IEEE P802.11
Wireless LANs

|  |
| --- |
| SA1 Resolution for CIDs assigned to Abhi |
| Date: April 5, 2024 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Abhishek Patil | Qualcomm Technologies Inc. |  |  | appatil@qti.qualcomm.com |
| Alfred Asterjadhi |  |  |  |
| George Cherian |  |  |  |

 Abstract

This submission proposes resolutions for following CIDs received for TGbe D5.0 (SA1):

22395 22156 22295 22155 22310 22360 22241

**Revisions:**

* Rev 0: Initial version of the document.
* Rev 1: Fixed a typo [DCN self-reference was wrong] in the resolution column (across several rows).
* Rev 2: Added list of CIDs to the abstract.

***TGbe editor: Baseline for this document is 11be D5.1***

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. This introduction is not part of the adopted material.

***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** | **Category** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 22395 | Yusuke Tanaka | T | 35.3.9 | 544.55 | Fragmented MSDUs should be sent on the same link for fragmentation in MLD not to chase the status of each fragment among multiple links, and such restrictions should be stated. Also, restrictions of cap related fields should be stated. Please see discussion in 23/1408r1. | Please state restrictions to send fragmented MSDUs in the same link and restrictions of cap related fields for fragmentation in MLD. | **Revised**Agree with the comment. The resolution provides guidance on dynamic fragmentation in MLO.**TGbe editor, please make changes as shown in 11-24/0326r2 tagged 22395** |
| 22156 | Abhishek Patil | T | 35.3.9 | 542.53 | Dynamic fragmentation procedure is undefined for MLO. (Also see CIDs 19781, 19329, 19330 and 19630 LB 275). | Provide a procedure for dynamic fragmentation. | **Revised**Agree with the comment. The resolution provides guidance on dynamic fragmentation in MLO.**TGbe editor, please make changes as shown in 11-24/0326r2 tagged 22395** |
| 22295 | Ryuichi Hirata | T | 35.3.9 | 542.55 | Dynamic fragmentation procedure in multi-link operation is missing. Sending fragments on multiple links could help to reduce latency. | Define dynamic fragmentation procedure in multi-link operation. | **Revised**Agree with the comment. The resolution provides guidance on dynamic fragmentation in MLO.**TGbe editor, please make changes as shown in 11-24/0326r2 tagged 22395** |
| 22155 | Abhishek Patil | T | 35.3.9 | 542.53 | If non-dynamic fragmentation is not supported then TXOP limits might be violated (see 10.23.2.9 of baseline spec - P1915L40 of REVme D3.0) [Also see related CIDs 16681 and 16807 from LB271.] | As in comment | **Revised**Agree with the comment. The resolution provides guidance on how a STA while affiliated with an MLD can either perform dynamic fragmentation or reassociate as a non-MLD STA to perform static fragmentation in order to not violate the TXOP limit.**TGbe editor, please make changes as shown in 11-24/0326r2 tagged 22155** |
| 22310 | Alfred Asterjadhi | T | 35.3.3.4 | 502.05 | [Liuming Lu] The value for each obtained by receiving a Beacon frame, a Probe Response frame or a TIM frame on the respective link may be different from the value determined based on the TSF Offset subfield carried in the STA Info field corresponding to the reported AP | Please clarify the case that the value for each obtained by receiving a Beacon frame, a Probe Response frame or a TIM frame on the respective link may be different from the value determined based on the TSF Offset subfield carried in the STA Info field corresponding to the reported AP, and clariy how to resolve this inconsistence issue if the case may happen. | **Rejected**Baseline spec has several instances (see Neighbor Report element or Reduced Neighbor Report element) where a reporting AP provides timing information (such as TSF offset or TBTT offset) of a reported AP. In such cases, the receiving device (e.g., a non-AP) must trust the TSF value carried in a frame (e.g., Beacon, Probe Response etc) that is received from the reported AP and use that value for any computation or decision making. The same behavior applies to MLO where an affiliated AP provides TSF offset of another affiliated AP. The non-AP is expected to trust the value received from the frames of the reported AP and apply any correct if needed. TGbe should not treat this situation any different or define special rules. |
| 22360 | Alfred Asterjadhi | T | 9.4.2.312.2.3 | 254.50 | [Al Petrick] Table 9-404j - Add a diagram illustrating the frequency separation (frequency gap) including the widest gab between the nearest edges. The diagram should be added to the example annex | As commented | **Rejected**The comment fails to identify a technical issue. The description of the ‘Frequency Separation For STR/AP MLD Type Indication’ subfield in the Common Info field of Basic ML IE is unambiguous and a figure is not needed.  |
| 22241 | Robert Stacey | T | 9.4.2.312.2.3 | 256.17 | Submitted on behalf of Po-Kai. For "Recommended Max Simultaneous Links", it is clear that the fields regulate STR, but it is not clear if this include NSTR. It seems that the intention is for STR. Clarify this in the description. | Change "Recommended maximum number of enabled links that a non-AP MLD can operate on for simultaneous frame exchanges. Reserved when carried in a frame that is not a Beacon frame or a broadcast Probe Response frame. Indicates the recommended maximum numbe" to "Recommended maximum number of enabled links that a non-AP MLD can operate on for simultaneous transmission and reception frame exchanges. Reserved when carried in a frame that is not a Beacon frame or a broadcast Probe Response frame. Indicates the recommended maximum numbe" | **Rejected**The comment fails to identify a technical issue. In addition, the text in ‘Proposed Change’ section is incomplete. The definition of the field is clear and is intended to apply to both STR and NSTR modes of operation. |

**35.3.9 Fragmentation in multi-link operation**

***TGbe editor: Please add the following paragraphs to this subclause as shown below:***

[22395]A STA affiliated with an MLD may use dynamic fragmentation as described in 26.3 (Fragmentation and defragmentation) subject to the following additional requirements:

* The Dynamic Fragmentation Support and A-MSDU Fragmentation Support fields in the HE Capabilities elements transmitted by each STA affiliated with the same MLD shall be set to values that are identical across all STAs.
* If the first dynamic fragment of an MSDU, A-MSDU or MMPDU is sent on an enabled link then all the remaining fragments of that MSDU, A-MSDU, or MMPDU shall be sent on that same enabled link.

[22155]If a STA is required to fragment an MSDU or MMPDU so that the initial transmission of the first fragment does not cause the TXOP limit to be exceeded (see 10.23.2.9) then the STA shall either use dynamic fragmentation (while conforming to the rules described above) or reassociate as a STA that is not affiliated with an MLD (so that it can use non-dynamic fragmentation).