802.1ah: CBP Address Translation
Version 1

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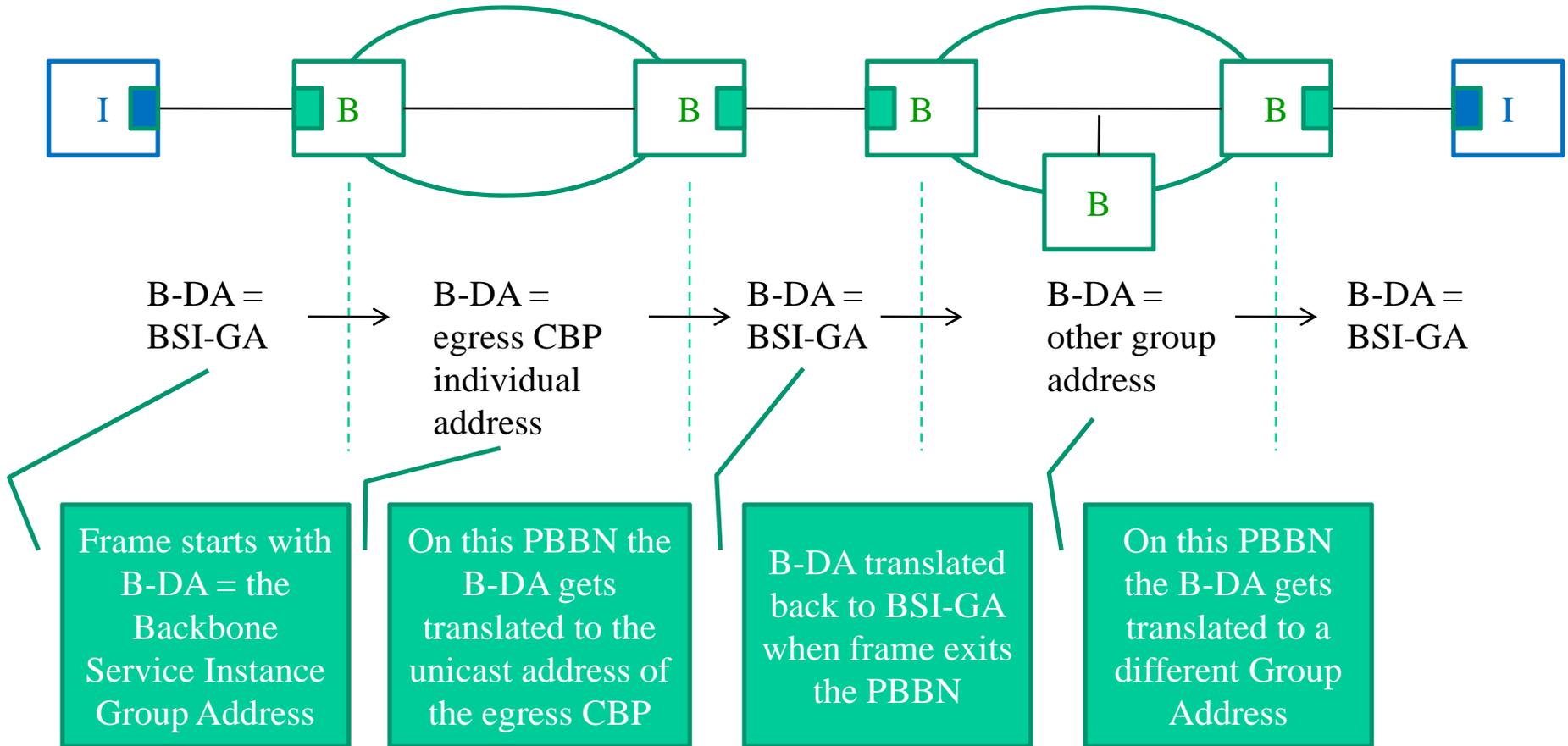802.1 Plenary, San Francisco

802.1ah-d3.6 comment resolution

- CBP address translation related comments:
  - Maarten Vissers: 466, 468, 484, 460
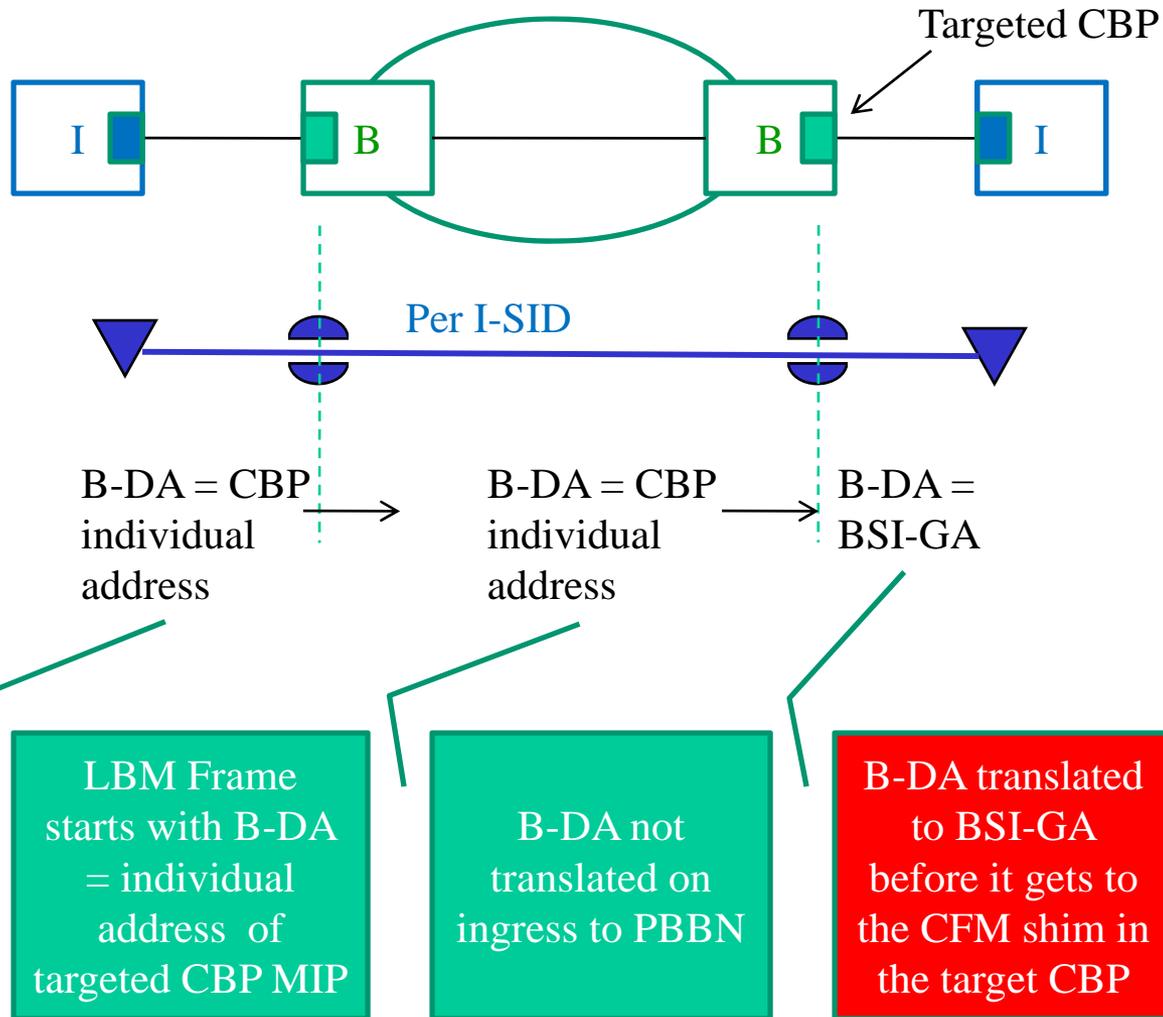 - Oliver Thorp: 633, 634
  - Muneyoshi Suzuki: 489, 490

CBP address translation rules

- ## UNITDATA.indication (ingress to PBBN)

  - If B-DA is the Backbone Service Instance Group Address (constructed from 802.1ah OUI and the I-SID), the CBP may translate the B-DA to the address configured in the Default Backbone Destination parameter.
    - Default Backbone Destination may be a group address or, if the backbone service instance is point-to-point on this PBBN, the individual address of the egress CBP.

- ## UNITDATA.request (egress from PBBN)

  - If B-DA is any group address or the individual address of this CBP, the CBP translates the B-DA to the Backbone Service Instance Group Address.

Address translation at CBP

| I | B | B | B | B | I |

B-DA = BSI-GA → B-DA = egress CBP individual address → B-DA = BSI-GA → B-DA = other group address → B-DA = BSI-GA

Frame starts with B-DA = the Backbone Service Instance Group Address

On this PBBN the B-DA gets translated to the unicast address of the egress CBP

B-DA translated back to BSI-GA when frame exits the PBBN

On this PBBN the B-DA gets translated to a different Group Address

Problem with CFM individual address

Targeted CBP

I — B — B — I

Per I-SID

B-DA = CBP individual address → B-DA = CBP individual address → B-DA = BSI-GA

LBM Frame starts with B-DA = individual address of targeted CBP MIP

B-DA not translated on ingress to PBBN

B-DA translated to BSI-GA before it gets to the CFM shim in the target CBP

Proposal for CFM individual address

Targeted CBP

I — B — B — I

Per I-SID

B-DA = CBP individual address → B-DA = CBP individual address → B-DA = BSI-GA

LBM Frame starts with B-DA = individual address of targeted CBP MIP

B-DA not translated on ingress to PBBN

B-DA translated to BSI-GA before it gets to the CFM shim in the target CBP
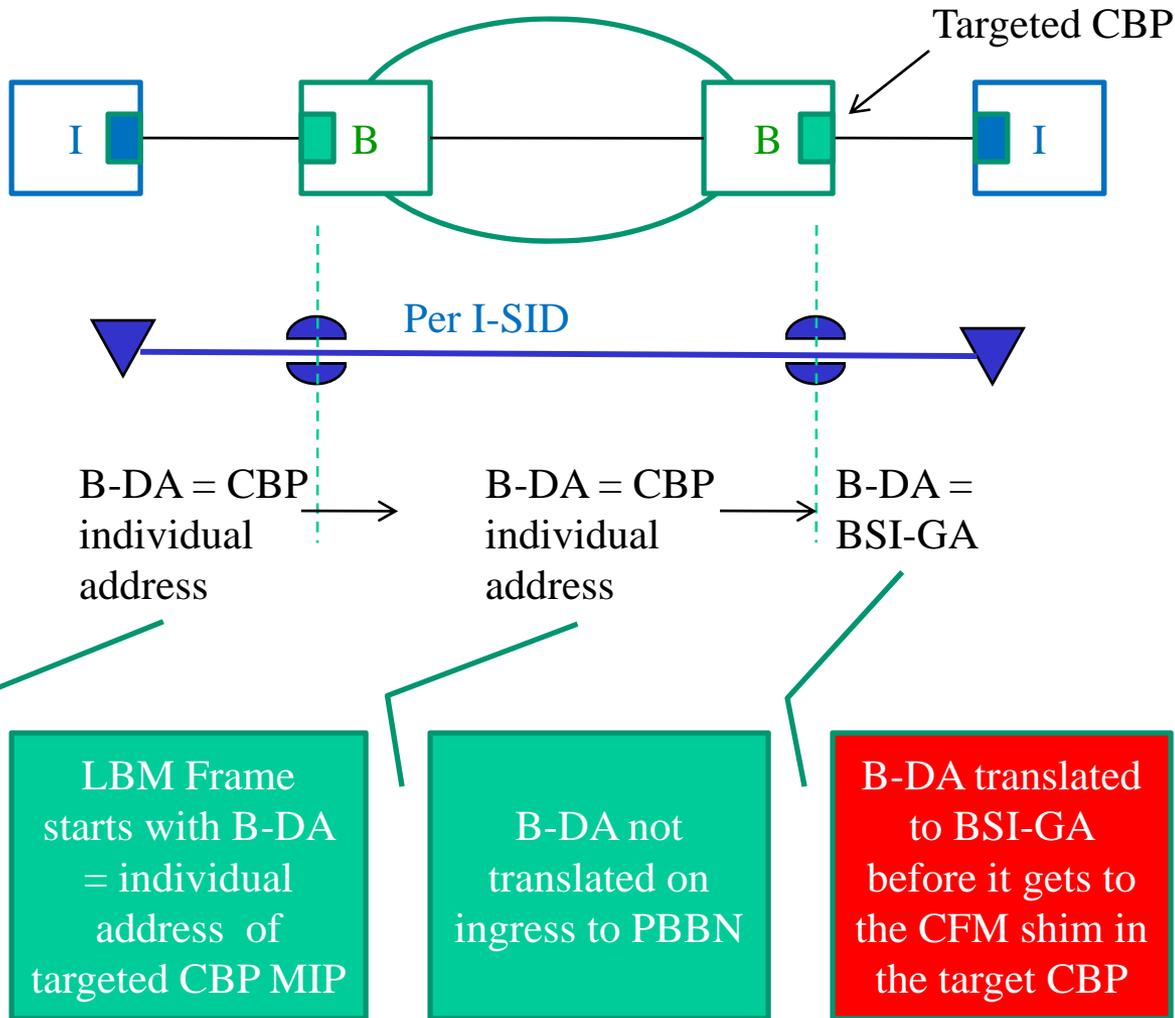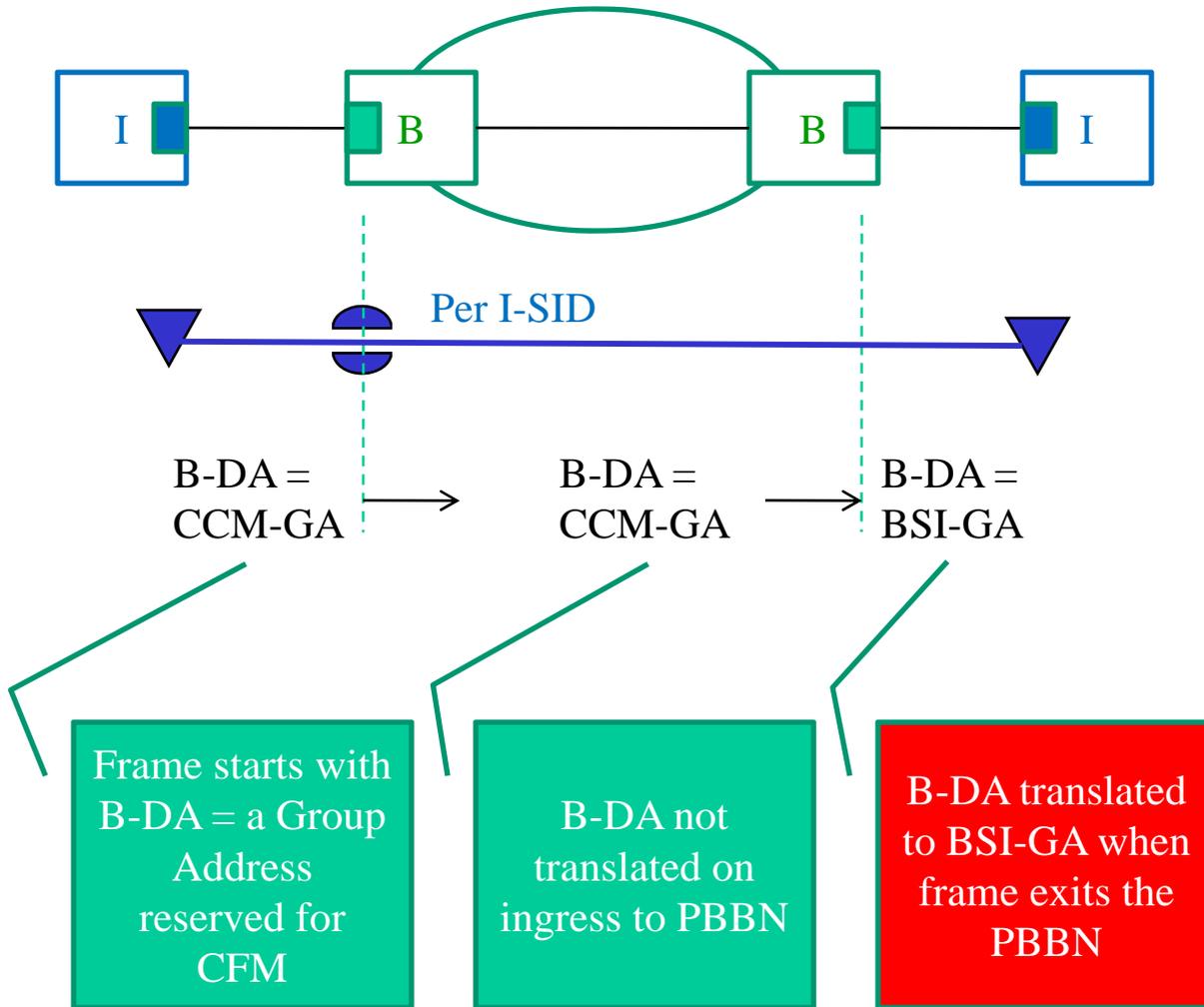
1) Make egress translation dependent on Ethertype (don't translate B-DA of backbone service instance level CFM).

2) CBP has two individual addresses: one for CFM shims and one for B-DA on user data frames.

3) Don't allow translating B-DA of user data frames to/from CBP individual address.

4) Put CFM shims above CBP functions (6.11) in interface stack.

Problem with CFM group address

Per I-SID

B-DA =
CCM-GA → B-DA =
CCM-GA → B-DA =
BSI-GA

Frame starts with B-DA = a Group Address reserved for CFM

B-DA not translated on ingress to PBBN

B-DA translated to BSI-GA when frame exits the PBBN

Proposal for CFM group address