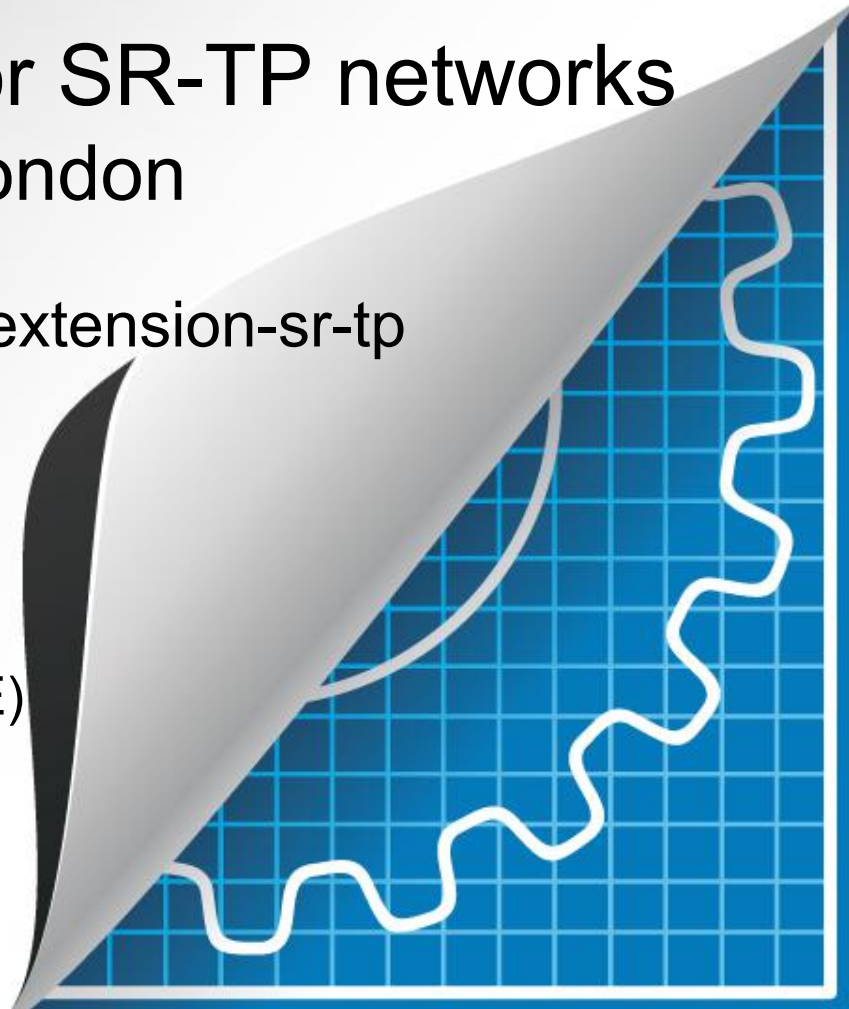


The PCEP extensions for SR-TP networks

IETF 101 London

draft-xiong-pce-pcep-extension-sr-tp

Quan Xiong(ZTE)
Fangwei Hu(ZTE)
Shuangping Zhan(ZTE)

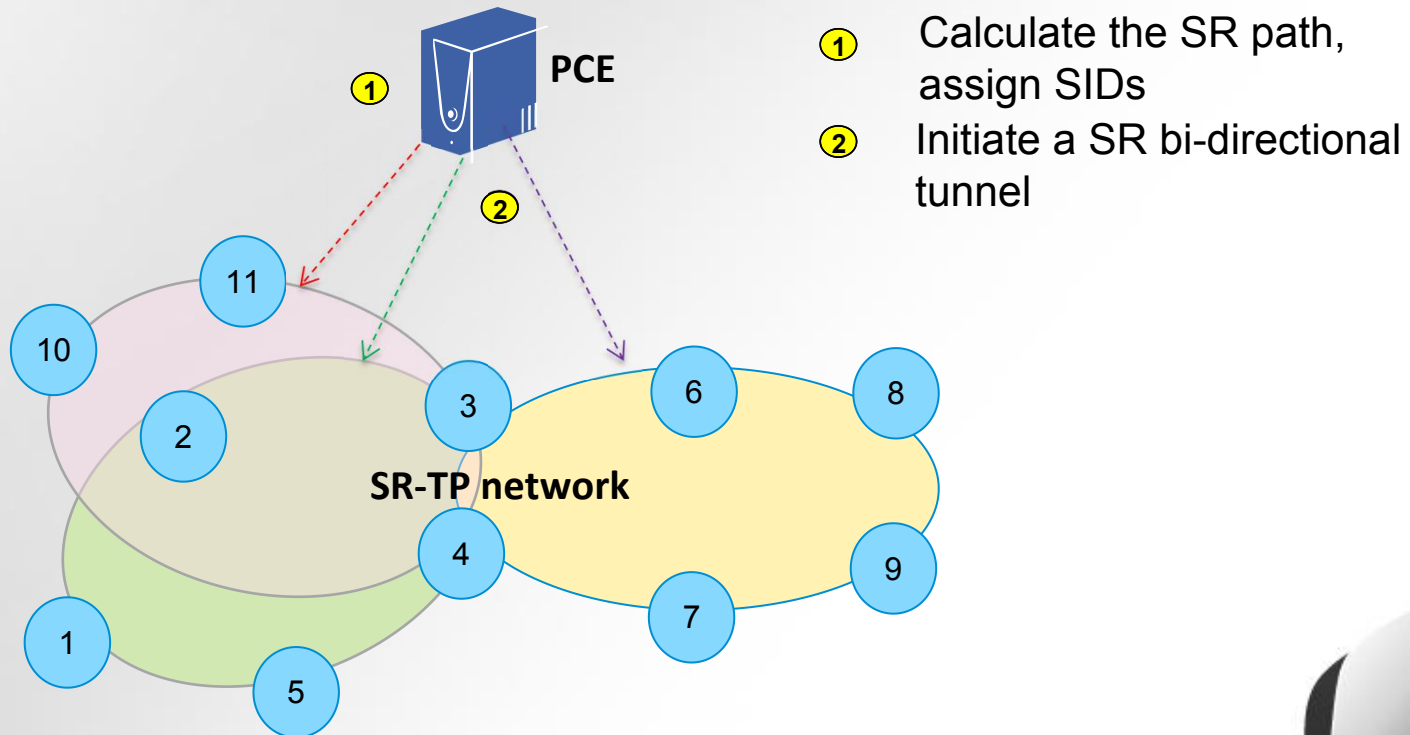


Overview

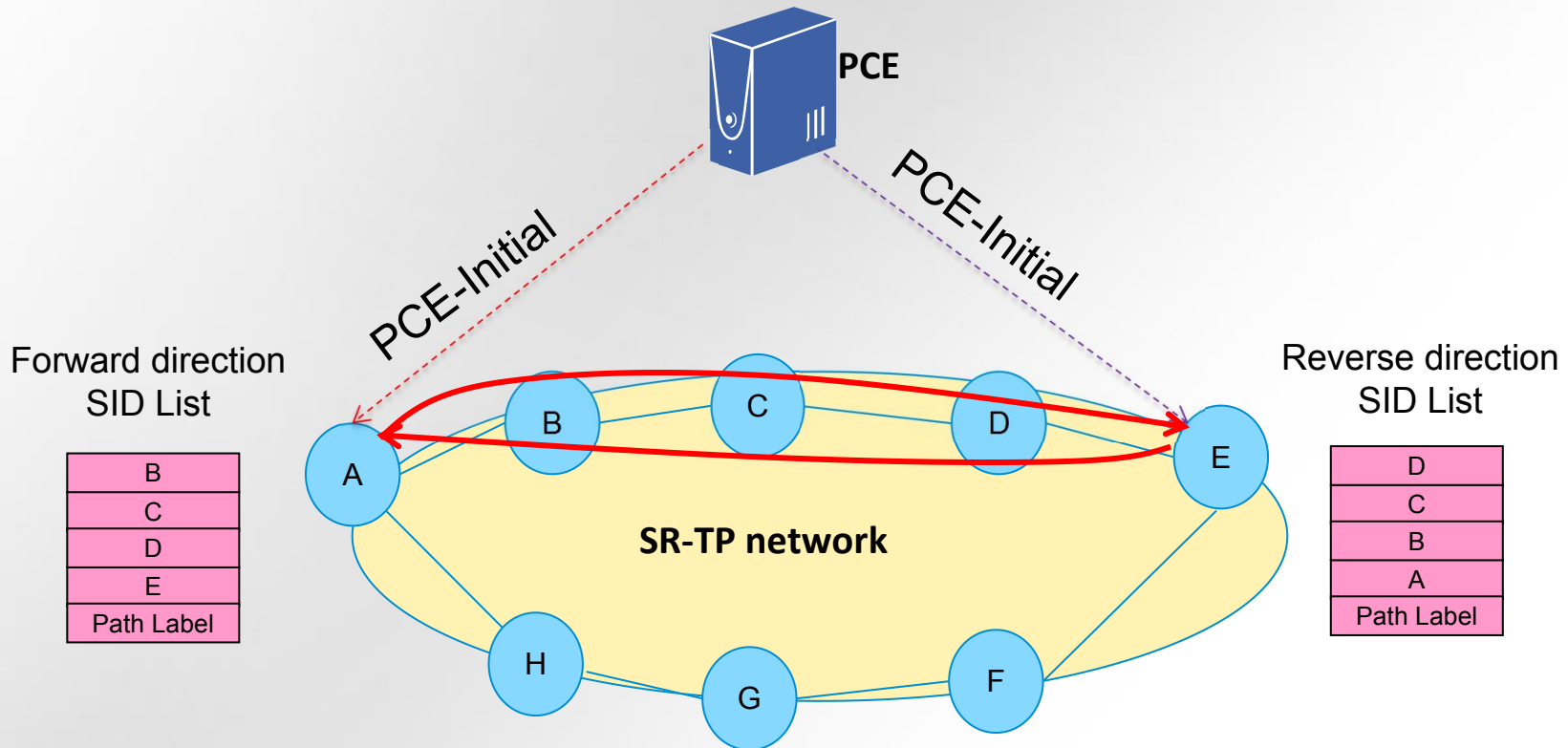
- [I-D.hu-spring-sr-tp-use-case] describes the use case of SR tunnel to be deployed in MPLS Transport Profile (SR-TP) networks.
- Define a general mechanism to create the bi-directional SR tunnel in SR-TP networks with PCE.
- Propose a set of extensions to PCEP for SR-TP networks.

The SR-TP Scenario with PCE

- The PCE may calculate the end-to-end SR paths, assign the ordered segment list and initiate a SR path on a PCC (SR node).

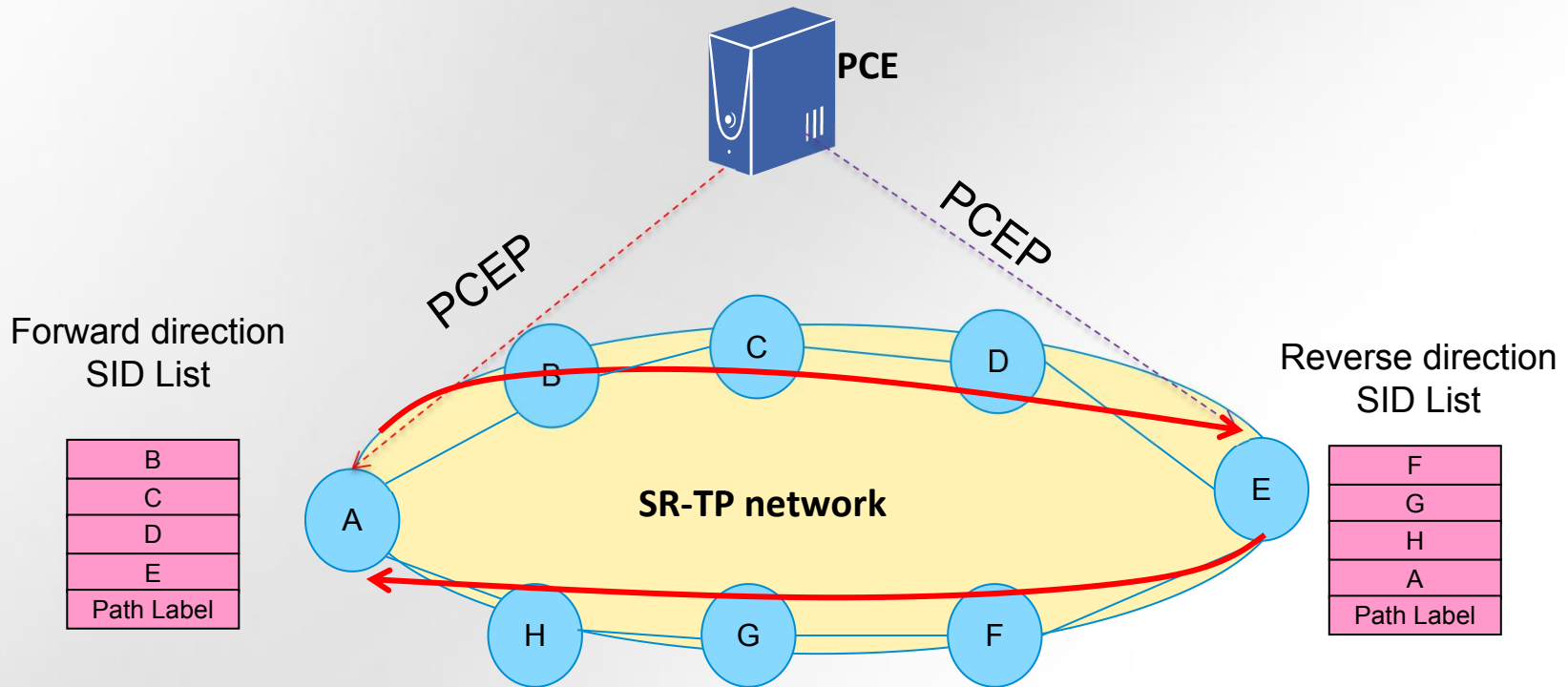


Co-Routed Bi-directional SR-TP LSP



- The PCE assigns a global unique SID for each SR node and a path label to bind the forward and reverse directional path.
- The PCE creates a Co-Routed Bi-directional SR-TP LSP from PCE-Initial message on Ingress and Egress SR nodes (PCC) respectively.

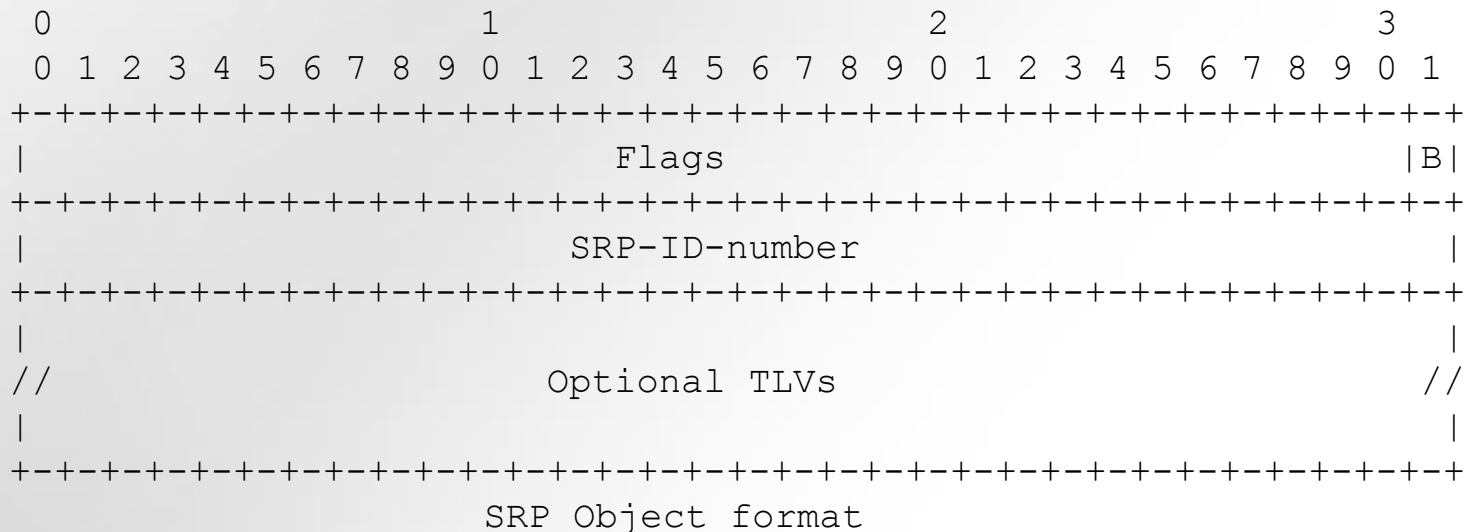
Associated Bi-directional SR-TP LSP



- The forward and reverse directional LSPs transit through different paths and initiated by PCC or PCE.
- The two directional SR-TP LSPs may be associated by Association Object as defined in [I-D.barth-pce-association-bidir].

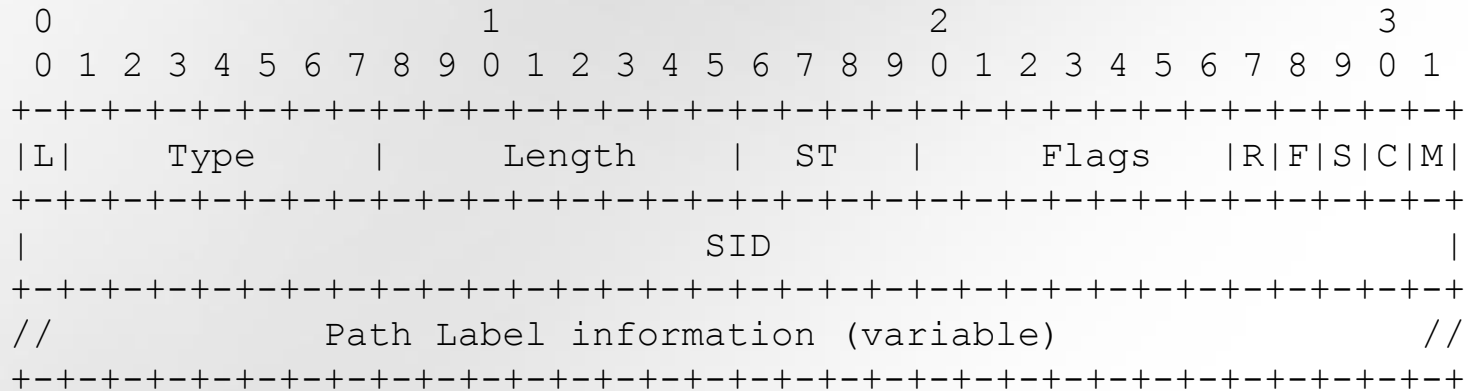
Bi-directional LSP Extension

- The B flags of SRP object (section 4.3.3 of draft-ietf-pce-pcep-stateful-pce-gmpls-08) is defined to indicate a bi-directional LSP operation initiated by the PCE.

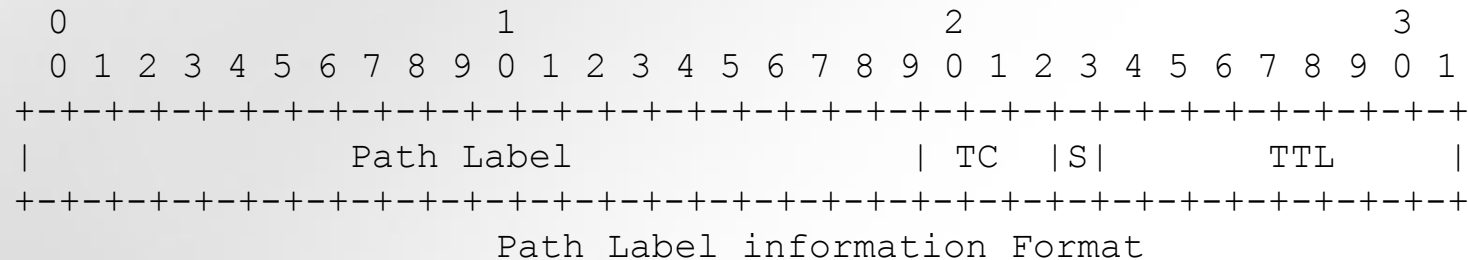


SR-TP ERO Extension

- This document proposes the extension of the SR-ERO Subobject to carry the bi-directional tunnel information as defined in [I-D.cheng-spring-mpls-path-segment].



The extension of SR-ERO Format



- ✓ ST (SID Type -- 4 bit): indicates the type of information associated with the Path Label contained in the object body.
- ✓ R (Reverse Flag -- 1 bit): indicates the SR path direction.

Next Step

- Further research directions:
 - More extensions for Bi-directional SR-TP LSP
 - Extensions for other use cases in SR-TP
- Comments and discussion

Thanks!