NEWS RELEASE

Lumen and Ciena Transmit Record-breaking 1.2 Tbps Wavelength Service Across 3,050 Kilometers

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Network trial paves the way for hyperscalers and enterprises to have the bandwidth agility and cost-efficiency needed for AI and next-gen applications

DENVER, March 27, 2025 /PRNewswire/ -- **Lumen Technologies** (NYSE: LUMN) and Ciena (NYSE: CIEN) have successfully established a 1.2 terabit wavelength service trial across 3,050 kilometers (more than 1,800 miles) on Lumen's Ultra-Low-Loss (ULL) fiber network, making it the world's longest 1.2 terabit non-regenerated signal.

Using 800G interfaces, Lumen and Ciena successfully tested and qualified the services to support wavelength, Ethernet, and IP services over the 1.2 Tbps single carrier channel. The live network trial from Denver to Dallas used Ciena's latest **WaveLogic 6 Extreme** (WL6e) technology equipped in the Waveserver platform running over a 6500 photonic line system.

"1.2 terabits per second isn't just about incredible speed and long distances, it's about the value of enabling the next wave of digital transformation. Lumen is at the forefront of building a next-generation network designed to handle the explosive growth of AI and cloud workloads," said Dave Ward, Lumen's chief technology and product officer. "Our investment in increased capacity, powered by Ciena's WaveLogic 6 technology, provides our hyperscale cloud partners and enterprises with the ultra-high-capacity connectivity needed to scale their AI and cloud applications. With 400G connectivity speeds today and a seamless upgrade path to 1.2 terabits, Lumen stands as the trusted network for AI."

The trial also showcased the impressive performance and seamless interoperability between Ciena's Waveserver platform and the Juniper **PTX10002-36QDD Packet Transport Router** at 800 Gbps over the ultra-long-haul 1.2 Tbps intercity network. By leveraging the performance, flexibility and scalability of the Juniper **PTX Series Routers**, Lumen successfully established Ethernet and IP services with minimal latency and zero packet loss throughout the tests.

Why it Matters

AI, cloud and security demands are pushing data transmission speeds to new limits. For hyperscalers and enterprises, the jump to 1.2 Tbps wavelength services unlocks next-gen AI, cloud and data-intensive applications while improving scalability and network efficiency.

"At Microsoft, the demand for ultra-high-speed, low-latency connectivity is growing exponentially as AI workloads, cloud applications, and real-time analytics scale," the company said. "Lumen and Ciena's successful wavelength trial showcases a forward-thinking approach to meeting these growing demands. By enabling more efficient data movement over vast distances, this solution helps us optimize cloud performance, enhance customer experiences, and support the rapid expansion of AI training and inferencing models across our global infrastructure."

Ciena's WL6e is the industry's first high-bandwidth coherent transceiver using state-of-the-art 3nm silicon, capable of carrying capacity up to 1.6 terabits per second per wavelength.

"As the pioneer in high-speed optical innovation, we are dedicated to helping our customers set new benchmarks in network performance and efficiency," said Brodie Gage, Ciena senior vice president, global products and supply chain. "This industry-first trial with Lumen marks a pivotal step in our efforts to prepare networks for the AI era. Lumen's network does not stand still. Continuous investment in the latest network technology is essential for keeping up with bandwidth demands today and into the future."

Faster connections up to 1.2 Tbps wavelengths means less lag, more capacity and the flexibility to handle the most data-hungry applications across multiple industries:

- **AI & Machine Learning**
- **Hyperscale Cloud & Data Center Interconnects**
- **Financial Trading and Market Data Transport**
- **Cybersecurity & AI-powered Threat Intelligence**
- **Media & Streaming**

The Lumen 400G-enabled network already spans over 78,000 route miles, and the company continues to invest in next-generation fiber to enhance its Ultra-Low Loss (ULL) fiber network, the largest in North America.

Additional Resources:

- **Frost & Sullivan named Lumen the 2024 Frost Radar Growth and Innovation Index leader for Wavelength Services in North America.**

- **Vertical Systems Group (VSG) Ranked Lumen #1 in Waves on their Year-End 2024 Leaderboard for the fourth consecutive year.**

About Lumen Technologies

Lumen is unleashing the world's digital potential. We ignite business growth by connecting people, data, and applications – quickly, securely, and effortlessly. As the trusted network for AI, Lumen uses the scale of our network to help companies realize AI's full potential. From metro connectivity to long-haul data transport to our edge cloud, security, managed service, and digital platform capabilities, we meet our customers' needs today and as they build for tomorrow. For news and insights visit **news.lumen.com**, LinkedIn: /lumentechnologies, X: @lumentechco, Facebook: /lumentechnologies, Instagram: @lumentechnologies, and YouTube: /lumentechnologies.

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