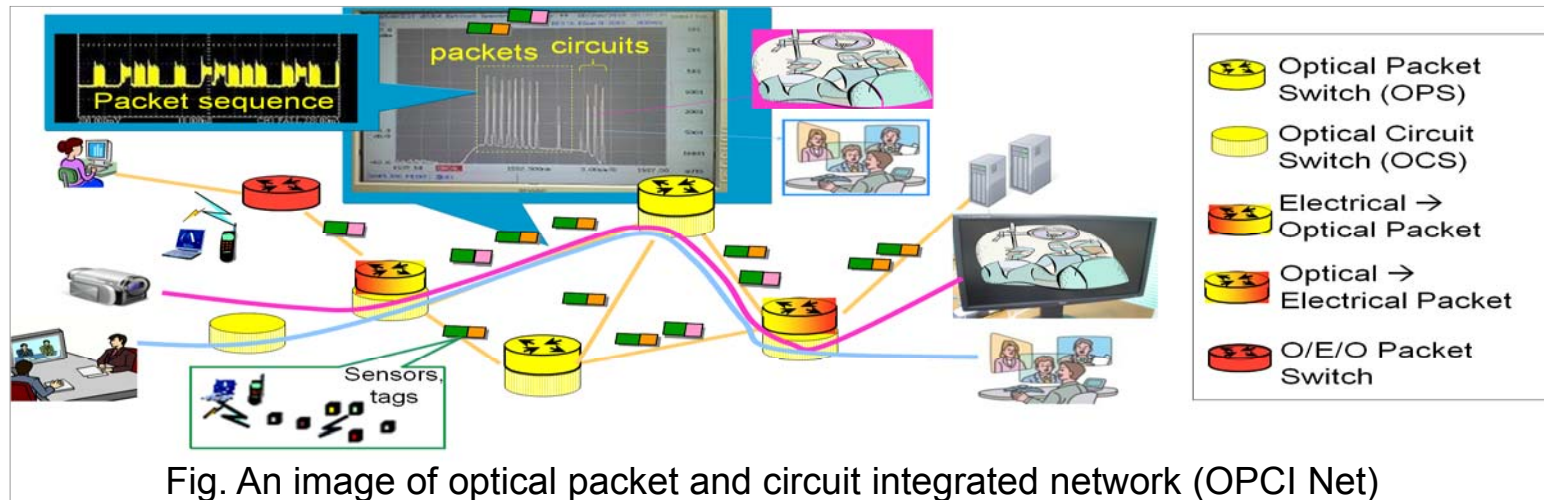


Optical Packet and Circuit Integrated Network (OPCI Net)

National Institute of Information and Communications Technology (NICT), Japan

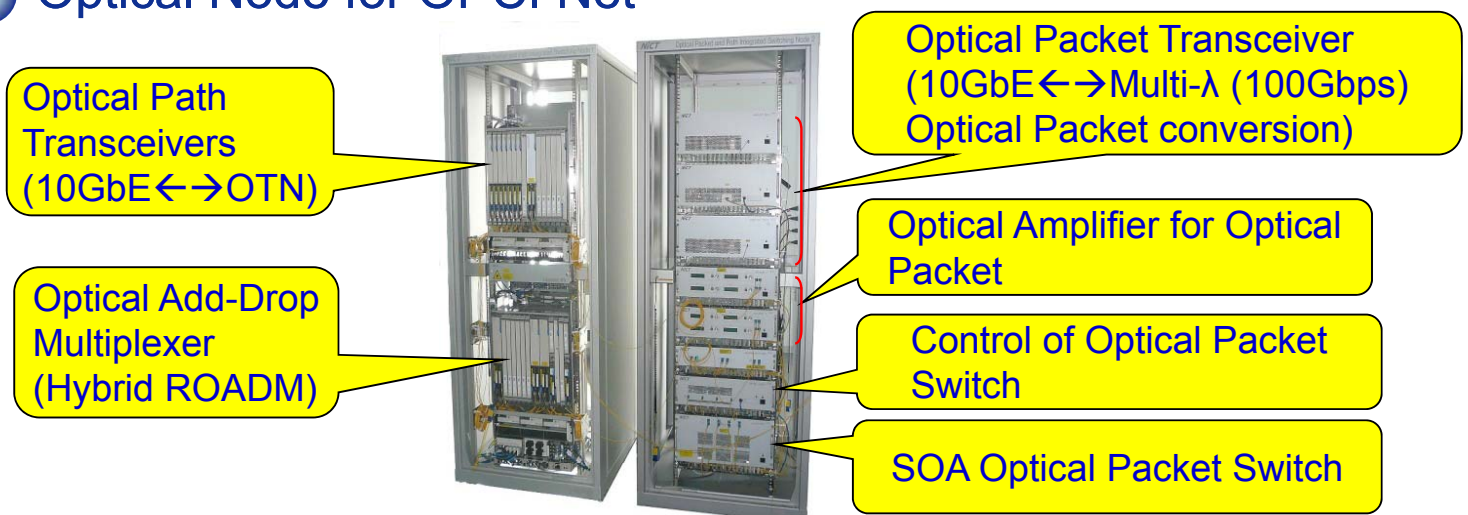


Characteristics of OPCI Net

1. Both packet- and circuit-switching on the same fiber network infrastructure
 → **Providing diverse services**
2. Dynamic wavelength-resource allocation to OPS & OCS
 → **Autonomous distributed resource allocation**
3. Path control messages are transferred by means of optical packets
 → **Unified control interface for OPS & OCS**
4. Advanced optical switching technologies → **Contribution to higher energy efficiency**

Cf. H. Harai, *IEICE Transactions on Commun.*, vol. E95-B, no.3, pp.714-722, Mar. 2012.
 H. Furukawa, et al., *Optics Express*, vol.20, iss.27, pp.28764 -28771, Dec. 2012.
 T. Miyazawa, et al., *IEEE/OSA JOCN*, vol.4, no.1, pp.25-37, Jan. 2012.

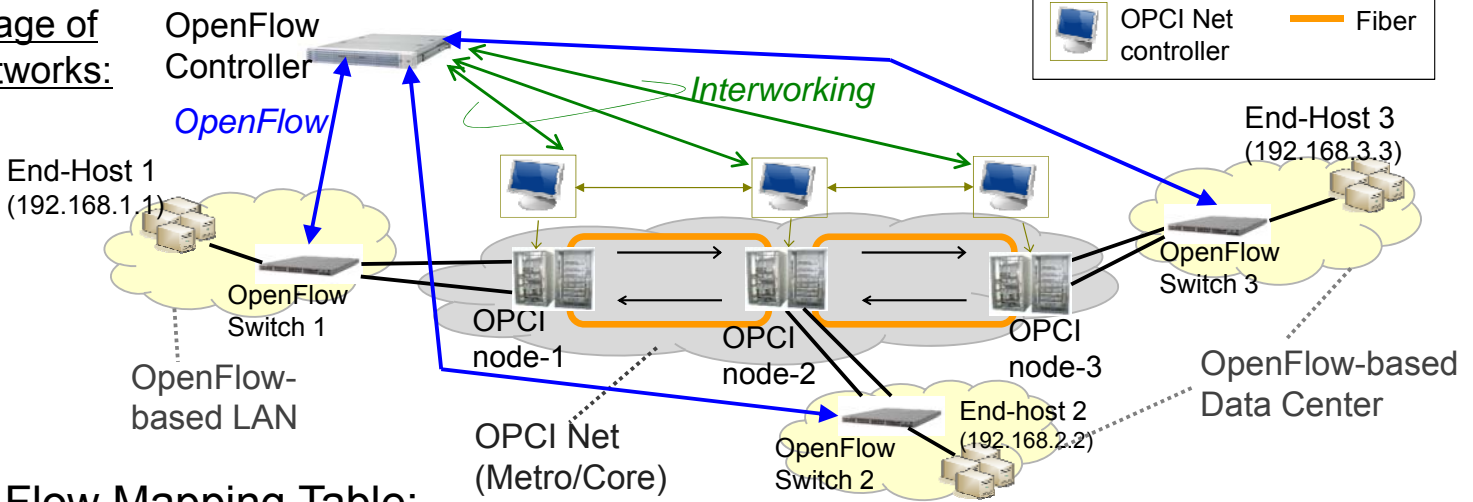
Optical Node for OPCI Net



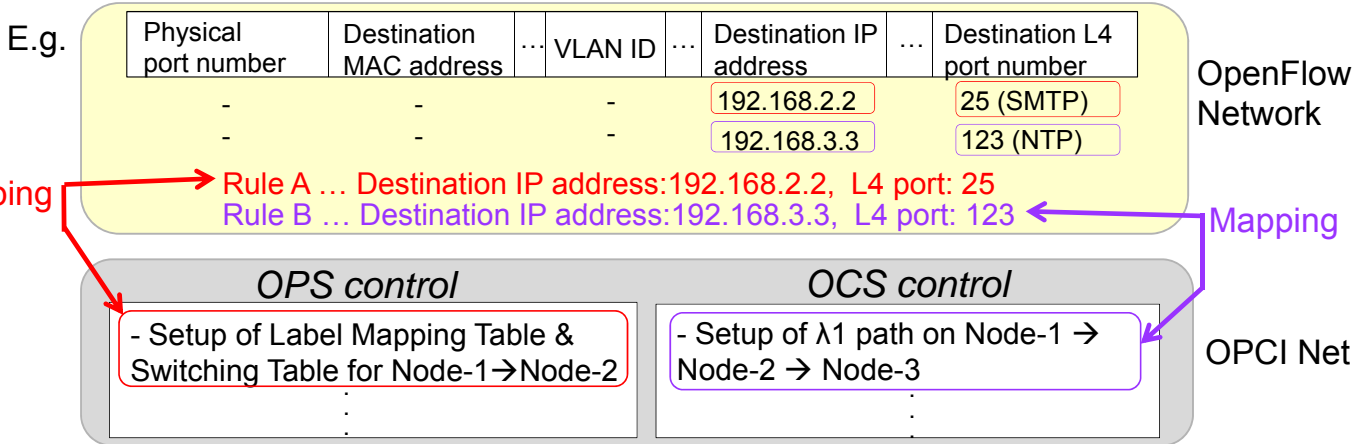
Stable simultaneous transfer of both optical packets and optical path signals

Interworking between OPCI Net control and OpenFlow

Image of networks:



Flow Mapping Table:



For each flow, our OpenFlow controller defines the switching method (OPS or OCS) & route & wavelengths on OPCI Net ... Simple & Flexible control

Demonstration - a part of Interworking between OCS control & OpenFlow -

* Matching Rule ... Source MAC address + VLAN ID

