



Media Release

ARTC NEXT GENERATION TRAIN MANAGEMENT LAUNCHES RAIL INTO THE NEXT CENTURY

15 May 2013

ARTC has welcomed the Australian Government's Nation Building investment of \$50 million into the first stage implementation of an Advanced Train Management System (ATMS) on the Australian Rail Track Corporation's (ARTC) Interstate network, CEO John Fullerton said today.

The investment will see the technology tested and implemented on the Interstate network between Port Augusta and Tarcoola in South Australia and prepare a section of track for ATMS between Tarcoola and West Kalgoorlie in Western Australia.

"ATMS is a smart train management system that can locate and control trains on the network allowing them to travel at closer intervals safely and has collision avoidance systems and remote braking override to help prevent accidents," Mr Fullerton said.

"This system is a first for Australia and it's at the cutting edge of rail management systems anywhere in the world.

"ATMS will not only vastly improve the safety of the network for train crew, track workers and passengers, but it will transform the rail industry in Australia by substantially increasing capacity and avoid the need to build additional tracks and sidings.

"The productivity benefits of this investment are huge and we look forward to working closely with rail operators, adjoining track owners and the national rail safety regulator on bringing these benefits to our Interstate network."

Mr Fullerton said the investment follows the completion this year of a successful proof of concept phase.

"With Lockheed Martin as our partner we have proven the concept in a trial environment and it's now time to put this to the test under actual operating conditions.

"We intend to start the implementation on a discrete section of the network to test and trial the system under full operating conditions over the next three years before we begin discussions with rail operators and customers elsewhere to consider further rollout across our Interstate and Hunter Valley networks."

This investment complements a suite of improvements already underway in this all-important corridor including:

- \$35m train control system upgrade and additional crossing infrastructure between Adelaide and Tarcoola; and,
- \$60m re-railing between Koolyanobbing and Kalgoorlie.

“Rail continues to dominate the land transport market on the East-West corridor and is increasingly recognised as key to the solutions required for the growing freight challenge on Australia’s east coast.

“A future rollout of ATMS on the Interstate and Hunter Valley networks will transform the rail industry and the businesses that rely on it.

“The safety, capacity and productivity benefits that this system will deliver are nothing short of game changing and as the custodian of our nation’s Interstate network ARTC is excited for our nation’s freight future,” Mr Fullerton said.

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ABOUT ATMS

Advanced Train Management System (ATMS)

ATMS is a specially-tailored, ‘smart’ train management system that uses wireless, broadband communications, a centralised and on-board computer control system and GPS-based train tracking and control devices to manage train operations.

Rather than using the traditional signalling method of fixed ‘block lengths’, where trains are given authority to operate in distinct geographical sections of the network, ATMS replaces signals and other trackside infrastructure used to locate trains with a digitally-controlled network that manages much shorter, ‘virtual’ block lengths such that trains operate with shorter distances between each other.

These virtual block lengths provide the ability to manage and control trains far more closely and as a result, increase capacity and reliability through better on-time-running and provide greater safety outcomes through management of train authorities and speed limit enforcement.

ATMS also promises to lower costs for rail operators through reduced fuel consumption, less wear on wheels and brakes, fewer train crew hours and less trackside infrastructure maintenance requirements.

What does the system do?

With ATMS, train drivers are able to view the appropriate authorities¹ for their train through an in-cab based display rather than lineside signals or paper-based information. It shows the exact position of the train (at front and rear), advice of the train authorities that must be followed, and the proximity of other trains on the network and trackside workers.

ATMS also provides new capability to network control centres, each able to digitally locate and control all traffic on the ARTC network as well as deliver information (both voice and data) to locomotives and provide a backup capability to other network control centres in the event of a failure.

Finally, ATMS will include collision avoidance capability by digitally 'reaching into' the drivers cab to apply brakes of the train if the train has exceeded its limit of authority. This feature will dramatically improve safety by maintaining safe train separation and will protect workers maintaining the track.

Visit <http://atms.artc.com.au/> for more information.

¹ An authority is the permission provided by a network controller to a train allowing it to operate on a certain section of the rail network.