Press Release

Nokia and lyntia demonstrate power of PSE-6s Coherent Optics in Live Commercial Network in Spain

- Live network trial in Barcelona brings scale and performance of Nokia's sixth generation super-coherent Photonic Service Engine (PSE-6s) to real world networks, increasing capacity, range and performance of lyntia's optic connections
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- Real world demonstration delivers 1.2Tb/s connection over 100 km and 3x increase in 800Gb/s wavelength reach.
- Addition of Nokia's PSE-6s in live optical network generates 60% reduction in network power consumption.
- Field trial emphasizes high performance of Nokia PSE-6s into the existing 1830 PSI-M optical transport platform, enabling lyntia to scale bandwidth of their existing network. for new high-speed services such as 400GE and 800GE.

14 September 2023
Espoo, Finland – Nokia today announced a real-world PSE-6s demonstration with lyntia, a large neutral host operator in Spain, who is using the next-generation coherent optics in its live network to effectively increase the capacity, reach and performance of its optical connections between Portugal and Spain.

Deployed over challenging real-world conditions, Nokia's PSE-6s achieved error-free 800Gb/s performance over a 1,900 km fiber network that consisted of 25 spans through 12 ROADM nodes with Colorless Directionless Connectionless and Flexgrid technology (CDC-F) and 1.2Tb/s transmission on a 100 km optical ring in the Barcelona region that consisted of 6 spans through 7 ROADM nodes (CDC-F).

Providing up to 2.4Tb/s of WDM capacity in a single line card, lyntia was able to increase the reach of its 800 GB/s wavelengths three-fold over prior technologies and reduce the network power consumption per bit by 60%. Using Nokia's DWDM network and PSE-6s will allow Lyntia to establish a high capacity, low latency network services that are future proof and deliver the best overall performance at the lowest cost per bit.

The trials were conducted from Barcelona Cable Landing Station, the new submarine cable station that plays a crucial role in the global connectivity framework, serving as a key gateway for submarine fiber-optic cables connecting Europe to various international destinations and as a neutral colocation and interconnection hub for ISPs, content providers and carriers fostering a thriving ecosystem for global data exchange.

This project marks an important step towards the future of optical networks. The collaboration between Nokia and lyntia is driving the potential of PSE-6s coherent optics in a real-world operating environment, paving the way for high-speed services and superior connectivity in the

region. lyntia operates the largest fiber optic network in Spain, connecting over 4,000 towns and cities throughout the country. It also has connections with the main submarine cable landing stations in the Iberian Peninsula and an interconnection with France and Portugal.

Nicolas Almendro, VP, Europe Nokia Optical Networks, at Nokia, said: "With data volumes growing exponentially, it's becoming critical that today's optical networks can scale to meet future demands. Nokia's PSE-6s allows providers like Lyntia to do this in a cost effective, reliable way. This trial is a great real-world example of how our super coherent optics can increase the capacity, reach and performance of networks using existing platforms."

Javier Ruiz, Network Planning Engineer Leader at lyntia, said: "This trial underscores lyntia's dedication to providing high-capacity services on our optical network. We're thrilled with the impressive results achieved during our live trial using Nokia's PSE-6s super coherent optics which exceeded performance and capacity expectations over long distances. We're excited to collaborate further with Nokia to continue to strengthen and future-proof our network."

Miguel Angel Acero, VP Operations at Barcelona Cable Landing Station, said: With just 11 months of activity, we are very proud that Barcelona Cable Landing Station is being considered by important companies, such as Nokia and lyntia, for their strategic plans and pilot projects. Connecting the two geographical points with the highest number of submarine cables in the coming years, Barcelona and Lisbon, is another step towards making Barcelona the new European digital hub, and we are proud that this milestone has been achieved from Barcelona CLS.

Resources and additional information
Press Release: Nokia launches next gen coherent optics to reduce network consumption by 60 percent #MWC
Website: Nokia PSE-6s
Ebook: https://onestore.nokia.com/asset/213067

Type: Title

About Nokia
At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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