A YANG model to manage the optical interface parameters for an external transponder in a WDM network

draft-dharini-ccamp-dwdm-if-param-yang-02

draft-galimbe-ccamp-iv-yang-03

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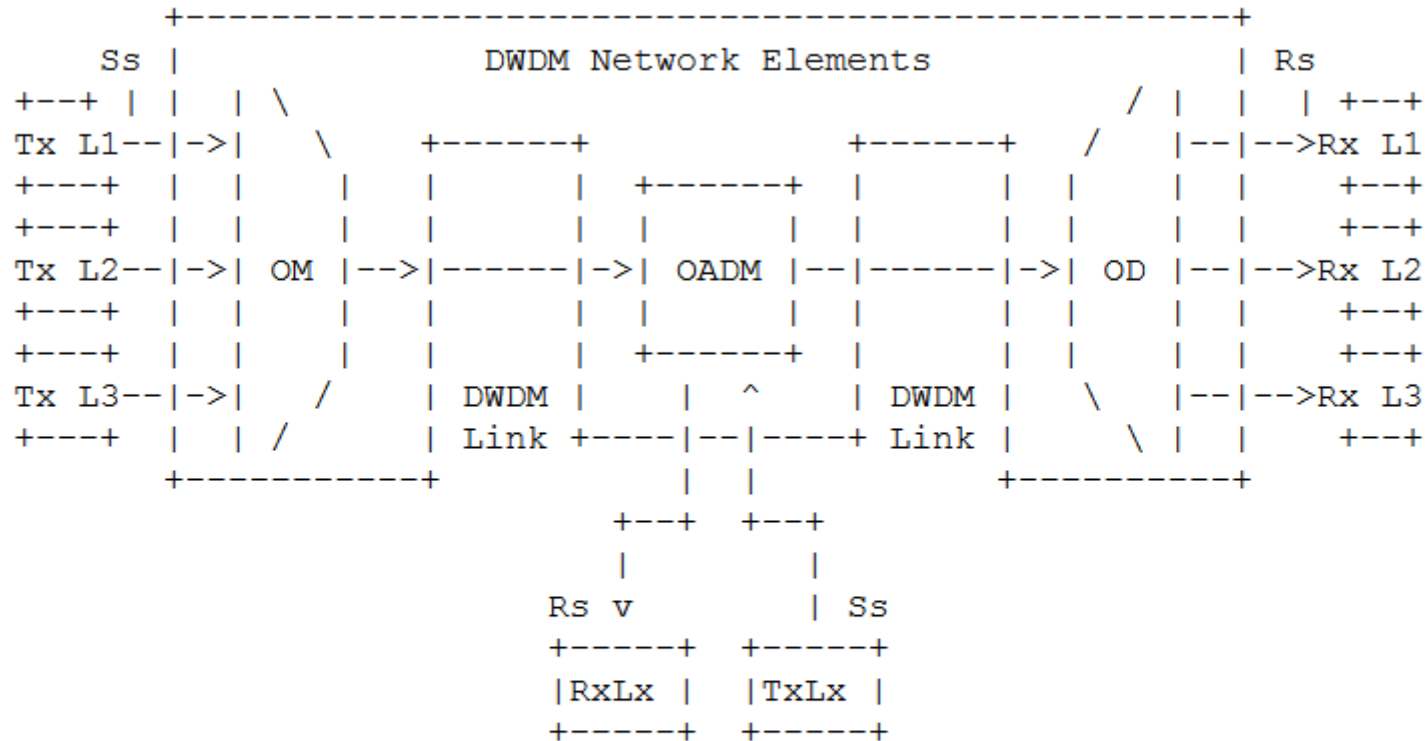**Gert Grammel**   Juniper Networks

Document History

IETF 90:   First Draft presented to netmod WG

IETF 91:   Align yang model with SNMP draft

IETF 92:   incorporate Yang doctor's suggestions

IETF 93:   Alignment with discussions at IETF 92

IETF 94:   replaced draft-dharini-netmod-g-698-2-yang-04 by
           draft-dharini-netmod-g-698-2-yang for a more generic   approach

IETF 95:   switched to draft-dharini-netmod-dwdm-if-yang, reducing
dependency from progress in non-IETF standard bodies

IETF 96:   deciding to go for experimental, given the lack of standards

IETF 96:   presented draft-galimbe-ccamp-iv-yang, for Optical Parameters

IETF 97:   Experimental draft in conjunction with a problem statement

IETF 98:   Introducing mode parameters

External Transponder Model

```
                +---------------------------------------------+
       Ss |            DWDM Network Elements              | Rs
+--+ |  |   | \                                  / |  |   | +--+
Tx L1--|->|   \         +------+               +------+   /    |--|-->Rx L1
+---+  |  |   |    |     |      |    +------+    |      |    |  |    +--+
+---+  |  |   |    |     |      |    |      |    |      |    |  |    +--+
Tx L2--|->| OM |-->|------|->| OADM |--|------|->| OD |--|-->Rx L2
+---+  |  |   |    |     |      |    |      |    |      |    |  |    +--+
+---+  |  |   |    |     |      |    +------+    |      |    |  |    +--+
Tx L3--|->|   /    | DWDM |    |  ^     | DWDM |    \    |--|-->Rx L3
+---+  |  | /      | Link +----|--|----+ Link |      \ |  |    +--+
       +----------+         |  |         +----------+
                         +--+  +--+
                          |       |
                      Rs v        | Ss
                      +-----+   +-----+
                      |RxLx |   |TxLx |
                      +-----+   +-----+
Ss = reference point at the DWDM network element tributary output
Rs = reference point at the DWDM network element tributary input
Lx = Lambda x
OM = Optical Mux
OD = Optical Demux
OADM = Optical Add Drop Mux
```

Motivation & Problem statement

Problem:

- Coherent transceivers not covered by standards today → draft status is experimental
- Supporting several combinations of parameters with interdependency between each other
- Current YANG models do not support the planning aspect allowing to select the best parameter combination
- Yang models definition according to existing draft like: draft-ietf-ccamp-wson-iv-info, draft-martinelli-ccamp-wson-iv-encode and RFC6566

Motivation:

- Provide a consistent way to plan and operate wavelength Interfaces with netconf/yang
- More about the problem and motivation can be found in: draft-many-coherent-dwdm-if-control-01

Changes from the previous version

- draft-dharini-ccamp-dwdm-if-param-yang-02
  - Corrected few typo
  - Changed OADM into ROADM
  - added/removed reference documents

- draft-galimbe-ccamp-iv-yang-03
  - Corrected few typo
  - Changed OADM into ROADM
  - added/removed reference documents
  - Removed some parameter from the schema

Next Steps

- Keep alignment with related effort in CCAMP
- Keep alignment to **draft-ietf-ccamp-wson-iv-info** and **draft-martinelli-ccamp-wson-iv-encode**
- Keep focus on operational aspects
- Address feedbacks