



Infinera and Telstra Validate Advanced Coherent Toolkit on 9,000 km Endeavour Trans-Pacific Cable

Sunnyvale, Calif. – Jan. 17, 2016 – Infinera, provider of [Intelligent Transport Networks](#), and leading global telecommunications and technology company Telstra, today announced the successful validation of Infinera’s Advanced Coherent Toolkit (ACT) for super-channels.

This new technology will cover the Telstra Endeavour subsea cable stretching 9,000 kilometers between Sydney, Australia and Oahu, Hawaii and extract the maximum capacity from subsea and long haul terrestrial cable systems carrying super-channels – whether for new large area fibers or existing cables.

In trials on a range of next-generation super-channel coherent modulation technologies conducted late last year, two unique super-channel based capabilities were successfully demonstrated in the trial – Nyquist subcarriers and Soft Decision Forward Error Correction (SD-FEC) gain sharing.

The trial validated the benefit of Nyquist subcarriers that have been shown in other studies to offer around a 20 percent increase in reach compared to single carrier transmission. In addition, the trial validated SD-FEC gain sharing in which carriers with the highest performance can be paired with carriers with lower Optical Signal to Noise Ratio (OSNR) to improve performance.

Other capabilities demonstrated as part of this trial include a new Matrix Enhanced Phase Shift Keying (ME-PSK) modulation technique that handily surpasses Binary Phase Shift Key (BPSK) reach performance; and the new, high-gain SD-FEC algorithm.

“The comprehensive modulation and compensation techniques in our Advanced Coherent Toolkit enable individual carriers and subcarriers in the super-channel to maximize the overall reach and capacity of the customer’s fiber,” said Scott Jackson, VP of Infinera’s Subsea Business Group. “For example, leveraging these techniques allows cables that previously could only support BPSK to move to higher modulation formats in the future, or support a mix of formats across carriers and subcarriers, for increased fiber capacity and a better return on the asset. This next generation of coherent technology has the potential to dramatically extend the useful life for existing cable systems while also improving the performance of new cables.”

“With trans-Pacific traffic rising at 49 percent annually, service providers can leverage these advances to help their business models keep pace with downward pricing pressure. Infinera has one of the leading coherent engineering teams and I applaud them for developing these innovative optical techniques,” said Mr. Jackson.

Andy Lumsden, Head of Network Services, Telstra Global Enterprise and Services said, “The flexibility of PIC-based super-channels has proven to be a major advantage in subsea operations, and the addition of next generation coherent processing provides an important capacity boost. These capabilities see us continue to exceed the demands of our customers, and provide exceptional service levels across the Telstra Global Network and North American region.”

Additional resources

- A White Paper describing the details of the Advanced Coherent Toolkit is available [here](#).
- [Infinera Subsea Solutions](#)



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About Telstra

Telstra is a leading telecommunications and technology company offering a wide range of services globally, with a focus on the Asia-Pacific region. Telstra's heritage is proudly Australian, but we have a longstanding international business. Today, we have around 3,000 employees based in 22 countries outside of Australia providing services to hundreds of business and government customers.

Our customers are global, our people are local and our assets are anchored in Asia. Over several decades we have established one of the largest subsea cable networks in the Asia-Pacific region, supplying wholesale and enterprise customers around the world. We also provide sophisticated network application services and have growing interests in software, video delivery, online sales and e-health.

About Infinera

Infinera (NASDAQ: INFN) provides Intelligent Transport Networks, enabling carriers, cloud operators, governments and enterprises to scale network bandwidth, accelerate service innovation and simplify optical network operations. Infinera's end-to-end packet-optical portfolio is designed for long-haul, subsea, datacenter interconnect and metro applications. Infinera's unique large scale photonic integrated circuits enable innovative optical networking solutions for the most demanding networks. To learn more about Infinera visit www.infinera.com, follow us on Twitter @Infinera and read our latest blog posts at blog.infinera.com.

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This press release contains forward-looking statements including, but not limited to, statements relating to the benefits of the features and functionality of Infinera's Advanced Coherent Toolkit (ACT) for super-channels. These statements are not guarantees of results and should not be considered as an indication of future activity or future performance. Actual results may vary materially from these expectations as a result of various risks and uncertainties. Information about these risks and uncertainties, and other risks and uncertainties that affect Infinera's business, is contained in the risk factors section and other sections of Infinera's Quarterly Report on Form 10-Q for the quarter ended September 26, 2015 as filed with the SEC on November 5, 2015, as well subsequent reports filed with or furnished to the SEC. These reports are available on Infinera's website at www.infinera.com and the SEC's website at www.sec.gov. Infinera assumes no obligation to, and does not currently intend to, update any such forward-looking statements.

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