News Release

OFS Transmits 300G over 14,000km in TeraWave® SCUBA150 Trial

OFC 2019, Booth 2639, San Diego, California, March 5, 2019 - OFS is pleased to announce that TeraWave® SCUBA150 fiber has enabled transport of 300 Gbit/s of data over a 14,000km link. This is the first demonstration to cover a distance greater than 10,000km at 300Gbit/s using commercially available, real-time digital signal processor (DSP) and commercially available components. The demonstration used an up-to-64Gbaud coherent DSP (ExaSPEED® TERA), High Bandwidth Coherent Driver Modulator (HB-CDM) and a High Bandwidth Intradyne Coherent Receiver (HB-ICR) from NTT Electronics (NEL) Corporation, and a high power and narrow linewidth micro integrable tunable laser assembly (FJL-Series uITLA) from Furukawa Electric Co., Ltd. Error-free performance after 14,000km transmission was achieved with 5dB margin, highlighting the combined benefit of low loss, highly linear TeraWave SCUBA150 fiber and the ability of the DSP to withstand both linear and non-linear signal distortions typical of trans-Pacific and longer distances.

“We are very excited by our contribution to this remarkable demonstration with our industry-leading coherent DSP and optical components,” said Osamu Ishida, EVP & GM of NEL Broadband System & Device Business Group. “ExaSPEED TERA supports flexible per-lambda capacity up to 600 Gbits/s by combining multiple Baud-rates and advanced modulation formats and provides no compromise on maximizing fiber potential for any links across the globe.”

“TeraWave SCUBA150 fiber from OFS has the industry best combination of lowest loss and largest effective area for long distance signal transmission. Combined with multidimensional modulation, this combination eliminated nonlinear impairments, even at 300 Gbits/s/channel. This remarkable link distance highlights the potential of TeraWave SCUBA150 for significantly higher bitrates over trans-Pacific distances,” said OFS CTO David DiGiovanni.

“Furukawa Electric recently developed the next generation uITLA that has been used in the trial,” commented Toshihiko Ota, Furukawa Electric General Manager of FITEL Products Division. “The laser can be tuned over more than 50 nm, has low noise, narrow linewidth and output power up

to 18 dBm. All these parameters are important for successful implementation of the sophisticated modulation formats that can be generated by ExaSPEED TERA at 32-64 Gbaud/s baud rate."

OFS would like to thank T8 LLC for the loan of some components used for the demo.

About OFS

OFS is a world-leading designer, manufacturer and provider of optical fiber, fiber optic cable, connectivity, fiber-to-the-subscriber (FTTx) and specialty fiber optic products. We put our development and manufacturing resources to work creating solutions for applications in such areas as telecommunications, medicine, industrial automation, sensing, aerospace, defense and energy. We provide reliable, cost-effective fiber optic solutions that help our customers meet the needs of consumers and businesses today and into the future.

Headquartered in Norcross (near Atlanta) Georgia, U.S.A., OFS is a global provider with facilities in China, Denmark, Germany, Morocco, Russia and the United States. OFS is part of Furukawa Electric Company, a multi-billion-dollar leader in optical communications.

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OFS PR Contact:
Sherry Salyer
shsalyer@ofsoptics.com
+1 (770) 798 - 4210