

# Maintenance Task Group Meeting

March 10<sup>th</sup>, 2015  
John Messenger

# Maintenance

## Mar 10, 2015 Agenda

- Patents and Guidelines
- Attendees
- Status
- New Maintenance items
  - 0158: SRP: Proposed changes to allow use of VLAN 1 – new
  - 0159: PortSyncSyncSend State Machine priority1 – solution ready in AS-Rev
- Existing Maintenance items – see following slides
  - SC6
  - 802.1Q-2014
  - 802.1AX
  - 802.1AS
  - 802.1AB
  - 802.1AC
  - Security
- SC6 status

# Mar 10, 2015 Attendees

- John Messenger, Mick Seaman, Norm Finn, Pat Thaler, Craig Gunther, Karen Randall, Tony Jeffree, Christian Boiger, Geoff Garner, Nigel Bragg, Stephan Kehrer, Duncan Cockburn, Peter Ashwood-Smith

# Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- Show slides #1 through #4 of this presentation
- Advise the WG attendees that:
  - The IEEE's patent policy is consistent with the ANSI patent policy and is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
  - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
  - There may be Essential Patent Claims of which the IEEE is not aware. Additionally, neither the IEEE, the WG, nor the WG chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.
- Instruct the WG Secretary to record in the minutes of the relevant WG meeting:
  - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
  - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
  - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.
- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG chair review the guidance in *IEEE-SA Standards Board Operations Manual* 6.3.5 and in FAQs 12 and 12a on inclusion of potential Essential Patent Claims by incorporation or by reference.

Note: WG includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.



# Participants, Patents, and Duty to Inform

All participants in this meeting have certain obligations under the IEEE-SA Patent Policy. Participants:

- “Shall inform the IEEE (or cause the IEEE to be informed)” of the identity of each “holder of any potential Essential Patent Claims of which they are personally aware” if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
  - “Personal awareness” means that the participant “is personally aware that the holder may have a potential Essential Patent Claim,” even if the participant is not personally aware of the specific patents or patent claims
- “Should inform the IEEE (or cause the IEEE to be informed)” of the identity of “any other holders of such potential Essential Patent Claims” (that is, third parties that are not affiliated with the participant, with the participant’s employer, or with anyone else that the participant is from or otherwise represents)
- The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group

Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2

- Early identification of holders of potential Essential Patent Claims is strongly encouraged
- No duty to perform a patent search

# Patent Related Links

All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development.

Patent Policy is stated in these sources:

IEEE-SA Standards Boards Bylaws

*<http://standards.ieee.org/guides/bylaws/sect6-7.html#6>*

IEEE-SA Standards Board Operations Manual

*<http://standards.ieee.org/guides/opman/sect6.html#6.3>*

Material about the patent policy is available at

*<http://standards.ieee.org/board/pat/pat-material.html>*

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at [patcom@ieee.org](mailto:patcom@ieee.org) or visit <http://standards.ieee.org/board/pat/index.html>

This slide set is available at <http://standards.ieee.org/board/pat/pat-slideset.ppt>

# Call for Potentially Essential Patents

- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
  - Either speak up now or
  - Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
  - Cause an LOA to be submitted



# Other Guidelines for IEEE WG Meetings

- **All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.**
  - **Don't discuss the interpretation, validity, or essentiality of patents/patent claims.**
  - **Don't discuss specific license rates, terms, or conditions.**
    - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
      - Technical considerations remain primary focus
  - **Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.**
  - **Don't discuss the status or substance of ongoing or threatened litigation.**
  - **Don't be silent if inappropriate topics are discussed ... do formally object.**

See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.



# Status Update

- 802.1Q-2014 was approved Nov 3<sup>rd</sup>, 2014
  - TG Chair will check, or request MR originators to check, that their items have been resolved.
- 802.1Q-2014/Cor1 PAR was approved on Feb 16<sup>th</sup>, 2015
  - D0.1 (2<sup>nd</sup> draft) available, not balloted yet
- 802.1AX-Rev/D4.54 has been approved on Dec 10<sup>th</sup>, 2014 and published on Dec 24<sup>th</sup>, 2014
  - Maintenance entries need to be checked
- 802.1AB-Cor 2 was approved on Feb 16<sup>th</sup>, 2015
- 802.1AB-Rev PAR approved on Dec 10<sup>th</sup>, 2014
  - No Initial draft yet
- 802.1AC/D2.0 draft not yet available
- 802.1AS-Cor2 PAR approved on Dec 10<sup>th</sup>, 2014.
  - WG d0.1 ballot closed, 2<sup>nd</sup> draft available, plan to go to Sponsor
- 802.1AS-Rev PAR approved Feb 16<sup>th</sup>, 2015
  - Not balloted yet
  - Need to withdraw 802.1ASbt PAR now

# Status Update

## Detailed Totals

A = 3  
B = 12  
CB = 7  
CE = 0  
E = 0  
F = 0  
I = 0  
J = 17  
P = 45  
R = 1  
S = 0  
T = 7  
V = 49  
W = 0  
Errors = 0  
  
Total = 141

## Summary Totals

Ready for ballot = 12  
Balloting = 49  
Approved = 3  
Awaiting clarification = 7  
Errata = 0  
To be categorised = 1  
Review by Technical experts = 7  
Withdrawn = 0  
Rejected = 17  
Published = 45  
  
Total = 141  
  
Open = 79

# SC6 items

- 0147: China comments on Std 802 PSDO pre-ballot
  - E-poll in 802.1 held (25/0/3)
  - EC vote to approve a different response was approved Feb 27<sup>th</sup> (12/1/0/2)
- Response to FDIS ballot comments
  - Karen Randall has prepared draft responses
  - Do we need to include them in the Maintenance database?
  - 802.1AEbn FDIS ballot comment (China)
  - 802.1AEbw FDIS ballot comment (China)

# 802.1Q-2014 items

- Items below are included in the initial draft of 802.1Q-2014/Cor-1
  - 0145: 802.1Q Definitions for the IEEE8021-FQTSS-MIB module – ready
  - 0132: Bit numbering in Annex D – ready
  - 0137: Encoding of congestion notification PDUs – ready
- Further items for 802.1Q-2014/Cor-1
  - 0148: SPT BPDU mandatory – agreed
  - 0150: SRP Endstation requirements – refer to TSN
  - 0152: 802.1Q/802.1AB/802.1AX Link Aggregation TLVs and Managed Objects – agreed
- Other items
  - 0158: SRP: Proposed changes to allow use of VLAN 1 – new

# 802.1AS items

- 0140: 802.1AS asCapable Hair Trigger – waiting for TSN
- 0061: 802.1AS variable names – ongoing
- 0117: PICS items for Pdelay – solution ready in AS-Rev
- 0135: Pdelay\_Req message storm – balloting in Cor-2
- 0138: Too many sync messages – solution ready in AS-Rev
- 0159: PortSyncSyncSend State Machine priority1 – solution ready in AS-Rev

# 802.1AB items

- 0121, 0127, 0133: 802.1AB/Cor-2 is approved – not published
- 0153: 802.1AB PortAutoNegAdvertisedCap objects are the wrong size – ongoing



# 802.1AC items

- 0141: 802.1AC items to be removed from Q – waiting
- 0125: move material from 802.1Q to 802.1AC – balloting

# 802.1 Security items

- 0136: 802.1X incorporation of HKDF – waiting for Sec TG
- 0154: 802.1X MIB `ieee8021XPaePortAuthenticatorEnable` and `ieee8021XPaePortSupplicantEnable` – waiting for Sec TG
- 0155: 802.1X MIB `ieee8021XAuthPaeReAuthEnabled` – waiting for Sec TG
- 0156: 802.1X MIB `ieee8021XAuthenticatorTable` – waiting for Sec TG
- 0157: 802.1X MIB typo in `ieee8021XEapolStartFramesTx` – waiting for Sec TG

# **BALLOT RESOLUTION**

# **EXISTING MAINTENANCE ITEMS**

# Maintenance Item – 0005

## Missing enable for Link Aggregation TLV

- Submission: Pat Thaler – June 2011
- Issues:
  - When LinkAgg TLV was moved into 802.1 MIB, the enable was not included
  - Error in table D-5 for IldpV2Xdot1ConfigPortVlanTable. Reference and MIB text don't agree
  - Missing security considerations in D.4.4 for Congestion Notification
- Latest Status: Ready for Ballot
  - Waiting for a revision of 802.1AX to fix. PAR agreed to be modified
  - New maintenance item 0009 submitted to address sending LLDP on physical links
- Discussion
  - .1AXrev editor will ensure this comment is included for discussion
  - Subsequent resolution will be handled in the .1AXrev task group.
  - .1AXrev in sponsor ballot

# Maintenance Item – 0008

MVRP cut-and-paste errors



- Submission: Craig Gunther – August 2011
- Issues:
  - MVPR1 and MVPR2 PICs items were pasted from MMRP items and remain incorrect
- Latest Status
  - “MVRP” change was made in Qbg, but references (10.8 & 11.2) were not changed
- Discussion
  - MVRP change published in 802.1Qbg
  - Change references included in 802.1Q-REV D1.0
  - Fixed in 802.1Q-2014



# Maintenance Item – 0009

## Disambiguating LLDP over Link Aggregations

- Submission: Jeffrey Lynch – September 2011
- Issues:
  - It is unclear how LLDP should operate over an aggregation
  - It is currently not possible to determine at the receiver if the LLDP frames were sent from a peer at the physical link or at the aggregate
- Latest Status: Ready for Ballot
  - Discussed at Nanjing Interim and at Atlanta Plenary - <http://www.ieee802.org/1/files/public/docs2011/maint-lynch-LLDP-over-LAG-0920-v1.pdf>
  - We desire to have the ability to send/receive at the physical layer – can be done in AXbq.
  - Agreed to workout the technical details in AXbq – prefer a TPMR type Y to send/receive
  - Preferred to define new TLVs or new bits, thus modifying existing TLVs – prefer to wait for AX revision to fix MIBs and TLVs
- Discussion
  - In current draft of AX-Rev. Subsequent resolution will be handled there.

# Maintenance Item – 0036

## MEPactive

- Submission: Weiyang Cheng – June 2012
- Issues:
  - Clause 20.9.1 (MEPactive): "Administrative state of the MEP A Boolean indicating the administrative state of the MEP. True indicates that the MEP is to function normally, and false that it is to cease functioning"
  - Administrative or operational state
- Proposed Resolution:
  - Reword to make administrative clear
- Discussion:
  - MEPactive regulates all of the MEP state machines in parallel with BEGIN. There is not much opportunity for foul ups that would make an operational and an administrative pair for MEP active that would not be visible from the ieee8021CfmConfigErrorListTable.
  - The MEPactive variable controls all of the MEP state machines by holding them in the reset condition. The current description is adequate to convey the meaning of the variable. It does not appear that the suggested text has a significantly different meaning than the current text of 20.9.1 or the dot1agCfmMepActive MIB object.
  - Add a note to end of 20.9.1 explaining why an Operational state is not needed.
    - NOTE--MEPactive controls the BEGIN input to the MEP state machines. Therefore, for any MEP that has been completely configured, it is as much an indication of the operative state of the MEP as a control over that state.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0038

## user priority

- Submission: Ben Mack-Crane – July 2012
- Issues:
  - In reviewing 802.1AC some editorial issues were noted in text that is also included in 802.1Q-2011. The same editorial corrections should be made in 802.1Q unless the affected text is removed in favor of maintaining a single copy in 802.1AC.
- Proposed Resolution:
  - 6.1.2 Replace ", but include all of" with "(but include all of)".
  - 6.7.1 Replace "Default User Priority" with "Default Priority".
  - 6.7.2 Replace "user\_priority" with "priority" (two occurrences).
  - 6.7.2 Replace "Default\_User\_Priority" with "Default Priority".
  - 6.7.4.1.1 Replace "user\_priority" with "priority".
  - 6.7.4.2.1 Replace "user\_priority" with "priority".
  - There are additional instances of “user priority” that could be replaced with “priority” in clauses 12.13.3.3.3 b), 12.13.3.4.2 d), and C.3.3.1 and Figure G-1.
- Discussion
  - The intent is that 6.1 and 6.7 will be removed from 802.1Q as part of the alignment with 802.1AC, so only the additional instances will need to be changed to “user priority”
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0041

## SRP title

- Submission: Tony Jeffree – August 2012
- Issues:
  - Clause 35 is titled "Stream Registration Protocol"
- Proposed Resolution:
  - Change title to "Stream Reservation Protocol"
- Discussion
  - Agreed.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0042

## MRP Attribute Propagation

- Submission: Bob Noseworthy – August 2012
- Issues:
  - Propagation of an attribute through the network follows the active topology of the Spanning Tree Instance associated with that attribute.
  - The wording of 10.3, if strictly followed, does not necessarily achieve this goal. One result is that it could allow for declarations to be propagated from blocked ports.
- Proposed Resolution:
  - " For a given MRP application and MAP Context (10.3.1), and for the set of Ports that are in a Forwarding state as defined by that MAP Context: "  
becomes
  - " For a given MRP application and MAP Context (10.3.1), and for the set of Ports that are in a Forwarding state as defined by that MAP Context, and for the set of attributes associated with that MAP Context: "
- Discussion
  - The proposed text says exactly the same thing as the existing text (how could we possibly discussing attributes for another context, doesn't make sense). However the change is clearly harmless and acceptable.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0043

## MRPDU transmission actions

- Submission: Bob Noseworthy – August 2012
- Issues:
  - 10.6.7.1 conflicts with 10.3.e
- Proposed Resolution:
  - Change to
  - " 10.7.6.1 MRPDU transmission actions Unless stated otherwise in these action definitions, MRPDU transmission as a result of the operation of a state machine in a Bridge occurs only through the Port associated with that state machine.
- Discussion:
  - Agree. The offending (clearly wrong) text about transmitting only if the Port was in a Forwarding state was the result of incorrectly accepting a ballot comment at some stage in the process. It is very clear that if the MAP Context no longer provides connectivity between points A and B and an attribute registration was previously being forwarded from A to B, then the registration has to be explicitly withdrawn by B sending a Leave (or some equivalent action).
  - Included in 802.1Q-REV D1.0



# Maintenance Item – 0045

## Flush!

- Submission: Bob Noseworthy – August 2012
- Issues:
  - The current behavior of the Registrar state table (Table 10-4) results in the permanent registration of the associated attribute, as the MRP application is never made aware of the Registrar's state change.
- Proposed Resolution:
  - Regarding Table 10-4, state "IN", event "Flush!":
  - Replace "MT" with " Lv MT "
- Discussion
  - This was discussed in 802.1ak D7.0 PDIS comment 45 (Nov 2006)
    - REJECT: As this is an efficiency issue this kind of change needs more detailed study.
  - Panos notes that he believes the “Lv” was deleted by accident
  - Mick Seaman proposes to accept. Agreed.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0046

## Initiating VLAN membership declaration

- Submission: Bob Noseworthy – August 2012
- Issues:
  - The last paragraph of 11.2.3.2.1 describes behavior on receipt of ES\_DEREGISTER\_VLAN\_MEMBER but the last line refers improperly to ES\_REGISTER\_VLAN\_MEMBER
- Proposed Resolution:
  - Change ES\_REGISTER\_VLAN\_MEMBER occurring in last line of 11.2.3.2.1 to ES\_DEREGISTER\_VLAN\_MEMBER.
- Discussion
  - Agree.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0047

## Registrar Administrative Controls

- Submission: Bob Noseworthy – August 2012
- Issues:
  - The propagation of statically set VLANs is implied, but no mechanism is defined to actually propagate such information.
  - Specifically, simply being in the "IN" state of the Registrar state machine does not trigger an indication to the MVRP Application.
- Proposed Resolution:
  - Alternative proposal is to change last paragraph of 10.7.2 to:
  - When an Attribute value is first set to 'Registration Fixed', a MAD\_Join.indication primitive is issued to the MAD Service User, indicating the Attribute instance. When an Attribute value is first set to 'Registration Forbidden', a MAD\_Leave.indication primitive is issued to the MAD Service User, indicating the Attribute instance. When an Attribute value is set back to 'Normal Registration', the associated Registrar and Applicant state machines act as though a rLv! (10.7.5.17) occurred.
  - If the value of this parameter is 'Registration Fixed', In and JoinIn messages are sent. If the value of this parameter is 'Registration Forbidden', Empty or JoinEmpty messages are sent.
- Discussion
  - Agree. Favour the alternative suggestion because otherwise some considerable attention would have to be addressed to defining "first" in "When ... first" to include cases where BEGIN has been asserted and/or machines reinitialized
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0048

## Use of "new" declaration capability

- Submission: Bob Noseworthy – August 2012
- Issues:
  - 11.2.5 should more clearly state what information will be removed when a new indication is received.
- Proposed Resolution:
  - Clarify that only the "Dynamic Filtering Entry" is affected.
  - Change the last paragraph of 11.2.5 to
    - When any MVRP declaration marked as “new” is received on a given Port, either as a result of receiving an MVRPDU from the attached LAN (MAD\_Join.indication), or as a result of receiving a request from MAP or the MVRP Application (MAD\_Join.request), any Dynamic Filtering Entries in the filtering database for that Port and for the VID corresponding to the attribute value in the MAD\_Join primitive are removed.
- Discussion
  - Agree
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0049

## MAP context for MSRP

- Submission: Bob Noseworthy – August 2012
- Issues:
  - This is unclear as no part of 35.2.4 references spanning trees.
- Proposed Resolution:
  - Change: "The Declarations are filtered according to the state of the spanning tree, as described in 35.2.4."
  - to
  - "The Declarations are filtered according to the requirements of 35.2.4 and its subclauses and according to the state of the spanning tree per 35.1.3.1."
- Discussion
  - Agreed.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0050

## MSRP Requirements

- Submission: Bob Noseworthy – August 2012
- Issues:
  - Clause 5.4.4 requires MSRP to make use of the MAP operation specified in 10.3.1; however, clause 10.3 points to 35.2.4, which simply indicates its different from 10.3
  - 5.4.4, 10.3, and 35.2.4 must be made consistent.
  - Currently, there is no MAP behavior defined for how new or non-new attributes are propagated or what to do when tcDetected occurs.
- Proposed Resolution:
  - Remove the conflict between 5.4.4 and 10.3/35.2.4.
- Discussion
  - **Accept the Proposed Resolution in Principle, but use an entirely different approach:**
    - Clause 10.3, page 157
      - The MRP Attribute Propagation (MAP) function enables propagation of attributes registered on Bridge Ports across the network to other participants. Each MRP application specifies the operation of the MAP function. This subclause specifies the operation of the MAP function for the MMRP application, the MVRP application (11.2.1) and the MSRP application (35.2). In addition, clause 35.2.4 specifies additional MSRP attribute processing rules that modify the MAP function defined below.
    - Clause 35.2.4, page 1129
      - This clause describes
        - » Rules for combining and propagating Listener attributes toward the associated Talker,
        - » How MSRP adjusts the Talker and Listener attributes before propagating them.
      - Unless stated otherwise, Talker and Listener attributes are propagated as described in 10.3.
      - In principle, the MAP performs MSRP Attribute Propagation when any of the following conditions occur:
  - Change bar version in minutes (<http://www.ieee802.org/1/files/public/maint/2012-11-maintenance.pdf> )
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0051

## Failure Information

- Submission: Bob Noseworthy – August 2012
- Issues:
  - No information is conveyed identifying the Bridge Port.
- Proposed Resolution:
  - strike "and Bridge Port" from 35.2.2.8.7
- Discussion
  - Agreed.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0052

## streamAge

- Submission: Bob Noseworthy – August 2012
- Issues:
  - The goal -- Stream age starts when the stream starts forwarding, not when the entry is first made to the DRE (Dynamic Reservations Entries)
- Proposed Resolution:
  - 35.2.1.4(c) proposed language (below)
  - streamAge: A per-stream 32-bit unsigned value used to represent the time, in seconds, since the control element for the associated port most recently became forwarding in the Dynamic Reservation Entry (8.8.7) corresponding to the stream's destination\_address. This value is used when determining which streams have been configured the longest. Streams with a numerically larger streamAge are considered to be configured earlier than other streams, and therefore carry a higher implicit importance."
- Discussion
  - **Insert “per-port” back into the Proposed Resolution:**
    - c) **streamAge:** A per-port per-stream 32-bit unsigned value used to represent the time, in seconds, since the control element for the associated port most recently became forwarding in the Dynamic Reservations Entries (8.8.7) corresponding to the stream's destination\_address. This value is used when determining which streams have been configured the longest. Streams with a numerically larger *streamAge* are considered to be configured earlier than other streams, and therefore carry a higher implicit importance.
  - Included in 802.1Q-REV D1.0



# Maintenance Item – 0053

## streamAge MIB

- Submission: Bob Noseworthy – August 2012
- Issues:
  - The first sentence of the DESCRIPTION of ieee8021SrpReservationStreamAge is sufficient to allow for Endstations (Talkers or Listeners) or Bridges to set the value however the implementation determines endstation stream age, and via 35.2.1.4c for Bridges.
- Proposed Resolution:
  - Replace DESCRIPTION of with (i.e, delete last two sentences):
  - "The number of seconds since the reservation was established on this port."
- Discussion
  - **Accept the Proposed Resolution as-is:**
  - **Clause 17.7.14, page 841**
    - "The number of seconds since the reservation was established on this port."
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0054

## MAP context for MSRP

- Submission: Bob Noseworthy – August 2012
- Issues:
  - No statement is made regarding whether MSRPDUs are tagged in MST environments.
- Proposed Resolution:
  - In 35.2.4, replace:
  - “All MSRPDUs sent and received by MSRP Participants in SST Bridges are transmitted as untagged frames.”
  - with:
  - “All MSRPDUs sent and received by MSRP Participants in SST or MST Bridges are transmitted as untagged frames.”
- Discussion
  - **Accept the Proposed Resolution in Principle, but use this wording:**
    - Clause 35.2.4.5, page 1133
    - All MSRPDUs are transmitted as untagged frames.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0055

## MSRP Attribute propagation

- Submission: Bob Noseworthy – August 2012
- Issues:
  - MSRP does not define any further action to take upon receipt of 'new'.
  - It is desirable to explicitly state any action desired, or none if no action is desired (which is presumed in this case).
- Proposed Resolution:
  - Add a subclause after the current 35.2.6 and before 35.2.7 similar to 10.12.3 defined as:
    - 35.2.6 Use of "new" declaration capability
    - MSRP does not make use of the 'new' declaration capability.
- Discussion
  - Agreed in Principle, see resolution to item 0050
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0056

## MSRP MAP

- Submission: Bob Noseworthy – August 2012
- Issues:
  - MSRP MAP functionality is currently not clearly defined.
- Proposed Resolution:
  - Replace :
    - "a) A MAD\_Join.indication adds a new attribute to MAD (with the new parameter, 10.2, set to TRUE);"
  - with:
    - a) A MAD\_Join.indication adds a new attribute to MAD;"
    - b) A MAD\_Join.indication is received with the 'new' parameter, 10.2, set to TRUE;"
- Discussion
  - Agreed in Principle, see resolution to item 0050
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0057

## MRP Attribute propagation

- Submission: Bob Noseworthy – August 2012
- Issues:
  - The existing text is unclear as to which "Port" is referenced in 10.3.a "If the value of tcDetected for the Port..." as it could refer to either:
    - "received by MAP from a given Port" (the ingress Port)
    - "each other Port" (egress Ports)
- Proposed Resolution:
  - Change to
  - "If the value of tcDetected for the given Port..."
- Discussion
  - This is editorial. Agreed.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0061

## Request 61

- Submission: Paul Woods – October 2012
- Issues:
  - 10.2.6.1.1: The name rcvdPSSync is used in 10.2.11.1.1 and 10.2.12.1.1 for different variables, which is confusing.
- Discussion:
  - 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?).
  - The practice in 802.1 is to use unique names even for local variables. As a result, it is recommended to implement this improvement in .1ASbt.
  - An initial .1ASbt draft is available. However, as this is a significant change, the editor will do this last.
- Latest Status: Change Text - Ballot

# Maintenance Item – 0086

## EVB TLV

- Submission: Sung Hyuk Byun – November 2012
- Issues:
  - The explanations of TLV values R(D.2.13.5), RTE(D.2.13.6), RWD(D.2.13.8) and RKA (D.2.13.9) do not clearly specify which value (local or operational value) should be sent by EVB Bridge and EVB station.
  - And, in D.2.13.8, ROL setting for RWD in EVB Bridge is not described clearly. Only the EVB station action on ROL is specified.
  - In D.2.13.9, ROL setting for RKA in EVB station is not clearly described, too. Only the EVB Bridge action on ROL is specified.
  - These could lead many incompatible EVB implementations by different interpretation of the standard.
  - According to the email discussion in 802.1 mailing list after reporting this issue, it is clear that the original intent is using of local value for all R, RTE, RWD and RKA in transmitting EVB TLV.
  - ROLs for RWD and RKA seemed to be introduced to notify peer node which proposed value is used in operation by the sending node, remote or local. Thus it might be more useful if both EVB Bridge and EVB station set OLs for RWD and RKA with the flag indicating which value (remote or local) is used at each sending node.
- Proposed Resolution: 802.1Qbg
  - See PDF document for detailed Proposed Resolution
- Discussion:
  - Agreed. This was already discussed on the mailing list and the resolution is consistent with that discussion.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0087

## Definitions for the IEEE8021-CFM MIB module

- Submission: Stephen Haddock – November 2012
- Issues:
  - A liaison received from the MEF called attention to some ambiguity in determining how a LTM transmission is initiated by management. The text in the MIB says it is initiated "in a manner similar to that described for LBM transmission", but LBM transmission is initiated by a writing a non-zero value to the dot1agCfmMepTransmitLbmMessages object, but there is no similar object for LTM.
  - LTM transmission should be initiated by a write to the dot1agCfmMepTransmitLtmFlags object.
- Proposed Resolution:
  - See PDF document for detailed Proposed Resolution
- Discussion:
  - Agreed
  - Included in 802.1Q-REV D1.0



# Maintenance Item – 0088

## IEEE 802.1 Organizationally Specific TLVs

- Submission: Tony Jeffree (Submitted on behalf of David Law) – December 2012
- Issues:
  - In the original specification of the Port and Protocol VLAN ID TLV found in Figure F-2 of IEEE Std 802.1AB-2005, the bits in the 'flag' field are numbered 0 to 7 with bit 0 reserved, the 'supported' bit in bit 1, the 'enabled' bit in bit 2, and bits 3 to 7 are reserved. Looking at Figure D-2 of IEEE Std 802.1Q-2011 the bits in the 'flag' field are now numbered 1 to 8, but the 'supported' bit is still in bit 1, the 'enabled' bit is still in bit 2, and now bits 3 to 8 are reserved. It appears the position of the 'supported' and 'enabled' bits in the octet have changed, which doesn't seem to be correct. The version shown in 802.1Q looks to be the same as the version published in 802.1AB-2009.
  - This seems to have happened as a result of an attempt to align the bit numbering in AB to be consistent with bit numbering usage in 802.1Q; however, there is at least one other instance in 802.1Q-2011 of but numbering starting at 0 (see Figure D-7).
- Proposed Resolution:
  - Need to discuss what to do about Figure D-2 - the two TLV definitions (AB-2005 vs AB-2009/Q-2011) are clearly different.
  - Ideally, 802.1Q should be fixed so that bit numbering is consistent everywhere.
- Discussion:
  - Technical review completed. The position should not have changed
  - Agree to change back to original spec in 802.1AB-2005
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0089

## IEEE 802.1Q TLV VID length

- Submission: Tony Jeffree (Submitted on behalf of David Law) – December 2012
- Issues:
  - Annex D.2.5 'VID Usage Digest TLV' of IEEE Std 802.1Q-2011 states that 'The value of the VID Usage Digest is obtained by applying the CRC32 function (IEEE Std 802.3-2008,4.2.10) to a VID Usage Table having a fixed length of 128 octets.' and that 'A bit of the VID Usage Table contains the value PBB-TE-USAGE (binary 1) if the corresponding element of the MST Configuration Table (8.9.1) contains the value PBB-TE MSTID (hex FFE) and otherwise contains the value NON-PBB-TE-USAGE (binary 0)'. Subclause 12.12.3 'The MST Configuration Table' of IEEE Std 802.1Q-2011 however states 'The MST Configuration Table is modeled as a fixed table of 4096 elements, as described in 13.7.'. If the MST Configuration Table is modelled as a fixed table of 4096 elements, how can the VID Usage Table, which seems to have to contain one bit for each element of the MST Configuration Table, contain only 128 bytes, which is 1024 bits. Should the VID Usage Table have a fixed length of 512 bytes so that there are 4096 bits to match the number of entries in the MST Configuration Table?
- Proposed Resolution:
  - Clarification seems to be needed.
- Discussion:
  - Technical review complete
  - The point is correct:
    - Clause D.2.5 page 1217
      - In 3rd line from bottom, change 128 to 512.
    - Clause D.2.5.1 page 1218
      - In 2nd line of paragraph, change 128 to 512.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0090

## IEEE 802.1AB LLDP TLVs

- Submission: Tony Jeffree (Submitted on behalf of David Law) – December 2012
- Issues:
  - I have a question in relation to the MIB entries that seem to be defined with wrong indexes in IEEE Std 802.1AB-2009. For example, `lldpV2Xdot1RemManVidEntry` describes the management VLAN ID of a specified neighbour. However, `lldpV2RemIndex` is not included by the indexes. The same bug exists on the `lldpV2Xdot1RemVidUsageDigestEntry`.
- Proposed Resolution:
  - Include `lldpV2RemIndex` in the indexes for these two objects.
- Discussion:
  - Agree. Changes required to Annex D of 802.1Q (which was moved from 802.1AB-2009):
  - Clause E.10.3 Table E.5 page 137:
    - Add "`lldpV2Xdot1RemIndex` | (Table index)" as the next-to-last entry under `lldpV2Xdot1RemVidUsageDigestTable`, ahead of `lldpV2Xdot1RemVidUsageDigest`
    - Add "`lldpV2Xdot1RemIndex` | (Table index)" as the next-to-last entry under `lldpV2Xdot1RemManVidTable`, ahead of `lldpV2Xdot1RemManVid`
  - Clause E.10.5 page 157:
    - Add `lldpV2Xdot1RemIndex` as the last INDEX in `lldpV2Xdot1RemVidUsageDigestEntry`.
  - Clause E.10.5 page 158:
    - Add `lldpV2Xdot1RemIndex` as the last INDEX in `lldpV2Xdot1RemManVidEntry`.
  - This requires deprecating the old `lldpV2Xdot1RemVidUsageDigestTable` and `lldpV2Xdot1RemManVidTable` and creating new ones, which of course, is a more extensive change. This note just records what the document should have said.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0091

## VDP state machine variables and parameters

- Submission: Sung Hyuk Byun– December 2012
- Issues:
  - The toutKeepAlive variable is only used at EVB Bridge, but the original text states that this is used by both station and Bridge.
  - In 41.5.5.9, respWaitDelay is defined as follows:  
$$\text{respWaitDelay} = 1.5 \times (2^{\text{urpVdpResourceWaitDelay}} + (2 \times \text{ecpOperMaxTries} + 1) \times 2^{\text{ecpOperAckTimerInit}})$$
and the default value of respWaitDelay is stated as about 11.6s.
  - But, the ecpOperAckTimerInit is the operational value of ackTimerInit (D.2.13.6) which is defined as  $10 \times 2^{\text{RTE}}$  microsec, so it cannot be a exponent value. Actually, no system variable is defined for operational RTE.
  - The original intent of the respWaitDelay definition seems to be as follows:  
$$\text{respWaitDelay} = 1.5 \times (\text{resourceWaitDelay} + (2 \times \text{ecpOperMaxTries} + 1) \times \text{ecpOperAckTimerInit})$$
  - And, resourceWaitDelay =  $10 \times 2^{\text{urpVdpResourceWaitDelay}}$  (D.2.13.8), not  $2^{\text{urpVdpResourceWaitDelay}}$
  - The above corrected definition of respWaitDelay yields the default value of 17.4s, not 11.6s in original text.
- Proposed Resolution: 802.1Qbg
  - See PDF document for detailed Proposed Resolution
- Discussion:
  - Paul Bottorff provided detailed text for the editor for 91, 93, 107 and others as a part of a ballot comment on 802.1Q-REV D1.0
  - Included in 802.1Q-REV D1.1

# Maintenance Item – 0092

## Bridge VDP State Machine

- Submission: Sung Hyuk Byun – December 2012
- Issues:
  - In Figure 41-8 Bridge VDP state machine, WAIT\_STATION\_CMD state include following equation :  $vsiState = operCmd.Model$ ; But, there is no definition of  $operCmd.Model$  in the standard.
  - $operCmd.Model$  should be a mistyping of  $operCmd.TLVtype$
- Proposed Resolution: 802.1Qbg
  - Change the following equation at WAIT\_STATION\_CMD state of Figure 41.8, Clause 41.5.2  $vsiState = operCmd.Model$  with  $vsiState = operCmd.TLVtype$
- Discussion:
  - Agree
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0093

## ECP State Machine Variables

- Submission: Kodirov Nodir and Sung Hyuk Byun – January 2013
- Issues:
  - The R field of EVB TLV is the maxRetries value for ECP state machine (43.3.7.4).
  - Most system variables for R are named with "maxRetries" suffix, but some variables are named with "maxTries", and the ECP Tx state machine (43.3.4) is designed with "maxTries" in mind.
  - So, the ECP Tx state machine should be modified to correctly reflect the meaning of "maxRetries". Additionally, several system variables such as evbSysEcpDfltMaxTries (Table 12-17 and Table 12-18 of 12.26.1), ecpAdminMaxTries (Table 12-18 of 12.26.1) and ecpOperMaxTries (12.27.1, 41.5.5.9, 41.5.5.13, 43.3.7.4) need to be changed with "MaxRetries" concept.
- Proposed Resolution: 802.1Qbg
  - See PDF document for detailed Proposed Resolution
- Discussion:
  - Agree with resolutions 2-5, but do not change state machine as suggested. Instead simply change the following aspects
    - `ackTimer == 0 && (retries < maxRetries)` to `ackTimer == 0 && (retries <= maxRetries)`
    - `ackTimer == 0 && (retries == maxRetries)` to `ackTimer == 0 && (retries > maxRetries)`
  - Paul Bottorff provided detailed state machine and detailed object changes for the editor as a part of a ballot comment on 802.1Q-REV D1.0
  - Included in 802.1Q-REV D1.1

# Maintenance Item – 0094

## Definitions for the IEEE8021-CFM MIB module

- Submission: Andreas Meier – January 2013
- Issues:
  - Dot1agCfmMaintAssocNameType is not SMIv2 compliant
- Proposed Resolution:
  - Replace “ICCformat” with “iccFormat”
- Discussion:
  - Agree.
  - Change the label into:
    - iccFormat(32) ICC-based format as specified in ITU-T Y.1731
  - Note: change the occurrence of the same label in the DESCRIPTION clause of the Dot1agCfmMaintAssocNameType TC and update the REVISION date of the MIB as well.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0096

## Definitions for the IEEE8021-CFM MIB module

- Submission: Raphael Garti – January 2013
- Issues:
  - ieee8021MstpFidToMstiV2Table (pages 740,741) is indexed by: INDEX { ieee8021MstpFidToMstiV2ComponentId, ieee8021MstpFidToMstV2Fid }. The second object, ieee8021MstpFidToMstV2Fid, does not exist.
- Proposed Resolution:
  - INDEX { ieee8021MstpFidToMstiV2ComponentId, ieee8021MstpFidToMstV2Fid} should be replaced with: INDEX { ieee8021MstpFidToMstiV2ComponentId, ieee8021MstpFidToMstiV2Fid
- Discussion:
  - Agree
  - Included in 802.1Q-REV D1.0



# Maintenance Item – 0097

Definitions for the IEEE8021-MSTP MIB module, State machine timers and Performance parameter management

- Submission: Raphael Garti – January 2013
- Issues:
  - The default TX hold count parameter should be 6 according to 802.1D-2004 (table 17-1) and 802.1Q-2012-Ed (table 13-5), but 3 according to the DEFVAL clause of `ieee8021SpanningTreeRstpTxHoldCount` (page 652 in 802.1Q-2012-Ed).
- Proposed Resolution:
  - Either change the default of Transmit Hold Count to 3 in 802.1D-2004 (table 17-1) and 802.1Q-2012-Ed (table 13-5), or change the DEFVAL clause of `ieee8021SpanningTreeRstpTxHoldCount` to 6.
- Discussion:
  - This was 3 in 802.1w (Table 17-5) and then `dot1dStpTxHoldCount` of RFC 4318, of which `ieee8021SpanningTreeRstpTxHoldCount` is a direct derivation per 802.1Q (Table 17-5). It changed to 6 in 802.1D-2004
  - Change to 6 in MIB and change reference to 802.1Q.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0098

## Definitions for the IEEE8021-MSTP MIB module

- Submission: Raphael Garti – January 2013
- Issues:
  - The description of most of the MSTP MIB tables contains the phrase “... instance of ieee8021SpanningTreeVersion (from the IEEE8021-SPANNING-TREE-MIB) has a value of mstp(2)”, whereas mstp in that object equals 3, not 2: ieee8021SpanningTreeVersion OBJECT-TYPE SYNTAXINTEGER { stp(0), rstp(2), mstp(3) }
- Proposed Resolution:
  - Replace each table DESCRIPTION clause that contains the phrase “... instance of ieee8021SpanningTreeVersion (from the IEEE8021-SPANNING-TREE-MIB) has a value of mstp(2)”, with: “... instance of ieee8021SpanningTreeVersion (from the IEEE8021-SPANNING-TREE-MIB) has a value of mstp(3)”
- Discussion:
  - Agree
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0099

## Definitions for the IEEE8021-MSTP MIB Module, AdminEdge

- Submission: Raphael Garti – January 2013
- Issues:
  - The default admin edge parameter is recommended to be false to 13.27.1, but true according to the DEFVAL clause of ieee8021MstpCistPortAdminEdgePort (page 733)
- Proposed Resolution:
  - Either change the recommendation in 13.27.1 to true, or change the DEFVAL clause of ieee8021MstpCistPortAdminEdge to false.
- Discussion:
  - The REFERENCE for this in the MIB is to 802.1D 17.13.1 which provides no guidance on default values. The revised 802.1Q clause 13 is the appropriate reference
  - Accept – change DEFVAL to false and update the reference
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0100

## Definitions for the IEEE8021-MSTP MIB Module

- Submission: Raphael Garti – January 2013
- Issues:
  - In MSTP, all VLANs are assigned to the CIST by default and users may assign VLANs to other MST instances. The ieee8021MstpFidToMstiV2Table is read-writable, but it is indexed by filtering database (FID), rather than VLAN.
  - FID to VLAN allocation is done via ieee8021QBridgeVlanCurrentTable, which is a (partially) dynamic table. A user cannot configure the VLANs to MAST instance mapping, if the FID to VLAN mapping is created dynamically, or if a VLAN was not assigned an FID yet.
- Proposed Resolution:
  - Change the MAX-ACCESS clause of ieee8021MstpVids0, ieee8021MstpVids1, ieee8021MstpVids2, ieee8021MstpVids3 (pages 729, 730) to read-create, and use them for VLAN-to-MST mapping, regardless of VLAN-to-FID mappings.
  - A similar solution is to change the MAX-ACCESS clause of ieee8021MstpVlanV2MstId to read-write, but this is inconvenient if you have to map a many VLANs, since ieee8021MstpVlanV2Table contains one per VLAN
- Discussion:
  - There is a mismatch between clause 8, clause 12 (has more than 8) and clause 17 (differ from 12)
  - Panos Saltsidis has completed the technical review
  - Included in draft for 802.1Q-REV

# Technical review (0100)

During the SPB project discussions it has been decided to drop the dynamic aspects of VID to FID allocations as expressed through the VLAN Learning Constraints (and leave only dynamic allocations associated with the operation of SPBV (the SPVID allocation)). As a result clause 8.8.8 has been modified by IEEE Std 802.1aq-2012 to reflect these changes but unfortunately these changes are not reflected in Clause 12 or in Clause 17 which still discuss dynamic VID to FID allocations through the use of the VLAN Learning Constraints.

Here is the list of changes that are required for Clause 12 (Clause 17 should reflect those changes but my MIB expertise is limited and somebody else needs to go through those changes)

The current title of 12.10.3 The VLAN Learning Constraints managed object needs to be changed to  
“12.10.3 The VID to FID allocation managed object”

The text in 12.10.3 needs to be replacing the current text with the following:

“The VID to FID allocations managed object models operations that modify, or inquire about

VID to FID allocations (8.8.8) that apply to the operation of the Learning Process and the Filtering Database. The object is modeled as a fixed-length tables, as follows:

a) A VID to FID allocation table (8.8.8) with an entry per VID supported by the implementation. Each table entry indicates, for that VID, that there is currently

- 1) No allocation defined; or
- 2) A fixed allocation to FID X; or
- 3) A dynamic allocation to FID X.

NOTE- Item 3) is only applicable only for SPT Bridges and VIDs that have been reserved for use as SPVIDs.

The management operations that can be performed on the FID to VID allocations managed object are

- b) Read VID to FID allocations (12.10.3.1);
- c) Read FID allocation for VID (12.10.3.2);
- d) Read VIDs allocated to FID (12.10.3.3);
- e) Set VID to FID allocation (12.10.3.4);
- f) Delete VID to FID allocation (12.10.3.5).”

Delete current clauses 12.10.3.1, 12.10.3.2, 12.10.3.3 and 12.10.3.4.

Renumber the following clauses starting from 12.10.3.1 in increasing order.

In 12.10.3.5.3, 12.10.3.6.3, and 12.10.3.7.3 (now renumbered to 12.10.3.1.3, 12.10.3.2.3, and 12.10.3.3.3) Include a NOTE

“NOTE- The indication of dynamic is only applicable only for SPT Bridges and VIDs that have been reserved for use as SPVIDs”

In 12.10.3.8.3 Outputs (now renumbered to 12.10.3.4.3 Outputs) delete item a1) and renumber subsequent sub items.

Make a global search for “VLAN Learning Constraints” and delete the associated references.

# Maintenance Item – 0101

## Management Protocol

- Submission: Paul Bottorff – January 2013
- Issues:
  - The ieee8021BridgeEvbVSIMgrID16 object defines an octet string object with size 1, with a reference to subclause 41.1.3 ‘VSI Manager ID’. However this subclause states that ‘The value 0 means ... indicating that the Bridge should select a default value. Any other value is interpreted as an IPv6 address, as defined in IETF RFC 4291.’ In addition the ‘VSI Mgr ID’ field in the VSI manager ID TLV is defined as 16 octets. This seems to imply the object size should be 16 bytes
- Proposed Resolution:
  - ieee8021BridgeEvbVSIMgrID size should be 16 octets not 1 octet. Need to deprecate MIB object and define a new object in the same row.
  - Deprecate ieee8021BridgeEvbVSIMgrID and define a new object call ieee8021BridgeEvbVSIMgrID16 with string size 16. Also update the table 17-26 with the new ieee8021BridgeEvbVSIMgrID16.
- Discussion:
  - Agree
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0102

## CDCP configuration variables

- Submission: Soomyung Pahk – January 2013
- Issues:
  - In clause 42.4.14, RemoteVersion variable is explained as one of CDCP configuration variables, but RemoteVersion variable is not used in CDCP or any other part of EVB standard.
  - By tracking the draft documents of 802.1Qbg, we found that the RemoteVersion variable was introduced in the initial EVB proposal document for CDCP, but not used anymore in the final EVB standard.
- Proposed Resolution:
  - Remove clause 42.4.14 RemoteVersion.
  - And, change the clause number of “42.4.15 schState” to “42.4.14 schState”
- Discussion:
  - Agree
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0103

## Support of the ISS for attachment to a Provider Bridge Network and Support of the ISS by additional technologies

- Submission: Philippe Klein– January 2013
- Issues:
  - 6.13 – Type: Incorrect primitive name in the sentence: “When Service Access Priority Selection is enabled, the mac\_service\_data\_unit in each M\_UNIDATA.request is priority-tagged with an S-VLAN tag header ...” M\_UNIDATA must be replaced with M\_UNITDATA
  - 6.15 – Type: Incorrect primitive name in the sentence: “The technology is responsible for invoking an M\_UNITDATA.indication with appropriate parameters (6.6) for each received frame,...” M\_UNIDATA must be replaced with M\_UNITDATA
- Proposed Resolution:
  - 6.13 – “When Service Access Priority Selection is enabled, the mac\_service\_data\_unit in each M\_UNITDATA. Request is priority-tagged with an S-VLAN tag header...”
  - 6.15 – “The technology is responsible for invoking an M\_UNITDATA.indication with appropriate parameters (6.6) for each received frame...”
- Discussion:
  - Agree.
  - Included in 802.1Q-REV D1.0



# Maintenance Item – 0104

## Definitions for the IEEE8021-TEIPS MIB Module

- Submission: Ben Mack-Crane – January 2013
- Issues:
  - 802.1Qbf and 802.1Qbg have used the same MIB number { ieee802dot1mibs 24 }.
- Proposed Resolution:
  - The IEEE8021-TEIPS MIB module should use { ieee802dot1mibs 27 } according to the OID allocation table maintained by the WG chair
- Discussion:
  - This is an unfortunate error. However, there are few, if any, implementations of this MIB module so the change should be limited to this module as suggested
    - Change OID root (e.g., to 27) and rename module name and tables/objects (e.g., include v2 in prefix)
    - Include name of old tables at the beginning of the MIB module indicating they are deprecated with a strong warning that they are not to be used.
    - Change all usages in remainder of clause 17 to new object names
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0105

## Management Protocol

- Submission: Paul Bottorff – January 2013
- Issues:
  - 'partial (2)', and 'vlanOnly (3)?', however the reference for this object is subclause 41.2.8 'Filter Info format' which states 'The Filter Info formats defined by this standard are shown in Table 41-6.'. Table 41-6 however defines values of 'VID (41.2.9.1) 0x01', 'MAC/VID (41.2.9.2) 0x02', 'GroupID/VID (41.2.9.3) 0x03' and 'GroupID/MAC/VID (41.2.9.4) 0x04' which don't match the object vales.
- Proposed Resolution:
  - The value list should match Table 41-6.
  - Deprecate ieee8021BridgeEvbVSIMvFormat object and add a new object VSIMvFormat4 with values VID(1), MAC-VID(2), GroupID-VID(3), GroupID-MAC-VID(4).
- Discussion:
  - Agree in Principle. Call new object ieee8021BridgeEvbVSIFilterFormat with values VID(1), MAC-VID(2), GroupID-VID(3), GroupID-MAC-VID(4).
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0106

## Management Protocol

- Submission: Paul Bottorff – January 2013
- Issues:
  - The description for the ieee8021BridgeEvbVDPCounterDiscontinuity object is 'The time (in hundredths of a second) since the last counter discontinuity.' and while I assume it is either associated with, or derived from, ifCounterDiscontinuityTime there appears to be no further definition of this object and there is no reference subclause.
- Proposed Resolution:
  - The discontinuity referred to is ieee8021BridgeEvbVsiDbTable entry creations which can occur at any time since these entries can be created and destroyed dynamically along with the VDP machine instances. The timer which may have a discontinuity is the ieee8021BridgeEvbVSITimeSinceCreate.
  - Some text should be added to the ieee8021BridgeEvbVDPCounterDiscontinuity indicating that it is set when the ieee8021BridgeEvbVSIDBEntry is created. For instance update "The time (in hundredths of a second) since the last counter discontinuity" with " The time (in hundredths of a second) since the ieee8021BridgeEvbVsiTable row was created."
  - In addition, the ieee8021BridgeEvbCounterDiscontinuity should be included in table 17-26.
- Discussion:
  - Change ieee8021BridgeEvbVDPCounterDiscontinuity DESCRIPTION to
    - The time (in hundredths of a second) since the last counter discontinuity for any of the counters in the row.
  - Included in 802.1Q-REV D1.0

# Maintenance Item – 0107

## Management Protocol

- Submission: Paul Bottorff – January 2013
- Issues:
  - Clause 12 specifies object called evbSysEcpDfltAckTimerInit and evbSysEcpDfltMaxTries. however clause 17 references objects by the names ieee8021BridgeEvbSysEcpAckTimer and ieee8021BridgeEvbSysEcpMaxTries in table 17-26 and ieee8021BridgeEvbSysEcpMaxRetries in the MIB text.
- Proposed Resolution:
  - Replace evbSysEcpDfltMaxTries in clause 12 and table 12-17 with evbSysEcpDfltMaxRetries.
  - Replace ieee8021BridgeEvbSysEcpAckTimer and ieee8021BridgeEvbSysEcpMaxTries in table 17-26 with ieee8021BridgeEvbSysEcpDfltAckTimerInit and ieee8021BridgeEvbSysEcpDfltMaxRetries.
  - Deprecate ieee8021BridgeEvbSysEcpAckTimer and ieee8021BridgeEvbSysEcpMaxRetries from the SNMP MIB
- Discussion:
  - Agree with table changes (first is already in #93), but do not accept third proposal (deprecate objects). Instead point add the following note in the DESCRIPTION for these objects:
    - ieee8021BridgeEvbSysEcpAckTimer and ieee8021BridgeEvbSysEcpMaxRetries refer to EvbSysEcpDfltAckTimerInit and EvbSysEcpDfltMaxRetries in Clause 12.
  - Paul Bottorff provided detailed text proposal for the editor as a part of a ballot comment on 802.1Q-REV D1.0
  - Included in 802.1Q-REV D1.1

# Maintenance Item – 0108

MIB

- Submission: Raphael Garti – May 2013
- Issues:
  - The SYNTAX of ieee8021MstpPortPathCost is Integer32 (1..200000000).
  - Other path cost writable objects can get the value 0, to denote the automatically calculated default cost value.
- Proposed Resolution:
  - 1. Change the SYNTAX of ieee8021MstpPortPathCost to Integer32 (0..200000000).
  - 2. Change the reference of ieee8021MstpPortPathCost in table 17-10 to 17.27.33.
- Discussion:
  - Technical Review completed by Norm Finn and submitted as a ballot comment on 802.1Qrev. Already included in 802.1Qrev draft
  - Continue review as part of balloting of 802.1Qrev

# Maintenance Item – 0109

MIB

- Submission: Raphael Garti – May 2013
- Issues:
  - ieee8021SpanningTreePortPathCost has MAX-ACCESS of read-write If ieee8021SpanningTreePortPathCost is operational it should not be writable.
- Proposed Resolution:
  - 1. Change the MAX-ACCESS of ieee8021SpanningTreePortPathCost to read-only.
  - 2. Substitute ieee8021SpanningTreeRstpPortAdminPathCost for ieee8021SpanningTreePortPathCost in the list of writable objects, in 17.4.3
- Discussion:
  - The review was not detailed enough for the editor.
  - New Technical Review by Ben Mack-Crane
  - Editor requested to update draft for 802.1Qrev

# Technical review (0109)

- 1) (p727/line 8) The name "ieee8021MstpCistPortPathCost" used in the description for ieee8021MstpCistPortAdminPathCost does not exist. That is, there is no oper object to go with the admin object.
  - Change  
"This complements the object ieee8021MstpCistPortPathCost, which returns the operational value of the path cost. "  
to  
" This complements the object ieee8021MstpCistPortCistPathCost, which returns the operational value of the port path cost."
  - The ieee8021MstpCistPortCistPathCost object is intended to be the oper object for ieee8021MstpCistPortAdminPathCost, but its description is not consistent with this use.  
Change the description of this object to  
" In an MSTP Bridge, the Port's Port Path Cost parameter value for the CIST."  
and change the references to  
REFERENCE "13.27.25, 17.13.11 of IEEE Std 802.1D"
  - ieee8021MstpCistPathCost lacks references.  
Insert on page 720 line 50  
REFERENCE "13.9:d, 13.10"
  - Table entry for ieee8021MstpCistPortAdminPathCost  
page 507 line 7 change " IEEE 802.1Da 13.22 p), 17.13.1" to "13.27.25, 17.13.11 of IEEE Std 802.1D "
  - Table entry for ieee8021MstpCistPortCistRegionalRootId  
page 507 line 30 change "13.10 c), 13.11, 13.27.47 " to "13.9 c), 13.11"
  - Table entry for ieee8021MstpCistPortCistPathCost  
page 507 line 31 change "13.10 d), 13.11, 13.27.47 " to "13.27.25"
  - Table entry for ieee8021MstpCistPathCost  
page 506 line 17 change "—" to "13.9 d), 13.11"
- 2) (p646/line 44) Since the object is read-write the description for ieee8021SpanningTreePortPathCost would benefit from the following change:  
"802.1D-1998 recommends that the default value of this parameter be in inverse proportion to the speed of the attached LAN."  
changed to  
"Table 13-4 recommends defaults and ranges for Port Path Cost values, in inverse proportion to the speed of the attached LAN. If this object is used to set the Path Cost it is possible to restore the default setting using the ieee8021SpanningTreeRstpPortAdminPathCost object."  
A similar bit of description should be added to the ieee8021MstpPortPathCost object,  
"... Table 13-4 recommends defaults and ranges for Port Path Cost values, in inverse proportion to the speed of the attached LAN. If this object is used to set the Path Cost it is possible to restore the default setting using the ieee8021MstpPortAdminPathCost object"
- 3) (p725/line 25) The name "ieee8021SpanningTreePortPathCost32" should be "ieee8021SpanningTreePortPathCost"

# Maintenance Item – 0110

## MSTP MIB

- Submission: Raphael Garti – May 2013
- Issues:
  - ieee8021MstpVlanV2Table added 0 & 4095 to the range of ieee8021MstpVlanV2MstId for 802.1aq, but it is indexed by IEEE8021VlanIndex, which is Unsigned32 (1..4094|4096..4294967295), and its MIB description states that “values of 0 and 4095 are not permitted”
- Proposed Resolution:
  - Change the DESCRIPTION of ieee8021MstpVlanV2Table to "In an MSTP Bridge, the fixed-length (4094 elements), read-only, MST Configuration Table."
- Discussion:
  - Technical Review completed by Nigel Bragg -- agree with the replacement text proposed:
    - there are 4094 entries in the table, indexed by VLAN, and each returns an MSTID in the extended range of 0 – 4095.
  - Included in draft D1.2 of 802.1Qrev



# Maintenance Item – 0111

## PBB MIB

- Submission: Ben Mack Crane – May 2013
- Issues:
  - The MIB Textual Convention IEEE8021PbbIngressEgress is used for the objects controlling the (unused) ingress/egress bits in the IEEE8021-PBB-MIB; however, this TC has also been used in the IEEE8021-SPB-MIB for read-only access to the T/R bits in the ISIS-SPB topology database. Therefore, while the MIB objects for ingress/egress should be deprecated, the TC should be kept to avoid disrupting the SPB MIB. Some adjustment to MIB TC and object descriptions is needed to clarify the situation.
- Proposed Resolution:
  - Delete 12.16.3.1.3:f, 12.16.3.2.2:d, 12.16.5.1.3:f, and 12.16.5.2.2:f
  - In IEEE8021-PBB-MIB deprecate ieee8021PbbVipType and ieee8021PbbCBPServiceMappingType and correct the Conformance sections, if necessary.
- Discussion:
  - The original intent was to cover asymmetric VLANs on BSIs, but this was never fully documented. Notably there are no state variables that would drive this. We either need to specify behaviour for this or deprecate them.
  - Agree to proposal as-is.
  - Included in draft D1.2 of 802.1Qrev

# Maintenance Item – 0112

PBB-TE MIB

- Submission: Ben Mack Crane – May 2013
- Issues:
  - The name “ieee8021PbbTeTeSidTable” appears 5 times in the document, but not as a name in the MIB.
- Proposed Resolution:
  - Replace “ieee8021PbbTeTeSidTable” with “ieee8021PbbTeTeSiEspTable”.
- Discussion:
  - This is an editorial issue in the clause 17 text.
  - Agree to proposal.
  - Included in draft D1.2 of 802.1Qrev

# Maintenance Item – 0115

correctionField (Integer64)

- Submission: Geoffrey M. Garner – June 2013
- Issues:
  - Table 11-5 indicates that for messageType Pdelay\_Req, the value of the correctionField contains corrections for fractional ns. This is not correct in 802.1AS. In general in IEEE 1588, the only way that fractional ns corrections can be included in the correctionField of Pdelay\_Req is if there are end-to-end transparent clocks present that timestamp with fractional ns precision. However, 802.1AS does not allow (and does not describe) end-to-end transparent clocks, and therefore fractional ns cannot be present in the Pdelay\_Req correctionField.

## Proposed Resolution:

- Remove Pdelay\_Req from the messageType column of row 2 (not including the table header) of Table 11-5.
- Discussion:
  - Proposal agreed.
  - Included in draft D0.1 of 802.1ASbt

# Maintenance Item – 0116

- Submission: Geoffrey M. Garner – June 2013
- Issues:
  - Subclause 9.5.9.4 of IEEE 1588 - 2008 indicates that the correctionField of the Sync message shall be zero in the case of a two-step clock. In addition, Table 21 of 1588 says that the correctionField of Announce and Signaling messages (and management messages, but these are not used in 802.1AS) is zero. Finally, subclause 11.4.3. of IEEE 1588-2008 indicates that the correction field of the Pdelay\_Req message is set to zero by the Pdelay requestor. It was intended that the correctionField of Sync, Announce, Signaling, and Pdelay\_Req in 802.1AS should be zero, since the correctionField of these messages is not used (in the case of Sync, it is because the clocks are two-step). However, Table 11-5 of 802.1AS does not indicate that the correctionField is zero for these messageTypes.
- Proposed Resolution:
  - Add a row to Table 5 of 802.1AS indicating that the correctionField is zero for Sync, Announce, Signaling, and Pdelay\_Req.
- Discussion:
  - Proposal agreed.
  - Included in draft D0.1 of 802.1ASbt

# Maintenance Item – 0117

- Submission: Geoffrey M. Garner – June 2013
- Issues:
  - As a result of comments against P802.1AS-Cor-1/D3.0 (the initial sponsor ballot version), the mandatory requirements on residence time and Pdelay turnaround time, in B.2.2 and B.2.3, respectively, were changed to recommendations (i.e., "shall" was changed to "should" in both subclauses). The comment resolution indicated that the necessary changes would be made to the PICS. However, inspection of Annex A indicated that there are no PICS entries for these items. Further inspection indicated that these items were referenced only in Annex E, which means that the only PICS reference is for CSN (because there was a respective PICS entry for the Annex E references). But, these items also apply to full duplex Ethernet, and therefore respective references are needed for clause 11. Note that a PICS entry or reference for clause 11 is needed for B.2.4 (measurement of rate ratio) also.
- Proposed Resolution:
  - Add respective references to B.2.2 and B.2.4, in clause 10; and B.2.3 in clause 11, add respective PICS entries for B.2.4
  - Make necessary changes for PICS entry for the Annex E reference to these sub clauses.
- Discussion:
  - Proposal updated and agreed.
  - Included in 802.1ASbt/D0.2. Actually all in Clause 10 rather than 11. Balloting.

# Maintenance Item – 0118

- Submission: Geoffrey M. Garner – June 2013
- Issues:
  - In the label of the vertical axis of the plot of Figure B.2, Allan Deviation (ADEV) should be dimensionless, i.e., it does not have units of time. Note that Table B.2, on p.247, is correct; it is only the label in the plot that is incorrect.
- Proposed Resolution:
  - Change the label of the vertical axis of Figure B.2 from "ADEV (ns)" to "ADEV".
- Discussion:
  - Proposal agreed.
  - Included in draft D0.1 of 802.1ASbt

# Maintenance Item – 0119

- Submission: Geoffrey M. Garner – June 2013
- Issues:
  - Inspection of the PortAnnounceInformation state machine in Figure 10-13 of 802.1AS indicated that if the current GM downgrades (e.g., due to its losing its connection to GPS and going into holdover) and sends an Announce message that reflects the new, downgraded, clockClass and/or clockAccuracy (and/or any other clock attributes), the new information is not immediately used (i.e., the function updateRolesTree() is not immediately invoked, which is roughly equivalent to the BMCA not being immediately invoked (this is analogous to not immediately causing the state decision algorithm and dataset comparison algorithm of IEEE 1588 to be invoked)). Instead, the new information is not used until Announce receipt timeout occurs. This behavior was not intended in 802.1AS, and also is not consistent with the default BMCA of IEEE 1588.
- Discussion:
  - The current GM downgrades, the new information actually IS used immediately. In 10.3.5, it indicates that the message priority vector is superior to the portPriorityVector of the port if, and only if, the messagePriorityVector is better than the portPriorityVector, or the Announce message has been transmitted from the same master time-aware system and MasterPort as the portPriorityVector. The key is the 2nd part referring to the Announce message being transmitted from the same port.
  - Editor has already made editorial change to ASbt D0.2 in 10.3.11.2.1 to remind the reader of this, and to point to 10.3.5.

# Maintenance Item – 0120

- Submission: Geoffrey M. Garner – June 2013
- Issues:
  - The current MDSyncReceiveSM state machine, of Figure 11-6/802.1AS requires waiting for a Follow\_Up message for a time equal to one mean Sync interval. If the next Sync arrives slightly early, before the expiration of this Sync interval, the next Sync will be ignored because the state machine will still be waiting for Follow\_Up. If the Sync after that arrives slightly late, it also will be considered lost, and sync receipt timeout will occur.
- Proposed Resolution:
  - The exact fix is not decided at present, though the fix described above is one possibility. In any case, the MDSyncReceiveSM state machine will be modified so that this behavior does not occur.
- Discussion:
  - Proposal by Geoff Garner was reviewed in TSN  
<http://www.ieee802.org/1/files/public/docs2013/as-garner-sync-receipt-timeout-issue-0713-v01.pdf>
  - Included in draft D0.1 of 802.1ASbt



# Maintenance Item – 0121

- Submission: Adapa Ajith – July 2013
- Issues:
  - In Section 8.5.8 Figure 8-10, System Capabilities TLV is shown to have a "Chassis ID subtype" as shown below, which is wrong.
  - In Section 11.2, Table 11-2 — LLDP MIB MIB objects are maintained globally instead of per LLDP Agent
  - In Section 11.5.2 for IldpV2MessageTxHoldMultiplier OBJECT-TYPE, TTL value is computed incorrectly
- Proposed Resolution:
  - Remove Chassis ID
  - As per the section 9.2.5 msgTxInterval, msgTxHold, reinitDelay, txCreditMax, msgFastTx and txFastInit are per LLDP Agent variables. Per Agent MIB objects should be maintained under IldpV2PortConfigTable.
  - TTL value should be computed as shown below according to section 9.2.5.22  
$$\text{TTL} = \min(65535, (\text{IldpV2MessageTxInterval} * \text{IldpV2MessageTxHoldMultiplier}) + 1)$$
- Discussion:
  - Issue 1 is already fixed per Maintenance #32
  - issue 2: The text of 9.2.5.7 makes it very clear that msgTxInterval is per-agent (per destination MAC address). However, the MIB variable IldpV2MessageTxInterval is per-system. There is clearly a problem that needs to be fixed. **Proposed solution on next page ...**
  - Issue 3: The text in the MIB certainly differs from the text in section 9.2.5.22. The MIB has no +1, 9.2.5.22 does. The corresponding text in 802.1AB-2005 doesn't have the +1. Clearly a conscious change was made in the 2009 text, but not to the MIB. As to which one is correct, I'd lean towards the +1. The difference is that, without the +1, the receiver times out at exactly the same time that the Nth frame is expected to arrive. The +1 makes much more sense. **Fix MIB DESCRIPTION**
  - Fixed in 802.1AB-cor2 which is approved

# Technical review - Issue #2 (121)

- The commenter's suggestion for a fix to part 2 of item 121 is basically correct. I would not delete the current universal variables, but would make it clear in the DESCRIPTIONS of the new variables added to IldpV2ManAddrConfigTxPortsEntry that the default value of these variables when a new row is created is the current value of the corresponding global variables that now exist. This goes in revised DESCRIPTION clauses of the current variables, also, of course.
- In other words:
  - Now: There are variables that are global that should be per-instance.
  - New: We add per-instance variables in parallel to the current variables.
  - The current global variables now supply default values for new rows created in the per-instance variables.

# Maintenance Item – 0122

- Submission: Tony Jeffree – July 2013
- Issues:
  - In 802.1BA, clause 6.7.2
  - b) The implementation shall be capable of declaring the MSRP attributes associated with a single stream; i.e., a single Talker declaration, and registering the MSRP attributes associated with the Listener declaration(s) that result from that Talker declaration (see 3.5.1.2 and 3.5.1.3 of IEEE Std 802.1Q).
- Proposed Resolution:
  - The references in bullet b) should be to 35.1.2 and 35.1.3
- Discussion:
  - Proposal agreed
  - This editorial is not critical enough for a corrigendum, target for next update of 802.1BA

# Maintenance Item – 0125

- Submission: John Messenger – September 2013
- Issues:
  - The definition of the ISS belongs in 802.1AC rather than 802.1Q. 802.1AC-2012 was based on text from 802.1Q-2011. Since then, amendments have made changes to the ISS and these have been incorporated into 802.1Q. This is probably wrong, and material should be moved from 802.1Q to 802.1AC. There may be a problem with 802.1Qbp as well.
- Proposed Resolution:
  - Some items have been added back into 6.6 ISS and 6.7 of 802.1Q
    - 6.6.1 Stream Reservation Protocol (SRP) Domain status parameters
    - 6.6.2 Control primitives and parameters
    - 6.6.3 EVB status parameters
  - 6.7.1 Support of the Internal Sublayer Service by IEEE Std 802.3 (CSMA/CD)
  - Do we want to remove this into 802.1AC?
- Discussion:
  - Move 6.6.2 to clause 11 of .1AC (as part of .1AC-rev) (done: 11.4), retain in Q until AC published
  - Move 6.7.1 to clause 12 of .1AC (as part of .1AC-rev) (done: end of 12.1), retain in Q until AC published
  - Move 6.6.1 & 6.6.3 to more suitable places in .1Q (included in current.1Q-rev draft) (done)
  - Ballotting in ~~802.1Q-Rev (published)~~ and 802.1AC-Rev

# Maintenance Item – 0126

- Submission: Ajith. Adapa – September 2013
- Issues:
  - In Appendix C.6, MAX-ACCESS for OBJECT TYPE dot3adAggPortActorOperKey is defined as read-write.
  - Proper value for MAX-ACCESS for OBJECT TYPE dot3adAggPortActorOperKey should be read-only. Check the description for the OBJECT and it is mentioned as read-only.
- Proposed Resolution:
  - Fix
- Discussion:
  - implemented in current draft of AX-Rev (sponsor recirc)
  - Approved and published.

# Maintenance Item – 0127

- Submission: Ajith. Adapa – September 2013
- Issues:
  - If we execute both the state machines (TX\_LLDP\_INITIALIZE and TX\_TIMER\_INITIALIZE) one after the other we never use txShutdownWhile timer as we start and stop the timer immediately when adminStatus is changed to disabled or enabledRxOnly.
- Proposed Resolution:
  - In case of adminStatus set as disabled or enabledRxOnly we have a new state called TX\_TIMER\_DISABLED.
- Discussion:
  - The problem is that
    - (adminStatus == disabled) ||
    - (adminStatus == enabledRxOnly)
  - sends the Transmit state machine to TX\_SHUTDOWN\_FRAME which starts a timer and sends the Transmit timer state machine to TX\_TIMER\_INITIALIZE which resets that same timer – undoing the setting of it.
  - Agreed solution (3): delete setting the timer to zero from that state and add it to TX\_LLDP\_INITIALIZE.
  - Fixed in 802.1AB-cor-2 which is approved

# Proposed resolutions -127

1. New state (TX\_TIMER\_DISABLED) would go in the Transmit timer state machine.
  - We shouldn't have a global transition into the new state because that would open the possibility of global transitions into the new state and TX\_TIMER\_INITIALIZE could be true at the same time. Since all the states below TX\_TIMER\_IDLE are transient states (i.e. they all operate on variable values and then UCT back to TX\_TIMER\_IDLE), one could put the condition on a transition from TX\_TIMER\_IDLE to the new state.
  - The box for the new state could be empty (no actions – just a place to wait for the txShutdownWhile to expire. There would be a transition out of that state to TX\_TIMER\_INITIALIZE when txShutdownWhile==0.
  - Remove
    - (adminStatus == disabled) ||
    - (adminStatus == enabledRxOnly)
  - from the global transition into TX\_TIMER\_INITIALIZE (leaving only BEGIN or portEnabled == FALSE as global transitions into that state).
2. remove the initialization of that timer (txShutdownWhile=0) from TX\_TIMER\_INITIALIZE of Fig 9-3 (Transmit timer state machine) and move it to TX\_INFO\_FRAME of Fig 9-1 (Transmit state machine)
3. delete setting the timer to zero from that state and add it to TX\_LLDP\_INITIALIZE.
4. move the txShutdownWhile timer initialization into txInitializeLLDP() as part of 9.2.7.12 item c) or in the TX\_LLDP\_INITIALIZE state explicitly seems to be the best and easiest approach. The former would be more consistent.

# Maintenance Item – 0128

- Submission: John Messenger– February 2014
- Issues:
  - Footnote 59 at the bottom of page 1454, referring to the source of RFCs, is incorrect.
- Proposed Resolution:
  - Internet RFCs are retrievable at <http://www.ietf.org/rfc/rfcNNNN.txt>
- Discussion:
  - Agreed.
  - Similar comment received on 802.1Qrev sponsor ballot, change included in 802.1Q-Rev.
  - Published.



# Maintenance Item – 0131

- Submission: Eric Multanen – March 2014
- Issues:
  - Clause E.1 incorrectly refers to clause 9.1 as the source of the LLDPDU bit and octet ordering conventions. The correct clause number is 8.1.
  - (Clause 9.1 was the correct location in IEEE 802.1AB-2005.)
- Proposed Resolution:
  - Replace "9.1" with "8.1".
  - Alternatively, since the material in clause E is now part of P802.1Q-REV, maybe clause E should be removed when Q-REV is standardized.
- Discussion:
  - Clause E was already removed in 802.1AB/Cor-1.
  - Reject this maintenance item.

# Maintenance Item – 0132

- Submission: Norm Finn – March 2014
- Issues:
  - Table D-3 is wrong. It numbers the bits 0-7, and Figure D-7 numbers them 1-8. This is not a major problem; most readers should be able to detect the blunder and do the right thing.
  - However, this TLV is now documented in three places: < 802.1AB-2009, exactly as in 802.1Q-REV D2.0 < 802.1Q-2012, exactly as in 802.1Q-REV D2.0 < P802.1AX-REV, corrected and extended. This standard is starting sponsor ballot.
- Proposed Resolution:
  - Delete section D.2.7 and renumber the remaining sections of Annex D.2. Replace all references to D.2.7 in the document with the corresponding references to 802.1AX-REV Annex F.1.
  - Check knock-on effects in the rest of the document (e.g., MIB)
- Discussion:
  - Agreed
    - Decided to not align Table D-2 with numbering convention
  - To be included in 802.1Q-2014 corrigendum
  - See 0152

# Maintenance Item – 0133

- Submission: Norm Finn – March 2014
- Issues:
  - Table E-2 is wrong. It numbers the bits 0-7, and Figure D-7 numbers them 1-8. This is not a major problem; most readers should be able to detect the blunder and do the right thing.
  - However, this TLV is now documented in three places: < 802.1AB-2009, exactly as in 802.1Q-REV D2.0 < 802.1Q-2012, exactly as in 802.1Q-REV D2.0 < P802.1AX-REV, corrected and extended. This standard is starting sponsor ballot.
- Proposed Resolution:
  - Delete section E.8 and renumber the remaining sections of Annex E. Replace all references to E.8 in the document with the corresponding references to 802.1AX-REV Annex F.1.
- Discussion:
  - Clause E was already removed in 802.1AB/Cor-1.
  - References fixed in 802.1AB/Cor-2/D0.2 – status = Balloting.
  - 802.1AB/Cor2 is approved

# Maintenance Item – 0134

- Submission: Eric Multanen – March 2014
- Issues:
  - Once the current P802.1Q-REV project becomes a standard, clauses E and F may be removed from IEEE 802.1AB because the IEEE 802.1 Organizationally Specific TLVs defined in clause E have been moved to P802.1Q-REV and, in the case of the Link Aggregation TLV, to P802.1AX-REV.
  - The IEEE 802.3 Organizationally Specific TLVs have been transferred to an 802.3 standard.
- Proposed Resolution:
  - Once P802.1Q-REV, P802.1AX-REV and relevant 802.3 projects have been standardized, remove clauses E and F from IEEE 802.1AB.
- Discussion:
  - Reject
  - The notes added in 802.1AB-cor1 indicate that this will be done in the next revision of 802.1AB

# Maintenance Item – 0135

- Submission: Bob Noseworthy – May 2014
- Issues:
  - 802.1AS-2011 clause 11.2.5 possible Pdelay\_Req message storm
- Proposed Resolution:
  - Remove the requirement to send a new Pdelay\_Req immediately after entry to the RESET state.
- Discussion:
  - Issue agreed
  - Solution adopted from original maintenance request
  - Balloting in 802.1AS-Cor2.

# Maintenance Item – 0136

- Submission: Mick Seaman – May 2014
- Issues:
  - 802.1X clause 6.2.1 possible incorporation of HKDF (RFC 5869)
- Proposed Resolution:
  - Add or substitute the RFC 5868 (HKDF) for the current KDF.
  - Placeholder for future discussion rather than a recommended change.
- Discussion:
  - Evaluation performed by Security TG – this only needs to be added if there's a future non-compatible change in this area.

# Maintenance Item – 0137/139

- Submission: Pat Thaler – May 2014
- Issues:
  - 802.1Q-2011 clause 32, 33: Encoding of congestion notification PDUs
  - Polarity of cnmQOffset defined differently in different places
  - Interoperable implementation not possible
- Revised Proposed Resolution:
  - In 32.14.4 e), change:
    - "and the CNM's cnmQOffset field (33.4.5) is negative," to
    - "and the CNM's cnmQOffset field (33.4.5) is positive"
  - In 33.4.5 change:
    - "The two's-complement signed integer value of the transmitting CP's cpQOffset (32.8.7) in units of 64 octets."  
to
    - "The two's-complement signed integer value of - cpQOffset (32.8.7) of the transmitting CP in units of 64 octets."
  - The effect of these changes is that cnmQOffset is positive when the current queue is longer than the queue setpoint (i.e. positive indicates congestion).
- Discussion:
  - Proposed text developed on the email reflector and accepted.
  - 802.1Q-2014/Cor-1 will be initiated at November 2014 meeting including this

# Maintenance Item – 0138

- Submission: Bob Noseworthy – May 2014
- Issues:
  - 802.1AS-2011 clause 10.2.11, Figure 10-8 : Sync messages can be sent more often than intended
  - Might overload partner
- Proposed Resolution:
  - Remove the 0.5\* from the exit condition expression, OR
  - favour waiting for incoming Sync messages (this solution chosen)
- Discussion:
  - Issue agreed
  - Solution developed in TSN (proposer's final choice (1.3 / 0.7)) – documented in Annex Z of 802.1ASbt/D0.5



# Maintenance Item – 0140

- Submission: Bob Noseworthy – July 2014
- Issues:
  - 802.1AS-2011 clause 11 – asCapable Hair Trigger
  - Numerous scenarios wherein asCapable, once set TRUE, can immediately be set FALSE with little or no delay.
- Proposed Resolution:
  - Increase hysteresis
  - asCapable could be set to FALSE only if 3 faults are detected in a row
- Discussion:
  - Agreed to be an issue
  - Included in Annex Z of 802.1ASbt but no solution developed

# Maintenance Item – 0141

- Submission: John Messenger – July 2014
- Issues:
  - Item 0125 copied ISS functions from 802.1Q-2011 to 802.1AC-Rev.
  - Once 802.1AC-Rev is approved, we need to remove them from Q
- Proposed Resolution:
  - Delete 802.1Q 6.6.1 and 6.7.1
  - Fix up references as documented in maintenance request.
- Discussion:
  - Propose to fix this in next maintenance of 802.1Q

# Maintenance Item – 0144

- Submission: Ajith Adapa – September 2014
- Issues:
  - 802.1AX-2008 Periodic Transmission Machine
  - Figure 5-12 shows transition from NO\_PERIODIC to FAST\_PERIODIC as unconditional
- Proposed Resolution:
  - Change condition to
    - $LACP\_ENABLED = TRUE) * (port\_enabled = TRUE) * ((Actor\_Oper\_Port\_State.LACP\_Activity = PASSIVE) + (Partner\_Oper\_Port\_State.LACP\_Activity = PASSIVE))$
- Discussion:
  - There is a global condition which overrides all other conditions including UCT. See 5.1.1.3
  - Reject

# Maintenance Item – 0145

- Submission: Tony Jeffree – October 2014
- Issues:
  - 802.1Q subcluse 17.7.12
  - the ETS code point needs adding to the textual convention IEEE8021FqtssTxSelectionAlgorithmIDValue
- Proposed Resolution:
  - Include an enumerated value for this, and change the "reserved" values, as shown:
    - 2: Enhanced Transmission Selection algorithm
    - 3-255: Reserved for future standardization.
- Discussion:
  - Agreed. Include in 802.1Q-2014-Cor1.

# Maintenance Item – 0146

- Submission: John Messenger/Mark van Tol – November 2014
- Issues:
  - 802.1AXbk rebased its MIB on the 802.3ad version
  - This may have reintroduced errors from that version
- Proposed Resolution:
  - Change the value range of all 6 "Priority" objects of dot3adAggPortTable from (0..255) to (0..65535).
  - Change the OID for the MIB from
    - { iso(1) member-body(2) us(840) 802dot3(10006) snmpmibs(300) 43 }
  - To
    - { iso(1) member-body(2) us(840) ieee802dot3(10006) snmpmibs(300) 43 }
- Discussion:
  - Existence of a problem is agreed
  - Change is not allowed per SMI rules. Object must be deprecated, but given the OID issue, the entire MIB must be deprecated and re-rooted.
  - Solution needs to be developed.

# Maintenance Item – 0147

- Submission: John Messenger – November 2014
- Issues:
  - China National Body submitted comments on Std 802 PSDO pre-ballot
  - Provide a detailed description about the various categories of network resources, their registration authorities and the agreements this authorities refer to.
  - This proposed project provides an overview to the family of IEEE 802 standards. IEEE 802 standards are involved with many types and large numbers of network resources, including EtherType number, information element, OID, reason code, etc. We believe it is necessary to manage them by a feasible and effective method. However, the fact is that some of them are specified, while others are not entirely clear who and on what base is administrating these network resources.
- Proposed Resolution:
  - Respond with: “IEEE has been designated by the ISO council to act as the exclusive registration authority for the implementation of international standards in the ISO/IEC 8802 series.”
- Discussion:
  - Agreed.
  - Glenn conducted E-poll ballot of 802.1 to approve response.
  - EC approved a different response, which was sent (?)

# Maintenance Item – 0148

- Submission: Janos Farkas – November 2014
- Issues:
  - SPB-2 says SPT BPDU exchange is mandatory
  - However the required information exchange can be achieved using IS-IS
- Proposed Resolution:
  - In A.37, change SPB-2 to “Encode, decode, and validate IS-IS Hello PDUs or SPT BPDUs for the Agreement Protocol (AP) and support AP logic in IS-IS?”
- Discussion:
  - Agreed. Editor will include in Q/Cor1

# Maintenance Item – 0149

- There is no item 0149



# Maintenance Item – 0150

- Submission: Levi Pearson – November 2014
- Issues:
  - SRP Endstation requirements duplicated from SRP Bridge requirements and are not relevant to endstations
  - Clarify endstation generation of TalkerFailed
- Proposed Resolution:
  - Strike SRP-11 and SRP-12 from the PICS for SRP end station behavior.
  - Further discussion should probably take place to either eliminate the possibility of sending Talker Failed from an end station or to completely specify how a Talker end station uses the Talker Failed attribute.
- Discussion:
  - Discuss in TSN proposed resolution:  
<http://www.ieee802.org/1/files/public/docs2015/cc-cgunther-maint-150-0115-v01.pdf>
  - Document agreement in Q/Cor1

# Maintenance Item – 0151

- Submission: Kenneth Williams – November 2014
- Issues:
  - 802.1AX bit numbering reference error
  - Bit position reference is incorrect in text which describes counting/indexing method.
- Proposed Resolution:
  - Replace 'seventeenth' with 'sixteenth' in sentence which read:
  - "... of the second octet are assigned the value of the ninth through seventeenth bits ..."
- Discussion:
  - Issue and proposed solution agreed. Awaiting suitable amendment or revision.

# Maintenance Item – 0152

- Submission: Tony Jeffree – January 2015
- Issues:
  - Previous maintenance request (#132) calls for the removal of D2.7 (Link Agg TLVs) from 802.1Q as these are also documented in 802.1AX-REV. However:
  - The TLVs are documented in AX-REV but the related managed objects in the 802.1AB MIB extension are still documented in 802.1Q
  - The MIB object in Q that represents the link agg capability/status (Table F-1 in AX-REV) make use of a textual convention taken from 802.1AB which no longer corresponds to the current definition of the field.
- Proposed Resolution:
  - Various alternative possibilities:
    - Fix the textual convention in AB to match Table F-1.
    - Write a new textual convention in the extension MIB in Q-2014 Cor-1 that corresponds to Table F-1 and use that in the object defs in Q., or
    - Deprecate the objects in Q (via Q-2014-Cor-1) and write a (very short) extension MIB to go in AX-REV.
- Discussion:
  - Problem agreed. Panos and Tony recommend option 2.
  - Agree to proceed with option 2. Editor will update draft.

# Maintenance Item – 0153

- Submission: Raphael Garti – January 2015
- Issues:
  - 802.1AB PortAutoNegAdvertisedCap objects are the wrong size
- Proposed Resolution:
  - Make changes to the MIB detailed in the request
- Discussion:
  - John emailed Howard Frazier (copy Glenn) to confirm issues – no reply
  - Need to deprecate MIB objects and add new ones with correct syntax
  - Need to decide .1AB/Cor2 vs .1AB-REV

# Maintenance Item – 0154

- Submission: Raphael Garti – January 2015
- Issues:
  - 802.1X-2010 PAE MIB definitions
  - ieee8021XPaePortAuthenticatorEnable and ieee8021XPaePortSupplicantEnable
- Proposed Resolution:
  - Make changes to the MIB detailed in the request
- Discussion:
  - Refer items 154-157 to Security Task Group for review
  - Status in <http://www.ieee802.org/1/private/email2/msg22740.html>

# Maintenance Item – 0155

- Submission: Raphael Garti – January 2015
- Issues:
  - 802.1X-2010 PAE MIB definitions
  - ieee8021XAuthPaeReAuthEnabled should not always return FALSE
- Proposed Resolution:
  - Omit the requirement to always return false.
  - Make changes to the MIB detailed in the request
- Discussion:
  - Refer to Security Task Group for review
  - Status in <http://www.ieee802.org/1/private/email2/msg22740.html>

# Maintenance Item – 0156

- Submission: Raphael Garti – January 2015
- Issues:
  - 802.1X-2010 PAE MIB definitions
  - ieee8021XAuthenticatorTable should depend on capability bits
- Proposed Resolution:
  - Allow configuration of an authenticator independently of its administrative status.
  - Make changes to the MIB detailed in the request
- Discussion:
  - Refer to Security Task Group for review
  - Status in <http://www.ieee802.org/1/private/email2/msg22740.html>

# Maintenance Item – 0157

- Submission: Raphael Garti – January 2015
- Issues:
  - 802.1X-2010 PAE MIB definitions
  - Typo in description of ieee8021XEapolStartFramesTx
- Proposed Resolution:
  - Change descriptopn from “counts the number of \*received\* frames”. Should be \*transmitted\*.
  - Make changes to the MIB detailed in the request
- Discussion:
  - Refer to Security Task Group for review
  - Provisionally agreed
  - Status in <http://www.ieee802.org/1/private/email2/msg22740.html>



# **NEW MAINTENANCE ITEMS**

# Maintenance Item – 0158

- Submission: Norman Finn – January 2015
- Issues:
  - SRP: Proposed changes to allow use of VLAN 1
- Proposed Resolution:
  - Add the core/not variables to Clauses 12 and 17.
  - Mention this in a NOTE 4 in 8.8.2
  - Add explanatory why/how text somewhere in Clause 35
  - Add a “shall” clause to 35.1.4 saying that the Static VLAN Registration Entry for transmitting the SR\_PVID tagged/untagged changes when the core port status changes.
- Discussion:
  - Discuss in TSN and Interworking

# Maintenance Item – 0159

- Submission: Bob Noseworthy – 26 February 2015
- Issues:
  - 802.1AS PortSyncSyncSend State Machine
  - PortSyncSyncSend SM (Fig 10-8) does not behave as intended if the device was grandmaster and then has priority1 set to 255
- Proposed Resolution:
  - Introduce a new variable systemIdentityChange
  - Change behaviour of PortSyncSyncSend State Machine
- Discussion:
  - TSN has developed a resolution which is included in 801.1AS-Rev/D0.9 – ready

# **JTC1 SC6 STATUS**

# ISO/IEC JTC1 SC6 Status

- PSDO agreement in place to allow progress of IEEE standards in ISO/IEC
- EC JTC1 standing committee is administering the process for IEEE 802 Standards
  - 802.1, 802.3, 802.11, 802.22
- 802.1 has previously agreed to submit its standards to SC6
  - Most standards and their amendments
  - Currently phasing in approvals
  - Motion required per standard
    - To forward sponsor ballot draft for comment
    - To submit approved standard for PSDO approval

# 802.1 Stds for SC6 approval

- PSDO approved
  - 802.1AE - FDIS passed Oct 2013, cmnts liaised Jan 2014
  - 802.1X - FDIS passed Oct 2013, cmnts liaised Jan 2014
  - 802.1AS (Time synch) - FDIS passed Dec 2013, cmnts liaised May 2014
  - 802.1AB (LLDP) - FDIS passed Dec 2013, cmnts liaised May 2014
  - 802.1AR (Secure device ID) - FDIS passed Dec 2013, cmnts liaised May 2014
- PSDO in process (FDIS)
  - 802.1AEbn - FDIS closed Feb 2015, one China cmnt
  - 802.1AEbw - FDIS closed Feb 2015, one China cmnt
  - 802.1Xbx - 60-day ballot closes March 19<sup>th</sup>, 2015
  - 802.1Q-2014 - 60-day ballot closes March 13<sup>th</sup>, 2015
- PSDO in process (Pre-ballot)
  - 802 when? - pre-ballot closed 26 Oct 2014, cmnts liaised
- Information (SC6 comments on 802.1 sponsor ballot)
  - 802.1Q - sent (March 2014)
  - 802.1AX - sent as information to SC6 (July 2014)
- To be submitted (802.1 work in progress)
  - 802.1AC - send as information to SC6, at sponsor ballot time
- PSDO to be submitted after 802.1Q
  - 802.1BA (AVB systems) - motion this week to send for information
  - 802.1BR (Port extender) - motion this week to send for information