

PBB-TE Domain, Layers and Components Clarification

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Introduction

PBB-TE networking differs from PBB networking

Which elements of 802.1ah are to be modified in 802.1Qay?

Initial questions for clarification

- What is the interpretation of “domain” in the 802.1Qay PAR
- Which layers are present in a PBB-TE network
- Which components are present in PBB-TE BEB nodes

Several alternatives are presented for discussion

PBB-TE Domain Clarification

PBB-TE “will not take account of multi domain networks“ (PAR)

❑ Three interpretations

- single administrative domain, which may include one or more PBB-TE Networks
- single PBB-TE Network with IB-BEB, I-BEB, B-BEB and PB nodes
- single PBB-TE Network with IB-BEB and PB nodes only (i.e. no I-BEBs)

❑ Interpretation on 802.1 mailing list, June 29, 2007

- Network with PBs and IB-BEBs only

PBB-TE Layers Clarification

How many PBB-TE layers?

❑ Two alternatives

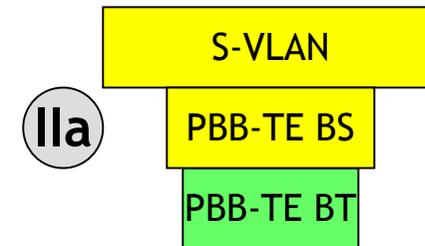
- **One PBB-TE layer** performing a backbone tunnel (BT) layer role
 - layer stack includes S-VLAN + PBB-TE BT layers
- **Two PBB-TE layers** performing backbone service (BS) and backbone tunnel (BT) layer roles
 - layer stack includes S-VLAN + PBB-TE BS + PBB-TE BT layers

❑ S-VLAN + PBB-TE BT (I)

- S-VLAN layer acts as Service Layer; p2p and mp services
- PBB-TE BT layer acts as Tunnel Layer; p2p tunnels

❑ S-VLAN + PBB-TE BS + PBB-TE BT (IIa, IIb)

- S-VLAN layer acts as Service Layer; p2p and mp services
- PBB-TE BS layer acts as Backbone Service Layer; p2p services
- PBB-TE BT layer acts as Backbone Tunnel Layer; p2p tunnels

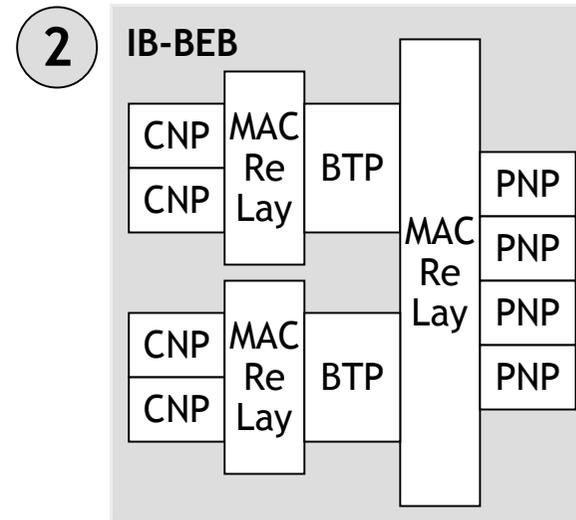
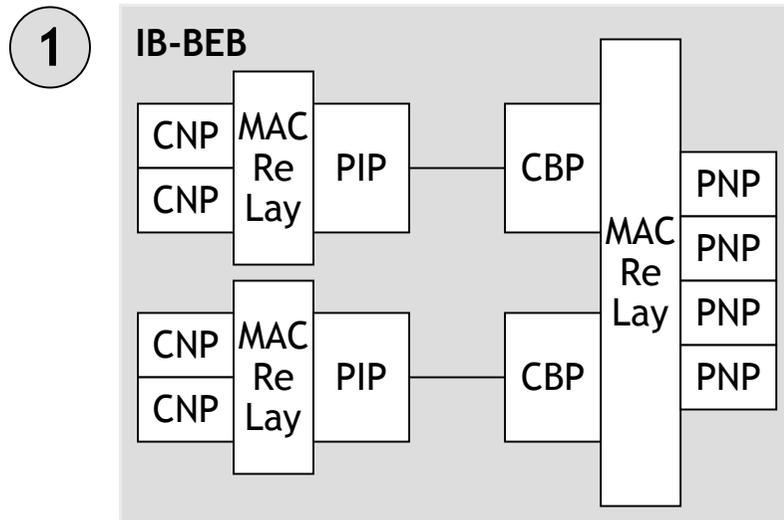


PBB-TE Components Clarification

IB-BEB Components

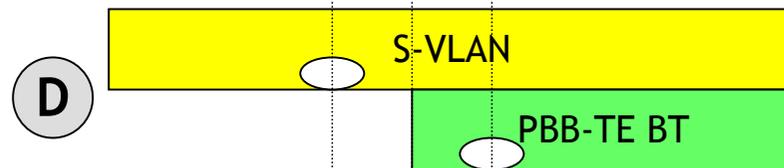
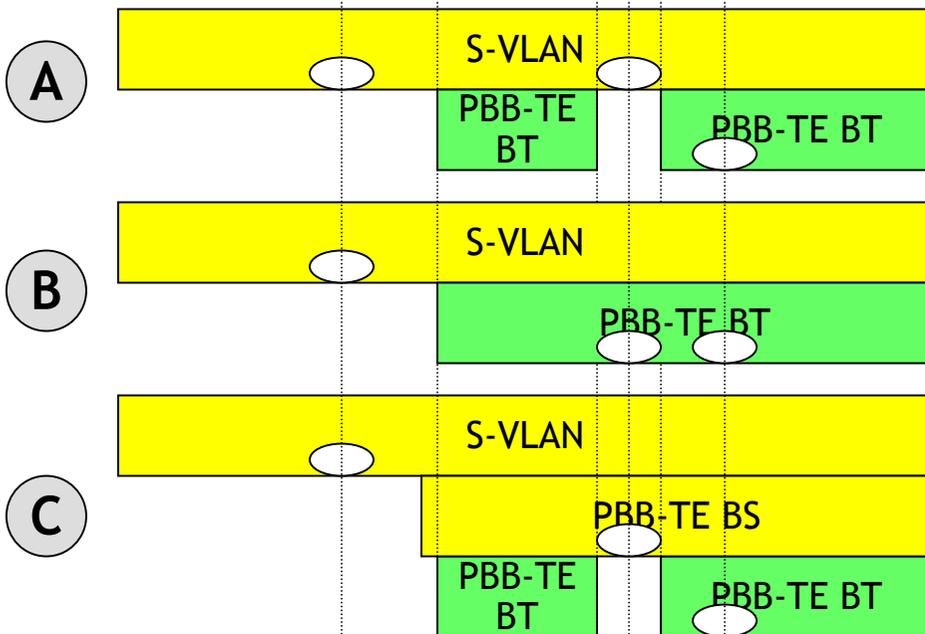
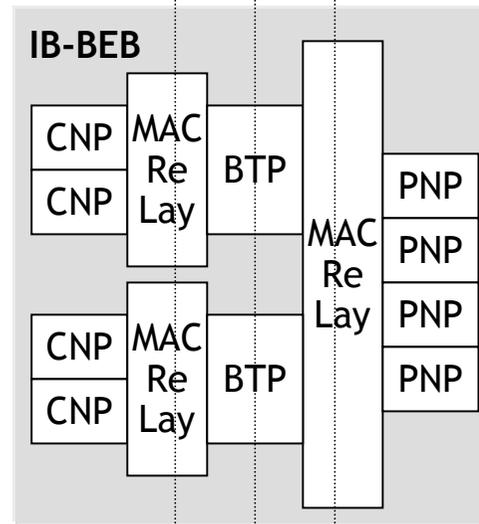
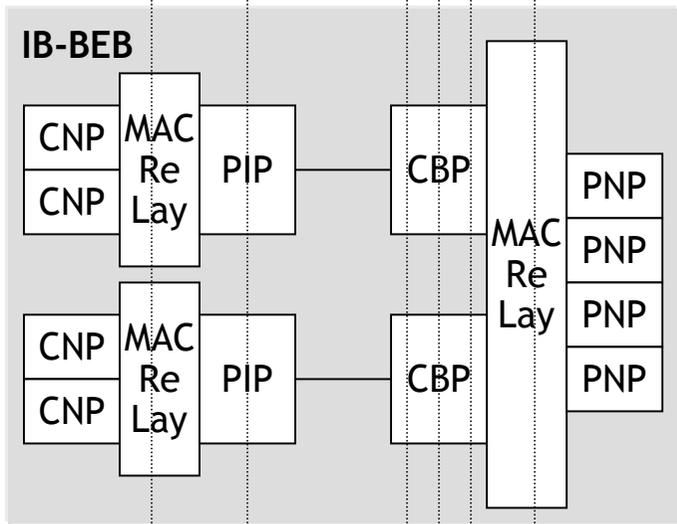
Two alternatives

- Separate I-Component and B-Component interconnected via clause 6.14 shims
 - Supports two PBB-TE (BS and BT) layers case
 - Supports one PBB-TE (BT) layer case
- Single B-Component with integrated “PIP/CBP” function (Backbone Tunnel Port (BTP))
 - Supports one PBB-TE (BT) layer case



PBB-TE Components and Layers

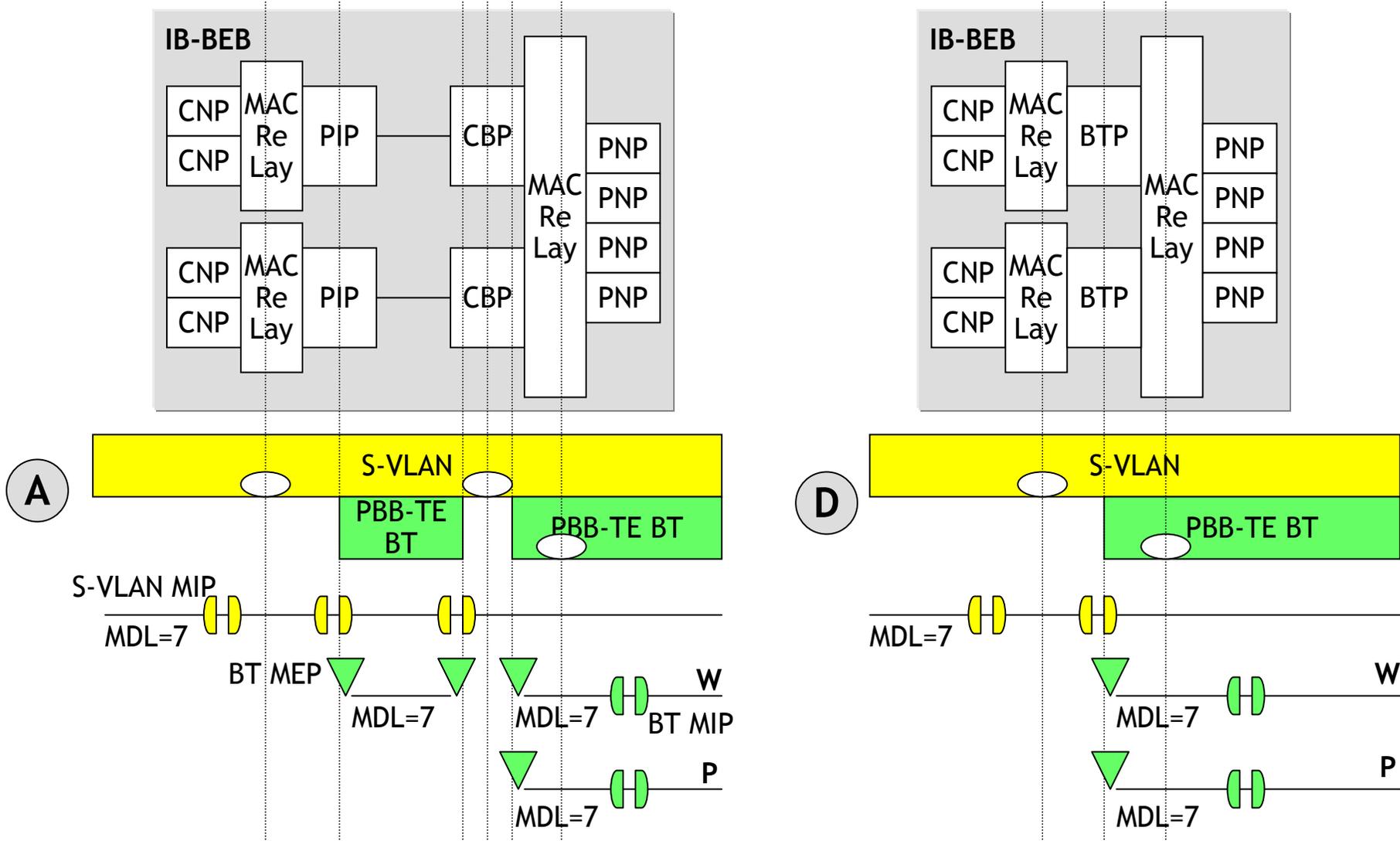
Four Alternative Combinations



- A: PBB-TE BT Instances terminate in CBP (Extra PBB-TE BT Instance between PIP and CBP S-VLAN switch (Service Instance Table) in CBP)
- B: PBB-TE BT Instances terminate in PIP (PBB-TE BT switch in CBP)
- C: PBB-TE BS Instances terminate in PIP, PBB-TE BT Instances terminate in CBP (Extra PBB-TE BT Instance between PIP and CBP PBB-TE BS switch (Service Instance Table) in CBP)
- D: PBB-TE Instances terminate in BTP

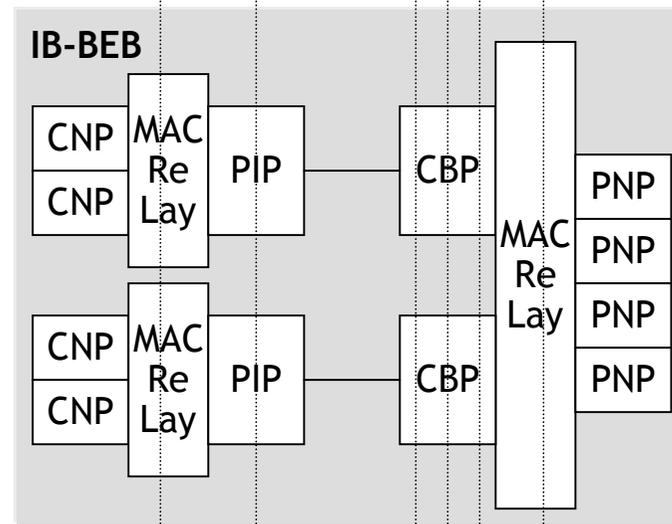
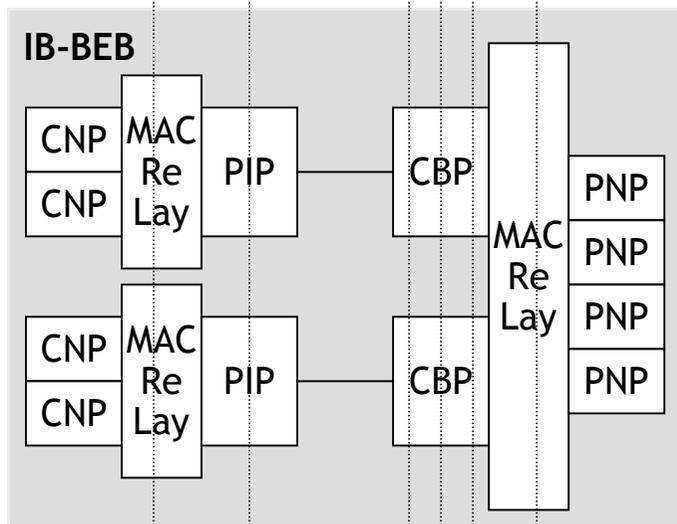
PBB-TE Components and Layers

MEPs and MIPs with MD Level

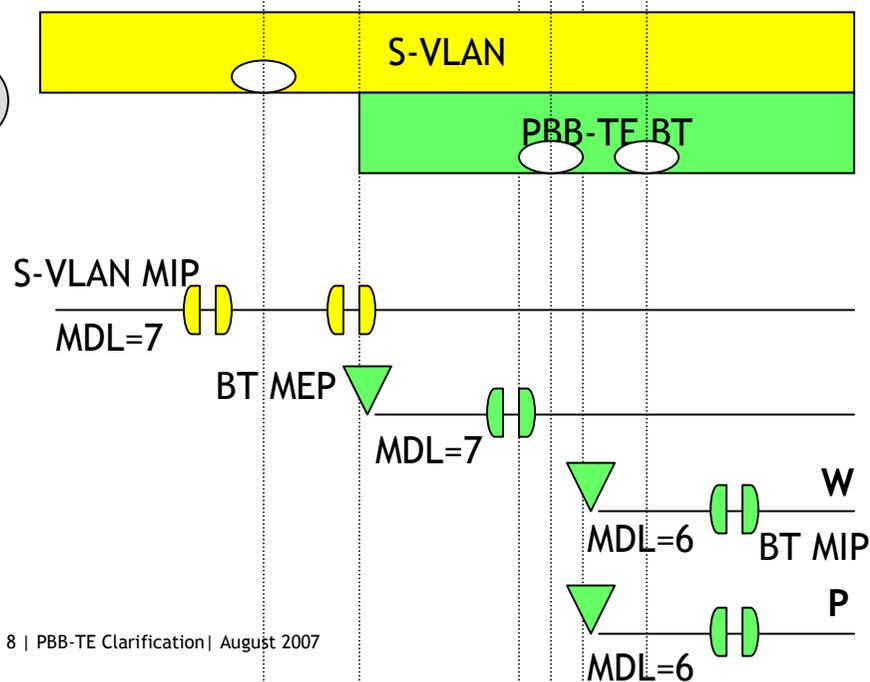


PBB-TE Components and Layers

MEPs and MIPs



B



C

