GMPLS-based Hierarchy LSP Creation in MRN/MLN

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draft-zhang-ccamp-gmpls-h-lsp-mln-05.txt

Fatai Zhang (zhangfatai@huawei.com)

Xian Zhang (zhang.xian@huawei.com)

Oscar Gonzalez de Dios (ogondio@tid.es)

Cyril Margaria (cyril.margaria@nsn.com)

Problem Statement (1/3)

– In MLN/MRN, multiple switching capabilities and/or multiple switching granularities and/or adaptation functions may exist in the server layer network. The source node of the client layer connection needs to specify:

1) which server layer switching capability

Example:

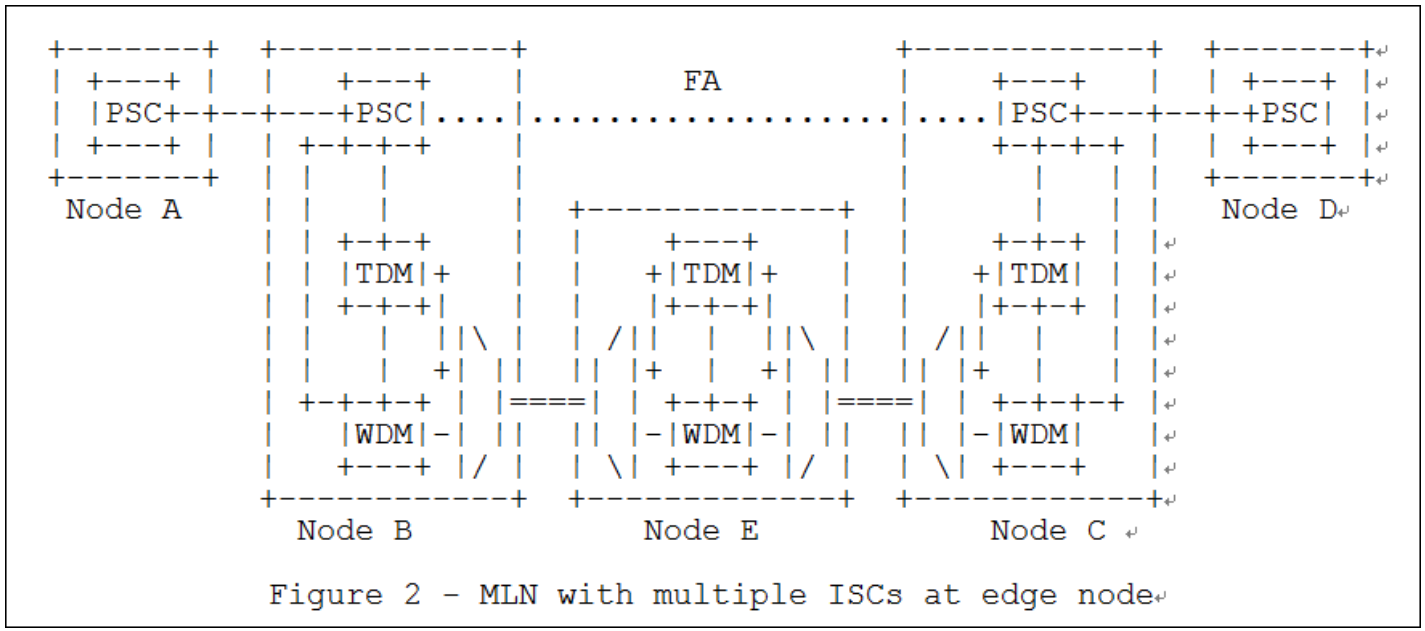

Figure 2 - MLN with multiple ISCs at edge node

Problem Statement (2/3)

2) and/or switching granularity

Example:

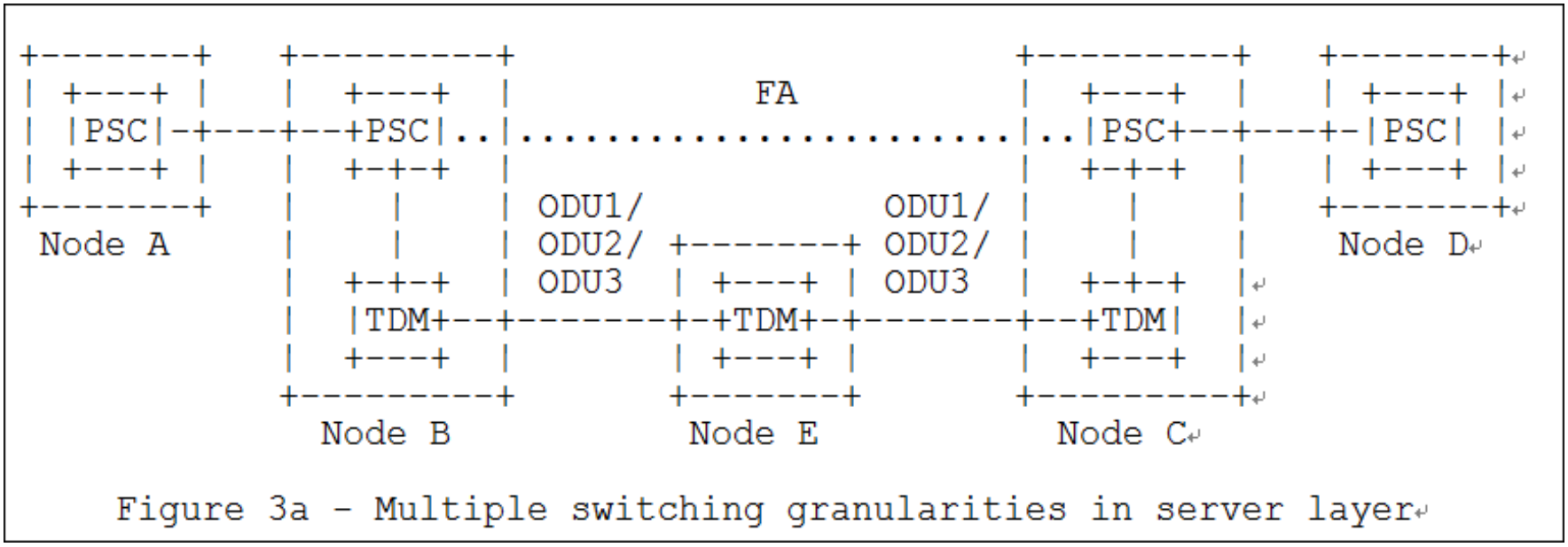

Figure 3a - Multiple switching granularities in server layer

Problem Statement (3/3)

3) and/or adaptation functions is selected

Example:

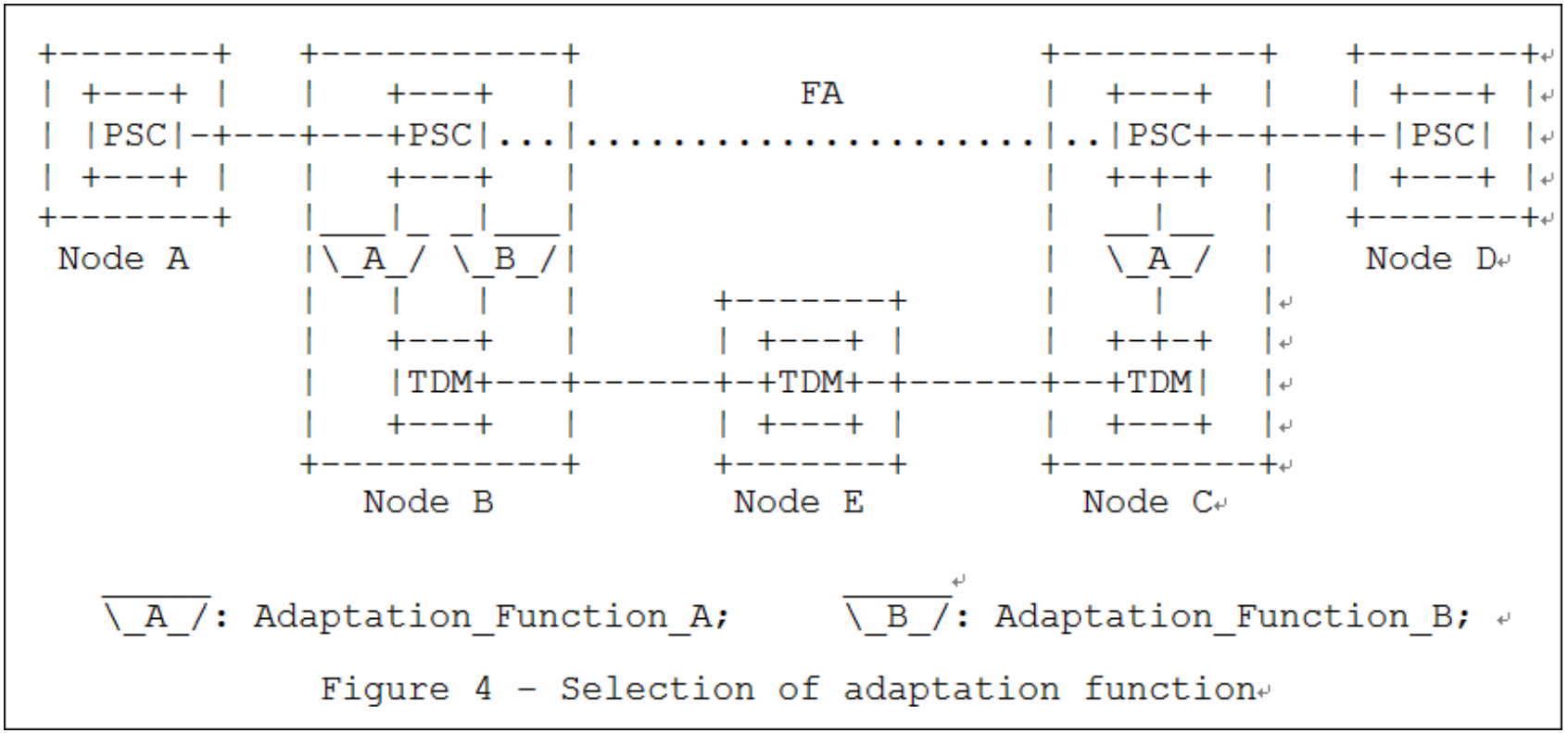

Figure 4 – Selection of adaptation function

Gap Analysis

Signaling:

- **RFC6001:** introduces a SC subobject in XRO, but only support SC exclusion, **NOT** the selection of SC in the server layer;
- **RFC6107:** Extending LSP_TUNNEL_INTERFACE_ID object to support ends point of lower layer LSP decide the feature of this LSP, including how the client use this LSP (private link etc.).

Conclusion: None of this extensions can solve the problem presented.

Next Step

- Please review our draft and we would like to move this draft forward;