

Telefónica a Tier-1 network operator, and Infinera, a provider of Digital Optical Network solutions, successfully completed a joint Terabit Technology Showcase. The Terabit Technology Showcase demonstrated pioneering implementations of advanced technologies expected to increase the capacity of future optical networks.

The highlights of the Terabit Technology Showcase demonstrations include:

- 10 Terabit per second (Tb/s) of super-channel capacity based on Infinera FlexCoherent™ technology to realize QPSK and 16 QAM super-channels to extend fiber capacity and signal reach
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- Telefónica I+D's Flexi-Grid standards based GMPLS control plane for rapid service deployment and simplification of network operations
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- Demonstration of Infinera's next-generation PIC-based flexible grid super-channels for improved spectral efficiency and flexibility

The demonstration illustrates some of the potential future capabilities of Infinera's PIC based Digital Optical Network solution including transmitting ten 1Tb/s super-channels as well as a demonstration of flexible grid transmission.

"Infinera's 10 Terabit super-channel transmission and flexible grid transmission have been successfully tested in Telefónica I+D labs," said Juan Fernandez-Palacios, Head of Core Network Evolution at Telefónica I+D-GCTO Unit. "This demonstration shows a promising path to higher capacity and cost effective optical transmission beyond 100Gbps."

Rapid deployment of services, robust protection and ease-of-use were demonstrated with Telefónica's prototype Flexi-Grid GMPLS control plane. Telefónica and Infinera, together with other vendors and service providers are standardizing GMPLS based control plane as one of the key technologies for flexible networks in Internet Engineering Task Force (IETF) standards committees.

"We are extremely pleased with the results of our Terabit Technology Showcase with Telefónica," said Dave Welch, Co-founder, EVP and Chief Strategy Officer at Infinera. "This demonstration is another proof point that Infinera's Digital Optical Network solution with photonic integrated circuits is the foundation of next generation optical networks growing beyond 100G."