Annual Report from the System Interface Committees (SICs)
Presentation to the RSSB Board 06 September 2012

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There are five System Interface Committees (SICs)

Purpose is to help the industry manage interfaces in an effective and efficient way

SICs are major clients for research

RSSB supports the SICs through:
- meetings management
- Facilitation
- technical advice
- delivery of research projects

The SIC Protocol sets out a framework for the establishment, operation and management of SICs
- Proposal for amendment
Vehicle/Train Control & Communications SIC

- Developed a system architecture and process framework for a Defect Report and Corrective Action System (DRACAS)
  - expected financial benefits of £500m over 20 years if implemented
  - ERTMS ETCS is likely to be the first application

- Supported the introduction of a Driver Advisory System (DAS) as part of the Future Traffic Regulation Optimisation (FuTRO) programme of work to:
  - improve time-keeping
  - save energy
  - reduce cost
Vehicle/Train Energy SIC

• continued to develop the strategy for converting the 750V DC system to 25kV AC. The benefits are:
  – reduced cost of operation
  – increased performance
  – increased capacity
  – scaleable power supply system

• The start of this work is now contained in the new HLOS statement for CP5

• Network Rail now confident of the benefits
  – need to consider diverting the funds from the large-scale renewal of 750V DC equipment to 25kV OLE electrification.
Vehicle/Vehicle SIC

• Workstreams in support of the Rail Technical Strategy to develop remote condition monitoring strategies:
  – trials of Automatic Vehicle Identification (AVI) technology
  – associated Radio Frequency Identification Readers (RFID)
  – improving current condition monitoring equipment
• Research into benefits of all-electric braking
  – a train that is less susceptible to low adhesion conditions
Vehicle/Track SIC

- P12 ‘anti-RCF’ wheel profile has provided unforeseen benefits:
  - improvement of stability at high speed
  - reduction in tread damage, increasing the typical wheelset-reprofiling mileage for the Class 390 fleet

- Trials of the variable stiffness yaw suspension bush
  - likely to reduce system costs by several million pounds to South West Trains
  - further investigations are underway by other operating companies

- Development of decision support tools:
  - Vehicle Track Interaction Strategic Model (VTISM), Wheelset Management Model (WMM); Track-Ex tool
Vehicle/Structures SIC

- Focused on measures which will make it easier (and hence more cost effective) to establish if a vehicle has clearance on any particular route:
  - Developing a lower sector gauge
  - Examining the introduction of a database of vehicle gauging data which it would be mandatory to populate
  - Published a ‘Guide to British Gauging Practice’
  - Promoted use of statistical gauging methods (early application has enabled approximately £1m to be saved in the electrification of Haymarket Tunnel)
Proposal to amend SIC Protocol

• Changes to SIC Protocol are proposed to:
  – reflect the changes to the governance arrangements for RSSB research projects agreed in 2011
  – simplify the means of setting out the level of support that RSSB provides to SICs and their subgroups
  – require the governance of SIC subgroups to follow the same arrangements as for SICs
  – update the items that must be included in SIC subgroup remits

• The board is invited to:
  – **NOTE** the report of the activities of the five SICs
  – **APPROVE** the proposed amendments to the SIC Protocol