



Televic Rail

iSync

Data Synchronization and Management for the entire Fleet

Train to ground communication

Passenger trains contain more and more systems and services on board. These systems depend on, and are producing large amounts of data. iSync simplifies the data synchronization and management between train and wayside systems for the entire fleet from a centralized application.

Synchronize | Activate | Manage

iSync enables effective management of all data and software used in the fleet:

- » iSync manages bidirectional data synchronization between wayside and on-board systems across an entire fleet.
- » Upon data delivery, iSync activates the necessary software components at the destination to process the data in such a way that the corresponding on-board or wayside systems are correctly updated and configured.

Highlights

- » **Optimized data transfers** with guaranteed data integrity, using any wireless link (e.g. Wi-Fi, 4G ...)
- » **Interoperable and future-proof** modular design based on proven technologies and standards
- » **Respects procedures and rules** from third party systems
- » **Efficient provisioning and updating** dependency management in case of multiple, trigger-based activations (e.g. on date/time, network ...), automated queuing
- » **Monitoring and management** single user interface for all fleet applications
- » **Secure end-to-end encryption** of data transfer, credential-based access to user interface

- » The entire synchronization and provisioning process for all on-board systems in the entire fleet can be controlled and monitored by an operator from a single web-based iSync dashboard.

iSync streamlines operations

- » iSync connects to Televic Rail and third party applications. It transfers the data traffic of all connected systems safely to/from the wayside via the most appropriate network.
- » iSync respects any user/third party systems' procedures and rules, whilst guaranteeing their integrity and ensuring reliable data exchange between control centres and running vehicles.
- » iSync reduces the number of manual interventions needed to keep the data and software of all on-board systems up-to-date and synchronized.

Specifically designed for rail

From its initial design, iSync has taken into account the specific characteristics of the rail business, including but not limited to:

- » the heterogeneity of trains in terms of on-board systems, such as different vendors or different generations of equipment.
- » multiple different and changing train configurations in the fleet.
- » the importance of reliability and security.
- » the challenging conditions for connectivity while on the move.
- » handling of unpredictable events such as power outages, or defective on-board devices.

A single solution for all data transfers

The core of this system consists of

- » an on-board software application
- » a wayside application installed in a data center

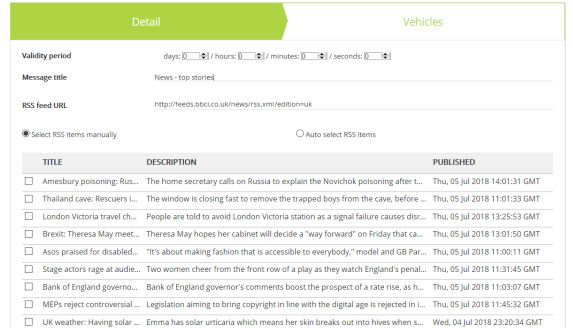
Software adapters provide the necessary interfaces to interoperate with Televic and third party applications.

For supporting the necessary on-board hardware interfaces, Televic Rail provides the iCoM controller for

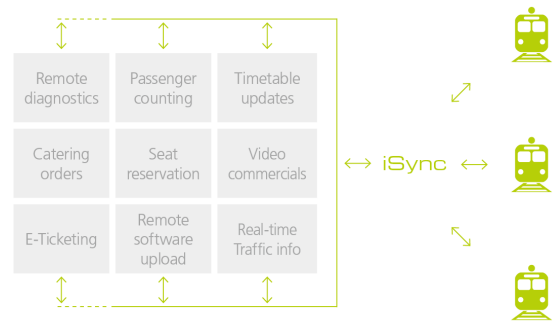
“The rail-oriented focus of iSync leads to a high-quality data synchronization and management solution for rail, avoiding the need to go through lengthy, expensive, and hard to maintain customisation cycles of generic tools for data synchronization.”

on-board information and entertainment.

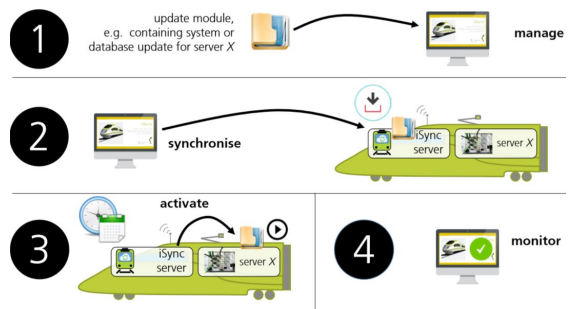
For the actual transmission of the data, Televic Rail offers its Mobile Access Router (MAR) extension to the iCoM controller. The MAR makes Wi-Fi and mobile wireless connectivity available on board the train. Alternatively, existing third party connectivity can be reused.



The iSync application allows the data from all connected systems in the fleet to be managed and monitored from a single dashboard.



Different systems. Different suppliers. Different configuration needs and ways. One common challenge: keeping on-board and wayside data synchronized.



In a few simple steps, the system allows updating the connected software systems or subsystems of an entire fleet.

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