Telstra, Ericsson and Ciena achieve world's fastest speeds on the Telstra transmission network in Melbourne

Telstra, Ericsson (NASDAQ: ERIC), and Ciena (NYSE:CIEN) today announced they had successfully demonstrated 400 gigabit per second (Gbps) speeds over 61.5 GHz spectrum on Telstra's transmission network in Melbourne. This demonstrates the highest spectral efficiency per fibre pair ever achieved in a live environment and enables up to 30.4 terabit per second (Tbps) bandwidth on Telstra's transmission network in Melbourne.

This technology will be introduced as part of the upgrade Telstra is completing across its long haul, metro and regional optical network under the Networks for the Future program to deliver increased capacity, enhanced resiliency and fully programmable capabilities.

The achievement enables up to 30.4 Tbps per fibre pair – which is the equivalent to 1.2 million 4K Ultra HD videos being streamed simultaneously – the most capacity ever achieved, with the previous highest on record being 25.6 Tbps. It is made possible through the deployment of software programmable 400Gbps wavelengths using Ciena's WaveLogic Ai modem technology on the 6500 Packet-Optical Platform, in combination with Ciena's Blue Planet Manage Control Plan (MCP) and Liquid Spectrum applications.

Telstra has deployed the industry's first fully programmable coherent modem in the world – developed by Ciena. It offers up to three times data capacity and enables up to 60 percent reduction in power per bit compared to the modem technology currently deployed in the Telstra network. These technologies also open up the opportunity for more flexibility and dynamic software based control of Telstra's optical transport network. This technology gives Telstra the ability to adjust bandwidth in the network in real-time to optimise capacity and fibre investment to meet customer demands.

David Robertson, Director of IP and Transport Engineering at Telstra, says: "Over the next five years we forecast traffic on our network will grow by five times. We are investing in our network and developing these innovations to meet this growing demand by providing unprecedented levels of scale, automation and intelligence. This technology will be deployed in our domestic transmission network and we will look for opportunities to use it in Telstra's international subsea cable network, which is the largest in the Asia-Pacific region."

Emilio Romeo, Head of Ericsson Australia and New Zealand, says: "We are proud to be supporting our long-term partner Telstra with end-to-end systems integration expertise to deliver innovative solutions that will ultimately improve overall efficiency of the network. Deployment of these technologies will help Telstra to prepare for the ever-increasing demand for data. This will give Telstra the ability to predict and address connectivity and capacity challenges as they emerge, enabling them to respond and allocate capacity across paths in real time."

Steve Alexander, Ciena's Chief Technology Officer says, "As high-bandwidth applications become further ingrained in our daily lives, the implementation of a more intelligent and adaptive network – one that lets operators eliminate complexity by combining intelligent automation, real-time performance monitoring, and the ability to continuously tune their network – is critical. These accomplishments will prepare Telstra's network to better respond to customer demands."

This achievement will lay the foundation for Telstra's Networks for the Future program delivering efficiency, scalability and programmability to the network to meet future demands.

About the technology and implementation:

- WaveLogic Ai is the industry's first fully programmable coherent modem, with tunable capacity up to 400Gbps, that delivers maximum network performance at minimum cost.
- The state of the art technology is managed and controlled by Ciena's Blue Planet MCP domain controller and Liquid Spectrum applications.
- Liquid Spectrum provides a software-defined platform that will allow networks to predict and address connectivity and capacity challenges as they emerge.
- Ericsson provides end-to-end systems integration to supply, install, and integrate the next generation of optical equipment into Telstra's transmission network and managed the deployment of technology for this demonstration, together with Telstra and Ciena.

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