openETCS Consortium

29 partners - 7 countries - 1 project
www.openetcs.org

Belgium
ALSTOM
ERTMS Solutions

France
ALL4TEC
CEA
Centre National de la Recherche Scientifique
ERSA
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Institut National Polytechnique de Toulouse (INPT)
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EclipseSource
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Technische Universität Braunschweig
TWT GmbH Science & Innovation
Universität Rostock
Universität Bremen

Italy
GE Transportation

Netherlands
NS Nederlandse Spoorwegen
Lloyd's Register Rail

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European Train Control System
Open Proofs - Open Source

openETCS

aims at developing an integrated modeling, development, validation and testing framework for leveraging the cost-efficient and reliable implementation of the European Train Control System (ETCS).

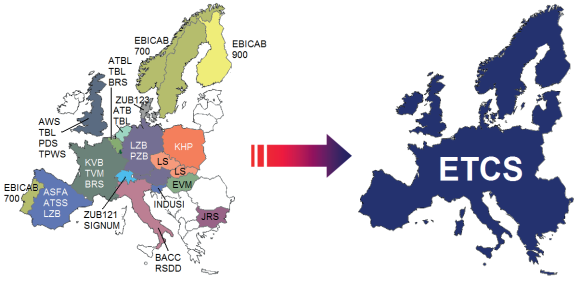
openETCS employs open standards on all levels, including hardware and software specification, interface definition, design tools, verification and validation procedures and last but not least embedded control software.

Visit us at InnoTrans to learn more about the openETCS project and discuss with our experts. All activities and presentations are public!

Programme inside

The vision

The goal of ETCS is the unification of the European rail network allowing train operators to use a rail vehicle equipped with a single signalling system to operate throughout Europe.



The reality

Real interoperability between different implementations of ETCS and their track side counterparts is not yet achieved. The reason is the „human factor“ in interpreting the standards. Furthermore, the migration costs from national systems to ETCS are high.

The solution

Transfering the ETCS specification into a formal model and then generating the code for an ETCS onboard unit will help to overcome interoperability problems. This avoids ambiguities and divergent interpretation of verbal language specifications, thereby enabling a vendor-neutral reference implementation.

InnoTrans 2014 Programme

openETCS @ Speakers‘ Corner

September 24, 13:30-14:30
Hall 14.2/15.2

Catapulting the Railway Industry into the 21st Century
Jos Holtzer (NS Nederlandse Spoorwegen)

openETCS: An Idea becomes Reality, Open Source Software for the European Train Control System
Klaus-Rüdiger Hase (Deutsche Bahn)

How Open Source Collaborative Projects Improve Quality and Time-to-Market
Ralph Müller (Eclipse Foundation)

Towards Interoperable Standards – the openETCS Approach
Stefan Rieger (TWT GmbH Science & Innovation)

openETCS Workshop*

September 24, 16:00-18:00
CityCube Berlin, meeting room R12 (level 3, entry from Jafféstraße)

openETCS: Modelling and Formalization for Safety and Interoperability
Stefan Rieger (TWT GmbH Science & Innovation)

Agile Methods meet Safety
Jan Welte (Technische Universität Braunschweig)

Towards a Model-based Design for ETCS Speed and Distance Monitoring
Alexander Nitsch (Universität Rostock)

Verifying SCADE Models based on SAT Solving
Nicolas Breton (Systerel)

On Modeling and Testing Components of the ETCS
Ana Cavalli, Huu-Nghia Ngyen (Institut Mines-Télécom)

Model Based Safety Analysis with the Safety Architect Approach
Frédérique Vallée (ALL4TEC)

* Due to the limitation in the number of participants for the workshop we kindly ask you to notify us of your attendance via email to: **innotrans.openetcs@twt-gmbh.de**.

Booths of Partners

ERSA Hall 11.2, Booth 110	ERTMS/ETCS Simulator and Test Bench
Fraunhofer FOKUS Hall 23B, Booth 206	Verification and validation of openETCS - Approach on proving functional correctness