E-NNI registration protocol

Hayim Porat

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Agenda

- Background
- Motivation
- Problem definition
- Suggested new standard

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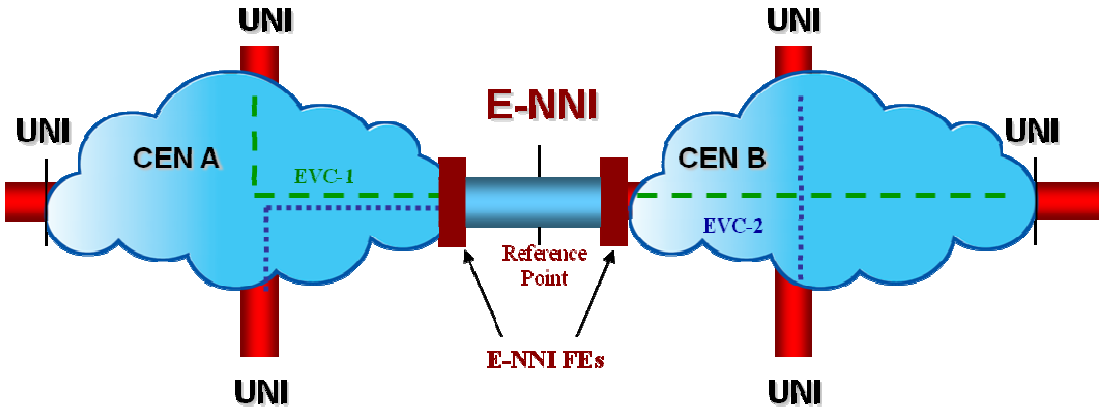
Background



- In order for two carriers (domains) to peer, there is a need for an external NNI.
- E-NNI is a reference point where two Service Providers meet in support of specified MEF Services.
- The E-NNI reference point is defined to exist between control domains

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Motivation

- Inter carrier (inter Domain) service provisioning automation is gaining place in carrier packet transport
- Ethos with NSN, BT,BGU & TKK are developing a solution for inter carrier Ethernet transport under the FP7 European research programs
- MEF had defined the E-NNI as a building block for inter carrier Ethernet transport (currently static and only S-VLAN)
- E-NNI must be supported at forwarding plane in order to enable automatic /TE service provisioning

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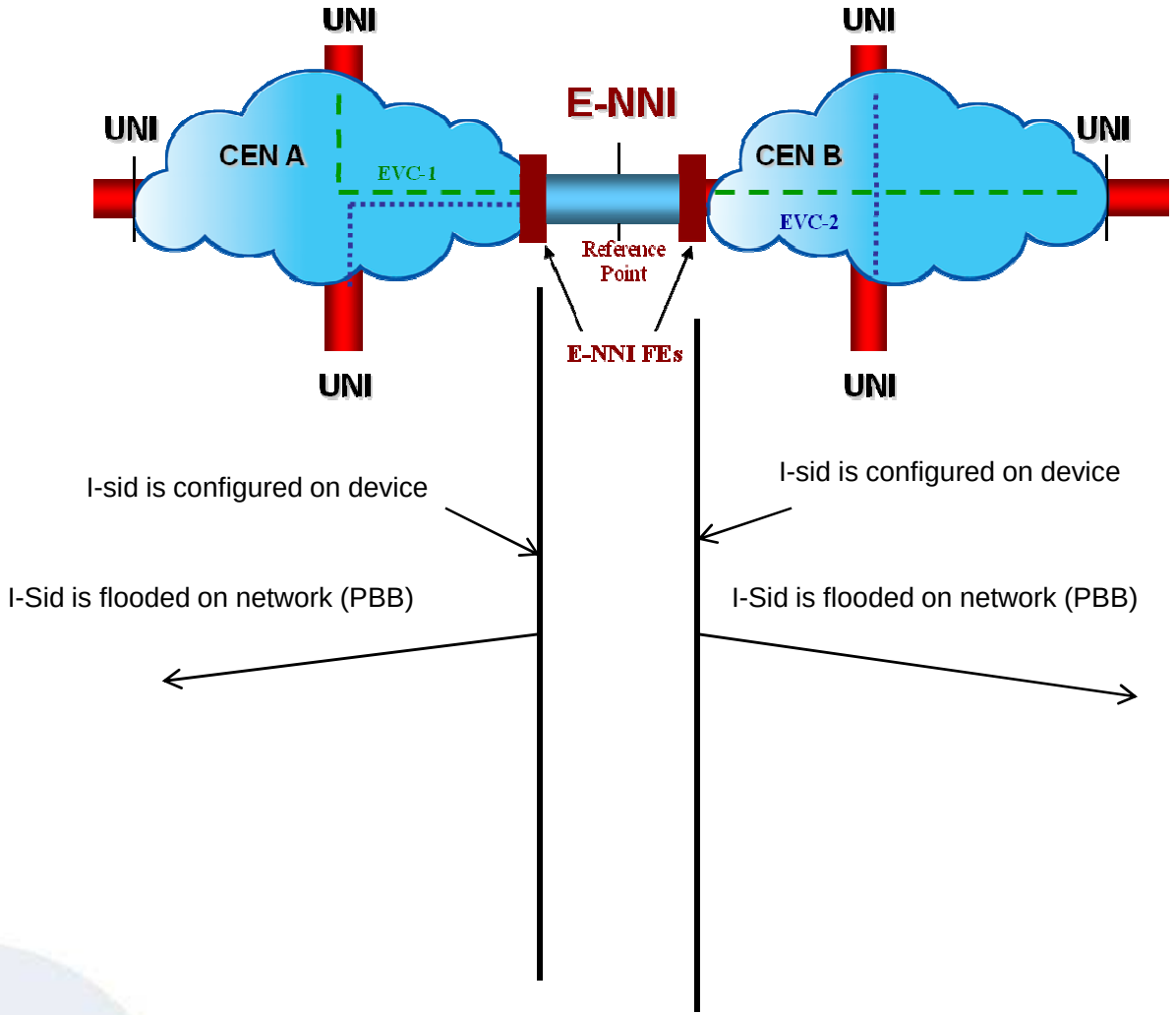
Current situation



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Problem definition

- PBB supports PBBN peering but not registration.
- For peering, PBB has an I interface but I tag peering is not defined - no registration of I-tag on the peered E-NNI port
- PBB-TE must rely on external agent to be configured. The inter-carrier case raises problems with:
  - NMS connectivity between two carriers
  - Authority over ports configurations
  - Configuration synchronization

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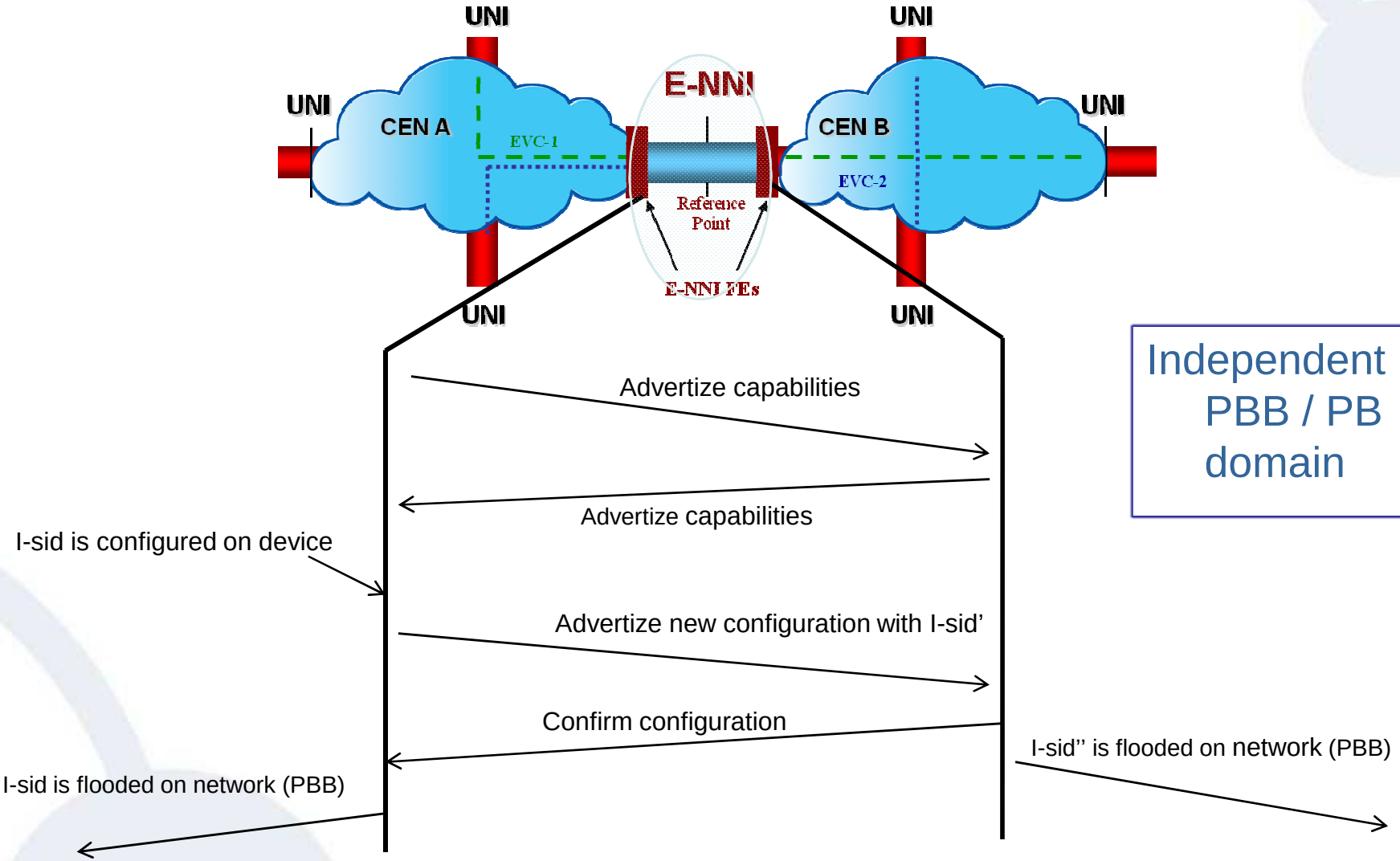
Suggested solution



Independent PBB / PB domain

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Suggested solution

- Add E-NNI interface definitions to PBB-TE
- Add to standards the following capabilities:
  - A new registration protocol (based on GVRP) for I tag / S-VLAN registration between two adjacent E-NNIs
  - Discovery and advertizing of E-NNI functionality and configuration
  - Automatic I tag (S-VLAN) registration / stitching/ translation mechanisms within the data plane. (extend I/S interface functionality)
- Two modes:
  - Promiscuous (for I-NNI): Any I-sid information from adjacent port is automatically assumed trusted and thus registered
  - Authorized - (for E-NNI) adjacent port is not assumed trusted. Any registration event causes a request to an external agent for authorization, path calculation and tag allocation

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