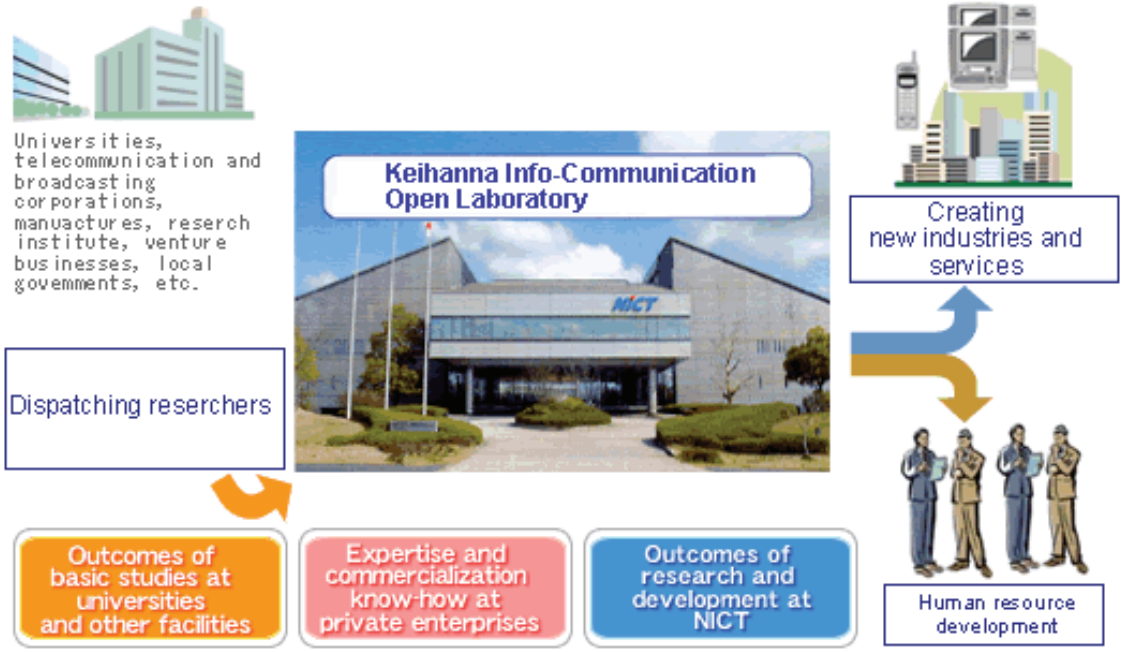
The Research Promotion Council of Kei-han-na Info-Communication Open Laboratory Overview

Objective

Established to promote effective use of the Keihanna Open Info-Communication Laboratory by encouraging research and development in the related research field of the laboratory through collaboration between industry, academia and government, and to develop new technologies, human resources and new industries, thereby fulfilling the Kansai region's role in developing the world's leading ICT economy and revitalizing the Kansai economy.



Organization

General Assembly of the Council
Chief director : Masayuki MATSUSHITA (Panasonic Corporation)

- **Board of Directors**
  - **Operation and Research Committee**
    - **Planning and Public Relation Subcommittee**
    - **New Generation Network Subcommittee**
      - **Interoperability Working Group**
        Chair : Naoaki YAMANAKA (Keio Univ.)
      - **Photonic preparations Working Group**
    - **Universal Communications Subcommittee**


Workshop
(New Generation Network Subcommittee)

iPOP2012 ***Research Promotion Council of Keihanna Info-Communication Open Laboratory***

New Generation Network Subcommittee

Interoperability Working Group

Projects

PJ31: Ethernet over OTN technology

-100GE/40GE/10GE-LANPHY transmission technology etc…

PJ32: Multi-Technology Transport Network control technology

-All optical network control technology etc…

Members

Chair: Naoaki Yamanaka（Keio University）

Vice chairs: Satoru Okamoto（Keio University）, Masatoshi Suzuki（KDDI LABS）, Atsushi Hiramatsu（NTT）

Members: NTT, KDDI Labs, NEC, HITACHI, Fujitsu, Mitsubishi Electric, Anritsu, Keio University, NICT

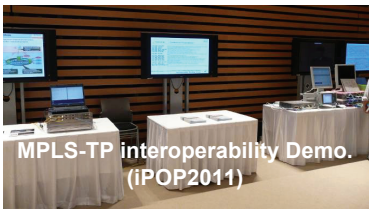
Testing

World's First Successful Demonstration of Multi-Vendor Equipment Interoperability in Transmitting 100 Gigabit Ethernet Signals over OTN (PJ31)

OTN network interoperability field trial including 90 km optical fiber transmission had been demonstrated and completed with multi-vendors for OTU4 interface carrying 100 Gigabit Ethernet signal. (Dec.2011)

MPLS-TP interoperability testing (PJ32)

MPLS-TP interoperability test of protection function had been demonstrated with multi-vendors in iPOP2011. (June 2011)

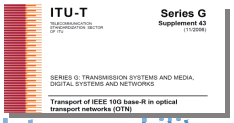


MPLS-TP interoperability Demo. (iPOP2011)

Conference/ Presentations

June 2006	**iPOP 2006**	"Kei-han-na interoperability demonstrations on interworking of inter-carrier ASON/GMPLS network domains"
July 2006	**OIF WS**	"Inter-Carrier ASON/GMPLS Network Domains Interworking Trial in Kei-han-na Open Lab"
Sep. 2006	**APOC**	"Interoperability Activities for Photonic Networks in Japan"
Sep. 2006	**ECOC 2006 WS**	"Field Trial of Signaling Interworking of Multi-Carrier ASON/GMPLS Network Domains"
Oct. 2006	**MPLS 2006**	"Issues on GMPLS Inter-carrier E-NNI and a Prototype Node based on Linux"
June 2007	**iPOP 2007**	"Inter-carrier photonic networking developing project in Japan" "Development of GMPLS inter-carriers E-NNI prototype node based on Linux"
Aug. 2007	**PS 2007**	"Interoperability Activities for Photonic Networks in Kei-han-na Open Laboratory Interoperability Working Group"
Oct. 2007	**MPLS 2007**	"L2SC Inter-carrier Interface Interoperability Trial"
June 2008	**iPOP 2008**	"Inter-carrier PCE-Based Path Computation in Keihannna Interoperability Project"
Oct. 2008	**MPLS 2008**	"Interoperability Effort for Ubiquitous GMPLS Controlled Optical Networks"
June. 2009	**iPOP 2009**	"Implementation and evaluation of inter-domain Ethernet control between ASON and GMPLS network"
Sep. 2009	**ECOC 2009**	"Multi-Vendor Interoperability Demonstration of Wavelength Switched Optical Network(WSON) with GMPLS Lambda-Label Extension"
July 2010	**OECC 2010 PD**	"Experimental demonstrations of dynamic wavelength path control and highly resilient recovery in heterogeneous optical WDM networks "
Oct. 2010	**MPLS 2010**	"Brief Report on Recent All Optical Interop Testing in Japan Keihanna Open Labs"
March 2011	**OFC/NFOEC 2011**	"Multi-failure Restoration Demonstrations with Multi-vendor Interoperability in Control Plane enabled WSON"
March 2012	**OFC/NFOEC 2012**	"Network Interoperability trial with Multi-vender OTU4 interfaces carrying 100Gigabit Ethernet signals "

Standardization



- Contributed to the documentation of G.Sup43 *"Transport of IEEE 10G Base-R in Optical Transport Networks (OTN)"* in Oct. 2006, and updated in Dec. 2008
- One of the over clock mapping of 10G Base-R into ODU2e described in G.Sup43 was promoted to the client signal of OTU4 as a document of Revised G.709 in December 2009.
- RFC 6205 *"Generalized Labels for Lambda-Switch-Capable (LSC) Label Switching Routers"* in March 2011