

IP Optical Networking

Network Virtualization and Autonomic Management & Control of Optical Infrastructure

Overview

- The objective is to enable flexible and reliable network
 - Network Virtualization enables virtualizing optical network resources in order to be allocated to various service networks
 - Autonomic Management & Control enables advanced and automatic network management and control
- These features are enabled by IP Optical Server, which manages and controls optical infrastructure composed of optical switches and routers.

Features

- Network service is delivered when/where needed utilizing optical infrastructure
- Quality guaranteed service is provided by utilizing bandwidth guaranteed optical paths
- Total optimization is possible by integrated control of IP and optical layers
- Traffic matrix estimation technique is applied which estimates traffic matrix from minimum set of measurable traffic information
- Operation is automated by topology optimization upon traffic change and failure, and automatic configuration of optical links.

Use Cases

- Virtualized network service delivery
- Advanced network operation using traffic matrix estimation and topology optimization
- Test bed for future network technology R&D

