PROJECT

FAST-TRACKS

Fast rAdio technologieS for uninterrupTed TRAin to traCKside communications

Funding: European (Horizon 2020)

Duration: Jul 2015 - Dec 2015

Status: Complete

Total project cost: €71,429

EU contribution: €50,000

Call for proposal: H2020-SMEINST-1-2015

CORDIS RCN : 197409

Objectives:

The urbanization trends of the suburban metropolitan areas has increased exponentially with the demand for high-capacity rail infrastructure, which require interoperable systems and services, with high standards of safety and reliability.

At the same time, the railway technological infrastructure and the related services require a high level of innovation, especially in the field of telecommunication systems and rail control, which is still made using traditional systems, based on wired or relay electromechanical technology.

In this context, the wireless telecommunication networks are playing an increasingly important role for the known functional, installation time and maintenance features: they are potentially able to develop robust systems with high redundancy that can simultaneously vehicular traffic data for automatic train control and the "massive" transfer of security and passengers control information.

The business idea proposes the development and commercialization of a low cost system, which allows addressing the main problems faced at present in the integration of a traditional Wi-Fi system within the railway technological infrastructure.

The proposed infrastructure, due to the high-speed capacity, dual embedded radio and configurable approach, permits to integrate vital and non-vital services on the same wireless backbone simply dedicating different radio to different services operating with a full redundant architecture.

Thus, the system proposed will contribute to:

- establish a high speed, reliable and continuous communication between a train in motion and the trackside, allowing capacity enhancement;
- support Communication Based Train Control (CBTC) services;
- collect data of Close Circuit TV (CCTV);
- provide support for VoIP and Personal Information Systems (PIS) services;
- enable preventive maintenance;
- ensure passengers' safety and security during their journey;
- improve travel comfort;
- provide real time multimedia information and access.

Parent Programmes:

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Comesvil Spa

Address:
CORSO ITALIA 471
80010 VILLARICCA
Italy

EU Contribution: €50,000

Technologies:

Rail operations
Advanced train control systems

Development phase: Demonstration/prototyping/Pilot Production

STRIA Roadmaps:
Cooperative, connected and automated transport, Network and traffic management systems

Transport mode: Rail transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Digitalisation

Geo-spatial type: Urban