Objective

The current interoperability approval process for new High Speed and Conventional railway vehicles in Europe is a very long and costly process. The Technical Specifications for Interoperability provide common regulations for the homologation of new rolling stock but do not directly eliminate the current burdens regarding new vehicle approval on each network. In this context, the pantograph/catenary system represents one of the major barriers to rolling stock interoperability. Indeed, each country has developed its own overhead line equipment leading to different catenary designs with variations in mechanical properties. A unified approval method is a key subject that must be addressed to provide a competitive railway system. Hence, PANTOTRAIN proposes to transfer the pantograph/catenary certification from current line testing towards laboratory testing and simulation. This will improve pantograph interoperability, increase train performances on the existing infrastructure and achieve considerable costs and time savings for the homologation of new pantographs. The project is part of the TRIO-TRAIN cluster (Total Regulatory Acceptance for the Interoperable Network) which comprises 3 related projects dealing with key railway interoperability issues: Aerodynamics (AEROTRAIN), Railway Dynamics and Track Interaction (DYNOTRAIN) and Pantograph/Catenary Interaction (PANTOTRAIN) all submitted under the 2nd Call of the FP7. The objective of these projects is to propose an innovative methodology via a computer simulation/virtual homologation that will allow multi-system network and route approval in Europe to become a faster, cheaper and better process for all involved stakeholders. Therefore the success of the
TRIOTRAIN cluster will lead to a time reduction for relevant parts of the certification process from 24 to 6 months; an 80% saving in effort for the acceptance of a new vehicle already accepted in an other country and an estimated financial saving of €20-50 Million/year.

Field of Science
/engineering and technology/mechanical engineering/vehicle engineering/aerospace engineering/aeronautical engineering

Programme(s)
FP7-TRANSPORT - Specific Programme "Cooperation": Transport (including Aeronautics)

Topic(s)
SST.2008.2.5.1 - Interoperable rolling stock

Call for proposal
FP7-SST-2008-RTD-1

See other projects for this call

Funding Scheme
CP-FP - Small or medium-scale focused research project

Coordinator
UNION DES INDUSTRIES FERROVIAIRES EUROPEENNES - UNIFE
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Activity type
Other
EU Contribution
€ 137 078,70

Website
Contact the organisation

Administrative Contact
Ross Hanley (Mr.)

Participants (15)
<table>
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<tr>
<th>Organisation</th>
<th>EU Contribution</th>
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<th>Activity type</th>
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<tr>
<td><strong>ALSTOM TRANSPORT SA</strong></td>
<td>€ 176 024</td>
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<td><strong>BOMBARDIER TRANSPORTATION GMBH</strong></td>
<td>€ 110 549,50</td>
<td>Eichhornstrasse 3 10785 Berlin</td>
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<td><strong>Stemmann-Technik GmbH</strong></td>
<td>€ 79 863,50</td>
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<td>SNCF MOBILITES</td>
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<td>RAIL SAFETY AND STANDARDS BOARD LIMITED</td>
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<td>UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA</td>
<td>€ 78 750</td>
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<td>UNION INTERNATIONALE DES CHEMINS DE FER</td>
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NETWORK RAIL INFRASTRUCTURE LIMITED
United Kingdom

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Activity type
Other

EU Contribution
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Activity type
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Francesca Lacala (Ms.)
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<td>€ 23 580</td>
<td>Rua Eng Ferreira De Mesquita Edificio Cp Bloco B 1 1 1099 35 Lisboa</td>
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<td>DEUTSCHE BAHN AG</td>
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