



AUSTRALIAN RAIL TRACK CORPORATION LTD

MEDIA RELEASE

ADVANCED TRAIN MANAGEMENT SYSTEM SOUTH AUSTRALIA TRIAL: STAGE 1 RESULTS A SUCCESS

Australian Rail Track Corporation today announced that Stage 1 of the Advanced Train Management System (ATMS) Proof of Concept phase has been successfully completed.

The Stage 1 trials were designed to establish whether the ATMS could replace 'on track' signals and manage trains using a sophisticated computer program and a Global Positioning System (GPS).

ARTC CEO, John Fullerton explained that Stage 1 culminated with a series of successful physical trials on ARTC track between Port Pirie and Port Augusta to the north of Adelaide.

"This successful trial stage provides a real boost to the project. It proves the core concepts of ATMS and paves the way for the Stage 2 works which will focus on delivering capacity improvements," Mr Fullerton said.

"The ATMS represents a 'new wave' of infrastructure technology designed to significantly increase the capacity of rail freight. It continues ARTC's ongoing commitment to make rail freight even more competitive, ultimately getting more goods off heavy trucks and onto rail," he said.

The Stage 1 trials successfully used the Telstra Next G telecommunications network and showed the system capability to:

- deliver and display electronic movement 'authorities' to the train;
- manage both trains fitted with ATMS on-board equipment as well as unfitted trains;
- accurately determine the exact position of the train on the rail link;
- enforce current track speeds;
- enforce 'end of authority' limits; and
- monitor and remotely control switches.

Stage 2 works are well advanced with final design documentation completed, soon to be followed by software development, integration and testing.

The Stage 2 functionality will focus on using smaller virtual track segments to introduce capacity improvements.

It will also be able to manage the full range of train and track worker 'authorities' needed for safe and efficient operation of the rail network.

Mr Fullerton said that the design of ATMS has involved, and will continue to involve, extensive consultation with numerous stakeholders including train drivers, network controllers, infrastructure workers and rail regulatory authorities.

“Successful completion of Stage 1 gives ARTC and the Australian rail industry confidence that a new paradigm for train control is both achievable and a viable alternative to conventional signalling systems,” he said.

ARTC worked closely with its partner Lockheed Martin and its sub-contractors, Ansaldo-STS and Seneca on this project.

For further details on ATMS please refer to the website (www.atms.artc.com.au).

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BACKGROUND

ATMS is the Advanced Train Management System which will provide significantly upgraded capabilities to the rail industry of Australia.

ATMS is designed to support ARTC’s objectives of improving rail network capacity, operational flexibility, train service availability, transit times, rail safety and system reliability.

The system will:

- Replace trackside signaling with in-locomotive displays of authorities to drivers;
- Provide precise location of trains both front and rear using satellite based GPS technology;
- Provide new digital network control centres, each capable of controlling all traffic on the ARTC national network;
- Provide a back up capability in the event of failure at one control centre;
- Provide enforcement of authorities on each locomotive if a train is at risk of exceeding its authority;
- Provide switch settings and automatic route clearances; and
- Provide information (voice and data) to all locomotives via the Telstra 3G National Network.

Benefits

When ATMS is fielded it is expected to provide:

- Increased rail capacity through closer train operation;
- Improved reliability through better on-time performance;
- Improved efficiency and flexibility of the rail network;
- Increased safety through authority and speed limit enforcement;
- Additional protection for trackside workers;

- Operator savings through less fuel consumption, less wear of wheels and brakes, and fewer train crew hours; and
- Reduced operation and maintenance cost for the trackside infrastructure.