

Work-Package 6: “Dissemination, Exploitation and Standardization”

## Dissemination Plan and Report

### First version of the project Dissemination Plan (D6.1)

 Dr. Michael Ditze, Dr. Stefan Rieger, Dr. Frank Golatowski, Dr.  
 Peter Mahlmann, Hansjörg Manz, Jan Welte and @all: Add your  
 name if you contributed

March 2013



#### Funded by:


 Federal Ministry  
 of Education  
 and Research

 Région de  
 Bruxelles-  
 Capitale

 GOBIERNO  
 DE ESPAÑA

 MINISTERIO  
 DE INDUSTRIA, ENERGÍA  
 Y TURISMO

This page is intentionally left blank

**Work-Package 6: “Dissemination, Exploitation and Standardization”**

**OETCS/WP6/D6.1  
March 2013**

# Dissemination Plan and Report

**First version of the project Dissemination Plan (D6.1)**

Dr. Michael Ditze and Dr. Stefan Rieger

TWT GmbH  
Science & Innovation  
Bernhäuser Straße 40-42  
D-73765 Neuhausen  
Germany

Dr. Frank Golasowski

University of Rostock  
Faculty of Computer Science and Electrical Engineering  
Institute of Applied Mikroelektronik and Computer Engineering  
Richard-Wagner Str. 31  
18119 Rostock-Warnemuende  
Germany

Dr. Peter Mahlmann

DB Netz AG  
Völckerstraße 5  
D-80939 München  
Germany

Hansjörg Manz and Jan Welte

Technische Universität Braunschweig  
Institute for Traffic Safety and Automation Engineering  
Langer Kamp 8  
D-38106 Braunschweig  
Germany

@all: Add your name if you contributed

@all: Add your affiliation if you contributed

Deliverable

Prepared for openETCS@ITEA2 Project

**Abstract:** This document is the first version of the openETCS dissemination plan and report. It represents a preliminary version of the project dissemination strategy and covers past and as well as planned dissemination activities. There will be two updated versions to this document (D6.3 and D6.5).

**Disclaimer:** This work is licensed under the "openETCS Open License Terms" (oOLT) dual Licensing: European Union Public Licence (EURL v.1.1+) AND Creative Commons Attribution-ShareAlike 3.0 – (cc by-sa 3.0)

THE WORK IS PROVIDED UNDER openETCS OPEN LICENSE TERMS (oOLT) WHICH IS A DUAL LICENSE AGREEMENT INCLUDING THE TERMS OF THE EUROPEAN UNION PUBLIC LICENSE (VERSION 1.1 OR ANY LATER VERSION) AND THE TERMS OF THE CREATIVE COMMONS PUBLIC LICENSE ("CCPL"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS OLT LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HERE, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. TO THE EXTENT THIS LICENSE MAY BE CONSIDERED TO BE A CONTRACT, THE LICENSOR GRANTS YOU THE RIGHTS CONTAINED HERE IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

<http://creativecommons.org/licenses/by-sa/3.0/>  
<http://joinup.ec.europa.eu/software/page/eupl/licence-eupl>

# Table of Contents

1	Introduction.....	4
2	Past Dissemination Activities .....	4
3	Exhibitions.....	7
3.1	ITEA2/Artemis Symposium .....	7
3.2	Exhibitions and Trade Shows.....	7
4	External Conferences.....	8
4.1	Railway, Vehicular and Transportation .....	8
4.2	Verification and Validation.....	9
4.3	Software Engineering and Methodologies .....	11
4.4	Open Source .....	13
4.5	General Computer Engineering and Computer Science .....	13
5	Journals and Magazines .....	13
6	Events Organised by openETCS Project Partners .....	14
7	Open Source Activities .....	16
7.1	Establishing the Infrastructure .....	16
7.2	Toolchain .....	16
7.3	Ecosystem .....	16
7.4	Methodologies .....	16
8	Further Activities .....	16
8.1	openETCS Website.....	16
8.2	Github .....	16
	References .....	17

## 1 Introduction

This document is the first version of the openETCS dissemination plan and report. It represents a preliminary version of the project dissemination strategy and covers past and as well as planned dissemination activities.

The document is structured as follows. Section 2 lists dissemination activities such as talks and articles that have taken place / were published already. Details like date, publisher and/or venue as well as contributors and an abstract are provided. In the Sections 3, 4 and 5 we list planned future dissemination opportunities and events categorised by their type (conference, exhibition, journal, etc.). For each of those items we provide the planned contribution(s) and the relevance for the project.

Section 6 lists events to be organised by the openETCS project that provide a significant dissemination potential. Sections 7 and 8 focus on the open source activities, a central aspect of openETCS and additional dissemination activities not covered by the other sections, respectively.

## 2 Past Dissemination Activities

### **European Railway Review, Volume 18, Issue 3, 2012**

Type: Journal Article  
Title: openETCS: Applying ‘Open Proofs’ to European Train Control  
Pages: 30–34  
Author: Klaus-Rüdiger Hase (DB)  
Publisher: Russell Publishing Ltd., Kent, UK  
Website: <http://europeanrailwayreview.com/tag/openetcs>

European Railway Review is the leading bi-monthly technical journal for the European rail industry. Featuring articles and news about the latest technologies and developments, the magazine is essential reading for people involved in the railway business. Here, an overview article of the openETCS project, covering the technical background and the project goals, has been published by DB Netz AG.

### **FORMS/FORMAT 2012**

Type: Conference Paper and Talk  
Title: Using ERTMSFormalSpecs to model ERTMS braking curves  
Authors: L. Ferier, S. Lukicheva and S. Pinte (ERTMS Solutions)  
Date: 11-13/12/2012  
Location: Braunschweig, Germany  
Website: <http://www.forms-format.de>

To be completed by ERTMS Solutions

**10th International Conference on Software Engineering and Formal Methods (SEFM)**

Type: Conference Paper and Talk  
Title: Frama-C: a Software Analysis Perspective  
Author: Virgile Prevosto (CEA LIST)  
Date: 01-05/10/2012  
Location: Thessaloniki (Greece)  
Publisher: Springer (LNCS)  
Website: <http://sefm2012.city.academic.gr/>

To be completed by CEA LIST, is openETCS mentioned?

**24th IFIP International Conference on Testing Software and Systems (ICTSS)**

Type: Conference Paper and Talk  
Title: Off-line test case generation for timed symbolic model-based conformance testing  
Author: Christophe Gaston (CEA LIST)  
Date: 19-21/11/2012  
Location: Aalborg (Denmark)  
Publisher: Springer (LNCS)  
Website: <http://ictss2012.aau.dk/>

To be completed by CEA LIST, is openETCS mentioned?

**12th International SIGNAL+DRAHT-Congress 2012**

Type: Talk  
Title: openETCS: Von der Idee zur Praxis  
Speaker: Klaus-Rüdiger Hase (DB)  
Date: 08-09/11/2012  
Location: Fulda, Germany

The openETCS project has been presented at the congress, which took place under the motto “How will signaling technology evolve over the next ten to fifteen years?”. The focus was predominantly on the development of the railway networks as well as on the expected changes in the areas of automatic train control, route protection, level crossing protection and control technology. Therefore, this congress was an ideal platform to present the project to a large audience of highly distinguished experts.

**APTA/UIC High-Speed Congress 2012**

Type: Talk  
Title: openETCS: Applying Open Proof's to the European Train Control System  
Speaker: Klaus-Rüdiger Hase (DB)  
Date: 10-13/07/2012  
Location: Philadelphia, PA, USA

The Congress focuses on highspeed railway traffic. Here, the openETCS project has been presented a large audience of highly distinguished experts and has especially been presented to the non-european audience.

**ERTMSFormalSpecs Workshop**

Type: Workshop organised by ERTMS Solutions  
Date: 17-18/12/2012  
Location: Brussels, Belgium  
Organisator: ERTMS Solutions  
Participants: openETCS consortium, ERA, RFF, DVIS

WP3a/b tasks contributions, @ERTMS Solutions: Was this workshop open for external people to attend or just an internal event?

**4th annual Signalling and Train and Control Conference**

Type: Talk  
Title: Infrastructure manager case study: Ensuring systems integration and developing functionality with openETCS  
Speaker: Klaus-Rüdiger Hase (DB)  
Date: 19-21/03/2013  
Location: Vienna, Austria  
Website: <http://globaltransportforum.com/signalling-and-train-control/>

The 4th annual Signalling and Train Control show in Vienna is one of the definitive events for rail signalling, telecom and traffic management experts. With over 50 leading speakers and 300 attendees, the congress allows for the sharing of best practice strategies and unparalleled business development opportunities. At the symposium openETCS project leader Klaus-Rüdiger Hase presented the openETCS approach to developing functionality and system integration.



#### 41. Symposium “Moderne Schienenfahrzeuge”

Type: Talk  
 Title: Open ETCS: Ein internationales ITEA2-Projekt begleitet den Wandel  
 Speaker: Klaus-Rüdiger Hase (DB)  
 Date: 7-10/04/2013  
 Location: Graz, Austria  
 Website: <http://www.schienenfahrzeugtagung.at/>

The symposium focuses on highspeed railway traffic, railway transport vehicles, rail freight transport, vehicle components, and interaction of wheel and track. The platform of the symposium will be used to present the openETCS approach to a large audience of distinguished experts in railway business.

### 3 Exhibitions

#### 3.1 ITEA2/Artemis Symposium

To be completed by TWT

#### 3.2 Exhibitions and Trade Shows

##### INNOTRANS

Date: 2014  
 Location: Berlin, Germany

INNOTRANS will provide an opportunity to present key results, e.g. modelling tools and simulators. INNOTRANS, the world's largest trade fair for railways and public transit, addressing the entire railway industry. Since several openETCS partners like Alstom, Deutsche Bahn, ERSA, ERTMS-Solutions, General Electric, Siemens, SNCF, etc. are regularly represented at that industrial fair, the openETCS subject could be featured specifically at their particular exhibition having a best possible outreach to make the approach well known.

##### BICCnet Innovation Forum Embedded Systems

Frequency: annual  
 Next Event: April 2013 (Munich, Germany)  
 Website: <http://bicc-net.de/termine/termin/innovation-forum-embedded-systems/>

Presentation of openETCS partner results on booth, To be completed by Fraunhofer ESK

##### Embedded World Conference

Frequency: annual  
 Next Event: March 2013 (Nuremberg, Germany)  
 Website: <http://www.embedded-world.eu/>

Presentation of openETCS partner results on booth, To be completed by Fraunhofer ESK

**Rencontre du numérique de l'ANR**

Frequency: annual

Next Event: April 2013 (Paris, France)

Presentation of (French) projects related to openETCS; CEA LIST plans to present the Framac tool.

## 4 External Conferences

### 4.1 Railway, Vehicular and Transportation

**ERTMS World Conference**

Frequency: bi-annual

Next Event: 2014 (Istanbul, Turkey)

Website: <http://www.ertms-conference2014.com>

As the ETCS standard is one part of the European Rail Traffic Management System (ERTMS) this conference is highly recommended to present openETCS.

**SIGNAL+DRAHT-Congress**

Frequency: annual

Website: <http://www.eurailpress.de/events/eurailpress-events.html>

A talk about the openETCS project has already been given at the 12th international SIGNAL+DRAHT congress in 2012 (see 2). A follow up talk is planned for 2014 or 2015 in order to present the results of the project.

**IEEE Vehicular Technology Conference**

Frequency: semi-annual

Next Events: June 2013 (Dresden, Germany), Sept. 2013 (Las Vegas, USA)

Website: <http://www.ieeevtc.org/vtc2013spring>

This semi-annual flagship conference of the IEEE Vehicular Technology Society will bring together individuals from academia, government, and industry to discuss and exchange ideas in the fields of wireless, mobile, and vehicular technology. The conference will feature world-class plenary speakers, tutorials, and technical as well as application sessions.

**International Conference on Design and Operation in Railway Engineering (Comrail)**

Frequency: bi-annual

Next Event: 2014

The aim of the conference is to review the latest developments in railway engineering and update the use of advanced systems, promoting general awareness throughout the business management, design, manufacture and operation of railways.

**International Railway Safety Conference (IRSC)**

Frequency: bi-annual

Next Event: 2014

@all: Please check if this is still relevant and complete it. Otherwise this entry will be removed.

**Conference on Railway Engineering (CORE)**

Frequency: bi-annual

Next Event: 2014

@all: Please check if this is still relevant and complete it. Otherwise this entry will be removed.

**Fachtagung Technische Zuverlässigkeit (TTZ)**

Frequency: bi-annual

Next Event: April 2013 (Leonberg, Germany)

Website: <http://www.vdi-wissensforum.de/de/nc/angebot/detailseite/event/02TA502013>

@all: Please check if this is still relevant and complete it. Otherwise this entry will be removed.

**World Congress on Railway Research 2013 (WCRR 2013)**

Frequency: bi-annual

Next Event: Nov. 2013 (Sydney, Australia)

Website: <http://www.wcrr2013.org/>

The World Congress on Railway Research is the world's foremost international forum for the promotion, development and exchange of the latest innovations in the global rail industry. Therefore it can be used to promote openETCS and our first results to researchers, manufacturers and operators from across the global rail industry.

**2013 IEEE International Conference on Intelligent Rail Transportation (IEEE ICIRT 2013)**

Next Event: Aug. 2013 (Beijing, China)

Website: <http://www.ieee-icirt.org/>

Since there is a high interest in openETCS and its results in Asia, the 2013 IEEE International Conference on Intelligent Rail Transportation provides a forum to communicate with potential partners. The theme of ICIRT 2013 is "Safe, Green & Intelligent Rail".

## 4.2 Verification and Validation

**IFIP International Conference on Testing Software and Systems (ICTSS)**

Frequency: annual

The well-established ICTSS series of international conferences addresses the conceptual, theoretic, and practical challenges of testing software systems, including communication protocols, services, distributed platforms, middleware, embedded systems, and security infrastructures.

**European Safety and Reliability Conference (ESREL)**

Frequency: annual  
Next Event: Sept. 2013 (Amsterdam, Netherlands)  
Website: <http://www.esrel2013.org/>

Safety, reliability and risk management become more and more important in an always more challenging and competitive environment, in every industry and human activity: multidisciplinary approaches to safety and reliability engineering and risk management become more and more necessary and attractive.

This annual conference will provide a forum for presentation and discussion of scientific works covering theories and methods in the field of risk, safety and reliability, and their application to a wide range of industrial, civil and social sectors and problem areas. ESREL 2011 will also be an opportunity for researchers and practitioners, academics and engineers to meet, exchange ideas and gain insight from each other.

 **$\lambda\mu$  Symposium**

Frequency: bi-annual  
Next Event: 2014 (France)  
Website: <http://www.imdr.fr/en/sommaire/index.php>

French safety and reliability conference, **To be completed by ALL4TEC**

**Nasa Formal Methods Symposium (NFM)**

Frequency: annual  
Next Event: May 2013 (Moffet Field, USA)  
Website: <http://ti.arc.nasa.gov/events/nfm-2013/>

The NASA Formal Methods Symposium is a forum for theoreticians and practitioners from academia, industry, and government, with the goals of identifying challenges and providing solutions to achieving assurance in mission- and safety-critical systems.

**Integrated Formal Methods (iFM)**

Frequency: annual  
Next Event: June 2013 (Turku, Finland)  
Website: <http://www.it.abo.fi/iFM2013/>

The iFM conference series seeks to further research into hybrid approaches to formal modeling and analysis; i.e., the combination of (formal and semi-formal) methods for system development, regarding modeling and analysis, and covering all aspects from language design through verification and analysis techniques to tools and their integration into software engineering practice.

**FORMS/FORMAT 2014**

Frequency: bi-annual  
Next Event: Jan. 2014 (Braunschweig, Germany)  
Website: <http://www.forms-format.de>

The symposium FORMS/FORMAT 2012 offers scientists facing formal techniques, practitioners and managers, developers and consultants of automotive and railway industries as well as traffic system operators with interest in formal methods an accepted platform for the exchange of scientific experience and the transfer of practical description means, methods and tools for complex automation systems. With its focus on formal methods and transportation it provides an ideal forum to present openETCS and its results.

**IFIP International Conference on Formal Techniques for Distributed Systems**

To be completed by Institut Telecom

**International Conference on Testing Software and Systems**

To be completed by Institut Telecom

**International Conference on Software Engineering and Formal Methods**

To be completed by Institut Telecom

**IEEE International Conference on Software Testing**

To be completed by Institut Telecom

**4.3 Software Engineering and Methodologies****Workshop on Certification and Model-Driven Development of Safety Critical Software (ZeMoSS)**

Date: 27/02/2013  
Location: Aachen, Germany  
Website: <http://zemoSS.in.tu-clausthal.de/>

The requirements for software quality of safety critical systems are very high, especially for the aspects of functional safety and information security. This German workshop covers among others the topics of model-driven development, integration of safety and security, and certification of open source software. Thus it is highly relevant for the project.

**Embedded Real Time Software and Systems (ERTS<sup>2</sup>)**

Frequency: annual  
Next Event: 2013 (France)  
Website: <http://www.erts2012.org/>

The ERTS<sup>2</sup> Congress is a unique European cross sector event on Embedded Software and Systems, a platform for top-level science with representatives from universities, research centers and industries.

**International Conference on Model Driven Engineering Languages & Systems (MODELS)**

Frequency: annual  
Next Event: Sep., Oct. 2013 (Miami, USA)  
Website: <http://www.modelsconference.org/>

To be completed by Fraunhofer ESK

**IEEE International Conference on Software Engineering (ICSE)**

Frequency: annual  
Next Event: May 2013 (San Francisco, USA)  
Website: <http://2013.icse-conferences.org/>

The International Conference on Software Engineering (ICSE) is the premier software engineering conference, providing a forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, experiences and concerns in the field of software engineering.

**Embedded World Conference**

Frequency: annual  
Next Event: March 2013 (Nuremberg, Germany)  
Website: <http://www.embedded-world.eu/>

To be completed by Fraunhofer ESK

**BICCnet Innovation Forum Embedded Systems**

Frequency: annual  
Next Event: April 2013 (Munich, Germany)  
Website: <http://bicc-net.de/termine/termin/innovation-forum-embedded-systems/>

To be completed by Fraunhofer ESK

**IEEE/ACM International Conference on Automated Software Engineering**

Next Event: Sept. 2013 (Essen, Germany)  
Website: <http://ase2012.paluno.uni-due.de/>

To be completed Institut Telecom

**International Conference on Quality Software**

To be completed Institut Telecom

**ACM Symposium on Applied Computing (SAC)**

Frequency: annual  
 Next Event: Feb. 2013 (Coimbra, Portugal)  
 Website: <http://acm.org/conferences/sac/>

Over the past years, the ACM Symposium on Applied Computing (SAC), the primary SIGAPP Annual Conference, has become a primary forum for applied computer scientists, computer engineers, software engineers, and application developers from around the world to interact and present their work.

**Joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering**

To be completed Institut Telecom

**IEEE International Symposium on High Assurance Systems Engineering**

To be completed Institut Telecom

**International Conference on Software Engineering and Knowledge Engineering**

To be completed Institut Telecom

**Asia-Pacific Software Engineering Conference**

To be completed Institut Telecom

**4.4 Open Source****EclipseCon Europe**

Frequency: annual  
 Next Event: Oct. 2013 (Ludwigsburg, Germany)  
 Website: <http://www.eclipsecon.org>

EclipseCon is one of the largest open source conferences of the world. Several consortia such as the Automotive Group and the OPEES group are presenting their results and are looking for potential collaboration partners.

@EclipseSource: Please check, whether these data are correct.

**4.5 General Computer Engineering and Computer Science****International Conference on Information Systems Security**

To be completed Institut Telecom

**5 Journals and Magazines****Networking Sciences**

To be completed by Institut Telecom

**Annals of Telecommunications**

To be completed by Institut Telecom

**Computer Networks**

To be completed by Institut Telecom

**Journal of Statistical Software**

Website: <http://www.jstatsoft.org/>

To be completed by Institut Telecom

**Software Tools for Technology Transfer (STTT)**

Website: <http://sttt.cs.uni-dortmund.de/>

To be completed by CEA LIST

**SIGNAL+DRAHT**

Website: <http://www.eurailpress.de/verlag/zeitschriften/signal-draht/profil.html>

A talk about the openETCS project has already been given at the 12th international SIGNAL+DRAHT congress in 2012 (see 2). For 2014 or 2015 it is planned to publish an article about the project results in the accompanying SIGNAL+DRAHT magazine.

**International Railway Journal (IRJ)**

Website: <http://www.railjournal.com>

The journal was launched in 1960 and is the world's first globally-distributed magazine for the railway industry. It is written for senior managers and engineers of the world's railways and transit systems, ministers of transport, manufacturers, railway planners, and consultants. Concerning openETCS, it is planned to publish an article about the simulator which will be developed for the purpose of demonstration in the project.

**ZEV Rail**

Website: <http://www.zevrail.de>

ZEV Rail is the accompanying journal to the "Moderne Schienenfahrzeuge" symposium. An article with the title "OpenETCS: Ein internationales ITEA2-Projekt begleitet den Wandel" is currently under submission.

-



## 6 Events Organised by openETCS Project Partners

### Workshop and Training Class on Formal Methods

Date: 15-17/04/2013

Location: Munich (Germany)

The project partners will organize a workshop on formal methods at the site of Deutsche Bahn in Munich, Germany. Goal of the workshop is to give an overview and short introduction to the vast number of formal methods which can potentially be used for the formalization process of the project. For this, the format of an un-conference will be used. In a closing workshop we want to set up an evaluation matrix with all relevant parameters. Moreover, there will be a training class on FORMALSPEC.

### Special Session on Ensuring Safety in Industrial Critical Systems at IEEE INDIN 2013

Date: 29-31/07/2013

Location: Bochum (Germany)

TWT, Deutsche Bahn, the University of Rostock, and the project-external partner Infineon will organize a special session “Ensuring Safety in Industrial Critical Systems” (ESICS) at the IEEE International Conference on Industrial Informatics (INDIN). The purpose of the workshop is to leverage the discussion with respect to development methods of embedded safety-critical systems in transportation, thus building the foundation for an ecosystem of stakeholders and for dissemination of project results. Several contributions from the openETCS project are expected.

### Workshop on Advances in Model Based Testing

Organisator: Institut Telecom

To be completed by Institut Telecom

### International Summer School on Training And Research On Testing

Date: July 2013

Location: Volterra, Italy

Organisator: Institut Telecom

To be completed by Institut Telecom

### Workshop on Formal Methods in the Development of Software

Organisator: Institut Telecom

To be completed by Institut Telecom

### International Workshop on Security Testing

Organisator: Institut Telecom

To be completed by Institut Telecom

**Test4Rail Symposium**

Date: Q4/2013  
Location: Braunschweig  
Organisator: DLR

To be completed by DLR

**openETCS Conference 2013**

Date: Q4 2013

Approximately by the End of 2013 a mid-term conference under the patronage of the UIC (Union Internationale des Chemins de Fer, engl.: International Union of Railways) in Paris is planned. It will be attracting potential users, which are railway companies world wide.

**openETCS Conference 2015**

Date: 2015

After finishing the project in 2015 a second conference on the openETCS subject is planned to present the final results and most likely first marketable products at an adjacent product exhibition.

## 7 Open Source Activities

@EclipseSource: Do you have any dissemination-relevant aspects here? Otherwise I believe that this section can be removed.

### 7.1 Establishing the Infrastructure

### 7.2 Toolchain

### 7.3 Ecosystem

### 7.4 Methodologies

## 8 Further Activities

### 8.1 openETCS Website

With the start of the project a preliminary public project website has been set up and can be reached under <http://www.openetcs.org>. In its current state the website gives a brief overview over the project, its goals, and the participating partners. Moreover, a calendar with upcoming events gives people not yet involved but interested in the project an overview of ongoing activities and thus the possibility to participate in these events. Last but not least the website provides links to the project github repository, thus providing access to deliverables, software, meeting minutes, etc.

It is planned to go online with a redesigned and revised website within this year. The revised website will among other things provide more information about the participating partners and each of the working packages.

## 8.2 Github

To be completed by TWT

## References