IEEE P802.11
Wireless LANs

|  |
| --- |
| CR for CID 2162 and 2163 |
| Date: 2021-04-22 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Ming Gan | HuaweiHuawei |  |  | ming.gan@huawei.com |
| Jason Yuchen Guo |  |  |  |
| Yunbo Li | Huawei |  |  |  |
| Guogang Huang | Huawei |  |  |  |
| Yiqing Li | Huawei |  |  |  |
| Mengyao Ma | Huawei |  |  |  |
| Hongjia Su | Huawei |  |  |  |

Abstract

This submission proposes resolutions of comments received from TGbe comment collection (TGbe Draft 0.4).

* 2162, 2163

Revisions:

* Rev 0: Initial version of the document.
1. **Introduction**

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 TGbe Draft. The introduction and the explanation of the proposed changes are not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe Draft (i.e. they are instructions to the 802.11be editor on how to merge the text with the baseline documents).***

***TGbe Editor: Editing instructions preceded by “TGbe Editor” are instructions to the TGbe editor to modify existing material in the TGbe draft. As a result of adopting the changes, the TGbe editor will execute the instructions rather than copy them to the TGbe Draft.***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause**  | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 2162 | Laurent Cariou | 9.4.2.295b.3 |   |   | "The subfields of the Multi-Link Control field of the Probe Request variant Multi-Link element except the Type subfield are TBD." All these subfields should be set to 0 as no other information is needed in MLD probe request | as in comment | **Revised.**Propose to add MLD ID into the Probe Request variant Multi-Link element to simplify the parsing at the AP MLD side, please refer to the discussion part in this document for the detailTGbe editor to make the changes shown in 21/0741r0 under all headings that include CID 2162. |
| 2163 | Laurent Cariou | 9.4.2.295b.3 |   |   | "The presence and format of the Common Info field in the Probe Request variant Multi-Link element are TBD." It is much simpler if the format is identical as the basic type, and to set all control bits that indicate presence of fields to 0, so that there are no fields present | as in comment | **Revised.**Propose to add MLD ID into the Probe Request variant Multi-Link element to simplify the parsing at the AP MLD side, please refer to the discussion part in this document for the detail TGbe editor to make the changes shown in 21/0741r0 under all headings that include CID 2163. |

**Discussion:** None.

For an AP MLD which contains nontransmitted BSSID in the same multiple BSSID set as reporting AP, the non-AP MLD could obtain the following info during the discovery phase

1. The MAC address of the nontransmitted BSSID
2. The MLD ID of the AP MLD

The non-AP MLD could use the following setting in the ML Probe Request frame to simplify the parsing at the AP MLD side

1. The A1 and A3 address fields are set to the MAC address of the reporting AP (receiving AP)
2. The MLD ID in the common part of Probe Request variant ML element is MLD ID of this MLD

Moreover, this setting of the ML Probe Request can be used to solicit the information of another AP MLD collocated with the reporting AP, but does not have an affiliated AP on the same link as the reporting AP, like MLD 2 for AP\_1x as shown in the following figure (Note this basic info of this AP MLD is mandated to be carries in the RNR element)



***TGbe editor: Please modify the subclause 9.4.2.247b.3Probe Request variant Multi-Link element as follows***

**9.4.2.247b.3 Probe Request variant Multi-Link element**

The Probe Request variant Multi-Link element is used to request an AP to provide information of other APs affiliated with the same AP MLD as the AP. The inclusion of a Probe Request variant Multi-Link element in a Probe Request frame identifies it as an MLD probe request.

The format of the Presence Bitmap subfield of the Probe Request variant Multi-Link element is defined in Figure 9-788xx (Presence Bitmap subfield of the Probe Request variant Multi-Link element format).

|  |  |  |
| --- | --- | --- |
|  | B0  | B1 B11 |
|  | MLD ID Present | Reserved |
| Bits: | 1 | 11 |
| Figure 9-788xx—Presence Bitmap subfield of the Probe Request variant Multi-Link element format |

The MLD ID Present subfield is set to 1 if the MLD ID field is present in the Common Info field. Otherwise the MLD ID Present subfield is set to 0.

The format of the Common Info field of the Probe Request variant Multi-Link element is defined in Figure 9-788yy (Common Info field of the Probe Request variant Multi-Link element).

|  |  |
| --- | --- |
|  | MLD ID |
| Octets: | 1 |
| Figure 9-788yy—Common Info field of the Probe Request variant Multi-Link element |

The MLD ID subfield indicates the identifier of the AP MLD to which the ML Probe Request frame that carries the Probe Request variant Multi-Link element is targeted. (#CID2162, 2163)

The format of the Link Info field of the Probe Request variant Multi-Link element is defined in Figure 9-788ek (Link Info field of the Probe Request variant Multi-Link element format).

|  |  |
| --- | --- |
|  | Per-STA Profile Subelements |
| Octets: | Variable |
| Figure 9-788ek—Link Info field of the Probe Request variant Multi-Link element |

The Per-STA Profile Subelements field contains zero or more Per-STA Profile subelements as defined in 9.4.2.295b.2 (Basic variant Multi-Link element). Each Per-STA Profile subelement starts with a Per-STA Control field as defined in 9.4.2.295b.2 (Basic variant Multi-Link element).

A Per-STA Profile subelement includes only a (Extended) Request element if a non-AP STA requests partial information from the AP corresponding to the per-STA profile, and does not include any elements if the non-AP STA requests complete information from the AP. If the (Extended) Request element is present in the Per-STA Profile subelement, the Complete Profile subfield of the Per-STA Control field shall be set to 0.

***TGbe editor: Please modify the subclause 35.3.4.2 Use of ML probe request and response as follows***

**35.3.4.2 Use of ML probe request and response**

An ML probe request is a Probe Request frame that is sent outside the context of active scanning that is used to discover an AP:

—with the Address 1 field set to the broadcast address and the Address 3 field set to the BSSID of an AP, or with the Address 1 field set to the BSSID of an AP’s BSS.

—with the MLD subfield set to the MLD ID which identifies the targeted AP MLD (#CID2162, 2163)

—and that includes a Probe Request variant Multi-Link element defined in 9.4.2.295b.3 (Probe Request variant Multi-Link element).

…

An ML probe response is a Probe Response frame:

—that is transmitted in response to receiving an ML probe request

—and that includes Basic variant Multi-Link element which can carry complete or partial per-STA profile(s), based on the soliciting request, for each of the requested AP(s) of the AP MLD identified by the MLD ID subfield in the Probe Request variant Multi-Link element of the received ML Probe Request frame. (#CID2162, 2163)