



Question(s): 9, 13/15

Geneva, 16-27 May 2005

LIAISON STATEMENT**Source:** ITU-T SG15, Q9/15**Title:** Liaison to IEEE with regard to Synchronisation of Ethernet PHY

To: IEEE 802.3**Approval:** Agreed to at SG15 meeting (Geneva, 16-27 May 2005)**For:** Action**Deadline:** 1 February 2006

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ITU-T is currently producing a range of Recommendations covering Ethernet functionality and services. Amongst these are such topics as circuit-emulation for private line services and others that require a network operator's central clock (Primary Reference Clock) to be transported to the endpoints of the service. In traditional networks this function is supplied using the SONET/SDH or PDH bearer.

Currently most Ethernet interfaces provide no such transportation mechanism. Other methods of clock transportation have been considered, such as timing delivery by packet, or GPS. However these methods do not meet either the performance or availability requirements of the services to be carried. The exception to this is the 10GWANPHY interface defined in IEEE 802.3ae which does provide the required functionality.

The ITU-T is therefore starting work on adding backward compatible synchronisation functionality to the 802.3 PMA sublayer. The full range of interfaces to be encompassed by this work has not been decided, but work will initially concentrate on optical interface at 1G and above.

In order to meet the functional requirements of synchronisation transport, it is also required that a messaging channel is required between a synchronisation source and sink. It is proposed to use a MAC control frame for this purpose. The addition of this facility would raise the functionality of 802.3 LANPHY interfaces to that of 10GWANPHY and SONET/SDH for synchronisation purposes. ITU-T SG15 will include this functionality in G.8021

Therefore the ITU-T requests that IEEE802.3 make a MAC Slow Protocol Subtype assignment to the ITU for Synchronisation Status Messaging (SSM), which would be a minimum length frame running at a rate of around 1 to 5 messages per second .

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