



Question(s): 6, 11/15

Geneva, 4-15 June 2007

Source: ITU-T SG15**Title:** Bit rate of 40 Gigabit Ethernet

LIAISON STATEMENT**To:** IEEE 802.3 HSSG**Approval:** Agreed to at SG15 meeting June 2007**For:** Information**Deadline:** None

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ITU-T SG15 notes that IEEE 802.3 HSSG is currently discussing the possibility of standardising 40 GbE in addition to 100 GbE. ITU-T SG15 is aware that a decision to specify 40 GbE has not yet been reached. However, ITU-T SG15 would like to take the opportunity to inform the HSSG about the capability of the Optical Transport Network (OTN) hierarchy to transport 40 GbE. Structure and bit rates of the OTN signals are specified in ITU-T Recommendation G.709, which can be obtained at:

<http://www.itu.int/rec/T-REC-G.709-200303-I/en>

The relevant Optical Channel Data Unit – level 3 (ODU3) provides a payload of 40,150,519.322 kbit/s \pm 20 ppm.

In the event that IEEE 802.3 specifies 40 GbE, carriers will need the ability to efficiently transport that as a client signal. It would considerably ease the transport of 40 GbE over the WAN if IEEE 802.3 were able to specify a line bit rate (PCS encoded) of 40 GbE that does not exceed the above mentioned payload rate. In this case the entire signal could be wrapped into an ODU3 for a bit transparent transport. Due to the experience with the 10 GbE LAN PHY ITU-T SG15 would prefer a bit transparent transport in order to meet the requirements of many carriers' customers.

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