IEEE P802.11
Wireless LANs

|  |
| --- |
| LB266 CR on CID 10014 |
| Date: 2022.10.08 |
| Author(s): |
| Name | Company | Address | Phone | email |
| Guogang Huang | Huawei Technologies | F3-6-A124, Huawei Base, Bantian, Longgang, Shenzhen, Guangdong, China, 518129 |  | huangguogang1@huawei.com |
| Yuchen Guo |  |  |  |
| Yunbo Li |  |  |  |
| Yousi Lin |  |  |  |
| Ming Gan |  |  |  |
|  |  |  |  |

Abstract

This submission contains proposed comment resolutions to comments on P802.11be D2.2.

Revisions:

- Rev 0: Initial version of the document.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page.****Line** | **Comment** | **Proposed Change** | **Resolution** |
| 10014 | 35.3.19.2  | 469.56 | "The TBTT Information Field Type subfield shall set to 1" also can be used in AP MLD when at least one affiliated AP is in unavailable state without causing compatible issue with legacy STA. | as the comments. | RevisedAgree in principle. A Disabled Link Indication subfield has been added within the MLD Parameters subfield to prevent the non-AP MLD probing a disabled link. Since the legacy STA cannot recognize the Disabled Link Indication subfield, we should also propose a method to prevent the legacy STA probing a disabled link. The above function can be achieved by setting the TBTT Information Field Type subfield to 1.Instructions to the editor:Please make the changes as shown in 11/22-1554r0 |

Discussion:

Currently, when a link is disabled by the AP MLD, each AP affiliated with the AP MLD shall include a TID-to-link Mapping element within the Beacon. Simultaneously, to prevent the non-AP MLD to probe this reported AP which is disabled, a Disabled Link Indication subfield is added in the MLD Parameters subfield in the RNR element. But this indication cannot be recognized by the legacy STA (i.e. the HE STA). Hence, we also need to find a way to prevent the legacy STA to probe this reported AP. The simplest way is setting the corresponding TBTT Info Field Type to 1 when a link is disabled by the AP MLD.

The above method is also applied to the NSTR mobile AP MLD. But the current text on this part is not correct. Hence, we fix this issue in this CR document.

*“The TBTT Information Field Type subfield shall set to 1 to identify, together with the TBTT Information Length subfield, the format of the TBTT Information field for the reported AP operating on the nonprimary link.”*

**35.3.19.2 Discovery of an NSTR mobile AP MLD**

***TGbe editor: Please revise the following paragraph as below:***

The discovery procedure for an NSTR mobile AP MLD is the same as the procedure described in 35.3.4 (Discovery of an AP MLD) with the following exceptions:

* An AP affiliated with an NSTR mobile AP MLD and that is operating on the primary link of an NSTR link pair shall indicate that it is an NSTR mobile AP MLD by setting (#12391)(#11165)AP MLD Type Indication subfield to 1 in MLD Capabilities and Operations field of Common Info field in the Basic Multi-Link element.
* When an AP MLD is a NSTR mobile AP MLD, the link on which the Beacon and Probe Response frames are received is identified as the primary link. Correspondingly, the nonprimary link can be identified by parsing the NSTR Indication Bitmap subfield included in the Per-STA Profile subelement of the Basic Multi-link element.
* An AP affiliated with an NSTR mobile AP MLD and that is operating on the primary link of an NSTR link pair shall include a Reduced Neighbor Report element with the MLD Parameters subfield present in a TBTT Information field corresponding to a reported AP affiliated with the NSTR mobile AP MLD and that is operating on the nonprimary link of the NSTR link pair in a Beacon and Probe Response frames that it transmits. The Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short-BSSID subfield, the BSS Parameters subfield and the 20 MHz PSD subfield shall not be present in the TBTT Information Field for that reported AP. And the corresponding TBTT Information Field Type and TBTT Information Length subfields shall be set to 1 and 3, respectively.
* A non-AP STA affiliated with a non-AP MLD shall not transmit a Probe Request frame to the AP affiliated with the NSTR mobile AP MLD and that is operating on the nonprimary link of the NSTR link pair. To request a complete profile of the AP operating on the nonprimary link, a non-AP STA affiliated with a non-AP MLD may send a Multi-Link probe request to an AP affiliated with the NSTR mobile AP MLD and that is operating on the primary link (see 35.3.4.2 (Use of Multi-Link probe request and response)).
* (#12392)The NSTR mobile AP MLD shall not respond to any received Probe Request frames on the nonprimary link.

**35.3.7.3.2 Affiliated AP link disablement**

***TGbe editor: Please revise the following paragraph as below:***

When an AP MLD advertises that a link is disabled for all associated non-AP MLDs, after the time indicated by the Mapping Switch Time field is reached:

* the Disabled Link Indication subfield shall be set to 1 in the MLD Parameters subfield corresponding to the AP affiliated with the AP MLD and operating on the link that is included in the Neighbor AP Information field in the Reduced Neighbor Report element carried in the Beacon or Probe Response frames transmitted by any of the APs affiliated with the AP MLD and any APs that set the Co-Located AP bit of the BSS Parameters subfield of the TBTT Information field of the Neighbor AP Information field to 1 for the disabled AP. If the Disabled AP Link Indication subfield corresponding to a reported AP is set to 1, then the corresponding TBTT Information Field Type and TBTT Information Length subfields shall be set to 1 and 3, respectively.
* an EHT STA affiliated with a non-AP MLD that is associated with the AP MLD shall not use the link to transmit individually addressed frames to the AP affiliated with the AP MLD that is operating on a link that is disabled.
* an EHT STA affiliated with a non-AP MLD that is not associated with the AP MLD shall not transmit ML Probe Request, Authentication, and (Re)association Request frames to the AP affiliated with the AP MLD while the link is disabled (as indicated in the Expected Duration field in the advertised TID-To-Link Mapping element that does not include Mapping Switch time field, or as indicated in the Disabled Link Indication subfield in the Reduced Neighbor Report element).
* an EHT STA affiliated with a non-AP MLD that is not associated with the AP MLD should not use the link to transmit other individually addressed management frames to the AP affiliated with the AP MLD that is operating on a link that is disabled.
* a non-AP STA affiliated with the non-AP MLD shall not delete the GTK/IGTK/BIGTK values for the disabled link.

**11.49 Reduced neighbor report**

***TGbe editor: Please revise the following paragraph as below:***

A STA that receives a Neighbor AP Information field with an unrecognized TBTT Information Field Type subfield shall ignore the remainder of the Reduced Neighbor Report element. If there are more than one Neighbor AP Information fields in the Reduced Neighbor Report element, the order of the Neighbor AP Information fields in the Reduced Neighbor Report element shall be arranged in ascending order based on the corresponding value of the TBTT Information Field Type subfield.