Transport Network Technology

Overview

To meet the demand for high-volume communication traffic, we are working on high-speed transmission technology for 100 Gbit/s data transfer and new signal processing technology that integrates optical wavelength cross-connection (OXC) and packet switching. By implementing a 100 Gbit/s integrated transport system that applies the technology, we target the construction of a transport network that is economical, simple and energy-efficient through (1) high-speed and large-capacity traffic transport, (2) reduction of IP routing load on IP core routers, (3) improved operability from hardware integration, and (4) reduction of the NE Operation systems (NE-OpS).

Features

- Increase capacity, improve economy, simplify, and reduce power consumption for the backbone network through R&D on an new integrated transport system
- Ultra-fast 100 Gbit/s optical transmission by applying digital coherent technology
- Optical wavelength mesh network by applying OXC technology
- Packet transport network applies MPLS-TP*, which guarantees communication line quality and has maintenance and management mechanisms against failures

Application scenarios

- Backbone network of NTT Communications
- Metro network of NTT East Corporation and NTT West Corporation

* MPLS-TP: Multi Protocol Label Switching-Transport Profile