IEEE P802.11
Wireless LANs

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| LB271 CR for subclause 35.3.4.4 |
| Date: 2023-03-08 |
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Abstract

This submission proposes resolutions of comments received from TGbe comment collection LB271 based on TGbe D3.0.

16374 16184 15975 17822 16088 15172 16185 16375 16787 16376 15856 (11 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** |
| 16374 | 35.3.4.4 | 495.01 | Don't need "rules" in the title since this is a standard and it always includes "rules". | Change the title of the clause to "Multi-Link element usage in the context of discovery" | Revised-Agree in principle. Apply the changes marked as #16374 in this document. |
| 16184 | 35.3.4.4 | 495.04 | a typo | chane "hen" to "then" | Revised-Agree. The issue was addressed by the document 11-23/0386r1.Incorporate the changes under CID 15397 of the document 23/0386r1. Note to TGbe editor, there is no further change for this CID |
| 15975 | 35.3.4.4 | 495.07 | This clause is missing top level requirement that the AP shall include a Basic ML element in Beacon and Probe Response. It only provides details on what is included within the Basic ML element, but not a top level requirement for including Basic ML element. Similar comment for requirement on line 23 for nontransmitted BSSID case. | Add a first sub bullet "shall include a Basic Multi-Link element" | Revised-Agree in principle. Apply the changes marked as #15975 in this document. |
| 17822 | 35.3.4.4 | 495.07 | the bullets in this paragraph and next paragraph are same. Isn't it better to merge them into one paragraph? | as in comment | Rejected-The first paragraph is for the AP that does not correspond to the nontransmitted BSSID, the next one is for the AP corresponding to the nontransmitted BSSID. The proposed merge is not needed because of the different locations of the ML element. |
| 16088 | 35.3.4.4 | 495.19 | It would be better to mention specifically that the nontransmitted BSSID profile is included in Multiple BSSID IE | As in the comment | Revised-Agree in principle. Apply the changes marked as #16088 in this document. |
| 15172 | 35.3.4.4 | 495.35 | For the following two sentences, "A Probe Request frame that is not a multi-link probe request shall not include any variant Multi-Linkelement. A multi-link probe request shall include a Probe Request Multi-Link element and shall not include any othervariant Multi-Link element.", I think it just means "a Probe Request frame shall not include Multi-link element except Probe Request Multi-Link element". Note that, we already have the following in Table 9-66 Probe Request frame body a, so why do we need this two sentences? "A single Probe Request Multi-Link element is present if dot11-MultiLinkActivated is true and the Probe Request frame is amulti-link probe request as defined in 35.3.4.2 (Use of multi-linkprobe request and response). Otherwise the Multi-Link element isnot present." | Delete the "A Probe Request frame that is not a multi-link probe request shall not include any variant Multi-Linkelement. A multi-link probe request shall include a Probe Request Multi-Link element and shall not include any othervariant Multi-Link element." because we have already specified the format in Table 9-66. | Revised-Agree in princinple. Rephrase these two paragraphs to address the circular issue. Apply the changes marked as #15172 in this document. |
| 16185 | 35.3.4.4 | 495.35 | This sentence is confusing, the above two paragraphs mentions this kind of probe request shall include the common info field of the basic Multi-link element. However, this sentence provides conflicting statement. | Please amend it accordingly | Rejected-The commenter has misunderstood the corresponding paragraphs. One is for probe request, and the other is for probe response. |
| 16375 | 35.3.4.4 | 495.35 | The cited sentence is ambiguous. | Change the cited sentence as follows: Change "A Probe Request frame that is not a multi-link probe request shall not include any variant Multi-Link element." to "A probe request frame that is transmitted as a the the result of an MLME-SCAN.request primitive with a ScanType other than MULTI\_LINK\_PROBE shall not contain a Multi-Link element." | Revised-Agree in principle. Apply the changes marked as #16375 in this document. |
| 16787 | 35.3.4.4 | 495.35 | There are two instances of "variant Multi-Linkelement" but this term is not defined | Add a definition of "variant Multi-Linkelement" | Revised-Agree in principle. Delete the "variant". Apply the changes marked as #16787 in this document. |
| 16376 | 35.3.4.4 | 495.39 | The requirement described by the cited sentence is unclear. The Probe Request frame format is described in 9.3.3.9 | Replace "A multi-link probe request shall include a Probe Request Multi-Link element and shall not include any other variant Multi-Link element." to "A multi-link probe request contains a Probe Request variant of the multi-link element and is described in 9.3.3.9. | Revised-Agree with the comment partially. Apply the changes marked as #16736 in this document. |
| 15856 | 35.3.4.4 | 495.39 | A multi-link probe request by definition includes a Probe Request Multi-Link element as specified in P202L26-29. The 'shall' statement is unnecessary and causes circular definition. | Change to: A multi-link probe request shall not include any Multi-Link element other than the Probe Request Multi-Link variant." | Revised-Agree in principle. Apply the changes marked as #15856 in this document. |

**Discussion:** None.

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

**35.3.4.4 Multi-Link element usage (#16374) 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 as defined in 9.4.2.312.2 (Basic Multi-Link element) except for the Link Info field of the Basic Multi-Link element unless conditions in 35.3.11 (Multi-link procedures for channel switching, extended channel switching, and channel quieting) are satisfied. 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). (#15975)

—may include a Reconfiguration Multi-Link element as defined in 9.4.2.312.4 (Reconfiguration Multi-Link element) and 35.3.6 (Multi-Link 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 the Multiple BSSID element (#16088) 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 as defined in 9.4.2.312.2 (Basic Multi-Link element) except for the Link Info field of the Basic Multi-Link element unless conditions in 35.3.11 (Multi-link procedures for channel switching, extended channel switching, and channel quieting) are satisfied. 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). (#15975)—may include a Reconfiguration Multi-Link element as defined in 9.4.2.312.4 (Reconfiguration Multi-Link element) and 35.3.6 (Multi-Link reconfiguration).

NOTE—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).

 A Probe Request frame that is transmitted as a result of an MLME-SCAN.request primitive with a ScanType other than MULTI\_LINK\_PROBE shall not include a Multi-Link element. (#15172, 16375, 16787)A multi-link probe request shall not include any Multi-Link element other than the Probe Request Multi-Link element. (#15172, 16376, 15856)

The value of the Link ID field of the Per-STA Profile subelement of the Probe Request Multi-Link element identifies the AP affiliated with an AP MLD that is requested and shall be set to the link ID that is assigned to this AP (see 35.3.3.2 (Link ID)).

**35.3.5.4 Basic Multi-Link element usage in the context of multi-link (re)setup, authentication, and FT action frame exchange between two MLDs (#16374)**