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In today’s increasingly connected world, rail companies need to differentiate by making their services more attractive to passengers.

Besides the obvious passenger expectations, such as punctual, safe and comfortable journeys, there is an ever growing demand for consistent, real-time and reliable information.

*Televic Rail offers qualitative, reliable and future-proof solutions to inform passengers in the best possible way.*
With changing passenger needs, growth in users and digitization of railway operations, communication systems are expected to be ever more performant and connected.

Televic Rail focuses on three aspects:

**Connect**

The exchange of data between train and ground systems is of key importance, both for keeping on-board systems synchronized and for providing passengers with reliable and real-time information. Televic Rail optimizes the data transfers between the on-board systems and the operating company’s IT infrastructure. On-board, Televic offers tailored network architectures and solutions to ensure efficient integration of systems, whilst taking into account the ever increasing security demands.

**Inform**

Passengers expect clear information about key items such as connections, arrival times, disruptions, alternative routes and on-board services. Televic’s systems enhance the passenger experience by automatically delivering the right information at the right time.

**Control**

The train operating company is in control of the entire system. It can update journey schedules, show real-time information, or react instantly to unexpected events and monitor the performance of systems and services on board. Televic guarantees a reliable communication between the crew, the control center, the passengers and all associated systems.

With more than 30 years of experience in delivering passenger information systems, our team of engineers is at your service for specific requests or customizations.
Discover our solutions for

- Real-time passenger information
- Seat reservation and occupancy
- Video surveillance
- Train to ground communication
- Content management
- Condition-based monitoring
Data synchronization and management

Passenger trains contain more and more systems and services on board. These systems depend on, and are producing large amounts of data.

Televic Rail optimizes data transfer between the fleet and the operational center, even under challenging conditions, such as poor connectivity, failing wireless links and systems going offline.

A Televic Mobile Acces Router connects physically the train to the ground via cellular and/or Wi-Fi networks.

Effectively manage all software and data

» Securely synchronize data of any type between wayside and on-board systems across an entire fleet.
» Deliver data and process for further actions, such as scheduling maintenance operations.
» Control and monitor this process from a user-friendly dashboard for the entire fleet.
» Minimize efforts to initialize and maintain on-board information systems.

On-board networks

Custom network architectures are designed depending on the train architecture, the functional requirements and the required redundancy levels. Redundancy can be provided at network and component level. Where required, redundant IP rings can be complemented with analog fallback lines.
Inform

Ensure a carefree travel experience with real-time information.

Content management
Transport operators can easily manage their passenger information with Televic Rail’s content management system:

» Manage the complete visual and automated audio communication.
» Efficiently import and input stations, routes and journeys.
» Create travel-related, commercial or entertainment content in multiple languages.
» Display different information on different locations and devices at the same time.
» Provide passengers with real-time customized travel information.
» Remotely control all communication systems.

Real-time data
Provide up-to-date and reliable information from various sources about destinations, connections at the next station, weather, news or any other third party feed.

Flexibility
For content management the operating company is in control. It can freely define, adapt and format the content of the information to be communicated at any time.

Content simulation
Experience journeys through the eyes of the passenger. Simulate the audiovisual content as rendered on any of the on-board devices.
**TFT screens**

The color calibrated TFT screens offer superior image quality, both for static images and video content.

High-definition screens are the perfect tool to visualize any type of content, such as next stop info, train loading overviews, real-time delays and public transport connections.

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**LED displays**

The indoor and outdoor LED displays deliver messages with unequalled brightness and contrast levels.

Available in various sizes, they offer perfect visibility at all times, even in direct sunlight.

The LED displays can be installed in passenger saloons, but also at the front and side of the vehicle, informing passengers on the platforms about train destinations, car numbers and journeys.

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While you focus on the content, we take care of getting it there. Ensure a carefree travel experience with targeted content.
Seat reservation

Televis Rail’s innovative traffic light seat reservation displays clearly show whether seats are reserved or not. A TFT panel shows textual information relevant to the current leg of the journey.

Thanks to the protruding multi-color LED lights, available seats can easily be spotted from the gangway.

Passenger counting

Passenger counting sensors, installed above the doorways and in the gangways, provide precise measurements of the loading of the trains. This data can be used to optimize passenger behavior, vehicle compositions and train schedules.

Audio systems

The on-board audio communication system facilitates crystal-clear voice communication between passengers, driver and staff. It enables audio broadcasting to passengers, such as pre-recorded messages and public address announcements, as well as intercom functions between crew and passengers requiring assistance also in case of emergencies.
Remote operations

**Enrich on-board information**

When connected to rich data sources, the on-board passenger information system provides real-time information in a fully autonomous way.

However, during times of disruption or in other specific situations, it may be that the operator wants to check, change or append the automated on-board information. The Televic Rail solution provides all tools to monitor the fleet and adjust the on-board information as and when needed.

**Highlights**

- See a map and status view of all connected vehicles in the fleet
- Send freely defined text/audio messages to vehicles
- Remotely trigger pre-recorded audio announcements
- Reconfigure basic data sources e.g. change to a different news source, suppress news items ...
**Video surveillance**

Improve overall safety with a reliable on-board video surveillance. The digital on-board CCTV solution enables efficient security control.

The CCTV system can be integrated with the passenger information system for efficient handling of incidents. For example, passenger alarms can trigger a variety of actions: locating the emergency, showing live footage to the driver, and tagging the video for longer retention and easy retrieval, or even transmit live images to the off-board control center.

**Benefits**

» Increase actual and perceived security and safety
» Minimize, prevent and investigate vandalism, false claims, and emergency situations
» Handle alarms in an efficient and easy way

**Rear-view monitor**

Rear-view monitors are mounted on each side of the cabin, providing high-quality camera content like a rear-view mirror. In that way, the driver can easily check the platforms before leaving the station, guaranteeing a safe and efficient train departure. Rear-view monitors all support DOO - Driver Operated Only - operations.
Passenger emergency alarms and Call for Aids

In case of emergencies the alarm panels quickly connect passengers to the train crew. Upon the activation of an alarm, the driver can immediately locate the position in the vehicle and answer the call.

Call for Aid devices help passengers with reduced mobility to get assistance when required.

The combination of cameras, intercoms and the public address system ensure safe and optimal registration and handling of incidents. The audio and video recordings make it possible to analyze any situation and to make the appropriate decision.

Human Machine Interfaces

Televic Rail’s Human Machine Interfaces (HMI), mounted in the cab or other staff locations, make it possible to control and monitor all on-board systems.

Functionalities include
- managing journeys,
- starting the playback and visualization of pre-recorded messages,
- starting and answering intercom calls,
- displaying live footage from the on-board surveillance system,
- controlling the seat-reservation system,
- getting an overview of the system status for maintenance purposes,
- …

All control, operational and maintenance functionalities can be operated via local or remote interfaces.
Some recent references

Your global partner for connected on-board communication systems

Discover our solutions on more than 25,000 rail cars worldwide.
Visit www.televic-rail.com for more references
Televic Rail designs, produces and maintains communication and control systems for the railway market. Worldwide over 25,000 vehicles are equipped with our on-board solutions.

For more than 30 years, Televic Rail has been a leading, trusted partner for railway operators and train builders all over the world.

ISO and IRIS certified
The IRIS certification confirms the quality, reliability and sustainability of Televic’s products. It ensures the continuous quality improvement throughout the supply chain thanks to standardized requirements.

Innovation
Out of the 300 people Televic Rail employs, there are 80 R&D specialists. To stay on top of innovation they often collaborate internationally with universities, technology centers and research labs.

For Televic, innovation is of utmost importance: it enables us to offer products and services that really create added value.

» Televic has registered more than 30 patents and awards, making it a leading specialist for on-board communication systems.

» Our product management and innovation teams are constantly working on cutting-edge technology.

» 80% of our turnover comes from products developed in the last 5 years.

How we make the difference
Keeping your passengers informed every step of the way.
Televic Rail also offers a range of high-end measurement systems for condition-based monitoring and train control.

Ask for our brochure about the COSAMIRA system.
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