

An approach for unified LAN edge

(draft-hu-trill-pseudonode-nickname-03)

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Motivation

- Provide active-active forwarding for multi-homed pt-pt LAN edge
- Unified framework for shared LAN and multi-homed pt-pt LAN edge
- Receive and Transmit, both TRILL and native frames
- Detects configuration errors on multi-homed pt-pt LAN edge
- Resilience under various failure conditions.
- Avoid MAC flip-flop (MAC moves) on active-active edge.

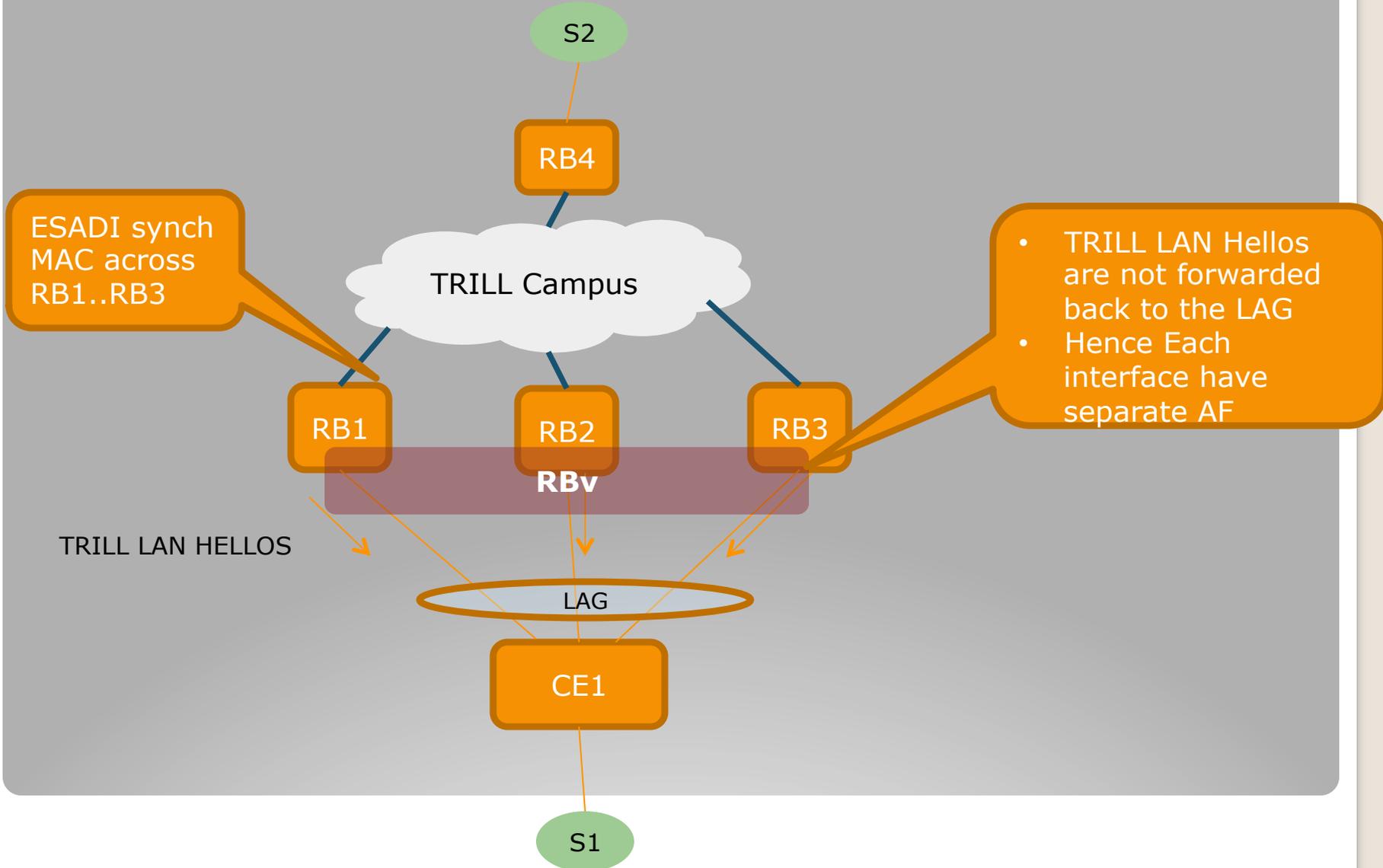
Framework

- Utilize the Appointed Forwarder mechanism presented in RFC6325
- Utilize methods presented in the CMT draft (draft-ietf-trill-cmt)
- ESADI to synchronize address learning across Shared LAN edge,
- Combination of the above create the unified Framework

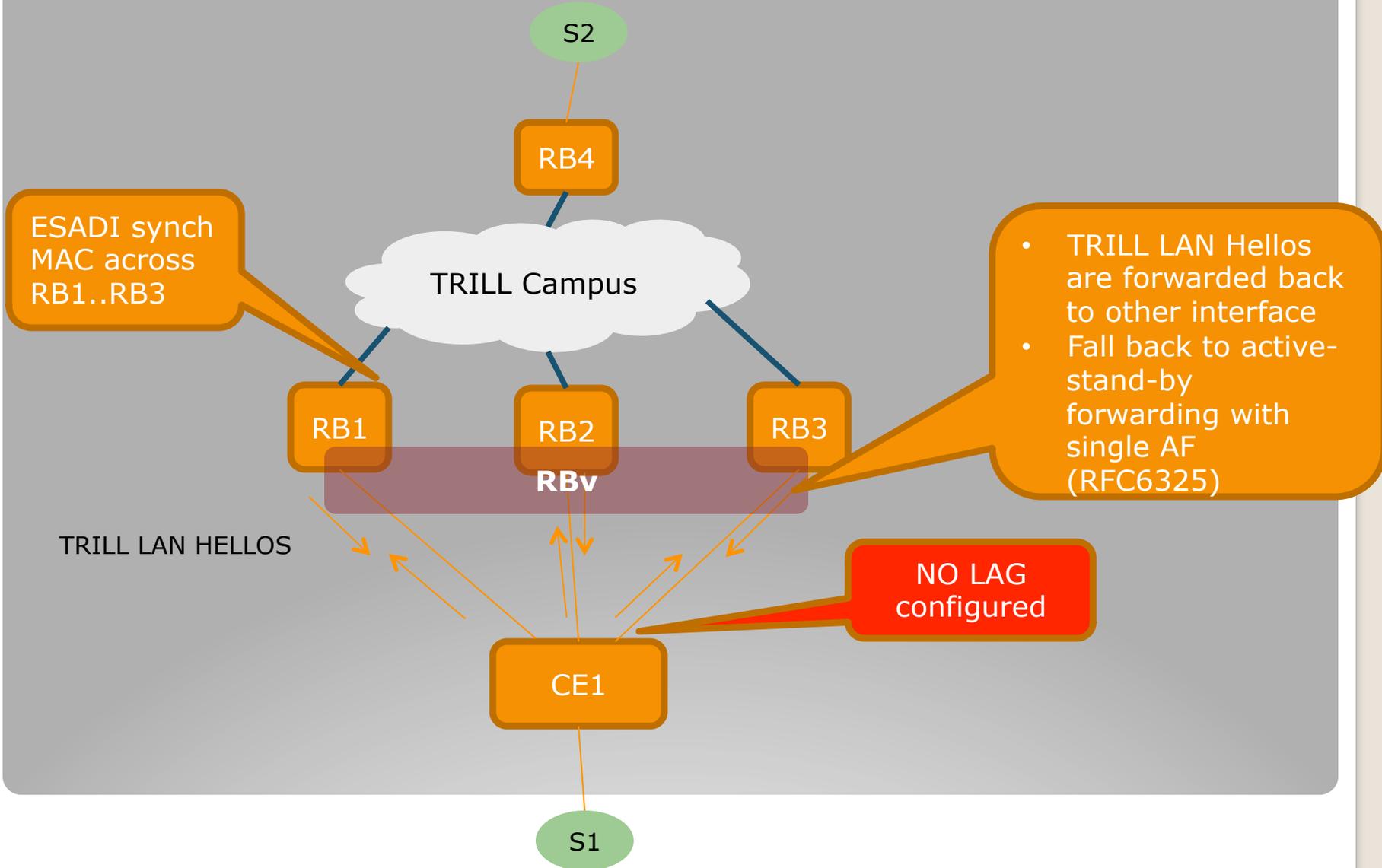
Theory of Operations

- TRILL LAN Hellos are enabled on each LAN edge port.
- Group of RBridges that interface with the LAN edge is represented by single virtual nickname, aka pseudo-nickname.
- All native frames ingress from the LAN edge has pseudo-nickname as the ingress nickname.

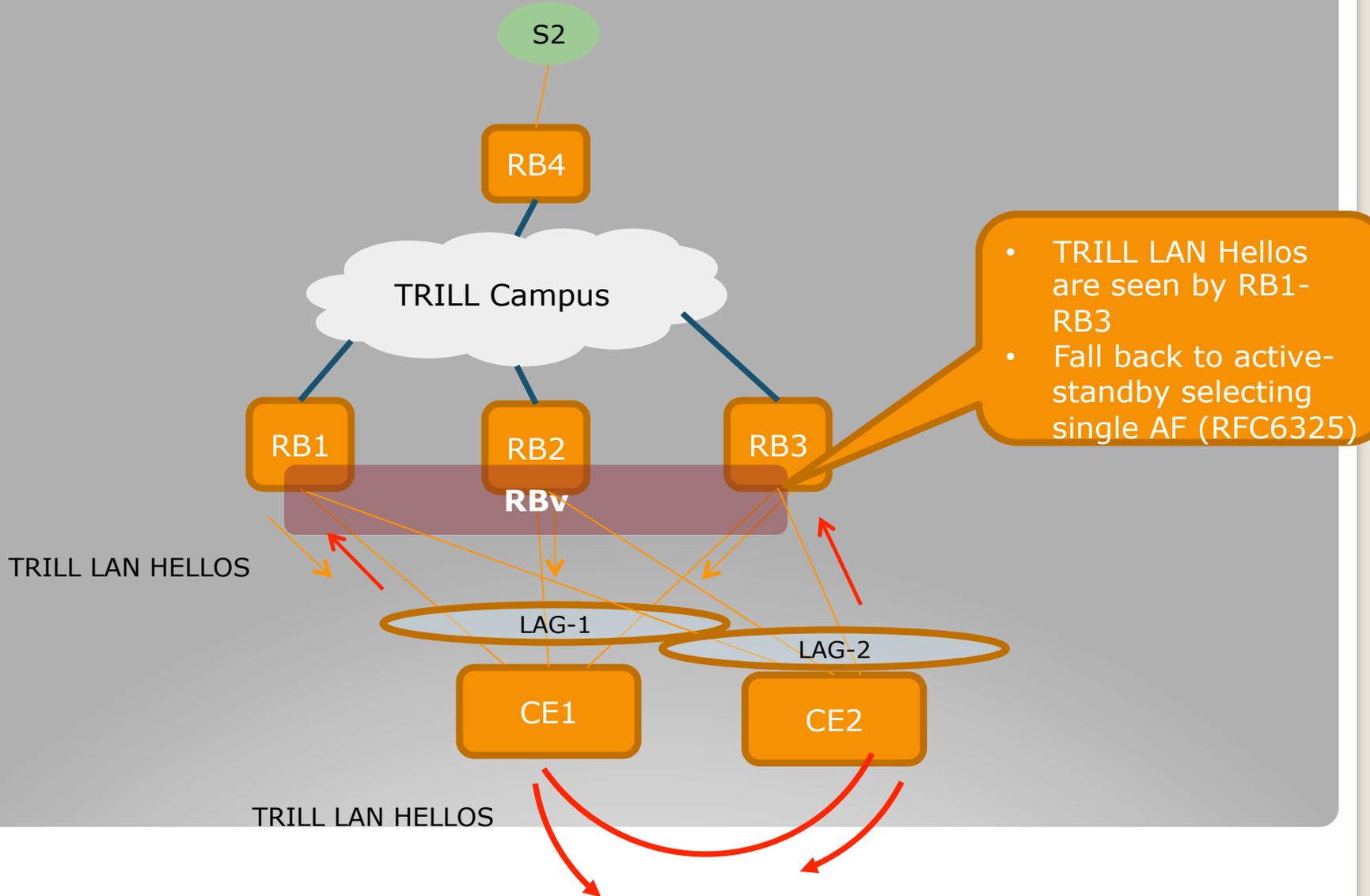
Theory of Operation



Theory of Operation (Configuration error)



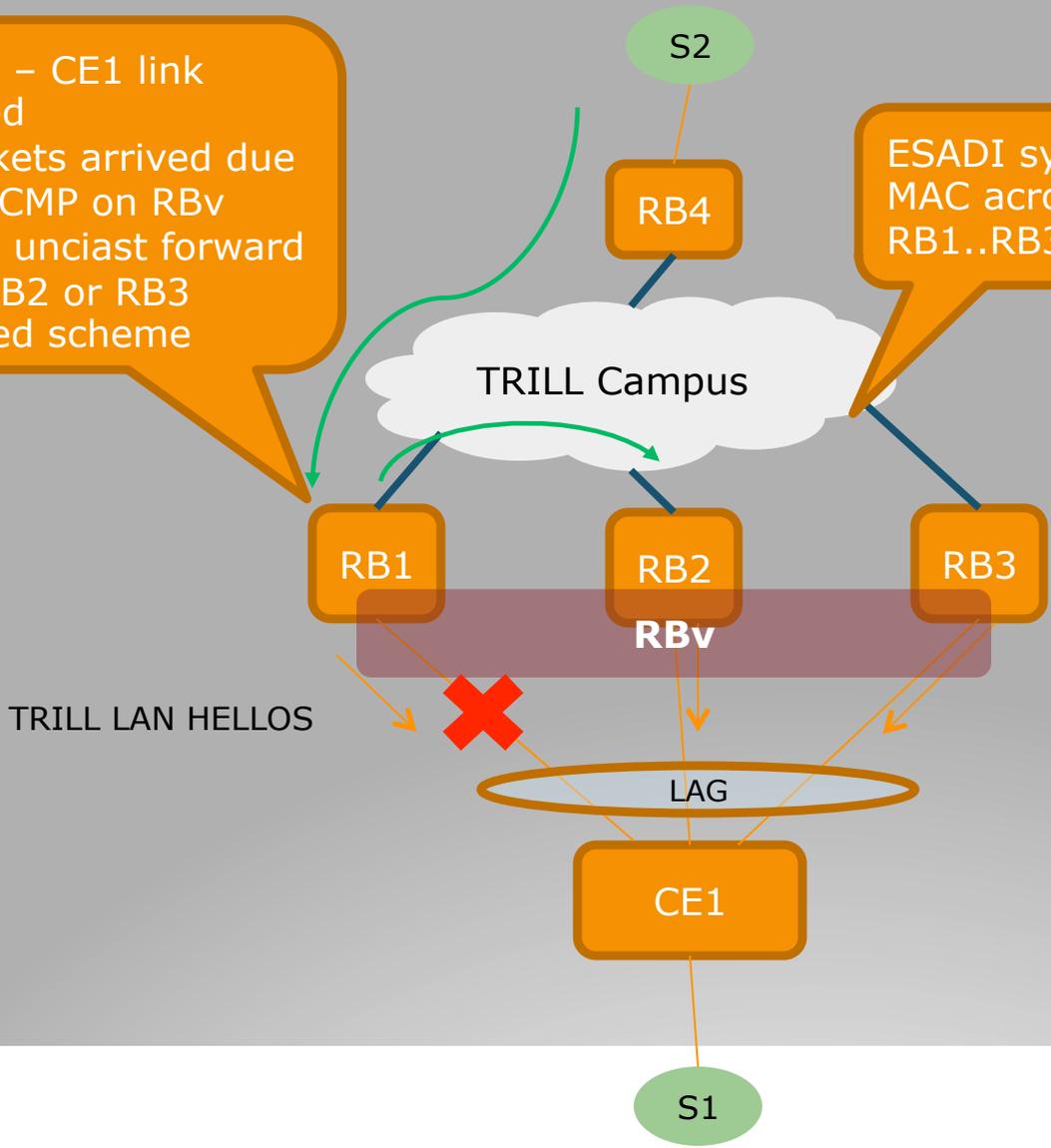
Theory of Operation (configuration Error - cross connect)



Theory of Operation (Link Failure-unciaast)

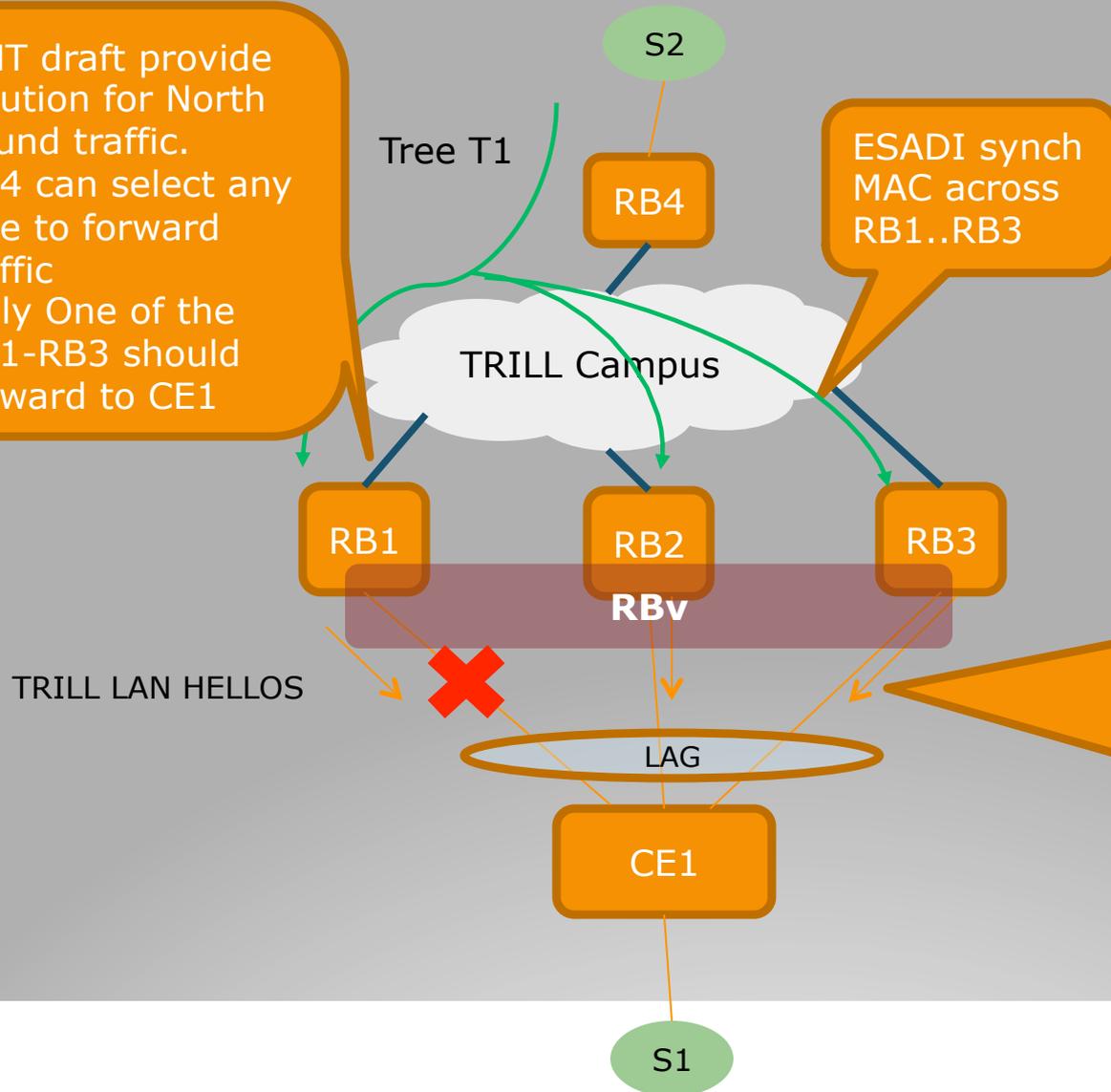
- RB1 – CE1 link failed
- Packets arrived due to ECMP on RBv
- RB1 unciaast forward to RB2 or RB3 based scheme

ESADI synch MAC across RB1..RB3



Theory of Operation (Link Failure-multicast)

- CMT draft provide solution for North bound traffic.
- RB4 can select any tree to forward traffic
- Only One of the RB1-RB3 should forward to CE1



ESADI synch
MAC across
RB1..RB3

- Each LAG is identified by a unique-ID
- One of the RB (1-3) is responsible for forwarding to CE1 per tree.
- In this case RB2 forward
- Propose to use ESADI to advertise {RBx RBv,LAGID} binding

Discussion

- There are 3 kinds of LAG membership information needed to be propagated.
 - Each member RB announce on behalf of RBv
 - All member LAGs
 - Withdrawal LAG/LAGs
 - Add LAG/LAGs
- We can implement this either as a separate ISIS sub-TLV under router capability (OR)
- We can implement as part of the ESADI framework
- Any preferences ?

Next Steps

- Move to WG status