

OSPF-TE extensions for GMPLS Control of Evolving G.709 OTN

draft-ceccarelli-ccamp-gmpls-ospf-g709-06

CCAMP WG, IETF 81th Quebec City

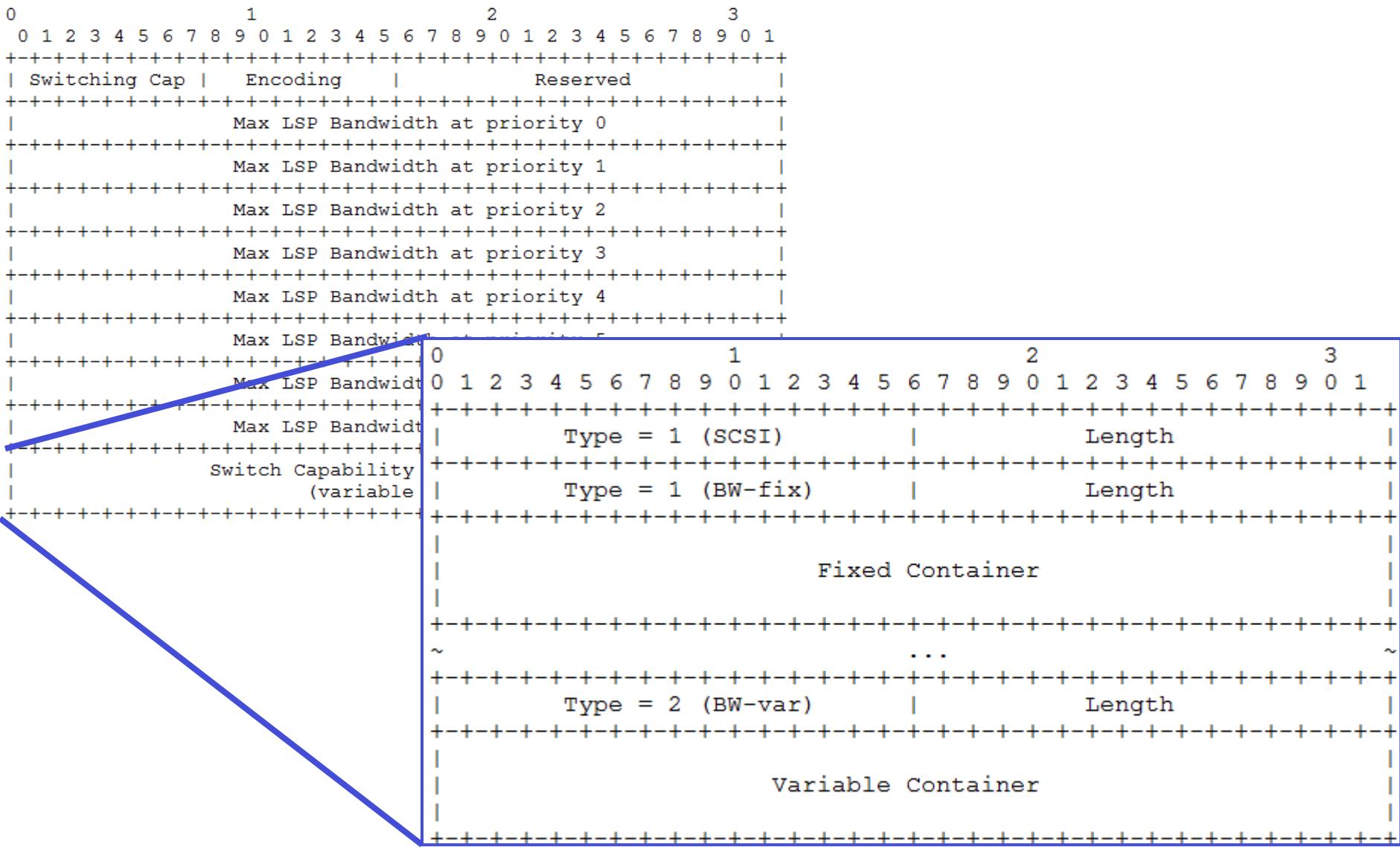
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Agenda

- Changes in version -06
 - Merge of
 - Draft-ceccarelli-ccamp-gmpls-ospf-g709-05
 - Draft-ashok-ccamp-gmpls-ospf-g709-03
 - New OTN ISCD,
 - New SCSI sub-TLV
 - New Bandwidth sub-sub-TLV
 - 1 – Fixed container
 - 2 – Flexible container
 - Procedures
- Next steps

New OTN ISCD and SCSI TLV



New Bandwidth sub-sub-TLV (1-BW-fix)

- Num of stages: Number of muxing stages
 - Signal type = Client layer
 - Stage #1 = ODU where the client layer is muxed
 - Stage #N = ODUs server layer
 - E.g. ODU1->ODU2->ODU3->ODU4
 - Signal Type = ODU1
 - Stage #1 = ODU2
 - Stage #2 = ODU3
 - Stage #3 = ODU4

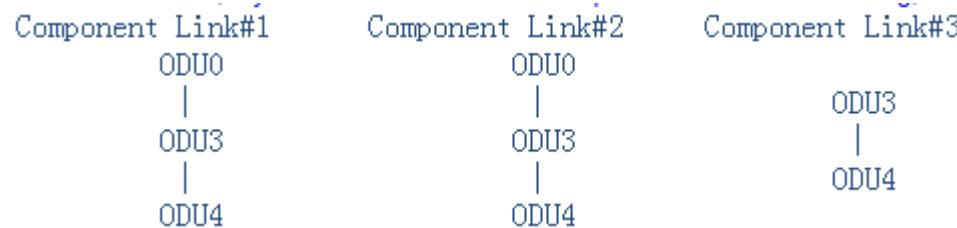
New Bandwidth sub-sub-TLV (2-BW-var)

0	1	2	3
0 1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1
+++++	+++++	+++++	+++++
Type = 2 (BW-var)		Length	
+++++	+++++	+++++	+++++
Signal type Num of stages F T S Res Priority			
+++++	+++++	+++++	+++++
Stage#1 ... Stage#N Padding			
+++++	+++++	+++++	+++++
Bandwidth at priority 0			
+++++	+++++	+++++	+++++
Bandwidth at priority 1			
+++++	+++++	+++++	+++++
Bandwidth at priority 2			
+++++	+++++	+++++	+++++
Bandwidth at priority 3			
+++++	+++++	+++++	+++++
Bandwidth at priority 4			
+++++	+++++	+++++	+++++
Bandwidth at priority 5			
+++++	+++++	+++++	+++++
Bandwidth at priority 6			
+++++	+++++	+++++	+++++
Bandwidth at priority 7			
+++++	+++++	+++++	+++++

- F flag - Unreserved vs MAX LSP bandwidth

Procedures

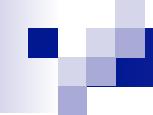
- A single ISCD per TE-Link MAY be advertised
- Interfaces with different OTUk layers and different muxing hierarchies MAY be bundled together but a different SCSI TLV MUST be used for each different type of muxing hierarchy.



- Merging all the 3 different component links in the example above would cause and advertisement:
 - ODU0->ODU3->ODU4 and ODU3->ODU4
- But in this case it is not possible to know how many ODU3->ODU4 are available for ODU3 FA set up (i.e. belonging to the ODU0->ODU3->ODU4 hierarchy) and how many simple ODU3 cannot be used for ODU0 transport (i.e. belonging to ODU3->ODU4 hierarchy).

Next steps

- Collect feedbacks from the meeting and ML
- Keep alignment with OTN Framework and G.709 Info Model.
- Adopt as WG document



QUESTIONS ?

THANK YOU