Iskratel Transport infocommunications

Operational communications

Key features:

- **Unified IP-based** platform for all access technologies (**analogue, TDM and IP**)

- Integration of **video surveillance** and conferencing

- **Redundant** and **geo-redundant** configurations

- Flexible and **tailored** implementations

Railways operational communications are changing faster than they used to. Standardization bodies can hardly follow the new technology-driven needs. This range of systems and applications that are specifically designed and configured to run railways operations, ensure traffic safety and traffic control. They are complemented with support systems that generally support, manage and supervise infrastructure for all operational systems.

The communications may not be the core business in transport industry, but they play a crucial part, assuring that all transport operations run smoothly and provide reliable, efficient and secure communications between traffic control centres, trains, trackside personnel and railway stations.

Although the majority of railway communications are still done through a fixed network, we need to establish a future-proof environment which we'll meet the need for multi-service access and broadband transmission of video and similar demanding services.

Operational communications on railways

Iskratel, as an established manufacturer of telecommunications systems, provides complete solutions for operational and technological communications, which are adapted to the requirements of specific requirements, needed in railway networks.

In order to ensure traffic safety and correct traffic movement, not to forget special situations that may occur, we need to establish several different types of communications like:

- **Dispatcher calls**; between traffic control and train drivers

- **Mobile communications** for inter-connection of track-side and on-board equipment (GSM-R, DMR, analogue…)

- Calls through **specific** landline and track-sides **equipment** to traffic controls etc.

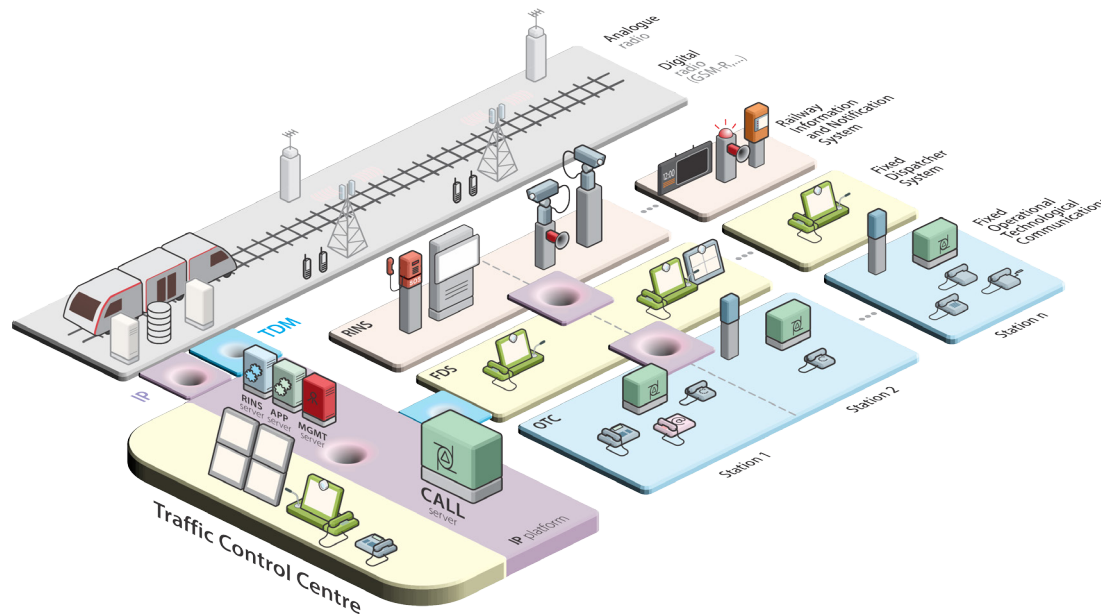## Fixed Dispatching system (GSM-R networks)

It is critical to ensure smooth communications between trains and traffic control centres, since trains today travel at very high speeds. GSM-R is an international wireless communications standard for railway communications and applications, that enables and guarantees performances at those speeds.

As a sub-system of ERTMS, it is used for communications between trains and railway regulation control centres. It is based on GSM and EIRENE – MORANE specifications which guarantee performance at speeds up to 500 km/h, without any communications loss.

GSM-R is widely use and became the European standard for mobile radio communications in railways.

ISKRATEL

Iskratel provides a full EIRENE compliant infocommunications GSM-R solution. Although the Fixed Dispatching System (FDS) primarily focuses on interfacing with GSM-R mobile networks, it allows flexible interconnection to existing legacy communications networks into a unified communication system.

It offers the possibility to control communications and operating processes clearly and transparently from a single work place, from one dispatching console. Different communication services can be shown on its display to give the dispatcher a better and more efficient communication experience.

All network elements of the FDS are managed and supervised by the Iskratel's centralized management system.

SOLUTIONS HIGHLIGHTS

The modern IP architecture allows flexible interconnecting to mobile (GSM-R, DMR…) networks as well as existing legacy communication and network infrastructures. This flexibility helps you protect your existing investments, smooth migration to new technologies and develop new, advanced railways services.

Communication networks in railways environments are quite specific and require gradual migration towards a single, converged infrastructure which requires integrated communications across all areas of railway operations.

The solution is designed to support smooth and efficient train operations and is tailored to suit the needs of dispatchers in railway command and control centres, to improve the efficiency of everyday railway operations.

We know how to get railway network communications done right for your next big project.

A robust communications network is required which supports new generation applications for universal communications, telephony, as well as control and management of the network. This enhances the safety and security throughout the network for passengers and personnel.

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