1ST UIC GLOBAL CONFERENCE ON SIGNALLING
MILAN 2018  26-28 March  The Evolution of ERTMS

Programme

Media partners
CONFERENCE PROGRAMME

Sunday 25 March 2018

18:30 Cocktail reception at MI.CO Congress Center, Milano

Monday 26 March 2018

08:00 **REGISTRATION, WELCOME COFFEE**

10:00 **WELCOMES**

- **Introduction** Mr. Jean-Pierre Loubinoux - Director General of UIC
- **Welcome** Mr. Renato Mazzoncini - Chairman of UIC and CEO of FS Group
- **Welcome** Mr. Giuseppe Sala - Mayor of Milan

10:30 **KEYNOTE SPEECHES**

The political and technical authorities will address the participants and provide their vision on the main key drivers for the next development of ERTMS in the world

- Mr. Renato Mazzoncini - Chairman of UIC and CEO of FS Group
- Mr. Karel Vinck - EU Coordinator for ERTMS overall program
- Mr. Josef Doppelbauer - Executive Director of ERA
- Mr. Philippe Citroën - Director General of UNIFE
- Mr. Libor Lochman - Executive Director of CER
- Mr. Massimiliano Salini - Member of European Parliament

11:00 **OFFICIAL OPENING OF EXHIBITION AREA**

Mr. Jean-Pierre Loubinoux - UIC and Mr. Philippe Citroën - UNIFE

COFFEE BREAK
11:45 **Session 1: ERTMS in the world: the Funding Challenges**

Taking advantage of the presence of political authorities and main representatives of the sector, this session will provide an overview of the challenges for financing the installation of ERTMS, the main adopted strategies worldwide and the new opportunities.

**Chairman:** Mr. Karel Vinck - EU Coordinator for ERTMS overall program

Mr. Alberto Mazzola - FS Group representative (Italy-EU):
*Innovative funding schemes for ERTMS*

Mr. Michael Fransson - Bane NOR (Norway)
*Financial Aid Scheme for ERTMS Onboard Implementation in Norway*

Mrs. Melody A. Sheahan - Association of American Railroads (USA)
*The U.S. Freight Railroad Industry*

Mr. Ian Conlon and Mr. Íñigo Cruz - European Commission
*Funding opportunities and challenges in EU*

Questions & Answers *(15 min)*

13:00 **LUNCH**
Session 2: ERTMS today, the return of 20 years long experience worldwide

In the first session the main worldwide ERTMS users will present the status of the implementation in their countries/region, along with most important returns of experience on Tendering/Contractual management, Certification and Authorization processes, Operation and Training of experts, drivers, maintenance stuff; critical issues/decisions and general hints.

Chairman: Mr. Michel Ruesen - ERTMS Users Group (Belgium-EU)

Mr. Peter Zijdemans Ricardo - Rail /Thalys (Netherlands-EU)
ERTMS in Thalys, an emblematic case study

Mr. Manfred Pisek - ÖBB (Austria-EU)
ETCS in Austria - 10 years of operational experience

Mr. MO Zhisong - China Railways-Department of Infrastructure (China)
Application and development trend of CTCS

Mr. Klaus Mindel - Thales
Mr. Andre Radomiak - Alstom
Mr. Antonio Casazza - Ansaldo STS (UNIFE, Belgium-EU)
20 years of Project Engineering of ERTMS Level 2 systems – lessons learnt, trends and challenges

Mr. Daniele Bassano - Ramboll (Denmark-EU)
The Danish Signalling Programme, deployment of a complete network upgrade and related authorisations processes

Questions & Answers (15 min)

POSTERS:

DEUTA – The economic safety upgrade strategy for DMI and other subcomponents

TRIORAIL – GSM-R IM3 interferences identification and counter act, the experience of Triorail

ERTMS Solutions – How to enable Eurobalise preventive maintenance

CEDEX – ETCS Commissioning Process, a special case: testing the handover between RBCs at lab

ARCADIS UIC – UIC Expertise Development Platform- ERTMS course

COMTEST WIRELESS – The evolution from ‘Fix on Failure’ to ‘Value Engineering’ for ERTMS Signalling and Telecoms Monitoring and Testing

TRENITALIA – Radio communication and depannage management
16:00 **Session 3: The EU regulatory context for ERTMS and Global opportunities for CCS deployment and development**

Purpose of second session is let EU and non EU members to learn from one each other and share knowledge about:

- the EU legal environment with related obligations and leadership on the ERTMS development by EC, ERA, UNIFE, ERTMS Users’ Group…
- the opportunities offered in extra-EU environments with the corresponding threats to the global standardisation and market scale advantages

**Chairman:** Mr. Philippe Citroën - UNIFE (Belgium-EU)

Mr. Fernando Pascual Gil - European Court of Auditors (Luxembourg-EU)

*A single European rail traffic management system: will the political choice ever become reality?*

Mr. Pio Guido - European Union Agency for Rails (ERA) (France-EU)

*The challenge of European harmonization*

Mrs. Federica Fornari - NBrail (Italy-EU)

*EC Certification and Verification of Quality of Service in the GSM-R network*

Mrs. Melody A. Sheahan - Association of American Railroads (USA)

*The current situation and future development of PTC in the U.S.*

Mr. Alberto Varano - Eurocontrol (Belgium-EU)

*Looking at other transport domains: sharing experience with the Aviation*

**Questions & Answers (15 min)**

- **POSTERS:**
  - ERTMS CORRIDOR – *The Mediterranean Corridor*
  - MULTITEL – *On the way for a Subset-RBC for CCS TSI in the near future, necessity and opportunities?*
  - RFI – *The functional evolution of interlocking in the new Command and Control applications*
  - MERMEC – *ERTMS in cross border lines, the Swiss-Italian border of Rhine alpine RFC*

19:00 **Gala dinner at Superstudio Events, located in Via Tortona, 27 – 20144 Milano**
Session 4: Game Changer: ATO & ATS integration

This session will provide the status of the development and integration of ERTMS with the Automatic Train Operation system (ATO), looking to higher level of optimisation of the train run by reducing the human weight and responsibility, as well as the integration with the Automatic Train Supervision (ATS), which aims to optimise the rail traffic, in particular in the most congested nodes.

Chairman: Mr. Josef Doppelbauer - ERA (France-EU)

Mr. Pavel Popov - JSC NIIAS (Russia)
The Present and the Future of ATO in Russia

Mr. Benoît Bienfait - Shift2Rail /Alstom (Belgium-EU)
The Shift2Rail project “ATO over ETCS up to GoA4”

Dr. Amine Arezki, Mr. Norbert Howe - Thales (Germany-EU)
ATO and ATS vs. ATO with ATS: A vital question for train autonomy

Mr. Luc Laroche - SNCF (France-EU)
The project “Train Autonome”

Mr. Dietrich Schuckmann - SIEMENS (Germany-EU)
ATO - the next technology push for ETCS

Questions & Answers (15 min)

POSTERS:

RFI – The automatic ERTMS diagnostic system MISTRAL
Session 5: Game Changer: the Future Railway Mobile Communication System

This session will provide an overall update on the master plan, the achieved results and remaining tasks needed to define, test and put in practice the successor of the GSM-R, whose lifetime is expected to last till ~2030. The UIC master project FRMCS, the relationship with most involved standardisation bodies (ETSI and 3GPP) and other Critical Communication users (TCCA) as well as the evolution of legal domain in Europe will be duly afforded.

Chairman: Mr. Robert Sarfati – UIC/Systra (France-EU)

Mr. Dan Mandoc - UIC/Network Rail (France, UK-EU)
The UIC FRMCS Project: Vision, State of the Art, Way Forward

Mr. Ingo Wendler - UIC/SBB (Switzerland)
FRMCS – the Standardization Roadmap

Dr. Ulrich Geier - ROC-IG/Kapsch
Mr. Michael Klöcker - ROC-IG/Nokia (Germany-EU)
Seamless migration to future-ready railway infrastructure

Mr. Pierre Cotelle - ROC-IG/Alstom (France-EU)
Mr. Gottfried Winter - ROC-IG/Funkwerk (Germany-EU)
On-board flexible bearer solution

Mr. Markus Myslivec - Frequentis AG (Austria-EU)
Inter-domain challenges, solutions and synergies towards next generation mission-critical communication networks

Questions & Answers (15 min)

■ POSTERS:

NOKIA – How FRMCS can benefit from mobile telecommunication evolution

HUAWEI – Industry observation on FRMCS

INDIAN RAILWAYS – Piggybacking of Mobile Train Radio Comm. Service on Public LTE network- A techno-economically viable solution for Indian Railway

12:30 LUNCH
Session 6: Game Changer: The synergy between Level 3 and Satellite integration

There’s a common target strictly linking together Level 3 and Satellite integration: the cost reduction in the trackside. In this session the current technical trends and main projects for the development of Level 3 will be discussed, together with the opportunities and constraints of the parallel integration of Satellite based facilities, for both geo-localisation (in addition/substitution of Eurobalise) and data transmission (with/without other terrestrial data radio).

Chairman: Mr. Efim Rosenberg - JSC NIIAS (Russia)

Mr. Alexey Ozerov - JSC NIIAS (Russia)
Global Challenges for Signalling and Russian Experience

Mr. Massimiliano Ciaffi, Mr. Stefano Neri - RFI/Trenitalia_FS Group (Italy-EU)
The ERSAT Galileo game changer

Mr. Marcel van der Vliet - ProRail (Netherlands-EU)
Mrs. Nicola Furness - Network Rail (UK-EU)
ERTMS Hybrid Level 3

Mr. Daniel Lopour - GNSS Agency (Czech Republic-EU)
Mr. Bernhard Stamm - SIEMENS (Switzerland)
Galileo and EGNOS on the roadmap to support satellite positioning as a game changer in ERTMS

Mr. Simon Chadwick - SIEMENS (UK-EU)
Mr. Salvatore Sabina - Ansaldo STS (Italy-EU)
Reducing the Signalling Footprint

Questions & Answers (15 min)

POSTERS:

RFI – ERTMS Level 3 field tests on regional RFI line: a new way of managing rail operation beyond the digitalisation of the signalling system

TRENITALIA – High Density Functions and Train Integrity Implementation in Trenitalia

15:00 Coffee Break
Session 7: "Cybersecurity" & "Safety" issues

Each advanced train control system (ERTMS makes no exception) relies on an exchange of safety related data, and more and more the radio is the chosen carrier. The security of such data exchange is essential. In the session the most advanced researches and adopted techniques to guarantee the security against the cyber-attacks will be showed and commented.

Chairman: Mr. Michel Van Liefferinge - UNISIG (Belgium-EU)

Mr. Francesco Inzirillo - MERMEC (Italy-EU)
Real case study for cyber security implementation, the On Board ETCS – RBC radio communication protection

Mr. Miki Shifman - CYLUS (Israel)
Best Practices for ERTMS Cybersecurity

Mr. Reinhard Hametner - THALES (Austria-EU)
Fusing Safety and Security on a Solid Foundation for ERTMS – A Platform Approach

Mr. Christoffer Neesen - TÜV (Germany-EU)
ERTMS Cyber Security Analysis – Overview of the threat landscape

Mr. Efim Rozenberg - JSC NIIAS (Russia)
Ways of Integration of Safety and Cybersecurity

Questions & Answers (15 min)

POSTERS:
NOKIA – Cyber Security for Railways

Round Table

Moderator: Mr. Marc Antoni - UIC

Ideally, this final round table will summarize main messages and lessons learnt, in order to tune the current development according to the Users' needs.

The attendees will be invited to propose questions via an interactive web based system.

Final Conclusions by Jean-Pierre Loubinoux – Director General of UIC
VISIT TO MILANO GRECO PIRELLI CONTROL ROOM

10:00 – 12:00
Milano Greco Pirelli RFI Control Room placed in operation on November 2013, manages 1,532 km of railway lines in north Italy with over 90 stations and more 2130 train per day (high speed, intercity, regional and freight, and more than 710,000 commuters per day.

The Central Station of Milan Greco Pirelli is a building on 3 floors levels, consisting of a central body (newly built) and four lateral bodies performing the following functions: railway traffic management, management and control of customer information, infrastructure monitoring and diagnostics and security facilities management.

The key technology implemented in Milano Greco Pirelli is ERTMS level 2 with computer based interlocking interfaced with state-of-the-art traffic control systems.
JOURNEY ON THE FRECCIAROSSA 1000 DRIVING CABIN AND VISIT TO PCS (POSTO CENTRALE) BOLOGNA AV

08:00 – 13:00

Frecciarossa 1000 travels at a maximum speed of 400 km/h and a commercial speed of up to 360 km/h, and boasts a starting acceleration of 0.7 m/s², thanks to its 16 engines fitted on four of the train eight vehicles. Frecciarossa 1000 is a train with distributed traction that can constantly make the most of its adherence to the tracks and its special bogies providing the utmost in layout and comfort.

Frecciarossa 1000 features the most technologically advanced signalling system, the ERTMS/ETCS and it is the first fully interoperable high-speed train, which could travel on all high-speed networks across Europe.

VISIT TO BOLOGNA CENTRALE
CONTROL ROOM

June 2012 marks the official completion of the Milano-Bologna and Bologna-Firenze high-speed by-pass branch («Passante» in Italian language): the tunnel 12 km long, connects two of the most important lines of the Italian high-speed network, hosts the new Bologna high-speed station and provides important traffic benefits by de-congesting the city railway network.

The Bologna Centrale Control Room is the most important railway traffic control facility in North-Central Italy as it manages both the Milano-Bologna-Firenze high-speed lines (280 km) and intercity and regional lines (500 km) with an overall figure of 1200 trains per day.

The Control Room is also in charge of managing both the underground 4 tracks high-speed station and the surface level station with 26 tracks.

Thanks to ERTMS level 2 strongly interfaced with computer-based interlocking, it is also possible to manage the train traffic inside the 73 km tunnel of Bologna-Firenze high-speed line and the safety exit zones towards which high-speed train are guided to in case of danger in an automated way.