



Media release

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nbn demonstrates gigabit future of HFC

Ultrafast trial highlights potential upgrade path

NBN Co, the company building Australia's broadband access network, has achieved trial download speeds of 994Mbps, or 1Gbps,* during a technology trial on the Hybrid-Fibre Coaxial (HFC) access network.

The in-field trial in Templestowe, Victoria, demonstrates the potential for around 2.5 million homes and businesses that use or are due to be connected to the **nbn**™ HFC access network across Australia.

During the trial, next generation DOCSIS 3.1 technology demonstrated its capability over an expanded spectrum range to support future wholesale speed upgrades using a standard **nbn**™ HFC connection box in the home.* The trial provided new insights to guide future technical development and planning.

A related lab test with DOCSIS 3.1 demonstrated trial upload speeds of 988Mbps*. Both trials used the expanded spectrum range inside the coaxial cable that **nbn** will progressively start using as part of the introduction of DOCSIS 3.1 technology.

These latest demonstrations build upon an ongoing program to improve customer experience on the HFC network, including technology upgrades and infrastructure improvements geared towards providing an HFC network that delivers on customer expectations today and into the future.

nbn Chief Technology Officer, Ray Owen said:

"This is an important day for **nbn**. It shows how a specific technology – HFC – is evolving to meet customer demand for greater capacity from their broadband connection over time.

"It's good news for both residential and business customers using HFC as we have demonstrated both the wholesale download and upload capacity of this technology.

"As we work to complete our network rollout, we're constantly looking at what's over the horizon for all of our technology assets and how we can evolve our network as demand grows."



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Resources

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Notes to editors

- The in-field trial used a non-RSP connected test service over **nbn**'s HFC network – at layer 2 – in the home of an **nbn** customer in Templestowe, Victoria. A direct link was established between the home and the local Point of Interconnect in North Balwyn.
- In reference to this technology trial being conducted on 'Layer 2' this means **NBN** Co conducted the works on its own infrastructure, bypassing Layer 3 networks that belong to retail service providers.
- This optical node is still in co-existence, meaning that **nbn** is sharing the spectrum (inside the HFC cabling) with Telstra's (non-**nbn**[™]) broadband service. **nbn** also shares spectrum with Pay TV operators including after the co-existence period ends. The expanded spectrum used during this in-field trial refers to spectrum **NBN** Co has access to due to a progressive bandpass filter swap program.
- The home where the service was tested is a regular private residence with a standard **nbn**[™] HFC connection.
- The potential development of an ultra-fast speed tier offering on the **nbn**[™] HFC network would require advanced technical work, consultation with retailers and vendors and shifts in market dynamics. Analysis of data growth suggests that downstream traffic demand is increasing faster than upstream traffic, suggesting that customers may prefer additional downstream performance. These trials allowed nbn to gather important new insights for the work that is required to support this potential market dynamic.
- This HFC gigabit trial using DOCSIS 3.1 is part of an ongoing program of work by **nbn**'s technology office to plan future upgrade paths on **nbn**'s access networks. Previous trials and demonstrations have included G.FAST and XG.FAST for FTTN/B/C, NGPON2 and XGS PON for FTTP, and new technology for the transit and wireless networks.



- * **nbn** provides services to its wholesale customers, telephone and internet service providers, and does not provide services directly to end users. These speeds were achieved by an end user in the context of a trial and are not necessarily reflective of the speeds that will be experienced by end users. An end user's experience, including the speeds actually achieved over the **nbn**[™] broadband access network, depends on the **nbn**[™] access network technology and configuration over which services are delivered to their premises, whether they are using the internet during the busy period, and some factors outside of **nbn**'s control (like their equipment quality, software, chosen broadband plan, signal reception, or how their provider designs its network). Speeds may also be impacted by the number of concurrent users on the **nbn**[™] Fixed Wireless network, including during busy periods. Sky Muster[™] satellite end users may also experience latency.

For more information, visit www.nbn.com.au