Input on PMD decisions and Input to Connectors

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IEEE P802.3cz Multi-Gigabit Optical
Automotive Ethernet Task Force
Reflection on Goals

• IEEE 802.3 Criteria for Standards Development (CSD)
  • “The project may define multiple PHYs, but will define only a single PHY for each rate, media, and link reach combination.”

• Objectives OMEGA
  • Objective 9-13: Define the performance characteristics of an automotive link segment and an optical PHY to support 2.5, 5, 10, 25 Gb/s point-to-point operation over this link segment supporting up to 4 inline connectors for at least 40 m on at least one type of automotive optical cabling.
  • Objective 14: Define the performance characteristics of an automotive link segment and an optical PHY to support 50 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.
Reminder – OEM input

- January, 2020, Input - Automotive Use-cases and Requirements Multi Gigabit

Important:
- It shall be possible to use the same physical medium.
- PHY (Transceiver) support of multiple speed grades is interesting. However, cost optimization important.
Decide PMD based on objective data

Make decision on **objective** data: technology, timing and cost

Ensure that all data is on the table...

Remember:
- **One** robust PMD for **all** speed grades.
Input on connectors

• Standardize connectors?
  • Interesting:
    • Single connector, multi connector and quad connectors.
    • Small form factor needed (compare with 1000BASE-T1 – IEEE 802.3bp connectors) to fit multiport switches or small sensors.

• 90-degrees

• 180-degrees

Interesting due to tight packaging space within vehicle and limited sizes on ECU’s.
Thank you!