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Question(s):	11/15

LIAISON STATEMENT

Source:	Rapporteur Q11/15
Title:	Liaison in response to IEEE liaison on providing appropriate support for OTN

LIAISON STATEMENT

To:	**IEEE 802.3**
Approval:	**SG15 Q11 Interregnum meeting, September 2008**
For:	**Information**
Deadline:	**-**

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Mr. Law, Mr. D'Ambrosia and members of the IEEE P802.3ba task force,

ITU-T SG15 Q11 wishes to thank IEEE 802.3 for your recent liaison concerning appropriate support for OTN.

Concerning the transport for 100 GbE, we are working, as you mentioned, on developing a new ODU4 transport container which will support 100 GbE as one of its clients. Our current working assumption as of this meeting is that this new ODU4 will have a payload (OPU4) capacity of 104.355975 Gbit/s ±20ppm. It is our understanding that the IEEE P802.3ba task force is currently specifying 100 GbE to have an aggregate encoded bit-rate of 103.125 Gbit/s ±100ppm, so we do not expect any problem with transporting 100 GbE over ODU4.

Concerning transport for 40 GbE, we share the view that it is important to carry this client over the existing 40 Gbit/s transport network. As you observe, the ODU3 has a payload capacity of ~40.150519322 Gbit/s ±20ppm and the aggregate encoded bit-rate for 40 GbE is 41.25 Gbit/s. We have prepared draft text in this meeting for a G.709 Annex, based on our best understanding at this point in time about the format of the 40 GbE signal, specifying how this would be mapped into ODU3 by transcoding the 64B/66B block coding of 40 GbE into a 1024B/1027B block code with the same information content. This reduces the bit-rate to be mapped into ODU3 to ~40.1171875 Gbit/s ±100ppm, which fits into the ODU3 payload area even if both the ODU3 and the 40 GbE signal are operating at the worst case ends of their ranges of clock accuracy.

As you observe, this kind of compression relies on certain aspects of the PCS coding, in particular the fact that the byte that indicates a control block type has only a limited set of valid values (15 or fewer, our current understanding is 11 valid control block types for 40 GbE). We appreciate your efforts to limit this set of control block types to enable the type of mapping we need to provide so

that 40 GbE fits into ODU3. We further appreciate your plans to insert a warning note that could help prevent unintentionally breaking this mapping through future evolution of the IEEE 802.3ba standard.

Your suggestion regarding link fault signalling will be more fully considered by ITU-T Q9/15 at their meeting in December.

ITU-T SG15 Q11 received the informal communication on 25 September. Thank you for making the draft available to us. We will use this to review our own mappings of higher speed Ethernet into OTN. Please keep us updated as this standard evolves.

ITU-T SG15 Q11 would like to express its appreciation for the continued useful exchange of information with IEEE 802.3 concerning the relationship of the work of the P802.3ba task force to optical transport network standards. We look forward to continuing this coordination in the future.