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| IEEE 802.1 REVISION REQUEST 0119                                  |
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DATE:June 24, 2013

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REQUESTED REVISION:

    STANDARD: 802.1AS

    CLAUSE NUMBER: 10.3.11.3

    CLAUSE TITLE: State diagram

RATIONALE FOR REVISION:

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.

The current BMCA state machines in sub-clause 10.3 of 802.1AS (and its sub-clauses) were developed in 2008 using the RSTP state machines of 802.1D-2004 as a guideline. Discussion during the May, 2013 meeting (offline) between the editor and an 802.1 participant who is very familiar with the RSTP state machines indicated that there were some errors in the version that was in 802.1D-2004; these were subsequently fixed in a later version of 802.1Q; however, the fixes were in the form of references in 802.1Q to the relevant subclauses of 802.1D-2004 and in indication of what changes should be made. However, it was indicated to the editor that the full RSTP state machines are contained in the new draft P802.1Q-Rev-2013, which is merging 802.1D-2004 and 802.1Q-2011, and that this could be used as a guide to fix the problem.

Note that this item was discussed during the May, 2013 802.1 TSN TG meeting. It was

indicated that the problem should be addressed in 802.1ASbt and that the editor
should submit this item for entry in the maintenance database.

PROPOSED REVISION TEXT:

The exact fix is not known at the present; however, the fix will follow the correct
RSTP state machines in P802.1Q-Rev-2013. It was suggested that the editor initially
examine the recordDispute() function and its result.

IMPACT ON EXISTING NETWORKS:

This corrects an error in the BMCA. It will result in faster reconfiguration when a
GM downgrades (and will result in the intended behavior).


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| Please attach supporting material, if any                            |
| Submit to:- Tony Jeffree, Chair IEEE 802.1                           |
|  and copy:- Glenn Parsons, Vice-Chair IEEE 802.1                     |
|     E-Mail: stds-802-1-maint-req@ieee.org                            |
|                                                                      |
|              +------- For official 802.1 use -----------+           |
|              | REV REQ NUMBER:0119                       |           |
|              | DATE RECEIVED: 04/07/13                   |           |
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|              | BALLOT REQ'D YES/NO                       |           |
|              | Status: R                                 |           |
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