Recent Comments Received for 802.1AS

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Introduction

- Recently, 28 comments on 802.1AS were received from a user
- The editor of P802.1ASbt and P802.1AS-Cor-1 went through them and sent the comments with possible dispositions to the 802.1 reflector
- 13 of the comments were trivial and/or editorial
  - These were discussed in the 11/7/2012 AVB call, and the dispositions will be incorporated into P802.1AS-Cor-1
- The remaining 15 comments will be discussed in the November, 2012 AVB face-to-face meeting
- The comments are listed in this presentation, along with possible disposition and/or comments from the editor, to facilitate the discussion
- The comments are listed by their numbers in the email sent to the reflector

Comment 1

- 6.3.3.8: offsetScaledLogVariance is shown as UInteger16, but does not match what is shown in Table 14-1, where it is shown as Integer16.

- Initial response - It should be UInteger16; tables 14-1 and 14-3 must be changed. In addition, the corresponding MIB variables have datatype Integer32 (pp. 186 and 196). It is not clear (to the main editor) if this is because there are no Integer16 or UInteger16 datatypes for MIBs. In addition, in the description field for the MIB variable on p.186, the default value is written as 410016. The '16' would be a subscript, to indicate base 16. It is realized that that subscripts are not possible in the MIB code; should this be indicated some other way (e.g., 4100 (hex) or 0x4100 -- Question for the clause 15 clause editor).

Comment 4

- 10.2.4.6: There are inconsistencies between this section and 14.6.10and Table 14-6. If the entries in 14.6.10 and Table 14-6 were named scaledNeighborRateRatio it would match the description and data type.
  - Note: the comment had ‘scaledNeighborRaitRatio’; this is corrected.

- Initial Response: It is agreed there is confusion because the managed object and internal variable have the same name, while the former is a scaled version of the latter. Should we change the name of the managed object to 'scaledNeighborRateRatio'? Note that we would then have to change the name of the corresponding MIB object.

Comment 5

- 10.2.6.1.1: The name rcvdPSSync is used in 10.2.11.1.1 and 10.2.12.1.1for different variables, which is confusing.

- See also comment 18
- Initial Response: Disagree. Fundamentally, this is ok, as these are local variables for different state machines.
- Subsequent discussion in 11/7/2012 AVB call: It is true that fundamentally local variables in different functions or state machines can have the same name; however, it would be helpful to the user if the names of different variables were different. For example, this would facilitate searching for all instances of a variable.
- If we do rename variables so that variables in different functions or state machines have different names, how should we pick the new names (e.g., append the numbers 1, 2, … to each name that is a different variable?). Also, should this change go in the corrigendum or in 802.1ASbt (since it actually is not fixing something that is incorrect; rather, it is improving the document)?

Comment 7

- 10.3.5: This part is confusing, especially when trying to figure out what applies for a simple end-point device.

- Initial response: Could the commenter be more specific? Note that 10.3.5 (and the BMCA formalism here) follows the corresponding RSTP sections and formalism in 802.1Q-2011 and 802.1D-2004 (i.e., 17.5 and 17.6 of 802.1D-2004; 13.8 and 13.9 of 802.1Q-2011).

Comment 9

- Figure 10-13: In the UPDATE state, it seems that "reselect = TRUE"is missing.

- Initial response: This needs to be checked. Note that a similar 'reselect = TRUE' is not present in the corresponding state in Figure 13-20/802.1Q-2011 or Figure 17-18/802.1D-2004.

Comment 11

- Figure 10-13: State DISABLED sets announceReceiptTimeoutTime to currentTime. This ensures that 14.7.10 announceReceiptTimeoutCountwill increment when AGED is entered from DISABLED. Should there be a qualification on the counter to only count when entering from CURRENT? Or maybe DISABLED should set announceReceiptTimeoutTime to currentTime plus announceReceiptTimeoutInterval?

- Initial response: Agree; It seems we should not increment the counter when entering the AGED state from DISABLED, as there has not been an Announce receipt timeout in this case. Should have the qualification on the counter (the first suggestion).

Comment 12

- 10.3.12.1.4: the description of updtRolesTree() is confusing---needssome diagrams

- Initial response: This needs discussion. There are no such diagrams in 802.1D-2004 or 802.1Q-2011.

Comment 17

- 11.2.13.2.1 i): Follow Up message TLV does not have lastGmFreqChange element. The description is confusing. It's clarified a little in11.4.4.3.9.

- Initial response: Agree. It should say "lastGmFreqChange is set equal to the scaledLastGmFreqChange of the most recently received Follow_Up message, multiplied by 2^{-41}."

Comment 18

- The variable name rcvdMDTimestampReceive appears in 11.2.14.1.3,11.2.15.1.7, and 11.2.16.1.2 but each instance has a different meaning.Should be globals with unique names to allow setting from hardware layer.

- Initial response: Disagree. The variables in the state machines here are local, and therefore can have the same names. This does not dictate an implementation; an implementation can use globals if desired.
- However, regardless of whether the variables are local or global, using different names might be more helpful to the user; see comment 5.

Comment 22

- Figure 11-8: In MDPdelayReq state machine, state RESET, it seems to needto clear rcvdPdelayResp because otherwise the check performed in stateWAITING_FOR_PDELAY_RESP could occur repeatedly on the old (bad) message.

- Initial response: Agree.

Comments 26 and 27

- Comment 26: PICS MDFDPP-2 doesn't apply to receiver-only endpoint system.
- Comment 27: General: There needs to be more clarity about what parts can be omittedfor a one-port, listener-only endpoint. For instance, in Figure 10-2,I believe that PortSyncSyncSend and MDSyncSend are not needed in that case (although PortSyncSyncReceive then needs to handle an action thatPortSyncSyncSend performs).

- Initial response: This needs discussion, as may include more than just the item of 26. If this is done, should it be part of the corrigendum or amendment?
- Note that 802.1AS does not currently define “listener only” systems. Instead, it indicates that a time-aware system may or may not be grandmaster-capable. But, a time-aware system that is not grandmaster capable may hav more than one port.

Comments 26 and 27 – Cont.

- It appears that, when the commenter talks about a "listener-only" system, the commenter is referring to a time-aware system that is not grandmaster-capable and has only one port. It is true that for this case some of the requirements are not applicable. However, 802.1AS does not specifically consider this special case. IEEE 1588 does talk about "slave-only" clocks, and in 1588 these have just one port, but that is because 1588 has not introduced the notion of a boundary clock that is not GM-capable but has many ports. (The fact that 802.1AS has introduced such a device is ok becauase 802.1AS uses an alternate BMCA, not the 1588 default BMCA.) The question here is whether 802.1AS should specifically distinguish the requirements for single-port devices that are not grandmaster-capable.
- In any case, this could certainly be addressed, though probably it belongs in 802.1ASbt (i.e., the amendment) rather than the corrigendum.

Comments 26 and 27 – Cont.

- Since the other AVB standards do talk about “listener-only” systems, it could be helpful, and more friendly, to the user if 802.1AS also described this case

Comment 28

- General: There are no priorities assigned to paths leading out of states.Are all paths mutually exclusive?

- Initial response: This needs discussion. The exit paths are intended to be mutually exclusive. Note that 802.1 state machines seem to not use explicit priorities; instead, Annex D (state machine notation; taken from other 802.1 standards) describes how it is determined which exit path is taken when all the procedures within a state are completed.