

Adding in MACsec

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This note comprises a number of diagrams to illustrate a proposed architectural placement of the MACsec Entity (the MACsecY or secY) within the media access control method independent part of the MAC Sublayer.

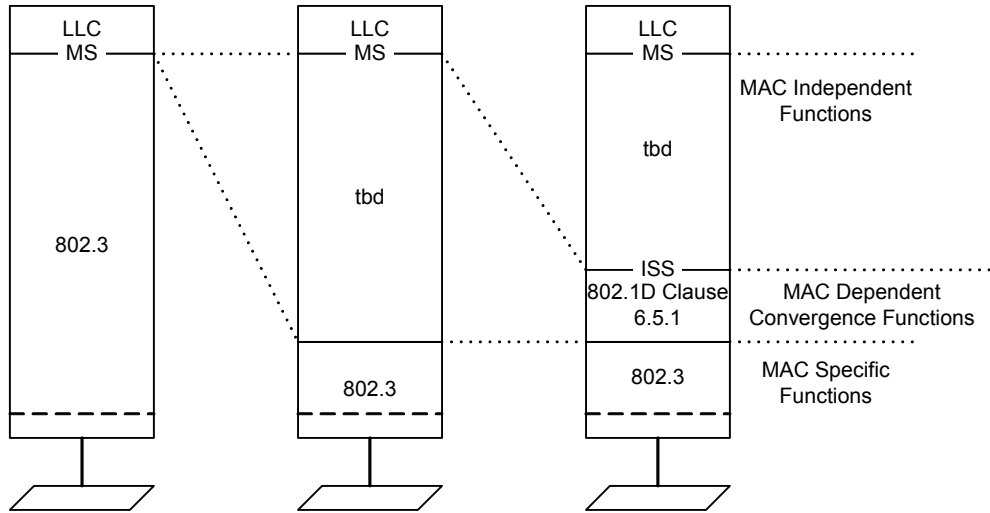
Diagrams are provided for an End Station, for an 802.1D MAC Bridge, for an 802.1Q/802.1s VLAN-aware Bridge, and for Provider Bridged Network CPE capable of service selection of customer VLAN Ids and redundant access links to a provider bridged network. In the later case provision of MAC security from customer to customer across the provider network is shown, as well as use of MAC security to protect the access link to the provider network, and use internally to secure links between provider bridges.

No commentary is provided ... good luck.

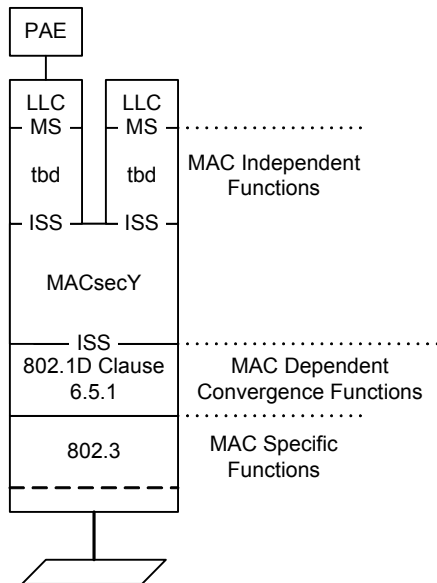
Commentary

When time permits ..

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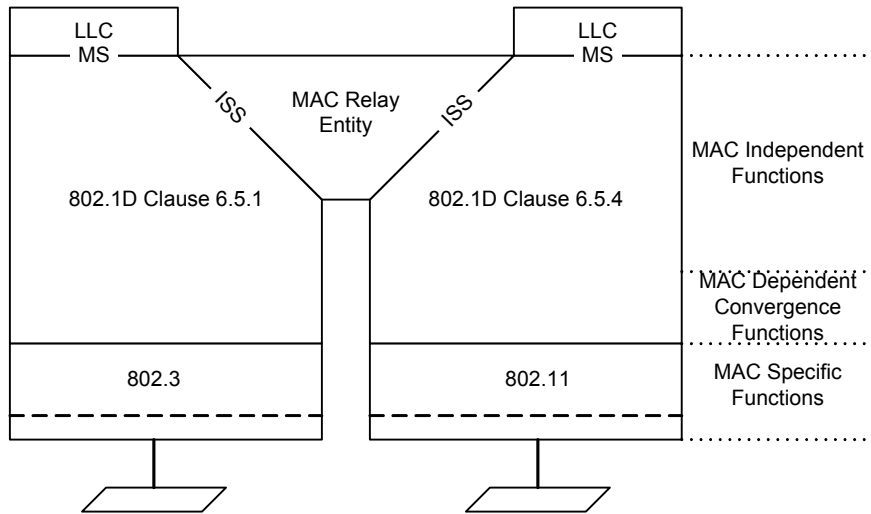
Three (equally valid) views of the MAC sublayer in an end station



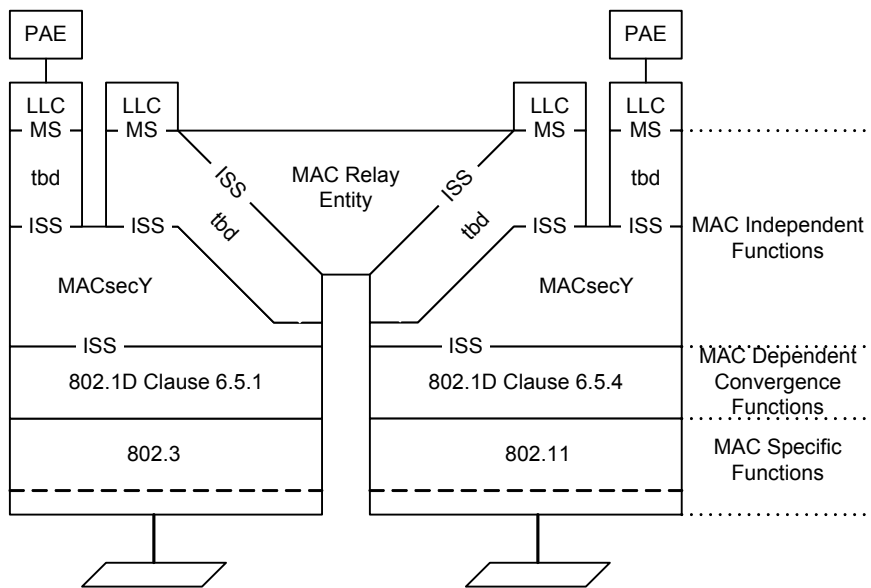
MAC sublayer in an end station with MAC Security

Notes:
MS = MAC Service
ISS = Internal Sublayer Service
EISS = Enhanced Internal Sublayer Service
tbd = To Be Done (functionality trivial to define, but not written in standard)

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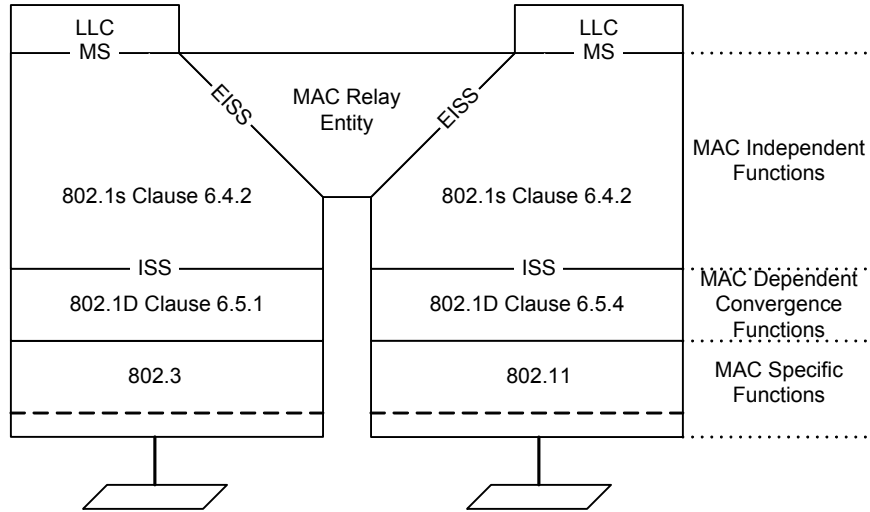


The MAC sublayer in an 802.1D MAC Bridge

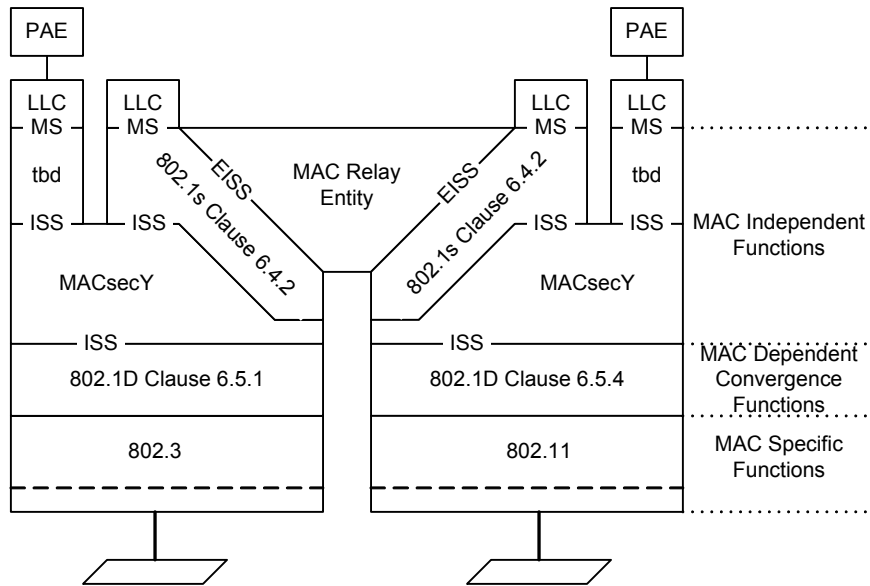


The MAC sublayer in an 802.1D Bridge with MAC Security

Notes:
MS = MAC Service
ISS = Internal Sublayer Service
EISS = Enhanced Internal Sublayer Service

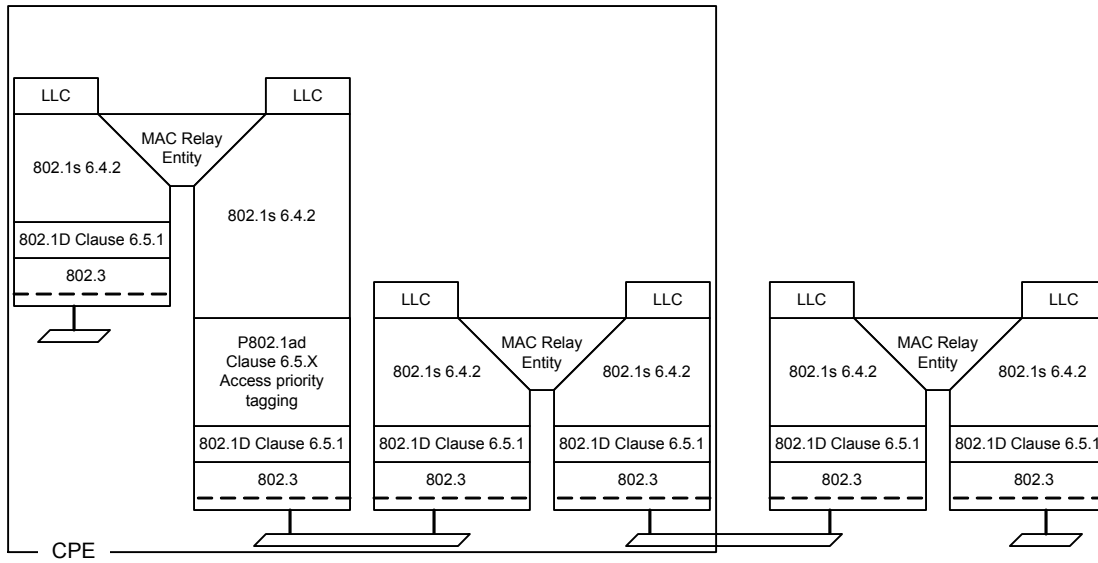


The MAC sublayer in a VLAN-aware bridge

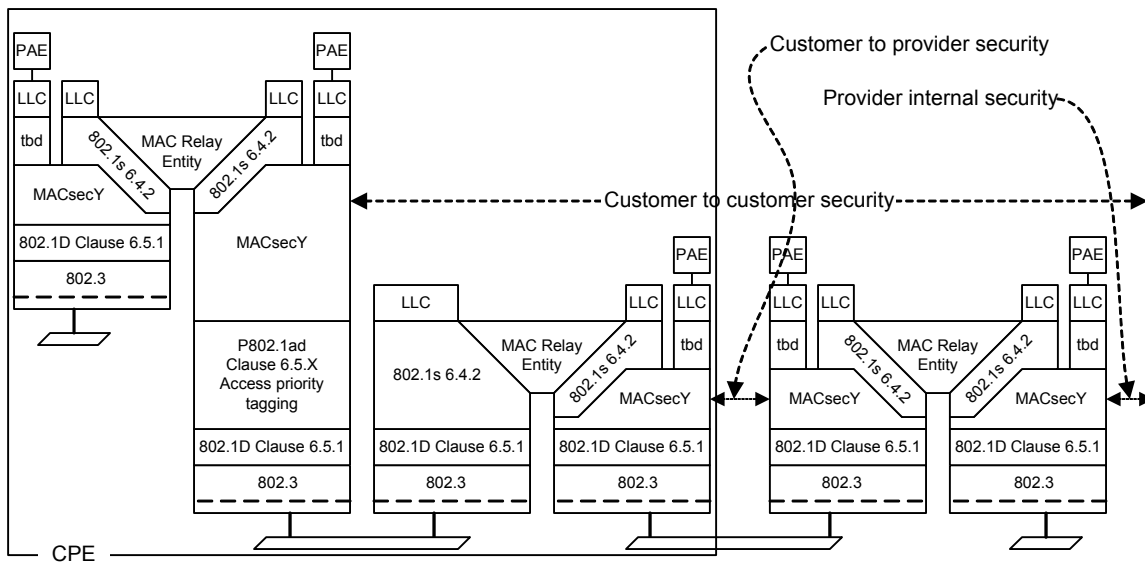


The MAC sublayer in a VLAN-aware bridge with MAC Security

Notes:
 MS = MAC Service
 ISS = Internal Sublayer Service
 EISS = Enhanced Internal Sublayer Service



Provider Bridged Network : CPE attached to PPE



MAC Security in a Provider Bridged Network