

Managing the long term technical evolution of ERTMS

The European Rail Traffic Management System (ERTMS) has without a doubt become the reference for railway signalling, in Europe and worldwide. In order to further promote the deployment of ERTMS, the sector has recently agreed to a period of stability before the formal release of the next version of system specifications.

■ UNIFE (the European Rail Industry Association) Director General, Philippe Citroën, explains: “For UNIFE and our members, this period of stability is the opportunity to focus on innovating the next technological evolution of ERTMS.”

Earlier this year, the European Railway Agency - the system authority for ERTMS - delivered its “longer term strategy” identifying the future “game changers” for the system. ETCS Level 3, automatic train operation for mainline, next generation communications as well as satellite positioning are the topics that have been clearly recognised by both railway operators and infrastructure managers as key priorities to be addressed in the coming years. These “game changers” are expected to further increase capacity, reliability, safety and energy savings while also reducing life-cycle cost.

UNIFE has long been involved in the coordination of research projects commissioned to prepare the ground for the integration of these new sig-

nalling functionalities into the market. The NGTC project (“Next Generation Train Control”), launched in 2013 (funded via the EU’s 7th Framework Programme for R&D), aims to compare and evolve the two major train control systems used today: ERTMS and CBTC. In addition to the development of the next generation train control systems specifications, the project is specifically focusing on functionalities such as moving block, IP based radio communication and satellite positioning.

On the latter topic, UNIFE also recently launched the Horizon 2020 “STARS” (“Satellite Technology for Advanced Railway Signalling”) project, co-funded by the European GNSS Agency (GSA). This project endeavours to develop a universal approach to predict the achievable E-GNSS performance to determine the necessary evolution of ETCS to include GNSS services as well as to quantify the economic benefits of satellite positioning through the reduction of cost. Both NGTC and

STARS must be seen in the wider context of rail research. Among other projects, they are paving the way to the Shift2Rail Joint Undertaking, an ambitious large-scale, railway stakeholder-driven and multi-annual rail research initiative, co-funded by the EU and the rail sector, created to help boost EU rail sector competitiveness. Specifically, they will directly contribute to the

Shift2Rail Innovation Programme on Advanced Traffic Management and Control Systems.

In cooperation with VDB, UNIFE will organise a Dialog Forum during InnoTrans on “Managing the long term technical evolution and continued deployment of ERTMS”, on Thursday, 22 September 2016 (Palais am Funkturm, Messe Berlin).

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ETCS Level 2 equipped trains are guided by cab signalling.