

# Framework for DWDM interface Management and Control

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**Ruediger Kunze**

Deutsche Telekom

**Gabriele Galimberti**

Cisco Systems

**Gert Grammel**

Juniper Networks

**Dieter Beller**

Alcatel Lucent

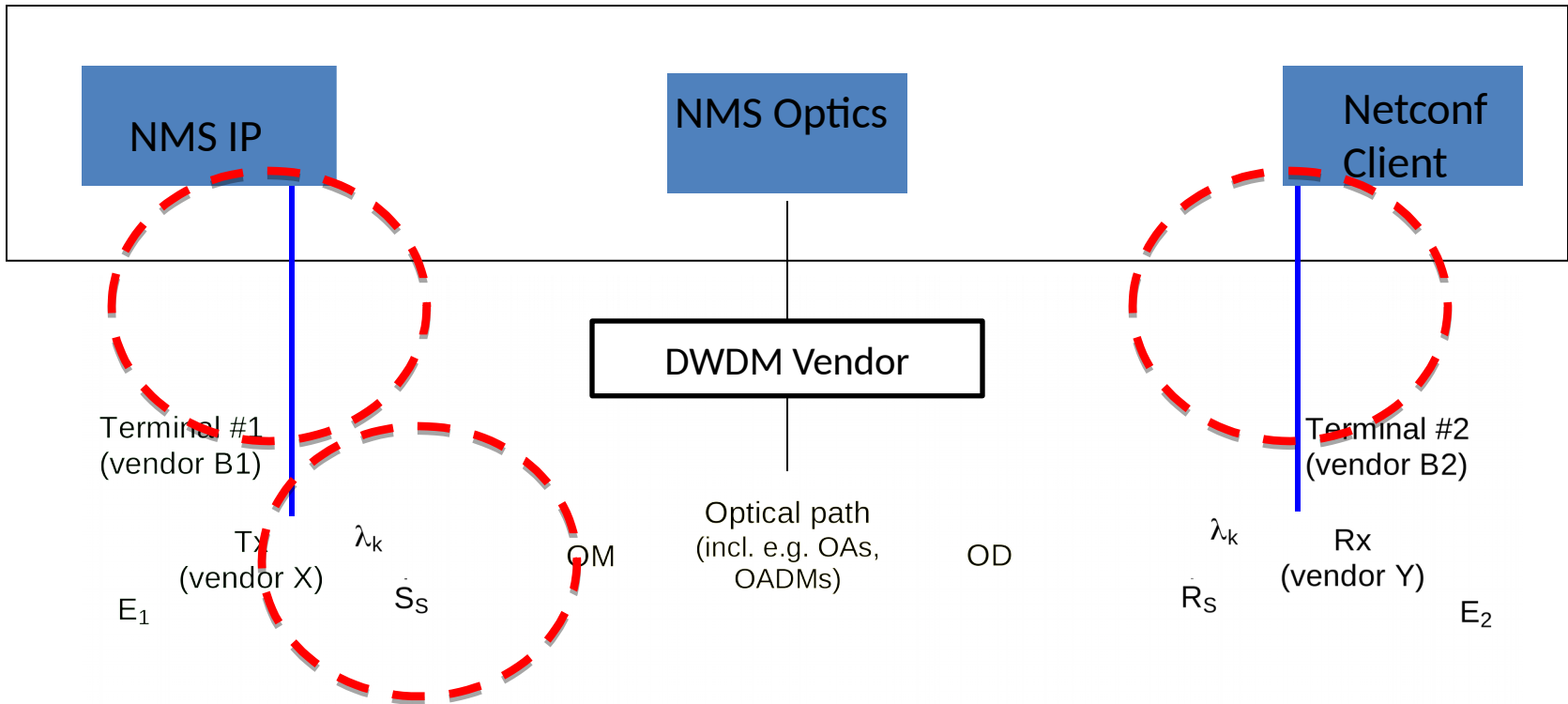
# Motivation

- State-of-the-art is to interconnect Routers via standard grey interfaces to proprietary transponder equipment as part of the DWDM network
- The deployment DWDM interfaces outside the DWDM network leads to the following issues:
  - Transponders and DWDM equipment may be implemented by different vendors, so there is a need for a common parameter set defining the line of the network
  - the network and the terminal equipment need at least to exchange interface characteristics, operational state and verify the inter-layer connectivity quality.
- A multivendor packet-optical network requires a common network model to ensure an efficient operation and management of the network

# Document Scope

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

# Solution initially in scope.



EMS – Element Management System  
NMS – Network Management System

# Key Requirements

- This document covers management and control plane considerations for 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.

# Diffs in version 01

- New version is ready, uploading the new document after the IETF meeting
- Did rephrasing and error correction
- Making the document better readable by using common terms/definitions
- Further cleanup, deleted unnecessary text
- Will discuss the next version on the list

# New proposed ToC (1)

- 1 Introduction
- 2 Terminology and Definitions
- 3 Architectural Options in IPoDWDM environments
- (describe grey and colored interface and say that we focus on colored)
- 3.1 single channel interface options
- (description of the options)
- 4 Solution for managing and controlling the optical interfaces
- 4.1 Management considerations
- 4.2 Control plane considerations
- 4.2.1 Signaling
- 4.2.2 Routing
- 4.2.3 LMP

# New proposed ToC (2)

- 5. Use Cases
  - 5.1 Service Setup
  - 5.2. Power Control
  - 5.3 Access Link Monitoring
- 6. Requirements Section