GMPLS Routing and Signaling Frame work for Flexible Ethernet (FlexE)
draft-izh-ccamp-flexe-fwk-03

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What has happened since Chicago

- Version -03 posted
  - Two new contributors
  - Restructured the document(s) - see next slide
  - A lot of editorial changes
    - Prioritized what is of interest for IETF
    - Simplified use cases
  - Remains to be done
    - Final clean up of requirements
    - Sort out if there is anything that needs to go into other documents

Proposed FlexE documents

- Framework
  - draft-izh-ccamp-flexe-fwk
  - Framework, architecture, use cases and requirements
- Signaling and Routing
  - Extensions to RSVP-TE
  - Extensions to the TE IGPs
    - The ISIS-TE draft is under way
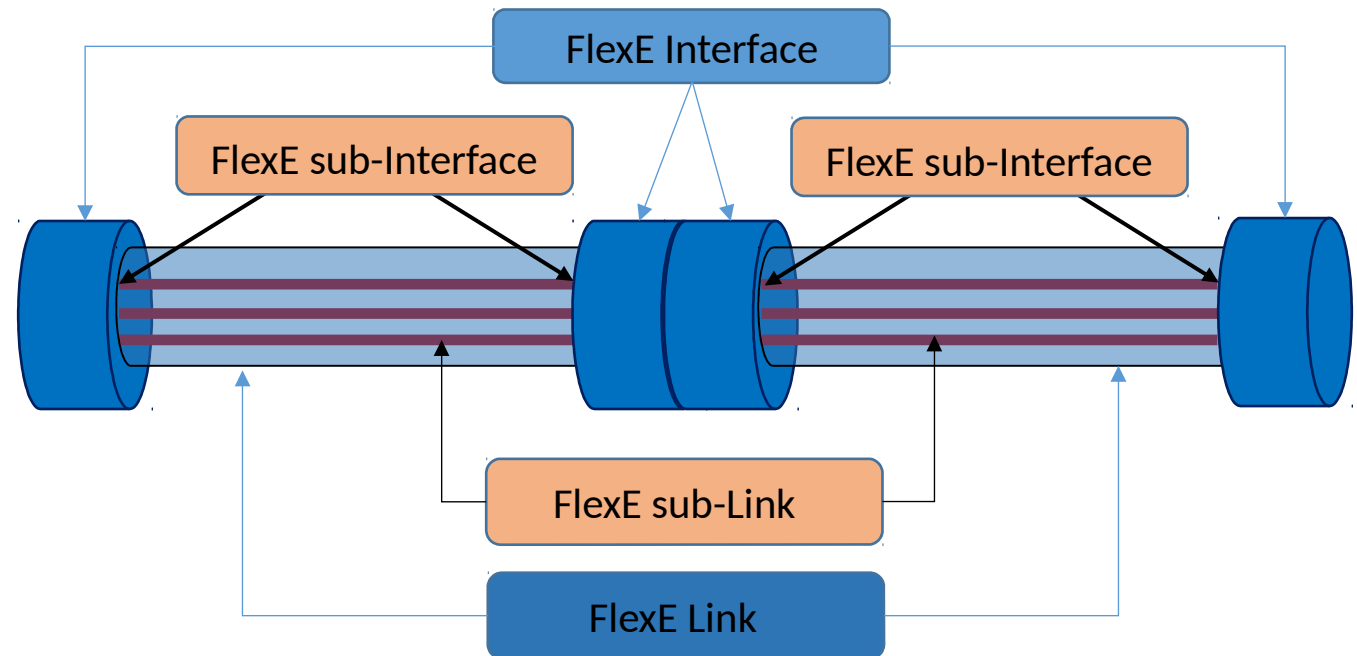 - Extensions to LMP (?)
- YANG Model

Framework and Architecture:
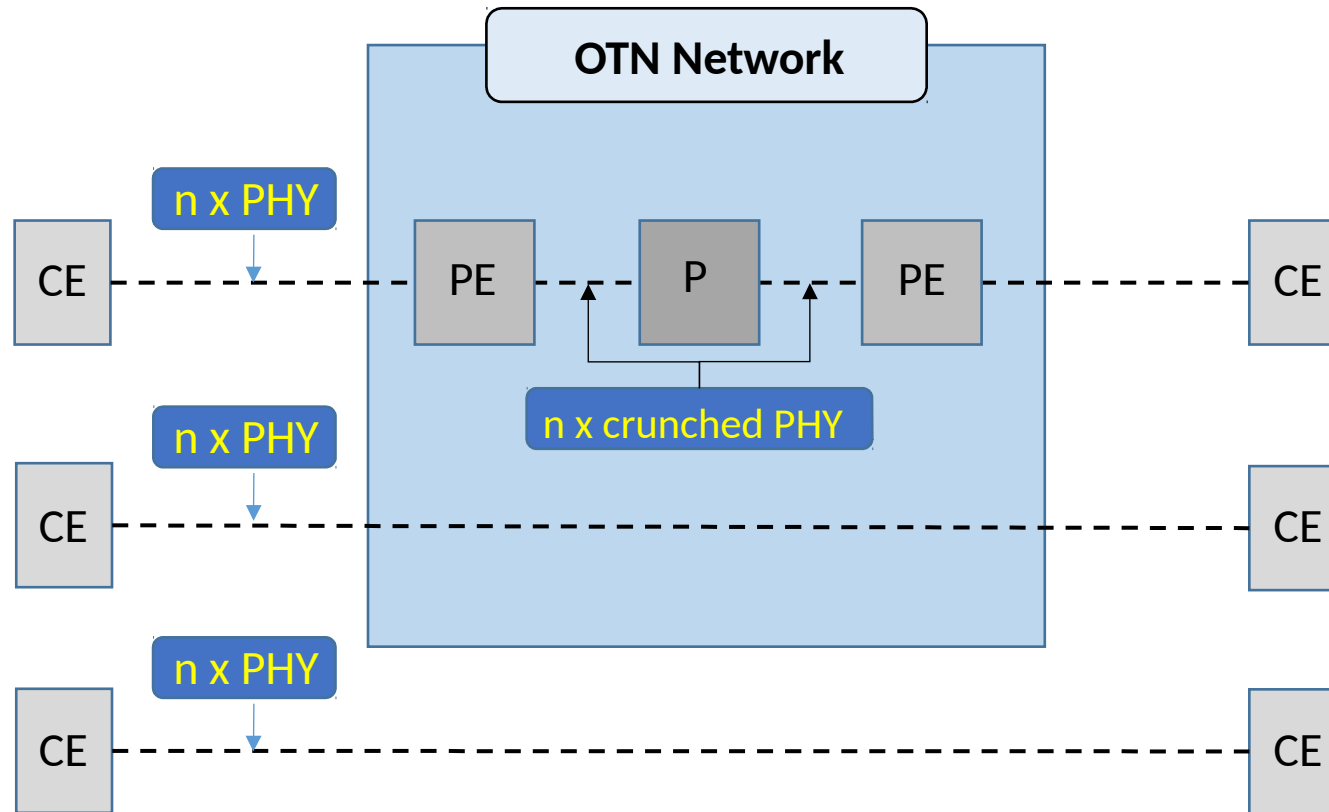
FlexE Reference Model

FlexE Data Plane at a Glance

- A FlexE interface
  - Is a logical interface and consists of 1 to 254 100GBASE-R Ethernet interfaces
  - Can be channelized into multiple sub-interfaces
- A FlexE link connects two FlexE interfaces
  - The big pipe
- A FlexE sub-link connects two FlexE sub-interfaces
  - The small pipes

Routing and Signaling

FlexE Link

FlexE Sub-link
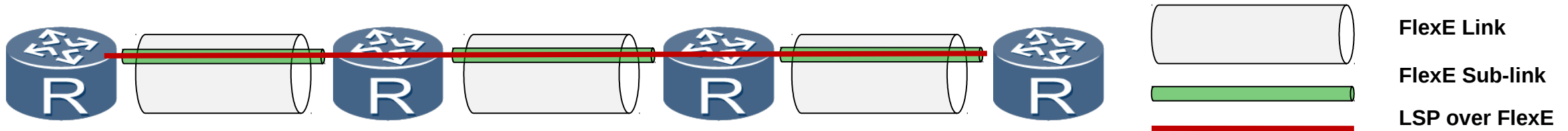
LSP over FlexE

- FlexE Group/Interface is assumed pre-configured

- Routing

  - FlexE links and sub-links advertisement (as TE link) through ISIS-TE or OSPF-TE;

- Signaling

  - Create FlexE sub-links (FlexE channelization) through RSVP-TE;

  - Establish LSP over those sub-links through RSVP-TE;

- FlexE signaling procedure – "two labels"

  - The request carries a FlexE label that indicates the slots to be used for the FlexE Client

  - The upstream request a MPLS Label to be allocated by the downstream node

  - The downstream node allocates and distribute a normal MPLS label

- The procedures are repeated end-to-end hop by hop

Next steps

- WG review
- Involve more authors/contributors
- Make WG document

Thanks