Caso de estudio

Teldat H2-Rail & Mobility Software: complete onboard Wi-Fi solution for passengers travelling on short-distance trains in Germany

The solution was comprised of different software tools and devices specifically designed for railway environments. With the introduction of these products, the customer can provide Wi-Fi on their trains and offer a premium quality service to their customers.
Client Summary

The customer is a Spanish company that has been producing railway equipment and trains for the world’s leading tram, metro, tyre metro, commuter, long-haul and high-speed networks for decades. It has carried out 159 projects in total, making it the world’s sixth manufacturer.

Challenge

- To find a complete, quality communications solution.
- The solution must allow the customer to offer a Wi-Fi service on their trains.
- The Wi-Fi service should include other features.
- To allow the customer to deliver a secure, reliable and quality service to their customers.

Solution

- H2-Rail & APR-222ac: railway communications platform with LTE and Wi-Fi, plus an indoor access point specially designed for such environments.
- CNM Mobility: software that monitors vehicle routes and signal quality along those routes.
- Teldat HotSpot by WiFiGo: a tool that provides Wi-Fi in an easy, personalized, quick and secure way.
- Teldat Webfilter: a filtering tool that provides protection and security while users surf the Web.

Why Teldat

- The continued technical-sales relationship built on other common projects, such as the Helsinki and New Zealand projects.
- The quality of Teldat’s devices and tools and the fact that they are suitable for use in the railway sector.
- Good management and a strong commitment from all Teldat departments in all prior projects embarked on for the customer.
- Thanks to Teldat’s international scope, it could provide excellent support in the countries where the projects were executed.
Solution

The solution brought by Teldat was to:

- Equip each train with the **Teldat H2-Rail** router, a multiservice communications platform for railway environments which provides reliable 4G/LTE communications and broadband over Wi-Fi.
- Equip each coach with the **Teldat APR-222ac** device, an access point specifically designed to provide Wi-Fi connectivity on board trains and expressly designed according to the strict railway regulations (including EN 50155). Its two radio modules provide simultaneous dual-band Wi-Fi connections, permitting latest generation devices to be connected to the less collapsed 5 GHz band while leaving the 2.4 GHz band for devices with lower capabilities. It supports a range of advanced Wi-Fi features, such as SSID, various access levels, logical separation and prioritization systems.

Moreover, both were integrated into cloud management platforms and HotSpot services. The following additional features were included:

- **Teldat CNM**: a tool for globally managing all Teldat devices from a central location. It provides an easy, efficient way to automate network deployment and notify about incidents or problems with Teldat devices.
- **CNM Mobility**: added to the Teldat CNM software platform, this feature is used to monitor signal quality along routes and create usage alarms.
- **Teldat HotSpot by WiFiGo**: a flexible tool that gives the customer a quick, easy-to-use and secure Wi-Fi. The solution can also be customized in several different aspects including, among others, homepage design, type of access method (e.g., via social networks, with or without login credentials, self-registration validated by SMS or email, etc.) or web page redirects.
- **Teldat Webfilter**: this tool provides protection and security for the customer while their users surf the Web. It works by adjusting Internet filtering policies through black and white lists that either authorize or block access to web pages. This way the customer can stop users from viewing inappropriate content (e.g., pornography, illegal downloads, etc.) and restrict access to high data usage websites.

What results are expected?

Once the project is implemented, the software tools and devices provided by Teldat will allow the customer to:

- Provide a Wi-Fi connection on board their trains and thereby deliver a superior quality service to their customers.
- Provide passengers with a personalized web browsing experience that meets the customer’s needs.
- Ensure that the service is secure for both the customer and passengers alike.
- Monitor things like signal quality, the kind of web content customers can view, etc.

Why Teldat?

The main reasons that led the customer to choose Teldat were as follows:

1. The continued technical-sales relationship built between Teldat and the customer on other common projects, such as the Helsinki and New Zealand projects.
2. The quality of Teldat’s products (devices and software tools) and the fact that they are suitable for use in railway environments.
3. Good management and a strong commitment from all Teldat departments in all previous projects embarked on for the customer.
4. Thanks to its international scope, Teldat could provide excellent support in the different countries where the projects were executed.
**H2-Rail**
Platform for railway communications with LTE and Wi-Fi.

- Multiservice communications platform.
- Multiple WWAN, bandwidth aggregation and load balancing.
- Compliant with railway regulation (EN 50155:2007, EN 45545-2)
- Geo-fencing: GPS-based dynamic configuration.
- Standards-based service isolation.
- Built-in switch for connection to other systems.
- Complete Wi-Fi solution (management, HotSpot and APs).

**APR-222ac**
Railway access point for Wi-Fi services on trains.

- WLAN access for passengers and staff.
- Wide temperature range: -25 ºC to 70 ºC.
- Two 2.4/5 GHz radio modules.
- Two M-12 Gigabit Ethernet LAN ports.
- WLAN controller 5+1 APs in AP (master) mode.
- Multi-SSID support (up to 16 per radio) and 32 VLANs.
- Certified for use in railway environments.

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**Teldat HotSpot by WiFiGo**

Teldat HotSpot by WiFiGo is the solution that offers all these services. Guaranteed flexibility, ease of use, security and value-added features ensure your guests and corporate users can easily and safely connect to your Wi-Fi.

**Teldat Webfilter**

Teldat Webfilter is a tool that requires no additional hardware or software and that can be easily integrated with Teldat devices. The filtering tool offers reliable and secure control which can be configured quickly and easily. HTTPS-based access to the management interface allows remote and secure connection from administrators. Filtering is implemented using DNS technology which has an imperceptible impact on the Internet performance of end users.