Common Public Radio Interface

Time Sensitive Networking
CPRI discussion on Synchronization & Timing
Introduction

• CPRI would like to clarify with TSN working group its scope of work concerning Timing & Syntonization (frequency synchronization).

• AVB Profile and AVB requirements are taken as example when given the background information to the questions.
AVB bridges

• CPRI understanding (please correct if necessary):
  – All AVB bridges shall be also 802.1 AS compliant
  – Is it the same assumption for “802.1 CM bridges”?

• 802.1 AS Requirements
  – +or-500 ns accuracy (Audio specification driven)
  – 100 PPM crystal Accuracy, 1PPM / sec max drift.
  – Clock >= 25 MHz => 40 ns Timestamp Accuracy or lower.
802.1 AS

• CPRI understanding (please correct if necessary):
  – AVB bridges using 802.1 AS are not capable to support other 1588V2 profiles.
  – Bridge Syntonization is logical not physical.
    • Such profiles including 802.1AS + SyncE could exist.
CPRI Questions to TSN

• Questions:
  – Are timing services within TSN scope of work (as it was for AVB) ?
    • Does TSN plan to tighten 802.1 AS requirements ?
    • Will there be any dependencies between 802.1CM & 802.1 AS ?
    • Could there be some TSN profile supporting 1588V2?

  – Is Synchronization within TSN scope of work?
    • Or external solutions included in TSN profiles (SyncE etc ...)

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