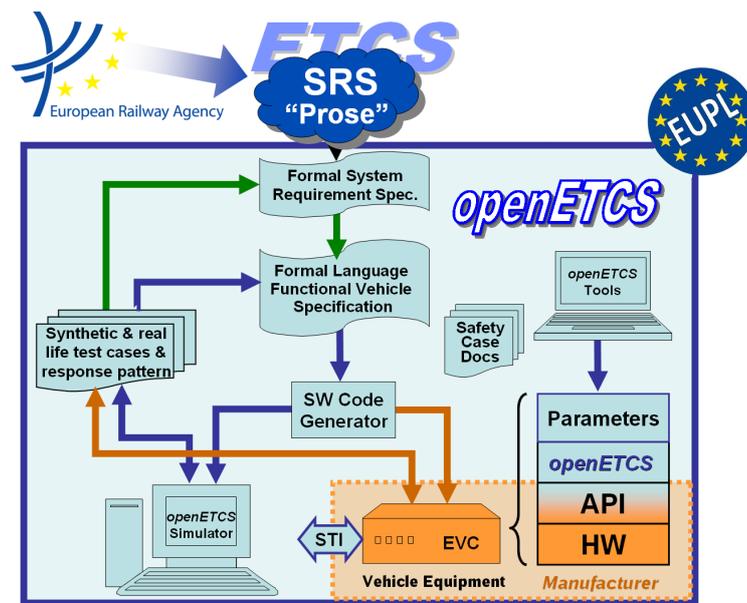openETCS

Work-Package 6: "Dissemination, Exploitation and Standardization"

Dissemination Plan and Report

Project Dissemination Plan and Report (D6.1)

Dr. Michael Ditze, Dr. Stefan Rieger, Dr. Frank Golatowski, Dr. Peter Mahlmann, Hansjörg Manz, Jan Welte and Alexander Stante

March 2013

Funded by:

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Work-Package 6: "Dissemination, Exploitation and Standardization"	**OETCS/WP6/D6.1** **March 2013**

Dissemination Plan and Report

Project Dissemination Plan and Report (D6.1)

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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).

Table of Contents

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. Section 7 addresses additional dissemination activities not covered by the other sections.

2 Past Project 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.

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.

ITEA & ARTEMIS Co-summit 2012: Sharing a Vision for ICT Innovation

Date:	30-31/10/2012
Location:	Paris, France

The ITEA & ARTEMIS Co-summit 2012 was used to introduce the openETCS project to a wide audience ranging from industry to academia, public authorities and press from all over Europe.

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.

3 Exhibitions and Trade Shows

ITEA & ARTEMIS Co-summit 2013

Date:	4-5/12/2013
Location:	Stockholm, Sweden

The ITEA & ARTEMIS Co-summit will be used as platform to present the project, report about the current status of the openETCS project and present first results. It is a great opportunity for exchanging ideas with the community and to disseminate and advertise the project as the event covers participants from industry, academia, public authorities and press from all over Europe.

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.

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 Frama-C tool.

Embedded World Exhibition & Conference

Frequency: annual

Next Event: February 2014 (Nuremberg, Germany)

Website: `http://www.embedded-world.eu/`

The annual EmbeddedWorld Exhibition & Conference is the world largest trade exhibition in the area of embedded systems. It is planned to present openETCS partner results at the exhibition as well as at the conference.

4 External Conferences

4.1 Railway, Vehicular and Transportation

41th 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 fraight 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.

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 ideals 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 (Comprail)

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.

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.

IEEE International Conference on Intelligent Rail Transportation (ICIRT 2013)

Next Event: Aug. 2013 (Beijing, China)

Website: `http://www.ieee-icirt.org/`

Since their is a high interest in openETCS and its results in Asia, the 2013 IEEE International Conference on Intelligent Rail Transportation provides a forum to communicated 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.

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.

International Conference on Software Engineering and Formal Methods (SEFM)

Frequency:	annual
Next Event:	Sep. 2013 (Madrid, Spain)
Website:	`http://antares.sip.ucm.es/sefm2013/`

The SEFM conference series aims to advance the state of the art and usage of formal methods in the industry, being a great hub for discussion on formal methods and software engineering.

IEEE International Conference on Software Testing (ICST)

Frequency:	annual
Website:	`http://www.icst.lu/`

ICST is a conference series that specialises in Software Testing and Verification & Validation. Topics discussed range from Verification & Validation, testing, model checking, among others.

4.3 Software Engineering and Methodologies

Embedded Real Time Software and Systems (ERTS^2)

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

The ERTS^2 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/`

The International Conference on Model Driven Engineering Languages & Systems (Models) is the premier conference series for model-based software and system engineering. The conference covers all aspects of modeling, from languages and methods to tools and applications.

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.

BICCnet Innovation Forum Embedded Systems

Frequency: annual

Next Event: April 2013 (Munich, Germany)

Website: `http://bicc-net.de/termine/termin/`
                       `innovation-forum-embedded-systems/`

The Bavarian Information and Communication Technology Cluster (BICCnet) organizes the annual Innovation Forum Embedded Systems (IFES). The IFES offers talks, panel discussions and a trade exhibition addressing cross domain relevant topics in the area of networked embedded systems. It is planned to present openETCS partner results in talks as well as at the trade exhibition.

IEEE/ACM International Conference on Automated Software Engineering (ASE)

Frequency: annual

Next Event: Nov. 2013 (California, USA)

Website: `http://ase2013.org/`

The ASE conference series is a great forum for automatic software engineering, with main research topics on techniques and tools for the automation of testing, analysing and maintenance of software systems.

International Conference on Quality Software

Frequency: annual

Next Event: July 2013 (Nanjing, China)

Website: `http://software.nju.edu.cn/qsic/index.html`

The QSIC conference series aims to improve the quality assurance and overall verification & validation techniques. Main topics discussed are software testing and quality, debugging and formal methods.

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.

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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.

International Conference on Software Engineering and Knowledge Engineering (SEKE)

Frequency: annual

Next Event: June 2013 (Boston, USA)

Website: `http://www.ksi.edu/seke/seke13.html`

Specializing in software engineering, the SEKE conference series provides a great forum for discussion around this topic.

Asia-Pacific Software Engineering Conference (APSEC)

Frequency: annual

Next Event: Dec 2013 (Bangkok, Thailand)

Website: `http://apsec2013.eng.chula.ac.th/`

A very important conference series in Asia, APSEC brings together researchers from the field of software engineering, being a great place to show work in the area.

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.

5 Journals and Magazines

Journal of Statistical Software

Website: `http://www.jstatsoft.org/`

Specializing in statistical software and algorithms, it provides a medium to publish about different techniques used for the validation & verification of embedded systems.

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.

Test4Rail Symposium

Date: Q4/2013

Location: Braunschweig

Organisator: DLR

It is the objective of the Symposium, to identify new approaches for the optimisation of tests of safety-critical, software-based railway systems. This objective shall be reached by exchange between science, industry and operators. The complexity of safety-critical and software-based systems in the railway sector as well as specific requirements related to safety and availability lead today to enormous effort for test and commissioning. On the other side modern methods and procedures for system tests are available from information science.

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   Further Activities

7.1   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.

7.2   Github

Throughout the project the GitHub platform [2] is used for management and publication of project results. Many of the project repositories are public and thus are accessible to the outside world, making it possible for everyone to view the state of the project and its results. In addition, the platform enables anybody to contribute content to the project. GitHub is based on the open source Git tool [1] and provides a wide variety of functions, including versioning, team collaboration support, public and private repositories and a wiki. In addition to the main project repositories wikis are a useful tool for communicating project state and results to the outside world.

References

[1] The Git Tool: `http://git-scm.com/`.

[2] The GitHub Platform: `http://github.com/`.