



SIGNALLING AND TRAIN CONTROL

4 - 6 May 2011 • Radisson Blu Scandinavia • Copenhagen, Denmark

The dedicated event for rail signalling and telecommunications professionals

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Programme Director,
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Banedanmark



Andrew Simmons
Director of Future
Train and Operational
Control Systems,
Network Rail



Ove Dahl Kristensen
Director of Traffic
Planning
DSB



Seizo Sato
Deputy Director,
Electrical and Signal
Network System
Department,
East Japan Railway
Company



Jan Richard
Innovation and
Technology Manager
SBB Swiss Railways



Keith Holt
Deputy Chief Engineer,
Communications
and Signals
Amtrak



Phil McQueen
General Manager,
Rail
KiwiRail Network



Jesper Rasmussen
Director of Safety
Danish Transport
Authority

- The business case for global signalling standards – ERTMS, ERTMS Regional, ATACS, PTC and CBTC
See page 6 for the keynote session on generating maximum ROI
- Three dedicated breakout sessions for rail signalling, telecoms and control systems specialists
See page 7 for the breakout session addressing your unique technical challenges
- Hands-on technical workshops on signalling, telecoms, the safety case and project management
See page 10 for workshops that will help you to deliver on time and on budget
- Learn from actual CBTC deployments by attending one of the technical visits at Metro Copenhagen.
See page 11 for technical visits demonstrating best practice deployments in action

UPDATED

ONLY 6 WEEKS TO GO

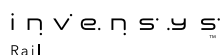
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Welcome to the world's leading independent rail signalling and telecoms event

Leading global railways, suppliers, associations and media support Signalling and Train Control 2011. The event brings together over 300 of the world's rail infrastructure managers, train operating companies, project managers and suppliers to discuss strategy, technology, delivery and operations across global systems and standards, procurement, migration strategies, the safety case, project delivery and operations and maintenance. If you are involved with the large-scale deployment of rail signalling, telecoms and control systems, you cannot afford to miss this event. Due to the support the event has received we are offering **a limited number of discounted places for government, regulators, infrastructure managers and operators** and by booking now you will also be entitled to our discounted early booking rate.

KEY ADVISORY BOARD MEMBERS INCLUDE:

GOVERNMENT AND REGULATORY BODIES

Peter Brugts
Senior Policy Advisory, Railway Division
Ministry of Transport, Netherlands

Hans Bierlein
ERTMS Adviser
European Railway Agency

Akhilesh Yadav
Director, Signal Research, Design and Standards Organisation
Ministry of Railways, India

Gino Di Mambro
Research and Development Manager
Italcertifer

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ETCS Project Leader
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David Briginshaw
Editor-in-Chief
International Railway Journal

Josep-Maria Ribes
Editor
TecniRail

Chris Jackson
Editor
Railway Gazette International

Alberto García Álvarez
Research and Education Director
Via Libre

COVERING:

SIGNALLING

ERTMS / ERTMS Regional
ATACS
PTC
CBTC

TELECOMS

GSM-R
LTE

CONTROL SYSTEMS

SCADA
Interlockings

KEY TOPICS INCLUDE

ROI on global signalling systems (ERTMS, ERTMS Regional, ATACS, PTC and CBTC)

Developing telecoms standards (GSM-R and LTE)

Time and cost-efficient migration strategies

Creating a collaborative procurement process

Defining homologation, interoperability and interchangeability

Building an integrated safety case and certification process

Efficiency across project management and delivery

Controlling costs and delivering QoS during operations

Maximising lifecycle costs through preventative maintenance

Developing the integrated, automated railways of the future

Book before 1st April and SAVE £100

CONFIRMED DELEGATIONS

Meet over 300 innovators from the industry's leading rail infrastructure managers, train operating companies, suppliers, association and media. Companies who have already confirmed their attendance include:

Alcatel-Lucent	DSB	Libyan Railroads	RATP Engineering Division
Alstom Transport	East Japan Railway Company	MÁV	RAVE
Amtrak	Esterel Technologies	Metro de Madrid	RFI
Ansaldo STS	EURAIL Mag	Ministry of Railways, India	SBB Swiss Railways
Arriva Trains Wales	European Railway Agency	Ministry of Transport, The Netherlands	Siemens Mobility
Arup	FEVE	Mitsui Rail Capital Europe	SNCB
AS EVR Infra (Eesti Raudtee)	GE Transportation	Nacionalna Kompania Železopatna	SNCF
ATIS Association	GSM-R Industry Group	Infrastruktura (NRIC)	TecniRail
Attica Advies	Huawei	Network Rail	Thales
Banedanmark	Infrabel	NKZI	Trafikverket
Bombardier	International Railway Journal	Nokia Siemens Networks	Trenitalia
Booz and Co.	Invensys Rail	ÖBB-Infrastruktur	UIC
Botniabanan	Italcertifer	OTN Systems	UNIFE
CER	Jernbaneverket	Parsons Brinckerhoff	Via Libre
Copenhagen Metro	JSC High-speed Rail Lines Russian Railways	ProRail	VR-Yhtymä
Danish Transport Authority		Railway Gazette International	
Deutsche Bahn		Ramboll	

CONFIRMED SPEAKERS:

GOVERNMENT AND REGULATORY BODY

Jesper Rasmussen, Director of Safety, **Danish Transport Authority**
Peter Brughts, Senior Policy Advisor, Railway Division, **Ministry of Transport, Netherlands**
Akhilesh Yadav, Director, Signal, Research, Design and Standards Organisation, **Ministry of Railways, India**
Gino Di Mambro, International Business Manager, **Italcertifer**
Stefan Schwaab, Programme Manager, Railway Safety, Danish Signalling Programme, **Danish Transport Authority**

RAIL INFRASTRUCTURE MANAGERS

Morten Søndergaard, Programme Director, Signalling, **Banedanmark**
Andrew Simmons, Director of Future Train and Operational Control Systems, **Network Rail**
Seizo Sato, Deputy Director, Electrical and Signal Network System Department, **East Japan Railway Company**
Phil McQueen, General Manager, Operations, **KiwiRail Network**
Per Blomkvist, Project Manager, **Botniabanan**
Øystein Løkås, Systems Engineer, GSM-R, **Jernbaneverket**
Arjen Zoeteman, Manager of Technology Policy, **ProRail** (and **EIM** representative)
Maarten van der Werff, Manager Expert Group Interlocking, Signaling Department, Asset Management Division, **ProRail**
Abojela Bennuba, Signalling and Telecommunications Engineer, **Libyan Railroads**

TRAIN OPERATING COMPANIES

Ove Dahl Kristensen, Vice President, Traffic Planning, **DSB**
Jan Richard, Innovation and Technology Manager, **SBB Swiss Railways**
Peter Leppard, Operations and Safety Director, **Arriva Trains Wales**
Klaus-Rüdiger Hase, ETCS Project Leader, **Deutsche Bahn**
Keith Holt, Deputy Chief Engineer, Communications and Signals, **Amtrak**
Pierre Messulam, Rail Strategy and Regulation Director, **SNCF**

METRO COMPANIES

Laurent Fournet, Head of Engineering Department, **RATP**
Klavs Hestbek Lund, Project Director, Transportation Systems, **Copenhagen Metro**

INDUSTRY

Heikki Viika, Head of Strategy and Business Development, **Bombardier Transportation**
Gregory Enjalbert, Director, Mainline Projects, China, **Bombardier Transportation**
Roland Kuhn, Director, Product Planning, **Bombardier Transportation**
Daniele Bozzolo, Head of Business Development, Signalling Business Unit, **Ansaldo STS**
Claudio Traverso, Vice President, Market Intelligence, **Ansaldo STS**
Christian Fry, Business Development Manager, Innovation, **Invensys Rail**
Paul Thomas, Systems Engineering Manager, **Parsons**
Olivier André, Director, Rail Market, Enterprise and Vertical Markets, **Alcatel-Lucent**
Eric Bantégnie, President and Chief Executive Officer, **Esterel Technologies**
Arne Borälv, Chief Executive Officer, **Prover Technology**
Fernando Hazeu, Vice President, Mainline Signalling Solutions, **Alstom Transport**
Brian McKendrick, Head of Asset Management and Operations, **Lloyd's Register Rail**
Stefan Belz, Manager, Projects and Bids, **Siemens Mobility**
Georg Köpfler, CEO, **Thales Transportation, Signalling and Security Solutions A/S, Denmark**
Volkmar Heuer, Head of Product Strategy and Management for Operation Control Systems, **Thales Transportation Systems GmbH, Germany**

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Libor Lochman, Deputy Executive Director, **CER**
Michael Clausecker, Director General, **Unife**
Stefan Roseanu, Senior Partner, **Club Ferroviar** (and Secretary General, **AIF, Romanian Railway Industry Association**)
Ciro de Col, Representative, **GSM-R Industry Group**

MEDIA

David Briginshaw, Editor-in-Chief, **International Railway Journal**
Chris Jackson, Editor, **Railway Gazette International**



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Book 3 places and get a 4th place FREE!

CONFERENCE HIGHLIGHTS

Keynote session on the business case and ROI for global signalling systems:

See page 5 for further information

The non-EU market for ERTMS is now larger than the EU market. Alternative solutions such as ERTMS Regional are also emerging, ATACS is rolling out across Japan, PTC is rolling out across the US and suburban and metro lines are having great success with CBTC. Every signalling project has individual requirements. Our keynote session offers insights from Banedanmark on ERTMS, Amtrak on PTC and RATP on CBTC to define the most appropriate system for each individual project with a view to generating maximum ROI on expensive signalling upgrades.



Signalling and Train Control 2011 Dinner:

Please visit www.signalling-traincontrol.com/dinner for further information

This year we will host the first Signalling and Train Control Dinner on the evening of Wednesday 4th May. Attendees to the dinner will enjoy the added benefit of networking with key signalling and telecommunications professionals in an informal environment.

Due to overwhelming demand the venue for the gala dinner on Wednesday 4th May has now been moved to the Casino Ballroom at the Radisson Blu Scandinavia Hotel. We welcome you to enjoy this exclusive event inside the only casino in Copenhagen. Once the dinner has finished you are invited to enjoy a thrilling night in the hotel's casino, playing against your peers at a selection of games.



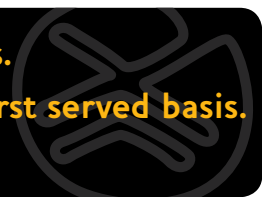
Technical site visits hosted by Copenhagen Metro and DSB:

See page 13 – 14 for further information

We are delighted to announce that both Copenhagen Metro and DSB will host technical site visits on the third day of the conference, allowing delegates to gain an insight into how Danish railways and metro companies are delivering the cost-efficient, interoperable networks of the future. Copenhagen Metro will give visitors a unique opportunity to view its Control and Maintenance Centre, where they will see the facilities used when changing bogies and wheel branch, processing technical and security train data and operating an automatic unmanned railway. DSB will allow delegates to visit DSB Train Components, where mechanical and electrical train components, such as bogies, wheels, engines, transmissions, generators and brakes, are checked and maintained. Some electrical and mechanical solutions will be demonstrated during the visit, which will finish with a demonstration of the Green Speed simulator.



Dinner is not included in the cost of your conference pass. This will need to be purchased separately and is based on a first come first served basis. Book online at www.signalling-traincontrol.com



Book online at www.signalling-traincontrol.com

Q & A WITH:**SEIZO SATO**

DEPUTY DIRECTOR, ELECTRICAL AND SIGNAL NETWORK SYSTEM DEPARTMENT
EAST JAPAN RAILWAY COMPANY

Q1. What are the main advantages of ATACS in comparison with other signalling systems?

A. ATACS is a radio-based train control signalling system like CBTC or ERTMS Level 3, which can reduce the total cost compared with the conventional systems with wayside signalling facilities. The main advantages of ATACS compared with other radio-based systems are as follows:

- Superior continuity of radio communication at high speed
- It is a comprehensive system including level crossings, safety equipment on the passenger platform and the infrastructure maintenance, etc
- Superior fault-tolerance if there is a failure in a part of the facilities

Q2. What are the specific requirements for a signalling system that is to be used in a high speed rail line?

A. - The position of every running train must be identified continuously.
 - The signal display on board for the driver must not fail for more than a given time, regardless of the running speed.
 - The system must monitor the driver's brake operation. When the system recognizes inadequate brake application, it must halt the train automatically according to the required braking pattern.
 - The system must ensure that train operation is within the speed limit at locations such as curves and switch-points.

Q3. How do you think train signalling will evolve in the near future?

A. As signalling systems increasingly become more sophisticated in order to maintain the safety and punctuality of railway transport, it will be an expected trend to shift the functions of signalling and controlling from wayside to on-board. In this situation, JR East, as a railway operator which has direct responsibility for the safety of its passengers, will enhance the ability to ensure high-quality products, while also working to keep costs at a minimum.

Q4. In your opinion, how can safety be guaranteed during the implementation of a new signalling system?

A. It is, of course, important to maintain safety when both a conventional signalling system and a new signaling system coexist. The method will vary for railway lines with different characteristics. In this ATACS case, we carried out a shadow mode test for a full year; this test was virtual control of trains by the new system in parallel with actual control of those trains by the existing system. We also operated actual train runs under control of the new system during midnight hours twice a week, in order for drivers and conductors to practice the new system. Through these procedures, it became possible to implement the change to the new system in just one night.

Q5. What will the main signalling projects in Japan be during the next 5 years?

A. JR East is going to develop ATACS in order to introduce it in the Tokyo metropolitan area in five years. Another project under development by JR East is the yard logic controller, which will completely reform the concept of control of interlockings in yards by using a general-purpose network technology. There is another project in JR East which is developing an inexpensive radio-based train control system for local lines, based on its radio-based train control signalling technology. This system is expected to start in operation in five years.

These interviews contain the opinions of the people interviewed and do not necessarily reflect the outputs of the Advisory Board or the position of the interviewees' organisations.

TUESDAY 3 MAY 2011 PRE-CONFERENCE BRIEFING

18:00 Pre-conference registration

18:30 **Special address: The state of the market as defined by Unife's World Rail Market Study 2010**
Michael Clausecker, Director General, Unife

19:00 Signalling and Train Control 2011 pre-conference drinks reception



CONFERENCE DAY ONE WEDNESDAY 4 MAY 2011

08:00 **Networking breakfast and registration**

08:50 **Global Transport Forum welcome address and introductory remarks**

Alex Williamson, Managing Director, Global Transport Forum

David Rodriguez-Vega, Conference Producer, Global Transport Forum

KEYNOTE SESSION

SESSION 1: GLOBAL SYSTEMS AND STANDARDS

Session moderator:

David Briginshaw, Editor-in-Chief, International Railway Journal

Session overview:

ERTMS / GSM-R is the designated standard to bring interoperability to the European rail network. Minimising costs and maximising capacity, speed and efficiency are also crucial drivers for the implementation of ERTMS or any other signalling system. Signalling solutions such as ERTMS Regional and communications solutions such as LTE are emerging. The global market offers alternatives such as PTC, and lessons can be learnt from the urban rail's success with CBTC. For financial and operational success the chosen technology must match individual project needs as defined by the business case.

Session themes:

ERTMS, ERTMS Regional, PTC, CBTC, GSM-R, LTE, project justification, financing, ROI, planning and delivery

Session topics:

- Financing signalling deployments – political and economic constraints of the implementation of new signalling systems
- Calculating the cost of equipment, implementation and use, service disruptions and capacity improvements
- Justifying ERTMS deployments – beyond interoperability, how do we calculate the ROI?
- ERTMS Regional / PTC / CBTC – can these offer cost-effective alternatives when the ROI on ERTMS is not demonstrated?
- From GSM-R to LTE, the role of telecommunications in maximising ROI on safety critical signalling systems

Insights:

Each speaker will address the pros and cons of different signalling systems in order to outline the actual or projected successes and failures under each individual project scenario.

09:00 **ERTMS insight: Denmark's ERTMS programme – business case and planning**

Morten Søndergaard, Programme Director, Signalling, Banedanmark

09:15 **PTC insight: Can PTC offer the global rail market a cost-effective alternative to ERTMS?**

Keith Holt, Deputy Chief Engineer, Communications and Signals, Amtrak

09:30 **CBTC insight: Lessons from urban rail's successes in using CBTC to reduce costs and increase capacity**

Laurent Fournet, Head, Engineering Department, RATP

Panel:

The panellists will address ERTMS, ERTMS Regional, PTC, CBTC, GSM-R and LTE in order to understand their potential to reduce costs and maximise capacity under varying project requirements

09:45 **Panel session: Understanding individual project requirements, financing and ROI for optimum planning and delivery**

Morten Søndergaard, Programme Director, Signalling, Banedanmark

Keith Holt, Deputy Chief Engineer, Communications and Signals, Amtrak

Laurent Fournet, Head, Engineering Department, RATP

Pierre Messulam, Rail Strategy and Regulation Director, SNCF

Seizo Sato, Deputy Director, Electrical and Signal Network System Department, East Japan Railway Company

Ciro de Col, Representative, GSM-R Industry Group

10:30 **Morning coffee**

“The business case and the ROI will be quickly lost unless there is a close relationship between the customer and the supplier, before and during the tender and right through to operations and maintenance... A close relationship between the metro and the supplier is one of the most important factors in delivering the projected ROI and ensuring on time and on budget delivery and smooth and efficient operations and maintenance.”

Insight from Global Transport Forum's 2010 Insider's Guide Series:

Book before 1st April and SAVE £100

“It was very special to meet Martine-Sophie Fouvez of UNECE, Tim Smart of High Speed 1, Rudolph Schilder of OBB, Lázlo Mosoczi from MÁV and Phil McQueen of Kiwirail in somewhat of a tête à tête.”

Ana Isasi, Director of Railway Maintenance Operational Unit, SNCF

TECHNICAL SESSION

SESSION 2: MIGRATION STRATEGY

Session moderator:

Michael Clausecker, Director General, Unife

Session overview:

To migrate from one signalling system to another is a critical step for any rail infrastructure manager to take. Making the right decision on the type of system to be deployed is essential. Once the decision is made, it is then essential to design the right migration strategy, to minimise risks, to ensuring safety, to reduce costs and to spare customers any unnecessary disruptions. In addition existing systems must be managed, maintained and potentially decommissioned. This session will analyse best practice migration planning to avoid project deviation and time and cost overruns.

Session themes:

Legacy systems, ETCS (2.3.0 to 3.2.0), GSM-R to LTE, interchangeability / interoperability, safety, costs and service disruptions

Session topics:

- Managing the operations, maintenance and decommissioning of legacy systems before, during and after migration
- Designing an effective migration strategy that meets the needs of the system and matches the projected ROI
- Cost and service implications of the “big-bang” approach versus the “staged bang” approach
- Building cross-border and cross-technology interoperability into the strategy to avoid future time and cost implications
- Developing a flexible migration strategy to manage risk and to avoid unexpected costs

Insights:

Each speaker will offer their perspective on the challenges and risks involved in migration in order to highlight considerations for the design of a cost-effective migration strategy with minimal disruptions.

11:15 Infrastructure manager insight: ATACS in operation - developing a train control system and a migration strategy for its implementation
Seizo Sato, Deputy Director, Electrical and Signal Network System Department, East Japan Railway Company

11:30 Train operating company insight: Minimising the impact on service when re-signalling an existing route with ERTMS using existing rolling stock
Peter Leppard, Operations and Safety Director, Arriva Trains Wales

11:45 Industry insight: Migration strategy: ERTMS Level 2 application to “line revamping” projects
Daniele Bozzolo, Head of Business Development, Signalling Business Unit, Ansaldo STS

Panel:

The panellists will discuss how to identify challenges and risks legacy and new systems, to ensure they are considered during the design of the migration strategy and avoided during project delivery.

12:00 Panel session: Preventing long-term project complications through early collaboration and comprehensive planning
Seizo Sato, Deputy Director, Electrical and Signal Network System Department, East Japan Railway Company
Peter Leppard, Operations and Safety Director, Arriva Trains Wales
Daniele Bozzolo, Head of Business Development, Signalling Business Unit, Ansaldo STS
Heikki Viika, Head of Strategy and Business Development, Bombardier Transportation

12:45 Lunch



Book 3 places and get a 4th place FREE!

CONFERENCE DAY ONE WEDNESDAY 4 MAY 2011

TECHNICAL SESSION

SESSION 3: PROCUREMENT PROCESS

Session moderator:

Chris Jackson, Editor, *Railway Gazette International*

Session overview:

To be effective a collaborative tendering process is of the utmost importance when it comes to implementing and maximising the potential of a new signalling system. The industry needs to understand what their clients expect to achieve with the new technology. Likewise, the customer must be prepared to listen to the suppliers' experiences of previous projects and projections on the capabilities of the technology. The ideal scenario resulting from a well-managed tender process would be the creating on a single team working under one management.

Session themes:

Tender process, industry partnerships, collaboration, homologation, certification, risk management, incentives and penalties

Session topics:

- Driving collaboration between infrastructure managers, operators and suppliers for an open, two way tender process
- Utilising the tender process to test the business case and migration strategy and to identifying and overcoming risks
- Using simulation models to understand the capabilities of new signalling, communications and control systems
- A holistic view of the tendering process – options for combining signalling, communications and control system tender
- Defining incentives and penalties and working with your suppliers before, during and after deployment

Insights:

Each speaker will give their perspective on the challenges involved in building a railway / supplier partnership in order to highlight how successful procurement can reduce project costs and increase project efficiency.

14:00 Infrastructure manager insight: Procurement, installation and commissioning of the ERTMS signalling system in the Botniabanan line
Per Blomkvist, Project Manager, Botniabanan

14:15 Train operating company insight: Smooth operator: working with the industry to overcome the challenges and maximise the benefits of resignalling a railway network
Ove Dahl Kristensen, Vice President, Traffic Planning, DSB

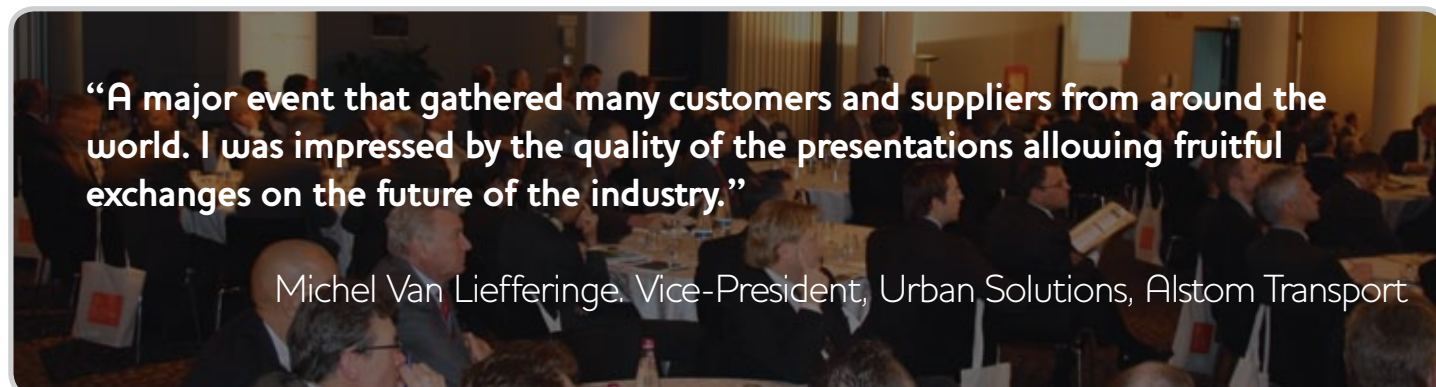
14:30 Industry insight: Highlighting previous challenges and defining system capabilities to meet the migration strategy requirements
Stefan Belz, Manager, Projects and Bids, Siemens Mobility

Panel:

The panellists will discuss how to overcome a lack of clarity and definitions amongst infrastructure managers, operators and suppliers in order to build a strong working relationship to meet the aims of the migration and delivery strategy.

14:45 Panel session: Collaborating to deliver unified procurement across signalling, communications and control systems
Per Blomkvist, Project Manager, Botniabanan
Ove Dahl Kristensen, Vice President, Traffic Planning, DSB
Klavs Hestbek Lund, Project Director, Transportation Systems, Copenhagen Metro
Abojela Bennuba, Signalling and Telecommunications Engineer, Libyan Railroads
Stefan Belz, Manager, Projects and Bids, Siemens Mobility

15:30 Afternoon coffee



“A major event that gathered many customers and suppliers from around the world. I was impressed by the quality of the presentations allowing fruitful exchanges on the future of the industry.”

Michel Van Liefferinge, Vice-President, Urban Solutions, Alstom Transport

Book before 1st April and SAVE £100

BREAKOUT SESSION**SESSION 4: SIGNALLING, COMMUNICATIONS AND CONTROL SYSTEMS**

The breakout sessions offer the ideal platform to engage, examine and exchange views on key industry challenges. Moderated by subject matter experts, these interactive sessions allow participants an opportunity for in-depth, honest discussion and learning in a small, informal setting. With the audience divided into three separate breakout areas, hosted on tables of no more than 10, participants will deliberate on the topics detailed below.

1: SIGNALLING: MAINLINE, SUB-URBAN AND METRO LINES	2: COMMUNICATIONS: FROM GSM-R TO LTE	3: CONTROL SYSTEMS: ADVANCED INTERLOCKINGS	4. RISK MANAGEMENT
<p>Session moderator: Christian Fry, Business Development Manager, Innovation, Invensys Rail</p>	<p>Session moderator: Øystein Løkås, Systems Engineer, GSM-R, Jernbaneverket</p>	<p>Session moderator: Akhilesh Yadav, Director, Signal, Research, Design and Standards Organisation, Ministry of Railways, India</p>	<p>Session moderator: Georg Köpfler, CEO, Thales Transportation, Signalling and Security Solutions A/S, Denmark</p>
<p>Session overview: The traditional boundaries between mainline, suburban lines and metro systems are becoming blurred as we seek to solve the transport challenges of the 21st century and deliver effective interchangeable and interoperable multi-modal rail transport solutions. The introduction of new technologies has in the past presented significant challenges to the signalling and train control industry, and this session will open the debate on how the industry can adapt to an accelerating rate of technology change and spiralling system complexity.</p>	<p>Session overview: Communications systems are the foundation for all modern signalling systems. These technologies evolve rapidly – GSM-R end of life could be as soon as 2025. This session will open the debate on the potential of GSM-R and the evolution to LTE.</p>	<p>Session overview: Interlocking has a long history and yet it is often overlooked as a topic for discussion. Advanced interlocking systems however, have the potential to enable signalling and communications systems to maximise capacity and safety.</p>	<p>Session overview: Risk management is an essential part of every project. The more complex the project, the more demanding is in terms of risk management. The main aspects of successful risk management will be discussed in this session. The focus will be on the Danish projects F-/S-Bane. The client takes huge responsibility from the government to implement one of the biggest signalling projects Europe has ever seen.</p>
<p>Session themes: Changing demands for rail travel, innovation, system complexity, cultural and structural barriers to innovation</p>	<p>Session themes: GSM-R, LTE, bandwidth (availability and auctions) and safety / non-safety critical applications</p>	<p>Session themes: Interlockings, control systems, upgrades, capacity, safety, operations and maintenance</p>	<p>Session themes: Risk management, signalling, control systems, project management</p>
<p>Session topics:</p> <ul style="list-style-type: none"> The changing demands for rail transport Can the industry adapt to rapid changes in technology? How are structural and cultural paradigms challenging the industry's ability to realise the true benefits of innovation? Lessons from other industries in harnessing innovation and delivering successful project outcomes 	<p>Session topics:</p> <ul style="list-style-type: none"> Maximising the value of rail communications projects Analysing long-term ROI on GSM-R deployments Facilitating the smooth migration of GSM-R to LTE Aligning LTE with ERTMS, PTC and CBTC technologies New revenue streams via non-safety critical services? 	<p>Session topics:</p> <ul style="list-style-type: none"> Benefits of alternative interlocking systems Interlocking modernisation best practice Utilising interlockings to maximise capacity The role of interlockings in increasing safety Operating and maintaining interlocking systems 	<p>Session topics:</p> <ul style="list-style-type: none"> Professional risk management as an essential asset to manage projects in a highly complex world Collaboration between government, infrastructure managers, the industry and certification bodies Risk sharing between different stakeholders Generating a common understanding between stakeholders Ownership vs. risk management
16:15 Moderator's Introductory presentation	16:15 Moderator's Introductory presentation	16:15 Moderator's Introductory presentation	16:15 Moderator's Introductory presentation
16:30 Open discussion	16:30 Open discussion	16:30 Open discussion	16:30 Open discussion
17:30 Moderator's concluding presentation	17:30 Moderator's concluding presentation	17:30 Moderator's concluding presentation	17:30 Moderator's concluding presentation
17:45 Global Transport Forum closing remarks and close of day one David Rodriguez-Vega, Conference Producer, Global Transport Forum			
18:00 End of day one			

Signalling and Train Control Dinner

Places are limited and is allocated on a first come first served basis. **BOOK EARLY TO GUARANTEE YOUR PLACE!**

Due to popular demand and a large amount of success, the venue for the Signalling and Train Control Dinner on Wednesday 4th May has now been moved to the Casino Ballroom at the Radisson Blu Scandinavia Hotel. We welcome you to enjoy this exclusive event inside the only casino in Copenhagen. Once the dinner has finished you are invited to enjoy a thrilling night in the hotel's casino, playing against your peers at a selection of games.

Book online at www.signalling-traincontrol.com

CONFERENCE DAY TWO THURSDAY 5 MAY 2011

08:00 **Networking breakfast and registration**

08:50 **Global Transport Forum welcome address and introductory remarks**

Alex Williamson, Managing Director, Global Transport Forum

David Rodriguez-Vega, Conference Producer, Global Transport Forum

KEYNOTE SESSION

SESSION 5: THE SAFETY CASE

Session moderator:

Peter Brugts, Interoperability and Safety, Railway Division, Ministry of Transport, The Netherlands

Session overview:

Safety is a vital concern for anyone working in the railway sector. The safety case is a priority when a new signalling system is implemented and it must be factored into the migration strategy. Signalling, communications and control systems must be designed with safety at their core and all necessary measures need to be taken to minimise risk and guarantee safety during implementation, operations and maintenance. Infrastructure managers, operators and suppliers need to work together to identify safety risks in order to address them promptly and efficiently.

Session themes:

ERTMS, PTC, CBTC, GSM-R, LTE, SCADA, certification, industry collaboration, migration, network security and operations

Session topics:

- Ensuring regulator, infrastructure manager, operator and supplier collaboration to minimise risk
- Measuring economic implications and safety performance of different signalling, communications and control systems
- Harnessing the potential of new communications technologies to capture data and improve train safety
- Evaluating the certification process and ensuring all technologies meet the requirements of the safety case
- Minimising safety risks during the delivery of a new, integrated signalling, communications and control system

Insights:

Each speaker will address how certification, new technologies and improvements in systems management can help to define the safety case and to reduce risks and improve overall safety.

09:00 **Regulatory body insight: The Danish Transport Authority's safety policy and its impact on the plan to re-signal the whole national railway network**

Jesper Rasmussen, Director of Safety, Danish Transport Authority

09:15 **Certification body insight: The ERTMS-ETCS safety assessment: the Italian high speed network**

Gino Di Mambro, International Business Manager, Italcertifer

09:30 **Industry insight: Managing certification, the safety case and network security to deliver on the project aims**

Brian McKendrick, Head of Asset Management and Operations, Lloyd's Register Rail

Panel:

The panellists will address how regulators, infrastructure managers, operators and suppliers can work together in order to minimise costs without compromising certification, safety and security.

09:45 **Panel session: Evaluating the safety performance of ERTMS, PTC, CBTC, GSM-R and LTE to define optimum safety case parameters**

Jesper Rasmussen, Director of Safety, Danish Transport Authority

Gino Di Mambro, International Business Manager, Italcertifer

Øystein Løkås, Systems Engineer, GSM-R, Jernbaneverket

Eric Bantégnie, President and Chief Executive Officer, Esterel Technologies

Arne Borälv, Chief Executive Officer, Prover Technology

10:30 **Morning coffee**

“As a sponsor and as delegates, the Global Transport Forum team met our expectations and gave us the quality and attention that a customer expects. A job well done!”

Cees van der Moolen, Senior Consultant, DeltaRail

Book before 1st April and SAVE £100

“Global Transport Forum did a great job. A good agenda with interesting speakers and well thought through interaction between participants.”

Michael Clausecker, Director General, UNIFE

TECHNICAL SESSION

SESSION 6: PROJECT DELIVERY

Session moderator:

Libor Lochman, Deputy Executive Director, CER

Session overview:

Once the migration strategy has been designed and the tenders awarded, the new technology can be deployed. The project team need to efficiently manage the lack of hardware and software standard interfaces and the lack of a common homologation process. This is a lengthy process and is the crucial step in delivering on the original vision outlined during planning and procurement. Differing scenarios will have been considered but any deviations from the migration strategy can incur time and cost overruns that must be avoided to deliver on the projected ROI.

Session themes:

Legacy systems, hardware / software, specifications, standards, interfaces, homologation and interoperability

Session topics:

- Following the strategy for safety, costs, deadlines and service disruption to ensure successful project delivery
- Managing hardware and software interfaces and delivering pre-defined interchangeability / interoperability
- Delivery approaches – “Big bang” vs. “staged bang” and challenges unique to existing vs. new infrastructure
- Taking a flexible approach to stick to the migration strategy and avoid an increase in project time and costs
- Successfully operating and maintaining legacy systems during project delivery

Insights:

Each speaker will address the challenges involved in the delivery of new signalling, communications and control systems in order to keep on time and on budget, to ensure safety and interoperability and to avoid service disruptions.

11:15 Infrastructure manager insight: The implementation of ProRail’s signalling / interlocking policy: system development, standards and interfaces

Arjen Zoeteman, Manager of Technology Policy, ProRail (and EIM representative)

Maarten van der Werff, Manager Expert Group Interlocking, Signaling Department, Asset Management Division, ProRail

11:30 Train operating company insight: Equipping rolling stock with on-board technology whilst maintaining efficient operations during project delivery

Klaus-Rüdiger Hase, ETCS Project Leader, Deutsche Bahn

11:45 Industry insight: Programme management – bringing together all parties to ensure the project is delivered on time and on budget

Gregory Enjalbert, Director, Mainline Projects, China, Bombardier Transportation

Panel:

The panellists will address what measures can be taken to keep costs under control and avoid service disruption during the delivery process in order to deliver on the original project aims as defined by the business case and migration strategy.

12:00 Panel session: Ensuring effective planning and collaboration to prevent cost increases and disruptions during the delivery process

Arjen Zoeteman, Manager of Technology Policy, ProRail (and EIM representative)

Maarten van der Werff, Manager Expert Group Interlocking, Signaling Department, Asset Management Division, ProRail

Klaus-Rüdiger Hase, ETCS Project Leader, Deutsche Bahn

Paul Thomas, Systems Engineering Manager, Parsons

12:45 Lunch



Book online at www.signalling-traincontrol.com

CONFERENCE DAY TWO THURSDAY 5 MAY 2011

TECHNICAL SESSION

SESSION 7: OPERATIONS AND MAINTENANCE

Session moderator:

Stefan Roseanu, Senior Partner, Club Feroviar (and Secretary General, AIF, Romanian Railway Industry Association)

Session overview:

After the deployment of the new system, the infrastructure managers and operators must focus on performance. In order to deliver the maximum system lifecycle and ROI as projected in the business plan and migration strategy, the system must be operated and maintained efficiently to deliver optimum capacity, safety and efficiency, reliability and speed and quality of service. Ongoing operations, maintenance and obsolescence of legacy systems must also be built into this strategy to avoid unexpected costs. A coherent preventative maintenance strategy is key to achieving these aims.

Session themes:

Legacy systems, lifecycle costs, capacity, safety, reliability, QoS, operational rules and preventative maintenance

Session topics:

- Defining clear and concise operational rules to avoid confusion and ensure efficient operations
- Maximise safety critical operations and introducing revenue generating non-safety critical services
- Clarifying the role of the supplier in ensuring efficient operations and maintenance of the systems they have installed
- Co-ordinating efficient maintenance of signalling, communications and control systems with minimal disruptions
- Developing a long-term preventative maintenance strategy to maximise the system lifecycle

Insights:

Each speaker will address the key challenges of operating and maintaining signalling, communications and control systems in order demonstrate key considerations and optimum strategies for maximising system performance and lifecycle.

14:00 **Infrastructure manager insight: Developing a maintenance and asset performance strategy for signalling, communications and control systems – the New Zealand journey**

Phil McQueen, General Manager, Operations, **KiwiRail Network**

14:15 **Train operating company insight: How to improve traffic management through intelligent signalling and train control systems**

Jan Richard, Innovation and Technology Manager, **SBB Swiss Railways (SBB CFF FFS)**

14:30 **Industry insight: Managing technologies and operations and maintenance procedures to maximise the system lifecycle**

Fernando Hazeu, Vice President for Mainline Signalling Solutions, **Alstom Transport**

Panel:

The panellists will address how to support legacy interfaces in conjunction with the maximisation of newly deployed systems in order to reduce costs and maximise revenues.

14:45 **Panel session: Managing legacy systems and minimising costs and maximising revenues from new systems**

Phil McQueen, General Manager, Operations, **KiwiRail Network**

Jan Richard, Innovation and Technology Manager, **SBB Swiss Railways (SBB CFF FFS)**

Fernando Hazeu, Vice President for Mainline Signalling Solutions, **Alstom Transport**

Stefan Schwaab, Programme Manager, Railway Safety, Danish Signalling Programme, **Danish Transport Authority**

15:30 **Afternoon coffee**

“Focus was on the importance of radio planning and the development of new mobile railway communications system based on Long Term Evolution (LTE). The big question here was how long will it take for railways to keep pace with mobile technologies. Meanwhile, major operators such as Orange and AT&T have partnered with Alcatel-Lucent to conduct trials in Europe and North America. This highlights the fact that Alcatel-Lucent is positioning themselves as one of the leading LTE suppliers for railways.”

Andy Clayton, Engineering Services Manager, Balfour Beatty Rail

Book before 1st April and SAVE £100

ROUNDTABLE SESSIONS

SESSION 8: THE RAILWAYS OF THE FUTURE

The roundtable sessions offer the ideal platform to engage, examine and exchange views on key industry challenges. Moderated by subject matter experts, these interactive sessions allow participants an opportunity for in-depth, honest discussion and learning in a small, informal setting. Hosted on tables of no more than 10, participants will deliberate on the topics detailed below.

Session moderator:

David Rodriguez-Vega, Conference Producer, Global Transport Forum

Alex Williamson, Managing Director, Global Transport Forum

Session overview:

Signalling, communications and control systems are a core and necessary part of rail infrastructure. They play a big role in the areas discussed, such as capacity, efficiency, speed, reliability and interoperability. However, they also have the potential to shape the integrated, lower cost, higher revenue, intelligent railway networks of the future – automated signalling and train control networks that not only collect data and manage capacity and safety, but also offer functionality for additional non-safety critical revenue generating services. How far away are we from that bright future?

Session themes:

ERTMS, PTC, CBTC, GSM-R, LTE, SCADA, automation, data collection, cost reduction and revenue generation

Session topics:

- Beyond signalling – the potential for ERTMS Level 3 to deliver additional functionality and services
- GSM-R and LTE – communications role in increasing non-safety critical revenue generating CCTV, PIS and WiFi services
- The potential of integrated, automated and intelligent control centres in increasing network efficiency
- Capturing and utilising system data for operations, maintenance and potentially revenue generation
- What will the railways of the future look like and what is the role for signalling, communications and control systems?

Roundtable:

Participants will discuss what the future of the automated, integrated, intelligent railway in order to draw a roadmap to reduced costs and increased functionality and revenue streams.

16:15 Infrastructure manager insight: Defining the intelligent railways of the future

Andrew Simmons, Director of Future Train and Operational Control Systems, Network Rail

16:30 Train operating company insight: The operators contribution towards the future of the European Train Control System

Pierre Messulam, Rail Strategy and Regulation Director, SNCF

16:45 Industry insight: Innovative Traffic Management with ARAMIS for Networks with ETCS Level 2

Volkmar Heuer, Head of Product Strategy and Management for Operation Control Systems, Thales Transportation Systems GmbH, Germany

17:00 Open discussion

18:00 Moderator's concluding remarks

18:15 Global Transport Forum closing remarks and close of day two

David Rodriguez-Vega, Conference Producer, Global Transport Forum

Alex Williamson, Managing Director, Global Transport Forum



POST-CONFERENCE WORKSHOPS AND TECHNICAL SITE VISITS **FRIDAY 6 MAY 2011**

WORKSHOPS

The workshops offer participants access to detailed insights that delve deeper into the specific technical challenges discussed throughout the conference. Led by subject matter experts, the hands-on format encourages maximum interaction and idea sharing amongst workshop leaders and participants. To meet the unique needs of each sector of the industry there is a choice of workshops on signalling, telecoms, the safety case and project management.

1: ALIGNING TRACK-SIDE AND ON-BOARD SIGNALLING EQUIPMENT FOR OPTIMUM COST-EFFICIENCY	2: THE NEXT GENERATION OF TELECOMMUNICATION SOLUTIONS AND HOW TO VALIDATE THEIR USE WITH SAFETY CRITICAL SYSTEMS: THE THEORY, THE PRACTICE AND THE FINDINGS
<p>Workshop moderator: Roland Kuhn, Director, Product Planning, Bombardier Transportation</p>	<p>Workshop moderator: Michael Liem, Solution Manager and Architect, Railway Networks, Alcatel-Lucent</p>
<p>Workshop overview: The installation of new track-side signalling equipment places a requirement on operators to install the necessary on-board equipment. This is costly and operators may be required to install multiple systems to operate across multiple lines and cross-border. To justify the investment and maximise ROI, infrastructure managers, operators and suppliers must work together to identify cost-efficient methods of integrating on-board equipment to deliver long-term interoperability.</p>	<p>Workshop overview: The next generation of telecommunication solutions has to be developed to meet the safety needs of the railway industry. There is a series of key challenges that must be overcome across the business case and the development, testing, deployment and operations and maintenance of new technologies. All of this must be done in a time and cost-efficient manner to ensure that the rail industry can capitalise on them.</p>
<p>Workshop themes: Business case, legacy systems, ETCS (1, 2 and 3), specification, testing, certification, standardisation / homologation, migration and hardware / software upgrades</p>	<p>Workshop themes: Business case / ROI, safety / non-safety critical services, requirements, regulations, development, testing, lifecycle, upgrades, approvals, tendering, partnerships and migration</p>
<p>Workshop topics:</p> <ul style="list-style-type: none"> • Migration strategy to ensure efficient implementation and minimise disruption to revenue service • Homologation and certification as a cost driver - managing multiple systems and suppliers • Version management and upgrades to the system - robust planning to reduce costs • Exploring lessons learnt from other solutions 	<p>Workshop topics:</p> <ul style="list-style-type: none"> • Requirements for Telecom systems supporting railway operations – reality check for next generation systems • Benefits of new technology – what does LTE and IP/MPLS has to offer. • Adapting new Telecom technologies early – a risk versus benefit assessment. • Introduction strategies for new generation of Telecom technologies – finding the right time to migrate. • Introducing LTE for railways – What are the key obstacles which have to be solved before. • The role of RIMs, TOCs and suppliers in working towards efficient LTE development
<p>Workshop session: Participants will discuss the specific challenges of standardisation and the cost-efficient integration of multiple on-board signalling systems</p>	<p>Workshop session: Participants will address the current development of LTE technology to demonstrate its potential capabilities vs. those of existing technology and its possible impact on the railways of the future.</p>
<p>08:00 Networking breakfast and registration</p>	<p>08:00 Networking breakfast and registration</p>
<p>09:00 Moderators introductory presentation</p>	<p>09:00 Moderators introductory presentation</p>
<p>09:15 Open discussion</p>	<p>09:15 Open discussion</p>
<p>10:30 Morning coffee</p>	<p>10:30 Morning coffee</p>
<p>11:00 Open discussion</p>	<p>11:00 Open discussion</p>
<p>12:15 Moderators concluding remarks</p>	<p>12:15 Moderators concluding remarks</p>
<p>12:30 Lunch and close of day three</p>	<p>12:30 Lunch and close of day three</p>

TECHNICAL SITE VISIT 1: **COPENHAGEN METRO**

Metroselskabet develops and runs the Copenhagen Metro. The current metro consists of 22 stations of which 9 are under ground and 13 above ground. The driverless train system is supplied by Ansaldo STS and runs with an average service availability of 98 %. The operator is Metro Service. The metro carries approx. 50 million passengers a year. In 2018, a new metro circle line, the Cityringen, will open. The new line will have 17 underground stations, and the trains and transportation systems will be supplied by Ansaldo STS. Metroselskabet is a partnership, owned jointly by the City of Copenhagen (50%), the City of Frederiksberg (8.3%) and the Danish Government (41.7%).

The visit to Copenhagen Metro's Control and Maintenance Center will include both the maintenance and operational areas. The visitors will see the different facilities used in connection with changing the bogies and wheels branch, technical data for the trains, and the security required, respectively, on trains and in the system including drive types when operating an automatic unmanned railway. We will also visit the area for daily cleaning and facilities for cleaning of graffiti. Due to the work environment the briefing of the control room will be in the front compartment.

Bring your team - book 3 places and get a 4th place FREE!

WORKSHOPS (CONTINUED)

“Thank you for the opportunity to present. It was very well organized and the lectures were very interesting as well as extremely useful.”

Yariv Katz, Vice-President, Infrastructure, Israel Railways

3: INTEGRATING THE SAFETY CASE ACROSS THE PROJECT LIFECYCLE TO ENSURE EFFICIENT DELIVERY	4: FOSTERING COLLABORATION BETWEEN INFRASTRUCTURE MANAGERS, OPERATORS AND SUPPLIERS TO DELIVER ON TIME AND ON BUDGET
<p>Workshop moderator: Brian McKendrick, Head of Asset Management and Operations, Lloyds Register Rail</p>	<p>Workshop moderator: Reserved for a leading representative from the industry</p>
<p>Workshop overview: A key aim of advanced signalling and telecoms technologies is to advance network safety. If deployments do not meet safety requirements, this can cause multiple technical complications and time and cost overruns. It is vital that project plans define a solid safety case that addresses standardisation, approvals, testing and certification and is implemented across the entire project lifecycle to avoid unplanned project disruptions and revisions.</p> <p>Workshop themes: ERTMS, PTC, CBTC, GSM-R, LTE, SCADA, project planning, standardisation, approvals, testing, certification, industry collaboration, migration, network security and operations</p>	<p>Workshop overview: Rail infrastructure managers, train operating companies and suppliers each face a unique set of challenges when planning for, selecting, implementing and operating new signalling and telecoms systems. A collaborative and integrated approach to project management is essential to ensure that all parties are working towards the common goal of on time and on budget delivery in as efficient a manner as possible.</p> <p>Workshop themes: Project planning / design, procurement, collaboration, standardisation, interoperability, hardware / software integration, interfaces, risk management, delivery and operations</p>
<p>Workshop topics:</p> <ul style="list-style-type: none"> • Addressing and incorporating the safety case during project planning • Integrating safety across multiple signalling, telecoms and control systems and sub-systems • Homologating safety approval and certification standards and rules • Modelling and testing the safety case throughout planning and migration • Developing a safety case to ensure ongoing safety and security during operations 	<p>Workshop topics:</p> <ul style="list-style-type: none"> • Integrating a structure for efficient project delivery into the business and project plans • Clearly defining technical requirements, standards and aims from the outset • Structuring collaboration between infrastructure managers, operators and suppliers • Creating a flexible structure to cater for unexpected challenges during delivery • Evaluating, planning for and managing risk throughout the project lifecycle
<p>Workshop session: Participants will discuss the challenges of designing a standardised, integrated safety case running across the project lifecycle to deliver on time and on budget.</p>	<p>Workshop session: Participants will discuss methods of developing an integrated and collaborative approach to project delivery to ensure on time and on budget delivery.</p>
<p>08:00 Networking breakfast and registration</p> <p>09:00 Moderators introductory presentation</p> <p>09:15 Open discussion</p> <p>10:30 Morning coffee</p> <p>11:00 Open discussion</p> <p>12:15 Moderators concluding remarks</p> <p>12:30 Lunch and close of day three</p>	<p>08:00 Networking breakfast and registration</p> <p>09:00 Moderators introductory presentation</p> <p>09:15 Open discussion</p> <p>10:30 Morning coffee</p> <p>11:00 Open discussion</p> <p>12:15 Moderators concluding remarks</p> <p>12:30 Lunch and close of day three</p>

TECHNICAL SITE VISIT 2: DSB TRAIN COMPONENTS AND DEMONSTRATION OF “GREEN SPEED”

DSB Train Components is part of the DSB Group and performs quality maintenance of a number of mechanical and electrical train components, e.g. bogies, wheels, engines, transmissions, generators, brakes and electronic components. You will be taken on a guided tour around the facilities and the different mechanical and electrical solutions will be demonstrated.

After the guided tour of DSB Train Components, you have the opportunity to experience DSB's new energy driving system “Green Speed”. The system optimises the train drivers' driving patterns, so the energy consumption and the CO2 emissions are significantly reduced. The system will be demonstrated by the system developer and a highly experienced train driver.

Book online at www.signalling-traincontrol.com

SPONSORS AND PARTNERS

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Bombardier Transportation offers the broadest portfolio in the rail industry and delivers innovative products and services that set new standards in sustainable mobility. Our division, Rail Control Solutions is a global leader in delivering state-of-the-art, safe rail control solutions. From high density mass transit systems to intercity, or long distance passenger and freight operations, from cross-border solutions to regional and low density industrial lines, Bombardier's highly proven signalling solutions have been installed in over 50 countries and are adaptable to suit all needs.

BOMBARDIER

Ansaldo STS is a leading technology company listed on the Milan stock exchange and operating in the global Railway & Mass Transit Transportation Systems business with the provision of traffic management, planning, train control and signalling systems and services. It acts as lead contractor and turnkey provider on major projects worldwide. Ansaldo STS brings together the know-how, excellence and technological expertise of pioneering companies like Ansaldo Signal, Ansaldo Trasporti Sistemi Ferroviari, Union Switch & Signal and CSEE Transport. Ansaldo STS is headquartered in Genoa, Italy, and employs over 4,200 people in 28 different countries. In 2007, the revenues of Ansaldo STS reached € 973 M, with a gross operating margin of € 100,3 M and net profits of € 58,2 M.



Thales is a global technology leader for the Defence & Security and the Aerospace & Transport markets. In 2009, the company generated revenues of EUR 12.9 billion with 68,000 employees in 50 countries. With its 22,500 engineers and researchers, Thales has a unique capability to design, develop and deploy equipment, systems and services that meet the most complex security requirements. Thales has an exceptional international footprint, with operations around the world working with customers as local partners. Thales is a world leading supplier of cutting-edge railway signaling solutions for main line and urban rail which guarantee the safe, reliable and convenient transport of passengers and freight.

THALES

Thales has widespread, international experience in all aspects of control and safety technology, network integration and corresponding services concerning technical operations and maintenance. The product portfolio includes, among others, the following solutions:

- AllTrac for interoperable train control also comprising ETCS solutions (European Train Control System)
- LockTrac for train routing, also including the leading electronic interlockings from Thales together with field equipment and
- NetTrac for network management, disposition and control

Thales provides turnkey solutions that increase performance and line capacity while reducing operating, maintenance and infrastructure costs. Thales' goal is to be its customers long-term partner to help them address major challenges for continual growth.

Alstom Transport is a promoter of sustainable mobility. We develop the most complete range of systems, products and services for the rail transport industry worldwide.

ALSTOM

In the mainline train control market:

- We offer railway infrastructure managers complete signalling solutions including ERTMS-ETCS trackside train protection system which are also compatible with national standards.
- We offer passenger and freight train operators trainborne train control equipment packages that meet the ERTMS-ETCS requirements which are also compatible with national train protection systems.
- Out of 10 trains operating with ETCS in commercial service across Europe today, 8 do this with ATLASTM. These trains have together travelled over 48 million kilometres in commercial service.
- Currently, Alstom has ERTMS trackside and trainborne systems in service in 9 European countries among the 11 operating ERTMS systems, including:
 - The Rome-Naples line in Italy, the first line operated at 300 km/h equipped with a ERTMS
 - Level 2 system, without any fall-back system
 - The Mattstetten-Rothrist line in Switzerland, used by the biggest equipped fleet
 - The BR189 freight locomotive first to be homologated for an entire freight corridor
- Our Electronic Interlocking systems are operating in more than 20 different countries in the world managing some amongst the densest traffic junctions
- We also offer railways traffic control centers, passengers information and security systems. Alstom designs, builds and commissions also signalling systems for metro and tram lines.

The Mobility Division (Berlin, Germany) of Siemens is the internationally leading provider of transportation and logistics solutions. With Complete mobility, the division is focused on networking the various modes of transportation in order to ensure the efficient and environmentally compatible transport of people and goods. Complete mobility targets the goal of sustainability and combines the company's competence in operations control systems for railways and traffic control systems for roadways together with solutions for airport and postal logistics, railway electrification, rolling stock for mass transit, regional and mainline services, as well as turnkey systems and forward-looking service concepts. With around 25,000 employees worldwide Siemens Mobility posted sales of €6.5 billion in fiscal year 2010 (ended September 30). At the Business Unit Rail Automation (Berlin, Germany) round about 6,000 staff members worldwide are engaged in the development and production of equipment, systems and installations for safe and efficient operations management of mass transit and mainline rail transport. The rail automation portfolio ranges from operations control system, diagnostic and service systems, remote control systems, rail communication systems as well as electronic interlockings and automatic train control systems to signals, switch operating systems, track vacancy detection systems, grade-crossing protection as well as locating equipment. Furthermore the Business Unit offers complete solutions from consulting and planning to supply, commissioning and service, enabling us to provide convincing rail systems for operators all over the world within the shortest space of time. All solutions are optimally tailored to customer requirements.

SIEMENS

SPONSORS AND PARTNERS

We are the specialist team of transportation consultants within the Lloyd's Register Group. From offices in the UK, Europe, the Middle East and Asia, we provide a wide range of expert advisory and assurance services to improve the safety, performance, quality and asset management of rail systems across the world.



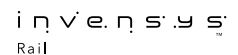
The services we offer include:

- Expert advice - Technical expertise is the backbone of our business. From technology strategies to designing innovative vehicle solutions, everything is focused on helping our clients build safe, sustainable and dependable businesses.
- Independent Assurance - To many people, Lloyd's Register is synonymous with independent assurance. We inspected and certified our first locomotive boiler in 1929 and have been independently assuring products, systems, processes and whole railways ever since.
- Training - We provide generic and bespoke courses aimed squarely at our clients' needs. We are renowned for our Yellow Book training.
- Conditioning Monitoring Systems - We have developed a range of infrastructure and train-based condition monitoring systems that can help prevent reasonable wear and tear on a railway escalating into costly, sometimes life threatening failures. We are European leaders in wheel-rail interface monitoring.

Our clients are at the heart of everything we do and all our services are delivered by experienced railway engineers and technical specialists across all key disciplines, from rolling stock, signalling and telecommunications, to civil engineering, power systems, human factors and operations.

ASSOCIATE SPONSORS

Invensys Rail, the new name for Westinghouse Rail Systems, is at the heart of many of the world's largest and most complex rail infrastructure projects. From London to Glasgow, Malaga to Vancouver and from Singapore to Oslo, the company's proven signalling and train control solutions have been specified for both green field and upgrade programmes, enabling operators to efficiently manage and control complex mass transit and mainline networks.



Parsons is an engineering and construction firm that offers full-service program and construction management, with a 60-year history of providing high-performance technological innovations. We set the standard for meeting client infrastructure needs by providing technical and management proficiency to government agencies and private industries worldwide. Having fostered strong relationships with key vendors and suppliers of safety-critical and vital systems for rail and transit operations, we are the preferred solutions partner in communications-based train control (CBTC).



Founded in 1999, Esterel Technologies is the leading provider of critical embedded software development tools and services in the rail transportation domain. Esterel SCADE® solutions are used by embedded software engineers to graphically design, verify, and automatically generate critical embedded software applications. As members of the SCADE® product family, Esterel SCADE Suite® and Esterel SCADE Display® reduce time-to-deployment and certification for critical control and embedded graphics display applications respectively. Both products, with support for the full development life-cycle, from requirements through deployment and verification are certified for critical application development. SCADE KCG® automatic code generators have been certified by TÜV SÜD for EN 50128 up to SIL 3/4 for Rail Transportation Applications. With direct presence in North America, Europe, Asia, and distributors globally, Esterel Technologies continues to drive advances in critical embedded software development.



Alcatel-Lucent is the trusted transformation partner of service providers, enterprises, strategic industries such as defense, energy, healthcare, transportation, and governments worldwide, providing solutions to deliver voice, data and video communication services to end-users. A leader in fixed, mobile and converged broadband networking, IP and optics technologies, applications and services, Alcatel-Lucent leverages the unrivalled technical and scientific expertise of Bell Labs, one of the largest innovation powerhouses in the communications industry. With solutions running effectively in more than 80 mission-critical railway networks, Alcatel-Lucent provides deep expertise in building, integrating and managing networks - to optimise operational efficiency and ensure safety and security for an enhanced passenger experience.



Prover Technology provides software products and services for development and independent V&V of railway control and signaling systems. The company's Prover Certifier product is only software product on the market that allows you to automatically produce complete safety evidence for CENELEC EN50128 SIL 4 certification using formal verification. The company's Prover iLock tool suite provides unparalleled cost-efficiency in development and V&V of interlocking systems, customizable to different target platforms and geographical markets. Prover Technology's customer base includes Ansaldo STS, ABB, Bombardier Transportation, Canadian Pacific Railway, Invensys Rail, New York City Transit, Norwegian National Rail, Paris Metro (RATP), Stockholm Metro (SL), Swedish National Rail, Thales, and many others. The company was founded in 1989 and is headquartered in Stockholm, Sweden, with wholly owned subsidiaries in France and USA.



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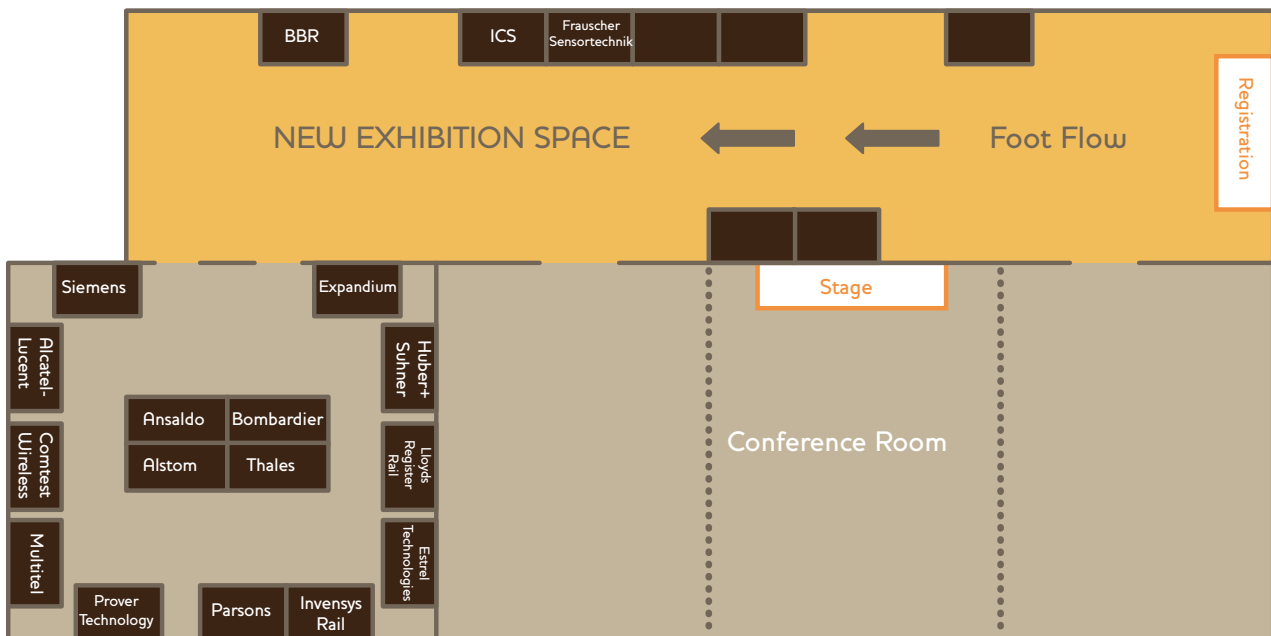


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RAIL AND METRO SIGNALLING AND TELECOMS 2011 EVENT SCHEDULE



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Railway Telecommunications 2011 brings together senior management, technical specialists and project leaders from the foremost rail infrastructure managers, train operating companies and suppliers. The industry's leading innovators will discuss the latest developments in railway telecoms, from GSM-R to LTE. They will focus on securing safety critical infrastructure and enhancing the passenger experience, whilst developing additional services and revenue (via CCTV, PIS and WiFi).

www.railway-telecoms.com



TRANSIT COMMUNICATIONS AND WIRELESS APPLICATIONS

1 - 3 November 2011 • San Francisco, USA

2011 Securing safety critical infrastructure | Maximizing additional revenue

Transit Communications and Wireless Applications 2011 brings together senior management, technical specialists and project leaders from the foremost main line, suburban and urban rail operators and suppliers. The industry's leading innovators will discuss the latest developments in transit communications from NFC to LTE, with an in-depth focus on securing safety critical infrastructure and services, enhancing the passenger experience and opening up additional services and revenue streams.

www.transit-comms.com



CBTC WORLD CONGRESS

8 – 10 November 2011 • Stockholm, Sweden

2011 The future of metro signalling and train control

This is the only global event dedicated to the strategic and technical challenges surrounding CBTC migration, operations and maintenance. CBTC World Congress 2010 was supported by the leading global metro operators, suppliers, associations and media, including: RATP, Alstom Transport, Alarms and the International Rail Journal. Featuring speakers from a far afield as Sao Paulo, the event attracted over 300 delegates from over 40 countries.

www.cbtcworldcongress.com

“We sponsored Signalling and Train Control 2010 in Rome. The execution was flawless and the attendance was great, a great success for all of those who attended, I would not hesitate in participating again as sponsor. See you in 2011!”

Olivier André, Alcatel-Lucent
Signalling and Train Control 2010



SIGNALLING AND TRAIN CONTROL

2011

4 - 6 May 2011 • Radisson Blu Scandinavia • Copenhagen, Denmark

The dedicated event for rail signalling and telecommunications professionals

HOW TO REGISTER

Online at www.signalling-traincontrol.com

Over the phone on +44 (0)20 7812 0707

Send this booking form by:

Fax to +44 (0)20 7812 0646

Or email to marketing@globaltransportforum.com

REGISTRATION FEES

	BEFORE 1ST APRIL	AFTER 1ST APRIL
INFRASTRUCTURE MANAGER / TRAIN OPERATOR / GOVERNMENT BODY /REGULATOR	£1000 + tax*	£1100 + tax*
Other	£1750 + tax*	£1850 + tax*

*Tax is charged at 25%

REGISTRATION SELECTION

COMPANY PROFILE <i>(please delete as appropriate)</i>	DAY THREE OPTION <i>(please select ONE option only)</i>					
	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Site Visit 1	Site Visit 2
DELEGATE 1						
DELEGATE 2						
DELEGATE 3						
DELEGATE 4						

Please refer to pages 13 & 14 for workshop / site visit details

I would like to attend the Signalling and Train Control Dinner on Wednesday 4th May. I understand this will be an additional £100.

DELEGATE INFORMATION BOOK 3 PLACES AND RECEIVE A 4TH PLACE FOR FREE!

Delegate 1 (Please complete in block capitals)

Title First name

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Title First name

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FOURTH DELEGATE FREE

PAYMENT Please tick payment option

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Paying by credit card is the best way to guarantee your place, and the only option after March 1st, 2011. To pay by card, book online at www.signalling-traincontrol.com. Alternatively, please call +44(0)20 7812 0707 to book over the phone.

OPTION 2: I ENCLOSE A CHEQUE PAYMENT

Cheques should be drawn on a UK bank and made payable to: **Global Transport Forum Ltd**

OPTION 3: PLEASE INVOICE ME

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OPTION 4: I AM PAYING BY BANK TRANSFER

Please ensure you include tax at 25%. Registration fees are net of bank charges. If paying by international bank transfer, ensure that your company pays both the sender's and receiver's bank charges.

A member of the Global Transport team will be in contact regarding your payment

AUTHORISATION

Authorising manager (PRINT)

Signature Date

TERMS AND CONDITIONS

Payment

Payment must be received no later than 14 days from the date of invoice. Registrations received within 42 days of the event must be prepaid immediately by credit card or bank transfer. Delegates who have not paid their fees in advance may be refused admission.

Substitutions / Cancellations

Any cancellations must be received in writing at least 42 days prior to the event. A cancellation fee of £500 will be payable on all cancellations received by this date. After this date, we regret that no cancellations can be accepted, and registering companies will be liable for 100% of the registration fee. A substitute delegate may be named at no extra charge.

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