IEEE P802.11
Wireless LANs

|  |
| --- |
| CC36 Resolution for CIDs related to ML element – Part 1 |
| Date: July 19, 2021 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Gaurang Naik | Qualcomm Inc. |  |  | gnaik@qti.qualcomm.com |
| Abhishek Patil | Qualcomm Inc. |  |  | appatil@qti.qualcomm.com |
| Alfred Asterjadhi | Qualcomm Inc. |  |  | aasterja@qti.qualcomm.com |
| George Cherian | Qualcomm Inc. |  |  | gcherian@qti.qualcomm.com |
| Duncan Ho | Qualcomm Inc. |  |  | dho@qti.qualcomm.com |
| Yanjun Sun | Qualcomm Inc. |  |  | yanjuns@qti.qualcomm.com |
| Abdel Karim Ajami | Qualcomm Inc. |  |  | aajami@qti.qualcomm.com |

 Abstract

This submission proposes resolutions for following 56 CIDs received for TGbe CC36:

7566, 7439, 4100, 6865, 4106, 6704, 5377, 8058, 5742, 4814, 5743, 6235, 4815, 4810, 8280, 7568, 4816, 7569, 6869, 8281, 6387, 6015, 6705, 6868, 5126, 6236, 7702, 5829, 7577, 5830, 7579, 7581, 5831, 5128, 6880, 6867, 5129, 7511, 8286, 8287, 8288, 4017, 4366, 4367, 5130, 5389, 6223, 6755, 7340, 6366, 8289, 6390, 8170, 6575, 7351, 4735

**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.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Section** | **Pg.Ln** | **Comment** | **Proposed Change** | **Resolution** |
| 7566 | Tomoko Adachi | 9.4.2.295b.1 | 128.02 | "The Type subfield ... is used to differentiate the various variants of the Multi-Link element." Table 9-322am only shows two variants at this moment and there is no plan to add more. "various" is exaggerated. | Delete "various" from the cited text. | **Revised**The word “various” was deleted in the identified text.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 7566** |
| 7439 | Thomas Derham | 9.4.2.295b.1 | 0.00 | "various variants" is redundant | change to "possible variants" or just "variants" | **Revised**The word “various” was deleted in the identified text.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 7566** |
| 4100 | Abhishek Patil | 9.4.2.295b.1 | 128.04 | Clarify that the format of each variant is different. Otherwise there is no strong need to have different variants. | As in comment | **Revised**A statement was added in subclause 9.4.2.295b.1. “The format of each variant of the Multi-Link element is defined in the subclauses below.”**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 4100** |
| 6865 | Rubayet Shafin | 9.4.2.295b.1 | 128.07 | Probe Response variant multi-link element is not inlcuded in the table, but used in many places in the spec. | Please add Probe Response variant Multi-Link element in the table and define the format of ML Probe Response frame | **Rejected**There is no Probe Response variant Multi-Link element. D1.0 defines only two variants of the Multi-Link element – Basic variant and the Probe Request variant. The variant of the Multi-Link element included in the Probe Response frame is the Basic variant. |
| 4106 | Abhishek Patil | 9.4.2.295b.1 | 128.24 | Fix typo | Replace "are" with "is" in the following: "The Common Info field carries information that is ..." | **Accepted** |
| 6704 | Rojan Chitrakar | 9.4.2.295b.2 | 129.32 | Since the Link ID Info field is intended to carry the link identifier of the link in which the MLE is transmitted, the field should be renamed to a more descriptive name (e.g. Host Link ID or Transmitting Link ID), else the name Link ID Info is easy to confuse with Link Info field. | Rename the Link ID Info field to a more descriptive name (e.g. Host Link ID or Transmitting Link ID) and also rename the Link ID Info Present subfield in the Presence Bitmap. | **Revised** Agree with the comment. The same issue also applies to the BSS Parameters Change Count subfield. Therefore, the name of the subfield is changed to “Transmitting Link Info” and the Link ID Info and the BSS Parameters Change Count subfields were moved into the Transmitting Link Info subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 6704** |
| 5377 | Jay Yang | 9.4.2.295b.2 | 129.51 | Too distinguish the term of Link ID subfield and Link ID info subfield, can we change the term of Link ID info to Link info subfield containing Link ID subfield. | as the comments. | **Revised** Agree with the comment. The same issue also applies to the BSS Parameters Change Count subfield. Therefore, the name of the subfield is changed to “Transmitting Link Info” and the Link ID Info and the BSS Parameters Change Count subfields were moved into the Transmitting Link Info subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 6704** |
| 8058 | Yuchen Guo | 9.4.2.295b.2 | 129.51 | The name of "Link ID Info" is not clear enough, suggest changing it to "Transmitting Link ID Info" | as in comment | **Revised** Agree with the comment. The same issue also applies to the BSS Parameters Change Count subfield. Therefore, the name of the subfield is changed to “Transmitting Link Info” and the Link ID Info and the BSS Parameters Change Count subfields were moved into the Transmitting Link Info subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 6704** |
| 5742 | Laurent Cariou | 9.4.2.295b.1 | 128.25 | "for the link on which Multi-Link element is", please add "the" before Multi-Link | as in comment | **Accepted** |
| 4814 | Dibakar Das | 9.4.2.295b.1 | 129.01 | "MLD MAC Address field" -> "MLD MAC Address sub-field" | As in comment. | **Revised**The identified statement was deleted as a resolution for CID 3017 during CC34 in the approved document 11-21/569r2. No further changes are required for the resolution of this CID in this document.**TGbe editor to make the changes as proposed by CID 3017 in doc 11-21/569r2** |
| 5743 | Laurent Cariou | 9.4.2.295b.2 | 129.01 | Do we have a case where the MLD MAC address is not mandated to be included? If not, we could remove the presence field? | as in comment | **Revised**The presence indicator was removed as a resolution for CID 3017 during CC34 in the approved document 11-21/569r2. No further changes are required for the resolution of this CID in this document.**TGbe editor to make the changes as proposed by CID 3017 in doc 11-21/569r2.** |
| 6235 | Ming Gan | 9.4.2.295b.2 | 129.02 | Please add "MLD MAC Address Present" before "subfield" | as in the comment | **Revised**The identified statement was deleted as a resolution for CID 3017 during CC34 in the approved document 11-21/569r2. No further changes are required for the resolution of this CID in this document.**TGbe editor to make the changes as proposed by CID 3017 in doc 11-21/569r2** |
| 4815 | Dibakar Das | 9.4.2.295b.1 | 129.14 | "set to1" -> "set to 1" | As in comment. | **Accepted** |
| 4810 | Dibakar Das | 9.4.2.295b.2 | 129.14 | "to1" -> "to 1" | As in comment. | **Accepted** |
| 8280 | Zhiqiang Han | 9.4.2.295b.2 | 129.14 | change "to1" to "to 1" | as in comment. | **Accepted** |
| 7568 | Tomoko Adachi | 9.4.2.295b.2 | 129.14 | "The Medium Synchronization Delay Information Present subfield is set to1 in the Medium Synchronization Delay Information subfield is present in the Common Info field." There's a typo. | Correct it to read "The Medium Synchronization Delay Information Present subfield is set to1 if the Medium Synchronization Delay Information subfield is present in the Common Info field." | **Revised**The typo in the statement was fixed. “in” was replaced with “if”.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 7568** |
| 4816 | Dibakar Das | 9.4.2.295b.1 | 129.19 | "EML Capabilities field " -> "EML Capabilities sub-field" | As in comment. | **Accepted** |
| 7569 | Tomoko Adachi | 9.4.2.295b.2 | 129.46 | Although it is obvous what the MLD MAC Address subfield is, it should be described here. | Add a description such as "The MLD MAC Address subfield specifies the MAC Address of the MLD with which the STA transmitting the Multi-Link element is affiliated." at the beginning of the paragraph starting from pp.ll 129.46. | **Revised**The statement was revised as “The MLD MAC Address subfield specifies the MAC Address of the MLD with which the STA transmitting the Basic variant Multi-Link element is affiliated.” Additionally, the paragraph referring to Clause 35.3 and its subclauses for the content of the MLD MAC Address subfield (as approved in doc 11-21/569r2) was deleted.**TGbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 7569** |
| 6869 | Rubayet Shafin | 9.4.2.295b.2 | 129.56 | There is a field name capitalization issue | Please capitalize "info", i.e. it should be "Common Info field" instead of "Common info field" | **Revised**Agree with the comment. The identified statement was moved below the figure (9-788ej) as a resolution for CID 6704. The capitalization was made at the location of the statement.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 6704** |
| 8281 | Zhiqiang Han | 9.4.2.295b.2 | 129.46 | This paragraph overlaps with the second paragraph in the next page, This paragraph can be deleted or the second paragraph in the next page can be modified. | as in comment. | **Revised**Agree with the comment. The text was revised to remove the duplication.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8281** |
| 6387 | Muhammad Kumail Haider | ﻿9.4.2.295b.2 | 129.46 | This whole paragraph is covered by text 2 paragraphs later. | Remove this paragraph as it is redundant. | **Revised**Agree with the comment. The text was revised to remove the duplication.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8281** |
| 6015 | Liwen Chu | 9.4.2.295b.2 | 130.11 | duplicate with P129L46. | remove the duplication | **Revised**Agree with the comment. The text was revised to remove the duplication.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8281** |
| 6705 | Rojan Chitrakar | 9.4.2.295b.2 | 130.11 | P129L46 already describes the condition for the presence of the MLD MAC Address subfield, no need to repeat it here. | Delete either one of the sentence describing the condition for the presence of the MLD MAC Address subfield. | **Revised**Agree with the comment. The text was revised to remove the duplication.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8281** |
| 6868 | Rubayet Shafin | 9.4.2.295b.2 | 129.64 | the subfield name in the figure subtitle is not appropriate | Please capitalize "info", i.e. it should be "Link ID Info subfield format" instead of "Link ID info" subfield format | **Revised**The name of the subfield was changed to Transmitting Link Info as a resolution for CID 6704. “i” was capitalized in the caption.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 6704** |
| 5126 | Geonjung Ko | 9.4.2.295b.2 | 129.65 | Change i in info to capital I | As in comment | **Revised**The name of the subfield was changed to Transmitting Link Info as a resolution for CID 6704. “i” was capitalized in the caption.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 6704** |
| 6236 | Ming Gan | 9.4.2.295b.2 | 130.12 | Please add "further" before "defined" | as in the comment | **Rejected**The identified statement is complete. The word “further” is not required. |
| 7702 | Xiaofei Wang | 9.4.2.295b.2 | 130.39 | an extra "threshold" is in the sentence. Please remove | as in comment | **Accepted** |
| 5829 | Lei Wang | 9.4.2.295b.2 | 131.25 | For a clear presentation and also following the convention of field / value setting specification, suggest using a table to specify the value settings for the EMLSR Delay subfield. | Use a table to specify the value settings for the EMLSR Delay subfield. | **Revised**Agree with the comment. The values of the EMLSR Delay subfield have been specified in a Table. **Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 5829** |
| 7577 | Tomoko Adachi | 9.4.2.295b.2 | 131.25 | "The EMLSR Delay subfield is 3 bits and set to 0 for 0 μs, set to 1 for 32 μs, set to 2 for 64 μs, set to 3 for 128 μs, set to 4 for 256 μs, and the values 5 to 7 are reserved." It is better to describe these by a table. | As in comment. | **Revised**Agree with the comment. The values of the EMLSR Delay subfield have been specified in a Table. **Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 5829** |
| 5830 | Lei Wang | 9.4.2.295b.2 | 131.38 | For a clear presentation and also following the convention of field / value setting specification, suggest using a table to specify the value settings for the EMLMR Delay subfield. | Use a table to specify the value settings for the EMLMR Delay subfield. | **Revised**Agree with the comment. The values of the EMLMR Delay subfield have been specified in a Table. **Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 5830** |
| 7579 | Tomoko Adachi | 9.4.2.295b.2 | 131.37 | "When the EMLMR Delay subfield is included in a frame sent by a STA affiliated with a non-AP MLD, the EMLMR Delay subfield is set to 0 for 0 μs, set to 1 for 32 μs, set to 2 for 64 μs, set to 3 for 128 μs, set to 4 for 256 μs, and the values 5 to 7 are reserved." It is better to describe these in a table. | As in comment. | **Revised**Agree with the comment. The values of the EMLMR Delay subfield have been specified in a Table. **Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 5830** |
| 7581 | Tomoko Adachi | 9.4.2.295b.2 | 131.47 | "When the Transition Timeout subfield is included in a frame sent by an AP affiliated with an AP MLD, the Transition Timeout subfield is set to 0 for 0 TU, set to 1 for 1 TU, set to 2 for 2 TUs, set to 3 for 4 TUs, set to 4 for 8 TUs, set to 5 for 16 TUs, set to 6 for 32 TUs, set to 7 for 64 TUs, set to 8 for 128 TUs, and the values 9 and 15 are reserved." It is better to describe these in a table. | As in comment. | **Revised**Agree with the comment. The values of the Transition Timeout subfield have been specified in a Table. **Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 7581** |
| 5831 | Lei Wang | 9.4.2.295b.2 | 131.48 | For a clear presentation and also following the convention of field / value setting specification, suggest using a table to specify the value settings for the Transition Timeout subfield. | Use a table to specify the value settings for the Transition Timeout subfield. | **Revised**Agree with the comment. The values of the Transition Timeout subfield have been specified in a Table. **Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 7581** |
| 5128 | Geonjung Ko | 9.4.2.295b.2 | 131.51 | Change "and" to "to | As in comment | **Revised**The statement referred to in this CID was deleted as part of resolution for CID 7581 and the values were inserted in a Tabular format. In the table, the highlighted issue was fixed. Hence, no change is required for the resolution of this CID.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 7581** |
| 6880 | Rubayet Shafin | 9.4.2.295b.2 | 131.50 | it says "...and the values 9 and 15 are reserved". How about the values between 9 and 15? | Please change it to "...and the values from 9 to 15 are reserved" | **Revised**The statement referred to in this CID was deleted as part of resolution for CID 7581 and the values were inserted in a Tabular format. In the table, the highlighted issue was fixed. Hence, no change is required for the resolution of this CID.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 7581** |
| 6867 | Rubayet Shafin | 9.4.2.295b.2 | 133.22 | It says Per-STA Profile subelement starts with STA Control field. This is not technically correct since Per-STA Profile subelement starts with Subelement ID | Please update the sentence accordingly. | **Revised**Agree with the comment. The paragraph was deleted because the contents of the Per-STA Profile subelement are specified in the next paragraph and the following figure.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 6867** |
| 5129 | Geonjung Ko | 9.4.2.295b.2 | 133.64 | Change "An STA" to "A STA" | As in comment | **Accepted** |
| 7511 | Tomoko Adachi | 9.4.2.295b.2 | 133.64 | "An STA sets this subfield to 1 when ...". For the term "STA", indefinite "a" is used. | Change it to read "A STA sets this subfield to 1 when ...". | **Accepted** |
| 8286 | Zhiqiang Han | 9.4.2.295b.2 | 134.03 | Change " in transmitted Basic variant Multi-Link element" to "in the transmitted Basic variant Multi-Link element" | as in comment. | **Accepted** |
| 8287 | Zhiqiang Han | 9.4.2.295b.2 | 134.10 | Change " in transmitted Basic variant Multi-Link element" to "in the transmitted Basic variant Multi-Link element" | as in comment. | **Accepted** |
| 8288 | Zhiqiang Han | 9.4.2.295b.2 | 134.29 | This paragraph describes the NSTR Indication Bitmap field. So it's better to put this paragraph after the paragraph"The DTIM Count field and the DTIM Period field are defined in 9.4.2.5 (TIM element) and carries the value of DTIM count and DTIM period, respectively, for the reported AP." | as in comment. | **Revised**Agree with the comment. The identified paragraph has been moved after the paragraph “The DTIM Count field and the DTIM Period field are defined in 9.4.2.5 (TIM element) and carries the value of DTIM count and DTIM period, respectively, for the reported AP”. Additionally, a figure showing the format of the STA Info field was added. These changes clarifies that the NSTR Indication Bitmap resides within the STA Info field of the Per-STA Profile subelement. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 4017 | Abhishek Patil | 9.4.2.295b.2 | 134.30 | Where is the NSTR Indication Bitmap field carried? | Clarify that this subfield is carried in the STA Info field when certain conditions match. Move the paragraph to the location where other fields of STA Info field are being described | **Revised**Agree with the comment. The text was clarified that the NSTR Indication Bitmap subfield is in the STA Info field. A figure showing the format of the STA Info field was also added. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 4366 | Arik Klein | 9.4.2.295b.2 | 134.30 | The section which describes the NSTR Indication Bitmap field is located as part of the description of the STA Control field of the Basic Variant MLE, which does not seem to be the propoer location. | The section which describes the NSTR Indication Bitmap field shall be moved to either the description of STA Info part or STA Profile part. Please specify the exact location of this field and move the current description to that part. | **Revised**Agree with the comment. The text was clarified that the NSTR Indication Bitmap subfield is in the STA Info field. A figure showing the format of the STA Info field was also added. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 4367 | Arik Klein | 9.4.2.295b.2 | 134.30 | There is no description / figure for the NSTR Indication Bitmap field format | Please add a description and proper figure for the NSTR Indication Bitmap field format | **Revised**Agree with the comment. The text was clarified that the NSTR Indication Bitmap subfield is in the STA Info field. A figure showing the format of the STA Info field was also added. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 5130 | Geonjung Ko | 9.4.2.295b.2 | 134.21 | Need to specify where the NSTR Indication Bitmap field is included in the Per-STA Profile subelement. | As in comment | **Revised**Agree with the comment. The text was clarified that the NSTR Indication Bitmap subfield is in the STA Info field. A figure showing the format of the STA Info field was also added. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 5389 | Jeongki Kim | 9.4.2.295b.2 | 134.30 | NSTR Link Pair Present subfield and NSTR Bitmap size subfield are present at STA Control field of Per-STA Profile subelement. However, the exact location of NSTR Indication Bitmap field is a little ambiguous in Per-STA Profile subelement. According to the current draft, the NSTR Indication bitmap is included in Per-STA Profile subelement as a field. If it's right, add the bitmap field in Figure 9-788en--Per-STA Profile subelement format as a field. If the bitmap is present at STA Info field or STA Profile field as a subfield, the indicated description should be updated. Update the Figure 9-788en-Per-STA Profile subelement by adding the NSTR Indication Bitmap | As per comment | **Revised**Agree with the comment. The text was clarified that the NSTR Indication Bitmap subfield is in the STA Info field. A figure showing the format of the STA Info field was also added. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 6223 | Mikael Lorgeoux | 9.4.2.295b.2 | 134.21 | The indication of the location of the NSTR indication bitmap within the Per-STA profile subelement is not clearly indicated | Indicate clearly that the NSTR indication bitmap is located in the STA Info field within the Per-STA profile subelement. | **Revised**Agree with the comment. The text was clarified that the NSTR Indication Bitmap subfield is in the STA Info field. A figure showing the format of the STA Info field was also added. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 6755 | Romain GUIGNARD | 9.4.2.295b.2 | 134.20 | The paragraph explains that NSTR bitmap is in the per-STA profile. As the presence bit for the NSTR bitmap is in the STA control, the NSTR bitmap should be in the STA info. Otherwise if the NSTR bitmap is in the STA profile (because per-STA profile is a typo), we have to define a NSTR element which carries the NSTR bitmap. | Please clarify where is the NSTR bitmap | **Revised**Agree with the comment. The text was clarified that the NSTR Indication Bitmap subfield is in the STA Info field. A figure showing the format of the STA Info field was also added. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 7340 | stephane baron | 9.4.2.295b.2 | 134.21 | the NSTR Indication bitmap location in the ML Information element is not clear. On line 21 it is indicated that the bitmap is in the per sta profile subelement but do not precise the subfield. Please indicate that the NSTR indication bitmap is present in the STA Info field rather than in the per STA profile subelement (like it is done for all other fields listed in the STA Control field).same comment apply at line 30, 32, and 33 | As in comment | **Revised**Agree with the comment. The text was clarified that the NSTR Indication Bitmap subfield is in the STA Info field. A figure showing the format of the STA Info field was also added. A table that summarizes the size of the NSTR Indication Bitmap subfield was added to simplify the text related to the size of the NSTR Indication Bitmap subfield.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 6366 | Morteza Mehrnoush | 9.4.2.295b.2 | 134.37 | There is no reference to the figure that shows the subfields of the STA Info field. Please add it. | as in comment | **Revised**A figure showing the format of the STA Info field was added as a resolution for CID 8288.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 8289 | Zhiqiang Han | 9.4.2.295b.2 | 134.37 | It's better to draw a figure to illustrate the STA Info field. | as in comment. | **Revised**A figure showing the format of the STA Info field was added as a resolution for CID 8288.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 6390 | Muhammad Kumail Haider | 9.4.2.295b.2 | 134.39 | Change "corresponding presence subfield" to "corresponding presencesubfields" | as in comment | **Revised**The statement was deleted as a resolution for CID 8288. No further changes are required for the resolution of this CID.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 8170 | Yunbo Li | 9.4.2.295b.2 | 134.42 | "The STA MAC Address subfield of the STA Info field carries the MAC address of the (AP or non-AP) STA that can operate on the link identified by the Link ID subfield". How to interpret the word "can" in this sentence? For a STA that has capability to operate on this link but may or may not operate on this link, or for a STA that really operate on this link? | remove the word "can"? | **Revised**Agree with the comment. The word “can” was removed and “operate” was changed to “operates” to make the statement grammatically correct.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8170** |
| 6575 | Payam Torab Jahromi | 9.4.2.295b.2 | 134.45 | MAC Address is a subfield | Change "STA MAC Address field" to "STA MAC Address subfield". | **Revised**The statement was deleted as a resolution for CID 8288. No further changes are required for the resolution of this CID.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 7351 | Stephen McCann | 9.4.2.295b.2 | 134.47 | Figure 9-788ep is not required, as IEEE 802-2014 defines the format of a MAC address. | Change the sentence:"The format of the STA MAC Address field is defined in Figure 9-788ep (STA MAC Address subfield format)"to"The format of the STA MAC Address field is defined in IEEE 802-2014."Delete the Figure 9-788ep | **Revised**The statement was deleted as a resolution for CID 8288. No further changes are required for the resolution of this CID.**Tgbe editor please implement changes as shown in doc 11-21/1085r0 tagged as 8288** |
| 4735 | Chunyu Hu | 9.4.2.295b.2 | 138.37 | "when a STA affiliated with an MLD transmits the Basic variant Multi-Link element" can be removed to be concise and doing so doesn't lose the correctness/context as the STA Profile field described in this subclause is part of the basic variant Multi-Link element and the transmitter is described in 35.3.2.2. | As commented | **Accepted** |

***TGbe editor: Please note Baseline is 11be D1.01***

**9.4.2.295b.1 General**

***TGbe editor: Please revise the paragraph after Figure 9-788eg (Multi-Link Control) as shown below***

The Type subfield is defined in [Table 9-322am (Type subfield encoding)](#bookmark95) and is used to differentiate the (#7566) variants of the Multi-Link element. Different variants of the Multi-Link element are used for different multi-link operations. The format of each variant of the Multi-Link element is defined in the subclauses below. (#4100)

***TGbe editor: Please revise the second paragraph after Table 9-322am (Type subfield encoding) as shown below***

The Common Info field carries information that is (#4106) common to all the links except for Transmitting Link Info subfield that applies to (#6704) the link on which the (#5742)Multi-Link element is sent and is optionally present based on the value of the Type subfield (see [9.4.2.295b.2 (Basic variant Multi-](#bookmark96) [Link element)](#bookmark96) and [9.4.2.295b.3 (Probe Request variant Multi-Link element)](#bookmark110)).

**9.4.2.295b.2 Basic variant Multi-Link element**

***TGbe editor: Please revise Figure 9-788eh (Presence Bitmap subfield of the Basic variant Multi-Link element) and the text below the figure as shown below***

B0 B1 B2 B3B4 B11

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Transmitting Link Info Present |  | Medium Synchronization Delay Information Present | EMLCapabilities Present | MLDCapabilities Present | Reserved |

Bits: 1 1 1 1 8

**Figure 9-788eh—Presence Bitmap subfield of the Basic variant Multi-Link element format** **(#6704)**

The Transmitting Link Info Present (#6704) subfield is set to 1 if the Transmitting Link Info (#6704) subfield is present in the Common Info field. Otherwise, the Transmitting Link Info (#6704) Present subfield is set to 0.

 (#6704)***TGbe editor: Please insert a space between “to” and “1” in the statement “set to1” as shown below [CID 4815]***

The Medium Synchronization Delay Information Present subfield is set to 1(#4815) if (#7568) the Medium Synchronization Delay Information subfield is present in the Common Info field. Otherwise, the Medium Synchronization Delay Information Present subfield is set to 0.

The EML Capabilities Present subfield is set to 1 if the EML Capabilities subfield (#4816) is present in the Common Info field. Otherwise, the EML Capabilities Present subfield is set to 0.

The MLD Capabilities Present subfield is set to 1 if the MLD Capabilities subfield is present in the Common Info field. Otherwise, the MLD Capabilities Present subfield is set to 0.

The format of the Common Info field of the Basic variant Multi-Link element is defined in [Figure 9-788ei](#bookmark98) [(Common Info field of the Basic variant Multi-Link element format)](#bookmark98).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| MLD MACAddress | Transmitting Link Info |  | Medium Synchronization Delay Information | EMLCapabilities | MLDCapabilities |

Octets: 6 0 or 2 0 or 2 0 or 2 0 or 2

**Figure 9-788ei—Common Info field of the Basic variant Multi-Link element for- mat (#6704)**

***TGbe editor: Please delete the following paragraph (from the approved text from doc 11-21/569r2) and replace with the new text as shown below***

 (#7569)The MLD MAC Address subfield specifies the MAC Address of the MLD with which the STA transmitting the Basic variant Multi-Link element is affiliated. (#7569).

The format of the Transmitting Link Info (#6704) subfield is defined in [Figure 9-788ej (Transmitting Link Info subfield format)](#bookmark99) (#6704). (#6704)

 B0 B3 B4 B7 B8 B15

Reserved

Link ID

BSS Parameters Change Count

Bits: 4 4 8

**Figure 9-788ej—Transmitting Link Info subfield format (#6704)**

The Link ID subfield indicates the link identifier of the AP that transmits the Basic variant Multi-Link element or the nontransmitted BSSID in the same multiple BSSID set as the AP that transmits the Basic variant Multi- Link element and affiliated with the MLD that is described in the Multi-Link element. The Transmitting Link Info subfield in the Common Info field is not present if the Basic variant Multi-Link element is sent by the non-AP STA. (#6704)

The BSS Parameters Change Count subfield (#6704) is an unsigned integer, initial ized to 0, that increments when a critical update occurs to the operational parameters for the AP that transmits the Basic variant Multi-Link element or the nontransmitted BSSID in the same multiple BSSID set as the AP that transmits the Basic variant Multi-Link element and affiliated with an MLD that is described in the Multi-Link element. The critical updates are defined in 11.2.3.15 (TIM Broadcast). The BSS Parameters Change Count subfield (#6704) is not present if the Basic variant Multi-Link element is sent by the non-AP STA.

The condition for the presence of (#8281) the Transmitting Link Info (#6704)subfield in the Common Info field is defined in 35.3.5.4 (Usage and rules of Basic variant Multi-Link element in the context of multi-link setup), 35.3.4.4 (Multi-Link element usage rules in the context of discovery), and 35.3.9 (BSS parameter critical update procedure).

***TGbe editor: Please revise the second paragraph after Figure 9-788ek (Medium Synchronization Delay Information subfield format) as shown below***

The Medium Synchronization OFDM ED Threshold subfield indicates the value of dot11MSDOFDMED- threshold (#7702)to be used by a non-AP STA during medium synchronization recovery and is defined in [Table 9-322an (Medium Synchronization OFDM ED Threshold subfield)](#bookmark101).

***TGbe editor: Please revise the second paragraph after Figure 9-788el (EML Capabilities subfield format) and the paragraphs below it as shown below***

The EMLSR Delay subfield indicates the MAC padding duration of the Padding field of the initial Control frame defined in 35.3.16 (Enhanced multi-link single radio opera- tion). The EMLSR Delay subfield is 3 bits and set as defined in Table 9-xxx (Encoding of the EMLSR Delay subfield) (#5829).

**Table 9-xxx—** **Encoding of the EMLSR Delay subfield (#5829)**

|  |  |
| --- | --- |
| **EMLSR Delay subfield value** | **EMLSR Delay** |
| 0 | 0 μs |
| 1 | 32 μs |
| 2 | 64 μs |
| 3 | 128 μs |
| 4 | 256 μs |
| 5-7 | Reserved |

The EMLMR Support subfield indicates support of the EMLMR operation for an MLD. The EMLMR Sup- port subfield is set to 1 if the MLD supports the EMLMR operation; otherwise it is set to 0.

The EMLMR Delay subfield indicates the minimum padding duration required for a non-AP MLD for EMLMR link switch when operating in EMLMR mode (see 35.3.17 (Enhanced multi-link multi-radio oper ation)).

When the EMLMR Delay subfield is included in a frame sent by a STA affiliated with a non-AP MLD, the EMLMR Delay subfield is set as defined in Table 9-xxy (Encoding of the EMLMR Delay subfield) (#5830). When the EMLMR Delay subfield is included in a frame sent by an AP affiliated with an AP MLD, the EMLMR Delay subfield is set to 0.

**Table 9-xxy—** **Encoding of the EMLMR Delay subfield (#5830)**

|  |  |
| --- | --- |
| **EMLMR Delay subfield value** | **EMLMR Delay** |
| 0 | 0 μs |
| 1 | 32 μs |
| 2 | 64 μs |
| 3 | 128 μs |
| 4 | 256 μs |
| 5-7 | Reserved |

The Transition Timeout subfield indicates the timeout value for EML Operating Mode Notification frame exchange in EMLMR mode (see 35.3.17 (Enhanced multi-link multi-radio operation)).

When the Transition Timeout subfield is included in a frame sent by an AP affiliated with an AP MLD, the Transition Timeout subfield is set as defined in Table 9-xxz (Encoding of the Transition Timeout subfield) (#7581). When the Transition Timeout subfield is included in a frame sent by a non-AP STA affiliated with a non-AP MLD, the Transition Timeout subfield is set to 0.

**Table 9-xxz—** **Encoding of the Transition Timeout subfield (#7581)**

|  |  |
| --- | --- |
| **Transition Timeout subfield value** | **Transition Timeout** |
| 0 | 1 TUs |
| 1 | 2 TUs |
| 2 | 4 TUs |
| 3 | 4 TUs |
| 4 | 8 TUs |
| 5 | 16 TUs |
| 6 | 32 TUs |
| 7 | 64 TUs |
| 8 | 128 TUs |
| 9-15 | Reserved |

***TGbe editor: Please revise the paragraphs after Table 9-322ap (Optional subelement IDs for Basic variant Multi-Link element) and the paragraphs below it as shown below***

Zero or more Per-STA Profile subelements are included in the list of subelements.

 (#6867)

***TGbe editor: Please revise the third paragraphs after Table 9-788eo (STA Control field format) and the paragraphs below it as shown below***

The MAC Address Present subfield indicates the presence of the STA MAC Address subfield in the STA Info field and is set to 1 if the STA MAC Address subfield is present in the STA Info field; otherwise set to 0. A (#5129) STA sets this subfield to 1 when the element carries complete profile.

The Beacon Interval Present subfield indicates the presence of the Beacon Interval subfield in the STA Info field and is set to 1 if the Beacon Interval subfield is present in the STA Info field; otherwise set to 0. A non- AP STA sets the Beacon Interval Present subfield to 0 in the (#8286) transmitted Basic variant Multi-Link element. An AP sets this subfield to 1 when the element carries complete profile.

The DTIM Info Present subfield indicates the presence of the DTIM Info subfield in the STA Info field and is set to 1 if the DTIM Info subfield is present in the STA Info field; otherwise set to 0. A non-AP STA sets the DTIM Info Present subfield to 0 in the (#8287) transmitted Basic variant Multi-Link element. An AP sets this sub- field to 1 when the element carries complete profile.

If the value of the Maximum Number Of Simultaneous Links subfield in the MLD Capabilities field is greater than 0, the NSTR Link Pair Present subfield in a STA Control field indicates if at least one NSTR link pair is present in the MLD that contains the link corresponding to that STA. It is set to 1 if there is at least one such link pair; otherwise it is set to 0.

If the Complete Profile subfield is equal to 1 and the NSTR Link Pair Present subfield is equal to 1 in the STA Control field, then the STA Info field (#8288) contains an NSTR Indication Bitmap subfield. Otherwise, the STA Info field does not include the NSTR Indication Bitmap subfield. (#8288)

(#8288)

***TGbe editor: Please insert the following figure as shown below: [CID 8288]***

The format of the STA Info field is defined in Figure 9-xyz (STA Info field format) (#8288).

|  |  |  |  |
| --- | --- | --- | --- |
| STA MAC Address | BeaconInterval | DTIM Info | NSTR Indication Bitmap |

 Octets: 0 or 6 0 or 1 0 or 2 0 or 1 or 2

**Figure 9-xyz—STA Info field format (#8288)**

 (#8288)

The STA MAC Address subfield of the STA Info field carries the MAC address of the (AP or non-AP) STA that operates (#8170) on the link identified by the Link ID subfield and is affiliated with the same MLD as the STA that transmitted the Basic variant Multi-Link element. (#8288)

 **(#8288)**

The Beacon Interval subfield of the STA Info field is defined in 9.4.1.3 (Beacon Interval field) and carries the value of beacon interval for the reported AP.

The DTIM Info subfield of the STA Info field has the format as defined in [Figure 9-788eq (DTIM Info sub-](#bookmark109) [field format)](#bookmark109).

Octets: 1 1

DTIM Period

DTIM Count

**Figure 9-788eq—DTIM Info subfield format**

The DTIM Count field and the DTIM Period field are defined in [9.4.2.5 (TIM element)](#bookmark73) and carries the value of DTIM count and DTIM period, respectively, for the reported AP.

**Table 9-788xyz – Length of the NSTR Indication Bitmap subfield (#8288)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Maximum Number of Simultaneous Links subfield value** | **Complete Profile subfield value** | **NSTR Link Pair Present subfield value** | **NSTR Bitmap Size subfield value** | **Length of the NSTR Indication Bitmap subfield** |
| 0 | 0 or 1 | Reserved | Reserved | 0 |
| > 0 | 0 | 1 | Reserved | 0 |
| > 0 | 1 | 0 | Reserved | 0 |
| > 0 | 1 | 1 | 0 | 1 |
| > 0 | 1 | 1 | 1 | 2 |

The presence and length of the NSTR Indication Bitmap subfield is summarized in Table 9-788xyz (Length of the NSTR Indication Bitmap subfield). LL(#8288)

The contents of the STA Profile field (#4735) are defined in 35.3.2.2 (Advertisement of complete or partial per-link information).

The Vendor Specific subelements have the same format as their corresponding elements (see 9.4.2.25 (Vendor Specific element)). Zero or more Vendor Specific subelements are included in the list of optional subelements.

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

***TGbe editor: Please revise the following paragraphs as shown below. Please note that the baseline is the approved text in doc 11-21/569r2:***

The Common Info field of the Basic variant Multi-Link element carried in the Beacon frame or Probe Response frame shall

* include the MLD MAC address subfield for the AP MLD with which the AP is affiliated
* include the Transmitting Link Info (#6704) subfield for the AP by setting the Transmitting Link Info Present (#6704) subfield of the Multi- Link Control field of the Basic variant Multi-Link element to 1
* (#6704)

**35.3.5.4 Multi-Link element usage rules in the context of multi-link setup**

***TGbe editor: Please revise the following paragraphs as shown below. Please note that the baseline is the approved text in doc 11-21/569r2:***

The Common Info field of the Basic variant Multi-Link element carried in the (Re)Association Request frame shall

* include the MLD MAC address subfield for the non-AP MLD with which the non-AP STA is affiliated
* not include the Transmitting Link Info (#6704) subfield by setting the Transmitting Link Info (#6704) Present subfield of the Multi-Link Control field of the Basic variant Multi-Link element to 0
* (#6704)