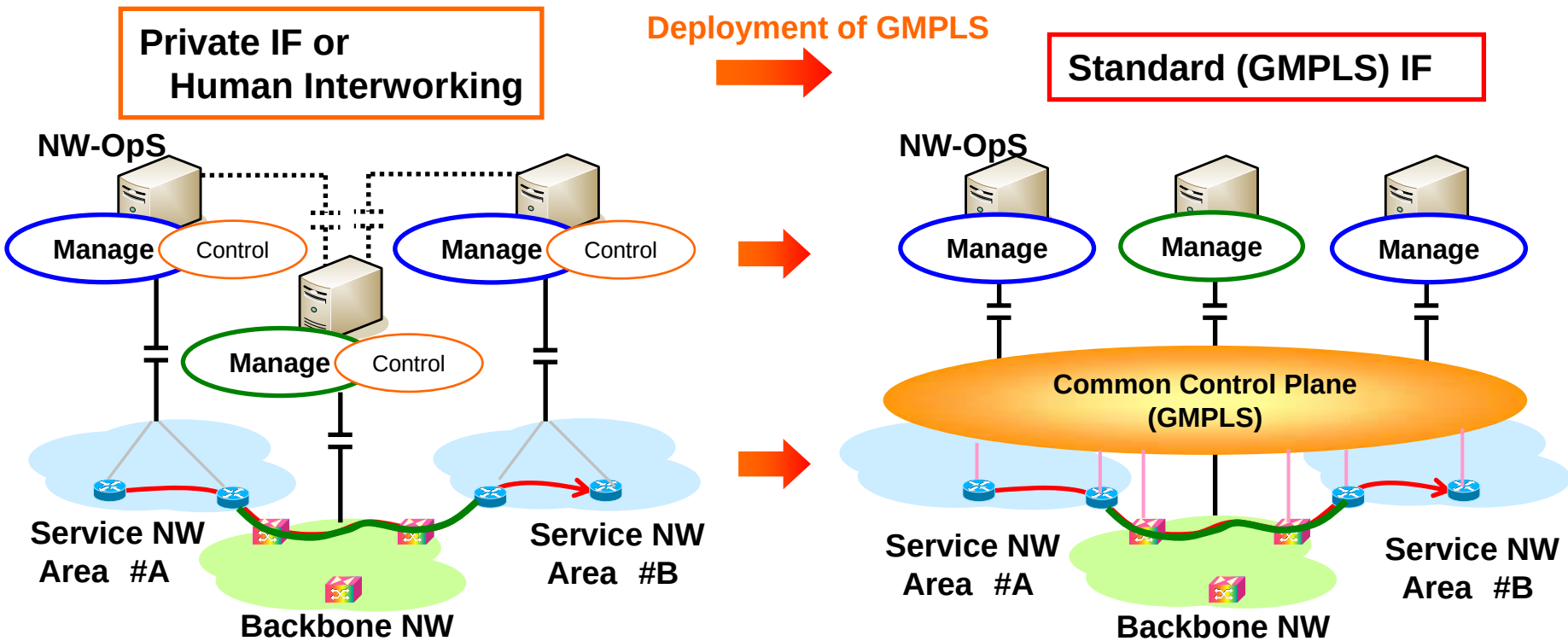
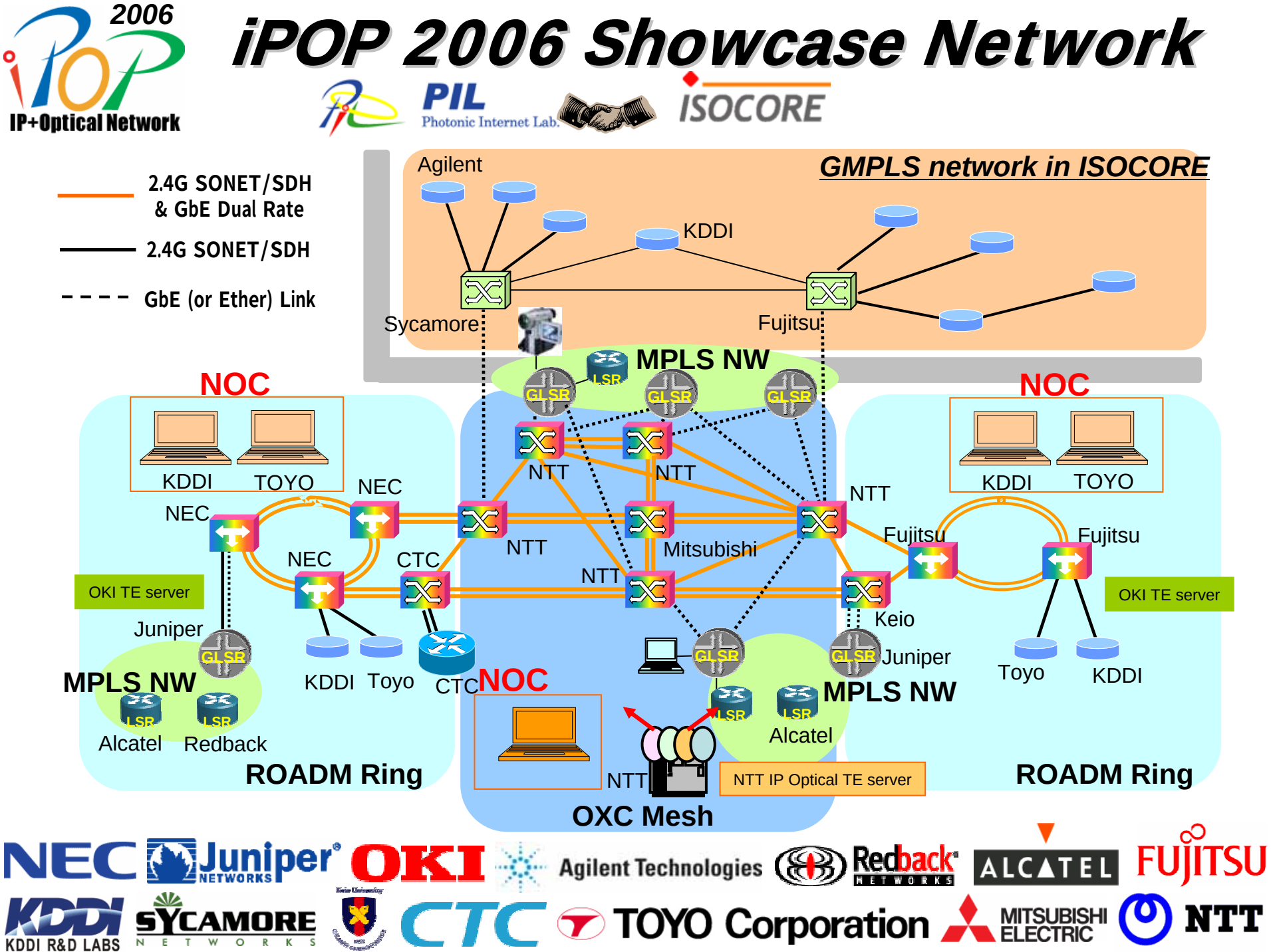
Concept of iPOP 2006 Showcase

- MPLS/GMPLS demonstration of
  - Fast Multiple Service Provisioning over Multiple NWs
    - Interoperability among ROADM Rings and OXC Mesh NWs
    - Interoperability between MPLS and GMPLS NWs
  - New network services such as L1-VPN service,
  - Measurement tools to support deployment of MPLS/GMPLS technologies.

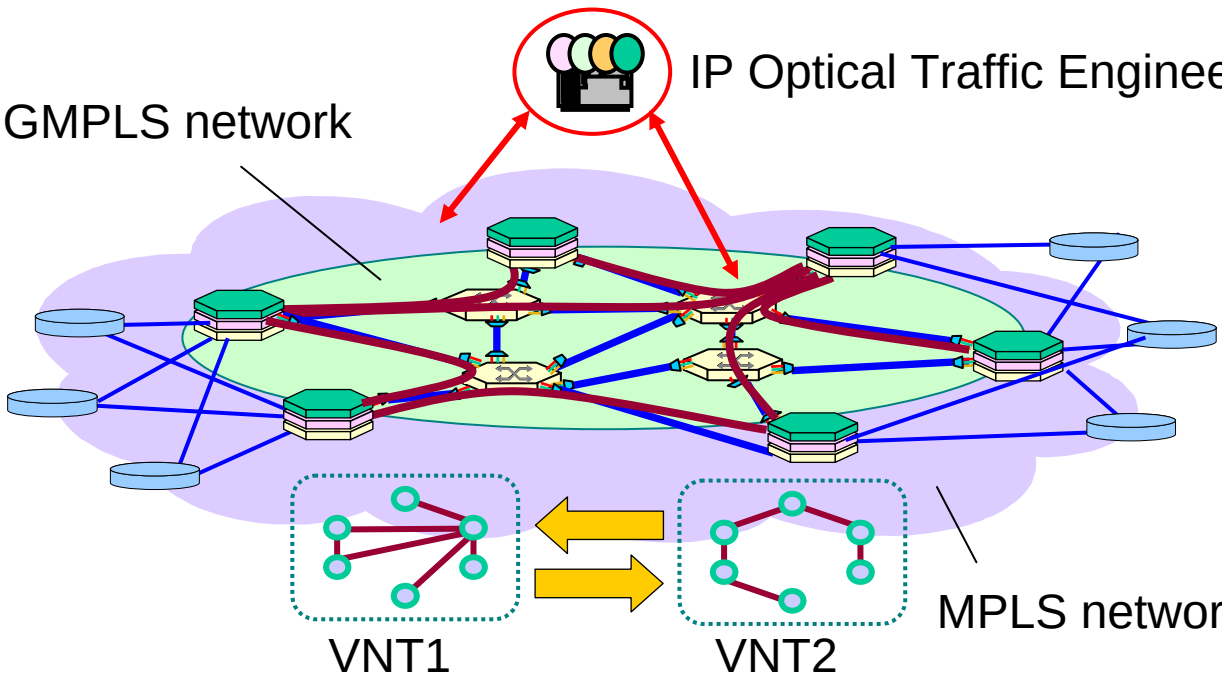


iPOP 2006 Showcase Network



IP Optical Traffic Engineering Server

- Both IP and optical TE topologies are visible.
- Multi-layer traffic engineering provides
  - Fast service
    - High-speed multi-layer path provisioning
  - Cost-effective and reliable service
    - Dynamic VNT reconfiguration according changes of traffic demands and network conditions.



TE: Traffic Engineering
VNT: Virtual network topology

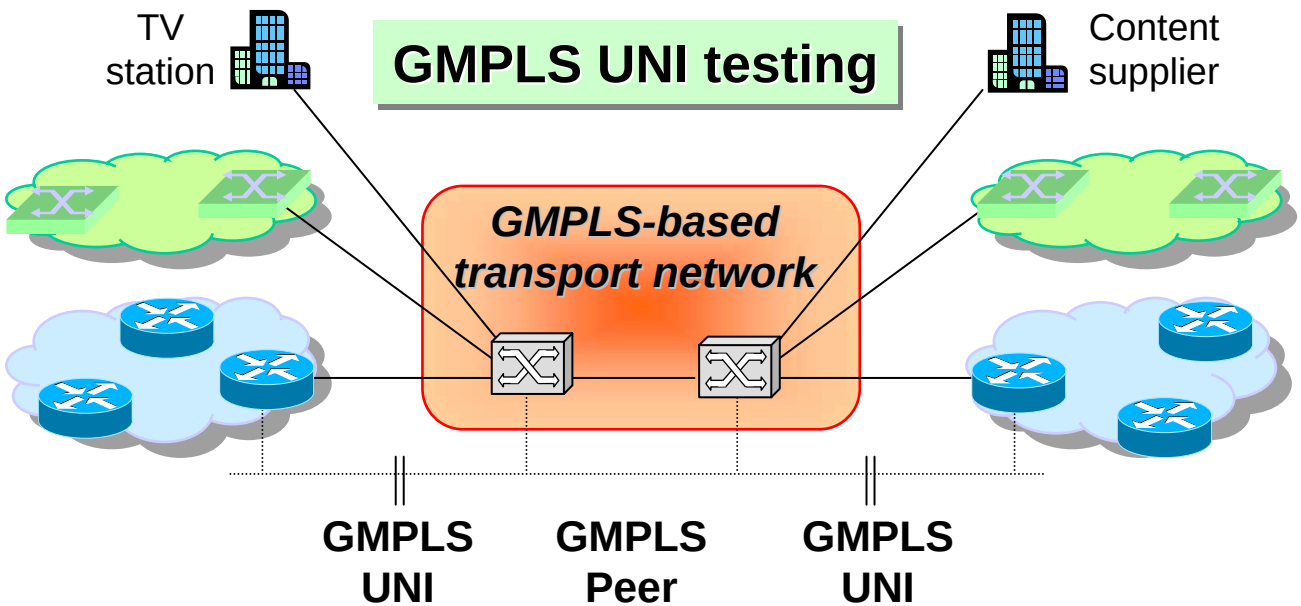
Layer 1 VPN

GMPLS facilitates Layer 1 VPN that enables:

- Support of multiple service networks over GMPLS-based transport network (carrier's carrier, multi-service backbone)
- New optical services (switching service, scheduling service)

Interoperability testing

- GMPLS-UNI: Key feature for Layer 1 VPN basic mode



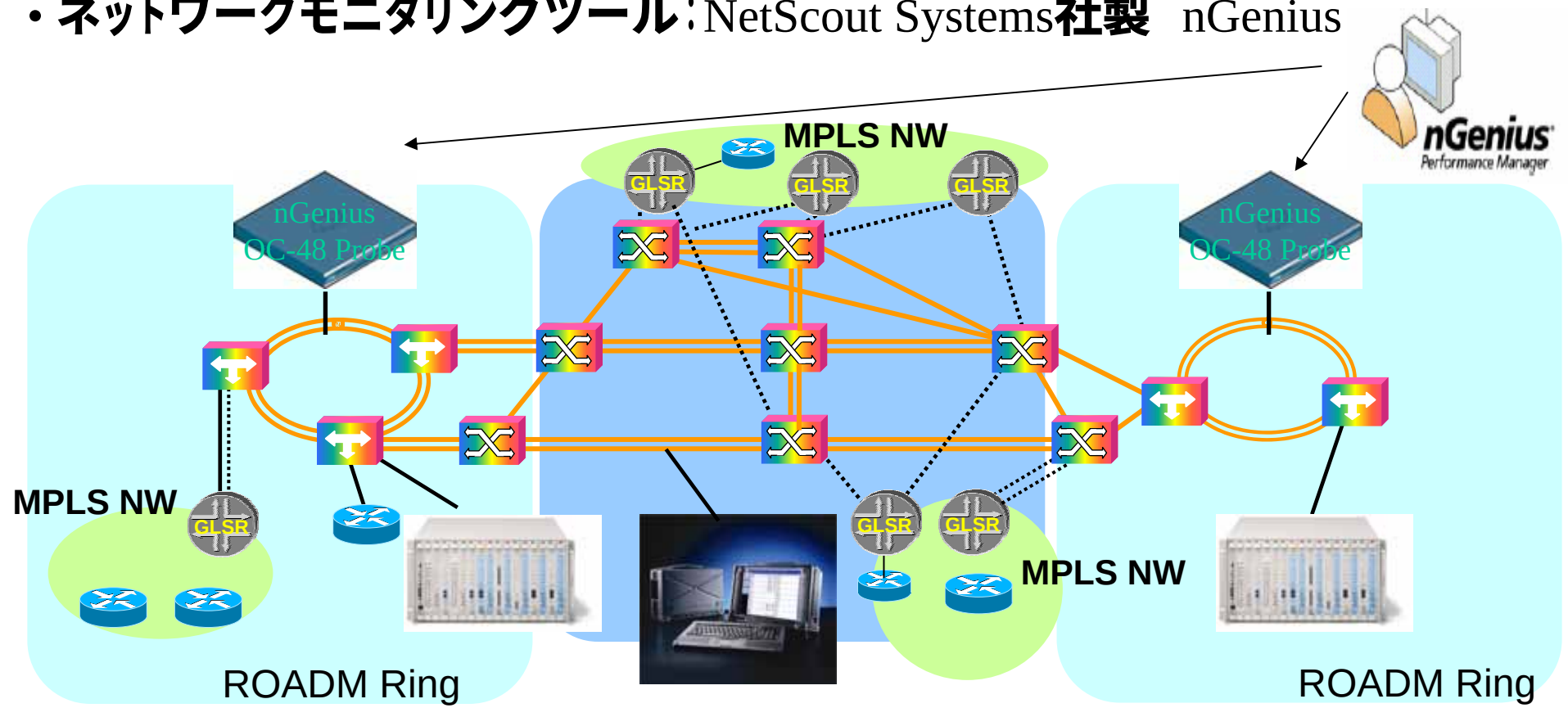
New optical services

L2 network for L2VPN service

MPLS network for L3VPN service

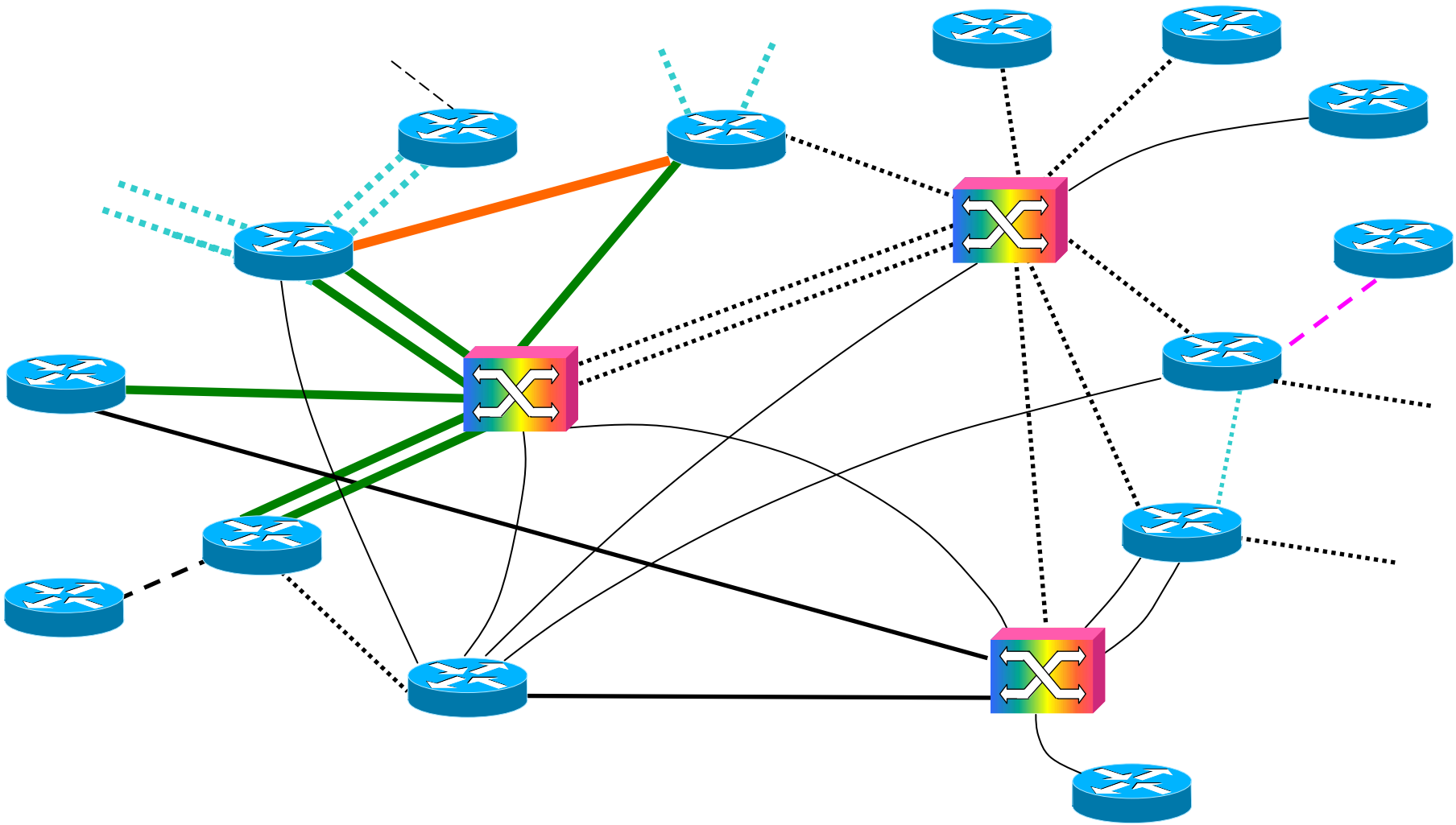
GMPLS measurement solution

- GMPLS **ルータエミュレーション**：SPIRENT Communications**社製**　AX/4000
- Gigabit Ethernet **アナライザ**：ClearSight Networks**社製**　ClearSight **ｱﾅﾗｲｻﾞ**
- **ネットワークモニタリングツール**：NetScout Systems**社製**　nGenius



TESTED AT ISOCORE INTERNETWORKING LAB

Isocore Spring 2006
Leading Edge Code Testing Test Bed



Ethernet Services over MPLS/GMPLS LSPs
Multi-site Isocore-iPOP Showcase

TESTED AT ISOCORE INTERNETWORKING LAB