IEEE P802.11
Wireless LANs

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| CR for miscellaneous CIDs on MLO |
| Date: April 4, 2024 |
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 Abstract

This submission proposes resolutions for following CID received for TGbe initial SA ballot:

* CIDs 22307, 22310, 22311, 22312, 22313

**Revisions:**

* Rev 0: Initial version of the document.

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.

***Editing instructions formatted like this are intended to be copied into the TGbe 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.***

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| **CID** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 22307 | Alfred Asterjadhi | 35.3.4.6 | 513 | [Liuming Lu] The description of "basic information of an AP MLD" is incomplete. | Please clarify what the basic information of an AP MLD is. | **Revised**In the CRC’s understanding the commenter highlight that the referred “basic information of an AP MLD” may be mistakenly interpreted as the information contained in the Basic Multi-Link element. In order to avoid dwelling on an exhaustive list of information referred here, the CRC suggests removal of the word “basic” from the note. The CRC also notes that there is another occurrence of the wording in Section 35.3.12.2, page 551, line 13, that is also revised.TGbe editor: please implement changes as shown in 11-24/0325r0 tagged 22307. |
| 22310 | Alfred Asterjadhi | 35.3.3.4 | 502 | [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**The commenter highlights the possibility that the Timestamp field specific to each link may be obtained with different methods, which may lead to inconsistent values, which is acknowledged by the CRC. Nevertheless, it is the CRC’s opinion that the STA affiliated with an MLD shall follow the procedures in 11.3 (Maintaining synchronization) and in addition an AP MLD shall correct the clock drift within all the affiliated APs to continuously comply with the $30 μs$ constraint for each pair of affiliated APs (see 35.3.1, page 497, lines 45-51). Therefore, it is the CRC’s opinion that it is not preferred to introduce normative text based on the ‘Note 2’ to mandate further rules on how to solve inconsistencies. |
| 22311 | Alfred Asterjadhi | 35.3.3.4 | 501 | [Liuming Lu] The description of "35.3.3.4 Fields and elements not carried in a per-STA profile" is incomplete. | Suggest to change "35.3.3.4 Fields and elements not carried in a per-STA profile" to "35.3.3.4 Fields and elements not carried in a per-STA profile subelement" | **Revised**Agree in principle that the title of the section may be more correct with specific callout of the formal subelement name, therefore the revised text is a minor edit (capitalized “P” in the element name) of the suggestion from the commenter. The CRC also notes that similar changes may be needed in other sections for text uniformity, which are edited accordingly (35.3.3.5, 35.3.3.5.1, 35.3.3.5.2).TGbe editor: please implement changes as shown in 11-24/0325r0 tagged 22311. |
| 22312 | Alfred Asterjadhi | 35.3.3.3 | 501 | [Liuming Lu] The description of "all the applicable elements for the reported STA" is incomplete | Suggest to change the sentence to "...after all the applicable elements for the reported STA listed in the above tables and are ordered..." | **Revised**Agree in principle with the comment and Proposed resolution is aligned with the suggested change with a minor edit (added reference to the tables in 9.3.3).TGbe editor: please implement changes as shown in 11-24/0325r0 tagged 22312. |
| 22313 | Alfred Asterjadhi | 35.3.3.3 | 500 | [Liuming Lu] The description is unclear in the sentence: "a Basic Multi-Link element" is missing after "a reported STA" | Suggest to change the sentence to "The complete profile of a reported STA in a Basic Multi-Link element consists of ..." | **Accepted**TGbe editor: please implement changes as shown in 11-24/0325r0 tagged 22313. |

*TGbe editor: the reference text is 11be Draft 5.0.*

35.3.3.3 Advertisement of complete or partial per-link information

*TGbe editor: please find below the changes related to CID 22313*

The complete profile of a reported STA in a Basic Multi-Link element consists of all the elements and fields that would be included in a Management frame that is of the same subtype as the frame transmitted by the reporting STA carrying the Basic Multi-Link element as if the reported STA were to transmit the frame and subject to inheritance rules defined in 35.3.3.5.1 (Inheritance in the per-STA profile of Basic Multi-Link element), exceptions specified in 35.3.3.4 (Fields and elements not carried in a per-STA profile). A reporting AP shall include applicable elements listed in 35.3.11 (ML procedures for (extended) channel switching and channel quieting) in the per-STA profile for a reported AP in a Basic Multi-Link element carried in a (Re)Association Response frame if the conditions stated in 35.3.11 (ML procedures for (extended) channel switching and channel quieting) apply to the reported AP.

*TGbe editor: please find below the changes related to CID 22312*

•If element(s), in addition to the ones listed in the above tables of 9.3.3 ((PV0) Management frames) are included in the STA Profile field due to other conditions being satisfied, then the ele­ments appear after all the applicable elements for the reported STA listed in the above tables of 9.3.3 and are ordered based on their Element ID and Element ID Extension (if present).

*TGbe editor: please find below the changes related to CID 22311*

**35.3.3.4 Fields and elements not carried in a Per-STA Profile subelement**

35.3.3.5 Inheritance in a Per-STA Profile subelement

35.3.3.5.1 Inheritance in the Per-STA Profile subelement of Basic Multi-Link element

35.3.3.5.2 Inheritance in the Per-STA Profile subelement of Probe Request Multi-Link element

*TGbe editor: no changes related to CID 22310, text below reported for reference*

NOTE 2—For an AP MLD that is not an NSTR mobile AP MLD, the Timestamp field is specific to each link and the value for each can be obtained by receiving a Beacon frame, a Probe Response frame or a TIM frame on the respective link or can be determined based on the TSF Offset subfield carried in the STA Info field corresponding to the reported AP.

35.3.4.6 Frame exchange sequences during MLO discovery and ML setup

*TGbe editor: please find below the changes related to CID 22307*

NOTE 1—A non-AP MLD can discover information of an AP MLD or that of an AP affiliated with an AP MLD via other means such as BSS transition management (see 35.3.23 (BSS transition management for MLDs)). The frame exchange for gathering information of the AP MLD and its affiliated one or more APs, and for performing ML setup with the AP MLD will be the same as that described in this clause.

35.3.12.2 Basic BSS operation

*TGbe editor: please find below the changes related to CID 22307*

A non-AP MLD shall be able to perform basic operations (such as receiving a traffic indication, time synchronization, receiving BSS parameter updates) related to the AP MLD and all the APs affiliated with the AP MLD by monitoring one or more of the link(s) it has set up with the AP MLD. This is accomplished in addition to other power save mechanisms (such as TWT or U-APSD), if setup, between the non-AP STA affiliated with the non-AP MLD and the corresponding AP affiliated with the AP MLD with which the non-AP MLD has performed association. With these mechanisms, a non-AP MLD can receive information about the AP MLD and all the APs affiliated with the AP MLD on a single link while the other non-AP STA(s) affiliated with the non-AP MLD are in the doze state.