IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Resolution for CIDs related to Multiple BSSID set | | | | |
| Date: January 17, 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 comments received in LB258 (REVme D1.0) for multiple BSSID set feature.

**Revisions:**

* Rev 0: Initial version of the document.
* Rev 1: Updated the resolution for 1004 based on feedback from Arik
  + Also includes resolution for CID 1003
* Rev 2: Live updates made when the doc was presented in TGm call on 2/7/22
* Rev 3: Added Part B – resolves CIDs 1019 & 1020
* Rev 4: Live updates to the resolutions for CIDs 1019 & 1020 when the doc was presented on REV call 4/28 PM1

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.

Part A:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 1004 | Abhishek Patil | 9.4.2.45 | 1356 | 36 | "Any element specific to the BSS or with content that is different from the transmitted BSSID." is a broad statement and doesn't capture the details of the inheritance mechanism. Add reference to 11.1.3.8.4 (Inheritance of element values) which provides the details of the inheritance mechanism. | Update the bullet as: "Any element specific to the BSS or with content that is different from the transmitted BSSID (see 11.1.3.8.4 (Inheritance of element values) for details on the inheritance operation)" | **Revised**  Agree with the comment. The cited bullet is terse and lacks details. Clause 11.1.3.8.4 provides details on what an ‘element specific to BSS’ means. This includes the condition that the value carried in the element is different from that for the transmitted BSSID. The bullet is updated to include a reference to clause 11.1.3.8.4 so that it is clear which elements are carried in the profile for the reported nontransmitted BSSID. In addition, a statement in clause 11.1.3.8.1 was updated to clarify the intention and the abbreviations for EMA was added to clause 3.4  **TGm editor, please implement changes as shown in doc 11-22/0116r2 tagged as 1004** |
| 1003 | Abhishek Patil | 9.4.2.45 | 1355 | 21 | NOTE 1 and NOTE 4 are saying the same. | Delete one of them. | **Revised**  Agree with the comment. NOTE 1 and NOTE 4 are essentially saying the same. The proposed change is asking to delete NOTE 1.  **TGm editor, please implement changes as shown in doc 11-22/0116r2 tagged as 1003** |

***TGm editor: The baseline for this document is REVme D1.0.***

* Multiple BSSID element

***TGm editor: Please delete the following NOTE and update the number for the remaining NOTEs in this subclause:***

[1003]***TGm editor: Please update the 4th bullet in the following paragraph this subclause as shown below:***

A nontransmitted BSSID profile carried in one or more Nontransmitted BSSID Profile subelements across one or more multiple BSSID elements in the same frame contains a list of elements for the AP or the DMG STA that has a nontransmitted BSSID and is defined as follows:

* Any element specific to the nontransmitted BSSID (see 11.1.3.8.4 (Inheritance of element values) for details on the inheritance operation and what qualifies as an element specific to the nontransmitted BSSID)[1004].

**11.1.3.8.1 General**

***TGm editor: Please update the following paragraph this subclause as shown below and merge it with the previous paragraph:***

[1004]A nontransmitted BSSID is discoverable if the AP corresponding to the transmitted BSSID includes information of that BSSID in its Beacon and Probe Response frames (though not necessarily in every frame).

**3.4 Acronyms and abbreviations**

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

[1004]EMA enhanced multiple BSSID advertisement

Part B:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 1019 | Abhishek Patil | 11.1.3.8.3 | 2660 | 48 | Any updates to the operational parameters of the BSS corresponding to the nonTxBSSID (such as updates to (V)HT/HE Operation element or other operational IEs) should be advertised in the DTIM beacon. | Provide normative text to clarify this behavior | **Revised**  Agree with the comment. A paragraph is added to clause 11.1.3.8.5 to cover this aspect.  **TGm editor please implement changes as shown in this doc tagged as 1019** |
| 1020 | Abhishek Patil | 11.1.3.8.3 | 2660 | 48 | An EMA AP must start advertising any parameter changes (such as BSS color change or (E)CSA, Quiet interval) early enough such that they appear in at least one DTIM beacon for each nonTxBSSID profile. | Provide normative text to clarify this behavior | **Revised**  Agree with the comment. A paragraph is added to clause 11.1.3.8.5 to cover this aspect.  **TGm editor please implement changes as shown in this doc tagged as 1020** |

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

**11.1.3.8.3 Discovery of a nontransmitted BSSID profile**

***TGm editor: Please update NOTE 3 in this subclause as shown below:***

NOTE 3—An AP corresponding to a nontransmitted BSSID [1019]can transmit a group addressed frame to advertise any changes to its BSS operational parameters or termination of the BSS (i.e., transmission of a broadcast Disassociation frame) during the beacon interval that follows the profile's DTIM beacon.

**11.1.3.8.5 Traffic advertisement in a multiple BSSID set**

***TGm editor: Please add new paragraphs after NOTE 1 in this subclause as shown below:***

[1019]An AP (which can correspond to either the transmitted BSSID or a nontransmitted BSSID) should advertise any change to the operational parameters that are specific to its BSS (such as, but not limited to, UORA parameter set or broadcast TWT parameter set) during the DTIM Beacon frame for its BSS so that STAs associated to that AP can receive the changes in the DTIM beacon without having to wake up for additional Beacon frames or S1G Beacon frames between the DTIM Beacon frames.

[1020]For operational parameters that apply to all the BSSs in the multiple BSSID set and those that involve a countdown (such as, but not limited to, channel switch announcement or BSS color change announcement), the AP corresponding to the transmitted BSSID should select a countdown value such that the pertinent element(s) appears in at least one DTIM Beacon frame of each AP in the set. This will allow a STA associated with an AP in the set to receive the announcement during the DTIM Beacon frame corresponding to its associated BSS.

Part C:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |  |