SIEMENS

Media
Release

Australia, November 25, 2015

Local ingenuity creates smart rail technology

- Siemens launches locally designed remote diagnostics and data management system for rail automation and digitalisation
- Converts big data to smart data
- One example of helping Australian rail get on the journey to intelligent infrastructure

A small team of Australian-based Siemens rail engineers have designed and developed a Remote Diagnostic and Advisory System (RDAS) that can help predict the future to avoid pitfalls. The product was launched at AusRAIL PLUS 2015 in Melbourne and according to the local head of Siemens mobility division, Max Eichhorn, it is just one example of how Australia can innovate in rail and compete at a global level through intelligent infrastructure.

"Australia needs to have globally competitive infrastructure to attract business investment and the best talent. This is about overlaying high-end digitalisation technology into both new and existing infrastructure to make it more efficient. There is a global trend and race to build intelligent infrastructure," Eichhorn said.

RDAS will, for the first time, bring disparate systems on the network into an integrated platform, giving operators the ability to view all their assets in real-time through one consolidated application – **a function that does not currently exist.**

RDAS monitors interlocking, network peripherals, point machines, signals, axle counters and others. Currently each device uses individual monitoring tools.

SIEMENS

Siemens Ltd
885 Mountain Hwy
Bayswater, Victoria

Unrestricted

Page 1/4

"Our RDAS reaches out to each device, collects the information centrally and then displays it in an intuitive way to allow the operator to drill down to the individual item to see what is really happening.

"There are several diagnostic systems in the rail industry, but this is the first technology-agnostic system which brings together many disparate systems into the one view. It's a powerful tool for any network provider," added Eichhorn.

According to Eichhorn, the potential for efficiencies and savings are enormous - "Take just one scenario of predicting faults in train doors. We've found that by measuring the current on the motors that open and close the door, via our Remote Diagnostic and Advisory System we can now predict 85% of the time when a fault is going to occur – before it actually occurs. This means that we schedule a train for service rather than taking a train out of service and disrupting thousands of commuters."

The functions can be deployed with quicker turnaround and with fewer resources – **allowing rail networks to do more with less input, cost and time**.

"For Australia to be more competitive globally, we need to modernise existing infrastructure networks and build new ones with future growth in mind. As people get smarter about how they use time, intelligent infrastructure that allows a seamless commute, will play a big role in our productivity as a nation and the investments we attract into the country," added Eichhorn.

Focused on modernising existing infrastructure to be more efficient and creating new infrastructure that can cope with the increasing demands over the coming decades, RDAS technology will help rail networks progress with automation and digitalisation.

The system was developed in Melbourne and Brisbane for rail network operators. Siemens is leading the intelligent infrastructure dialogue globally and in Australia through these pillars:

SIEMENS

Siemens Ltd
Bayswater, Victoria

- moving from operating independently and in silos to integrating modes
- smarter data management – big to smart data with remote diagnostics and monitoring
- using 3D printing technology to simulate and create models more cost-effectively
- automation of existing infrastructure
- from a 'find and fix' to 'predict and prevent' mode
- better and more efficient use of existing assets through its lifecycle – 'sweating the assets'

With at least $50 trillion needing to be spent globally on infrastructure development between now and 2030, Siemens has significant initiatives in the area of digitalisation to provide users with smart decision support tools.

"Technologies such as the RDAS and 3D printing play a crucial role in not just our competitiveness now, but also in our nation's ability to lead the way in the fourth industrial revolution," added Eichhorn.

-Ends-

Note to editors: Examples of Siemens intelligent infrastructure implementations
Through intelligent infrastructure projects around the world, Siemens has helped deliver 20-30% capacity increases with driverless trains; savings of up to 30% on rolling stock lifecycle costs; approximately 20% increase in city traffic speed; and 30% energy savings in road and rail. Some of these include:

- Helping **Auckland Rail** recently set a global benchmark in intelligent infrastructure when it became the first city in the world to run all its electric passenger trains with full European Train Control System (ETCS) supervision, the global benchmark for rail safety.
- **Paris Metro**: Driverless Metro Line 1 in Paris is increasing the capacity of the line by ~70,000 passengers every day.
- **The London Crossrail** will significantly increase the throughput in the inner city – halving travel time for many commuters. An additional 1.5m people will be able to access central London in less than 45 minutes.

SIEMENS

Siemens Ltd
Bayswater, Victoria

- **Metro Riyadh, Saudi Arabia**: The Riyadh Driverless metro trains turnkey projects will increase capacity by 50% and generate 15% energy savings.
- **U-Bahn Nuremberg**: Germany's first driverless mass-transit train line is the first in the world for the step by step migration of a conventional metro system to a driverless system.

Media Contact
Keith Ritchie
Keith.ritchie@siemens.com
0457 841 189

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 combined cycle 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 2014, which ended on September 30, 2014, Siemens generated revenue from continuing operations of €71.9 billion and net income of €5.5 billion. At the end of September 2014, the company had around 357,000 employees worldwide. Further information is available on the Internet at www.siemens.com.

SIEMENS

Siemens Ltd
Bayswater, Victoria