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STUDY GROUP 15

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Title:	LS - High Speed PON Liaison to IEEE P802.3ca

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LIAISON STATEMENT

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For action to:	-
For comment to:	-
For information to:	IEEE 802.3
Approval:	ITU-T SG15 meeting (Geneva, 9 February 2018)
Deadline:	-

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This liaison letter has been issued in order to keep IEEE P802.3ca abreast of current progress within ITU-T Q2/15 related to High Speed optical access.

During the Geneva January 29 - February 2, 2018 meeting, ITU-T Q2/15 agreed to begin specification work on the following recommendations:

1. **G.hsp.req:** Serves as a guide to the development of higher speed PON systems, by identifying sets of applications that can be addressed by a particular system, and defining the requirements for each of those systems. It is anticipated that there may be several distinct systems, such as higher speed single channel PON (TDMA-PON), higher speed multi-channel PON (TWDM-PON), and higher speed point-to-point single-fibre (bi-directional) Ethernet based systems. Note: Co-existence requirements between these systems (or lack of co-existence for bi-directional single fiber Ethernet based systems) will be also identified here.

2. **G.hsp.ComTC:** Defines a common Transmission Convergence (TC) layer for use in future high speed PON systems. This TC layer will support a wide range of Physical Medium Dependant (PMD) layers, including single and multiple channels, fixed and tunable wavelengths, a range of speeds, low latency, and channel bonding capabilities.

3. **G.9806:** Describes higher speed (10Gbit/s and higher) bi-directional single-fibre point-to-point optical access systems for the optical access services including the optical distribution network (ODN) specification, the physical layer specification, services requirements and the operation, administration and maintenance (OAM) specification. It is planned that this recommendation will largely rely on the IEEE 802.3 Ethernet PHY specifications.

Note: It is intended that this recommendation will build on in G.986 to achieve higher speed and longer reach. Synergies with work in IEEE will be maximized whenever possible.

4. **G.hsp.50Gpmd:** Provides the specifications of the physical medium dependent (PMD) layer for 50G single channel PON systems. This includes the ODN characteristics, the wavelength plan, the power budget, and interfacing to the common transmission convergence layer. Consideration will be given to compatibility and technology reuse between this system and multichannel systems.

5. **G.hsp.TWDMpmd:** Provides the specifications of the physical medium dependent (PMD) layer for time and wavelength division multiplexed (TWDM) PON systems. This includes the ODN characteristics, the wavelength plan, the power budget, and interfacing to the common transmission convergence layer. These PMDs are intended to fit within the larger NG-PON2 system, and therefore have various coexistence constraints.

Per the IEEE P802.3ca Task Force schedule, by the week of March 5th, 2018 meeting your draft High Speed PON proposal should be nearing Draft 1.0 status. In the spirit of continuing to drive PON Convergence between ITU and IEEE, we request access to the draft proposal as soon as practical after the March IEEE P802.3ca meeting.

ITU-T Q2/15 intends to use this draft to extend the gap analysis presented during the joint workshop. ITU-T Q2/15 also intends to analyze operating enablers embedded in the framing fields and PLOAM messaging.

To ensure progress towards convergence, ITU-T Q2/15 hopes that all legacy operating capabilities get their equivalent in a converged effort. An example of such convergence-check would be the ability to support BBF TR-156 authentication method through the PLOAM password message.

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