

CORIANT IS NOW PART OF INFINERA

Submarine POP-to-POP Technology

Evolving Global Carrier Networks to Resilient End-to-end Architectures

As the global demand for bandwidth continues to explode largely due to the rise of cloud-based services, existing submarine cable systems are rapidly running out of capacity. This growth is dominated by the data center traffic of the large internet companies that consume capacity in the terabit range. Thus, maximizing the capacity and reach of cable plants and increasing the efficiency of provisioning high-bandwidth client services is critically important. Global operators require cloud-scale networks that are scalable, programmable, and flexible while at the same time resilient and easy to operate. The newest generation of the Coriant packet optical portfolio satisfies all these requirements in global networks including transoceanic submarine cable systems.

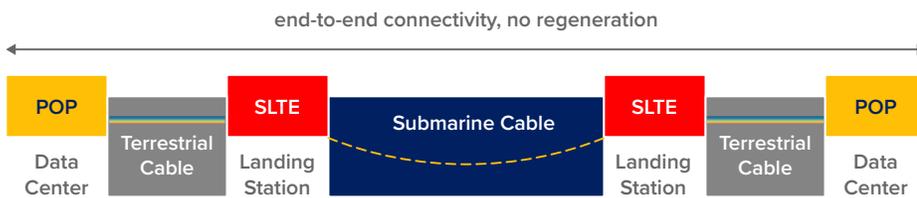


Figure 1 – Unified Terrestrial-Submarine Networks

APPLYING DATA CENTER PRINCIPLES TO SUBMARINE NETWORKS

Traditionally, submarine cable systems were completely separated from the terrestrial world with cable landing stations (CLSs) containing all elements of a network, including expensive transponder technology. On the other hand, data centers are predominantly located in central business areas at a distance from the CLSs. In order to provide efficient POP-to-POP connectivity with fast service provisioning, interworking of the Submarine Line Terminating Equipment (SLTE) with the data center gear on a common platform is a requirement. For this purpose, Coriant provides an open optical network approach featuring the leading data center interconnect and disaggregation platform, an open SLTE interworking with an open terrestrial line system, and a powerful open software suite for all management and service tasks. With all of these elements, the formerly separated submarine network can be perfectly integrated with the terrestrial network and provide resilient end-to-end connectivity with an outstanding degree of network security.

BENEFITS OF CORIANT SUBMARINE-TERRESTRIAL CONVERGENCE

- **Minimize** CapEx with faster innovation, reduced vendor lock-in, and end-to-end service provisioning
- **Reduce** operational costs with low power consumption and minimum form factor
- **Deliver** an enhanced customer experience with fast, automated service delivery and lower latency
- **Accelerate** innovation and reduce vendor lock-in with hardware and software disaggregation and open functional blocks
- **Increase** network capacity quickly and cost effectively with simple stackable upgrade options



Figure 2 – Key Technology Enablers

Coriant submarine POP-to-POP connectivity incorporates a number of key technology enablers, including:

- **Photonic Innovation** – Leverages silicon photonics using the newest generation of Coriant CloudWave™ Optics signal processing technology with flexible spectrum use and maximum capacity
- **Open Line System** – Provides a versatile, modular platform with open interfaces and high-capacity service cards, multiplexers, and line side amplification, all in 1RU form factor
- **Network Disaggregation** – Features the separation of hardware and software into best-in-class functional blocks with open APIs enabling faster innovation through the replacement of each functional block independently resulting in lower CapEx and OpEx while reducing vendor lock-in
- **Coriant Transcend™ SDN Solution** – Significantly reduces the time and cost of implementing innovations in the network and promotes network resilience by running a virtualized ASON (vASON) on the platform

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