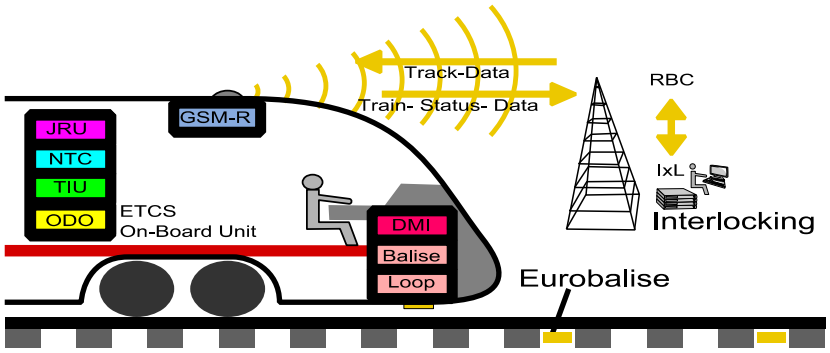
RailSiTe® - Railway Simulation and Testing
Testing for Interoperability

Marc Behrens

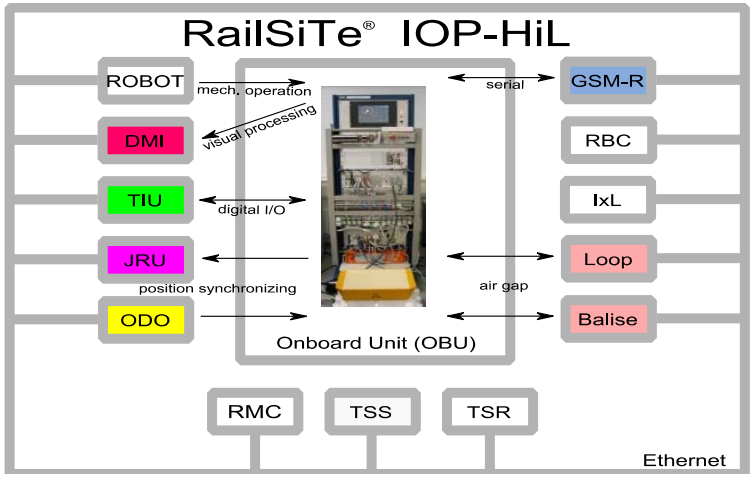
Challenges



Real-Track Data Recording

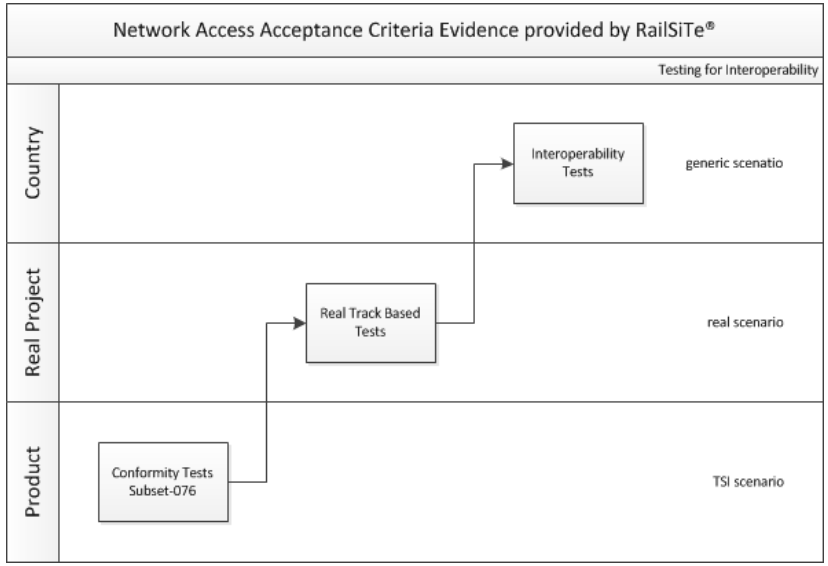
- Our goal is to make rail transport safer, more efficient and competitive, and to support the European harmonization of this mode of transport substantially,
- to exploit cost reduction potentials as well as achieve efficiency increases when testing and validating by relocating field tests into the laboratories.

Objectives



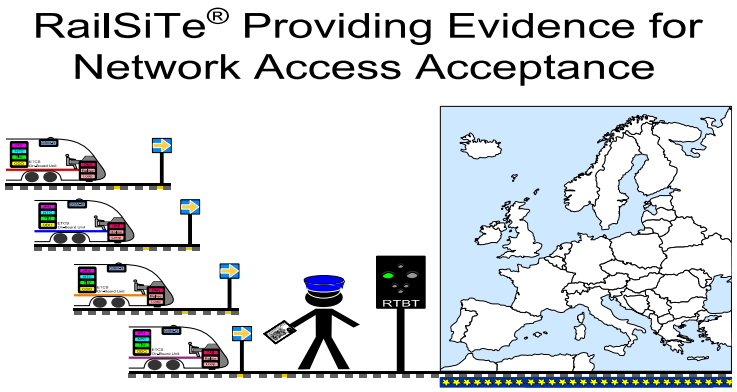
- Extension of our Railway Simulation and Testing Environment (RailSiTe®) and its accreditation as independent testing laboratory for ETCS components
- Develop generic Interoperability (IOP) tests enabling inter supplier testing for operational track scenarios
  and harmonizing validation through real track based testing[1]

Approach



- Advanced test automation is applied, to reduce the workload for ETCS conformity tests and, at the same time, to increase the quality.
- Evidence is given to the National Safety Authority for network access acceptance criteria with an approach transferable to any standardised train control system e.g. PTC (Positive Train Control).

Previous Results



- Further development of the ETCS test standards in close cooperation with the two other European testing laboratories: CEDEX in Spain and Multitel in Belgium.
- Efficiency of test processes has been increased by new methodologies for model-based test case derivation.
- National railway lines have been validated with manufacturer's OBU.

DLR

Executing of Scenarios

- Using legal Testspecifikation
- Automatic transfer of laboratory compatible events
- Comparing results of tests to scenarios or real OBU und ETCS-Referenceimüplementation: Reduce reactive model

Human Factor: Hardware in the Loop: Mockup

- Driver Desk from S-Bahn, BR 424
- Mockup, own construction
- Static simulator, no movement
- Periphere Sight

- Thank you for your attention!
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