IEEE P802.11
Wireless LANs

|  |
| --- |
| Resolution of CIDs 3243, 3357 |
| Date: 2019-01-01 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Solomon Trainin | Qualcomm |  | 972547885738 | strainin@qti.qualcomm.com |
| Assaf Kasher | Qualcomm |  |  | akasher@qti.qualcomm.com  |
| Alecsander Eitan | Qualcomm |  |  | eitana@qti.qualcomm.com  |
|  |  |  |  |  |

Resolution of CID 3243, and 3357 is presented

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 3243 | 155.00 | 21 | 9.4.2.271 | The TDD Synchronization element is incomplete. In 802.1AS and 1588, the best master clock (BMC) algorithm needs priority1, class, accuracy, offsetScaledLogVariance, priority2, and identity values. See Figure 27 in Section 9.3.4 of 1588-2008. | Either add priority1, priority2, and identity values to the TDD Synchronization element or describe a new BMC algorithm to be used by DMG STAs that support TDD channel access, without referring to 802.1AS | **Revised**Solution is presented in this document  |
| 3357 | 155.00 | 18 | 9.4.2.271 | TDD Synchronization element has been added to the draft specification. However, there is no reference to this information element in normative behavior description. In other word, the usage of the element is not described. | Either remove this information element from the standard or add description how to use it. | **Revised**Solution is presented in this document  |

**9.4.1.7 Reason Code field**

***TGay editor add new code to the Table 9-51—Reason codes***

|  |  |  |
| --- | --- | --- |
| **Reason code** | **Name** | **Meaning** |
| 69 | TIME\_SYNC\_LOST | The STA is not able to maintain TSF |

**9.4.2.127.7 TDD Capability Information field**

***TGay editor add new subfield to the Figure 28 —TDD Capability Information field format and text at end of the subclause***

|  |  |  |  |
| --- | --- | --- | --- |
|  | B0  | B1 | B3 B15  |
|  | TDD Channel Access Supported  | TDD Synchronization Mode | Reserved  |
| Bits: | 1  | 1 | 14 |

The Synchronization Mode subfield is set to 1 to indicate that the STA supports the TDD time synchronization described in 11.yy.4. The subfield is set to 0 otherwise.

**9.4.2.271 TDD Synchronization element**

***TGay editor add new subfield to the Figure 100 —TDD Synchronization element format and new text after the last paragraph***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Element ID  | Length  | Element ID Extension  | Clock Quality  | Sync Mode |
| Octets: | 1 | 1 | 1 | 4 | 1 |

Sync Mode subfield indicates access to the local source of timing. Sync Mode set = 1 indicates that the STA does not have access to the local source of timing. Sync Mode set to 0 indicates that the local clock is used by the STA at the time of sending the element.

**Annex C**

***TGay editor add new entry to the Dot11DMGOperationEntry at end of the SEQUENCE***

Dot11DMGSyncModeOperation TruthValue,

***TGay editor append at end of the dot11DMGOperationTable***

Dot11DMGSyncModeOperation OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This is a control variable.

It is written by the SME or an external management entity.

Changes take effect as soon as practical in the implementation.

This attribute when true indicates access to the local source of timing."

DEFVAL { False }

::= { dot11DMGOperationEntry 21 }

**11.yy.4 TDD Time synchronization**

The following rules apply to the communication between DMG AP and PCP STA and associated DMG non-AP and non-PCP STA that are operating under TDD channel access operation (11.yy) and are capable of TDD synchronization mode as indicated in the Synchronization Mode subfield set to 1 of the TDD Capability Information field in DMG Capabilities element (9.4.2.127) sent by the STAs, and does not apply overwise.

A STA with the Dot11DMGSyncModeOperation set to true shall include the TDD Synchronization element with the subfield Sync Mode set to 0 in the Announce frame it transmits to the peer STA.

An AP STA with the Dot11DMGSyncModeOperation set to true shall include the TDD Synchronization element with the subfield Sync Mode set to 0 in the DMG Beacon frame it transmits.

A STA with the Dot11DMGSyncModeOperation set to true shall transmit the frames with the TDD Synchronization element periodically at least once per Beacon Interval.

A STA with the Dot11DMGSyncModeOperation set to true shall not adopt the STA’s TSF timer to the Timestamp field of the received DMG Beacon or Announce frames.

A STA with the Dot11DMGSyncModeOperation set to false shall adopt the STA’s TSF timer to the Timestamp field of the DMG Beacon, and Announce frames received with the TDD Synchronization element contains the Sync Mode subfield set to 0.

A STA with the Dot11DMGSyncModeOperation set to false may not include the TDD Synchronization element in the Announce frame and the DMG Beacon frame it transmits.

A SME of the STA with the Dot11DMGSyncModeOperation set to false shall issue the MLME-DISASSOCIATE.request primitive with the ReasonCode set to the TIME\_SYNC\_LOST and the PeerSTAAddress equal to the TA of the last received Announce frame or to the BSSID of the DMG Beacon frame that the Sync Mode subfield is set to 1 in the TDD Synchronization element or the element is not presented in the frame.

**References:**

1. IEEE P802.11ay/D2.1, October 2018
2. IEEE P802.11-REVmd/D2.0, December 2018
3. 11-18-1801-00-00ay LB234 Comment resolution for CID 3358 and others