

Title: Liaison response to ITU-T SG15 LS-332
From: IEEE 802.1
For: Action
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Dear Colleagues,

In continuation of the liaison letter exchange between our organizations, we provide an update on IEEE P802.1CM TSN for Fronthaul in this response to your liaison COM 15 – LS 332. Our previous response is available at <http://www.ieee802.org/1/files/public/docs2016/liaison-response-itu-t-com15-ls332-0316-ver01.pdf>.

The P802.1CM project is having the first Task Group review of the current draft, i.e., the project is still in an early stage. The current draft collects synchronization requirements, which have been provided by the CPRI Technical Working Group. Time synchronization requirements are provided for four different categories, which can be applied in different deployment scenarios:

- 1) Category A+
The maximum absolute Time Error ≤ 10 ns with respect to a common point in the synchronization chain (e.g., the common grandmaster clock or the nearest common boundary clock in case of PTP).
Category A+ is, e.g., for Multiple-Input and Multiple-Output (MIMO) and transmit diversity radio access technologies.
- 2) Category A
The maximum absolute Time Error ≤ 45 ns with respect to a common point in the synchronization chain (e.g., the common grandmaster clock or the nearest common boundary clock in case of PTP).
Category A is for intra-band contiguous carrier aggregation radio access technology.
- 3) Category B
The maximum absolute Time Error ≤ 110 ns, with respect to a common point in the synchronization chain (e.g., the common grandmaster clock or the nearest common boundary clock in case of PTP).
Category B is for intra-band non-contiguous and inter-band carrier aggregation radio access technologies.
- 4) Category C
The maximum absolute Time Error ≤ 1.36 μ s, where the timing accuracy of the slave clock in the RE is relative to any grandmaster clock whose Time Error ≤ 100 ns. Meeting Category C requirement is mandatory. Category C is for time division duplex radio access technology.

These requirements may be changed during the course of the project. We would be grateful for your view on the means to address these requirements.

We look forward to further cooperation between our organizations and for further dialogue on P802.1CM as needed.