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Extension to the Link Management Protocol (LMP/DWDM - rfc4209) for Dense Wavelength Division Multiplexing (DWDM) Optical Line Systems

draft-dharinigert-ccamp-g-698-2-lmp-05.txt

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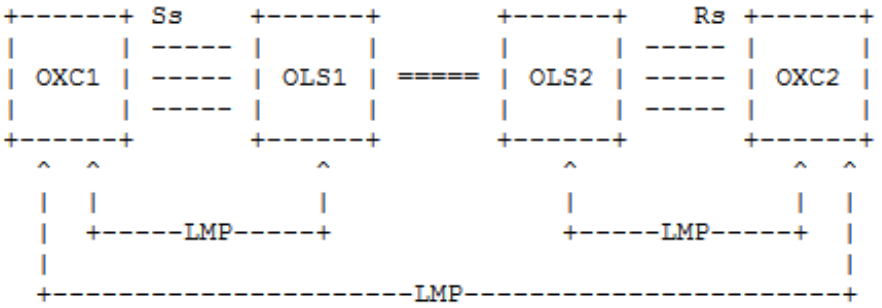
Role of LMP in GMPLS

- LMP (RFC4209) is designed to provide four basic functions for a node pair:
  1. control channel management
  2. link connectivity verification
  3. link property correlation
  4. fault isolation



OXC : is an entity that contains transponders
OLS : generic optical system, it can be -
Optical mux , Optical demux, Optical Add Drop Mux,
OLS to OLS : represents the black-Link itself
Rs/Ss : inbetween the OXC and the OLS

Figure 1: Extended LMP Model

Motivation & Problem statement

- ITU-T G.698.2 defined the "Application Codes" and their optical parameters to design a DWDM system in a multi-vendor approach.
- LMP is protocol of choice to exchange optical link property between client and server devices
- NON-GOAL: LMP doesn't replace routing or signalling

Motivation:

- Provide a standard way to exchange parameters between client (TX, Rx) and server (optical system).
- Support client and server devices to access local and remote optical parameters for property correlation
- Provide a simple way to share information about optical parameters across packet and optical devices for fault management

Status

- Changed from previous version:
  - Removed threshold provisioning and supervision because not supported by G.874 Amendment 2 and G. 874.1
  - added identifier for Application codes
  - Aded Vendor transceiver class application code
  - Rearranged messages BL_SS and BL_RS

- Kept alignment with http://tools.ietf.org/html/draft-galikunze-ccamp-g-698-2-snmp-mib-05