IEEE P802.11
Wireless LANs

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| LB 275 Resolution for assigned CIDs |
| Date: Sept 27th 2023 |
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 Abstract

This submission proposes resolutions for the following CIDs received for TGbe LB275 against D4.0:

* 19359, 19360, 19394, 19576

**Revisions:**

* Rev 0: Initial version of the document.

***TGbe editor: the baseline for this document is TGbe D4.0***

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** |
|  |
| 19359 | Brian Hart | 9.2.4.7.9 | 130.02 | 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 ..." | Revised –Agree in principle with the comment. Proposed resolution accounts for the suggested changes.**TGbe editor: please implement changes as shown in 11-23/1671r1 tagged** 19359**.** |
| 19360 | Brian Hart | 9.2.4.7.9 | 129.53 | "control response" but later in this section "control response frame" | Change "control response" to "control response frame" at L53. | Rejected –The PPDU that is sent in response, does contain the control response but also possibly other MPDUs as defined in Table 9-633 (A-MPDU contents in the control response context. Hence calling explicitly out control response frames in this particular paragraph would imply that only control response frames are allowed which is not the case.  |
| 19394 | Yingqiao Quan | 35.3.16.5.2 | 558.61 | "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 9-533 (A-MPDU contents in the control response context)."The index of the table is not correct, it should be Table 9-633 (P327 in D4.0) rather than Table 9-533 | Correct it and cite references here. | Revised –Agree in principle with the comment. Proposed resolution accounts for the suggested changes.**TGbe editor: please implement changes as shown in 11-23/1671r1 tagged** 19394**.** |
| 19576 | Xiandong Dong | 35.3.16.5.2 | 558.12 | "STA affiliated with a non-AP MLD" should be "non-AP STA affiliated with a non-AP MLD". The same issue exists in line 17. | As in comment | Revised –Agree in principle with the comment. Proposed resolution accounts for the suggested changes.**TGbe editor: please implement changes as shown in 11-23/1671r1 tagged** 19576**.** |
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* + - * 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 *(#19359)* 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*(#19576)* 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 shall not transmit a PPDU carrying an MPDU with SRS Control subfield to a non-AP STA affiliated with a non-AP MLD. *(#19576)*

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 equals to 0 *(#19576)*,
* 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 *(#19576)*. 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) *(#19394)*. 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*(#19576)*, 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)**

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| **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 for the reception of a frames that carries carry an SRS Control sub-field. | For an 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 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 receiving frames with an SRS Control subfield.Set to 0 otherwise. *(#19576)*See 35.3.16.5 (PPDU end time alignment on an NSTR link pair(#16247)). |