IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Resolution for CID 1000 | | | | |
| Date: April 28, 2021 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Abhishek Patil | Qualcomm Inc |  |  | appatil@qti.qualcomm.com |
| Gaurang Naik |  |  |  |
| Jouni Malinen |  |  |  |

Abstract

This submission proposes resolutions for CID 1000 received in LB258 (REVme D1.0).

**Revisions:**

* Rev 0: Initial version of the document.
* Rev 1: Updated based on offline feedback.
* Rev 2: Includes live updates when the doc was presented during REVme telco 5/27/22

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGm Draft. This introduction is not part of the adopted material.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 1000 | Abhishek Patil | 3.2 | 240 | 11 | The term DTIM Beacon frame or DTIM beacon is used at many locations. However there isn't a definition or a paragraph explaining it. | Provide a definition for DTIM beacon | **Revised**  Agree with the comment. A definition for DTIM beacon is be added to clause 3.2. In addition, all instances of DTIM Beacon (upper case b) are replaced with DTIM beacon (lower case b). A few other fixes along the way.  **TGm editor please implement changes as shown in this document.** |

***TGm editor: The baseline for this section is REVme D1.2.***

**3.2 Definitions specific to IEEE Std 802.11**

***TGm editor: Please add the following definition in alphabetical order in this subclause as shown below:***

**delivery traffic indication map (DTIM) beacon:** A Beacon frame or an S1G Beacon frame after which any buffered group addressed bufferable units (BUs) are transmitted.

***TGm editor: Please modify the following definition in this subclause as shown below:***

**delivery traffic indication map (DTIM) interval**: The interval between the consecutive target beacon transmission times (TBTTs) of DTIM beacons. The value, expressed in time units, is equal to the product of the value in the Beacon Interval field and the value in the DTIM Period field.

NOTE 1 – If the AP corresponds to a nontransmitted BSSID in a multiple BSSID set, the DTIM Period field is the one contained in the Multiple BSSID-Index element carried in the nontransmitted BSSID profile for that AP. Otherwise, the DTIM Period field is the one contained in the TIM element carried in the Beacon frame or S1G Beacon frame transmitted by that AP.

NOTE 2 – In a multiple BSSID set, the Beacon Interval field is the one contained in the Beacon frame transmitted by the AP corresponding to the transmitted BSSID in a multiple BSSID set.

**4.3.21.9 Flexible multicast service (FMS)**

***TGm editor: Please delete the following paragraph in this subclause as shown below:***

**10.24.3.3 MCCAOP reservations**

***TGm editor: Please modify the following paragraph in this subclause as shown below:***

The schedule is defined by means of the MCCAOP Reservation field defined in 9.4.2.105.2 (MCCAOP Reservation field). An MCCAOP reservation schedules a series of MCCAOPs with a common duration given in the MCCAOP Duration subfield of the MCCAOP Reservation field. This series is started after the first DTIM beacon following the successful completion of the MCCAOP setup procedure and terminated when the MCCAOP reservation is torn down.

**10.51 Page slicing**

***TGm editor: Please replace “DTIM Beacon” in Figure 10-146 with “DTIM beacon” (i.e., lower case ‘b’)***

**10.62 Energy limited STAs operation**

***TGm editor: Please modify the following bullet in this subclause as shown below:***

* The transmission of group addressed BU(s) has ended, where the group addressed BU(s) are expected to be received by the EL STA following a DTIM beacon.

**14.14.8.4 Operation in light sleep mode for a mesh peering**

***TGm editor: Please modify the following paragraph in this subclause as shown below:***

If a mesh STA is in light sleep mode for a mesh peering, it shall enter the awake state prior to every TBTT of the corresponding peer mesh STA to receive the Beacon frame from the peer mesh STA. The mesh STA may return to the doze state after the beacon reception from this peer mesh STA, if the peer mesh STA did not indicate buffered individually addressed or group addressed frames. If an indication of buffered individually addressed frames is received, the light sleep mode mesh STA shall send a peer trigger frame with the RSPI field set to 1 to initiate a mesh peer service period with the mesh STA that transmitted the Beacon frame (see 14.14.9.2 (Initiation of a mesh peer service period)). If an indication of buffered group addressed frames is received, the light sleep mode mesh STA shall remain in awake state after the DTIM beacon reception to receive group addressed frames The mesh STA shall remain awake state until the More Data subfield of a received group addressed frame is set to 0 or if no group addressed frame is received within the PHY specific Group Delivery Idle Time. (See 14.14.5 (TIM types).)

**11.2.3.4 TIM types**

***TGm editor: Please modify the following paragraph in this subclause as shown below:***

The third and fourth lines in Figure 11-14 (Infrastructure power management operation) depict the activity of two STAs operating with different power management requirements. Both STAs power-on their receivers when they need to listen for a TIM. This is indicated as a rampup of the receiver power prior to the TBTT. The first STA, for example, powers up its receiver and receives a TIM in the first Beacon frame; that TIM indicates the presence of a buffered BU for the receiving STA. The receiving STA then generates a PS-Poll frame, which elicits the transmission of the buffered BU from the AP. Non-GCR-SP group addressed BUs are sent by the AP subsequent to the transmission of a DTIM beacon.

**11.2.3.1 General**

***TGm editor: Please modify the following paragraph in this subclause as shown below:***

If any non-GLK STA in its BSS is in PS mode, the AP shall buffer all non-GCR-SP group addressed BUs that arrive via the DS and deliver them to all non-GLK STAs immediately following the next DTIM beacon. If the AP is an S1G AP, the AP may additionally deliver these BUs using group AID as defined in 10.55 (Group AID). If any GLK STA in its BSS is in PS mode, the AP shall not include any such STAs as a SYNRA destination and shall buffer all group addressed BUs that arrive from the attached bridge and are destined to such STAs, delivering them with individually addressed MPDUs using power save delivery methods.

**11.2.3.14.2 FMS general procedures**

***TGm editor: Please modify the following paragraph in this subclause as shown below:***

Each FMS counter decrements once per DTIM beacon and when the FMS counter reaches 0, buffered group addressed BUs assigned to that particular interval are scheduled for delivery immediately following the next DTIM beacon. After transmission of the buffered group addressed BUs, the AP shall reset the FMS counter to the delivery interval for the FMS streams associated with that FMS counter.

**29.6.2 WUR Beacon frame generation**

***TGm editor: Please modify the following paragraph in this subclause as shown below:***

If the WUR AP schedules a WUR Beacon frame, the WUR Beacon frame shall be the next frame for transmission according to the medium access rules specified in 10 (MAC sublayer functional description) unless a Beacon frame is scheduled for transmission as defined in 11.1.3.2 (Beacon generation in non-DMG infrastructure networks) in which case the Beacon frame is the next frame for transmission and the WUR Beacon frame is the next frame for transmission after transmitting the Beacon frame and non-GCR-SP group addressed if the Beacon frame is a DTIM beacon (see11.2.3.1 (General)).