**IEEE
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IEEE 802.3 Ethernet Working Group
Liaison Communication

March 20, 2008
From: IEEE 802.3 Ethernet Working Group
To: Yoichi Maeda, Chair of ITU-T SG15 (yoichi.maeda@ntt-at.co.jp)
Members ITU-T Question 2/15
Cc: Paul Nikolich; Chair, IEEE 802 (p.nikolich@ieee.org)
      Robert Grow, Chair, IEEE 802.3 (bob.grow@ieee.org)
      Wael Diab; Secretary, IEEE 802.3 (wdiab@broadcom.com)
Subject: ITU-T SG15 Liaison letters LS 203-E and LS 204-E to IEEE 802.3
Action: Response / Information

Dear Mr. Maeda and members of ITU-T SG15:

The 802.3 working group thanks Q2/15 for their kind liaisons regarding the proposed work on point-to-point single-fiber optical access systems. While currently there are no active task forces considering such systems, the working group as a whole looks on with great interest as the technology in our standard receives wider application and attention in peer standardization development organizations.

To the particular matters at hand:

At the current time, 100 Mb/s point-to-point single-fiber physical layers are described in IEEE Std 802.3 Clause 58 (100BASE-BX10), and in ITU-T G.985. We believe that this pair of documents has many similarities.   The IEEE document specifies the basic architecture of the PHY in question, and a basic level of performance. The ITU document specifies an extended level of performance, mainly having to do with loss budget and certain operations support features. The new work, which proposes to include the new feature of "silent start," can be included in the category of "extended performance." Importantly, such a feature is possible with the BX-like PHYs, because such PHYs have directionality (it should be noted that non-BX-like non-PX-like PHYs would not permit "silent start").

The 1000Mb/s point-to-point single-fiber physical layer is described in IEEE Std 802.3 Clause 59 (1000BASE-BX10). Similar to clause 58, clause 59 defines the basics of such a PHY. The ITU document suggested in the liaison could take 1000BASE-BX-10 as a base, and include such extensions as loss budget, operations support capabilities, and the "silent start" feature.

It should be noted that the systems described by such extended specifications likely will not be compliant with the corresponding IEEE 802.3 clauses. However, we expect that the ITU-T recommendations will have similarities with certain sub-sections of the IEEE clauses. At a minimum, this partial similarity probably could be clarified for the benefit of all.

We would like to describe briefly the process for modifying IEEE clauses, which would be needed if the work described in your liaison letter were to proceed in this body: This process begins by having a call-for-interest on the topic. A successful call-for-interest leads to a creation of a study group charged with generating a project authorization request and 5 criteria documentation. If the project is approved by IEEE Standards Association Standards Board, the task force is formed. The task force conducts meetings to select a baseline proposal, and then a draft standard document is drafted and reviewed through the comment resolution process.

While opening a project in IEEE 802.3 may be one option, another option would be to adopt alternative existing specifications from IEEE. For example, adopting 1000BASE-PX10 PMD specified in IEEE Std 802.3 Clause 60 may be a viable option, as this PMD provides a sufficient power budget and can operate on a point-to-point link (which is a special case of PON). For another example, the OAM functions specified in IEEE Std 802.3 Clause 57 provide an extension mechanism that may facilitate implementation of UNI management functions or additional loop-back tests.

If Q2/15 decides to proceed with the work described in the liaison, we would like to request that the following items be given consideration:

1. The relevant clauses of the 802.3 standard should be referenced, so that the reader can see the direct and specific connections between the work of the IEEE and ITU.

2. The ITU document should make it clear which specifications (i.e., sub-sections) in the IEEE standard are directly similar, and which are being extended or modified.

3. We also request that the ITU continue to keep the 802.3 working group advised as to the progress of the work.