SIGNALING AND EMBEDDED SYSTEMS

MEMBER OF
BASQUE RESEARCH
& TECHNOLOGY ALLIANCE

DIGITAL AND SMART RAILWAYS

Signaling and embedded systems are key aspects in the evolution of railways towards digitalization and smart railways. These systems are key drivers for progress in this sector since the benefits from the application of these electronic systems to the railway domain include improvements in simple passenger information systems, smart maintenance, asset tracking, signaling, system evolution, and can even enable autonomous driving solutions, thereby avoiding human errors. **Ceit** offers tailored solutions to cover all the user's needs by providing the most suitable and cost-effective solutions.

AD-HOC SOLUTIONS

Ceit provides ad-hoc signaling and embedded system development for railway applications including non-safety related electronic systems, safety critical systems (SIL 4 design methodology), positioning systems and communication systems. Testing includes field testing for system validation and environment characterization; laboratory testing (i.e. zero on-site) including ETCS virtual on-board laboratory; hardware in the loop; EMC analysis for characterization and system development, RAMS analysis, security assessment and pre-certification testing.

KNOWLEDGE AND EXPERTISE

Ceit offers both the technical knowledge related to Signaling and Embedded systems covering the whole life cycle, from concept and requirements to validation, certification and commissioning. Our multidisciplinary team owns complementary knowledge in different technologies such as antenna, radio frequency and analogue electronics, digital electronics, FPGA, DSP, microprocessors and SW. A range of validation strategies is used at **Ceit**, such as virtual validation in the laboratory, physical laboratory validation (Hardware in the Loop) and on-site validation. The added value our team provides is based on the team's knowledge of state-of-the-art technology in the railway domain (signaling, railway dynamics, energy, etc.), thanks, in great part, to our collaborative experience in multidisciplinary projects.

PARTNERS & CUSTOMERS

CAF Signalling · DLR · ERTMS SOLUTIONS · DB · TRAFIKVERKET · Cetren · euskotren · Ansaldo STS · indra · IFSTTAR

PROJECTS

eATS · TREND · ECUC www.ecuc-project.eu · Roll2Rail · ERSAT · SIA SYSTEM FOR VEHICLE-INFRASTRUCTURE INTERACTION ASSETS HEALTH STATUS MONITORING · Shift2Rail · X2RAIL 1 · X2RAIL 2 · FR8RAIL · fr8hub

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