System Vendors View on 100 Gb/s Backplane and Copper Study Group Issues

100 Gb/s Backplane and Cable Study Group
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Twinax Interface Desired Properties

- We believe that 5m should be used as our initial minimum target length for a passive cable specification

- Possible objective (from dambrosia_01_0311):

    Define a 4-lane 100 Gb/s PHY for operation over copper twin-axial cables for links consistent with lengths up to at least **5**m

- Improved FR4 PCB material + 4" per side is a good starting point for the host channel

- A cable with a reasonable diameter and bend radius should be considered for the channel, for example, a twinax cable gauge of AWG24 might fulfill this requirement

BER

- For many applications, a BER of 10^{-12} is sufficient

- Some applications though, will require a better BER; a BER of 10^{-15} is reasonable for more demanding applications

  - For example some backplane applications will require a BER better than 10^{-12}

- For those applications that require it, we are requesting an optional feature to reach a BER of 10^{-15}

  - This is in addition to supporting a baseline BER of 10^{-12}

Data Delay

- If FEC is used, it is preferable that the added latency is kept as low as possible, and it must not add more than (x) ns to the data delay

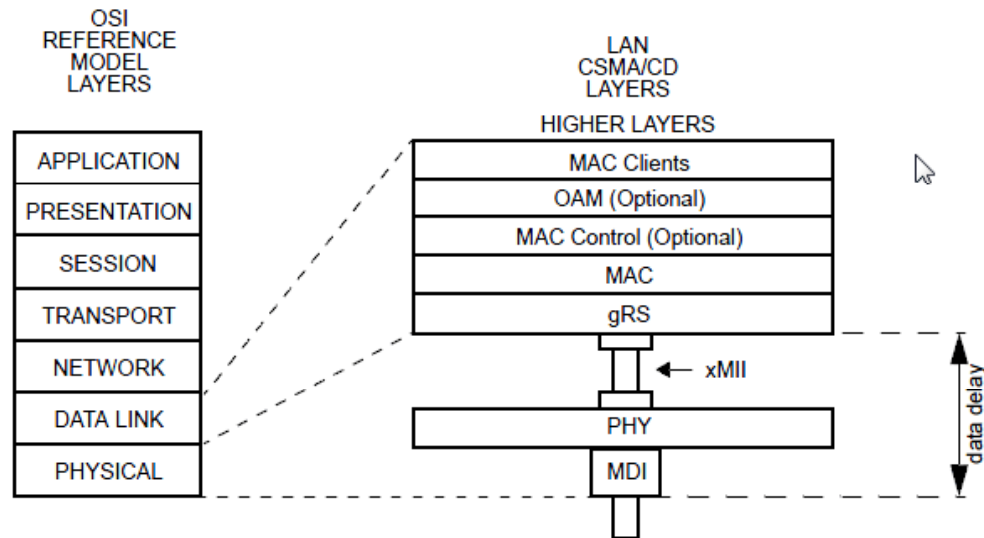 - The value of x is still under discussion!

Figure 90–3—Data delay measurement

Thanks!