IEEE P802.11  
Wireless LANs

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| Resolutions for CID 49, 50 and 139 | | | | |
| Date: October 26, 2022 | | | | |
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Abstract

This submission proposes resolutions to CID 49, CID 50 and CID 139. The text used as reference is 802.11bf D0.3.

Revisions:

* Rev 0: Initial version of the document.

**Comments:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 139 | 11.21.18.1 | 64.56 | "In the sensing session termination, a sensing session is terminated." This sentence is redundant and adds no information to the draft. | Remove this sentence or add a clear definition for what is "sensing session termination" | **Revised.**  TGbf editor please implement changes as shown in doc 11-22/1823r0 tagged as #139. |
| 49 | 11.21.18 | 64.32 | WLAN sensing discovery procedure is missing. An AP may carry the sensing capabilities information for its surrounding APs in order to speed up the discovery process. For example, in the RNR element. | As in comment. | **Revised.**  TGbf editor please implement changes as shown in doc 11-22/1823r0 tagged as #49. |
| 50 | 11.21.18 | 64.32 | WLAN sensing discovery procedure is missing. In multi-BSSID set, transmitted BSSID may carry the sensing capabilities information for the nontransmitted BSSID. | As in comment. | **Revised.**  TGbf editor please implement changes as shown in doc 11-22/1823r0 tagged as #50. |

***TGbf Editor: Please add the following contents to subclause 11.21.18.1 (Overview).***

##### 11.21.18.1 Overview

In the sensing session setup, a sensing session is established, and in the sensing measurement setup, operational parameters associated with sensing measurement instance(s) are set(#429, #665, #848, #852, #853, #854, #856, #858, #859, #841). A sensing measurement instance is a time interval when sensing measurements are obtained, and it can be one of two variants(#605): Trigger-based (TB) sensing measurement instance (see 11.21.18.6 (TB sensing measurement instance))(#186) or non-TB sensing measurement instance (see 11.21.18.7 (Non-TB sensing measurement instance))(#186). A sensing measurement setup(#138) is active until terminated in a sensing measurement setup termination. In the sensing session termination, a sensing session is terminated, and all related active sensing measurement setups shall be terminated automatically. (#139)

***TGbf Editor: Please add the following contents to subclause 11.21.18.3 (Sensing session setup).***

##### 11.21.18.3 Sensing session setup

A sensing session is an agreement between a sensing initiator and a sensing responder to participate in a WLAN sensing procedure.

In the sensing session setup of a WLAN sensing procedure, a sensing session is established, and operational parameters associated with the sensing session are determined and may be exchanged between STAs.

In order to accelerate the sensing capabilities discovery between AP STAs and non-AP STAs, an AP STA transmits a Beacon or Probe Response frame carrying one or more of its neighboring AP STAs’ sensing capabilities should include in the frame a Reduced Neighbor Report element. Neighboring AP STA’s sensing capabilities is indicated in the Sensing field (see Figure 9-1002cj (Sensing field format)) in the TBTT Information field in the Neighbor Report element. (#49)

In a multiple BSSID set, to accelerate the sensing capabilities discovery, the AP STA corresponding to the transmitted BSSID transmits a Beacon or Probe Response frame carrying the sensing capabilities of one or more APs corresponding to the nontransmitted BSSIDs should include in the frame a Multiple BSSID element. The sensing capabilities of one or more APs corresponding to the nontransmitted BSSIDs are indicated in the Sensing field (see Figure 9-1002cj (Sensing field format)) in the Nontransmitted BSSID Profile subelement in the Multiple BSSID element. (#50)

A sensing session is identified by MAC addresses and/or associated AID/USID(#228, #729, #24).

A STA may participate in multiple sensing sessions either as a sensing initiator or as a sensing responder.

A sensing initiator may maintain multiple sensing sessions to fulfill the requirements of a WLAN sensing procedure.

The detailed sensing session setup procedure is TBD.

***TGbf Editor: Please revise Figure 9-709 (TBTT Information field format) in 802.11be draft 2.2 as follows and add it into 802.11bf D0.3:***

##### 9.4.2.170.2 Neighbor AP Information field

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The TBTT Information Set field contains one or more TBTT Information fields. The TBTT Information field is defined in Figure 9-709 (TBTT Information field format(11ax)).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Neighbor AP TBTT Offset | BSSID (optional) | Short SSID (optional) | BSS Parameters | 20MHz PSD | MLD Parameters | Sensing |
| Octets: | 1 | 0 or 6 | 0 or 4 | 0 or 1 | 0 or 1 | 0 or 3 | 0 or 9 |

**Figure 9-709—TBTT Information field format**

The Sensing field is defined in Figure 9-1002cj (Sensing field format). (#49, #50)

***TGbf Editor: Please revise Figure Table 9-321 (TBTT Information field contents if the TBTT Information Field Type subfield is set to 0) in 802.11be draft 2.2 as follows and add it into 802.11bf D0.3:***

**Table 9-321—TBTT Information field contents if the TBTT Information Field Type subfield is set to 0**

|  |  |
| --- | --- |
| **TBTT Information Length subfield value** | **TBTT Information field contents** |
| 1 | The Neighbor AP TBTT Offset subfield |
| 2 | The Neighbor AP TBTT Offset subfield and the BSS Parameters subfield |
| 5 | The Neighbor AP TBTT Offset subfield and the Short SSID subfield |
| 6 | The Neighbor AP TBTT Offset subfield, the Short SSID subfield, and the BSS Parameters subfield |
| 7 | The Neighbor AP TBTT Offset subfield and the BSSID subfield |
| 8 | The Neighbor AP TBTT Offset subfield, the BSSID subfield, and the BSS Parameters subfield |
| 9 | The Neighbor AP TBTT Offset subfield, the BSSID subfield, the BSS Parameters subfield, and the 20 MHz PSD subfield |
| 11 | The Neighbor AP TBTT Offset subfield, the BSSID subfield and the Short SSID subfield |
| 12 | The Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short SSID subfield, and the BSS Parameters subfield |
| 0, 3, 4, 10, 14, 15, 17, 18, 19, 20, 21, 23, 24 (#49, #50) | Reserved |
| 13 | The Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short SSID subfield, the BSS Parameters subfield, and the 20 MHz PSD subfield |
| 16 | The Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short-SSID subfield, the BSS Parameters subfield, the 20 MHz PSD subfield and the MLD Parameters subfield |
| 22 (#49, #50) | The Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short-SSID subfield, the BSS Parameters subfield, the 20 MHz PSD subfield, and the Sensing subfield (#49, #50) |
| 25 (#49, #50) | The Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short-SSID subfield, the BSS Parameters subfield, the 20 MHz PSD subfield, the MLD Parameters subfield, and the Sensing subfield (#49, #50) |
| 26-255 (#49, #50) | The first 25octets of the field contain the Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short SSID subfield, the BSS Parameters subfield, the 20 MHz PSD subfield, the MLD Parameters subfield, and the Sensing subfield (i.e., same contents as when the length of the TBTT Information field is 25). The remaining octets are reserved. (#49, #50) |