



Moving Europe towards a sustainable and safe railway system without frontiers.

ERTMS 2022 Conference: the Detailed Agenda and all the Slides

All the available slides delivered during the conference can be retrieved in this agenda, by clicking directly on the title of the presentation of each speaker.

Day 1 : Workshops - 26 April 2022

12:00 - 13:00

Registration and welcome coffee

13:00 - 13:15

Opening: Introductory remarks

Matthias Ruete



After a long career as Chief Executive Officer and Chairman in several Private European Industrial Groups and the Belgian Railways, Karel joined DG Move of the European Commission in 2005 as the ERTMS Coordinator until 2018. Working as an advisor, Karel currently supports a project of introducing ERTMS in the Southeast Asian region.

ERTMS is the instrument to lead the Railways into the 21st Century. The European Union has a recognized technology and leadership in deploying it. The model of different stakeholders working together to make it an European success is unique. Let us implement it faster in the European Union and further promote it worldwide as an industrial project which can contribute to the economic and social well-being of countries or regions.

13:15 - 14:45

Workshop Session A

Workshop #1 - ERTMS deployment trackside and on-board. Opportunities and Challenges

The objective of this workshop is to present some best practices and discuss the opportunities and challenges linked to the accelerated and synchronised trackside and on-board ERTMS deployment.

Speaker :

- **Marcin Wojcik**

Workshop #2 - Existing challenges for ERTMS retrofitting and installation

The main objective of this workshop is to present the key steps to carry out an ERTMS

installation or ERTMS retrofit project within a vehicle, with a particular focus on the technical aspects. During the workshop, we will also be discussing on how to organise the project in order to achieve optimal type authorization and conformity to type, and how to prepare for the next steps.

Speaker :

- **Marcin Wojcik**
- **Oscar Rebollo**

Workshop #3 - On-board and trackside architecture as foreseen in the TSI CCS 2022

This workshop will provide information about the trackside and on-board signalling architecture as it is foreseen for the TSI CCS 2022. Based on this input, the participants will be invited by the moderators to ask questions and discuss the architecture from different perspectives. Finally, the attendees may provide their feedback on the current status and their expectations about the future evolution of the architecture.

Speaker :

- **Klaus Mindel**

Workshop #4 - Implementing ATO over ERTMS early feedback from implementation

This session will be the occasion for participants to get information on key pilot lines, demonstrations and projects that have already tested or implemented ATO over ETCS.

This will include feedback from:

- ATO GoA2 – Betuwe line
- Hamburg S-Bahn operation with ATO
- ATO tests in Switzerland and United Kingdom in the framework of S2R

Participants will be provided with insights on these projects and will be able to get more insight on technical and operational aspects surrounding them.

Speaker :

- **Lea Paties**

Workshop #5 - Maximum performance through ETCS

This workshop is aimed at capacity experts and others who would like to get a much broader idea of what can actually be done to maximize capacity with the current “toolbox” of ETCS. Topics might include issues such as braking curves, block divisions, system delays as well as planning details and technologies.

Speaker :

- **Peter Reinhart**
- **Daniel Scherrer**

Workshop #6 - TSI CCS modifications and expected impact

The presentation focuses on providing the main changes in the TSI CCS 2022 text. These can be categorised in the following 2 main areas, the main technical changes within the ERTMS specifications and the impact of these specification changes on the implementation frameworks for vehicle and trackside projects.

Speaker :

- **Wouter Malfait**
- **Juan Hernández Fernández**

Workshop #7 - FRMCS introduction: strategies and perspectives

The introduction of a new Class A radio system requires an update of the TSI CCS and its Annex A documents. This presentation gives an overview of the changes in this TSI, related to the basic parameters, the interoperability constituents and the implementation and migration conditions. It will also give a brief overview of the system characteristics, as covered in the new specifications in Annex A.

Speaker :

- **Chiel Spaans**
- **Dan Mandoc**

Workshop #8 - CCS Beyond 2022: introducing Europe's Rail Programme

- **The Innovation Pillar**
- **The System Pillar**

I look forward to discussing the objectives of the System Pillar, and what it means for the future evolution of ERTMS and CCS more broadly.

Speaker :

- **Ian Conlon**
- **Giorgio Travaini**

Workshop #9 - Trackside Approval - return of experience

- ERTMS Trackside Approval
- Trackside approval- Return of experience of DB Netze
- Experience of RFI on Trackside Approval

- Experience of PKP Polskie Linie Kolejowe S.A. from on-going ERTMS approval procedures
- Trackside Approval- Experience of Správa železnic
- Considerations about Trackside Approval

Outcomes of the Workshop Trackside Approval will be presented during the conference. Based on the feedback collected from the participants we will report on interesting topics, possible proposals for improvement and experience from our first applicants.

Speaker :

- **Jo De Bosschere**

Workshop #10 - ETCS trackside engineering rules and their effect in operations

The workshop will elaborate on the close link between engineering and operational rules. It will also elaborate on how the ETCS toolbox that is used on the trackside creates different “user experience” on the onboard and requires different reactions from the driver. We will approach the Engineering guidelines produced by EUG as best practice and the role of harmonised marker boards to operational interoperability. To be debated: should more trackside engineering rules be harmonised at TSI level?

Speaker :

- **Georgios Kouparousos**

Marcin Wojcik



Georgios is an Electrical Engineer BSc DEA with 26-year background in signalling and ETCS projects for both trackside and on-board. He is the Chair of the ERTMS Operational Harmonisation workgroup at ERA since 2015 with a strong interest in operational interoperability and its effects on drivers' tasks and procedures. He previously worked in the Greek Regulatory Body/NSA with responsibilities on access and interoperability.

Workshop 3: Operational Harmonisation

Building on the conclusions of Workshop #10 of ERTMS Conference 2022, Workshop #3 of this Conference will present the concept of harmonised

operational processes. These will require a certain level of engineering harmonisation which will in turn benefit operational harmonisation as well as product development and certification.

14:45 - 15:15

Coffee break

15:15 - 16:45

Workshop Session B

Session A replicated

16:45 - 17:15

Coffee break

17:15 - 18:45

Workshop Session C

Session A replicated

18:45

End of day 1

Day 2 : ERTMS PAST - PRESENT - FUTURE - 27 April 2022

08:30

Registration and welcome coffee

09:00 - 09:15

OFFICIAL OPENING

Josef Doppelbauer



Adina Vălean is the European Commissioner for Transport. Before taking office on the 1st of December 2019, she was a Member of the European Parliament for 12 years. As an MEP she served as the Chairwoman of ITRE Committee (July-December 2019), Chairwoman of ENVI Committee (2017-2019) and as Vice-President of the European Parliament (2014-2017). She was also a Member of the Romanian Parliament between 2004-2007. Adina Vălean holds a master's degree in European Integration Studies and Security and a bachelor's degree in mathematics.

09:15 - 10:00

WHO IS WHO

EC, ERA, EUG, CER, EIM, UNIFE, EU-Rail, NB-RAIL, EAL

10:00 - 10:05

Session 1: 2000-2022 ERTMS ACHIEVEMENTS

Introduction

10:05

ERTMS deployment. Where do we stand now? Where are we going?

Matthias Ruete



Matthias Ruete is the European Coordinator for ERTMS, DG MOVE since January

2019. He was the Director General at the European Commission for Transport (2006-2014) and Home Affairs (2014-2018). He served as Director for Competitiveness (2005), Director for enlargement negotiations (2000-2004) and Director for International Transport, Galileo and Trans-European Infrastructure Networks (1998-2000). He holds a master's in law (London) and a doctorate in intellectual property law (Giessen).

As the ERTMS rollout is reaching a tipping point, this intervention will focus on presenting the state of play of the current deployment, both on-board and trackside and outline a forecast for the years to come. Furthermore, challenges and opportunities linked to an accelerated and synchronised deployment of ERTMS on the whole TEN-T network, and the vehicles using it, with a deadline for phasing out of national signalling systems by 2040, will be identified and analysed.

10:25

ERTMS evolution

EU Railways will increasingly use ERTMS. The Commission and the Agency will facilitate it in the revision of TSI CCS. This will improve the quality by providing a more robust mechanism for specification changes (inc. error corrections) and flexibility by creating the basis for a modular architecture. It will open the door for performance enhancing innovations: Automatic Train Operation and FRMCS. Future improvements (e.g., train positioning) will be handled in a consistent framework.

Wawrzyniec Perschke



Wawrzyniec Perschke is a Policy Officer in the Directorate-General for Mobility and Transport of the European Commission. He is working on the policy of rail interoperability, CCS TSI (ETCS, ATO & FRMCS) and EU-RAIL. His experience in the Commission includes work as an economist on intellectual property, on industrial policy and analysis of Member States' microeconomic reforms.

Future of CCS TSI - STIP, TSI and standardisation requests

After the 2023 revision of CCS TSI, the rail sector reflects upon the next evolutions of the ERTMS legislation. Obvious changes come soon: FRMCS, further operational harmonisation or DAC impact on CCS. On the horizon, we explore ATO GoA 3 and 4

and ASTP. The pace of the evolution and its channels: TSIs, standards and/or system pillar documents should be discussed.

10:40

The future

ERTMS establishes a single command, control and signalling systems for the EU. Yet, it needs to become more harmonised, add game changing functionalities and make it easier to deploy innovations added to it. JU's System Pillar will deliver a joint vision and a common system architecture for future development of CCS addressing this and ensuring coherence for development of the digital railway more generally. The rail sector will deliver game changing innovations through the Innovation Pillar of the JU.

Keir Fitch



Mr Fitch has been Head of Rail Safety and Interoperability Unit in the Directorate-General for Mobility and Transport in the European Commission since 2016 and was previously responsible in DG MOVE for the transport research policy. Prior to that, Mr Fitch was Deputy Head of Cabinet of Siim Kallas, Vice-President and Commissioner for Transport where he was responsible for land transport, security and competition/state aids. He was also the coordinator of the 2011 White Paper of the Future of Transport. Mr Fitch studied mathematics and law at Cambridge, was a lawyer at Herbert Smith and then moved on to the UK civil service in 1993. He joined the European Commission's Legal Service in 1999. Before joining the cabinet of Mr. Kallas in 2004, he was a Member of Cabinet of Vice-President Kinnock.

Introduction to the third day of the conference - Implementation and Outlook

ERTMS implementation needs to be accelerated. This requires a common effort. All stakeholders need to contribute to it within regulation, planning, ordering, production, certification, authorisation, maintenance, and operations. As ERTMS is an enabler for higher quality rail services it needs to evolve. Let's discuss the most promising improvements of ERTMS and how to make them happen.

10:55 - 11:05

Opportunities and challenges

The objective of this intervention is to report on the discussions that will take place in the workshop 1 scheduled for 26 April. The aim of workshop 1 is to present some best practices and exchange on the opportunities and challenges linked to the accelerated and synchronised on-board and trackside ERTMS deployment, coupled with decommissioning of class B systems.

Marcin Wojcik



Marcin Wójcik graduated from the Faculty of Law and Administration at the University of Krakow (Poland). He also studied at the University of Mainz (Germany) and the College of Europe (Natolin Campus in Poland). Since 2005 he has been working at the European Commission, where he dealt among others, with the implementation of the regional policy and the transposition of the EU law in Member States. Since 2018, he has been working as an adviser to the European Coordinator for ERTMS and in this capacity, he has been following the ERTMS deployment.

11:05 - 11:25

Questions and Answers session

11:25 - 11:30

Conclusions

11:30 - 11:45

Keynote speech

Andre Rodenbeck



Mr Rodenbeck has been the CEO of Rail Infrastructure since April 2019. Before that, he performed the following roles within the company:

- 2015-2019 General Manager Mass Transit – Braunschweig
- 2011-2015 Head of Sales for Mainline Signalling – Madrid
- 2008-2011 Director Sales and Projects Turnkey – Erlangen
 - 2006- 2008 Business Development – Erlangen
 - 2005-2006 Project Manager – Bangkok
- 2003-2005 Sales Manager Transrapid (MAGLEV) - Berlin

11:45 - 12:15

Coffee break

Session 2: TSI CCS REVISION PACKAGE 2022

Josef Doppelbauer



Josef Doppelbauer took office in January 2015 and led the Agency to a new era as a European authority, where EU-wide vehicle authorisation, safety certification, and ERTMS trackside approval are granted.

ERA's Executive Director is committed to a forward-looking approach and to making the railway system work better for society, while promoting the Agency, a respected authority, as the engine for change, driving the Single European Railway Area.

Josef Doppelbauer has more than 25 years experience in key aspects of railway technology, including signalling and control command systems. From 2012 to 2014, he was chairman of the European Rail Research Advisory Committee (ERRAC), the European technology platform of the rail sector. From 2011 to 2014,

he was the chairman of the Steering Committee of the Joint Technology Initiative Shift2Rail. While at the helm of ERA, he has initiated the digital agenda of the Agency.

12:15

TSI CCS ETCS - Modifications and its resulting impact and feedback from Workshop 6

Wouter Malfait



Juan joined the European Union Agency for Railways in 2017 as Project Officer in the ERTMS Unit. He is the chairman of the CCS TSI Revision Working Party. Juan has collaborated in the 4th RP adaptation of the TSIs and the CCS TSI 2023 recast as part of the Digital Rail and Green Freight TSI revision package. He also contributes to the ESC/RSC management and the ERTMS Trackside Approval applications.

Day 2 – Session 2 ERTMS Specifications inside CCS TSI 2023/1695

Main changes introduced in the ERTMS specifications in the CCS TSI 2023/1695, focusing on the new transition regime, new framework to manage the specifications' changes and technical enhancements (ATO, FRMCS and DAC readiness) in relation with system versions.

12:35

Managing Baseline compatibility

The CCS TSI should consider a compatibility roadmap to provide visibility of future evolutions and a stable and consistent deployment framework. The goal of the stable Baseline roadmap is to carefully manage each individual delivery program in a balanced way while considering the evolutions of the state of the art, reflected by the regulation, and the life cycle costs and revenues of the assets. The capacity of the sector to supply and integrate the changes must be considered.

Hélène Arfaoui Kaynak



Helene ARFAOUI KAYNAK is the ERTMS Director at SNCF since 2018 and an international expert in the fields of ERTMS, signalling, telecommunications and interoperability. She is an active member promoting the definition of a modular architecture for the railway system. Helene holds a PhD degree in Computer Science from Tokyo Institute of Technology and a MSc in Telecommunications from both Telecom Bretagne (IMT Atlantique, France) and Aston University (UK).

12:50

TSI CCS modifications on the communication systems and its resulting impact and feedback from Workshop 7: FRMCS introduction: strategies and perspective

Chiel Spaans



Chiel is the project manager of the Agency's EVORA project, preparing the inclusion of the next generation railway radio system FRMCS in the TSI CCS. Chiel joined the Agency in 2014, after 30 years of working in the railway telecom domain in the Netherlands.

13:05

PAD Vehicle Authorisation - Return of experience and feedback from Workshop 2:

Existing challenges for ERTMS retrofitting and installations

Thierry Breyne



After graduating in 2002 with an engineering degree in physics, Christian started his career in automation, automotive and space industries. Then, he worked in the field of ERTMS where he occupied functions from product development and validation to certification and authorisation of subsystems. As a Project Officer at ERA, he was in charge of coordinating the ERTMS NSA network and evaluation of CCS (Control Command and Signalling) national rules. Now he is working in the team in charge of CCM (Change Control Management) for ETCS.

13:20 - 13:35

Questions and Answers session

13:35 - 13:45

Conclusions

13:45 - 15:15

Lunch break

Session 3: System evolution towards digital rail

Carlo M. Borghini



Mr Carlo Borghini is responsible for the overall management of Europe's Rail

(successor of the Shift2Rail Joint Undertaking) activities since he took up the position of Executive Director in February 2016; in 2021, his mandate has been extended up to May 2026.

Prior to the current role, Mr Borghini held senior management positions in different domains in private and international organisations, at corporate level. He was the Deputy Executive Director for the SESAR Joint Undertaking (SJU) in Brussels from 2008 to 2014, and prior to this was Director and Chief Financial Officer (CFO) for the International Fund for Agricultural Development (IFAD), a specialised Agency of the United Nations based in Rome.

Mr Borghini holds a master's degree equivalent in Business Economics and speaks Italian, French and English. He is married with three children.

15:15

EU-Rail Vision for rail transport

Carlo M. Borghini



Mr Carlo Borghini is responsible for the overall management of Europe's Rail (successor of the Shift2Rail Joint Undertaking) activities since he took up the position of Executive Director in February 2016; in 2021, his mandate has been extended up to May 2026.

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Mr Borghini holds a master's degree equivalent in Business Economics and speaks Italian, French and English. He is married with three children.

15:20

Feedback from WS 3- On-board and trackside architecture as foreseen in the TSI CCS 2022

The presentation shows the main statements made by participants when the on-board and trackside architecture was discussed.

Hartwig Schuster



ESC Optimisation of campaigns and reduction of needed tests

ETCS on-board supplier experience with ESC and suggestions for improvements

15:25

System view: On-board and trackside architecture as foreseen in the TSI CCS 2022

Steffen Schmidt



Mr Fabio Senesi has been working at the Ferrovie dello Stato Italiane since 1993. Currently, he is the Deputy Director of Department Research and Development in RFI (Rete Ferroviaria Italiana) the Railway infrastructure company of Ferrovie dello Stato Italiane and Responsible for the ERTMS National Programme. He was the Director of Inspectorate and Auditing of National Safety Agency in Italy and was the former President of ERTMS Users Group. He is an Electronic Engineer with a PhD in Applied Electromagnetism from Università La Sapienza (Rome). He also possesses an MBA from HES, Paris.

The ERTMS Deployment in Italy with the experience from operation and the innovation solution and the application.

16:05

Innovation view and feedback from Workshop 8: CCS Beyond 2022: introducing Europe's Rail Programme

Lars Deiterding



Mr Jean-Michel Evanghelou is the Director of Telecom, Signalling and Digital Applications of UIC, and Deputy Director of Rail Systems. In his career, Jean-Michel held various positions as Director within the Orange Group and joined afterwards Nortel Networks where he had different international business roles, serving as Vice-President for various technologies and segments. More recently he was the Director for Railway Business in Kapsch. Jean-Michel graduated as engineer from the Ecole Centrale of Paris.

What's the State of Play of FRMCS for European Railways ? Such ambitious objective remains to be market ready for first implementations in the horizon 2026, in order to enable the emergence of new digital railway applications such as ATO, TCMS or video security. What is on track to meet this objective, what is at risk, and where EU-Rail should help the case ?

16:35

Transport view

Ralf-Charley Schultze



With a law degree, a fluency in 5 languages and a 15-year-experience in senior positions in freight and multimodal transport as well logistics (a.o. at SBB Cargo, GEFCO), Ralf-Charley Schultze has a solid international background and understanding of the logistics processes and real market needs.

16:55 - 17:00

Conclusions

17:00 - 17:30

Coffee break

17:30 - 18:30

Round table discussion

Josef Doppelbauer



Dr. Kristian Weiland is Head of the Corporate Program Digital Rail Germany at Deutsche Bahn AG as well as Board Representative Digital Rail Germany and CTO of DB Netz AG. He has a doctor's degree in electrical engineering and studied at Humboldt University in Berlin. After working in the industry, he worked in the technology department of DB AG from 1997 and at DB Energie from 2001. From 2015-2019, he was Head of Major Projects Southwest at DB Netz AG

18:30 - 19:00

Today's conclusions

19:00 - 22:00

Cocktail

22:00

End of day 2

Day 3 : ERTMS PROJECTS RETURN OF EXPERIENCE - 28 April 2022

08:30 - 09:00

Registration and welcome coffee

09:00 - 09:10

Opening speech

09:10 - 10:00

Railway sector representatives and policy makers share their views

Izaskun Bilbao Barandica



Alberto Mazzola has been the Executive Director at CER since January 2021, representing its members towards EU policymakers and advocating rail as the backbone of a competitive and sustainable transport system in Europe.

Alberto Mazzola holds a master's in business administration and a Doctorate cum Laude in Nuclear Engineering from the Politecnico of Milan. In 2002, he joined Ferrovie dello Stato Italiane (FS), where he held different positions. In his last role as Head of International Government Affairs, he was based in Brussels dealing with international affairs and European legislation, market regulation and technical standards.

A European ERTMS Programme Management

The presentation highlights that synchronised and harmonised trackside and onboard ERTMS deployment is vital to achieve the modal shift targets envisaged in the Green Deal, under the precondition of having suitable funding and financing

options in place. Today ERTMS governance is spread along several different bodies (EU ERTMS Coordinator, CINEA, EU Agency for Railways, Europe's Rail JU), each one responsible for a single component of the value-chain. This generates a clear need for an integrated approach, in order to improve consistency between objectives and fundings. CER believes that ERTMS deployment needs to be boosted and to this purpose a future centralised EU-Level ERTMS governance and Program Management could help with regulating funding, coordination of National Implementation Plans (NIP), resourcing, market uptake, migration, and transition.

10:00 - 10:30

Coffee break

Session 4: Feedback from the ERTMS projects, part 1

Michel Ruesen



Michel Ruesen is the Managing Director of the ERTMS Users Group since 2010. He is active in the Railway business since 2003, when he joined the Dutch Infrastructure manager ProRail as a deputy director of Maintenance and Asset Management. While working for ProRail, he was the President of the ERTMS Users Group from 2006 to 2008 and the President of the EEIG Corridor Rotterdam - Genoa (now called Rhine Alpine Corridor) from 2008 to 2010.

Moderator session 3

10:30

Towards ETCS over FRMCS in Finland - Return of experience on LTE/5G based deployment

The presentation will provide information about the Finnish ERTMS programme called Digirail and will share details about the use of FRMCS (5g/LTE) solution. Finally, it will show the results gained by the programme so far.

Jari Pylvänäinen



Juha has been working on railway signalling for 15 years and in the past five years as a project manager of the Finnish ERTMS program. The main focus at the moment is to lead Finnish railways to the digital era starting from radio based ETCS implementation, making digitalisation possible and taking full advantage out of it. Juha is keen on making railways more attractive with the help of digitalisation and also a strong believer in co-operation and making things by working together.

Moderator in the Workshop 4 titled: How to optimise cost for the ERTMS Lifecycle for Trackside and On-board

10:45

Norway ERTMS - National Implementation

The purpose of the presentation is to give an overview of the ETCS deployment in the Norwegian fleets. I will explain what are the main challenges, the embedded technical solutions and what is put in place to perform such a massive deployment at country level.

Vincent Garin



Mr Vincent Garin has been working at Alstom for nearly 18 years, almost exclusively in signalling. First working on generic development of ETCS solutions, then moving on projects' execution where he had the opportunity to work on both mainline and urban projects, in different countries such as Italy, Singapore, France, Denmark and currently Norway. Today, Vincent is in charge of ETCS deployment of

a baseline 3 release 2 solution in the Norwegian fleets.

11:00 - 11:15

Preconditions for successful rollout of ERTMS in Germany

Window of opportunity for innovation vs. stable specifications and availability of products needed for advanced vehicle equipment and to upgrade existing routes to ETCS L2 only

Philipp Bührsch



Philipp Bührsch is the Head of Strategic Rollout Planning Digitale Schiene Deutschland (DSD). Before that he was Head of Investment Management DSD and responsible for all aspects concerning finance and investment. In his previous 19 years with DB Netz and the DB Group he has held various positions such as project manager for developing a new approach to timetabling, as well as for construction and operations management. Philipp Bührsch studied civil engineering and project management.

11:15

Feedback from Workshop 5: Maximum performance through ETCS

Daniel Scherrer



Mr Daniel Scherrer is a former Forklift driver with various training courses in logistics. He also possesses Business studies and is a Network developer at SBB where he acts in:

- Development of intermodal terminals
- Development of timetable for expansion programme 2035
- Head of Network and Technology Concepts: little think tank group for out of the box strategies

11:20

New scopes for certification

The presentation is divided in two parts: the first one is dedicated to ERTMS Accredited Laboratories activities not only for today's needs but also in light of the preliminary numerous developments of ERTMS/ETCS in Europe; the second part, is dedicated to the Notified Bodies activities that are facing new challenges linked both to the TSI CCS updates and to the growing number of cross-border projects.

Luca Macchi



Luca started his career as an advisor of RFI, the Italian Infrastructure Manager, for the ERTMS development of Rome-Naples and Torino-Novara lines. Since 2006 he has been employed at RINA, an Italian NoBo, DeBo, AsBo and ERTMS laboratory and he has been involved in 200+ testing, certification and safety assessment of signalling projects. Today, Luca is responsible for the unit dealing with CCS, infrastructure and Energy Certification.

11:35

Trackside approval - Return of experience and feedback from Workshop 9: Trackside approval

The aim is to present the current status, the return of experience and the coming improvements of the ERTMS trackside approval.

Jo De Bosschere



Maria is an Expert on ERTMS and very linked to ERTMS deployment in Europe for more than 21 years.

11:50 - 12:05

Questions and Answers

12:05 - 12:15

Conclusions

12:15 - 13:45

Lunch

Session 5: Feedback from the ERTMS projects, part 2

Klaus Mindel



Klaus Mindel studied electrical engineering and graduated as a Dr.-Ing. (PhD) in mechanical engineering. He is quite active in the railway signalling domain for roughly 30 years, mainly for Thales Transport Solutions. He started his career in Systems Engineering and developed (via Sales and Project Management) into a Main Line Product Strategy responsible. Mid of 2021 he was appointed as UNISIG General Manager.

I am the moderator for Session 5

13:45

ERTMS on the Spanish commuter network and regional lines

Jaime Pereira



José Antonio has an Industrial Engineering BSc and an Embedded Systems MSc. He joined CAF Signalling in 2007 where he has developed most of his professional career. Starting as software developer for the first ETCS trackside products, he became Project Manager for simulation tools & automatic testing and also for the full range of Data Preparation tools & processes in the company. Since 2017 he represents CAF at the UNISIG Steering Committee and other European Forums.

WS9 A, B and C - CCS (Control, Command and Signalling) target and migration - the EU-RAIL System Pillar approach

My main contribution will be to moderate the discussion about System Pilar (SP) Migration Targets in the 3 workshops. Gather opinions and main take aways as feedback to the Conference and also to the work in the System Pillar.

14:00

Suppliers view on implementation of ATO and ETCS L3 Siemens

Ralf Kaminsky



Ralf Kaminsky is a civil engineer for railway operation and construction with a Phd in the field of railway timetabling and simulation of railway operation. He has worked for Siemens Mobility for more than 20 years in different positions around mainline signalling. Among others, he led the strategy department for the business in Germany and was responsible for the business with onboard equipment. All along he represents Siemens in different Committees (UNIFE, UNISIG; VDB) and EU funded projects.

Status, benefits, challenges of L3/HL3, ATO and a conclusion including the combination of ATO with HL3.

14:15

Feedback from Workshop 4: Implementing ATO over ERTMS early feedback from implementation

Lea Paties



Léa Paties joined Europe's Rail in March 2017 and oversees flagship projects dedicated to Network management planning & control and Digital & Automated processes up to Autonomous Train Operations. Between 2010 and 2017, she was a Project Manager at UNIFE where she first became involved in UNISIG (the consortium gathering the European ETCS suppliers) looking after the promotion of ERTMS in Europe and Worldwide. Léa holds a master's degree in European Affairs and EU Project Management from the University of Strasbourg, France.

Testing and validation of FRMCS specifications

14:20

Level crossing optimization with the help of ETCS

Jens Holst Møller



Christian Löffler has been working for Thales since 2003, spent over 16 years in the development of safety critical railway systems and is currently Senior Portfolio Architect for vital trackside systems. Christian participates in standardization work since 2014.

14:35

Harmonisation of operational concepts

Harmonisation of operational concepts

- The main goal is to develop a working and efficient meta-process for harmonising Operational Harmonization within CCS+
- Proof the efficiency of the meta-process by applying it to chosen relevant operational scenarios including relevant degraded situations
- Achieve a common understanding regarding the actors and their capabilities
- Find an adequate way of documentation for proof of concept, at the beginning in a semi-formal way, later on to be refined to match the chosen level of detail of specifications

Michael Leining



Danilo Iovino holds a degree in Electronic Engineering complemented with a Master in Transportation Systems. This allowed him to practice as Software Engineer for real-time embedded safety critical railway and space applications. Also, Mr Iovino was a Product Development Engineer in on-board railway and metro applications, and a Senior On-Board Signalling Engineer. His experience brought him to the role of Coordinator for On-Board Train Integrity and Virtual Coupling in Shift2Rail.

14:50

Feedback from Workshop 10: ETCS trackside engineering rules and their effect in operations

Georgios Kouparousos



Georgios is an Electrical Engineer BSc DEA with 26-year background in signalling and ETCS projects for both trackside and on-board. He is the Chair of the ERTMS Operational Harmonisation workgroup at ERA since 2015 with a strong interest in operational interoperability and its effects on drivers' tasks and procedures. He previously worked in the Greek Regulatory Body/NSA with responsibilities on access and interoperability.

Workshop 3: Operational Harmonisation

Building on the conclusions of Workshop #10 of ERTMS Conference 2022, Workshop #3 of this Conference will present the concept of harmonised operational processes. These will require a certain level of engineering harmonisation which will in turn benefit operational harmonisation as well as product development and certification.

14:55 - 15:10

Questions and Answers

15:10 - 15:20

Conclusions

15:20 - 15:50

Coffee break

15:50 - 17:10

Session 6: Window of opportunity

ERTMS2022 - Lessons learned

Flemming Jensen



Mr Fitch has been Head of Rail Safety and Interoperability Unit in the Directorate-General for Mobility and Transport in the European Commission since 2016 and was previously responsible in DG MOVE for the transport research policy. Prior to that, Mr Fitch was Deputy Head of Cabinet of Siim Kallas, Vice-President and Commissioner for Transport where he was responsible for land transport, security and competition/state aids. He was also the coordinator of the 2011 White Paper of the Future of Transport. Mr Fitch studied mathematics and law at Cambridge, was a lawyer at Herbert Smith and then moved on to the UK civil service in 1993. He joined the European Commission's Legal Service in 1999. Before joining the cabinet of Mr. Kallas in 2004, he was a Member of Cabinet of Vice-President Kinnock.

Introduction to the third day of the conference - Implementation and Outlook

ERTMS implementation needs to be accelerated. This requires a common effort. All stakeholders need to contribute to it within regulation, planning, ordering, production, certification, authorisation, maintenance, and operations. As ERTMS is an enabler for higher quality rail services it needs to evolve. Let's discuss the most promising improvements of ERTMS and how to make them happen.

17:10 - 17:30

Closing remarks

17:30

End of Conference

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