

## Infinera and Telstra successfully demonstrate PM-8QAM across submarine cable between Japan and South Korea

**Sunnyvale, Calif. – Jan. 15, 2015** – Infinera, a provider of [Intelligent Transport Networks™](#), and Telstra, a leading telecommunications and information services company, today announced the successful demonstration of next generation submarine super-channel technology, which is expected to increase the capacity of a single fiber by 50%.

The test, which was conducted across 2,200 kilometers of Segment F of the Reach North Asia Loop (RNAL), included Polarization Multiplexed 8 Quadrature Amplitude Modulation (PM-8QAM), and a range of advanced FlexCoherent™ modulation formats, along with transmitter and receiver-based signal processing technologies. Segment F runs between Wada in Japan and Pusan in South Korea.

PM-8QAM is a key technology for the optimization of the capacity of a fiber, in order to increase the value of established submarine cable systems around the world. PM-8QAM is designed to deliver a 50% increase in capacity compared to the most common coherent modulation technique, PM-QPSK, in a typical installation under the same conditions.

Steve Grubb, Infinera Fellow and the architect behind the RNAL demonstrations, said, “This trial demonstrates the potential of a full suite of FlexCoherent modulation formats on a single line card and the ability to precisely trade capacity for reach and margin. It also highlights the emergence of next generation coherent processing that works with existing coherent 100 Gigabit per second technologies, which are now firmly entrenched in modern submarine terminating line equipment, such as the Infinera DTN-X platform.”

“When regeneration within the submerged cable is simply not an option, the ability to trade margin for additional capacity can be crucial in submarine networks. Having the full suite of modulation formats on a single card can also dramatically lower inventory costs, while allowing the service provider to maximize cable capacity,” Grubb said.

In addition to showcasing these advanced modulation techniques, the RNAL trial included demonstrations of advanced coherent transmitter-based Nyquist DWDM pulse shaping, and both transmitter and receiver-based non-linear compensation technologies.

“We’re delighted to collaborate with Infinera to push technology boundaries when it comes to advanced super-channel techniques,” said Telstra’s Andrew Hankins, Head of Engineering, Global Enterprise & Services.

“We believe that the current and future capabilities of the DTN-X platform and our use of the newest technologies will continue to give Telstra a clear advantage in the Pacific region, both in terms of capacity and the ability to help deliver reliable services quickly to meet customer demand.”

As part of a larger showcase of submarine super-channel capabilities between Telstra and Infinera, one of the world’s first demonstrations of PM-3QAM modulation on a 4,250 km link between California and Hawaii was also completed.



For more information:

<http://blog.infinera.com/2015/01/15/8qam/>  
[www.infinera.com/go/subsea](http://www.infinera.com/go/subsea)

**Notes to Editor:**

PM-8QAM is one of a family of FlexCoherent modulations supported by the Infinera DTN-X packet optical transport networking platform. Working in conjunction, the PM-8QAM and Infinera DTN-X offer a tradeoff between optical reach and fiber capacity. A single Infinera super-channel line card is designed to support a suite of FlexCoherent modulations including PM-BPSK, which delivers the longest reach but the lowest total fiber capacity, PM-3QAM, PM-QPSK, PM-8QAM and PM-16QAM, which delivers the shortest reach but the highest potential fiber capacity.

**About Telstra:**

Telstra is the leading telecommunications and information services company in Australia. We provide end-to-end solutions including managed network services, global connectivity, cloud, voice, colocation, conferencing and satellite solutions. We have licenses internationally and offer access to over 2,000 PoPs in 230 countries and territories across the globe. Our extended reach means that we can offer customers smarter technology solutions to support sustainable business growth.

**About Infinera:**

Infinera (NASDAQ: INFN) provides Intelligent Transport Networks for network operators, enabling reliable, easy to operate, high-capacity optical networks. Infinera leverages its unique large scale photonic integrated circuits to deliver innovative optical networking solutions for the most demanding network environments. Intelligent Transport Networks help enable carriers, Cloud network operators, governments and enterprises to automate, converge and scale their data center, metro, long-haul and subsea optical networks. To learn more about Infinera visit [www.infinera.com](http://www.infinera.com), follow us on Twitter @Infinera and read our latest blog posts at [blog.infinera.com](http://blog.infinera.com).

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This press release contains forward-looking statements including, among other things, statements relating to Infinera’s products and product functionality including that: that PM-8QAM is expected to increase the capacity of a single fiber by 50%; that Having the full suite of modulation formats on a single card can dramatically lower inventory costs, while allowing the service provider to maximize cable capacity; and that as part of this trial, one of the world’s first demonstrations of PM-3QAM modulation was also completed. These statements should neither be considered guarantees of results nor 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 27, 2014 as filed with the SEC on October 29, 2014, as well subsequent reports filed with or furnished to the SEC. These reports are available on Infinera’s website at [www.infinera.com](http://www.infinera.com) and the SEC’s website at [www.sec.gov](http://www.sec.gov). Infinera assumes no obligation to, and does not currently intend to, update any such forward-looking statements.

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