

# Framework for DWDM interface Management and Control

draft-kdkgall-ccamp-dwdm-if-mng-ctrl-fwk-01

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# Introduction

**Black Link:** The Black Link approach [ITU-T G.698.2] allows supporting an optical transmitter/receiver pair of one or different vendors to inject a DWDM channel and run it over an optical network composed of amplifiers, filters, add-drop multiplexers from a different vendor. We would like to extend the parameters list used to manage the DWDM interfaces.

# Motivation

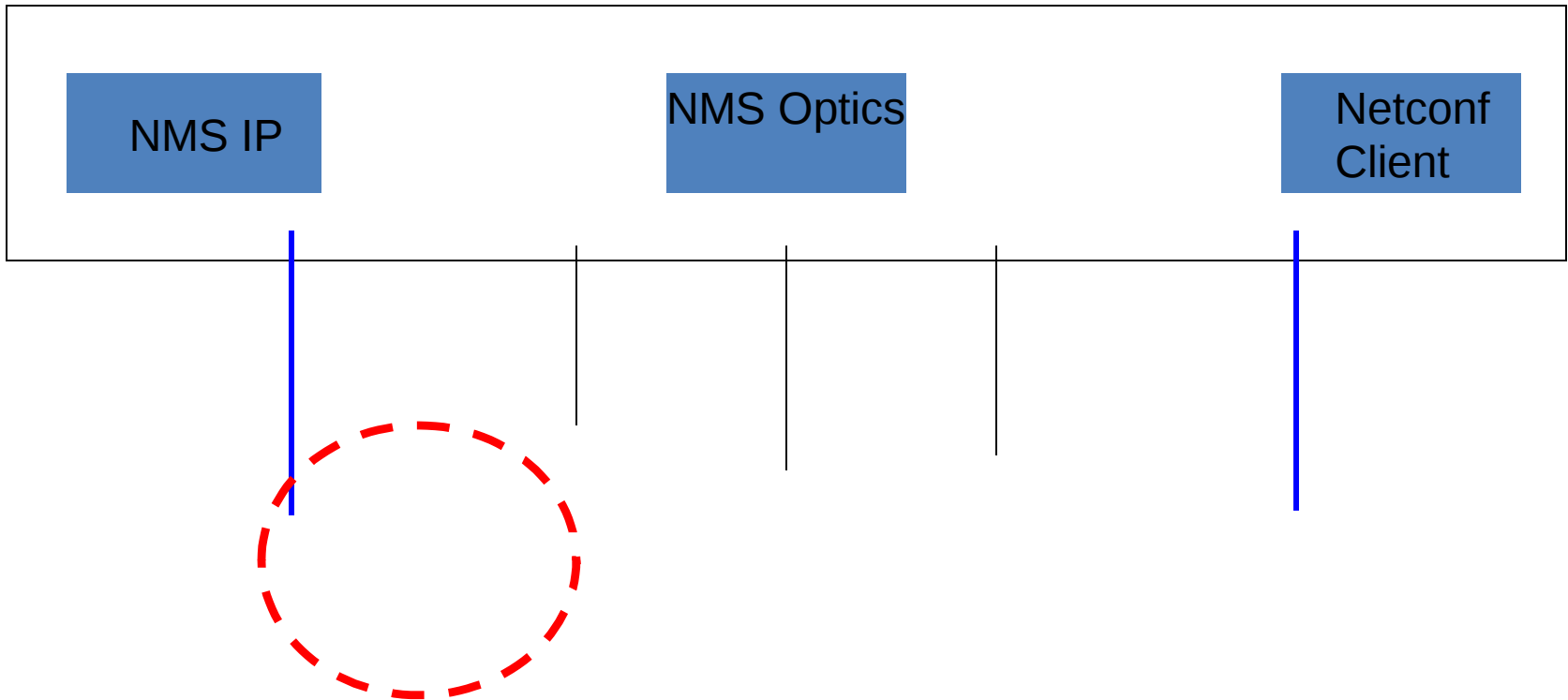
## The Problem:

- State-of-the-art is to interconnect Routers via standard grey interfaces to proprietary Transponder equipment hosted by the ROADM/DWDM
- When DWDM interfaces are fitted outside the DWDM network,
  - Transponders and DWDM equipment may be implemented by different vendors, so there is a need for a common parameter base
  - the network and the terminal equipment need at least to exchange Interface characteristics, operational state and verify the inter-layer connectivity quality.
- To control the multivendor packet-optical networks requires a common network model

# Document Scope

- The purpose is to identify the necessary information elements and processes for the given Architecture.
- This document describes use cases and requirements for the control and management of optical interfaces parameters
- Give requirements for the drafts:
  - draft-dharinigert-ccamp-dwdm-if-imp
  - draft-dharini-netmod-dwdm-if-yang
  - draft-galikunze-ccamp-dwdm-if-snmp-mib
- The focus is on automating the network provisioning process irrespective on how it is triggered
- This document covers management and control plane aspects for single channel DWDM interfaces

# Solution initially in scope.



EMS – Element Management System  
NMS – Network Management System

# Key Requirements

- This document covers management and control plane considerations to control single channel DWDM interfaces.
- Specification of solutions ensuring an interoperable management of multivendor deployments for 10G, 40G, 100G and beyond.
- The Management or Control planes of the Client and DWDM network must know the parameters of the Interfaces to properly set the optical link.
- Not in scope:
  - Optical Routing and Wavelength assignment based on WSON
  - wavelength ordering process and the process how to determine the demand for a new wavelength from A to Z based on WSON
- Note that the Control and Management Planes are considered two separate entities that are handling the same information in different ways.

# Next Steps

- Requesting Working Group feedback
- Progressing work on Use Case section and on Requirements
- Extend solution section if there are further approaches
- Coordinate with partner-drafts covering protocol implementations