Title: Response to *LS on the need for survival time*
From: IEEE 802.1
For: Information
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Dear colleagues,

Thank you for your liaison statement S2-2004653.

The term “survival time” is not used in IEEE 802.1 TSN standards. As such, we might not be interpreting it in the right context. Based on our understanding of survival time, a related application characteristic is the maximum number of consecutive frames whose loss can be tolerated by a given application. The current IEC/IEEE 60802 draft, D1.2, refers to this application-centric communication characteristic as “tolerance to loss” (per Table 4 in D1.2). The loss of any single frame may not be tolerated by highly loss-sensitive applications, e.g., isochronous (per subclause 4.6.3.1 in D1.2) and cyclic-synchronous (per subclause 4.6.3.2. in D1.2) applications. Cyclic-asynchronous applications can tolerate the loss of a certain number of consecutive frames, i.e., loss of frames for a certain number of consecutive cycles (per subclause 4.6.3.3 in D1.2). This loss tolerance can be converted to time given a known application cycle time.

The IEC/IEEE 60802 draft standard is under development and is subject to change. If you are interested, we would be happy to forward the IEC/IEEE 60802 draft standard to you when it is more mature.

Please note that the CNC does not communicate characteristics of applications or TSN Streams towards the bridges. The CNC may not even be aware of this information; but may only be aware of what level of redundancy is needed for the corresponding TSN Streams. The CNC configures the bridges such that the requirements derived from application characteristics are met. For example, the CNC populates the Filtering Database of the bridges with Static Filtering Entries to establish frame forwarding for TSN Streams and configures TSN features for Streams, e.g., scheduled traffic, frame preemption. Items 7) and 8) in Annex U.2 in IEEE Std 802.1Qcc provide examples on CNC operations towards bridges in an example configuration workflow.

We look forward to maintaining the dialogue and cooperation between our organizations. The TSN Task Group holds regular electronic meetings; details are available via the TSN Task Group page http://www.ieee802.org/1/tsn. Participation in IEEE 802.1 is on an individual basis.

Respectfully submitted,
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