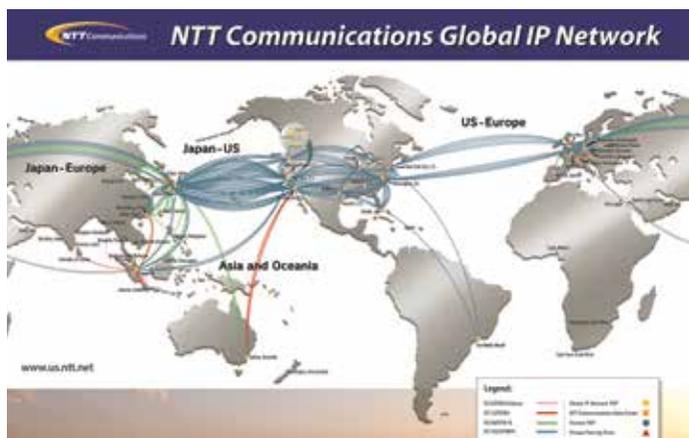




# NTT Communications Deploys 100Gbps Digital Coherent Technology on Transpacific Submarine Cable



NTT Com announced the world's first deployment of 100 Gbps digital coherent technology on a transpacific submarine cable system linking the U.S. and Japan, increasing the design capacity of the company's PC-1 system by more than 2.5 times to 8.4 terabits per second, effective immediately.

Data traffic has been growing rapidly due to the increased use of smartphones and tablets, music/video downloading, cloud computing and services such as social networking. In response, NTT Com demonstrated 100 Gbps optical transmission using digital coherent technology on the company's U.S.-Japan route in October 2011. But despite the technology's attractiveness as a method for rapidly expanding optical network capacity, it initially was difficult to provide stable 100 Gbps communication over long distances due to the characteristics of light. By optically optimizing the PC-1's network architecture, including with strategically placed optical repeaters and an enhanced

optical fiber layout, NTT Com has now achieved the world's first commercial deployment of 100 Gbps digital coherent technology on a transpacific route.

On May 25, 2009 it was announced that NTT Com was to acquire Pacific Crossing Limited and had concluded a contract with the shareholders of Pacific Crossing Limited (PCL), operator of the PC-1 Trans-Pacific cable network, to purchase all issued shares of PCL, including those from Strategic Value Master Fund Ltd., the major stockholder.

PC-1, measuring 21,000 km and having a capacity of 3.2 terabits per second, uses a ring

configuration to connect Japan and the United States with two landing stations on each side (please see attachment).

By the end of 2014, 100 Gbps optical transmission technology also will be deployed in NTT Com's Asia Submarine-cable Express (ASE), which links major cities in Asia via the shortest possible route for industry leading low latency.

## PC-1 Fiber Optic Submarine Cable System

The PC-1 optical submarine cable is operated by PC Landing Corp., an NTT Com group company.

System details are as follows:

- Total length: 21,000 km
- Configuration: Ring-topology network with landing stations in Japan and the United States
- Landing stations: Ajigaura (Ibaraki Prefecture, near Tokyo); Shima (Mie Prefecture, near Osaka and Nagoya); Harbour Pointe, Washington; and Grover Beach, California

On November 4, 2011 NTT announced that following the world's first successful trial of 100 gigabit per second (Gbps) optical transmission on its PC-1 transpacific submarine cable system the company has confirmed the commercial viability of digital coherent transmission, a next-generation optical transmission technology, and has formally decided to

incorporate the technology in the PC-1 by the middle of 2013. The upgrade will boost the PC-1's transmission capacity to 10 terabits per second (Tbps), more than triple its current capacity of 3.2 Tbps.

Digital coherent transmission is a next-generation transmission technology that improves spectral efficiency through multi-level modulation such as phase modulation and polarization multiplexing. It greatly enhances receiver sensitivity by combining coherent detection and digital signal processing.

Data communication is rapidly increasing due to the expanding use of cloud computing and smartphone/tablet devices, as well as music/video downloading, blogs and social networking. NTT Com uses the PC-1 to deliver global IP network services, ArcstarTM Universal One cloud-network services and global cloud services.

"Our subsea cable system PC-1 is an important international communications for the United States and Japan as proven during the March 11 disaster. Enhancing the capabilities of this PC-1, which provides the trans-pacific shortest link, through the most advanced technologies will satisfy ever increasing traffic and will be extremely beneficial for users," said Takahiro Sumimoto, CEO of PC Landing Corp. 