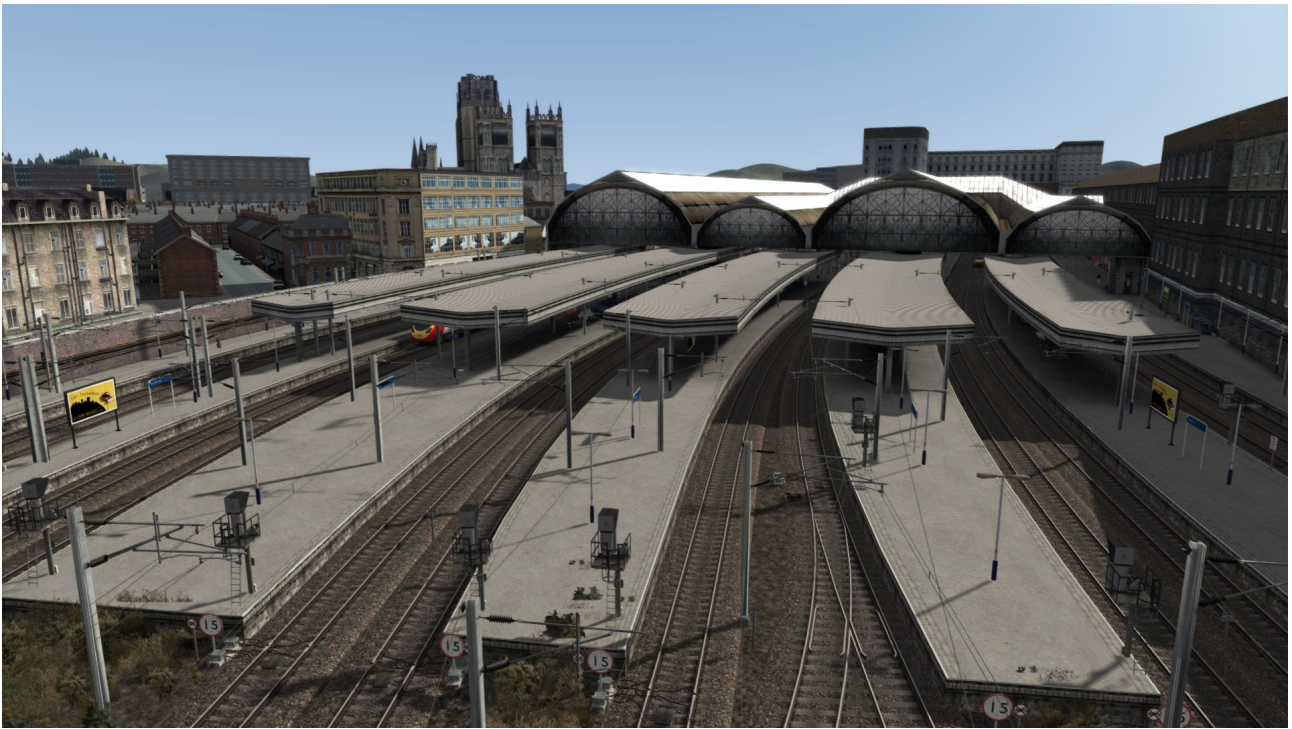
Accidents and incidents

During its existence, the RKP East-Sansek network has experienced a number of accidents and incidents. Some of these events were particularly significant. One example is the summer of 1986 when the A142430 locomotive (equivalent to Class 47), at the head of a passenger train from Floeta, entered Stelbrąk CS station in the middle of a heat wave and suddenly caught fire. The station was evacuated very quickly and the fire contained, but the event was no less impressive, damaging the station awning without causing any casualties.

In 1997, the most serious accident known of the RKP East-Sansek occurred in Lodenah. At the end of the tunnel, DMU B123010 which left Xeristoh a little earlier and late, was serving the station, providing a Rp service to Hoeldansvell. It is caught up at a speed of 90 km/h by another DMU, the B123009, also from Xeristoh and heading to Elsidonja, but not serving Lodenah station. The accident, which was extremely violent, killed six people and injured about 30 others. The investigation revealed that the signal at the entrance of Lodenah tunnel had not detected the first train and had therefore remained open, causing the second train to catch up, as the driver thought the track was clear.

From 2001 onwards, another series of events occurred and began to cause fear among drivers, but also among guards and some passengers. In March of the same year, a driver died suddenly of cardiac arrest while driving a passenger service from Stelbrąk to Floeta on locomotive A383013 (equivalent to a Class 90). The safety systems caused the train to stop, which did not lead to any additional complications or fatalities. But from then on, the locomotive began to accumulate technical problems and incidents, sometimes serious. In June, it struck a car at a railway crossing, causing the motorist's death and serious damage to the locomotive. She returned to the rails in September and, at the end of October, she hit two different men at two different points on the route, both suicides, during the same passenger service - connecting Stelbrąk to Floeta once again. In 2002, she hit a truck near Paldinvy, seriously injuring the locomotive. It was immobilized for repairs for almost six months and returned to VRP at the end of the year. It was involved in a series of fatalities, most of them suicides, so that in six more months she alone struck as many people as all the other trains of the RKP

East-Sansek combined during the same period. There have also been many failures, including several failures of the ETS power supply that transmits electricity to passenger cars, resulting in cars being plunged several times into darkness in the middle of the night. Some drivers reveal that sometimes the locomotive whistle activated itself, without them pressing anything. Soon, it was nicknamed the Cursed Locomotive by drivers, and some began to simply refuse to drive a service where it provided traction! The problem became a media issue when, at the end of 2003, the locomotive screamed its horn six times in the middle of Floeta CS station while no one was on board, in the middle of rush hour. In order to take the problem with humour, the RKP East-Sansek had a "The Cursed Loco" plaque placed on the locomotive some time later, and some reckless passengers, particularly young people, even went so far as to ask for information in order to be sure they were travelling on a service performed by this locomotive. At the very beginning of 2004, it caused serious disruptions on the network after ripping out the catenary in the Serinathea sector, which will require costly and time-consuming repairs. In June 2004, only a few months later, it struck at 160 km/h a 4x4 that had forced the Tansyry crossing. The impact was so violent that the locomotive derailed and successively struck a signal gantry and then a catenary gantry, again causing serious disruptions, including the complete stop of all traffic on this portion of the East-West axis for nearly sixteen hours. The train driver miraculously escaped unharmed, but the two occupants of the 4x4 died instantly. The locomotive was stopped and repaired for several months before returning to service in November 2004. One Sunday morning at the end of December of the same year, she suffered a final accident: while the temperatures were extremely cold, she provided fast service between Tarna and Floeta. The train was approaching Tolethą at a speed of 110 km/h (instead of 160 km/h due to freezing), passing just after a service to Xeristoh. While the signal did not indicate a fork, the driver realized at the last moment that the switch point had broken and had not rotated properly due to the cold. He initiated the emergency braking, but too late, and the train turned at over 100 km/h instead of 60. The locomotive overturned, followed by the rest of the train, which was completely embedded in the platforms of the Tolethą station. Fortunately, the early morning schedule and the fact that it was Sunday morning not only allowed the train to be almost empty, but also the Tolethą station to be unoccupied. Twenty-two people, including the train driver, was still seriously injured, and ten others was slightly injured. Contrary to expectations, the locomotive was not too damaged and could be repaired - which was not the case for three of the eight cars it was towing, which were disbarred - but most drivers, after the accident, say that they will now simply refuse to drive this locomotive. The decision was taken by the RKP East-Sansek not to repair it and to withdraw it. It was permanently removed in 2009 and sent to Akapathea, the capital, where it was scrapped. Some still say that it was haunted by the dead driver's mind when driving it, others, more cartesian, that it was simply the result of chance. Nevertheless, even after its removal, and while it was stored on a track in Floeta's yard for five years, its whistle sounded a few more times, for no apparent reason...



Floeta CS station dans the city's cathedral in the background.

On Wednesday, May 17, 2017, at 4:52 p.m., a violent accident occurred at Floeta London-Street station. A VHP service from Floeta CS to Floeta Koroleva was waiting at London-Street Station, Track 2, when a freight train pulled by an ARK66 (Class 66) struck the train from the front, at the driver's location, at a speed of about 70 km/h. The locomotive derailed and uprooted a catenary pole, cutting off power throughout the Floeta area for several hours. Fortunately, the accident did not cause any deaths, but 47 people were injured, 16 of them seriously. Traffic was very severely disrupted in the Floeta area until 7pm, when power was restored to the catenary. The line from Floeta CS to Floeta Kądoký was cut off until Monday, and trains from Pelkovja, Urnadov and Nerithea (Horod) had Floeta-Kądoký as their terminus, while the Xeristoh-Floeta VRP was diverted by Horendzhasva. The VHP service was also completely cut off until the end of the weekend, replaced by a bus service. The damaged train set, consisting of trains B123016 and B123017 (Class 150) had to be sent for repair, while the severely damaged B123016 train set was liable to be written off. The impacted locomotive, numbered A66097, was damaged to a lesser extent and resumed service on Monday, 22nd. Ironically, Class 66 locomotives are named with the names of modern artists in the RKP, and the A66097 locomotive was named *Donna Summer*, while the accident occurred on the fifth anniversary of her death. The investigation will reveal that the accident was due to several circumstances: firstly, the weather was terrible that day, with a very violent storm associated with heavy rain and very poor visibility. The A66 black box study revealed that the signal preceding the London Street switch was open when the train passed - no AWS alert - suggesting a signal failure. The train was travelling at a speed of 86 km/h at the time of the signal, and the driver could only see the train in the opposite direction a few seconds before the impact. The emergency brake, applied then, only reduced the speed of the convoy by a few kilometres per hour....

The RKP East-Sansek has suffered other incidents, albeit less spectacular. There was also an episode in 2013, for example, during which, for a week, all traffic had to be stopped on the Stelbrąk bridge over the September River, following fragilities discovered in the pillars.

The present network

The current RKP East-Sansek network includes all the lines in the northeast of Sansek State. The total network operated by the RKP East-Sansek covers a distance of 1,096 km (650 miles), centred around the main cities of the region, Tarna, Floeta, Stelbråk, Xeristoh, Gladiorka, Silidann, Nalasdogo, Hoeldansvell, Pelkovja and Sahn-Kornelja. The network presented here includes the line from Floeta to Stelbråk, which is the major axis of the network and the most frequented. The line is limited to 100 mph on almost the entire Floeta - Tarna section (except for two short sections at 85 mph, and two sections at 110 mph). Between Tarna and Vanarda, the limit is 95 mph on the normal track, then 85 mph to Nalasdogo. Then the line is at 110 mph on its quadruple tracks section - up to Dandzeszczenje - for fast lines, 85 or 75 for relief lines. The line is then limited to 100 mph to Stelbråk. The attached network also includes the North-South axis, also known as the Denekecziv line, between Tolethą and the Xeristoh depot, or about 170 km / 185 km if starting from Tarna (105 / 115 miles). This line, which is very mountainous on some sections, has many areas limited to 55 or even 40 mph. However, major improvements have been implemented over the past ten years, maintaining several sections at 85 or 100 mph, but also creating two major sections at 125 mph between Gladiorka and Xeristoh, which required replacing three level crossings with bridges. Also included are the short Zhenskeldava line (6 miles) which connects to the Denekecziv line, part of the Nalasdogo to Salvjati line (to Luzhanska-Lezhiszjo, 10 miles) and the Floeta CS to Urnadov line (14 miles) which marks the first portion of the Floeta CS lines to Nerithea (Horod) and Pelkovja. These last three portions of the network are not electrified; the Zhenskeldava line is single-track over a large part of its route.

The HSL portion between Tarna and Stelbråk 2V is limited to 140 mph between Tarna and Tarna Voling Versafloj, then to 155 mph. The line from Stelbråk CS to Silidann is limited to 75 mph on the portion that allows connection with the high-speed line. However, it should be noted that freight services have lower speed limits, in particular because of their weight, which sometimes considerably extends their braking distance - they are generally limited to 65 mph, sometimes 75 or 50, with the exception of postal services, which are limited to 100 mph.



An IP service from Prenja to Floeta thrashing through Luzhanska without stopping.

Rolling Stock

In order to provide passenger services, the RKP East-Sansek has a large number of vehicles. They are all maintained in the Floeta or Xeristoh traincare centres, as well as sporadically in the light workshops of Stelbråk. Some of the stock is old, but the RKP East-Sansek is constantly doing its best to renew its fleet and ensure a high level of quality. Here is the detailed list of its fleet, as of September 3, 2018:

Diesel Locomotives

Train Class	British Equivalent	Number	Year of construction	Max Speed	Unit numbering	Services
ARK 142	Class 47	7	1965	90 mph	A142427-429 A142431-434	+ Thunderbird locomotives
ARK 163	Class 68	9	2016	100 mph	A163001-006 A163017-019	+ RP Floeta – Pelkovja RP Floeta – Nerithea (Horod) RP Tarna – Serinathea VRP Tarna – Hoeldansvell RP Floeta – Xeristoh RP Gladiorka - Tarna

Electric Locomotives

Train Class	British Equivalent	Number	Year of construction	Max Speed	Unit numbering	Services
ARK 383	Class 90	8	1987	110 mph	A383011-012 A383014-019	+ VRP Floeta – Stelbrak RP Tarna – Stelbrak VRP Tarna – Xeristoh

Diesel Multiple Units

Train Class	British Equivalent	Number	Year of construction	Max Speed	Cars number	Unit numbering	Services
BRK 123	Class 150	19	1985	75 mph	2	B123001-008 B123011-015 + B123017-022	+ RP Nerithea (Horod) – Serinathea RP Gladiorka – Vezhnaja-ank- Sarvatkann – Silidann RP Xeristoh – Nerendavak RP Xeristoh – Kamasy – Elsidonja RP Horendzhasva – Pelkovja – Senfera RP Gladiorka – Zhenskeldava
BRK 142	Class 158	18	1994	90 mph	3	B142001-018	RP Tarna – Silidann VRP Tarna – Hoeldansvell RP Xeristoh – Elsidonja RP Xeristoh – Hoeldansvell Acmarad-ek-Sland
BRK 161	Class 170	16	1999-2000	100 mph	2	B161031-046	RP Floeta – Nandrak
		10	2000		3	B161124-133	RP Floeta – Nerithea (Horod)
		9	2005		2	B161511-519	VRP Tarna – Hoeldansvell
		14	2005-2006		3	B161723-736	VRP Xeristoh – Stelbrak VRP Xeristoh – Bavariex RP Xeristoh – Zhenskeldava RP Tarna – Silidann RP Xeristoh – Gyecsenah VRP Xeristoh –

							Kaczajkewathea VHP Floeta VRP Floeta - Xeristoh
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Electric Multiple Units

Train Class	British Equivalent	Number	Year of construction	Max Speed	Cars number	Unit numbering	Services
CRK 161	Class 319	12	1987	100 mph	3	C161013-024	RP Tarna – Stelbrak
		14	1992		4	C161401-414	RP Serinathea – Tarna RP Floeta – Serinathea RP Xeristoh – Gyecsenah RP Floeta – Horendzhasva RP Floeta – Wroclaw
CRK 164	Class 365	8	1995	100 mph	3	C164040-047	RP Floeta – Serinathea
		10	1999		4	C164804-813	RP Horendzhasva – Floeta RP Serinathea – Tarna VRP Floeta – Xeristoh VHP Tarna RP Tarna – Stelbrak RP Xeristoh – Tarna Replacement Train
CRK 168	Class 350	10	2009	100 mph	3	C168401-410	RP Gladiorka – Tarna
		7	2011		4	C168616-622	VRP Xeristoh – Tarna
		12	2017		5	C168901-912	RP Stelbrak – Sahn-Kornelja RP Tarna – Stelbrak RP Serinathea – Tarna RP Floeta – Serinathea RP Xeristoh – Nerendavak
CRK 251	Class 395	7	2011	155 mph	6	C251001-007	VRP250 Floeta - Bavarieks

Coaching Stock

Coach class	British Equivalent	Number	Year of construction	Max Speed	Public name
K4 - SK	Mk3 Coaches	74	1982	125 mph	K4 Coach – Standard Class

K4 - LK	Mk3 Coaches	16	1982	125 mph	K4 Coach – First Class
K4 - RK	Mk3 Coaches	16	1982	125 mph	K4 Coach – Buffet Coach *
K4 – VK	Mk3 Coaches	16	1984	125 mph	K4 Coach – Driving Van Trailer (A27156-171)

* Buffet Coaches has been refurbished into second class coaches fitted with food dispensers and toilets for disabled people.



Two RKP East-Sansek EMUs, a C161 (on the right) and a C164 (on the left), in the surroundings of Tarna Sahn-Veronika station.

Future

In 2018, the RKP East-Sansek announced the order of new B162 trains, equivalent to the English Class 175. They are expected to be delivered in 2020, with the aim of replacing the B161s on the longest routes, which would in turn allow the B161s to replace the ageing B123s, which are about to be withdrawn soon.

MAIN CITIES OF THE NETWORK

Before talking further about the different cities that make up the East-Sansek network, it is worth first of all talking a little more about the state of Sansek itself. Sansek is one of the twelve states of the CNR. It is a mainland state of 60,333 km², about the size of Latvia, and had 3,861,538 inhabitants in 2017. It is therefore a low-density state, famous for the great diversity of its natural landscapes. The north is marked by the presence of the Sansek River, which forms the border with the state of Hosdregoh. The river is bordered by narrow plains that form the Sansek Basin. It is in this basin that most of the population is concentrated, including the capital, Tarna, and the largest city of the state, Bavarieks (524,000 inhabitants). The northeast of the state is marked by the presence of Lake Androka, a huge 23,000 km² freshwater lake that forms the largest lake in Europe but also the first freshwater reserve on the continent. The southern shore of the lake, which belongs to the Sansek, is also highly urbanized and hosts the cities of Floeta and Serinathea; the lake is an important tourist destination in summer as its waters can reach 24 degrees in July / August. The presence of this strong urbanization along the lake and the Sansek River means that more than two million people live in the far north of the state, more than half of the population of the entire state spread over less than 8% of its area.

The rest of the state is marked by a very strong rural character and by many preserved natural areas. The eastern part of the state includes the Denekecziv massif, which hosts many ski resorts, while the centre is occupied by the Svell massif, which is lower than the Denekecziv. To the south is the Katchachkewa cultural region (noted as *Kaczajkewa* in Ruthenian), which occupies a vast plateau along the river of the same name. It is an important agricultural area of the country, organized around the two major population centres of the region, the cities of Kaczajkewathea (*Catyutycwdhrwuhwull* in Cachevian) and Gdezcejkewa (*Gwdhetyutydhrwu* in Cachevian). The west of the state, finally, corresponds to the Sland region (straddling the Noberek and Sansek), mainly formed by vast agricultural plains interspersed with dense forests, separated from the Katchachkewa plateau by a small massif of hills.

Administratively, the Sansek is divided into 9 different oblasti: Soth-Androka, Ędaja-Sansek, Sland-u-Sansek, Ędaja-Svell, Nygya-Sarvatkann, Denekecziv, Sland, Vest-Kaczajkewa and Ost-Kaczajkewa. Sansek is bordered to the north by Hosdregoh, to the west by Noberek and Rejkinav, to the south by Eskann and to the east by Poland, the Czech Republic and northern Hungary.

The following section will focus on presenting the most important cities in the network.

Floeta

Located in the far east of the country and of the Sansek state, the territory of the city of Floeta forms the corner between Lake Androka and the Polish border. Floeta is a major city both regionally and nationally. It occupies the centre of a city of 332,000 inhabitants, the third largest in the state of Sansek and the second largest in the East-Sansek network after Tarna. It is a city with a very strong industrial past, as evidenced by its sorting of goods and the importance of its port. The latter, located on the Lake Androka, is of vital importance because it is connected to the whole of Eastern Europe

and the rest of the country by the river and the railways. However, the city suffered a sharp drop in activity in the 1990s, due to successive economic crisis and globalization, which forced some industries to close down. Once more populated than Tarna, Floeta quickly lost speed and quickly became a city in agony. Suffering from a bad reputation for many years, the city nevertheless began a slow conversion towards the end of the 2000s, moving to the tertiary sector and developing an important campus that now earns it the title of university city. Historically poor both in terms of its inhabitants and its architecture, the city has been greatly modernized and has been populated by parks, cultural sites and high quality buildings where residential blocks used to form real rabbit hutches have been built.

Geographically, Floeta occupies an important position. It is adjacent to the Polish border - bounded by a small river that can be seen near the freight depot, near the port - and bordered to the north by Lake Androka. A crossroads for roads, railways and waterways, the city has recorded the highest growth rates in the region since its conversion. It is also structured around various important centres: the Koroleva district, the university district as its finest, the Kądoký district, a tertiary sector occupied by offices, the historic city centre, famous for its cathedral located a stone's throw from the central station, the Ẽsenav district which borders the Androka and which forms a pleasant place to walk in summer, the port or the new sports centre near the Meleny district.



Floeta marshalling yard and the Vest-Ẽsenav neighborhood on the edge of Lake Androka.

The city is served by five different stations: the central station, in a dead-end, has twelve lanes and is by far the largest. It has a high level of traffic of more than five hundred services per weekday; it is served by both local trains connecting one of the city's five suburban lines (to Nandrak, Serinathea, Nerithea, Pelkovja and Horendzhasva) and by regional, national and international express trains. In partnership with Poland, it also offers direct services to Wroclaw via Horendzhasva, Boleslawiec, Chojnow and Legnica. It registers nearly nine million passengers per year. The second most important station is Floeta-Kądoký, which registers nearly two million passengers per year, mainly commuters. London-Street (*London-Strav* in Ruthenian, often abbreviated to *Londram*) and Koroleva are two minor

stations served by the city's single VHP system line. Finally, Meleny-Street (*Meleny-Strav* in Ruthenian) station is not legally located on the city's territory, but in an adjacent municipality, and serves the sports centre and a dormitory suburb of the city. Floeta is adjacent to various suburban cities that have grown up around it, the most important being Sjenhorod, Baranshorod, Nebarenka, Paldinvy and Kalaržin.

Nerithea

Nerithea is a city of about sixteen thousand inhabitants located about twenty-five kilometres west of Floeta. It is located near Lake Neri and not far from the large Androka Lake. Many of its inhabitants commute to Floeta every day to work, generating heavy road and rail traffic. The city has two stations, Nerithea-Horod station, located in the city centre and situated on the line from Serinathea to Urnadov, and Nerithea-Voda station (Nerithea Water in English), on the outskirts and on the banks of Lake Androka. It is located on the East-West axis, on the line from Floeta to Tarna and is served by the RP and VRP services. Until 2014, the station was also served by the IP service linking Floeta and Molnja, with one stop per day in each direction. Shuttles by bus connect this station to the city centre, with a very regular frequency based on train schedules. A few kilometres northeast of the city is Androkaland, an important amusement park that attracts many young visitors every summer who often take the train from Tarna or Floeta. A depot, now abandoned, runs alongside the tracks.

In 2019, RKP East-Sansek proposed to rename Voda station with Nerithea-Androka. This change is due to be official in summer 2019.



The station of Nerithea-Voda

Serinathea

Serinathea is the most important city between Tarna and Floeta. Located halfway between the two cities, its municipality has 29,000 inhabitants and forms the centre of an agglomeration of nearly forty-two thousand souls. Its northern edge borders Lake Androka and offers a pleasant walk for its inhabitants. Unlike Nandrak, Serinathea has not developed a real seaside tourism, but hosts a large number of services for the surrounding villages - hospital, schools, colleges, high schools.... - and a few companies that make the city a major employment area. However, Serinathea suffers from its road situation: the city is not connected to the motorway, since the Floeta - Tarna motorway link passes almost twenty-five kilometres further south. There is an expressway to reach it from Serinathea, but the total travel time is about 40 minutes to reach Floeta, 50 minutes to Tarna, either by joining the highway or by taking the regional roads, which are more direct but slower. This explains the importance of Serinathea station for the city: many residents travel to Tarna or Floeta to work, and it takes only about 20 minutes for VRP to reach Serinathea from these two cities. Many workers also come from the surrounding villages to work in Serinathea during the day. The central station is also served by IP and I2V services that connect it to the rest of the country. However, the offer of I2V services tends to decrease over the years, as the service is considered economically unattractive and time-consuming. Serinathea has a second station, Svanram, served by a few RP every day. Svanram is indeed a district of the municipality of Serinathea and not a separate city, following the merge of the two cities in 2006.

Tarna

With 372,000 inhabitants, Tarna is the second largest urban area in the state of Sansek - after Bavarieks - and the first in the RKP East Sansek network. Tarna is renowned throughout the country for its architectural and cultural heritage, including its old town, many squares, opera house and cathedral overlooking the city. Historical monuments dot the city, whether it is the thousand-year-old Saint-Agrafena Bridge that spans the railway line, the Anjerki Castle or the Empire Place. Tarna is also an important university city, with an important and internationally renowned campus. Contrary to what many people think, the municipality does not touch Lake Androka, nor even the Sansek River, which is beginning to flow through it. The part along the Androka belongs to the municipality of Sahn-Marek-ank-Androka and the part along the Sansek to the city of Liend - de facto located on the other side of the bank, in the state of Hosdregoh and populated by about fifty-one thousand inhabitants. Indeed, the part along the Sansek is free of human constructions except for a few access roads over several kilometres, belonging to a protected national park. As a result, the boundary between the two states is located just outside Tarna, after Tarna-Kapara station.

The city is at the centre of an important railway and road junction. Its central station, Sahn-Veronika station, is the most used in the East-Sansek network, with more than twelve million passengers per year. It is in the centre of a four-pointed star and serves many suburban towns and villages, with commuting movements accounting for the majority of passenger traffic. It also connects Tarna to other cities in the country through IP and I2V. The city also hosts a high level of freight traffic, which passes through the city's western bypass. In total, the city has six different stations: Sahn-Veronika Station, formerly Tarna CS, Tarna-Lodvonaja Station, Tarna-Anjerki Station, Tarna-Horkova-Strav Station, Tarna-Kapara Station and Tarna-Ekhczov-Rajon Station. With the exception of the latter,

these stations, together with Kolpenbjel station, form the city's VHP line, which is served very regularly throughout the day and complements the city's intra-urban services by bus or tram. The VHP line, opened in 2014-2015, is expected to be just the beginning of a larger project that should see the creation of a line from Tolethą to Tarna-Voling Airport and would require the construction of additional tracks, a tunnel and underground station under Tarna station as well as 3 additional stop points between Tarna and Voling. Work, initially scheduled to begin in 2017, was postponed due to multiple disagreements over the project; it was finally scheduled to begin in 2019. After months of further debate, they are postponed to 2021. A second VHP line is also planned, between Lakarja (on the Tarna to Silidann line) and Liend via the main station and Tarna-Kapara. However, this project is dependent on the construction of the extension of the East-Sansek high-speed line between Tarna and Floeta, which would see the construction of a new express station in Tarna-Lakarja, saving 15 minutes of time compared to the normal route. This project is also criticised as being too expensive for a relatively small time saving; however, it would reduce the saturated traffic on the East-West axis.

Finally, Tarna is served by an international airport, Tarna Voling Airport, about 20 kilometres from the city centre, which offers connections to the country's largest cities and several European capitals. The airport station, located on the East-Sansek high-speed line and the East-West axis, is served by many services, including I2V.

The conurbation Liend - Tarna - Serinathea - Floeta exceeds one million inhabitants.



Tarna's city centre, with the cathedral on the background.

Nalasdogo

Nalasdogo is an important regional city in the network. With nearly sixty thousand inhabitants, the city is located thirty kilometres northeast of Stelbrak, and thirty-five kilometres northwest of Tarna. Built not far from the banks of the Sansek River, it is an economically important city that welcomes many workers every day. It forces the East-West axis to make a major detour - about ten kilometres - to serve the city.

The city has two stations, the central station which hosts most of the services, and the Nalasdogo-Gyevkar station, which hosts the services linking Stelbrak and Salvjati. This second station, built in 2007, aims to avoid these services having to make a time consuming U-turn at Nalasdogo CS station.

The area between Nalasdogo and Stelbrak, like the rest of the Sansek River banks, is particularly dense, and hosts some other large cities such as Klavanhorod (ten thousand inhabitants) or Dandzeszczenje (nine thousand inhabitants). Nalasdogo is also famous for being located not far from the Klavanhorod nuclear power plant, which supplies the region with electricity.

After the opening of the East Sansek high-speed line in 2009, Many IP and I2V avoided Nalasdogo, as it was considered too time-consuming. Indeed, Stelbrak - Tarna is carried out in twenty minutes by the LGV, against thirty-seven by the normal route. After several petitions, a limited service to the station was added in 2012. There is also a daily return trip from Molnja to Nalasdogo station as a terminus. This service is the only passenger service that crosses Stelbrak CS station without stopping there - it is direct from Nalasdogo to Bavarieks.

Stelbrak

Stelbrak is located at the western end of the RKP East-Sansek network, about 140 kilometres as the crow flies from Floeta. It is the third largest city in the network and the fourth largest in the state, and is at the centre of an urban area with a population of 184,000. It is a city of art, history and culture, just like Tarna, which welcomes many tourists every year. In addition to its castle, transformed into a museum, the Ensin palace or the passenger building of its central station, it is especially for the banks of the Sarvatkann that the city is famous. The city is located at the confluence of the Sarvatkann and Sansek rivers. The name of the city, which would be translated as "Bridge of the Stars", refers to the railway viaduct over the Sarvatkann - which was once a pedestrian bridge, several hundred years old. The city is served by three different stations: Stelbrak CS station, the largest, on the west bank of the river, Sahn-Snezhanka station, on the east bank, and Stelbrak 2V station, six kilometres to the south, on the East-Sansek high-speed line - connected to the CS station by a bus service. Since the creation of the HSL station, and the service that goes with it, the CS station has lost some of its traffic and importance, and is becoming more of a regional than a national station. In 2010, its control was transferred from RKP to RKP East-Sansek. Sahn-Snezhanka station, although smaller in size, remains very important; in addition to serving an important business district, the services it provides make it possible to reach the central station - and therefore the other bank - in three minutes, where bus services take almost fifteen to twenty minutes. Stelbrak also has a small cargo port on the banks of the Sansek River.

Senfera

Senfera is a city of nineteen thousand inhabitants located in the Nygya-Sarvatkann oblast. It is the second largest city in the region in terms of population, after Gladiorka and ahead of Vežnaja-ank-Sarvatkann. Built in the Denekecziv mountain range, it forms an important urban centre for the surrounding area as it is far from other major cities. Tarna is located fifty kilometres to the north and Gladiorka forty kilometres to the south. Senfera is a city famous for its thermal baths. Located on the North-South axis, the city is served by RP and VRP travelling between Tarna and Gladiorka or Xeristoh. It also includes a limited number of direct services to Floeta, with 4 trains per day. Its station also forms the junction with the Senfera line to Urnadov via Ambarenska and Pelkovja, on which a few services to Horendzhasva run. This line allows you to reach Floeta over a shorter distance than the passage via Serinathea. Nevertheless, the line crosses a very rugged terrain and many portions are single-track, making it very slow. It's not electrified, either.

Many Senfera residents commute to Tarna daily for work via the VRP services, which take just over thirty minutes. Road access, on the other hand, is much more complex.

Gladiorka

Gladiorka is the prefecture of the Nygya-Sarvatkann Oblast. It is an isolated city of 38,000 inhabitants, surrounded by a gorge in Denekecziv. As a former industrial and mining town, it suffered from the crisis in the late 1990s. Converted into a tertiary centre and a touristic resort, the city is now experiencing stagnation in its development, with many inhabitants preferring to settle in more dynamic cities. Gladiorka is known to be close to many ski resorts. The city is home of many educational and health facilities, as well as a very good ice hockey team. 90 km south of Tarna, the city is surrounded by wilderness, mountains and forests. It is not served by any motorway, and it takes more than an hour and twenty minutes to reach the state capital. Built on the north-south axis, the city is however excellently served by the rail system, and in particular by IP and I2V. It offers direct connections to Sarvatkann-Zaboh, Molnja, Karlavers, Floeta, Aeroba, Valkanslav, Saas-Avlek and Terekhristy. It is 48 minutes by I2V from Tarna, 54 by VRP, and 1h07 from Floeta by I2V without stopping.

The city is also located on the junction between the north-south axis and the Gladiorka - Silidann line.

Ženskeldava

As a town of 9,600 inhabitants, Ženskeldava (also spelled Zhenskeldava) is located in the valley of the same name, dava meaning valley in Ruthenian. In the middle of the Denekecziv mountain range, the city is famous for being close to many ski resorts, so it welcomes many tourists during the winter seasons. The city also has thermal baths specialising in the care of joint pain. Hokevor, a sawmill specializing in industrial woodworking, attracts many workers every day.

The city is served by a small railway line for which it is the terminus. It thus has RP services to Gladiorka and Xeristoh. During the winter holidays, special trains run on weekends between Tarna, Floeta and Zhenskeldava.

Sigyevnah

The city of Sigyevnah (pronounced *si-dyev-naa*) is the third most populated municipality in the Denekecziv region, after Xeristoh and Radborg. Its historic centre is built on a hillside, so that the city's central church is famous because the view from its bell tower allows you to admire a good part of the South Denekecziv plain, and also to have a beautiful view of the city of Xeristoh. With its 18,500 inhabitants, Sigyevnah is de facto the largest suburb of Xeristoh, since the two cities are only eight kilometres apart. Together, the two cities, separated by Lodenah, form a conurbation of 125,000 inhabitants, which is an important population centre for the surrounding area, particularly in rural areas.

Sigyevnah is served by RP and VRP, and its station is at the junction between the North-South axis and the Svell line, which then serves Hoeldansvell, Silidann, Sahn-Kornelja-ank-Sansek and finally Karsynburg before being added to the East-West axis in the RKP Sland territory. The city benefits from a large amount of services provided, and it is very easy and fast to get to Xeristoh.



Sigyevnah's station

Xeristoh

Xeristoh is the prefecture of Denekecziv oblast, and the eighth largest city in Sansek state (after Bavarieks, Tarna, Floeta, Stelbrąk, Kaczajkewatheia, Sahn-Piotr and Sahn-Katja). The city is relatively isolated from other major cities (85 km from Kaczajkewatheia and 170 km from Tarna), so it plays an important role in the area. The city has long suffered from a bad reputation due to its strong industrial past, the lack of aesthetic interest in its architecture, its isolation and its frequently unfavourable weather (the wind generally blows from north to south in this area, so that clouds often find themselves blocked against the Denekecziv mountain range, located just north of the city). Recently, the city has tried to take a more positive turn by promoting the merits of its university or its proximity to the surrounding winter sports resorts, but it is often denigrated by the collective imagination. In this sense, Sigyevnah is much more successful because its historic centre is very picturesque.

The city of Xeristoh has a large regional station, served not only by RP and VRP, but also by IP and I2V. All passenger trains stop here except in exceptional cases. The city has always enjoyed a strong importance in terms of rail transport, as it is close to the Czech border. The city is also highly developed in the oil refining sector. In addition, the city of Hokenah, in the southern suburb of Xeristoh, has a large freight yard that now serves as a "neutral" area for freight services. Indeed, its north beam is electrified with alternating current and its south beam with direct current, which makes it a locomotive changeover point for electric freight trains. At the RKP East-Sansek, Xeristoh has a large depot that includes one of the company's two traincare centres, the other one being located in Floeta.

SIGNAL SYSTEM

The East Sansek RKP operates an extensive network with relatively high train traffic. In order to ensure both safety and efficiency, it has appropriate signalling systems for its trains. Before performing your first service on the network, it is essential to master this system perfectly in order to be able to react in all situations.

First of all, it should be noted that there are several types of signalling systems used in the RKP East Sansek network. The network as proposed here includes four different ones, which will be presented. It should be noted that the signalling systems we used is derived from English signalling systems but with important variations that must be known in order not to make driving errors. We will now turn to the different signs.

The SAKS

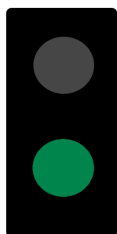
The SAKS, for *Sekuraska Avtomatiki Kvadrashovori Systema*, or System of Automatic Security Blocks, is the system you will encounter mainly on the East-Sansek network. It is derived from the English system and provides for the spacing and protection of points on high-density lines. It usually consists of blocks of 1500 to 1800 metres delimited by signals. This distance corresponds to the minimum braking distance for passenger trains travelling at 160 km/h and for freight trains travelling at 100-120 km/h depending on their load. Signals can have several aspects, which will be detailed below.

It should be noted that each signal is preceded by a ground magnet that will send information about the upcoming signal to the train. If the signal is not open, the driver must deactivate an alert or risk emergency braking. This is an inherent part of the SAKS security system. This magnet is placed upstream of the signal, between eighty and two hundred meters in front as a general rule.

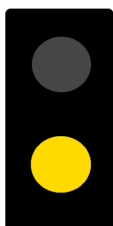
Here are the signals and their aspects:

SIMPLE SIGNALS

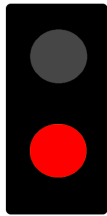
They are formed of a single rectangular panel.



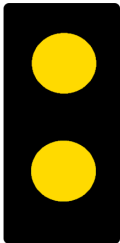
Green light : A green light signifies that the signal is *open*, i.e. that the driver can continue driving at the maximum permitted speed allowed by the line or by his train – the lowest speed limit rules. There will be no alert before this signal.



Simple yellow light : A simple yellow light signifies that the signal shows a *caution* instruction, i.e. that the next signal will display a *danger* instruction and thereby will be red. The driver must be able to stop his train before the next signal and so must brake accordingly. There will be an alert before this signal.



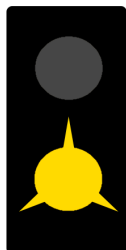
Red light : A red light signifies that the signal shows a *danger* instruction and thereby that it is protecting another train or set of points. The driver must stop before this signal.



Double yellow lights : The double yellow light symbolizes a *preliminary caution* instruction. In the SAKS, this indicates to the driver that the next signal displays a *caution* instruction, but can be too close to the *danger* signal to allow the complete stop of a train. The train speed must be reduced to two thirds of the speed limit, before the *caution* signal. There will be an alert before this signal. Please note that there is not always a double yellow light before a simple yellow light.

COMPLEX SIGNALS

Complex signals displays additionnal informations to the driver. They are showed here :

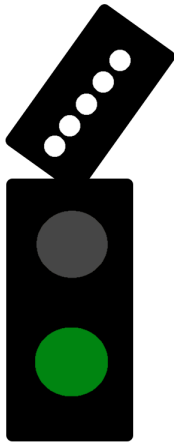


Simple flashing yellow light : This signal indicates that the next signal will be located before a fork or junction and that the train will be guided out of the mainline. This signal goes along with a warning speed sign that shows the speed limit of the diverted track. The driver must have reach that speed before the next signal.

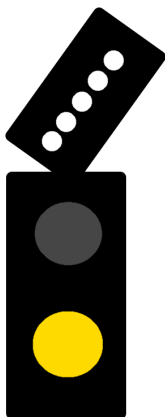


Double flashing yellow lights : This signal is set before a simple flashing yellow signal, as a preliminary caution. It is generally used when the braking distance between the simple flashing yellow light and the junction is too short to allow a safe driving.

Feathers : Feathers are small lights that go along with a light signal. They are illuminated when the train is going to be guided on a diverging track. A signal can have none, one or several of this feathers – up to 6 – according to the number of tracks. The feather direction matches the direction of the train.

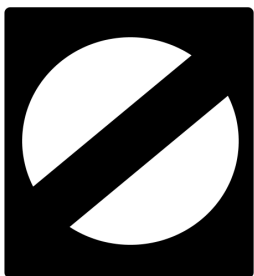


Green feather signal : This signal indicates to the driver that his train will go out of the mainline, on a diverging track. The green light indicates either that the junction does not need a change of speed or that the braking distance is sufficient to start braking after this signal. There will be no alert or simple flashing yellow before this signal.

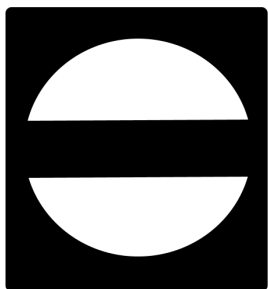


Yellow feather signal : This signal indicates to the driver that his train will go out of the mainline, on a diverging track. The yellow light indicates to the driver that the junction will need a reduced speed. There will always be a simple flashing yellow light before this signal. If you encounter a yellow feather signal without a flashing yellow before, it signifies that the yellow light must be seen as a *caution* instruction – thereby meaning that the next signal will be red.

Repeaters : When a yellow feather signal appears, the driver cannot theoretically know whether it is a warning signal announcing a future danger-type signal, or simply a lane change indication with a significant drop in speed. To overcome this problem, yellow feather-type signals are accompanied by a repeater. Most of the time, the repeater is placed just next to or above the signal, but sometimes it may not accompany the signal and be placed alone as soon as the junction. The repeaters have two different aspects:

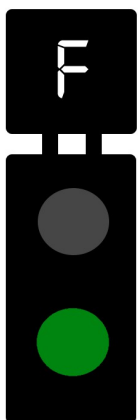


Open aspect : A repeater with a black bar set diagonally indicates that the next signal on the deviated track will not have a *danger* aspect, i.e. that it can display *caution* or *open* aspect. A yellow feather signal, when going along with an open aspect repeater, means that the driver can continue at the maximum speed limit allowed by the line or by his train.



Limited aspect : The repeater with a horizontal black bar indicates that the next signal on the deviated track has a danger aspect. This requires the driver to be able to stop before the next signal.

Note for repeaters: When the repeater accompanies a feather signal, it applies only to the deviated track and not to the "normal" track. The repeater should always be ignored if the signal feather is not lit. On the other hand, if the repeater is alone, it must be taken into account by the driver; in some cases, a repeater may be installed upstream of a signal that is difficult to see.



Theatre type signal: This signal fulfils a similar function to the previous one, except that it is surmounted by a screen displaying alphanumeric information.

The letter or number above the signal gives the locomotive engineer important informations about the route the train will take. Thus, at the station entrance, the numbers will correspond to the track number on which the train will be sent. For tracks above 9, the digit is replaced by a letter corresponding to a track number, in alphabetical order: A will then designate 10, E will designate track 14, etc.

In other cases, the number or letter will indicate the destination to which the train is being sent. This can vary from place to place and drivers generally learn their meaning, area by area. Thus, a letter can indicate the major destination: F for Floeta, T for Tarna, S for Silidann, etc. It can also designate a type of track: V for *Velokitaskaja*, i. e. a fast line, D for *Drahamocev*, i. e. a depot...

The BNKS

The BNKS, for *Blennaji Nuszarytlevkeji Kvadrashovori Systema*, or Impassable Long Blocks System, is the system you will encounter on the secondary and less dense tracks of the RKP East Sansek network. It ensures the spacing and protection of points on low and medium density lines. It is different from the SAKS system in that the *caution* instruction is placed on a different signal from the *open* or *danger* instruction. A first signal called a warning signal indicates to the driver whether the execution signal will be open or closed. The warning signal is always placed 1500 to 1800 meters before the execution signal, and the blocks - the distance between the execution signal and the next warning signal - are much longer than for the SAKS system - between 3 km and 15 km. The different signals are similar to those of the SAKS system and their operation is exactly the same.

The APAS

APAS, for *Adnaskaja Pojesda Avtomatika Systema*, or Single Train Automatic System, is a signalling system used on single tracks with low density. It is also found on the eastern part of Tarna's VHP. This system allows access to a given track area to only one train at a time. This is to prevent trains from catching up - there can only be one train in the same block - and from meeting head-on.

The signals used are the same as for the SAKS system except that there is no signal on the single track: the train enters the single track when the signal from the previous siding shows an *open* or a *warning* instruction and it is the only train that can travel on the single track to the end of the single track - the next siding, where trains can pass each other.

To differentiate an APAS signal from a SAKS signal, the APAS signals are preceded by a small indicator panel:



The SAKS-250

The SAKS-250 is a signalling system developed from the SAKS system. It is used on high-speed lines, i.e. lines with speeds higher than 200 (250 km/h being the max on the total RKP network). The system is based on the same principle as the SAKS, with the following variants: all signals can have *danger*, *caution*, *preliminary caution* and *green light* aspects and the signals are spaced at least 3000 metres apart at 225 km/h, and at least 3200 metres apart at 250 km/h. The complete distance between a train and the place where the next convoy will be notified of its presence is therefore at least 6000 to 6400 metres. This system is always installed on high-speed lines (High Speed Lines).

The signals also have an intrinsic speed limit:

Green light: The driver can proceed at the maximum speed of the line.

Double yellow light: The driver must reduce his speed to 200 km/h before the next signal.

Single yellow light: The driver must be able to stop before the next signal.

Similarly, this system can also provide flashing yellows, double flashing yellows and feather signals. The operation is the same as for the SAKS.



A DRK252 high speed train near Lagamor on the East-Sansek HSL.

RAIL SIGNS

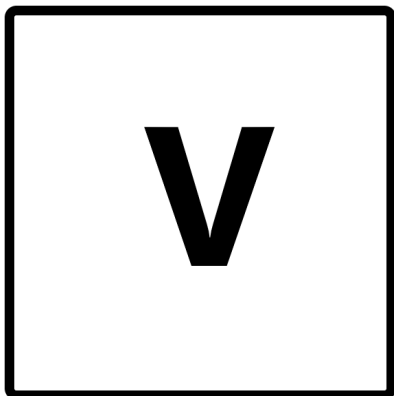
In addition to the various light signalling systems used by the RKP, many signs are used. You will meet them frequently along the track. Here is what they mean:



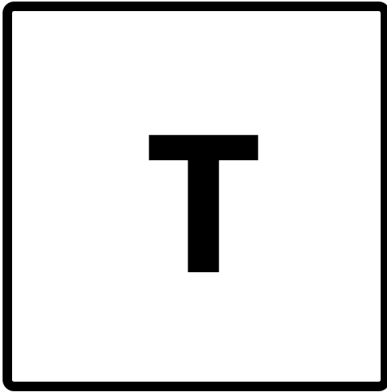
Speed limit sign : When crossing this sign, the train must have reached the speed limit indicated in mph by the sign. Here, the train must not exceed 85 mph. The sign may be highlighted by an arrow, indicating that the limitation applies for a deviated track and not for the mainline. It should be noted that the lowest speed limit - that of the train or line - is always the authoritative one. A freight train limited to 60 mph crossing this sign will not be allowed to exceed 60 mph.



Speed Limit Warning Sign: This sign is located upstream of the previous one and informs the driver of the upcoming speed limit. Here, the sign announces that the next speed limit is 55 mph. The driver must have adapted the speed of his train before the speed limit sign. When the speed drop is significant - generally above 30 mph - this panel can be preceded by a safety magnet triggering an alarm in the cabin, which the driver must acknowledge. Warning: this panel may be placed too close to the execution panel, but this is normal. Indeed, it is the knowledge of the line that prevails, and roadsheets are provided for this purpose in the scenarios.

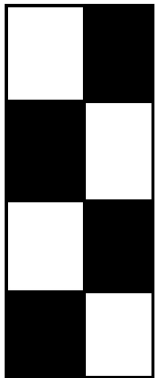
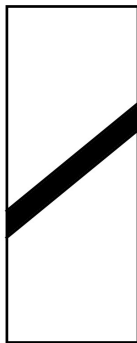


Whistle sign : This sign indicates to the driver that he must use the horn. It is usually placed before a dangerous crossing - pedestrian crossing, area where accidents are frequent, etc. This sign must be ignored from 11 pm to 6 am on weekdays, and from 11 pm to 7 am on Sundays, unless there is immediate danger.



Tunnel sign : This sign announces to the driver that he will enter a tunnel requiring a tone during the day. He will have to use the horn before entering the tunnel and then just before leaving it. Not all tunnels are preceded by them: thus, tunnels on HSL generally do not have them. Similarly, some tunnels require a horn blow even during night hours. In this case, they are preceded by a horn panel.

Approach marker boards signs: These three signs indicate, in advance, a signal whose position makes it difficult to see, either because it is located in a curve, behind an obstacle or relatively far away on the side of the track. The first marker board - a diagonal bar - is located 250 m before the signal, the second 150 m before the signal and the last 75 m before the signal.



Chessboard sign : This sign indicates, in advance, that a signal is in an unusual position in relation to the track. It is often present when the signal is to the left of the track rather than on the right.



Level crossing warning sign : This sign, with the letters HK for *Haknosovskrosivat'*, announces a level crossing. This indicates to the train driver that he or she will be crossing a level crossing.



Multiple level crossings warning sign: This sign performs the same function as the previous one, but the 2 sign indicates to the mechanic that he will encounter several successive crossings.

Notes : LC signs are not systematic on all lines. They are located, for example, on the North-South axis but not on the East-West axis.



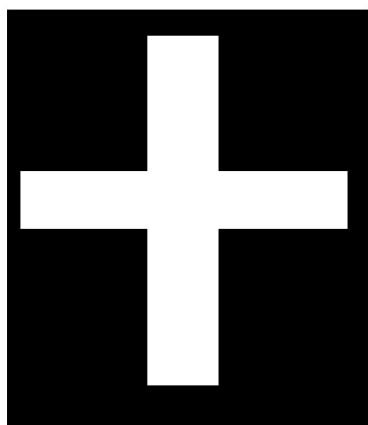
Shunt limit sign: This sign indicates the end of a portion of track used by shunting trains. It can be ignored by trains in normal service.



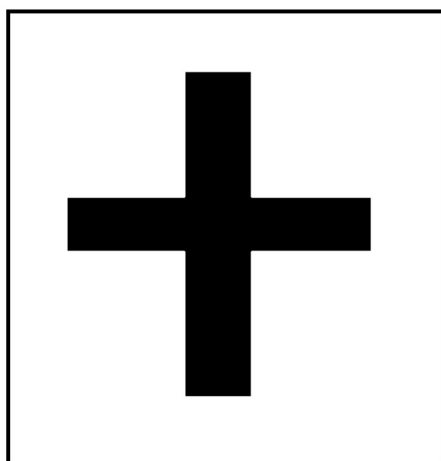
Unprotected level crossing warning sign: This sign is placed upstream of an unprotected and unguarded level crossing. It requires particular vigilance on the part of the train driver, as well as a horn blow. These LCs are generally accompanied by a speed limit of 10 mph, while driving at sight.



Stop sign: This sign, placed in stations, indicates to the mechanic where to stop his train, according to the number of coaches indicated on the sign (K means *kola* or *koli* in the plural, or "coach" in Ruthenian). If the sign includes the words "*ARK Gyvaraczerec pojesda*", it means that the location is intended for stopping trains pulled by a locomotive.



Neutral section warning sign: This sign indicates to the driver that he will enter an electrical neutral section. Before the next sign, he must have completely cut off the power of his train - brought the power throttle back to neutral. Sometimes, this sign is preceded by a warning magnet that triggers an alert that must be acknowledged.



Neutral section sign: This sign indicates to the driver that he is entering an electrical neutral section. The traction must be cut off or the train risks serious problems. Magnets, placed on the tracks, will first open the train circuit breaker, then close it again when it has passed the area in question. Once closed, the driver can reset the traction.

Note concerning neutral sections: They only concern trains that are electric-powered by catenary. Diesel-powered trains are not affected and may ignore them. Moreover, never stop with an electric train in a neutral section, otherwise you risk getting stuck in it!

DRIVING INFORMATION

The RKP network includes some driving particularities specific to the country and its history. First of all, please note that trains run on the right in CNR (and not on the left as in France and the United Kingdom). The Ruthenian rail network uses the imperial system to measure speeds but not distances. This is a unique feature of the country. As a result, speed limits are always displayed in miles per hour, while kilometric markers are indicated in kilometres (one post every kilometre). The Ruthenians are also very sensitive to punctuality and they like and are used to having their trains running on perfectly scheduled times. However, they are much less vindictive and "grumpy" than some of their neighbours, and have a much better understanding of the disruptions associated with exceptional circumstances. As RKP is largely subsidised by the state and cheap train tickets, citizens tend to see it as a service rather than a business.

Here are some rules of conduct that RKP provides to its agents:

- A train must always run with the position lights on, even during the day and even in a depot.
- It is recommended to reduce the braking intensity when the train stops, and also to gradually increase the traction when starting in order not to inconvenience passengers and/or damage the coupling systems.
- The use of the horn is subject to certain rules:
 - After a horn panel, three high or low tones (in any order) below 70 mph. Four high or low tones (in any order) above 70 mph.
 - At the entrance and exit of the tunnel, two tones (high or low).
 - When restarting a train stopped in the middle of the track, a single, long tone.
 - At the crossing with another train: one or two tones in the areas with dangerous surroundings (level crossings, adjacent road, houses, stations....)
 - Five shots (three short, one long, one short) if a person / worker is on the approach or on the track.

How to deal with a signal at danger :

If the closed signal is encountered after a warning: Slowly approach the signal. Request permission to cross (RKP trains have a dedicated button). If the signal has a shunting light and the passage is allowed, the light will come on. Permitted crossing and progression at 35 mph max to the next signal. If the signal does not include a shunting light, call the signalman who will give or not give a verbal crossing agreement.

If the closed signal is suddenly encountered after an open signal: Either an immediate danger has been detected or the signal is malfunctioning. In this case, use the train brake (not the emergency brake!) in order to stop. Ask for a crossing permit before the signal passes, then just after. If authorization is refused, stop and continue driving on sight. If authorization is granted, continue as usual.

Notes about some types of rolling stock

Tilting trains (DRK250 & DRK252): Two areas of the network shown here require different speeds for tilting trains than those indicated by the signs along the line. However, they are notified in the roadsheets:

- *East-west direction, from Kolpenbjel to the 75 mph speed limit at the Tarna depot: 90 mph instead of 100 mph.*
- *South-north direction, from Odenrq to the 65 mph speed limit: 65 mph instead of 75 then 85.*

In the case of DRK252 trains (equivalent to British Class 390), the train must always be used in "Boost Mod" rather than in "Eco Mod". This represents the fact that DRK252 trains are theoretically more powerful than the British Class 390 trains.

Trains equipped with ATP (DRK202): The ATP (*Automatic Train Protection*) safety system must not be activated on this type of train (concerns British Class 43). The system is not implemented on the East-Sanse network (it is, however, implemented on other parts of the RKP network). In theory, all RKP lines are equipped with a system called VVS (*Velokita vysmyera systema* or Speed Monitoring System) which controls the speed of trains at each signal. If the speed is 6 mph above the authorized speed, an emergency brake is applied. However, and due to the limitations of the simulator, this system is not implemented in the simulator.

High-speed trains (CRK251, DRK250, DRK251 & DRK252): High-speed trains from the CNR are designed to travel at 250 km/h (155 mph). Although they come from modifications of British trains, you are of course allowed to reach a maximum speed of 250 km/h. To do this, some modifications have been made:

- DRK251 trains are designed as EMUs without possible separation, consisting of two power units enclosing 7, 8 or 9 cars.
- DRK252 units should always be used in "Boost Mod" rather than "Eco Mod".

Dual-mode services between Xeristoh and Gyecsenah : A change of electrical system has to be made while driving these services. It will happen while collecting passengers at Ankarnhorod. You have to do things like that :

- From Gyecsenah to Xeristoh, switch from third rail DC system to OHLE AC system by raising the pantograph.
- From Xeristoh to Gyecsenah, switch from OHLE AC system to third rail DC system by lowering the pantograph.

Obviously, this won't be needed for diesel services.

FOR SCENARIOS CREATORS

A number of tools are available on the website www.rkp trains.com to assist people wishing to create additional scenarios for the East Sansek network. Every effort has been made to make it as easy as possible for them to create exciting and engaging activities with this network. Here is the list of tools available to them:

- A spreadsheet file containing the complete timetables of all services serving the network, for the week, Saturdays and Sundays (public holidays are considered as Sundays) for the year 2018-2019, as well as the composition of trains according to the services.

- Several PDF files including timetables for the main stations in the network (Stelbråk, Tarna, Serinathea, Floeta, Gladiorka, Xeristoh) and listing arrival and departure times as well as the origin and/or destination of all trains. However, it should be noted that not all empty trains are noted, that the tracks are not systematically given or for information purposes - they may vary from one day to the next, except during the week for Floeta station -.

- A PDF file containing the total list of all rolling stock items of the RKP East Sansek with their registration, composition and year of production. This does not apply to Intercity rolling stock or adjacent networks rolling stock.

In addition, a map of the country is provided with this download in order to better visualize the destination of the Intercity Trains and the stations served, indicated in the timetable.

You will notice that freight services do not have fixed schedules, but that they are interspersed with passenger services. Their numbering is unique for each day and assigned a few hours before the start of the service. They have the following logic:

- FRGT0xxx → Special train (nuclear, animal, medical train...)
- FRGT1xxx → Light engine
- FRGT2xxx → Container train
- FRGT3xxx → Aggregate train (concrete, gravel, ballast, coal...)
- FRGT4xxx → Liquid train (fuel, water, drinks...)
- FRGT5xxx → Vehicle train (cars, buses, trucks, machines...)
- FRGT6xxx → Military train
- FRGT7xxx → Empty freight train
- FRGT8xxx → Work train (track maintenance, ballast installation...)
- FRGT9xxx → Miscellaneous freight train (logs, waste, bulk goods...)

The numbering then starts again in the same way (11xxx for light engines, etc.) if all available numbers have been reached nationally.

THE SCENARIOS

The network is delivered with a series of 110 different scenarios (101 classics and 9 free roams) that have been created to give you the spirit of the line and transcribe the complex operations of the East Sansek network. In the pack containing the files of the line, you will find two folders with different scenarios:

- Scenarios Pack 01 - Complete Edition
- Scenarios Pack 01 - Light Edition
- Scenarios Pack 02 – Summer & Autumn 2019

The two first packs each include the same scenarios, but use different rolling stock. The Complete version has been implemented to represent as accurately as possible the complex operations of the East Sansek network, and as such uses rolling stock that is in line with the "reality" of the network. With extensive use of Armstrong Powerhouse packs, we have tried to provide you with the most authentic driving experience possible.

Nevertheless, we are aware that not everyone has a huge collection of locomotives and AP packs, and that is why we have published a Light version of the proposed scenarios. The Light version does not require any additional elements to operate other than those necessary for the operation of the network itself (see Dependencies on page 6).

The third pack is formed of a mix between revamped scenarios for the first packs and brand new ones, all made to be used with Summer 2019 and Autumn 2019 timetables.

The scenarios of the Complete version require the following elements:

Armstrong Powerhouse

- Class 43 MTU Enhancement Pack
- Class 56 Enhancement Pack *
- Class 66 Enhancement Pack ²
- Class 68 Enhancement Pack
- Class 91 Enhancement Pack ²
- Class 158/159 (Cummins) Enhancement Pack
- Class 168/170/171 Enhancement Pack
- Class 350 Enhancement Pack
- **Class 365 Enhancement Pack**
- Class 150/2 Pack
- Class 319 Pack Vol. 1
- Class 390 Sound Pack Pro

- Mk2D-F Coach Pack
- HKA/JMA Wagon Pack
- JPA Wagon Pack
- JXA/POA Wagon Pack
- **JNA-C Wagon Pack ***
- **TDA-D Wagon Pack**
- AP Sky & Weather Enhancement Pack ²

Dovetail Games

- Class 56 BR Sectors *
- Class 68
- Class 90
- Class 91
- Class 92 *
- Class 159
- Class 170 (Thomson Interactive)
- Class 370 *
- Class 390 Pendolino (New version)
- Portsmouth Direct Line – Waterloo Extension
- SHG Rnoos Wagon Pack *

Just Trains

- Class 220/221 Voyager Advanced *
- **Class 20 (RHTT Wagons) ***

* This items are used only in a few scenarios.

² This items are not necessary but greatly recommended to ensure the best possible driving experience. However, scenarios will work despite the lack of this items.

The packs in bold are used for Pack 02 (Summer / Autumn 2019).

Some additional bits & bobs....

In the files concerning the two types of scenarios, service sheets have been made available to you. They contain the characteristics of the service, its schedules, and the route plan with the various stopping or passage points as well as changes in speed limits. Coupled with the kilometric markers along the tracks, they are supposed to allow you to travel the network without the help of the HUD, like a real train driver.

To find the service sheet for the selected activity, refer to the number indicated in brackets

after the scenario name (by pressing the F1 key once the scenario has started). The service sheet has the corresponding number as file name.

Please also note that for the most important scenarios (those that last more than 2 hours), it is recommended to make frequent backups but, if possible, not to leave the game while driving is in progress, in order to avoid any malfunction. This is due to the limitations of the simulator. Similarly, it is recommended to reduce the resolution of the textures to one step below the maximum.

Some scenarios exist in duplicate (version A / version B). This is the same service, but with different circumstances. There is no way to know in advance what will happen, as in reality...!