

DRAFT for EC review**IEEE 802.3™ Ethernet Working Group Adds Task Forces and a New Study Group**

As Ethernet continues on a steady path of growth and advancement, enabling higher speeds and opening the door to new and enhanced applications, the IEEE 802.3 Ethernet Working Group has announced the addition of ~~three~~four new Task Forces and the launch of a new study group. These new efforts ~~have led to new projects that~~ include:

- IEEE P802.3cg™ [10 Mb/s Single Pair Ethernet Task Force](#).

~~IEEE P802.3cg addresses applications such as those used in automotive~~Automotive and automation industries, ~~which~~ have begun the transition ~~off~~from legacy networks to Ethernet. As a result, there is a growing need for an intrasystem control ~~need for a~~ 10 Mb/s solution that operates over a single balanced pair of conductors. IEEE P802.3cg project addresses this application space. This need includes associated provision of power over the data lines common in those applications. Because IEEE 802.3 does not currently support 10 Mb/s over a single balanced pair of conductors, a reduction in the number of pairs of conductors and interface components required for 10 Mb/s Ethernet will provide a basis for an optimized solution in these applications.

- IEEE P802.3ck™ [100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces Task Force](#).

The continual growth of bandwidth demand has driven evolution of higher Ethernet speeds, most recently with 100 Gb/s, 200 Gb/s and 400 Gb/s Ethernet. To meet this growth, IEEE ~~P802.3ck~~P802.3ck will support ongoing advancement in serializer and deserializer circuit (SERDES) technology to higher rates of operation that will enable the development of higher density or lower cost electrical interfaces using 100 Gb/s signaling.

- IEEE P802.3cm™ [400 Gb/s over Multimode Fiber Task Force](#).

Rapid growth of server, network, and internet traffic is driving the need for higher data rates, higher density, and lower cost fiber optic solutions, especially in the data center space. To address these needs, advances in technology now allow the specification of new 400 Gb/s physical layer types operating over fewer multimode pairs than in existing IEEE 802.3 Ethernet standards. This standard development is intended to support both the installed base and new installations of multimode fiber cable.

- IEEE P802.3cs™ [Increased-reach Ethernet optical subscriber access \(Super-PON\) Task Force](#)

The IEEE P802.3cs Task Force intends to help the fiber optic communication community to reduce cost and complexity in access optical distribution networks. The project aims to define a passive optical network (PON) architecture supporting longer distances between the central office and the customers and an increased number of subscribers per fiber strand through wavelength division multiplexing. This enables to simplify the access optical infrastructure and to significantly reduce the number of central offices required to support PON services in access networks.

- IEEE 802.3 [100 Gb/s per lane optical PHYs Study Group](#)

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The IEEE 802 LAN/MAN Standards Committee Executive Committee has chartered this Study Group under the IEEE 802.3 Ethernet Working Group to develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for 100 Gb/s per lane optical PHYs for 2 km and 10 km for 100 Gb/s Ethernet and 400 Gb/s Ethernet. The formation of the Study Group addresses increasing the reach for single-mode fiber interfaces based on 100 Gb/s per lane optical signaling. These are anticipated to lower component counts and ensure alignment between optical interface lane widths and future electrical interface lane widths being defined in IEEE P802.3ck.

| ~~It~~ has become clear that demand for Ethernet solutions continues to grow and there is a need for quick responsiveness from IEEE to engage stakeholders in the development of projects and standards that continue to improve and advance the Ethernet ecosystem. Thankfully, there is a dedicated group of individuals working under the Ethernet Working Group umbrella, and on these newly announced Task Forces, whose efforts continue to drive viable solutions for industry and end users alike.