IEEE P802.11  
Wireless LANs

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| LB275 CR for CIDs in in 35.3.4.4 and 35.3.15.1 | | | | |
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Abstract

This submission proposes resolutions of comments received from TGbe comment collection LB275 based on TGbe D4.0.

19931 19765 19920 19866 19766 19921 19922 19288 (8 CIDs)

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.***

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 19931 | 35.3.4.4 | 503.12 | If the AP is the only AP affiliated (e.g. after removing the other APs using ML reconfig) with the AP MLD, then the AP should not be forced to include the Basic ML IE. This is inefficient and unnessary. | Add an exception for the requirement of the inclusion of the Basic IE if the AP transmitting the management frame is the only AP affiliated with the AP MLD. | Rejected-  In Beacon and non-ML probe response, only the common part of ML element is included. The common part, like MLD MAC address, is still useful even if only one affiliated AP is left later. |
| 19765 | 35.3.4.4 | 503.13 | The text: ", in a Beacon frame and a Probe Response frame that is not a multi-link probe response that it transmits," in the first paragraph is confusing. For better readibility, move it after the third bullet. | Replace ", in a Beacon frame and a Probe Response frame that is not a multi-link probe response that it transmits," with a ":" and add "in a Beacon frame and a Probe Response frame that is not a multi-link probe response that it transmits." after the third bullet (same indentation as the beginning of the paragraph "If an AP ..."). | Accepted- |
| 19920 | 35.3.4.4 | 503.16 | The three bullets are based on the fact that the Basic ML element shall be included in the beacon and probe response frame. However, this was not clarified. | For completeness, as the first bullet, clarify that Basic ML element shall be included. | Revised-  Agree with the comment. Apply the changes marked as #19920 in this document. |
| 19866 | 35.3.4.4 | 503.20 | Link Info field (if present) should be clarified | add" If the Link Info field of the Basic Multi-Link element is present, then the STA Profile field of the Basic Multi-Link element shall only include the updated elements selected from the elements as described in 35.3.11 (Multi-link procedures for channel switching, extended channel switching, and channel quieting)" | Revised-  Agree with the comment. Apply the changes marked as #19866 in this document. |
| 19766 | 35.3.4.4 | 503.28 | The text: "in the nontransmitted BSSID profile corresponding to the nontransmitted BSSID carried in the Multiple BSSID element in a Beacon frame and a Probe Response frame that is not a multi-link probe response that it transmits," in the second paragraph is confusing. For better readibility, move it after the third bullet. | Replace ", in the nontransmitted BSSID profile corresponding to the nontransmitted BSSID carried in the Multiple BSSID element in a Beacon frame and a Probe Response frame that is not a multi-link probe response that it transmits," with a ":" and add "in the nontransmitted BSSID profile corresponding to the nontransmitted BSSID carried in the Multiple BSSID element in a Beacon frame and a Probe Response frame that is not a multi-link probe response that it transmits." after the third bullet (same indentation as the beginning of the paragraph "If an AP ..."). | Accepted- |
| 19921 | 35.3.4.4 | 503.31 | The three bullets are based on the fact that the Basic ML element shall be included in the beacon and probe response frame. However, this was not clarified. | For completeness, as the first bullet, clarify that Basic ML element shall be included. | Revised-  Agree with the comment. Apply the changes marked as #19921 in this document. |
| 19922 | 35.3.4.4 | 503.52 | This sentence is related to the usage of ML probe request. Same comment for the following paragraph. | Move these sentences to 35.3.4.2 | Revised-  The sentence that the comment referred to is already covered by 35.3.4.2, here is a comparison with the above paragraph, change it to a note. For the following paragraph, agree to move that to 35.3.4.2. Apply the changes marked as #19922 in this document. |
| 19288 | 35.3.15.1 | 552.19 | The use of the word "the" in the phrase "the buffered group addressed Management frames" suggests that it is refering to a specific set of frames, but it is not clear from the context what comprises that set. Also, is the word "independently" intended to indicate that transmission of a frame from one set can proceed even while a transmission of a frame in the other set is in progress? | Expand the description of the first set of frame referred to in the text to clearly indicate what they are and how they form a set. Also, clarify what scheduling independently means. | Revised-  Add a reference for the buffered group addressed Management frame. For “independently”, this is also used in baseline REVme, extra clarification is not needed. Apply the changes marked as #19922 in this document. |

**Discussion:** None.

***TGbe Editor: please modify the following paragraphs***

**35.3.4.4 Multi-Link element usage in the context of discovery**

If an AP affiliated with an AP MLD is not in a multiple BSSID set or the AP corresponds to a transmitted BSSID in a multiple BSSID set, then the AP, in a Beacon frame and a Probe Response frame that is not a multi-link probe response that it transmits,

—shall include the Basic Multi-Link element for the AP MLD. The Basic Multi-Link element shall include the Multi-Link Control field and the Common Info field as defined in 9.4.2.312.2 (Basic Multi-Link element) and shall not include the Link Info field unless conditions in 35.3.11 (Multi-link procedures for (extended) channel switching and channel quieting) are satisfied. (#19920) If the Link Info field of the Basic Multi-Link element is present, then the STA Profile field in the the Link Info field of the Basic Multi-Link element shall only include the updated elements selected from the elements as described in 35.3.11 (Multi-link procedures for channel switching, extended channel switching, and channel quieting). (#19866)

(#19920)—may include a Reconfiguration Multi-Link element as defined in 9.4.2.312.4 (Reconfiguration Multi-Link element) and 35.3.6 (ML reconfiguration).

If an AP affiliated with an AP MLD corresponds to a nontransmitted BSSID in a multiple BSSID set, then the AP that corresponds to the transmitted BSSID in the same multiple BSSID set, in the nontransmitted BSSID profile corresponding to the nontransmitted BSSID carried in the Multiple BSSID element in a Beacon frame and a Probe Response frame that is not a multi-link probe response that it transmits,

—shall include the Basic Multi-Link element for the AP MLD. The Basic Multi-Link element shall include the Multi-Link Control field and the Common Info field as defined in 9.4.2.312.2 (Basic Multi-Link element) and shall not include the Link Info field unless conditions in 35.3.11 (Multi-link procedures for (extended) channel switching and channel quieting) are satisfied. (#19921) If the Link Info field of the Basic Multi-Link element is present, then the STA Profile field in the the Link Info field of the Basic Multi-Link element shall only include the updated elements selected from the elements as described in 35.3.11 (Multi-link procedures for channel switching, extended channel switching, and channel quieting). (#19866)

(#19921)—may include a Reconfiguration Multi-Link element as defined in 9.4.2.312.4 (Reconfiguration Multi-Link element) and 35.3.6 (ML reconfiguration).

NOTE1—The conditions for the presence of subfields in the Common Info field are defined in 9.4.2.312.2.3 (Common Info field of the Basic Multi-Link element). (#19922)

NOTE2—A multi-link probe request does not include any Multi-Link element other than the Probe Request Multi-Link element. (#19922)

(#19922)

**35.3.4.2 Use of multi-link probe request and response**

A multi-link probe request allows a non-AP STA affiliated with a non-AP MLD to request an AP affiliated with an AP MLD to include the complete or partial set of capabilities, parameters and operation elements of the AP(s) affiliated with the targeted AP MLD in the response frame. The complete profile and partial profile of a requested AP are defined in 35.3.3.3 (Advertisement of complete or partial per-link information).

NOTE 1—If an AP MLD has only one affiliated AP, a multi-link probe response will not provide additional information compared to a Probe Response frame that is not a multi-link probe response.

An MLD SME may generate a multi-link probe request by calling MLME-SCAN.request with the ScanType parameter set to MULTI-LINK PROBE. A multi-link probe request is a Probe Request frame that is sent as a non-scanning probe request transmission (see 11.1.4.3.8 (Non-scanning probe request transmission)). The Probe Request frame shall be formatted as follows:

—either 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 and Address 3 fields set to the BSSID of an AP.

—with the AP MLD ID subfield (if present in the Probe Request Multi-Link element) set to the AP MLD ID that identifies the targeted AP MLD with which the requested AP(s) are affiliated.

—including a Probe Request Multi-Link element defined in 9.4.2.312.3 (Probe Request Multi-Link element).

—following the rules defined in 35.3.4.5 (Probe Request frame content for a non-AP EHT STA) for the inclusion of elements.

(#19922)

**35.3.15 Multi-link operation group addressed frames**

**35.3.15.1 AP MLD operation for group addressed frames**

Each AP affiliated with an AP MLD shall schedule:

—the transmission of the buffered group addressed Management frames (see 11.2.2 (Bufferable MMPDUs)) (#19288)independently from the transmission of buffered group addressed Management frames of other AP(s) affiliated with the same AP MLD.

—the transmission of the buffered group addressed Data frames that are expected to be received by a non-AP MLD in all the enabled links setup with the non-AP MLD.