# Applicability of ACTN to Packet Optical Integration (POI)

draft-peru-teas-actn-poi-applicability-02

**Daniel King** - daniel@olddog.co.uk
Italo Busi - Italo.busi@huawei.com
Jean-Francois Bouquier - jeff.bouquier@vodafone.com
Michael Scharf - michael.Scharf@hs-esslingen.de
Sergio Belotti - sergio.belotti@nokia.com
Fabio Peruzzini – fabio.peruzzini@telecomitalia.it

# The Motivation for this Work

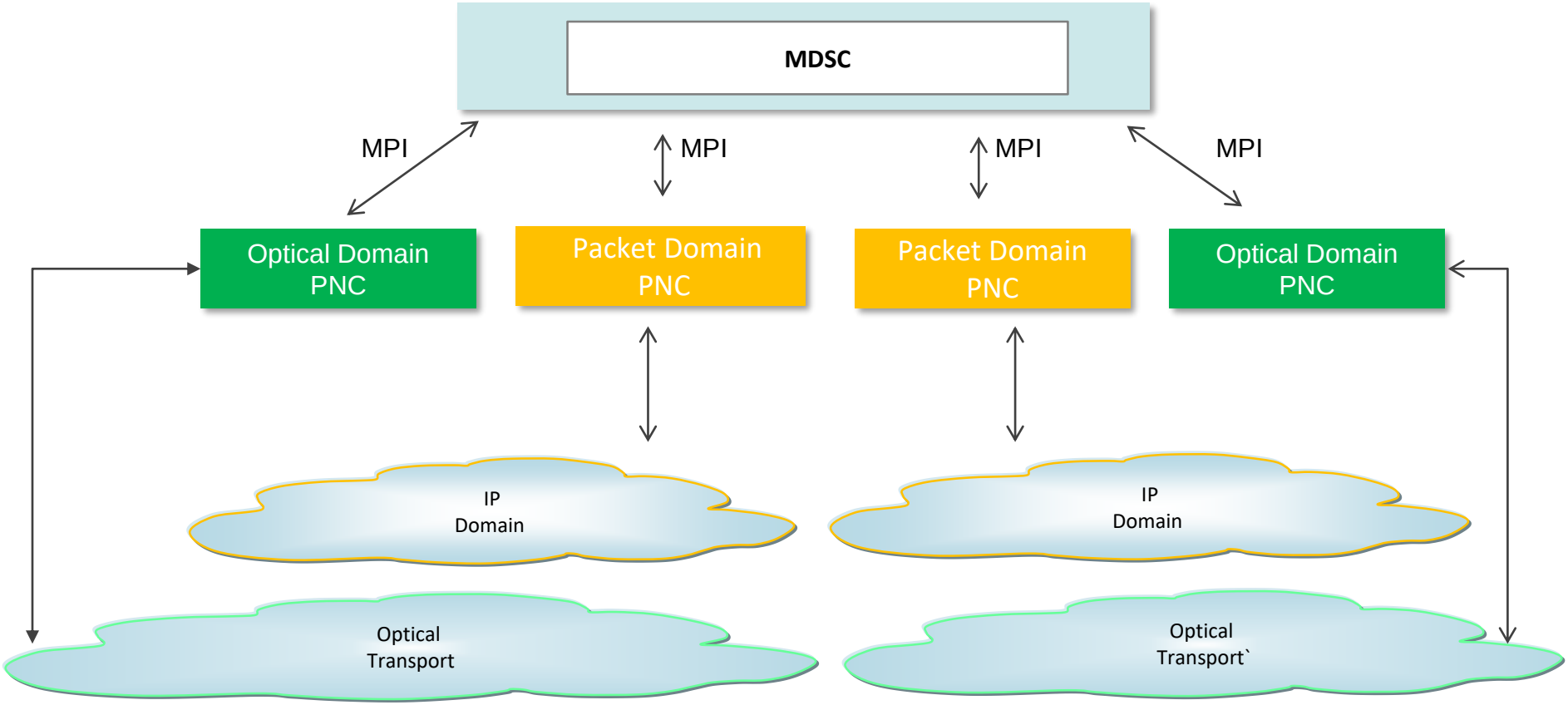
- Definition of key use cases for Packet Optical Integration (POI), described both from the point of view of the optical and packet layer
- Document the process and required coordination interactions between IP and Optical network components
- Identification of the IETF protocols and data models that may be used for ACTN-based infrastructure to control of POI networks, specially:
  - the MDSC (Multi-Domain Service Coordinator) and the underlying Packet and Optical Domain Controllers (P-PNC and O-PNC)

- This will help us understand the current level of standardization and the gaps will help to better assess the feasibility of integration between IP and Optical DWDM domain, especially for end-to-end multi-vendor service provisioning perspective.

# Use Cases Described

| | |
|---|---|
| **1. Multi-Layer Topology Coordination** | |
| 1.1 | Discovery of existing Och, ODU, IP links, IP tunnels and IP services |
| 1.2 | Provisioning of an IP Link/LAG over the DWDM |
| 1.3 | Provisioning of an IP link/LAG over DWDM with path constraints |
| 1.4 | Provisioning of an additional link member to an existing LAG with or without path constraint |
| **2. Multi-Layer Recovery Coordination** | |
| 2.1 | Ensuring network resiliency during maintenance events |
| 2.2 | Router port failure |

# Current Reference Topology



# Moving Forward

- Continue to define the list of steps to be executed by MDSC, O-PNC and P-PNC addressing the current use cases
- Documenting the YANG models used for the use cases
  - at the Optical MPIs
  - at the Packets MPIs
- Highlight gaps, if any
  - Are the existing models suitable?
  - If not, what is missing?
  - Any operational issues that need addressing?
- Continue to coordinate the work with draft-lee-teas-actn-poi-applicability-00
  - Our proposal is that IP-Optical transport layer coordination is discussed in our document, and the above document focuses on the IP services (which it currently does)

# Questions for the working group

- Is this a useful activity for the working group?
  - Describing key ACTN POI use cases and how to solve them
    - Including the requirements, and the models that may be applied to service them, highlighting model gaps, and operational and security considerations
- If not…
  - We could move the ACTN POI Applicability discussion onto the list only, agree use cases, applicable models, discuss and move on?
- Finally, could we see in the room who has read the document?