Scope of 802.3dh

Yuji Watanabe , AGC Inc.

IEEE802.3dhz Virtual interim meeting, May 23, 2022

Objectives (1/2)

AGC
Your Dreams, Our Challenge

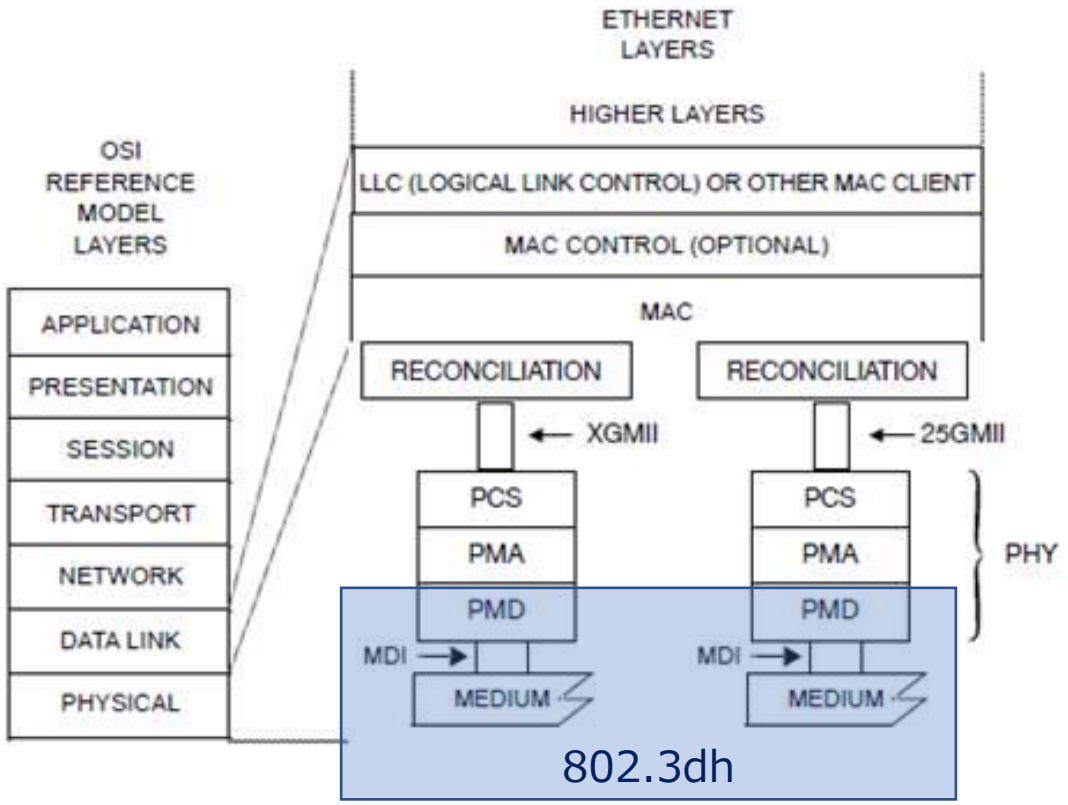
1. Preserve the IEEE 802.3/Ethernet frame format at the MAC client service interface
2. Preserve minimum and maximum frame size of the current IEEE 802.3 standard
3. Support full duplex operation only
4. Define optional startup procedure which enables the time from power_on=FALSE to a state capable of transmitting and receiving valid data to be less than 100ms
5. Support data rates of 2.5 Gb/s, 5 Gb/s, 10 Gb/s, and 25 Gb/s at the MAC/ PLS service interface
6. Support optional Energy Efficient Ethernet optimized for automotive applications
7. Support operation in automotive environments (e.g., EMC, temperature)
8. Do not preclude meeting FCC and CISPR EMC requirements

Objectives (2/2)

AGC
Your Dreams, Our Challenge

9. Define the performance characteristics of an automotive link segment and an optical PHY to support 2.5 Gb/s point-to-point operation over this link segment supporting up to 3 inline connectors for at least 15 m on at least one type of automotive optical cabling
10. Define the performance characteristics of an automotive link segment and an optical PHY to support 5 Gb/s point-to-point operation over this link segment supporting up to 3 inline connectors for at least 15 m on at least one type of automotive optical cabling
11. Define the performance characteristics of an automotive link segment and an optical PHY to support 10 Gb/s point-to-point operation over this link segment supporting up to 3 inline connectors for at least 15 m on at least one type of automotive optical cabling
12. Define the performance characteristics of an automotive link segment and an optical PHY to support 25 Gb/s point-to-point operation over this link segment supporting up to 2 inline connectors for at least 15 m on at least one type of automotive optical cabling
13. Support a Bit Error Ratio better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent)

Target



MAC = MEDIA ACCESS CONTROL
MDI = MEDIUM DEPENDENT INTERFACE
PCS = PHYSICAL CODING SUBLAYER
PHY = PHYSICAL LAYER DEVICE
PMA = PHYSICAL MEDIUM ATTACHMENT
PMD = PHYSICAL MEDIUM DEPENDENT
XGMII = 10 GIGABIT MEDIA INDEPENDENT INTERFACE
25GMII = 25 GIGABIT MEDIA INDEPENDENT INTERFACE