Extension to the Link Management Protocol (LMP/DWDM -rfc4209) for Dense Wavelength Division Multiplexing (DWDM) Optical Line Systems to manage the application code of optical interface parameters in DWDM application

draft-ggalimbe-ccamp-flex-if-lmp-07

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LMP Considerations

- LMP address the discovery/parameter-negotiation use case
- LMP is neither used for configuration nor provisioning and there is no mentioning of configuration or provisioning in these drafts
- Discovery determines the limitations of the DWDM interface to a WDM line system

Parameters to exchange

The parameters added for SSON are:

1. Modulation identifier: indicates the Transceiver capabilities to support a single or multiple modulation format like: BPSK, DC-DP-BSPSK, QPSK, DP-QPSK, QAM16, DP-QAM16, DC-DP-QAM16, QAM64, etc.
2. FEC: indicates the FEC types the transceiver can support
3. baud rate: number of symbols rate, basically this identifies the channel frequency
4. Number Carriers: number of subcarriers the transceiver can support and can be "mapped" in a Media Channel
5. Bits/symbol: number of bit per symbol (aka spectral efficiency)
6. Subcarrier band (minimum distance between subcarriers) in GHz required by the transceiver
7. Guard band (required guard band at the side of media channel)
8. Sub-carrier TX Power: output optical power the transceiver can provide
9. Sub-carrier RX Power: Input optical power Range the transceiver can support, this is known also as Sensitivity
10. Sub-carrier OSNR robustness
11. Max-pol-power-difference
12. Max-pol-skew-difference

Changes from the previous version

- Draft-ggalimbe-ccamp-flex-if-lmp-06
  - fixed ITU-T references

Next Steps

- Keep alignment with related effort in CCAMP
- Keep focus on operational aspects
- Keep alignment to **draft-dharinigert-ccamp-dwdm-if-lmp** follow the fate
- Progress towards WG doc.

A YANG model to manage the optical parameter in a WDM network

draft-galimbe-ccamp-iv-yang-08

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Motivation & Problem statement

Problem:

- Coherent transceivers not covered by standards today → draft status is informational (it could be also Standard Track after checking with ITU)
- Supporting several combinations of parameters with interdependency between Transponders connected through the line.
- 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

Changes from the previous version

- draft-galimbe-ccamp-iv-yang-07
  - Updated ITU-T References

Next Steps

- Keep alignment with related effort in CCAMP
- Keep alignment to **draft-ietf-ccamp-wson-iv-info** and **draft-ietf-ccamp-wson-iv-encode** and **draft-dharini-ccamp-dwdm-if-param-yang** follow the fate. Specially regarding any ITU liaison.
- Keep focus on operational aspects
- Address feedbacks to become WG doc. as the above deafts.

Thank You!