

Siemens and Denmark's DAMM partner to offer ETCS Advanced Train Control systems with TETRA Radio communications

- Agreement enables the interoperable European Train Control System (ETCS) to be used with long range TETRA communication standards.
- Makes next generation on-board train control system significantly more affordable in the Australian Market.
- Paves the way for Australian rail networks to introduce advanced train control systems with next generation rail communications.

Siemens and Denmark's DAMM, one of the leading providers of TETRA communication platform, announced an agreement to combine the international train control standard ETCS with the long range radio communication system TETRA for rail operators in Australia. The agreement will, for the first time, allow mining, freight and other entities to use long distance communication networks to control ETCS-enabled trains with communication towers installed at distances of 10+ kilometres instead of the current typical requirement of 5-7kilometres.

The agreement stemmed from the fact that the standard communication protocol used in European railways (GSM-R) is more suited to small distances and high population densities. ETCS is quickly becoming the world standard for Main Line train control, however in countries like Australia, the large distances can make this very expensive to deploy. Combining ETCS with TETRA communications allows this interoperable standard to be deployed at a significantly reduced investment.

Speaking on the partnership, Max Eichhorn, Executive General Manager of Siemens Mobility in Australia and New Zealand said that, "Moving passengers and goods quickly, efficiently and safely is a daily challenge for most vendors. This cutting-edge solution leverages the power of TETRA technology to tackle the daily operational challenges and high long-term capital costs of rail networks moving across the significant distances within Australia.

"With each state mandating their own networks and no national framework, we wanted to introduce the most interoperable platform using ETCS that works anywhere in Australia. The agreement is particularly ingenious as it leverages existing infrastructure and networks, without the need to invest more, and prepares Australian rail for future technological progresses."

Providing voice and data for critical emergency communications services among others, TETRA is a European standard. It operates over frequencies in the 400MHz region and gets a greater range than GSM or LTE which are 1.8, 2+ GHz, though with lower bandwidth.

TETRA's popularity in the Australian mining sector has stemmed from the fact that DAMM's systems are decentralised rather than centralised, making them more reliable for customers. Their systems are also more RF sensitive, requiring fewer towers.

"TETRA is a great fit for the mining industry as they are keen to deploy advanced systems like driverless trains and ETCS to get maximum efficiency. Using TETRA, Siemens enables the industry to do more with less, therefore increasing competitiveness," added Max.

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Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 165 years. The company is active in more than 200 countries, focusing on the areas of electrification, automation and digitalization. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens is No. 1 in offshore wind turbine construction, a leading supplier of gas and steam turbines for power generation, a major provider of power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. The company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT. In fiscal 2015, which ended on September 30, 2015, Siemens generated revenue of €75.6 billion and net income of €7.4 billion. At the end of September 2015, the company had around 348,000 employees worldwide. Further information is available on the Internet at www.siemens.com.