Comcast and Ciena Achieve 600G Milestone Across 1,600-Kilometer Connection

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Record-breaking performance from Newark to Pittsburgh demonstrates the future of network capabilities

HANOVER, Md. & PHILADELPHIA, Pa.--(BUSINESS WIRE)--

With the number of 4K content, gaming and augmented and virtual reality applications continuing to increase, Comcast is advancing its network to provide better immersive digital experiences to millions of customers. Employing Ciena's (NYSE: CIEN) WaveLogic 5 Extreme (WL5e) and flexible grid technology, Comcast recently conducted the world's first long-distance 600Gbps single wavelength pilot deployment, which carried live commercial traffic across more than 800km between core peering locations in Newark, New Jersey, and Pittsburgh, Pennsylvania. To test the full capabilities of the technology, Comcast also looped back the signal and verified successful operation of 600Gbps across 1,600-kilometers.

This significant industry milestone demonstrates Comcast's commitment to delivering the highest capacity and fastest speeds to provide the best possible user experience in a booming digital economy.

Key Facts:

- Comcast Labs and Network Engineering teams achieved a two times increase in wavelength capacity across the mixed fiber link while leveraging Ciena's WL5e technology. As the industry's first programmable 800G solution, WaveLogic 5 Extreme is designed to provide unmatched bandwidth tunability, from 200G to 800G, and adapt to constantly changing end-user demands with more capacity per wavelength and lower cost per bit.
- The deployment of WL5e on the link between Newark and Pittsburgh is the first in Ciena's Waveserver 5 form factor. Waveserver 5 leverages WaveLogic 5 coherent technology to scale up to 12.8Tbps in a compact 2RU footprint, allowing Comcast to maximize fiber capacity and reduce the amount of hardware required to support high-bandwidth service growth.
- In addition to capacity upgrades, WL5e facilitates the evolution to 400G-interface routers and universal 400GbE transport across any location in the Comcast National Backbone network without regeneration. This capability will allow Comcast to continue scaling its network at the pace of its business, with less power and lower overall costs.

Executive Comments:

- "As the largest fixed-broadband provider in the US, we know the way people consume media and data, in general, is changing and we're committed to continue and support the increased customer demand with increased capacity across our network. This recent achievement allows us to benefit from Ciena's continued innovation in its coherent optical technology, optimizing both our network architecture as well as our overall cost per bit."

Noam Raffaelli, Senior Vice President, Network and Communications Engineering, Comcast

- "This remarkable achievement is another demonstration of how our industry-leading technology continues to break boundaries and push the limit of what today's networks can do. With WaveLogic 5 Extreme, the industry's first 800G solution which includes support for universal 400GbE transport, Comcast can increase its network capacity with greater efficiency to stay ahead of the curve and continue delivering leading innovations in connectivity and entertainment."

Scott McFeely, Senior Vice President, Global Products and Services, Ciena

About Comcast

Comcast Corporation (Nasdaq: CMCSA) is a global media and technology company with three primary businesses: Comcast Cable, NBCUniversal, and Sky. Comcast Cable is one of the United States' largest high-speed internet, video, and phone providers to residential customers under the Xfinity brand, and also provides these services to businesses. It also provides wireless and security and automation services to residential customers under the Xfinity brand. NBCUniversal is global and operates news, entertainment and sports cable networks, the NBC and Telemundo broadcast networks, television production operations, television station groups, Universal Pictures, and Universal Parks and Resorts. Sky is one of Europe's leading media and entertainment companies, connecting customers to a broad range of video content through its pay television services. It also provides communications services, including residential high-speed internet, phone, and wireless services. Sky operates the Sky News broadcast network and sports and entertainment networks, produces original content, and has exclusive content rights. Visit www.comcastcorporation.com for more information.

About Ciena

Ciena (NYSE: CIEN) is a networking systems, services and software company. We provide solutions that help our clients create the Adaptive Network™ in response to the constantly changing demands of their users. By delivering best-in-class networking technology through high-touch consultative relationships, we build the world's most agile networks with automation, openness and scale. For updates on Ciena, follow us on

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