

802.1ah/D3.8 comments MAC Translation

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MAC Translation

Issues keep popping up

When will we have found the last issue?

MAC translation has so far resulted in the following processes:

- 1) use of backbone service instance group (BSIG) address in PIP instead of broadcast address
- 2) translation of CCM and LTM Group addresses in the Backbone Service Instance Multiplex Entity multiplexer into BSIG address
- 3) translation of local BSIG address into backbone BSIG address in CBP ingress function
- 4) translation of backbone BSIG address into local BSIG address in CBP egress function
- 5) translation of local BSIG address into individual BVP address (2nd CBP address) of the egress CBP
- 6) translation of the individual BVP address into local BSIG address on the egress CBP
- 7) change of CFM processing to recognise BSIG address as alternative CCM or LTM Group address
- 8) requirement in PIP function to accept group MAC address with BSIG value in addition to broadcast MAC address

Is there a less complex alternative?

What application requires MAC translation?

MAC Translation

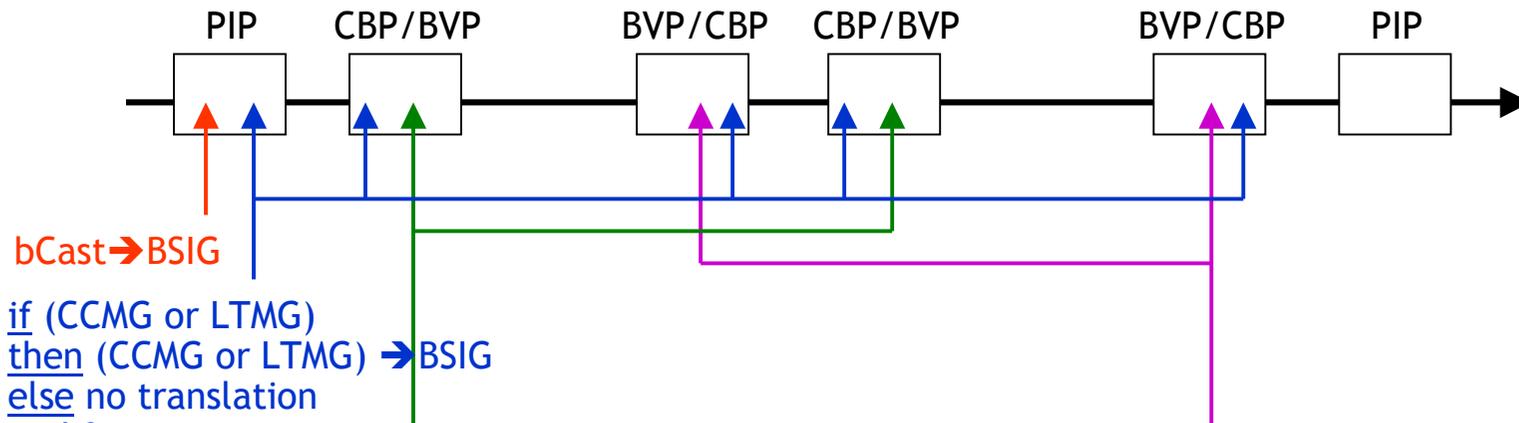
MAC translation required to restrict flooding of Backbone Service Instance frames within multipoint B-VLAN

- ❑ Not required when Backbone Service Instance frames transported within point-to-point B-VLANs or other point-to-point tunnels
 - Flooding scope of point-to-point B-VLANs/tunnels is smaller than or equal to the flooding scope of the backbone service instances carried

Design with lower number of MAC Translation locations?

- ❑ MAC translation only in CBP functions
 - specifically in the Backbone VLAN Port part of the CBP Functions
- ❑ Use broadcast address in PIP instead of the BSIG address
- ❑ Use CCM Group and LTM Group addresses in the Backbone Service Instance signals and the Backbone Service Instance MEPs and MIPs instead of BSIG address
- ❑ No need for MAC translation of the CCM Group and LTM Group addresses
- ❑ Required to translate "broadcast, CCM Group and LTM Group addresses" in the ingress CBP function into the "Default Backbone Destination" address, and to revert this translation (i.e. translate the "Default Backbone Destination" address into either the "broadcast, CCM Group, or LTM Group address") in the egress CBP function
 - Default Backbone Destination is either: Backbone Service Instance Group address (default value), Group address, or individual Backbone VLAN Port address.
- ❑ Backbone Service Instance layer again independent of Backbone VLAN layer

802.1ah/D3.8 MAC Translation specifications



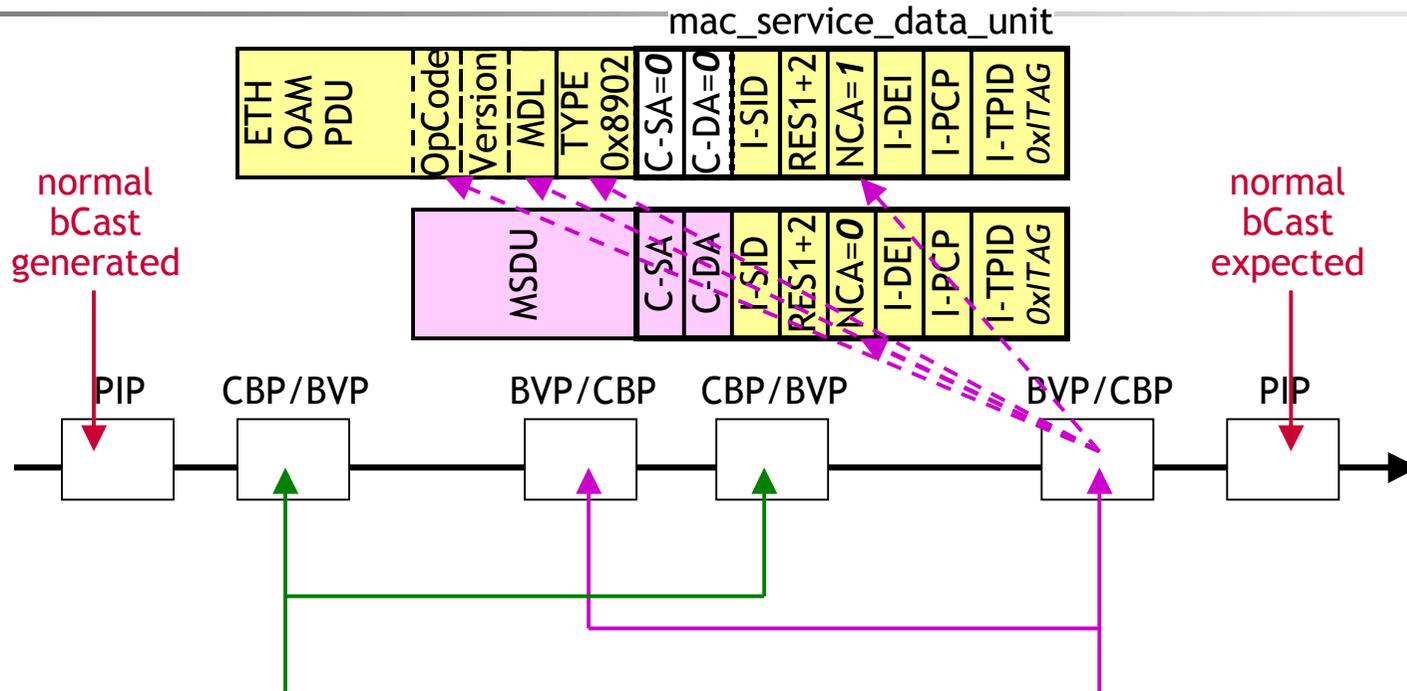
if (CCMG or LTMG)
then (CCMG or LTMG) → BSIG
else no translation
endif

if DBD
then if B-DA==BSIG
then B-DA=DBD
endif
else if Local-ISID
then B-DA=BSIG-b
else no translation
endif
endif

DBD configured as:
 - Group
 - Individual egress BVP

if B-DA==(Group or BVP)
then if Local-ISID
then B-DA=BSIG-l
else B-DA=BSIG-b
endif
else no translation
endif

Proposed MAC Translation specification



```

if (operPointToPoint==FALSE and (B-DA==bCast or CCMG or LTMG))
then B-DA = DBD
else no translation
endif
    
```

- DBD configured as:
- BSIG (default)
 - Group
 - Individual egress BVP

```

if (operPointToPoint==FALSE and (B-DA==Group/BSIG or BVP))
then if (MSDU.NCA==1 and MSDU.TYPE==0x8902)
then if MSDU.OpCode==LTM
then B-DA = LTMG(MDL)
else B-DA = CCMG(MDL)
endif
else B-DA = bCast
endif
else no translation
endif
    
```