



Rail Technology

2008

Smart Trains on Smart Tracks


29th - 30th July 2008, Radisson Plaza Hotel, Sydney



Program highlights:


- Updates on ATMS & ERTMS technology and projects from operators and technology suppliers
- Latest on GSM-R train radio systems
- Analysis of safety systems and human/machine interface
- Industry leading locomotive technology
- Train management, fuel optimisation and scheduling
- A vision for 2020 – interactive roundtable discussion on innovation, commercial applications, funding and future outcomes

Featuring international speakers:

 Craig Shier, Program Manager ATMS Program,
Lockheed Martin, US



 Mehdi Lababidi, Project Manager,
ALSTOM Transport Information Solutions, France

 Michael Latour, Director Locomotive Sales and Projects,
Siemens AG, Germany

 Tony Smith, Business Development Director,
Thales Rail Systems, UK*

*subject to final confirmation

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Researched and developed by:

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Day 1 – Tuesday 29th July 2008

8:00 **Registration and morning tea**

9:00 **Opening remarks and introduction from the Chairman**

Dale Coleman, Managing Director,
TTG Transportation Technology


9:10 **Welcome remarks and RISSB update**

Kevin Taylor, General Manager,
Rail Industry Safety and Standards Board (RISSB)

SIGNALLING AND COMMUNICATIONS TECHNOLOGY

9:25 **An update on the ARTC/Lockheed Martin ATMS project**

Leon Welsby, General Manager, Strategy Development and
Chief Information Officer, **ARTC**

 Craig Shier, Program Manager ATMS Program,
Lockheed Martin, US

9:50 **An update on RailCorp's ERTMS trial**

Peter Symons, RailCorp ETCS Representative, ATP Chair
Collaborative Development Group, Project Director –
Strategy, **RailCorp**

10:15 **The state of play with ATP on the QR network**

Andrew Forster, Principal System Engineer, Signals &
Telecommunications, **QR Network**

10:40 **Morning tea**

10:55 **The move towards communication based signalling systems**

- The Victorian context
- Experiences in implementing new signalling and train control technology in Hong Kong and the UK
- Improving capacity on existing railways

Nick Thompson, Rail Technology Director,
Department of Transport, Victoria

11:20 **Panel discussion – Towards a national interoperable signalling system**

Speakers from the morning session will be invited to join the discussion. Questions and comments will be taken from the delegates. Should you wish to submit a question to the panel before the event, please email loic.beuzit@informa.com.au and your question will be forwarded to the chairman.

ATP TECHNOLOGY PROVIDERS

11:30 **Strategic signalling technology decisions for Australia**

- Future of train control on board trains - a radical departure from most of the infrastructure currently in use in Australia
- Strategic thinking about the next generation of signalling technology to be adopted
- Selecting the next generation of signalling technology - proprietary vs multi-vendor debate

Charles Page, Director, Marketing and Sales,
Westinghouse Rail Systems Australia

11:50 **Deployment of a new ATP based on ERTMS for suburban lines with smooth migration**

- Deploying modern European standard ATP in a competitive environment
- Testing concept and options in a pilot phase for costs and functions benchmarking
- Deployment strategy to get benefits as soon as early investments are made in trackside and on-board equipment
- Alstom contribution based on experience gained in project already in revenue service

 Mehdi Lababidi, Project Manager, **ALSTOM Transport Information Solutions, France**

12:10 **ATP technology: A Thales perspective**



Tony Smith, Business Development Director,
Thales Rail Systems, UK *

12:30 **Lunch**

1:30 **The application of ETCS in Australia**

- Data preparation
- Hardware configuration
- Trackside installation
- Trainborne installation

David Hickson, Project Manager Rail Systems,
United Group Infrastructure

1:50 **Is Australia ready for communication based signalling schemes?**

David Norris, Director of Technology,
Ansaldo STS Australia

2:10 **Technology providers Q&A session**

2:25 **GSM-R train radio systems**

Bruce Jackson, Project Director, Digital Train Radio Project,
RailCorp

2:50 **Advancements in vigilance design through integration of GPS receiver**

Darren Slattery, System Engineer,
United Group Limited Rail Technologies
Tim Buchanan, Project Manager,
United Group Limited Rail Technologies

3:15 **Afternoon tea**

SAFETY SYSTEMS

3:30 **Technological developments in rail safety**

Carolyn Walsh, Chief Executive, **Independent Transport Safety and Reliability Regulator, NSW**

3:55 **Getting smart about transport safety**

- The rise of Safety Management Systems
- The fall of Driver Safety Systems
- The introduction of Collision Avoidance Systems
- The need for Vehicle Location System broadcasts
- Application to Level Crossing Protection

Kevin Anderson, Function Leader, Risk & Reliability,
Hyder Consulting

4:20 **Smart trains, smart tracks and unsafe systems - The need for independent assessment**

- New technology tends to remove control from the hands of humans, and places it within the domain of "trustworthy" automation
- This moves trust from the operators to the designers, testers and maintainers
- One mechanism for aiding safety is the appointment of an independent safety assessor (ISA)
- This talk discusses the whom, when, and how to engage and work with an assessor to achieve safety

Dr Andrew Rae, Senior System Safety Consultant,
System Safety and Quality Engineering

4:45 **Smart trains on smart tracks: Smarter users?**

- Users and maintainers with the right skills are critical to successful technology insertion
- To ensure that users have the right skills we need to consider how the role and competence of users changes as a result of the new technology
- Lessons have been learned from the use of human factors integration in a number of projects that show us how to include users in a structured way

- This presentation discusses how the lessons learned can be applied to help achieve successful technology insertion in the future

Toby Atkinson, Principal Human Factors Consultant,
Human Engineering

5:10 **PanCam: Trackside locomotive pantograph inspection system**

- Machine vision inspection system
- Inspects locomotive pantographs in normal service
- Promptly reports damage and wear
- Prevents dewirements (damage of overhead wires)
- Reduces inspection costs

Dr Leonard G. C. Hamey, Department of Computing,
Macquarie University

Darryl Wesche, Manager Trackside Systems, Mackay, **QR**

5:35 **Closing remarks and networking drinks**

* subject to final confirmation



Day 2 – Wednesday 30th July 2008

8:30 **Morning tea**

9:00 **Opening remarks and introduction from the Chairman**

Dale Coleman, Managing Director,
TTG Transportation Technology

NEW TECHNOLOGY IN LOCOMOTIVES AND FUEL OPTIMISATION

9:10 **Smart train technologies for improved train management**

- Sufficient research and technology exist to develop comprehensive "Smart Train" systems for train operation and management
- Many technology options and innovations have emerged that focus on the niche areas of improved train management and are separate from signalling/vital systems
- The paper will review and discuss technologies such as train state monitoring, train state prediction, cruise control, and control optimisation

A/Prof. Colin Cole, Director, Centre for Railway Engineering,
Central Queensland University

9:40 **Hybrid propulsion systems in rail**

- Update on hybrid drives in rail
- Future applications for hybrid technology
- Benefits and costs of hybrid drives

Brian Hastings, Regional Director, **Interfleet Technology**

10:10 **Energy optimisation and train scheduling**

- Energy-efficient driving strategies
- Demand responsive train planning
- Supply chain management

Prof. Phil Howlett, Industrial and Applied Mathematics,
School of Mathematics and Statistics,
University of South Australia

10:40 **Morning tea**

11:00 **AC locomotive traction technology: An update from Downer EDi Rail**

Frank Szanto, Mechanical Engineering Manager,
Downer EDi Rail

11:30 **Case study: The GE – Transportation/UGL Rail Evolution @ Series locomotive**

David McCabe, Product Manager Locomotives,
United Group Rail

12:00 **AC locomotive traction technology: An update from Siemens**



Michael Latour, Director Locomotive Sales and Projects,
Siemens AG, Germany

12:30 **Lunch**

INNOVATIONS IN METROPOLITAN RAILWAY PLANNING

1:30 **Planning railways to provide the greatest benefit to the customer for minimum cost**

- The three constraints of metropolitan railway planning
- Providing the greatest benefit to passengers for minimum cost
- The latest tools in railway timetable design

Rohan Schuppan, Director, **Systemwide**

AUSTRALIA'S RAIL TECHNOLOGY AND INNOVATION FUTURE

2:00 **Commercial applications of Rail CRC developed technologies**

- Overview of Rail CRC IP portfolio
- OZ-ECP Brakes
- Health Card

Dr Anna Thomas, General Manager,
Rail Innovation Australia

2:30 **CRC for Rail Innovation – Transformational change through collaborative research**

David George, CEO, **CRC for Rail Innovation**

3:00 **Roundtable discussion: 2020 technology actions and outcomes for rail**

All speakers and delegates will be invited to join the summary roundtable session, with the conference breaking up into discussion groups. The group discussions will be led by the speakers below, with further facilitators to be confirmed. Updates will be available at www.informa.com.au/railtechnology

David George, CEO, **CRC for Rail Innovation**

Dr Anna Thomas, General Manager,
Rail Innovation Australia

A/Prof. Colin Cole, Director, Centre for Railway Engineering,
Central Queensland University

Dr. Chris Gourlay, Research Director,
CRC for Rail Innovation

4:00 **Summary of roundtable discussion and closing remarks**

4:15 **Close of conference**

Exhibition and promotional opportunities

If you provide technology solutions or consultancy to the rail industry, the Rail Technology conference is an opportunity to showcase innovative products and services to a high-level, targeted audience. The event is not a major exhibition and as such exhibition opportunities in the boutique trade show are limited. Don't miss this unique opportunity to have frequent, direct contact with decision-makers who have purchasing responsibilities.

To find out more, contact Sarah Cullen, Sponsorship and Exhibition Manager, Rail Technology 2008 on T: +61 (0)3 9820 0535

E: sarah.cullen@informa.com.au

RAIL TECHNOLOGY 2008

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ACCOMMODATION & TRAVEL

We have negotiated a reserved rate on accommodation for delegates.
To get a quote or make booking call 1800 817 339.
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Registration fee includes the cost of papers, lunch and refreshments

CANCELLATION POLICY

Cancellations must be advised in writing at least 10 days prior to the event. An administration fee of \$440 (incl. GST) will be incurred for cancellations. A refund will not be given if a delegate fails to attend or cancels within 9 days prior to the event. Conference notes will be sent to paid delegates who cancel in the non-refund penalty period. Substitutions can be made at any time before the event without penalty.

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