Possible Objective Text

IEEE 802.3

MultiGigabit Automotive Ethernet PHY Study Group Ad Hoc

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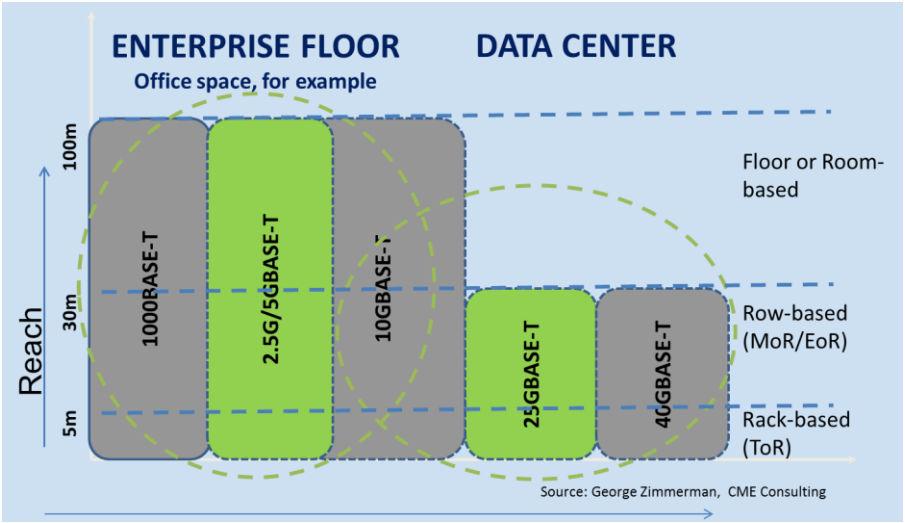
(revised during presentation)

Where we left things in January

- Lack of consensus on 10Gb/s media
- Talk was of adding additional rates
  - A reminder from 10GBASE-T & 802.3bz
    - ***There is a lot of room between 1Gb/s and 10Gb/s!***
    - See: The Spaces of BASE-T (EA Whitepaper)



Personal Opinion: If we leave that space blank, we will be back!

Proposed Change to “Environment” Objective

- Modify the objective below as shown:
  - Support operation ~~at 10Gb/s~~ in automotive environments (e.g., EMC, temperature) ~~over single pair shielded balanced copper cabling~~.

- This would allow a single objective for multiple rates, isolating the rates to the MAC and PHY objectives
- This would isolate media choices to the “link segment” objectives

Adding 2.5 Gb/s

- Seems to be consensus for this rate, and we should be able to come to consensus on a PHY/link segment objective.
- Add the following objective:
  - Support data rates of 2.5 Gb/s at the MAC/PLS service interface.
- This is independent of what media/distance/PHY spec we come up with

2.5 Gb/s PHY & Media

- Feasibility of 2.5Gb/s on at least some media has been shown under the 10Gb/s feasibility in Huntington Beach.
  - There is interest and plausibility of this working on UTP, but not enough to restrict the objective to UTP
  - There is also a question on the # of inline connectors

- Add the following objective:
  - Define the performance characteristics of an automotive link segment and a PHY to support 2.5 Gb/s point-to-point operation over this link segment supporting up to four (two?) inline connectors for at least 15m on at least one type of automotive cabling (e.g., UTP, STQ, STP, SPP, Coax, or Twinax).

10 Gb/s PHY & Media

- Feasibility of 10 Gb/s on shielded media has been shown under the 10Gb/s feasibility in Huntington Beach.
  - Results were followed up with some shielded media results
  - Desire was to include unbalanced media types for automotive
  - There is also a question on the # of inline connectors

- Add the following objective:
  - Define the performance characteristics of an automotive link segment and a PHY to support 10 Gb/s point-to-point operation over this link segment supporting up to four (two?) inline connectors for at least 15m on at least one type of shielded automotive cabling (e.g., STQ, STP, SPP, Coax, or Twinax).

Possible 5Gb/s Objectives

- Should we want to add 5Gb/s to the suite:
  - Don’t commit to shielded or unshielded
  - Need to resolve # of inline connectors
- Add the following objectives:
  - Support data rates of 5 Gb/s at the MAC/PLS service interface.
  - Define the performance characteristics of an automotive link segment and a PHY to support 5 Gb/s point-to-point operation over this link segment supporting up to four (two?) inline connectors for at least 15m on at least one type of automotive cabling (e.g., UTP, STQ, STP, SPP, Coax, or Twinax).