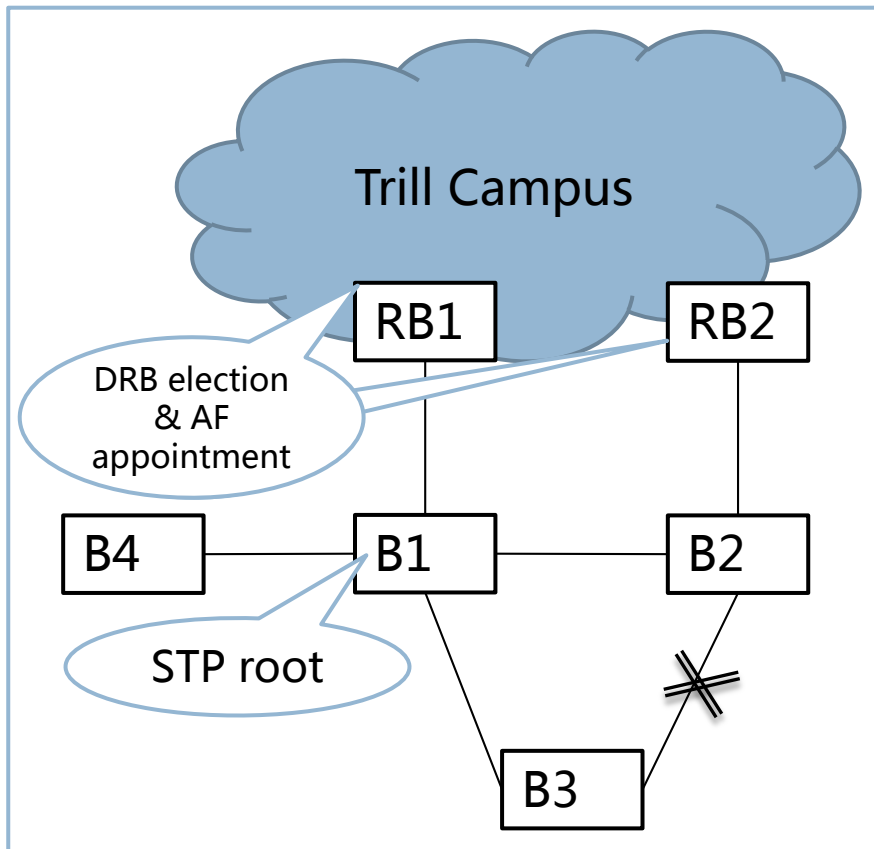# AWARE TC BPDU ON RBRIDGE

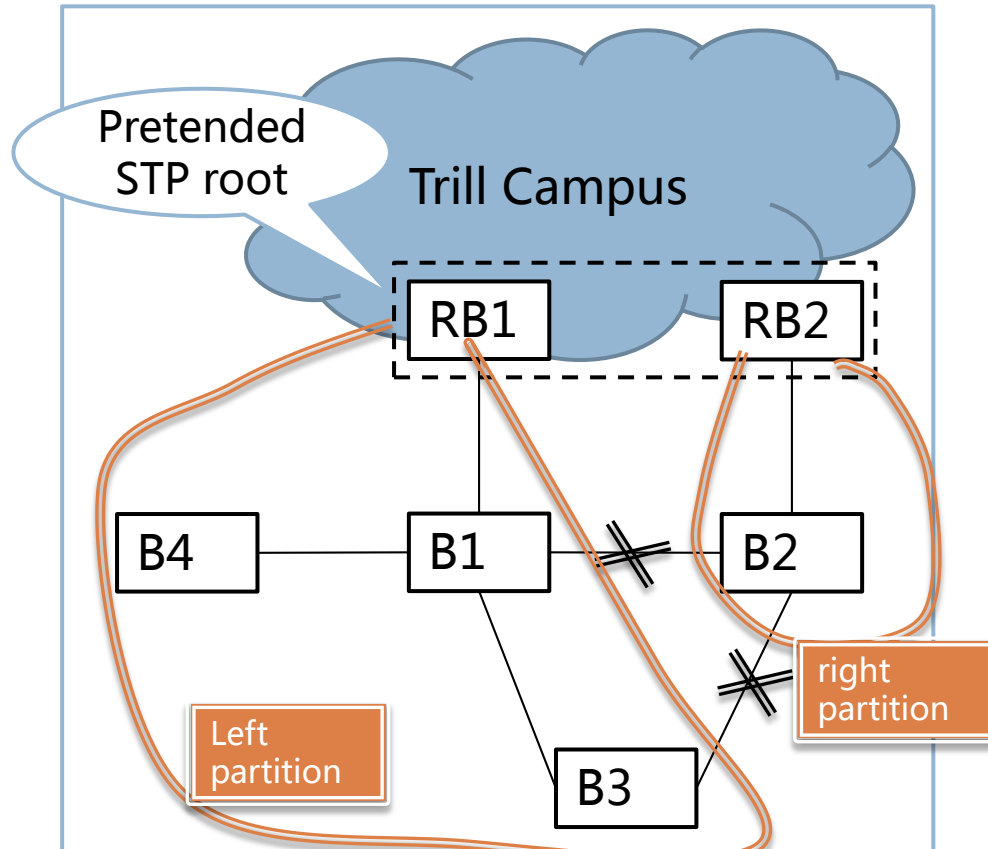draft-yizhou-trill-tc-awareness-01
Update

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Background – Two approaches to interconnect STP and trill domain
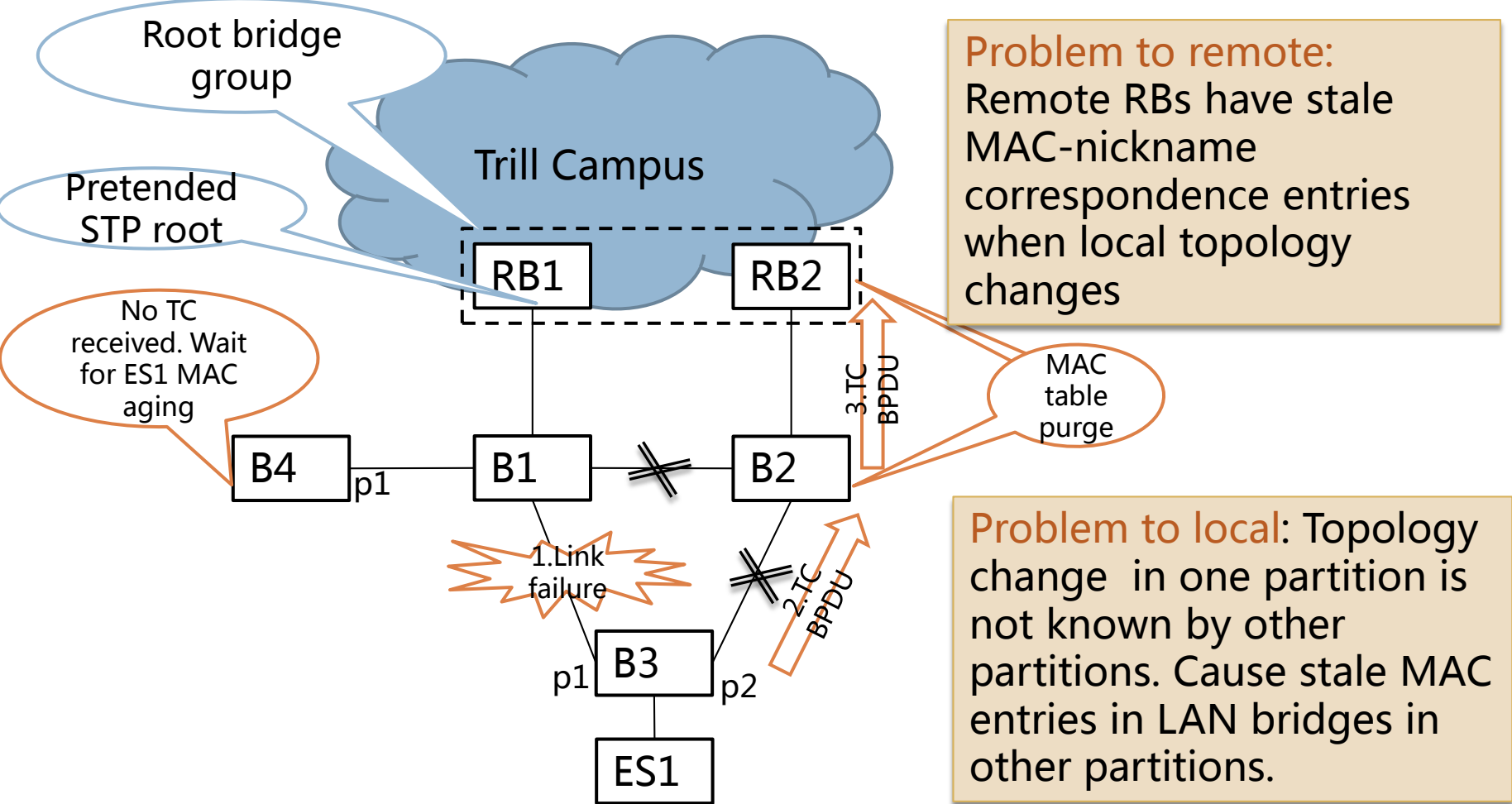

Method 1 (AF approach):
- RB does not participate in spanning tree calculation.
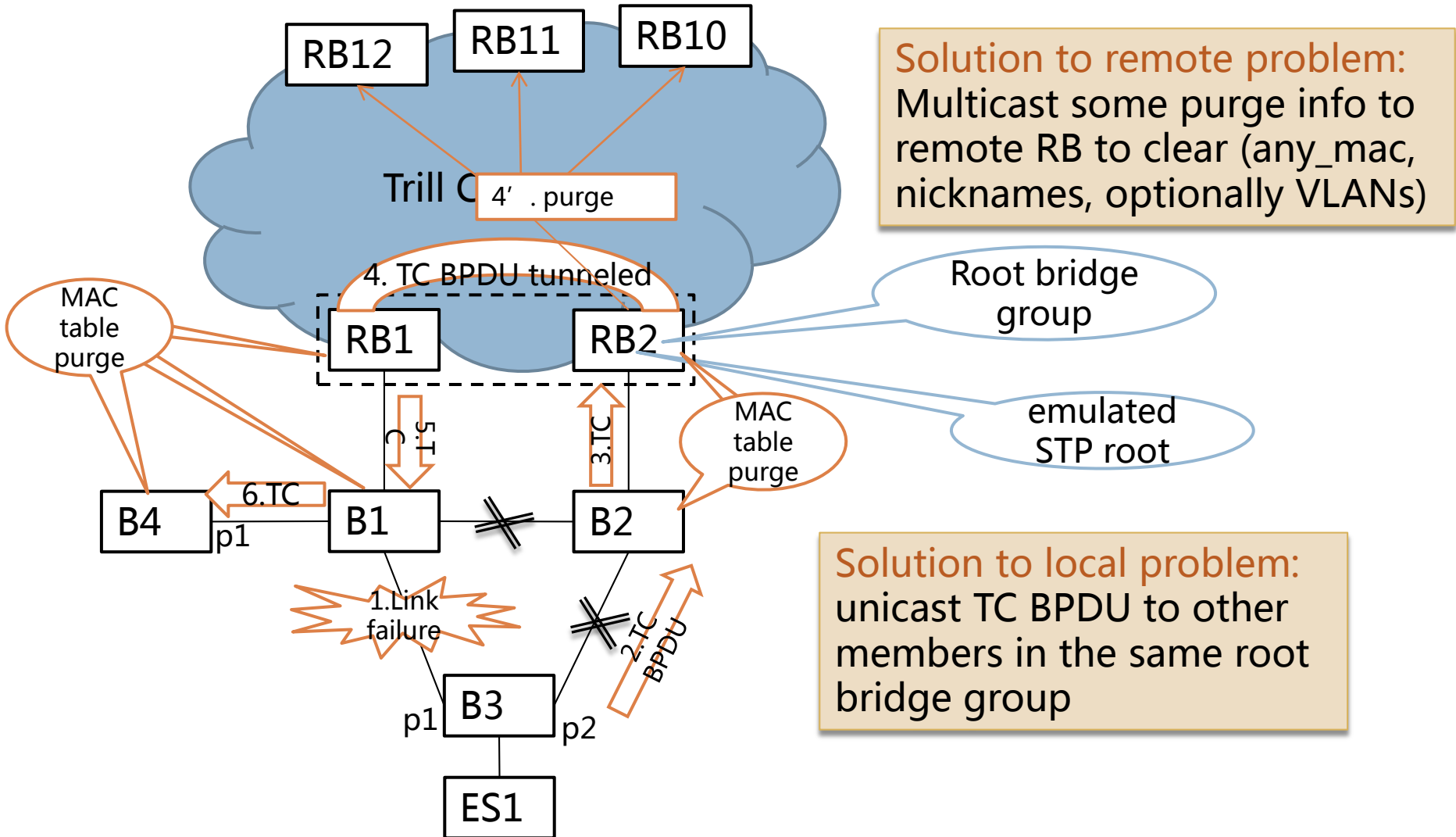- Achieve VLAN spliting on VLANs

Method 2 (Ethernet LAN Partition approach):
- RB1 & RB2 pretend to be single STP root
- Make Ethernet LAN domain partitioned
- Achieve per-vlan load balancing. AF & its inhibition timer no longer not necessary

Problems with Ethernet LAN Partition approach

Root bridge group

Pretended STP root

No TC received. Wait for ES1 MAC aging

Trill Campus

RB1 RB2

B4 p1 B1 B2

1.Link failure

3.TC BPDU

2.TC BPDU

MAC table purge

p1 B3 p2

ES1

Problem to remote: Remote RBs have stale MAC-nickname correspondence entries when local topology changes

Problem to local: Topology change in one partition is not known by other partitions. Cause stale MAC entries in LAN bridges in other partitions.

Use RBridge channel to tunnel TC BPDU and carry purge mesg

Solution to remote problem: Multicast some purge info to remote RB to clear (any_mac, nicknames, optionally VLANs)

Trill C

4'. purge

4. TC BPDU tunneled

RB12   RB11   RB10

RB1   RB2

Root bridge group

emulated STP root

MAC table purge

5.TC

3.TC

MAC table purge

B4   6.TC   B1   B2

p1

1.Link failure

2.TC BPDU

p1   B3   p2

ES1

Solution to local problem: unicast TC BPDU to other members in the same root bridge group

Changes since 00

- Root bridge group:
    - Allow static configuration
    - If more than 2 RBs in a group: sequential unicast TC
- Temporary TRILL campus splitting
    - Make sure destination RB should be reachable via TRILL campus
    - Not function for transition period
- Enhanced text for TLV field description

Next Step

- More comments welcome
- Move to WG draft