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

CCAMP WG, IETF 80th Prague

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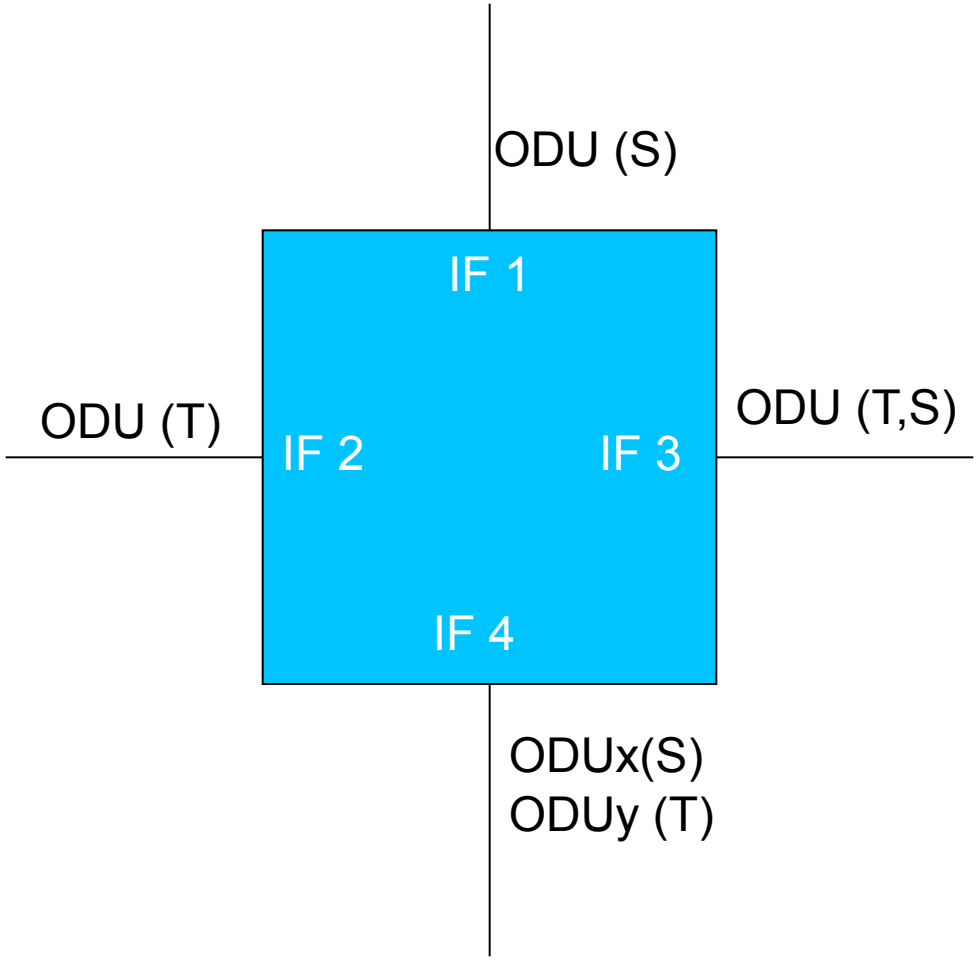
Switching vs Terminating model



IF1: ISCD

IF2: IMCD

IF3: ISCD+IMCD

IF4:

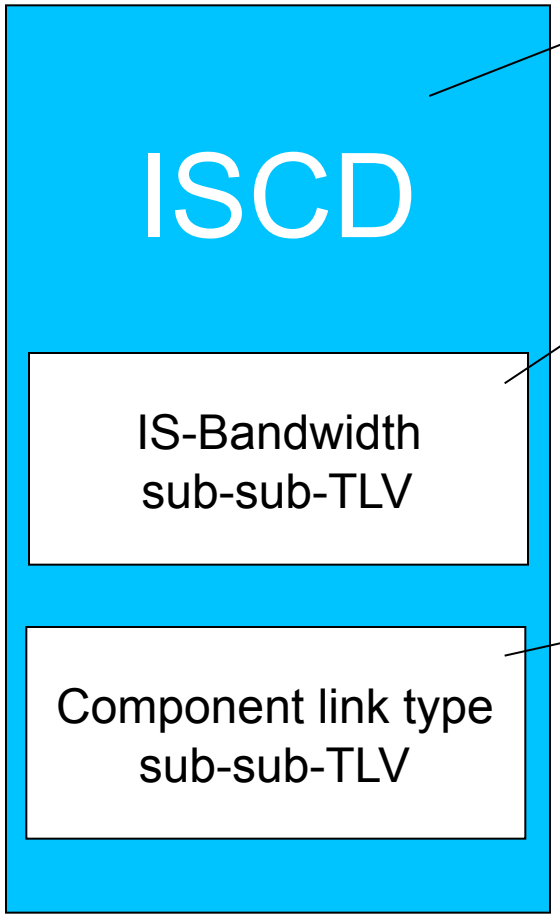
ODUx ➔ISCD

ODUy ➔IMCD

Procedures

- Switching capability advertisement:
  - 1 ISCD for each ODU (S)
  - ODU (S) – Advertised into the **OTN-ISCD** (new switch cap but ISCD format) via IS Bandwidth sub-TLV in the SCSI with signal type.
  - ODUj - ODUk (S) relation [optional] – Advertised into the SCSI of the **OTN-ISCD** via Component Link sub-TLV. (mirror info of the IMCD).
- Termination capability advertisement:
  - 1 IMCD for each Terminable Higher Order ODU including the related hierarchy
    - ODUk
    - Intermediate ODU layer for FAs
  - ODUk (T) – Advertised into the **IMCD** (new link type sub-TLV) via IM Bandwidth Accounting sub-TLV

ISCD



MAX LSP bandwidth:

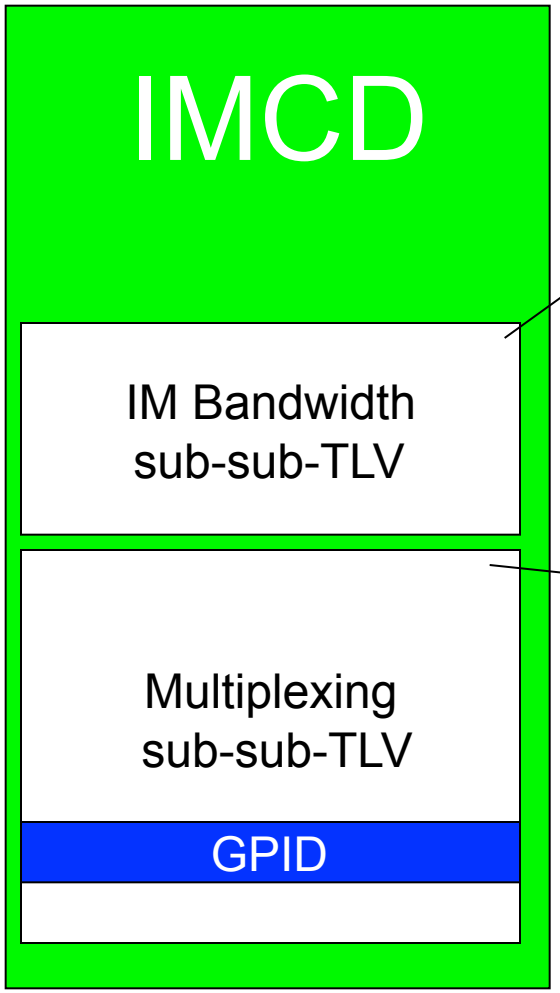
- **Fixed ODU = Nominal Bandwdith**
- **ODUflex = 0**

IS-Bandwidth sub-TLV: indicates:

- **the signal type unreserved bandwidth expressed in number of containers, per priority (Type=1)**
- **OR the MAX LSP bandwidth in case of ODUflex (Type=2)**

Component link type sub-TLV – [OPTIONAL]: to be used in case of link bundling and ODUj being advertised. It indicates the types of number of available related ODUk (server layer).

IMCD



IM - Bandwidth sub-TLV: indicates the ODUk signal type (without muxing hierarchy) unreserved bandwidth expressed in number of containers.

- **G-PID field (same of signaling) indicating the type of ODUk(T) being advertised**

Multiplexing sub-TLV:
Indicates the multiplexing hierarchy related to the given ODUk.

- **1 GPID for each stage of multiplexing with related bandwidth**

No correlation among GPIDs
OPEN ISSUE: multiple GPIDs inside the same IMCD

QUESTIONS ?

THANK YOU