GMPLS-based Hierarchy LSP Creation in MRN/MLN

draft-zhang-ccamp-gmpls-h-lsp-mln-03.txt

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Overview of this Draft (Version 03)

- Overview of the draft:

  - In MLN/MRN, there may be multiple switching capabilities and/or multiple switching granularities and/or adaptation functions in the server layer network

  - The source node of the client layer connection needs to specify which server layer switching capability and/or switching granularity and/or adaptation functions is selected

- Changes from version 02:

  - We welcome Cyril Margaria to be the co-author

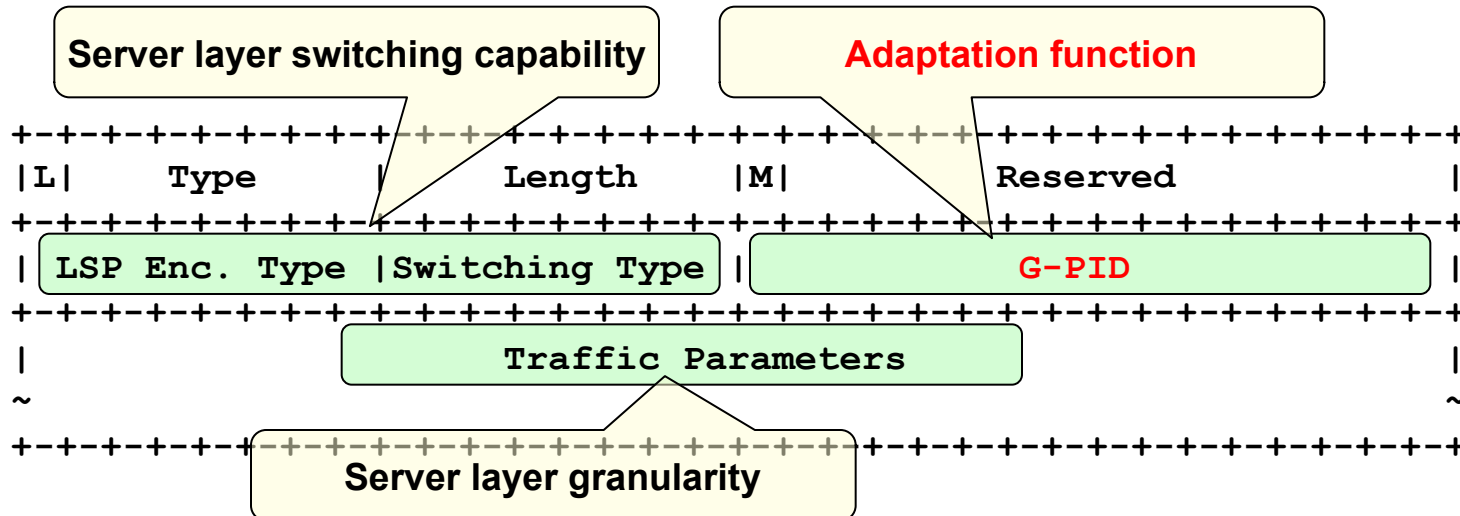 - Support selection of adaptation functions of the server layer

Selection of Adaptation Functions

- There may be multiple adaptation functions for the edge nodes to adapt the client signal into the server layer FA-LSP

- CALL mechanism may be used for adaptation function negotiation if the edge nodes support CALL mechanism

- But in case that the source node (i.e., node A) or PCE performs a full path computation including the server layer path, the adaptation functions will also be selected by node A or PCE

  - When creating the client layer LSP, the source node should tell the edge node of the selected adaptation function
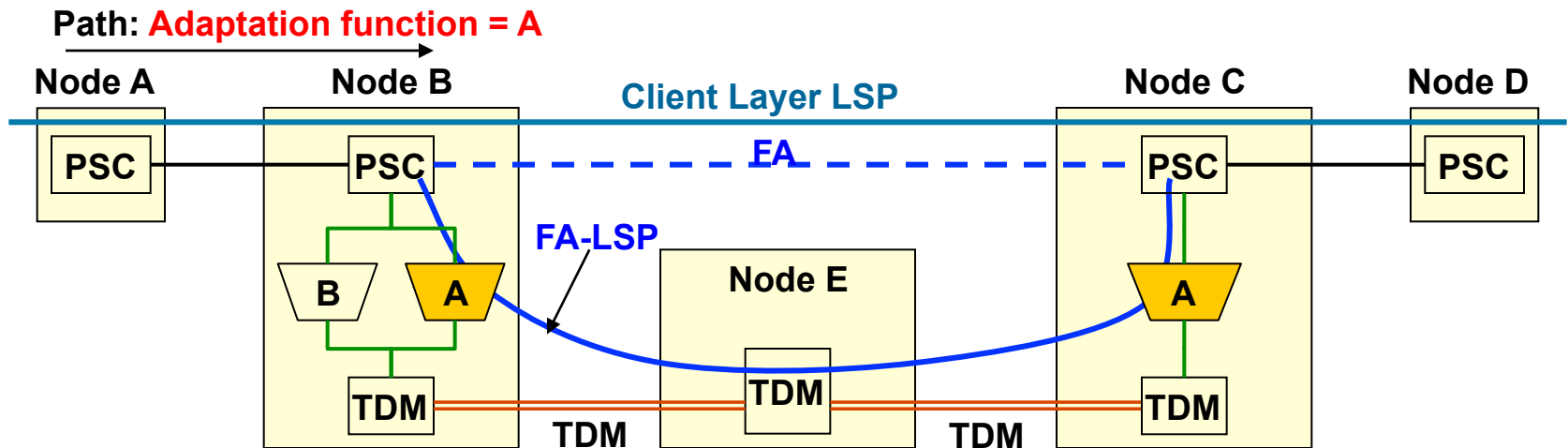
Selection of Adaptation Functions

- G-PID can be used to indicate the payload type of the server layer (i.e., the client signal) as well as the adaptation function for adapting the client signal into the server layer FA-LSP

- The G-PID is added into the suggested SERVER_LAYER_INFO sub-object in ERO
    - The edge node of the server layer network will use the selected G-PID (i.e., adaptation function) to create the FA-LSP

Server layer switching capability

Adaptation function

```
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|L|    Type       |      Length     |M|          Reserved           |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
| LSP Enc. Type |Switching Type ||                G-PID                |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                      Traffic Parameters                          |
~                                                                  ~
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

Server layer granularity

Next Steps

- Adopt it as WG document

- Comments are always appreciated

- Refine it based on the feedback from the meeting or mailing list