Objectives as revised, November Plenary, 2015

2.5 Gb/s and 5 Gb/s Ethernet over Backplane and Copper Cable

CU4HDD Study Group

Objectives (1 of 2)

- Support MAC data rates of 2.5 Gb/s and 5 Gb/s
- Support full duplex operation only
- Preserve the 802.3 Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum Frame Size of current 802.3 standard
- Support Auto-Negotiation (Clause 73)
- Support optional Energy-Efficient Ethernet operation.
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent)

Objectives (2 of 2)

- ~~Define a single lane 2.5 Gb/s PHY that supports operation over defined 2.5 Gb/s backplane and twinaxial copper cable channels.~~
- ~~Define a single lane 5 Gb/s PHY that supports operation over defined 5 Gb/s backplane and twinaxial copper cable channels~~
- Define a PHY for 2.5 Gb/s operation over a printed circuit board backplane and/or twinaxial copper cable with total channel insertion loss of <= 11 dB at 1.5 GHz
- Define a PHY for 5 Gb/s operation over a printed circuit board backplane and/or twinaxial copper cable with total channel insertion loss of <= 15 dB at 3 GHz