

10Gb/s on FDDI-grade MMF Cable

PAR Discussion Slides

10Gb/s on FDDI-grade MMF PAR

- Review the key areas of the PAR for 10Gb/s on FDDI-grade MMF
 - Title
 - Scope (two alternatives to review)
 - If a PMD is to be specified
 - If a PHY is to be specified
 - Purpose
 - Documents / Projects with a similar scope

Title

Information technology -- Telecommunications and information exchange between systems -- Local and metropolitan area networks -- specific requirements
Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Amendment: Physical Layer and Management Parameters for 10 Gb/s Operation, Type 10GBASE-XX

- Same as what was used for CX4 & 10GBASE-T
- Action item: we need to determine 'XX'

Scope (PMD assumed)

The scope of this project is to specify additions to and appropriate modifications of IEEE Std 802.3 as amended by IEEE Std 802.3ae-2002 (and any other approved amendment or corrigendum) to add a Fiber Physical Medium Dependent (PMD) option for 10 Gb/s operation, building upon the existing 10GBASE-R Physical Coding Sublayer (PCS) and 10 Gigabit Attachment Unit Interface (XAUI) specifications.

- Leveraged off the CX4 PAR
- Allows a PMD to be specified (on all specified media)
 - Assumes a LAN PHY objective

Scope (PHY assumed)

Specify a Physical Layer (PHY) for operation at 10 Gb/s on standards based structured fiber cabling, using the existing Media Access Controller and with extensions to the appropriate physical layer management parameters of IEEE Std 802.3.

- Leveraged off the 10GBASE-T PAR
- Allows a PHY to be specified (with required PMD option)

Purpose

The purpose of this project is to provide a lower-cost, installed fiber optic cabling option for 10Gb/s interconnection of equipment within ~300m of cable.

- Leveraged from CX4 & 10GBASE-T purposes

Documents / Projects with a Similar Scope

- Yes, with explanation below
- Explanation:
 - A PMD was included as part of IEEE Std 802.3ae-2002 (clause 53, 10GBASE-LX4) which was to address the interconnection of equipment over 300m of multimode fiber cabling. It has not achieved either widespread adoption within the industry, nor has it met the economic feasibility requirements for a low cost interface.