

Open issues

Kevin Daines
World Wide Packets

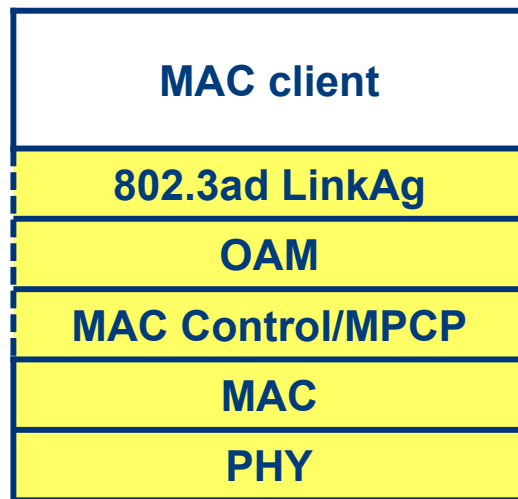
12 January 2005

Outline

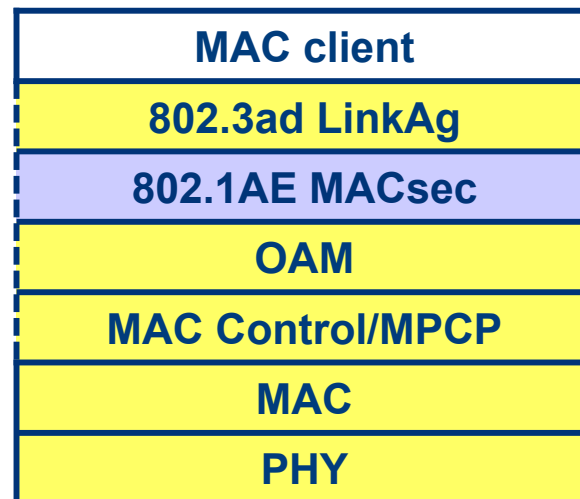
- Layering
- Ordering of tags within Prefix field
- Reserve space for 802.3 future use?
- Management attribute

Layering

- P802.1AE/D2.02 shows SecY below the Link Aggregation sublayer



802.3ah-2004



P802.1AE/D2.02 Fig 11-6

- OAMPDUs, MAC Control frames and MPCPDUs would **NOT** be encrypted while LACPDUs *would*
- Problems, concerns?

Tag ordering

- A possible concern was raised in San Antonio about LinkAg flows for load-balancing
 - Often a flow is { DA, SA, Tag-12, Pri-3 }
- Does a VLAN Tag need to be the first tag in the Prefix field?
 - P802.1AE/D2.02 Figure 11-4 shows a VLAN Tag *after* the SecTag (below)

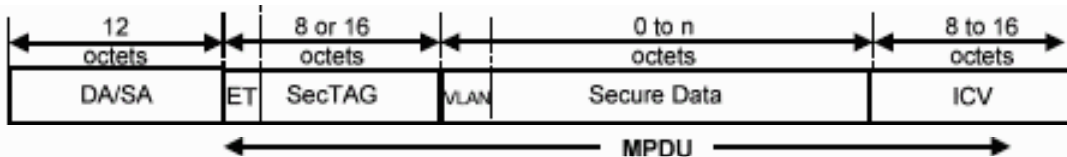
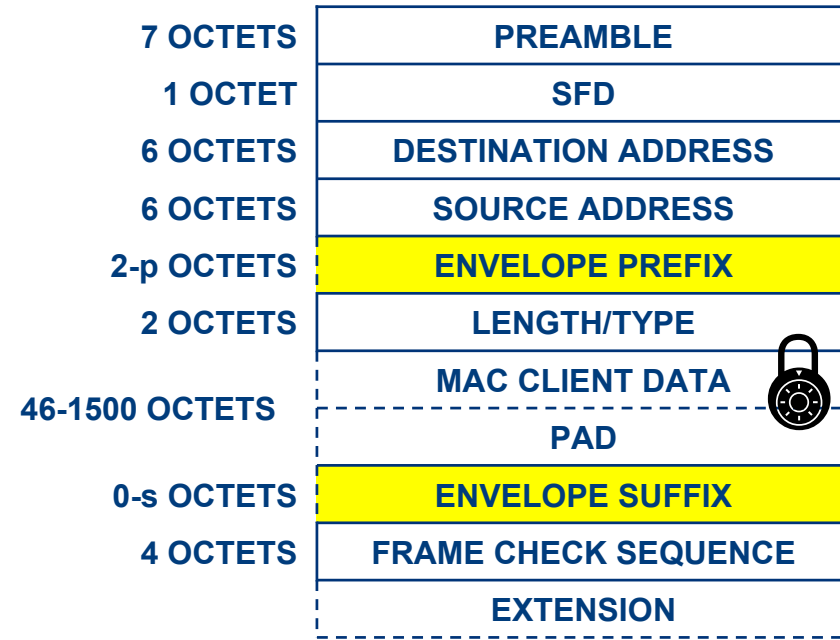


Figure 11-4—Frame format showing VLAN Tag



NEW Figure 3-3

Envelope MAC frame format

p is 2 to max[2, TBD – suffixSize]

s is 0 to max[0, TBD – prefixSize]

Reserved space?

- Ethernet originally specified a 1,024 octet data field, 18 octets of header (DA, SA, L/T) and trailer (FCS) fields
- This left 476 octets of “room” for additional headers, tags, etc
- Instead of setting MTU=1,024, device drivers used 1,500 and the “reserved for future use space” was gone
- A suggestion was made in San Antonio to reserve some of the new envelope space for 802.3 future use
 - If the new frame size is 1,875 (1518+357), for instance, perhaps 256 octets could be allocated to the MAC client and 101 octets could be reserved for 802.3 future use
 - This would help reduce the chance of needing to expand the frame size in the future

Management attribute

- Since frame size support is determined by multiple components in a system (memory system, MAC, PHY), and no standard method exists to communicate frame size, a reliable management attribute is not possible
- Despite this, the Frame Expansion SG overwhelming voted to include an attribute (16-0), even if it was “auto-magical”
- The following text could be the basis for such an attribute:
 - 30.3.x.y.z aMaximumFrame
 - ATTRIBUTE
 - APPROPRIATE SYNTAX:
 - BIT STRING [SIZE(11)]
 - BEHAVIOUR DEFINED AS:
 - A GET operation returns the maximum frame size supported by the DTE.
 - This attribute maps to the variable ??? (see x.y.z).;