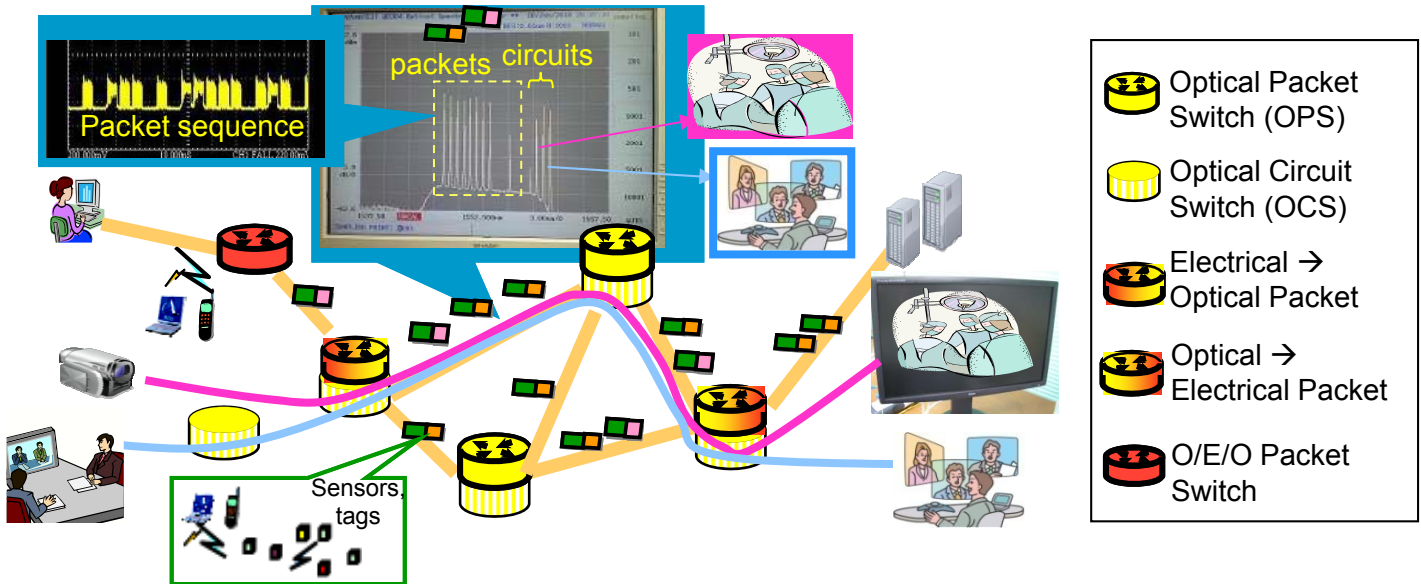


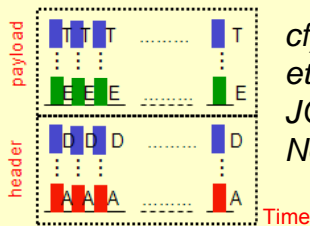
# Optical Packet and Circuit Integrated Network System Cooperated with Hierarchical Number Allocation for Locators

## Optical Packet and Circuit Integrated Network (OPCI Net)



## Features

*Optical Packet composed of Multi-Wavelengths*

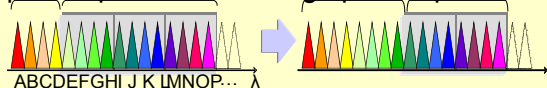


- Providing diverse services on the common (WDM) fiber infrastructure

- Unified control interface for both OPS and OCS



Lightpaths Optical Packets Lightpaths Optical Packets

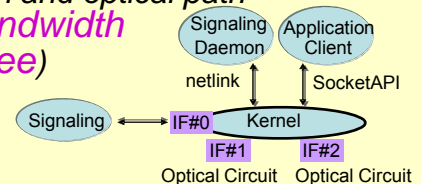


*Dynamic Resource Allocation*

cf) T. Miyazawa et al., IEEE JOCN, Vol.4, No.1, pp.25-37, January 2012.

cf) H. Furukawa et al., ECOC 2010 (We.8.A.4).

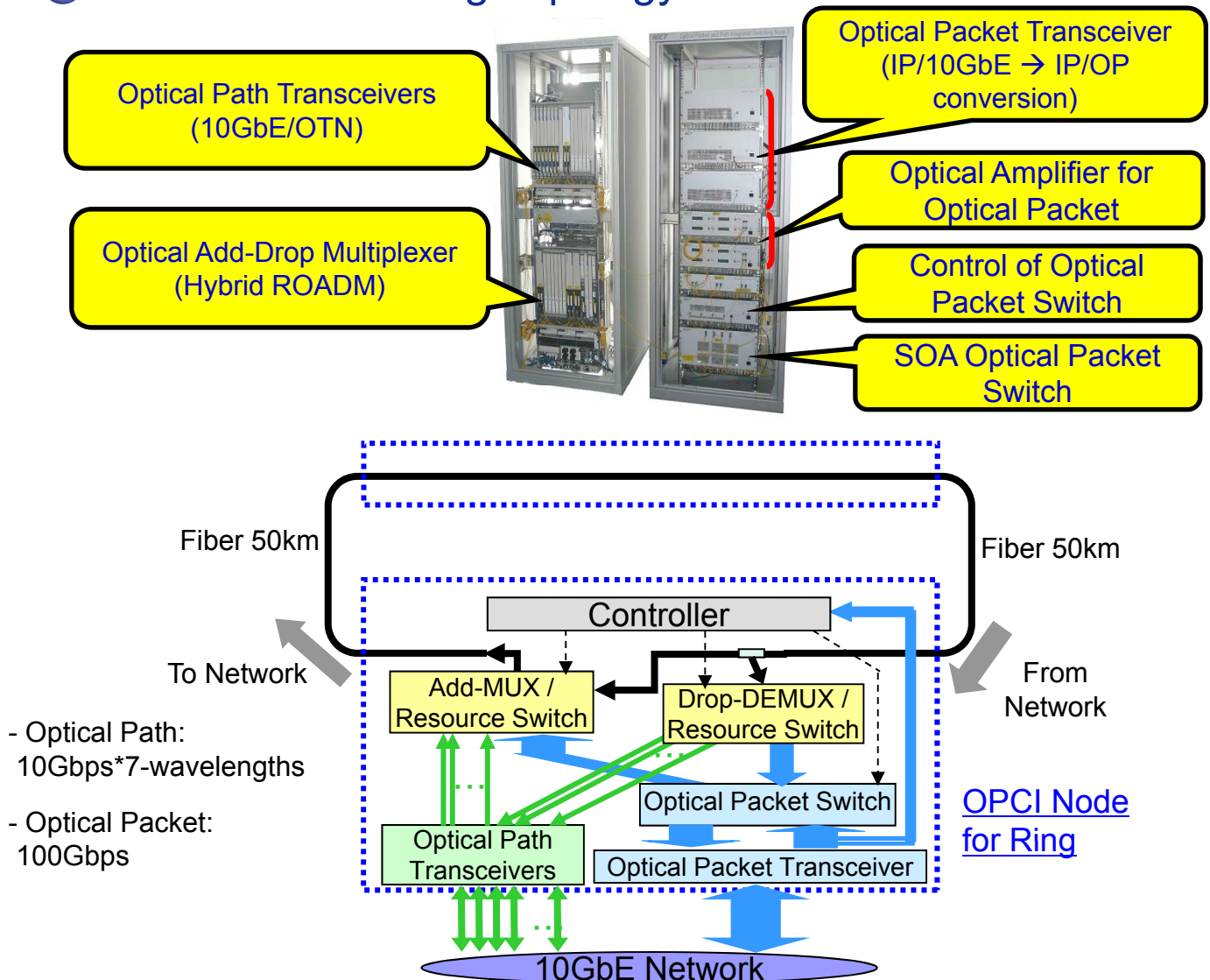
*Direct connection between application and optical path (A2A Bandwidth Guarantee)*



cf) K. Fujikawa, H. Otsuki, iPOP 2010.

# Optical Packet and Circuit Integrated Network System Cooperated with Hierarchical Number Allocation for Locators

## ● OPCI Node for Ring Topology



### OPS

- Being independent of fluctuation of polarization
  - Transferring optical packets with various packet lengths
  - Dealing with packet densities ranging from 1% to 10% *without any adjustments*
- High stability of data transfer.

Simultaneous address setting in the routing table is possible for OPS even if the network configuration changes due to increase of the number of nodes.

Space-saving by stabilization and integration of devices.

cf) H. Furukawa, H. Harai, T. Miyazawa, S. Shinada, W. Kawasaki, N. Wada, *Optics Express*, Vol.19, Iss.26, pp.B242–B250, December 2011.

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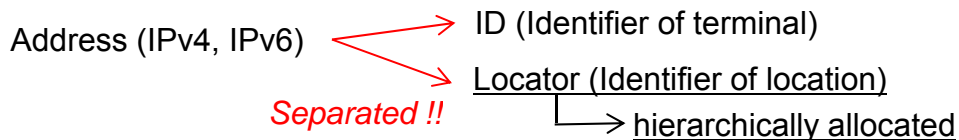
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# Optical Packet and Circuit Integrated Network System Cooperated with Hierarchical Number Allocation for Locators

## Hierarchical Number Allocation for Locators (HNA)

For New-Generation Networks (NwGN)



Function 1: Multiple locator-spaces are hierarchically allocated.

Function 2: Multiple locators are allocated in a site.

cf) K. Fujikawa, H. Harai, M. Ohta, Proc. of AWFIT2011, pp.124-131, 2011.

## Demonstration on OPCI Net cooperated with HNA

E.g.

