802.1ASdr Editor's Update

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IEEE 802.1 Maintenance

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PAR - 1

- The Scope of 802.1ASdr as stated in the PAR is as follows

    5.2.b Scope of the project: This amendment changes the non-inclusive, insensitive, and deprecated terminology including those identified by IEEE P1588g and IEEE editorial staff, replacing them with their suitable terminology wherever possible.

- The PAR states the dependence on IEEE P1588g

    5.3 Is the completion of this standard contingent upon the completion of another standard? Yes

    Explanation: The amendment depends upon the alternative terminology selected by IEEE P1588g. The Project Authorization Request (PAR) is submitted prior to the completion of IEEE P1588g to expedite changes and industry alignment on inclusive terminology.

PAR – 2

- The Purpose of 802.1ASdr as stated in the PAR is as follows

  5.4 Purpose: This standard enables systems to meet the respective jitter, wander, and time-synchronization requirements for time-sensitive applications, including those that involve multiple streams delivered to multiple end stations. To facilitate the widespread use of packet networks for these applications, synchronization information is one of the components needed at each network element where time-sensitive application data are mapped or demapped or a time-sensitive function is performed. This standard leverages the work of the IEEE 1588 Working Group by developing the additional specifications needed to address these requirements.

- The Need for 802.1ASdr as stated in the PAR is as follows

  5.5 Need for the Project: IEEE Std 802.1AS-2020, includes a profile of IEEE Std 1588-2019, and uses noninclusive terms to describe port states and clock roles in a Precision Time Protocol (PTP) network. IEEE SA has recently resolved that IEEE standards should be written in such a way as to avoid non-inclusive and insensitive terminology. IEEE P1588g is developing a consensus on the preferred alternative terminology. In order to avoid confusion in industry, this project selects from the IEEE P1588g alternative terms to describe PTP functionality.

Non-inclusive terms in IEEE 802.1AS – 1

Master is used 1169 times in the document

- Master
- Grandmaster
- ClockMasterSyncSend
- ClockMasterSyncReceive
- ClockMasterSyncOffset
- ClockMasterReceive
- ClockMaster
- MasterPort
- masterTime
- clockMasterLogSyncInterval
- updateMasterTime
- masterPriorityVector

- RepeatedMasterInfo
- SUPERIOR_MASTER_PORT
- masterPriority
- masterStepsRemoved
- SuperiorMasterInfo
- InferiorMasterInfo
- INFERIOR_MASTER_OR_OTHER_PORT_UPDATE
- grandmasterIdentity
- grandmasterClockQuality
- grandmasterPriority1
- grandmasterPriority2
- alternateMasterFlag

- rcvdMDSyncDot11MasterA
- initReqParamsDot11MasterB
- ftmReqGrantedMaster
- offsetFromMaster
- AcceptableMaster
- AcceptableMasterTable
- AcceptableMasterTableDS
- AcceptableMasterTableEnabled
- AcceptableMasterPort
- AcceptableMasterPortDS
- AcceptableMasterArray
- ftmReqGrantedMaster

Non-inclusive terms in IEEE 802.1AS – 2

Slave is used 338 times in the document

- Slave
- ClockSlaveSync
- ClockSlaveTime
- ClockSlave
- slaveTimeCallback
- slaveTimeCallbackPhase
- SlavePort
- rcvdClockSlaveTime

- updateSlaveTime
- dot11SlaveMac
- slaveMacOfLastRequest
- initReqParamsDot11Slave
- ftmReqGrantedSlave
- setMDSyncParamsDot11Slave
- setMDSyncReceiveDot11Slave
- slaveOnlyClock

P1588g update – 1

- Leader-Follower was selected as an alternative nomenclature for Master-Slave in the straw poll run-off

- A Working Group ballot for IEEE P1588g/D1.0 has started on September 13, 2021
  - The closing date for this ballot is 15 October, 2021

- The amendment adds a short subclause 4.4 with statements for alternative optional terminology for "master" and "slave"
  - Alternative word for "master" is "leader, and for "slave" is "follower"
  - If "master" and "slave" are part of a compound term, then that should also change, for example, "foreignMaster" should be replaced with "foreignLeader"
  - Master/slave port state names should be changed to leader/follower
  - The term "Grandmaster" should not be changed and it should remain "Grandmaster"
  - Abreviations "S" for "slave" and "M" for "master" should be replaced respectively with "L" for Leader and "F" for Follower.

IEEE 802.1ASdr next steps - 1

- There are three options to address the terminology in IEEE 802.1ASdr
  - Option #1: Replace Master/Slave in every place in the standard, including figures and state machines

    As an example:

    "**Clause 5**"

    "Change clause 5 as follows:"

    Then every Mater/slave throughout the clause is replaced with leader/follower inserted with strikethrough and underscore.

  - This will involve a large amount of editing and reviewing
  - If this approach is preferred, then it would be good to wait until 1588g goes through, at least the initial SA ballot, to have a good confidence that "leader" and "follower" are acceptable words.

IEEE 802.1ASdr next steps - 2

- Option #2: Editing instruction in each clause to replace all instances of master/slave

  As an example:

  Clause 5

  Replace "master" with "leader"

  Replace "ClockMasterSyncSend" with "ClockLeaderSyncSend"

  - This will involve a large amount of editing instructions and reviewing
  - Need to make sure that the level of the editing instruction is precise to avoid misunderstanding
  - If this approach is preferred, then it would be good to wait until 1588g goes through, at least the initial SA ballot, to have a good confidence that "leader" and "follower" are acceptable words.

- Option #3: Add a new Clause with a general editing instruction to replace all master/slave in the standard

  As an example:

  Insert Clause X as follows:

  X   Language

  Replace all usage of "master" in this standard with "leader"

  - This will involve a much less amount of editing and reviewing

IEEE 802.1ASdr next steps - 2

- The editor suggests Option #3
  - This involve a much less effort of editing and reviewing.
  - It has much less chance of accidental errors to be introduced

Thank you!