IEEE P802.11
Wireless LANs

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| LB 271 Resolution for assigned CIDs |
| Date: Jun 20th 2023 |
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 Abstract

This submission proposes resolutions for the following 26 CIDs received for TGbe LB271 against D3.0:

* 17390, 17391,
* 15169, 15812, 15926, 16342, 16343, 16433, 16886, 16888,
* 15470, 15527, 15528, 15529, 16014, 16015, 16016, 16508, 16509, 17949, 18147, 18148, 18149, 18203, 18204, 18234,

**Revisions:**

* Rev 0: Initial version of the document.

***TGbe editor: the baseline for this document is TGbe D3.2***

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** |
| **9.2.4.7.9 SRS Control field format** |
| 17390 | Brian Hart | 9.2.4.7.9 | 145.08 | The antecedent "the subfield" is unclear. Looking backwards, we first find "SRS Control subfield" but likely " Control Information subfield" is meant | Write "The format of the Control Information subfield is shown in Figure 9-33b ..." | Accepted |
| 17391 | Brian Hart | 9.2.4.7.9 | 145.05 | MPDU(s) or frame? | "MPDU(s)" at L5.5 but "frame" at L22. Change frame to frame(s) at L22? Also, for consistency, maybe use frame(s) in place of MPDU(s) at L5.5 | Rejected –MPDUs and frames are synonyms, hence either is fine. Please refer to the following definition in 3.2: “frame: A unit of data exchanged between medium access control (MAC) entities. Syn: medium access control (MAC) protocol data unit (MPDU).”As for using plural in L22, that change would be incorrect because there can only be one control response frame to a PPDU in this setting. |
| **35.3.16.5.2 End time alignment of response PPDUs using SRS Control field** |
| 15169 | Po-Kai Huang | 35.3.16.5.2 | 556.59 | Use non-AP STAs for STAs affiliated with a non-AP MLD in this clasue. | Use non-AP STAs for STAs affiliated with a non-AP MLD in this clasue. There are multiple instances. | Revised –Agree in principle with the comment. Proposed resolution accounts for the suggested changes.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 15169.** |
| 15812 | Muhammad Kumail Haider | 35.3.16.5.2 | 558.09 | In REVmeD2.1, A-MPDU contents in control response context is Table 9-633 and not Table 9-533 as cited here | Please correct the table number | Accepted |
| 15926 | Zhou Lan | 35.3.16.5.2 | 557.08 | In this line, it says AP affiliated with an AP MLD shall not transmit a PPDU with a SRS control subfield to a STA affiliated with a non-AP MLD but in NSTR mobile AP MLD case (subclause 35.3.19.1) there is a rule which allows the NSTR mobile AP MLD to do that. Please fix the text by removing this limitation for NSTR mobile AP MLD. | As in comment | Revised –Agree in principle with the comment. Proposed resolution accounts for the suggested changes. Additional changes were made to Table 9-404i to align the SRS Support interpretation to the normative behaviors.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 15926.** |
| 16342 | Oded Redlich | 35.3.16.5.2 | 557.26 | Update the text with EHT SU Transmission | Replace the text "EHT MU PPDU with EHT-SIG MCS equals 0 and addressed to a single STA" with "EHT SU transmission with EHT-SIG MCS equals 0". | Accepted |
| 16343 | Oded Redlich | 35.3.16.5.2 | 558.07 | Update the text with EHT SU Transmission | Replace the text "EHT MU PPDU format addressed to a single STA" with "EHT SU transmission". | Revised –Agree with the comment. Changed also in the subsequent note.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 16343.** |
| 16433 | Morteza Mehrnoush | 35.3.16.5.2 | 557.08 | In this line, it says AP affiliated with an AP MLD shall not transmit a PPDU with a SRS control subfield to a STA affiliated with a non-AP MLD but in NSTR mobile AP MLD case (subclause 35.3.19.1) there is a rule which allows the NSTR mobile AP MLD to do that. Please fix the text by removing this limitation for NSTR mobile AP MLD. | As in comment | Revised –Agree in principle with the comment. Proposed resolution accounts for the suggested changes. Additional changes were made to Table 9-404i to align the SRS Support interpretation to the normative behaviors.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 16433.** |
| 16886 | Mark RISON | 35.3.16.5.2 | 557.25 | "with EHT-SIG MCS equals 0" should be "with EHT-SIG MCS equal to 0" | As it says in the comment | Accepted |
| 16888 | Mark RISON | 35.3.16.5.2 | 558.06 | "Use a non-HT (duplicated) PPDU" is not clear: does it mean non-HT or non-HT dup, or does it mean non-HT that is necessarily dup? | Change to "Use a non-HT PPDU, non-HT duplicate PPDU" | Revised –Agree with the comment. Incorporated as suggested with minor editorial improvements.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 16888.** |
| **35.3.7.1.8 Association procedures for TID-to-link mapping** |
| 15470 | Xiangxin Gu | 35.3.7.1.8 | 521.32 | May the AP MLD include tid-to-link mapping elements in association response if there is no tid-to-link mapping in association request? | Please clarify it. | Revised –Agree in principle with the comment. Proposed resolution rephrases the first bullet to make it clear that the TID to link element in the (Re)Association Response frame may be present even if the same is not contained in the request. Also made a similar change for the Re-Association Response frame formats. **TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 15470.** |
| 15527 | Chaoming Luo | 35.3.7.1.8 | 521.48 | The three bullets of TID-to-link mapping negotiation procedure in P521 are confusing and hard to read. | Suggest to change to 4 cases:accept association and accept mapping,accept association and reject mapping,reject association with preffered mapping,reject assocation w/o preffered mapping | Revised –Agree in principle with the comment. However, there are only three cases that are covered in this procedure. Proposed resolution re-phrases certain portions of the bullets to make them clearer.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 15527.** |
| 15528 | Chaoming Luo | 35.3.7.1.8 | 521.53 | In the case "requests a mapping that maps TIDs to a link in a direction that is not enabled in the advertised mapping, the AP shall include", why cannot AP reject the request? | Add a condition in the text: if AP intends to accept the request then it shall include... | Rejected –The comment fails to identify a technical issue and is asking a question. The AP cannot reject the request since it has an established TID to link mapping that is being followed by all MLDs that are associated. Hence this new request is simply being added to an already established TID to link map, i.e. cannot be rejected. |
| 15529 | Chaoming Luo | 35.3.7.1.8 | 522.12 | "all links to which at least one TID is requested to be mapped" is confusing. | Change to:all links to each of which at least one TID is requested to be mapped | Revised –Agree in principle with the comment. Proposed resolution clarifies this aspect.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 15529.** |
| 16014 | Binita Gupta | 35.3.7.1.8 | 521.55 | The TID-to-link Mapping provided should be the one which is advertised and established, since there can be advertised mapping which is not yet established since Mapping Switch Time is in future. Clarify this in the text. | Modify to "...indicating the established TID-to-link mapping that is advertised in Beacons for each of the links accepted in the association procedure..." | Accepted |
| 16015 | Binita Gupta | 35.3.7.1.8 | 522.01 | How does the non-AP MLD know that the TID-to-Link Mapping element included in an (Re)Association Response is providing a suggested preferred mapping vs an advertised TID-to-Link mapping. Additional rules may need to be defined for the non-AP MLD. Clarify this aspect in the requirement. | Clarify requirement as per comment. | Rejected –The differentiation relies on the acceptance or rejection of the (re-) association procedure. If (re)association is accepted then the mapping is the same as the advertised TIDtolink mapping, if rejected then it is a suggested TIDtolink mapping.No further rules are required. |
| 16016 | Binita Gupta | 35.3.7.1.8 | 522.09 | Change 'can' to may | Use normative 'may' in the requirement | Accepted |
| 16508 | Arik Klein | 35.3.7.1.8 | 521.51 | There is either "TID-To-Link Mapping element" or either "TID-To-Link Mapping Request frame" but not "TID-to-link Mapping Request element". Please correct to the proper term. | As in comment | Revised –Agree with the comment. Removed “Request”.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 16508.** |
| 16509 | Arik Klein | 35.3.7.1.8 | 522.02 | The default TID-to-link mapping remains established till a new TID-to-link mapping is successfully negotiated. Please revise the sentence as suggested. | The sentence should be revised as follows: "..., and the default TID-to-link mapping remains established until a new TID-to-link mapping is advertised or successfully negotiated" | Revised –Agree with the comment. Amended as suggested in two locations.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 16509.** |
| 17949 | Yuchen Guo | 35.3.7.1.8 | 521.49 | "Where" or "When"? | Change "Where" to "When" | Accepted |
| 18147 | Abhishek Patil | 35.3.7.1.8 | 521.32 | The 2nd and 3rd bullets of the 3rd paragraph are already covered in 35.3.7.1.3 and must not be duplicated here. The only new item is handling the case when there is an established 'advertised' T2LM during ML setup. | Delete this subclause and update 35.3.7.1.3 to cover the missing case of advertised mapping. | Revised –There is partial overlap between the rules in those two locations. Proposed resolution is to move the contents of this subclause in 35.3.7.1.3 and remove all redundancy.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 18147.** |
| 18148 | Abhishek Patil | 35.3.7.1.8 | 521.49 | The bullet are hard to parse. Simplify it to say that when an advertised T2LM is established, the affiliated AP can include T2LM IE (to reemphasize advertised mapping) in its (Re)Assoc Resp frame, if the non-AP include T2LM request that does not match the advertised mapping or non-AP does not include a T2LM IE in the req frame. | As in comment | Revised –Agree in principle. Bullet is re-organized to make these aspects clearer.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 18148.** |
| 18149 | Abhishek Patil | 35.3.7.1.8 | 521.51 | There is no such element as TID-To-Link Mapping Request element. | Delete 'Request' in 'TID-to-Link Mapping Request element' | Accepted |
| 18203 | Liuming Lu | 35.3.7.1.8 | 521.51 | "if the non-AP MLD does not include at least one TID-to-link Mapping Request element or requests a mapping that maps TIDs to a link in a direction that is not enabled in the advertised mapping" seems to be confusing. | Suggest to modify "TID-to-link Mapping Request element" as "TID-to-link Mapping element for request" | Revised – Agree in principle with the comment. Proposed resolution simply removes “Request”. And the sentence has been generally amended to make it clearer.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 18203.** |
| 18204 | Liuming Lu | 35.3.7.1.8 | 521.57 | "TID-to-link mapping included in that frame" seems to be confusing. | Suggest to modify "TID-to-link mapping included in that frame" as "TID-to-link mapping element included in that frame" | Revised – Agree in principle with the comment. Proposed resolution amends the sentence to better reflect the intention.**TGbe editor: please implement changes as shown in 11-23/1122r0 tagged 18204.** |
| 18234 | Liuming Lu | 35.3.7.1.8 | 522.09 | "the AP MLD can accept the requested TID-to-link mapping in the TID-to-link Mapping element in the received (Re)Association Request frame only if it accepts the multi-link (re)setup for all links to which at least one TID is requested to be mapped" seems to be confusing. If an AP affiliated with the AP MLD is unreachable to an non-AP STA affiliated with an associated non-AP MLD corresponding to a setup link, it may be beneficial to set that link to be disabled for the non-AP MLD. | Please clarify how to handle the inconsistency between unreachability and enablement for a setup link of non-AP MLD. | Rejected –A non-AP MLD is not supposed to request ML setup for links that are not reachable. Hence, the issue is simply avoidable by having the non-AP MLD not make the mistake of requesting ML setup for unreachable links. Proposals for helping the non-AP MLD in determining the reachability of the AP MLD (and consequently aid in a dynamic selection of available links) via certain links were discussed in previous rounds but the group could not reach consensus. |

* + - * 1. **SRS Control**

***TGbe editor: Please update the contents of this paragraph in this subclause as shown below:***

The Control Information subfield in an SRS Control subfield contains scheduling information for the non- TB PPDU containing the control response to the PPDU carrying the MPDU(s) containing the SRS Control subfield (see 35.3.16.5.2 (End time alignment of response PPDUs using SRS Control field)). The format of the Control Information *(#17390)* subfield is shown in [Figure 9-33b (Control Information subfield format in an SRS Control subfield)](#_bookmark16).

B0 B7 B8 B9

Reserved

PPDU Response Duration

Bits: 8 2

**Figure 9-33b—Control Information subfield format in an SRS Control subfield**

The PPDU Response Duration subfield contains the duration of the solicited non-TB PPDU that carries the control response frame that immediately follows the PPDU carrying the SRS Control subfield. The PPDU Response Duration subfield is in units of 4 microseconds and is set as defined in 35.3.16.5.2 (End time alignment of response PPDUs using SRS Control field).

* + - * 1. **End time alignment of response PPDUs using SRS Control field**

***TGbe editor: Please update the contents of these paragraphs in this subclause as shown below:***

An AP that is affiliated with an AP MLD shall set the SRS Support subfield in the Common Info field of the Basic Multi-Link element it transmits to 1 if its dot11SRSOptionImplemented is true; otherwise the AP shall set it to 0.

A non-AP STA affiliated with a non-AP MLD operating on a pair of NSTR links for that MLD shall not transmit a PPDU carrying an MPDU with SRS Control subfield to an AP unless a non-AP STA affiliated with the non-AP MLD has received from the AP MLD a Basic Multi-Link element with the SRS Support subfield equal to 1. A non-AP STA*(#15169)* affiliated with a non-AP MLD shall not transmit a TB PPDU carrying an MPDU with SRS Control subfield.

An AP affiliated with an AP MLD that is not an NSTR mobile AP MLD shall not transmit a PPDU carrying an MPDU with SRS Control subfield to a non-AP STA*(#15169)* affiliated with a non-AP MLD. An NSTR mobile AP MLD can transmit PPDUs carrying an MPDU with SRS Control subfield as defined in 35.3.19.1.*(#15926, 16433)*

NOTE 1—If the received SRS Support subfield from an AP is equal to 0, a non-AP STA might not be able to perform multiple frame transmission in a TXOP over NSTR link pair(s) with the AP, unless the expected duration of solicited PPDU transmitted on NSTR link pair(s) are the same.

If non-AP STAs affiliated with a non-AP MLD operating on a pair of NSTR links simultaneously transmit PPDUs to the respective APs affiliated with an AP MLD that has dot11SRSOptionImplemented equal to true, the transmitted PPDUs solicit control response frames and the non-AP MLD intends to align the end times of the PPDUs sent in response by the peer APs, then at least one of the PPDUs soliciting a control response frame shall carry an MPDU with SRS Control subfield. The non-AP STA shall set the PPDU Response Duration subfield of the SRS Control subfield to a value that is equal to or longer than the maximum of the expected duration of the response PPDUs on all links, where the expected duration of the response PPDU is calculated based on the following parameters:

* PPDU format that is HE SU PPDU, or an EHT SU transmission with EHT-SIG MCS equal to 0 *(#15169, 16342, 16886)*,
* Bandwidth that is equal to the bandwidth of the soliciting PPDU, with BCC coding if the bandwidth is 20 MHz and LDPC coding if the bandwidth is greater than 20 MHz,
* NSS and number of LTFs that are equal to one,
* GI that is equal to the longest mandatory GI value (3.2 µs),
* MCS that is selected following the rate selection rules defined in 10.6.6.5 (Rate selection for control response frames), 26.17.1 (Basic HE BSS operation), 26.15.3 (MCS, NSS, BW and DCM selection),

[35.15 (EHT BSS operation)](#_bookmark111), and [35.14 (PPDU format, BW, MCS, NSS, and DCM selection rules)](#_bookmark109),

* A PSDU length that is equal to or greater than the length of a PSDU that contains the larger of a Multi-STA BlockAck frame and a Compressed BlockAck frame expected in response to the soliciting PPDU.

(#15157)An example of the usage of SRS Control for end time alignment of response PPDUs is shown in AF.13.3 (Example of end time alignment of response PPDUs using SRS Control field).

An EHT AP affiliated with an AP MLD that transmits a PPDU in response to a frame containing an SRS Control subfield shall:

* Have the duration of the PPDU to be equal to the duration that is specified in the PPDU Response Duration subfield of the soliciting SRS Control subfield.
* Use a non-HT PPDU, non-HT duplicated PPDU, HE SU PPDU, or an EHT SU transmission *(#15169, 16343, 16888)*. If the PSDU carried in the response PPDU contains an A-MPDU then the contents of the A-MPDU shall be as defined in Table 9-633 (A-MPDU contents in the control response context) *(#15812)*. If the PPDU is an HE SU PPDU then it shall not use DCM encoding

NOTE 2—If the PPDU carrying the response is an HE SU PPDU or an EHT SU transmission*(#16343)*, then the AP might use any type of padding to ensure that the duration of the PPDU is equal to the duration that is specified in the PPDU Response Duration subfield of the soliciting SRS Control subfield.

***TGbe editor: Please update the contents of the table as shown below:***

**Table 9-404i—Subfields of the MLD Capabilities And Operations subfield(#16582)**

|  |  |  |
| --- | --- | --- |
| **Subfield** | **Definition** | **Encoding** |
| Maximum Number Of Simultaneous Links | Indicates the maximum number of STAs affiliated with the MLD that support simultaneous transmission or reception of frames on the respective links. | (#16858)Set to a value between 0 and 14, which is the maximum number of affiliated STAs of the MLD that support simultaneous transmission or reception of frames minus 1.(#16859)The value 15 is reserved.See 35.3.16.2 (Multi-link device capability and operation signaling). |
| SRS Support | Indicates support forframes that carry an SRS Control sub- field. | For an AP MLD that is not an NSTR mobile AP MLD:Set to 1 to indicate that the AP MLD, with which the AP is affiliated, is capable of receiving frames with an SRS Control subfield. Set to 0 otherwise.For an NSTR mobile AP MLD:Set to 1 to indicate that the AP MLD, with which the AP is affiliated, is capable of receiving and generating frames with an SRS Control subfield. Set to 0 otherwise.*(#15926, 16433)*For a non-AP MLD:Set to 1 to indicate that a non-AP MLD, with which the non-AP EHT STA is affili- ated, is capable of generating frames with an SRS Control subfield.Set to 0 otherwise.See 35.3.16.5 (PPDU end time alignment on an NSTR link pair(#16247)). |

***TGbe editor: Please update the contents of these paragraphs in this subclause as shown below:***

 *(#18147)*

* + - * 1. **Negotiation of TID-to-link mapping**

***TGbe editor: Please update the contents of these paragraphs in this subclause as shown below:***

An MLD that supports TID-to-link mapping negotiation has dot11TIDtoLinkMappingActivated equal to true and shall set to a nonzero value the TID-to-link Mapping Negotiation Support subfield in the (#16582)(#16857)MLD Capabilities And Operations subfield of the Basic Multi-Link element that it transmits. An MLD that does not support TID-to-link mapping negotiation has dot11TIDtoLinkMappingActivated equal to false and shall set the TID-to-link Mapping Negotiation Support subfield to 0. If the TID-to-link Mapping Negotiation Support subfield value received from a peer MLD is equal to 1, the MLD that initiates a TID-to-link mapping negotiation with the peer MLD shall send only the TID-to-link Mapping element where all TIDs are mapped to the same link set. If the TID-to-link Mapping Negotiation Support subfield value received from a peer MLD is equal to 3, the MLD that initiates a TID-to- link mapping negotiation with the peer MLD shall send the TID-to-link Mapping element where each TID is mapped to the same or different link set. An MLD that includes two TID-To-Link Mapping elements in a frame shall set the Direction subfield in one of the TID-To-Link Mapping elements to 0 and the Direction subfield in the other TID-To- Link Mapping element to 1 *(#18147)*

During a ML (re)setup procedure, a non-AP MLD may initiate a TID-to-link mapping negotiation by including one or two TID-To-link Mapping elements in the (Re)Association Request frame if the AP MLD has indicated support for TID-to-link mapping negotiation. Otherwise, the non-AP MLD shall not include any TID-To-link Mapping element(s) in the (Re)Association Request frame.*(#18147)*

The AP MLD that receives a (Re)Association Request frame from a non-AP MLD shall respond with (Re)Association Response frame by following the rules in 11.3.5.3 (Authentication—destination STA or MLD), 11.3.5.5 (Deauthentication— destination STA or MLD), and [35.3.5 (ML (re)setup)](#_bookmark27), and perform the following:

* If *(#17949)* the AP MLD is advertising an established TID-to-link mapping (see [35.3.7.2.4 (Advertised TID-to-link mapping in Beacon and Probe Response frames)](#_bookmark39)) and
	+ If the non-AP MLD did not include a TID-To-link Mapping *(#18149, 16508, 15470)* element in the (Re)Association Request frame, then
		- The AP MLD shall not include the TID-To-Link Mapping element in the (Re)Assoc Resp frame.
		- The TID-to-link mapping that is advertised in the Beacon frame shall be considered as established and shall be used during the association unless and until a new TID-to-link mapping is advertised or successfully negotiated.
	+ Otherwise, if the non-AP MLD includes a TID-To-Link Mapping element in the (Re)Association Request frame which indicates a subset of the TID-To-Link Mapping advertised in Beacon and Probe Response frames, then
		- The AP MLD shall not include the TID-To-Link Mapping element in the (Re)Assoc Resp frame.
		- The TID-to-link mapping that is included in the (Re)Association Request frame shall be considered as established and shall be used during the association unless and until a new TID-to-link mapping is advertised or successfully negotiated
	+ Otherwise,
		- the AP MLD shall include in the (Re)Association Response frame, the same TID-to-link mapping element(s) that is advertised in Beacon and Probe Response frames, with the Mapping Switch Time Present subfield set to 0.
		- The TID-to-link mapping that is advertised in the (Re)Association Response frame shall be considered as established and shall be used during the association unless and until a new TID-to-link mapping is advertised or successfully(#16509) negotiated.(#18204, 18148)
* Otherwise,
	+ if the TID-To-link Mapping element(s) is included the received (Re)Association Request frame, then:
		- If the AP MLD accepts the requested TID-to-link mapping, then the AP MLD shall not include the TID-to-link mapping element(s) in the (Re)Association Response frame. The TID-to-link mapping that is included in the (Re)Association Request frame shall be considered as established and shall be used during the association unless and until a new TID-to-link mapping is advertised or successfully negotiated*(#15527, #15529)*
		- Otherwise, the AP MLD shall indicate rejection of the proposed TID-to-link mapping by including in the (Re)Association Response frame a TID-To-link Mapping element that suggests a preferred TID-to-link mapping. The default TID-to-link mapping shall be used during the association unless and until a new TID-to-link mapping is advertised or successfully*(#16509)* negotiated. Additionally, an AP MLD that rejects the (Re)Association Request may include a TID-to-link mapping-related status code in the (Re)Association Response frame. Status code 134 (PREFERRED\_TID\_TO\_LINK\_MAPPING\_SUGGESTED) may be used
	+ Otherwise
		- the AP MLD may include TID-to-link mapping element(s) in the (Re)Association Response frame suggesting a preferred TID-to-link mapping even if the non-AP MLD has not include the TID-To-link Mapping element(s) is included the received (Re)Association Request frame. The default TID-to-link mapping shall be used during the association unless and until a new TID-to-link mapping is advertised or successfully*(#16509)* negotiated.

NOTE—A ML (re)setup can be successful even if the TID-to-link mapping negotiation embedded in the ML (re)setup procedure is not successful.*(#18147)*

After the ML (re)setup is successful and 4-way handshake is complete (if RSNA is required), to negotiate a new TID-to-link mapping, an initiating non-AP MLD with dot11TIDtoLinkMappingActivated equal to true shall send an individually addressed TID-to-link Mapping Request frame to a responding MLD that has indicated support of TID-to-link mapping negotiation.

An AP MLD with dot11TIDtoLinkMappingActivated equal to true that initiates a TID-to-link mapping negotiation may perform one of the following:

* Send an individually addressed TID-to-link Mapping Request frame to a non-AP MLD
* Advertise a TID-to-link mapping by including a TID-To-Link Mapping element in Beacon and Probe Response frames as defined in [35.3.7.2.4 (Advertised TID-to-link mapping in Beacon and](#_bookmark39) [Probe Response frames)](#_bookmark39).

Upon receiving the individually addressed TID-to-link Mapping Request frame, the responding MLD shall send an individually addressed TID-to-link Mapping Response frame to the initiating MLD according to the following rules:

* If the responding MLD accepts the requested TID-to-link mapping in the TID-to-link Mapping element in the received TID-to-link Mapping Request frame, it shall set to 0 (SUCCESS) the Status Code in the TID-to-link Mapping Response frame.
* Otherwise, the responding MLD shall indicate rejection of the proposed TID-to-link mapping by setting to either 133 (DENIED\_TID\_TO\_LINK\_MAPPING) or 134 (PREFERRED\_TID\_TO\_LINK\_MAPPING\_SUGGESTED) the Status Code in the TID-to-link Mapping Response frame. When the Status Code in the TID-to-link Mapping Response frame is 134 (PREFERRED\_TID\_TO\_LINK\_MAPPING\_SUGGESTED), the responding MLD is suggesting a preferred mapping as indicated in the TID-to-link Mapping element included in the frame.

An MLD may suggest a preferred TID-to-link mapping to a peer MLD by sending an unsolicited TID-to- link Mapping Response frame with the Dialog Token field set to 0 that includes the TID-to-link Mapping element and sets the Status Code to 134 (PREFERRED\_TID\_TO\_LINK\_MAPPING\_SUGGESTED). An MLD shall not send an unsolicited TID-to-link Mapping Response frame that includes the TID-to-link Mapping element and sets the Status Code to either 0 (SUCCESS) or 133 (DENIED\_TID\_TO\_LINK\_MAPPING).

When initiating a new TID-to-link mapping negotiation with a peer MLD, an MLD should take into account the preferred TID-to-link mapping of the peer MLD if it has indicated one. In addition, an AP MLD should take into account the traffic flow(s) from the non-AP MLD and the capabilities and constraints (e.g., single radio operation), if any, of the non-AP MLD when providing a preferred TID-to-link mapping or initiating a new TID-to-link mapping negotiation with the non-AP MLD.

A multi-radio non-AP MLD should accept a TID-to-link mapping initiated by its associated AP MLD. A TID-to-link mapping negotiation is successful if a MLD successfully transmits or receives a TID-to-link Mapping Response frame with the value of the Status Code field equal to 0 (SUCCESS).

When two MLDs have negotiated a TID-to-link mapping, either MLD may tear down the negotiated TID- to-link mapping by sending an individually addressed TID-To-Link Mapping Teardown frame, except a non-AP MLD shall not tear down a negotiated TID-to-link mapping if the current TID-to-link mapping was established by an advertisement of TID-to-link mapping. After teardown, if a mapping scheme is advertised by the AP MLD as described in [35.3.7.2.4 (Advertised TID-to-link mapping in Beacon and Probe Response](#_bookmark39) [frames)](#_bookmark39), the MLDs shall operate in the established mode as described in [35.3.7.2.4 (Advertised TID-to-link](#_bookmark39) [mapping in Beacon and Probe Response frames)](#_bookmark39), otherwise they shall operate in the default mapping mode (see [35.3.7.2.2 (Default mapping mode)](#_bookmark37)).

Once an MLD has successfully negotiated the TID-to-link mapping with a peer MLD, both the MLD and the peer MLD shall update uplink and/or downlink TID-to-link mapping information according to the negotiated TID-to-link mapping. In case TID-to-link mapping of a specific TID is missing in the negotiation, the most recent TID-to-link mapping of this TID shall remain unchanged and valid. If an MLD has failed to negotiate the TID-to-link mapping with a peer MLD, the most recent TID-to-link mapping of all TID shall remain unchanged and valid.

NOTE—If there is no successfully negotiated TID-to-link mapping for a TID, then the TID is mapped to all setup links for DL and UL.

When an MLD has successfully negotiated with a peer MLD an uplink and/or downlink TID-to-link mapping in which the bit position *i* of the Link Mapping Of TID *n* field in the TID-to-link Mapping element in the (Re)Association Request frame, TID-To-Link Mapping Request frame, Beacon frame, or Probe Response frame is set to 0, TID *n* shall not be mapped to the link associated with the link ID *i* in the uplink and/or downlink based on the Direction subfield in the TID-To-Link Mapping element.

When an MLD has successfully negotiated with a peer MLD an uplink and/or downlink TID-to-link mapping in which the bit position *i* of the Link Mapping Of TID *n* field in the TID-to-link Mapping element in the (Re)Association Request frame, TID-To-Link Mapping Request frame, Beacon frame, or Probe Response frame is set to 1, the TID *n* shall be mapped to the link associated with the link ID *i* in the uplink and/or downlink based on the Direction subfield in the TID-To-Link Mapping element.

* + - 1. **Association Response frame format**

***TGbe editor: Please update the contents of the table as shown below:***

**Table 9-63—Association Response frame body**

|  |  |  |
| --- | --- | --- |
| **Order** | **Information** | **Notes** |
| … |  |  |
| <Last assigned + 4> | TID-To-Link Map- ping | One or two TID-To-Link Mapping elements are present if dot11- MultiLinkActivated is true, dot11TIDtoLinkMappingActivated is true, and the AP sends an Association Response frame in response to a received Association Request frame that is initiating a ML setup and contains TID-to-link mapping elements. Otherwise it is not present. *(#15470)* |

* + - 1. **Reassociation Response frame format**

 ***TGbe editor: Please update the contents of the table as shown below:***

**Table 9-65—Reassociation Response frame body**

|  |  |  |
| --- | --- | --- |
| **Order** | **Information** | **Notes** |
| … |  |  |
| <Last assigned + 4> | TID-To-Link Map- ping | One or two TID-To-Link Mapping elements are present if dot11- MultiLinkActivated is true, dot11TIDtoLinkMappingActivated is true, and the AP sends a Reassociation Response frame in response to a received Reassociation Request frame that is initiat- ing a ML resetup and contains TID-to-link mapping elements . *(#15470)* Otherwise it is not present. |