Reduced Twisted Pair Gigabit Ethernet PHY Study Group

Objectives

DRAFT 28-September-2012

Objectives

28-Sept--2012

- **Preserve the IEEE 802.3/Ethernet frame format at the MAC client service interface.**
- **Preserve minimum and maximum frame size of the current IEEE 802.3 standard.**
- **Support full duplex operation only.**
- **Support a speed of 1 Gb/s at the MAC/PLS service interface.**
- **Maintain a bit error ratio (BER) of less than or equal to 10^-10 at the MAC/PLS service interface**
- **Support 1 Gb/s operation in automotive & industrial environments (e.g. EMC, temperature).**
- **Define optional Energy-Efficient Ethernet**

Objectives

28-Sept-2012

- **Define the performance characteristics of an automotive link segment and a PHY to support point-to-point operation over this link segment with less than three twisted pairs supporting up to four inline connectors using balanced copper cabling for at least 15m for the automotive link segment.**

- **Define the performance characteristics of optional link segment(s) for the above PHY for industrial controls and/or automation, transportation (aircraft, railway, bus and heavy trucks) applications with a goal of at least 40m reach**
- **Define optional startup procedure which enables the time from power_on=FALSE to valid data to be less than 100ms**