

Proposed Objectives for Next-Gen Enterprise Access BASE-T

December 09, 2014

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Non-Controversial Objectives

- Support full duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum Frame Size of current 802.3 standard
- Support Auto-Negotiation (Clause 28)
- Support optional Energy Efficient Ethernet (Clause 78)
- Support local area networks using point-to-point links over structured cabling topologies
- Do not preclude meeting FCC and CISPR EMC requirements
- Support PoE (Clause 33)
 - including amendments made by 802.3bt “DTE Power via MDI over 4-Pair Task Force”

Meatier Objectives

- Support MAC data rates of 2.5 Gb/s and 5 Gb/s
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent)
- Define a 2.5 Gb/s PHY for operation over
 - Up to at least 100m on four-pair Class D (Cat5e) balanced copper cabling
- Define a 5 Gb/s PHY for operation over
 - Up to at least 100m on four-pair Class E (Cat6) balanced copper cabling
- Select copper media from ISO/IEC 11801:2002, with any appropriate augmentation to be developed through work of 802.3 in conjunction with SC25/WG3 and TIA TR42



Meatiest Objective?

5Gb/s on four-pair Class D (Cat5e) balanced copper cabling to supersede previous page “5 Gb/s PHY” objective with one of the options below.

- *Define a 5 Gb/s PHY for operation over*
 - *Either*
 - *Up to at least 100m on four-pair Class E (Cat6) balanced copper cabling*
 - *Up to 100m on four-pair Class D (Cat5e) balanced copper cabling*
 - *Or*
 - *Up to at least 100m on four-pair Class D (Cat5e) balanced copper cabling*

12/9:

“Contributions encouraged “ list moved to “work items” presentation.

If we target 5G/5e, then one of the two options on this page replaces the previous slide 5G/6 objective.