

# **Spectrum bands combined on live network for more than 1 Gbps downlink**

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Optus, one of the leading mobile operators in Australia, and Nokia Solutions and Networks have attained an aggregate downlink of 1.7 gigabits per second (Gbps) from a single site on the operator's live network using commercially available NSN equipment. The site, in Sydney, combines six frequency bands supporting HSPA+, FDD LTE and TD-LTE radio technologies to provide such exceptional capacity, underscoring Optus' credentials as an innovative mobile broadband operator.

"With this world first 'Gigasite', we are showing the capacity of all our spectrum assets, including our recently purchased 700, 2300 and 2600 MHz bands, by combining multiple layers and technologies onto a single site. Trials such as this are vital in enabling Optus to prepare for our network of the future, and support more users and more data per user while at the same time enhancing the customer experience," said Andrew Smith, Vice-President of Mobile Engineering, Optus.

"The beauty of this trial with Optus is that it uses equipment and technologies already deployed in today's commercial networks," said Stephen McFeeley, head of Australia and New Zealand at NSN. "This is an important step because we foresee that networks will need to be readied to profitably deliver 1 Gigabyte of data per user per day on average by 2020."

Using NSN's commercially available Single RAN Advanced which is based on its compact, energy-efficient Flexi Multiradio 10 Base Station,

Optus took advantage of six of its existing 3GPP spectrum allocations to build a live network site at St Mary's in western Sydney. The aim was to demonstrate the technology needed to meet burgeoning [mobile](#) broadband demand.

The site was built using HSPA+, FDD LTE and TD-LTE technologies in a lean site solution implemented with the award-winning Flexi Multiradio 10 Base Station. The NSN Flexi Multiradio 10 Base Station is the industry's highest capacity [base station](#).

Provided by Nokia Siemens Networks

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