

# OSPF-TE Extensions for MLNMRN based on OTN

draft-rao-ccamp-mlnmrn-otn-ospfte-ext-00

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IETF-85 Nov 5<sup>th</sup> 2012

# OSPF-TE extensions for OTNv3 support (draft-ietf-ccamp-gmpls-ospf-g709v3)

ISCD Format as defined by the extension requires available bandwidth for a signal Type + Hierarchy in a TLV in SCSI area. SCSI can have multiple of these TLVs.

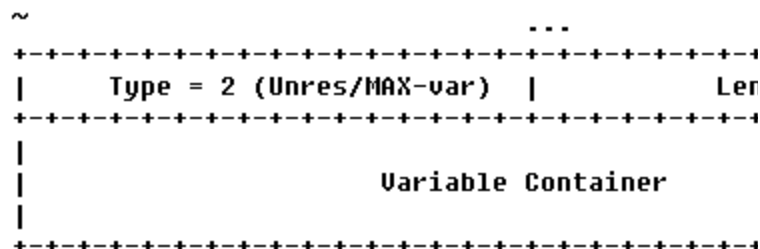
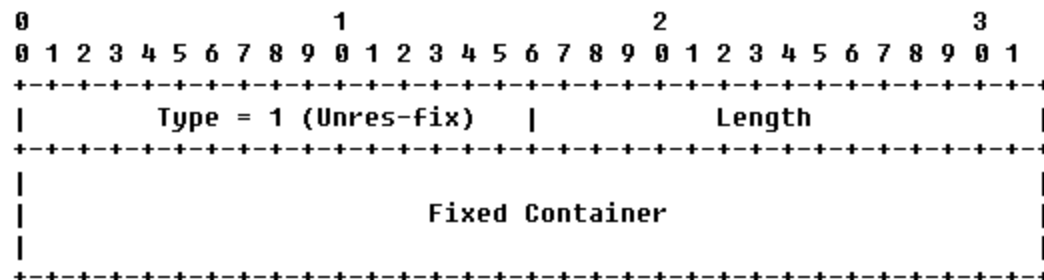


Figure 3: SCSI Format

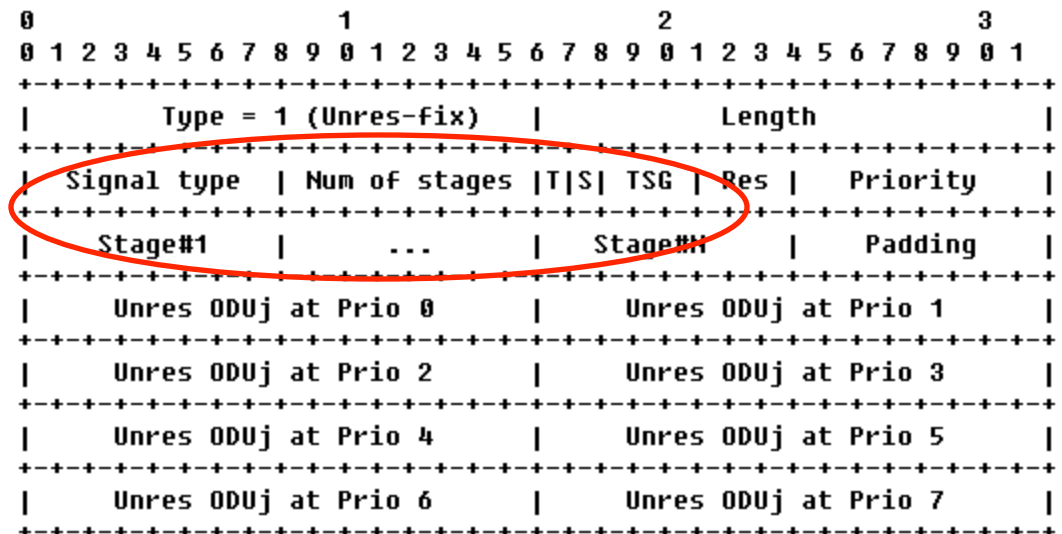


Figure 4: Bandwidth TLV - Type 1 -



# Problem for multi-layer technology like OTN w.r.t. MRN

- RFC 6001 assumes SwitchCap and Encoding type is good enough to represent the bandwidth associated with an interface (i.e. ISCD)
- While OTN extensions as defined today, captures more than one layer in one ISCD.
- IACD must associate to one of the layer in OTN ISCD.

# What is required to connect OTN Layer with other region(s)?

- A Layer in OTN
  - SwCap=OTN-TDM
  - Encoding=G.709 ODUk
  - Signal Type
  - Hierarchy
  - TSG
  - Terminating/Switching
- An IACD must carry above information to unambiguously identify a layer in OTN MultiLayer interface

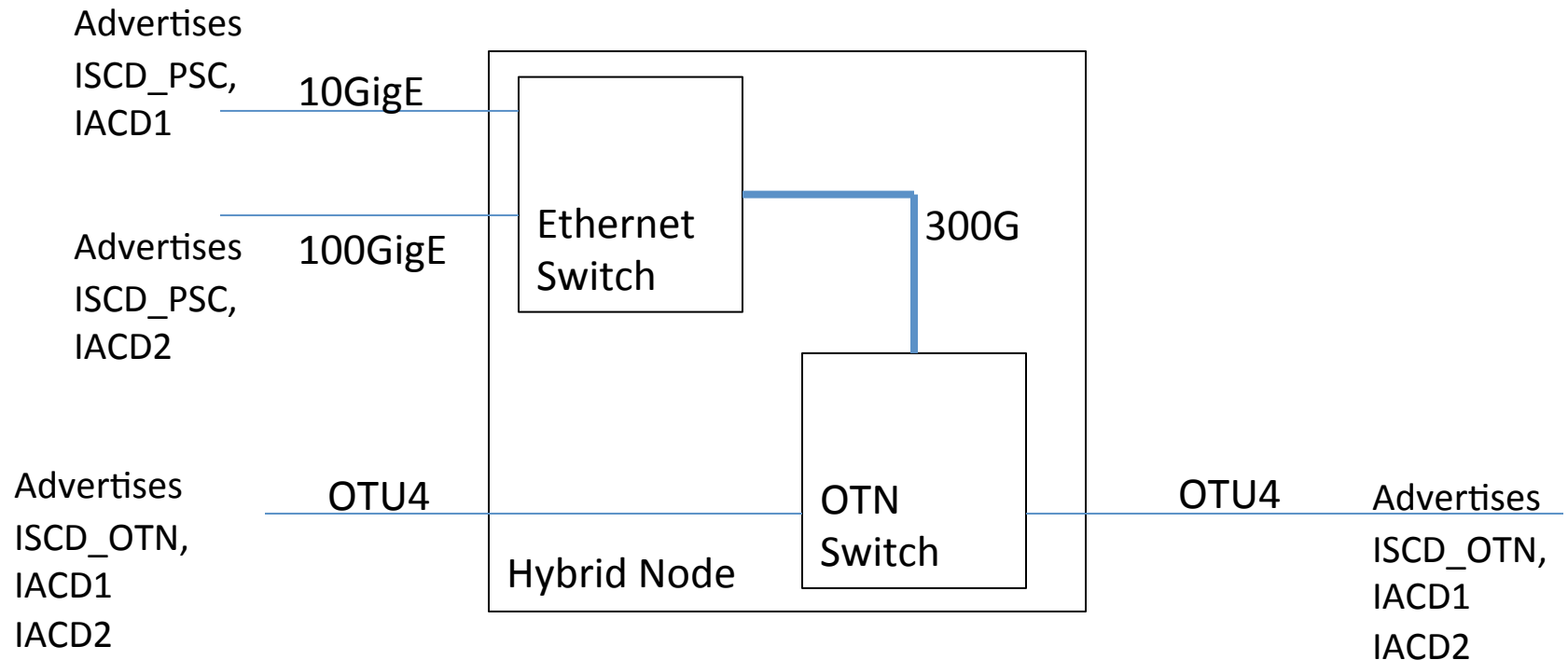
# How do we connect

Considering current definition of the SCS I for OTN extension for OSPF, IACD's Adjustment Capability specific information for OTN needs to carry all the information to correctly identify the layer in the OTN TE Link ISCD.

IACD (As defined by RFC 6001)						
Adjustment Capability-specific information for OTN						
Signal type	Num of stages	T S	TSG	Res	Stage#1	
Stage#2	...		Stage#N		Padding	

New  
Proposal

# Example



## **IACD1**

Upper SwitchCap/EncTyp : PSC/Ethernet

Lower SwitchCap/EncType : OTN-TDM/G.709 ODUk

SCSI : SignalType+Hierarchy ODU2-ODU4 (For 10GigE)

## **IACD2**

Upper SwitchCap/EncTyp : PSC/Ethernet

Lower SwitchCap/EncType : OTN-TDM/G.709 ODUk

SCSI : SignalType+Hierarchy ODU4(For 100GigE)

# Next Steps

- Workgroup feedback is welcome