

Objectives Discussion

IEEE 802.3 100Gb/s Backplane and Copper Cable Study Group

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Introduction

- Determining objectives is critical step
 - Contract with IEEE 802.3 WG
 - Impacts responses to 5 Criteria
- The following is an initial list of key objectives, based on discussions from the January meeting.
- Agreeing on the form of objectives will help to focus on answering the hard questions

Non-Controversial Objectives

- The following are examples of objectives that are used which are not usually controversial:
- Support full-duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum FrameSize of current 802.3 standard

Reach Objectives

- The reach objective(s) for this project will most likely be the most difficult.
 - Define a 4-lane 100 Gb/s PHY for operation over copper traces on “improved FR-4” for links consistent with lengths up to at least “X” m.
 - Define a 4-lane 100 Gb/s PHY for operation over copper twin-axial cables for links consistent with lengths up to at least “Y” m.
- Issue: Definition of Improved FR-4

BER Objective

- Assigned action from Jan Meeting for exploration
- Typical wording that has been used previously -
 - Support a BER of better than or equal to "10⁻²" at the MAC/PLS service interface

Latency

- Assigned action item from Jan Meeting for exploration
- Potential wording –
 - Support a Tx + Rx data delay of less than or equal to “W” ns between the CGMII and MDI

Note – “data delay” as defined by IEEE p802.3 bf

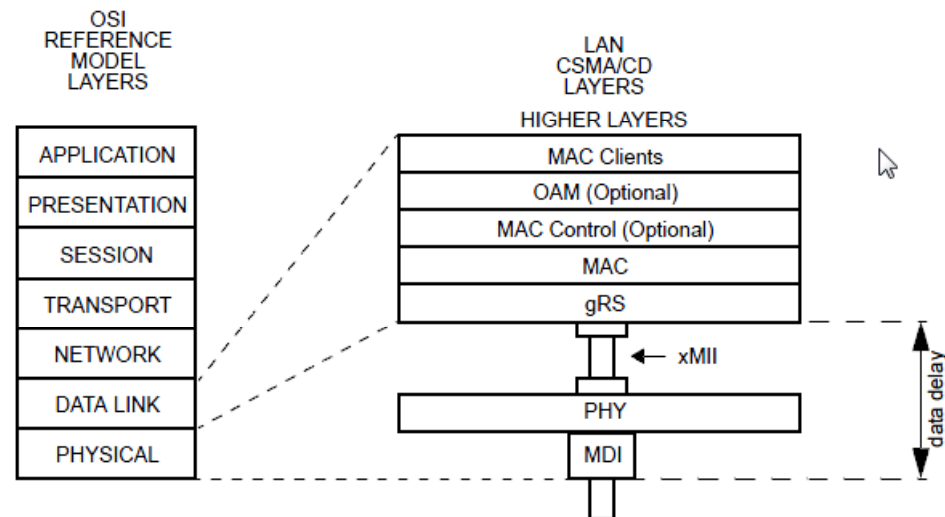


Figure 90-3—Data delay measurement