IEEE P802.11
Wireless LANs

|  |
| --- |
| 11be D5.0 CR for Miscellaneous CIDs Part II |
| Date: 2024-03-04 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Po-Kai Huang | Intel |  |  | po-kai.huang@intel.com |
|  |  |  |  |  |

Abstract

This submission proposes resolutions for the following CIDs:

22171, 22292, 22413

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Add CID 22413
* Rev 2: revision based on the discussion during the teleconference call
* Rev 3: Revision for CID 22413
* Rev 4: Editorial revision

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 D5.0 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe D5.0 Draft. (i.e. they are instructions to the 802.11 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** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 22171 | Gaurav Patwardhan | 35.3.5.1 | 516.05 | Add a reference to service subclauses i.e. Clause 5 and Clause 8. | as in comment | Revised – The commenter comments on the following note and suggests to add reference. Refer to clause 8 for PHY is appropriate. For MAC, clause 5 has lower MAC (CRC computation) and upper MAC (PN assignment), and may not apply univerisally, so we also add clause 35.3 as reference for “unless specified otherwise”. We further add reference of clause 10 for reference of functionality like TWT and clause 11 for power management, clause 26 for HE, and clause 35 for EHT. *NOTE 12—For each setup link, each service (and the corresponding rules) between a non-AP STA affiliated with the non-AP MLD and its associated AP affiliated with the AP MLD is the same as the service (and the corresponding rules) between a non-AP STA not affiliated with the non-AP MLD and its associated AP unless specified otherwise.* TGbe editor to make the changes shown in 11-24/0319r2 under all headings that include CID 22171 |
| 22292 | Brian Hart | 11 | 367.01 | It seems that, now we've introduced the MLD, the MLME needs to adapt: one MLME comprising a single upper MLME at the MLD level and multiple lower MLMEs at the STA/link level. Since all functions pre-11be were designed to operate at the STA level, by default they should remain there, with one instance per lower MLME; however 11be is moving some functions to the MLD level (e.g., BA), and such functions now need to be identified as singleton MLD-level functions. | For each MLME interface and function (and see elsewhere for MIB variables), explicitly define if they are upper MLME (singleton) or lower MLME (per STA). For interfaces, provide a mechanism to identify the intended lower MLME. Furthermore, in an AP/AP MLD, define how this MLME architecture and the legacy MLME architecrure can coexist in an AP affiliated with an AP MLD and having a non-MLD STA associated. | Rejected – The relation of MLME, SME, MAC SAP, and so on is described in a reference model of Figure 4-30b (Reference model for an MLD for two links). We also have sentences like “For MLO, the MLD SME invokes MLME SAP primitives through a single MLME SAP. When a primitive is invoked for an affiliated STA, the affiliated STA can be identified by its Link ID.” in 6.3.1 Introduction. For coexistence of AP side with legacy, there are high level architecture in Figure 4-30c (High level architecture for AP MLD with affiliated APs). Basically, SME of AP MLD and each legacy AP will coordinate for MLO and non-MLO |
| 22413 |  | 12 | 517.35 | For how a (Re)Association Response frame includes the Link Info fields, the later paragraph in P517L45 has already stated. P517L12 indeed should talk about how a (Re)Association Request frame includes the Link Info fields, refer to the original intention of that paragraph in D4.0. | Revert it to P510L40 in D4.0. | Revised – P517/45 based on the pdf page number rather than the document page number is the following.*If there is other requested link(s) in addition to the link on which the (Re)Association Request frame was transmitted, the Basic Multi-Link element carried in the (Re)Association Response frame shall contain the Link Info field, and for each other requested link, the Link Info field shall contain the corresponding PerSTA Profile subelement(s).*P517/12 based on the pdf page number rather than the document page number is the following.*If there are other requested link(s) in addition to the link on which the (Re)Association Request frame is transmitted, and at least one other requested link exists, the Basic Multi-Link element carried in the (Re)Association Response frame shall contain the Link Info field, and for each other requested link that exists, the Link Info field shall contain the corresponding Per-STA Profile subelement(s).*Agree in principle to change sentence above to (Re)Association Request frame.TGbe editor to make the changes shown in 11-24/0319r4 under all headings that include CID 22413 |

**Discussion:**

**Proposal:**

*TGbe editor: Modify Clause 35.3.5.1 as follows (track change on):*

**35.3.5.1 ML (re)setup procedure**

(…existing texts…)

NOTE 12—For each setup link, each service (and the corresponding rules) (see 5 (MAC service definition), 8 (PHY service specification), 10 (MAC sublayer functional description), 11 (MLME), 12, 26 (High-efficiency (HE) MAC specification), and 35 (Extremely high throughput (EHT) MAC specification)) between a non-AP STA affiliated with the non-AP MLD and its associated AP affiliated with the AP MLD is the same as the service (and the corresponding rules) between a non-AP STA not affiliated with the non-AP MLD and its associated AP unless specified otherwise (see 35.3 (Multi-link operation (MLO))).(#22171)

(…existing texts…)

*TGbe editor: Modify Clause 35.3.5.4 as follows (track change on):*

**35.3.5.4 Basic Multi-Link element usage in the context of ML (Re)Setup, Authentication, and FT Action frame exchanges between two MLDs**

(…existing texts…)

If there are other requested link(s) in addition to the link on which the (Re)Association Request frame is transmitted, the Basic Multi-Link element carried in the (Re)Association Request frame shall contain the Link Info field, and for each other requested link , the Link Info field shall contain the corresponding Per-STA Profile subelement(s). (#22413)

(…existing texts…)

If there are other requested link(s) in addition to the link on which the (Re)Association Request frame was transmitted, and at least one other requested link exists, the Basic Multi-Link element carried in the (Re)Association Response frame shall contain the Link Info field, and for each other requested link that exists, the Link Info field shall contain the corresponding PerSTA Profile subelement(s). any(#22413)

(…existing texts…)