

Protection for P2MP Ring in MPLS-TP Networks

draft-dai-mpls-tp-p2mp-ring-protection-00.txt

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TP Requirements

- **#92** MPLS-TP MAY support recovery mechanisms that are optimized for specific network topologies. These mechanisms MUST be interoperable with the mechanisms defined for arbitrary topology (mesh) networks to enable protection of end-to-end transport paths.
- **#95** MPLS-TP recovery in a ring MUST protect unidirectional P2MP transport paths.

Draft highlights

 Introduction

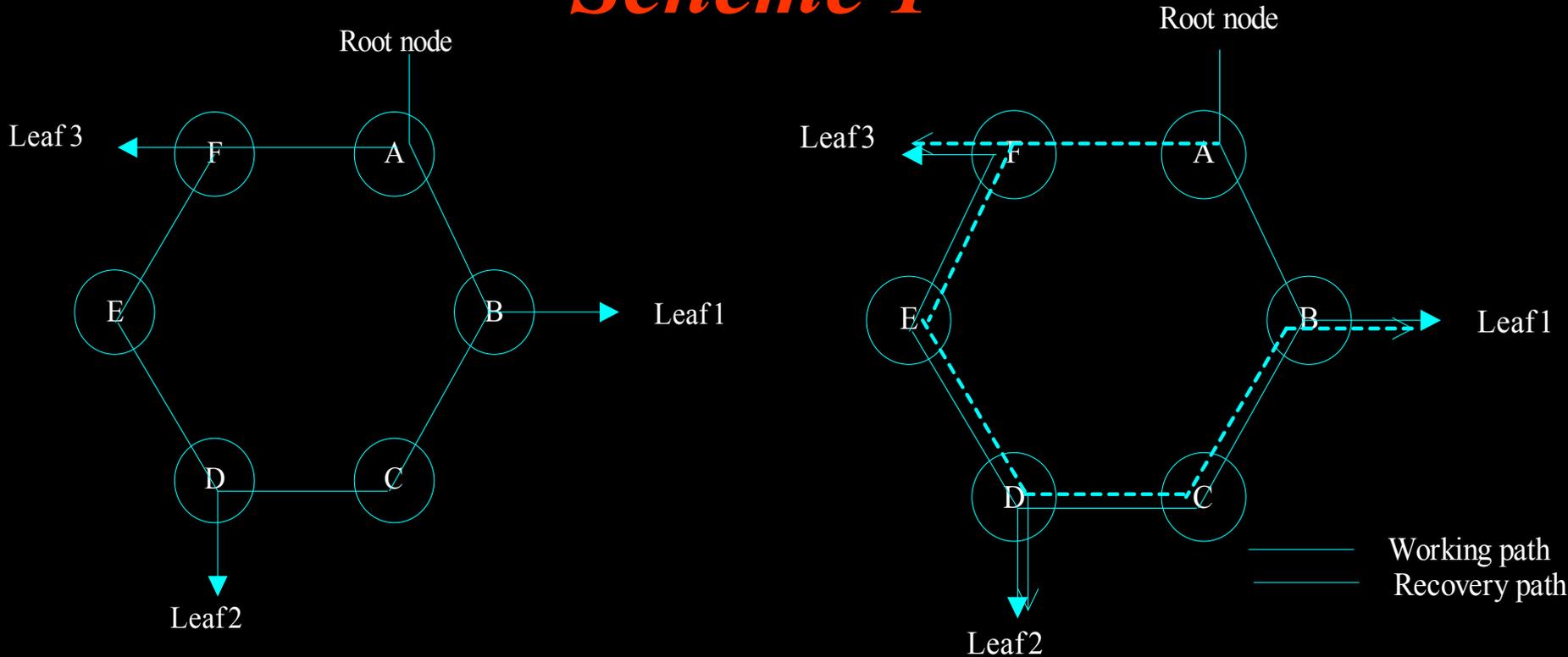
 Terminology

 Proposed protection schemes for P2MP ring

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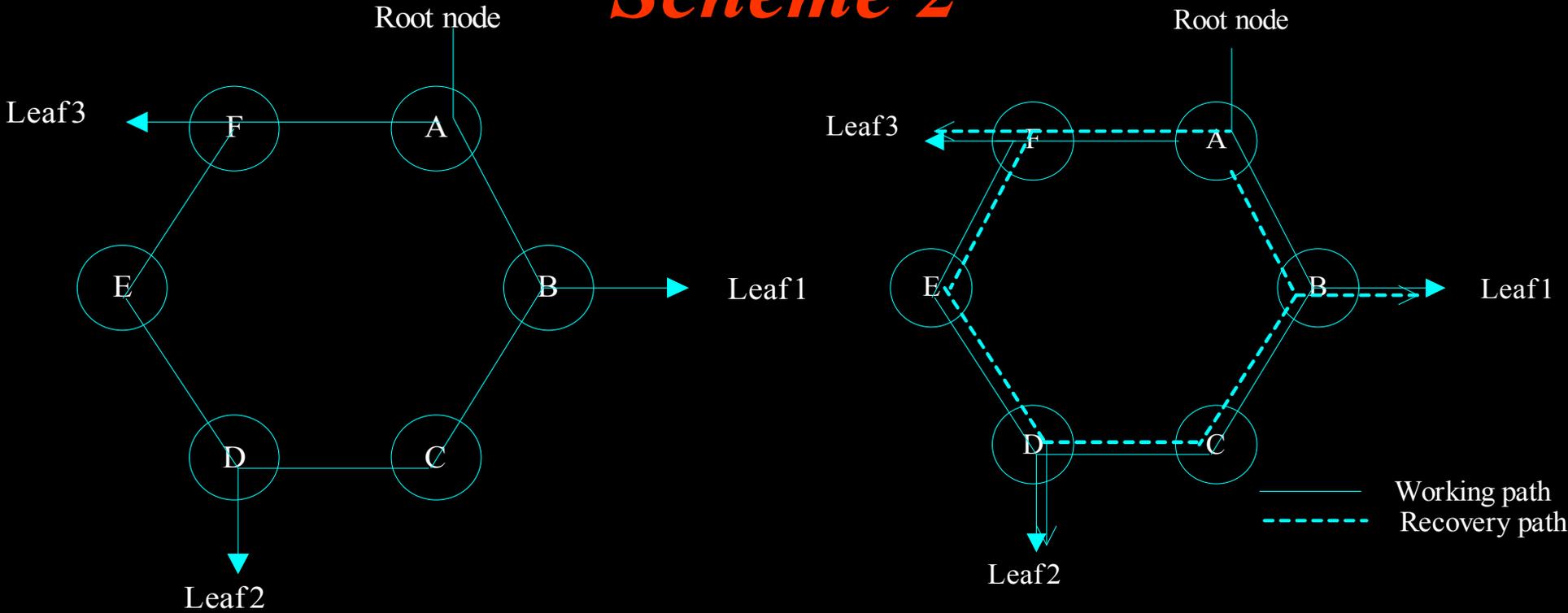
- This document proposes two protection schemes for a P2MP ring.
- These two schemes are homogeneous in most aspects, but have a little differences.
- In both schemes, MPLS-TP OAM SHOULD be used in a MPLS-TP transport path to perform Continuity Check (CC) operations.

Scheme 1



- ❑ Working path is A-[B]-C-[D]-E-[F] protection path is A-[F]- E-[D]-C-[B]
- ❑ There should be a return path from the FLN to the root node
- ❑ Under normal situations, user traffic is transmitted through the working path to different leaves.
- ❑ When a failure is detected by the FLN, FLN will initiate a failure message and transmit it to the root node through the return path
- ❑ The root node receives this failure message, it activates the recovery path, and P2MP traffic will be transported through the working path and recovery path at the same time.
- ❑ Each leaf will receive user traffic either from the working path or recovery path based a local policy.

Scheme 2



- Working path is A-[B]-C-[D]-E-[F]-A protection path is A-[F]- E-[D]-C-[B]-A
- Under normal situations, user traffic is transmitted through the working path to different leaves.
- The root node can detect a failure and activates the recovery path
- P2MP traffic will be transported through the working path and recovery path at the same time.
- Each leaf will receive user traffic either from the working path or recovery path based a local policy.

Questions?

Thank you!