‘Tell me about...’ standards

‘Which standards are relevant to my project?’
‘I don’t understand how European standards fit into the picture.’
‘This standard doesn’t make sense for my project – can I do something different?’

If your work involves standards, you might have had thoughts similar to those above at some stage and wondered how you could find the answer.

To help provide the answers to these types of question, the Industry Standards Co-ordination Committee and RSSB have jointly embarked on an initiative to provide a series of information leaflets for industry. The series of leaflets is entitled “Tell me about...”, and each leaflet provides an insight into a specific aspect of standards.

The first six leaflets are now finalised and provide information about the role of standards in the rail industry, the different types of standards, and some particular matters relating to Railway Groups Standards. They are:

- Standards and the rail industry
  This is an introductory leaflet about standards applicable to the mainline railway in Great Britain (GB). It sets out the different types of standards, their scope and application; European, National, Company and Project level.

- Railway Group Standards
  Railway Group Standards are agreed and used by the mainline railway in Great Britain (GB). They must be complied with under specified circumstances.

- Deviations from Railway Group Standards
  This leaflet is about how I could apply for a deviation from a Railway Group Standard (RGS).

- Changing Railway Group Standards
  This leaflet is about how to change Railway Group Standards (RGSs).

For details of changes to Railway Group Standards view the Latest Updates page on the RGS Online website www.rgsonline.co.uk


For details of forthcoming dates for RSSB consultations on standards and associated documents, please see: http://www.rssb.co.uk/SiteCollectionDocuments/pdf/rgs/Forthcoming%20consultations.pdf

Front page photo: Image courtesy of Network Rail
Management Changes at RSSB

Anson Jack, deputy chief executive of RSSB is to lead a board review to identify how the company can best support the industry and any changes that are needed in the period from 2014 to 2019 (Control period 5). The review is expected to last 12 months and will involve developing a new business plan and implementing any changes that arise.

Colin Dennis, head of safety knowledge and planning becomes acting director, policy research and risk in place of Anson Jack.

Jon Taylor, head of standards policy will be acting director standards and technical services following Andrew Sharpe’s decision to leave RSSB at the end of May.

Both Colin Dennis and Jon Taylor will report to Anson Jack.

Right Track issue 1 out now

The first edition of the Right Track magazine was published on 20 April. It has replaced the former Halcrow produced Red Alert publication and is designed to share developments, ideas and learning amongst the operational workforce of today’s railway. As such, it is aimed at driver’s, guards, conductors, other onboard staff, dispatchers, people on stations, signallers, shunters and depots workers, people working on the track as well as managers.

It is sponsored by Operations Focus Group and takes its place alongside other well known communications products such as RED DVD and OPSWEB. Anyone is free to contribute articles and content control is overseen by an industry consulted editorial panel comprising

• Technical Specification for Interoperability relating to structural sub-systems
  TSIs are documents that must be complied with under specified circumstances. They define the regulatory, technical and operational standards which must be met in order to satisfy the ‘essential requirements’ and to ensure the ‘interoperability’ of the European railway system. TSIs also set out expected performance levels.

• Euronyms
  This leaflet provides information about Euronyms (ENs). These are standards produced by European standards organisations.

Copies of the leaflets will shortly be sent out to key rail industry stakeholders for distribution in their companies. You can also find these leaflets on the RSSB website or obtain hard copies through RSSB (contact RSSB at standardsleaflets@rssb.co.uk).

To make sure that we are providing the right level of information, we would welcome your feedback (through the above contact point) on those leaflets that we have produced so far.

Further leaflets will be published over the coming year. If there is a topic that you would like included in this series, please let us know.
RSSB and the International Union of Railways (UIC) have signed a new Memorandum of Understanding, forging a stronger partnership with a focus on knowledge sharing. UIC will be working closely with RSSB to use SPARK http://spark.rssb.co.uk – the rail industry’s on-line knowledge sharing portal developed and managed by RSSB – as the global platform for accessing rail knowledge and promoting its use with its members.

As well as benefiting UIC members with a ready-made solution, this will benefit members of RSSB, RRUKA and knowledge sharing partners as it will expand SPARK’s reach, the breadth and depth of knowledge available and open up new international connections.

More details on this new venture will follow in future editions of Information Bulletin and other communication channels or contact Luisa Moisio, head of programme strategy and analysis, luisa.moisio@rssb.co.uk

Development and implementation of new supplier assurance arrangements

The RSSB led project to modernise and improve current supplier assurance arrangements practiced by GB rail is to commence practical implementation over the next 12 months through the following activities:

Part 1 - Development of the risk management enabling tools.

These are to comprise the publication of a single new supplier product/service classification catalogue for the whole industry based on international standards; the development of a new supplier product/service category risk assessment tool to determine the level of supply chain imported risk to the railway; the specification of universally recognised assurance requirements for the assessed level of supply chain risk for each product/service category and the definition of assurance interventions that will satisfy...
the identified requirements. These enabling tools will all be available by end of June and will then be practically applied by the stakeholder community through the following activities.

Part 2 - Application to Network Rail and its supply chain.

Commencing in June, Network Rail is to engage “in house” and supplier representatives to progressively apply the supplier risk assessment tool across all relevant product/service categories with the objective of defining the appropriate risk level for each and also specifying the appropriate assurance requirements. This project will take around 6 to 9 months to complete and RSSB will support Network Rail in this task.

Part 3 - Application to passenger and freight operators, ROSCOs and other main procurers.

In parallel with the Network Rail exercise, the RSSB project manager is to undertake a similar project with the other main procurement organisation in the industry. RSSB is to shortly write to each of these companies explaining the process and timetable for this delivery of this important project.

Part 4 - New Rail Industry Standard (RIS).

To help embed this modern, risk based approach including recognition and adoption of the associated tools, the long standing Railway Group Standard GM/RT2450, Qualification of Suppliers of Safety Critical Products and services is to be replaced by a new RIS which is to be published in April 2013.

Part 5 - Resource Centre.

RSSB is to create, populate and support a new “on line” resource centre which will contain the new supplier product/service catalogue, the risk assessment results for each product/service category along with the defined assurance requirements for each. The resource centre will also contain the tools and supporting guidance.

In parallel with the above, RSSB will also continue to work with Link-up and the other third party supplier assurance schemes to help align their activities, interventions and outputs to support the above.

Implementation of the above, will for the first time create a coordinated, transparent and risk based approach to the assessment of supplier risk on the modern railway system which will not only help improve assurance but will start to deliver the cost saving opportunities identified by independent research and create a platform for further industry cooperative action to improve supplier risk management.

For further information, contact Brian Evans, supplier assurance project manager at brian.evans@rssb.co.uk.

Developing a 30-year strategy for rail mobile communication technology

On behalf of the Technical Strategy Leadership Group RSSB has completed the latest phase of a research programme looking at a strategy for rail mobile communication technology and service development. The pace of change in mobile communication technology has been considerable, with new consumer interfaces and device capabilities becoming available ever faster. In addition, customers are demanding faster and more reliable services, unhindered by lack of coverage.

Arising as a direct result of the consultation on the rail industry’s Rail Technical Strategy, research was undertaken to address the potential opportunities from improved mobile connectivity for passengers and GB rail. In addition, the UK government’s National Infrastructure Plan refers to the need for better mobile coverage on Britain’s railways and the need for greater cooperation between rail and mobile network providers. Previous approaches have been bespoke.

This research aimed to identify opportunities for using mobile comms in passenger value-added communication services (for example provision of information about rail operation and mobile services on trains) and in operational scenarios (for example communication to enable the movement of trains). Outputs include reports covering technology and commercial options, a cross-industry business case, procurement guidance, and a connected services framework.

The key findings were:

• Mobile communications can enable key operational applications for train operating companies and Network Rail to increase the efficiency of rail operations.
• Improved mobile communications on railways would increase the number of passenger kilometres travelled.
• The installation costs of mobile communications gateway equipment on trains to enable wireless coverage are not prohibitive.
• A sequential and route-based approach is preferable to a national ‘roll-out’ as it reduces the timescales and costs for implementation.
• A 4G roll-out could reduce coverage costs by 35% compared to 3G.
• Rail mobile communications should ultimately migrate onto public 4G networks, and avoid bespoke developments such as GSM-R.

As a result, the rail industry now has a business case outlining a 30-year strategy, which, if implemented, would enable the coordinated adoption of mobile broadband services in three waves.
1. A progressive implementation of Mobile Communications Gateway equipment on rolling stock (both existing and future), to enable mobile signals to be better received on train vehicles.

2. The use of Network Rail assets to facilitate better coverage of public 3G and future 4G networks on or close to the rail environment.

3. The ultimate migration of rail mobile communications applications onto 4G networks.

Chief executives and managing directors of rail companies, who had been consulted on this strategic project, have been written to advising them that the research has been published; it can be found on SPARK under T964 or on the RSSB website at http://www.rssb.co.uk/RESEARCH/Lists/DispForm_Custom.aspx?ID=1007.

A briefing note is also available, providing a short explanation of method and findings.

The research was sponsored by the Technical Strategy Leadership Group (TSLG) and the Future Communications and Positioning Systems (FC&PS) Advisory Group.

For more information, contact John Stafford, control, command and signalling engineer, john.stafford@rssb.co.uk or Louise Webb, strategic research manager, louise.webb@rssb.co.uk.

Risk Management Forum 2012

RMF was held at RSSB’s offices in April, for the third consecutive year, welcoming 110 delegates and eight speakers; representing 70 different organisations of which half were RSSB member companies.

The day started with a session on Occupational Health. John Abbott, RSSB’s director of national programmes spoke on Health and Well Being and provided some scene setting, by defining the challenges the industry faces and the project, of the same name, that has been initiated to address the challenges. This session continued with presentations from Caroline Meek, Network Rail on the health risks arising from ballast dust and Jack Wheale, ATOC on the costs and benefits associated with TOC occupational health issues.

The second session was on Human Factors and Human Error. Ann Mills from RSSB asked why we should measure Safety Culture and outlined the latest developments to the RSSB Safety Culture Tool Kit. This was followed by Paul Taylor, who presented on Network Rail’s Safety Culture Leadership programme; highlighting the changes that Network Rail are making to improve safety culture. Huw Gibson concluded by presenting on a railway specific method for assessing human error; this featured a sound bite of the communications between air traffic controllers and pilots.

Tim Marsh from Ryder-Marsh spoke on The Psychology of Safety Culture and Leadership – People and Behaviours, covering topics such as Safety Culture, Behavioural Safety, Human Error and Just Culture, Management and Supervisory Cues, and Why we take risks?

The final session of the day was on Common Safety Methods. Brian Tomlinson, Network Rail, spoke on the CSM for Monitoring, which will be introduced later this year. Colin Dennis from RSSB and Ed Hodson from DB Schenker then presented on what the CSM for Risk Assessment means and its practical application, using as an example DB Rail’s application to operate trains through the Channel Tunnel.

The presentations can be viewed on SPARK or at www.SafetyRiskModel.co.uk

Potential benefits of all Electric Braking T860

This research project was commissioned on behalf of the Vehicle-Vehicle Systems Interface Committee (V/V SIC), to assess the current dynamic brake capability of trains under all service and emergency braking situations; to consider how the rail industry could exploit an ‘All-Electric Brake’ with no pneumatic brake and to discuss the impact of an ‘air free’ train on the other vehicle systems.

The research considered the benefits of future rolling stock, the constraints that would need addressing to permit this approach and proposes alternative solutions that would need to be adopted to replace the air systems on trains.

Modelling has suggested that an ‘All-Electric Brake’ EMU could be achieved with a 75% motored four car unit fitted with eddy current track brakes on six bogies. Similarly, an ‘All-Electric Brake’ high speed train could be achieved with a 50% motored nine car unit fitted with eddy current track brakes on nine bogies. The simulations completed for this research are based on designing an all-electric brake capable of achieving a nominal service braking rate of 0.6ms-2 for an electrical multiple unit, EMU, and 0.3ms-2 for the high-speed train. In emergency situations higher braking rates could be achieved with the all-electric brake being supplemented by additional limited use friction brakes.

Evidence was gathered from interviews with Infrastructure Managers, Train Operating Companies, Train Leasing Companies and suppliers of vehicles, traction systems and friction braking systems as well as examination of specifications, standards and overseas experience.

There are a number of constraints to the adoption of an all electric brake including the current requirement for a safety
critical friction brake, the mandating of a dynamic brake that can be isolated without affecting emergency braking or the inhibition or interruption of traction power in an emergency. Compatibility issues between the infrastructure and eddy current brakes would need to be addressed.

The project suggests there could be a significant cost benefit in adopting an ‘All-Electric Brake’ philosophy over a 25-year lifetime of train systems due to the reduced maintenance requirements, reduced use of friction brake consumables and energy savings. Savings could also be made in electrification systems if regenerative braking is considered at the design stage and these could be of the order of £6M to £8M for a new 20km line. However, there are many significant long term issues that would have to be addressed before the industry could switch toward an all-electric braking approach and the V/V SIC will be considering these as it assimilates the findings and recommendations.

The findings from T860 Benefits of all Electric Braking have been presented to representatives from the industry at a workshop and will be available on the RSSB website and Spark.

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**Operations Focus Conference, 03 October 2012**

The first Operations Focus Conference is scheduled for 03 October 2012 and it is going to be hosted by Network Rail at its Training Centre, Westwood, Coventry.

Like the former National Operations Risk Conference, this event is sponsored by the Operations Focus Group (OFG) and presents a fantastic opportunity to hear from industry experts and colleagues on how the rail industry is tackling important risk management topics.

The conference is going to be chaired by Charles Horton, managing director, Southeastern with a full programme currently being developed. The conference will hear from industry experts in the areas of - safety culture, technology, managing change, learning from the 2012 Olympic Games, safety critical communications and the future of safety cooperative working. It will also hear from some initiatives from outside the railway industry, with speakers invited from NATS and the military.

Invitations are about to be sent out to relevant colleagues in passenger operators, freight operators, Network Rail, LUL, major contributors and other related organisations. The conference is free to attend but pre-registration is a must.

For further information contact Susan Cassidy, programme manager, operational safety on 020 3 142 5373 or email susan.cassidy@rssb.co.uk.