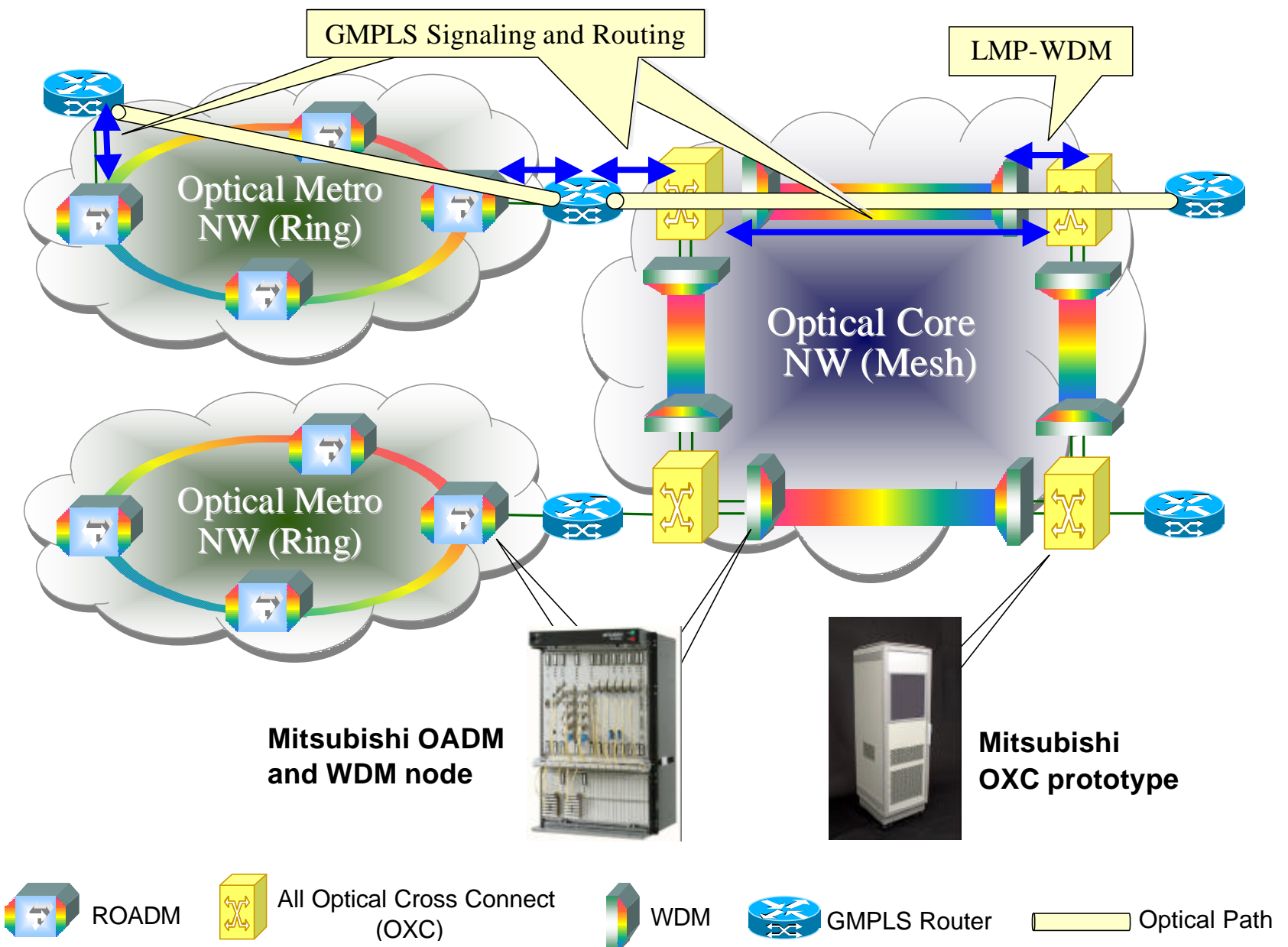# GMPLS Aware Optical Transport Systems

[Features]

- **A large capacity and high reliability IP Optical Network is realized by coordination of routers and Optical Transport Systems (OXC, WDM, ROADM) by GMPLS.**

- **In the optical core network, transmission quality monitor and re-route function is realized by all optical cross connects cooperating with WDM equipment.**

- **In the optical metro network, a flexible network adapting to the traffic demand is realized by GMPLS path signaling.**

ROADM   Reconfigurable OADM

Next Generation IP Optical Network

GMPLS Signaling and Routing

LMP-WDM

Optical Metro NW (Ring)

Optical Core NW (Mesh)

Optical Metro NW (Ring)

Mitsubishi OADM and WDM node

Mitsubishi OXC prototype

ROADM   All Optical Cross Connect (OXC)   WDM   GMPLS Router   Optical Path
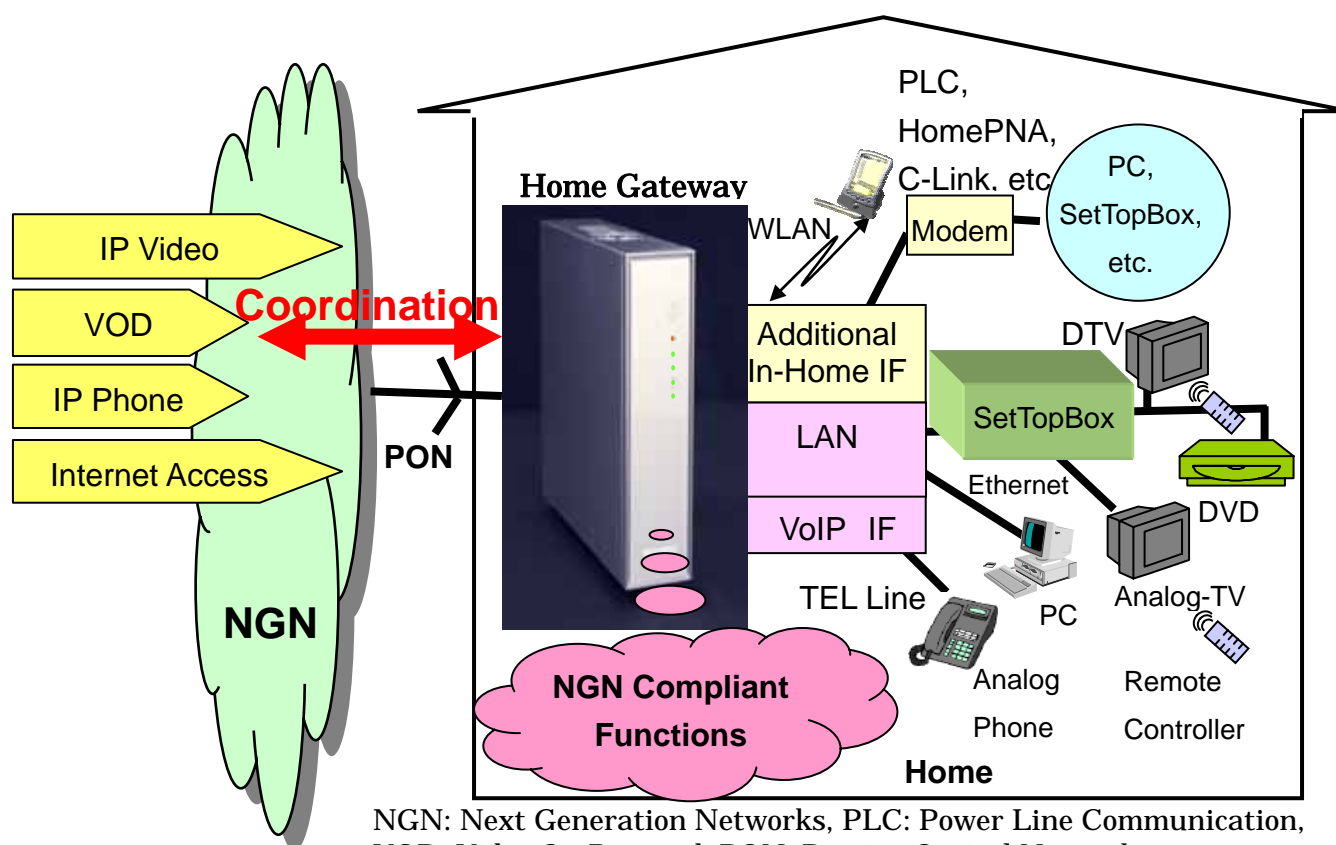
Communication Control Functions For NGN

Providing Communication Services with Appropriate Quality for Voice, Video and Any IP Communication

[Features]

- Provide session and QoS control functions for NGN discussed in ITU-T and MSF.
- Automatically map session attributes into QoS parameters.
- Reserve required network resources during the session establishment.

ITU-T: International Telecommunication Union – Telecommunication Standardization Body, MSF: MultiService Forum

IP Video
VOD
IP Phone
Internet Access

Coordination

PON

NGN

Home Gateway

PLC, HomePNA, C-Link, etc.

WLAN

Modem

PC, SetTopBox, etc.

DTV

Additional In-Home IF

SetTopBox

LAN

Ethernet

DVD

VoIP IF

TEL Line

PC

Analog-TV

NGN Compliant Functions

Analog Phone

Remote Controller

Home

NGN: Next Generation Networks, PLC: Power Line Communication,
VOD: Video On Demand, PON: Passive Optical Network,
VoIP: Voice over IP

Application Example – Home Gateway