IEEE P802.11
Wireless LANs

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| LB276 Resolutions on primitive-related comments – Part 2 |
| Date: 2023-09-05 |
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**Abstract**

This document proposes the comment resolution for CID 3022, 3497, 3498, 3025.

R0: initial version on Sept 05, 2023.

R1: revised version on Sept 15, 2023. URL was added. Editorial changes were made based on comments from TGbf editor. Special thanks to Claudio for reviewing the whole contribution.

R2: revised version on Sept 19, 2023. Author list was changed. SP text was changed.

R3: revised version on Oct 13, 2023. Editorial change: changed “cause” to “result in”, based on Ali’s comment. Thank you.

# 3022 3497 3498 3025 (SBP procedure)

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 3022 | 11.55.2.2 | 160.55 | Parameters of MLME primitives are no longer defined in Clause 6 (except for those in 6.5). | Text in 11.55.2.2 must be re-written so that it refers to elements/fields of frames, which are defined in Clause 9, instead of primitive parameters, which are no longer defined in Clause 6. For example, in 160.55-56, instead of referring to PeerSTAAddress (which is no longer defined in Clause 6), we must refer instead to the address of the AP to which the (Protected) SBP Request frame is sent to.Suggestion (edits may be needed): To establish an SBP procedure, the SME of an SBP initiator shall issue an MLME-SBP.request primitive that results in the transmission of an SBP Request frame to the intended SBP responder.Unfortunately, this issue will lead to many modifications to 11.55.2.2. |
| 3497 | 11.55.2.2 | 160.55 | For normative texts in SBP setup, it would be clearer to connect primitive issueing and the transmission of frames. Both DMG and sub-7 should be the same. | Change "To establish an SBP procedure, the SME of an SBP initiator shall issue an MLME-SBP.request primitive with PeerSTAAddress parameter equal to the intended SBP responder's MAC address."to " To establish an SBP procedure, the SME of an SBP initiator shall request the transmission of SBP Request frame to the SBP responder by issueing an MLME-SBP.request primitive with PeerSTAAddress parameter equal to the intended SBP responder's MAC address." |
| 3498 | 11.55.2.2 | 161.05 | For normative texts in SBP setup, it would be clearer to connect primitive issueing and the transmission of frames. Both DMG and sub-7 should be the same. | add the following sentece after aSBPSetupExpiry: " Upon receipt of an MLME-SBP response primitive, the MLME of the SBP responder shall transmit an SBP Response frame to the SBP initiator." |
| 3025 | 11.55.2.4 | 166.05 | Parameters of MLME primitives are no longer defined in Clause 6 (except for those in 6.5). | Text in 11.55.2.4 must be re-written so that it refers to elements/fields of frames, which are defined in Clause 9, instead of primitive parameters, which are no longer defined in Clause 6. For example, the parameter PeerSTAAddress referred to in 166.5 is no longer defined in Clause 6. Instead, text should refer to the STA that sends/receives the SBP Termination frame. |

**Proposed resolution: REVISED to all.**

**Please refer to the modifications labelled with #3022, #3497, #3498 and #3025 in DCN 23/1485r3:**

<https://mentor.ieee.org/802.11/dcn/23/11-23-1485-03-00bf-lb276-resolutions-on-primitive-related-comments-part-2.docx>

**Discussions:**

These comments are about refining the text in 11.55.2.2 (Setup exchange) and 11.55.2.4 (Reporting) for the SBP procedure. I agree with the commenter that since primitive parameters are no longer defined in Clause 6, we cannot refer to those parameters for normative texts in Clause 11. Instead, we will need to refer to the actual field/element in frames to describe normative behaviors. The major change is to replace the primitive parameters with elements/fields in the corresponding frames.

**Modifications:**

***To TGbf editor: Please modify the text in 11.55.2.2 from P160 to P163 as follows.***

**11.55.2.2 Setup exchange (#3022, #3497, #3498)**

To establish an SBP procedure, the SME of an SBP initiator shall issue an MLME-SBP.request primitive that results in the transmission of an SBP Request frame to the intended SBP responder. The SBP Request frame shall include valid SBP Parameters element and Sensing Measurement Parameters element . The SBP Request frame may include a Sensing Responder Addresses field within the SBP Parameters element to indicate a set of preferred sensing responders.

The SBP procedure expiry timer value is indicated in the SBP Parameters element within the SBP Request frame (see 9.6.7.54 ((Protected) SBP Request frame format)). Upon expiry of the corresponding SBP procedure expiry timer, the SBP procedure shall be considered terminated (see 11.55.2.4 (Termination)).

On receiving an SBP Request frame, the SBP responder shall validate the frame and issue an MLME-SBP.indication primitive. If the SME of an SBP responder receives an MLME-SBP.indication primitive, it shall issue an MLME-SBP.response primitive that results in the transmission of an SBP Response frame to the SBP initiator within *aSBPSetupExpiry*. The Status Code field within the SBP Response frame should be set to SUCCESS to indicate that the SBP procedure request is accepted if the SBP responder is able to satisfy the SBP request with parameters indicated in the SBP Request frame. The Status Code field within the SBP Response frame shall be set to REQUEST\_DECLINED or to REJECTED\_WITH\_SUGGESTED\_CHANGES to indicate that the SBP procedure request is rejected if the SBP responder is not able to satisfy the SBP request with parameters indicated in the SBP Request frame.

If the Status Code field within the SBP Response frame is equal to REJECTED\_WITH\_SUGGESTED\_CHANGES, the SBP Response frame shall include the SBP Parameters element and Sensing Measurement Parameters element that specify preferred SBP and sensing measurement session parameters, respectively.

If the Status Code field within the SBP Response frame is equal to SUCCESS, the SBP Response frame shall include a Measurement Session ID Indication field that specifies the Measurement Session ID assigned for the SBP setup exchange. In this case, the SBP Response frame shall not include a Sensing Measurement Parameter element and may include an SBP Parameters element .

If the Status Code field within the SBP Response frame is equal to SUCCESS, the SBP Response frame shall include an AID/USID field that specifies the AID/USID assigned to the SBP initiator.

If the Status Code field within the SBP Response frame is equal to REQUEST\_DECLINED, the SBP Response frame shall not include a Sensing Measurement Parameter element nor an SBP Parameters element.

On receiving an SBP Response frame, the SBP initiator shall validate the SBP Response frame by ensuring its fields are valid and issue an MLME-SBP.confirm primitive. If the Status Code field within the received SBP Response frame is equal to REQUEST\_DECLINED or REJECTED\_WITH\_SUGGESTED\_CHANGES, or if the SBP initiator does not receive an SBP Response frame with the Status Code field equal to SUCCESS within *aSBPSetupExpiry* of sending the corresponding SBP Request frame, the SBP procedure setup exchange shall be considered unsuccessful.

The Sensing Measurement Parameters element within the Sensing Measurement Request frame sent by the SBP responder to initiate a sensing procedure used to satisfy an SBP request should be identical to the Sensing Measurement Parameters element within the corresponding SBP Request frame. The Measurement Session ID Indication field within the Sensing Measurement Request frame sent by the SBP responder to initiate a sensing procedure used to satisfy an SBP request shall be identical to the Measurement Session ID Indication field within the corresponding SBP Response frame.

The SBP Request field within the SBP Parameters element within an SBP Request frame shall be set to 1. The SBP Request field within the SBP Parameters element within an SBP Response frame shall be set to 0. If present, the SBP Request subfield within the SBP Parameters element within an SBP Termination frame shall be set to 0.

The SBP responder shall set the Status Code field within the SBP Response frame to REQUEST\_DECLINED if the Mandatory Number of Responders field within the SBP Parameters element of the corresponding SBP Request frame is set to 1 and the SBP responder is not able to satisfy the requested number of sensing responders indicated in the Number of Sensing Responders field within the SBP Parameters element . If the Mandatory Number of Responders field within the SBP Parameters element is set to 0, the SBP responder should respond with an SBP Response frame with the Status Code field set to SUCCESS even if the requested number of sensing responders indicated in the Number of Sensing Responders within the SBP Parameters element cannot be satisfied.

If the Sensing Responder field within the SBP Parameters element of the corresponding SBP Request frame is set to 0, the SBP responder shall not use a sensing procedure initiated with the issue of an MLME-SENSMSMTSESSION.request primitive that resulted in the transmission of a Sensing Measurement Request frame to the SBP initiator to satisfy the SBP request. Otherwise, if the Sensing Responder field is set to 1, the SBP responder shall use a sensing procedure initiated with the issue of an MLME-SENSMSMTSESSION.request primitive that results in the transmission of a Sensing Measurement Request frame to the SBP initiator to satisfy the SBP request.

NOTE—If an SBP initiator is also a sensing responder and a sensing receiver in the sensing procedure initiated by the SBP responder, the AP sets the Sensing Measurement Report Requested field to 0 in the Sensing Measurement Request frame transmitted to the SBP initiator.

If the SBP initiator is unassociated with the SBP responder, the SBP responder shall poll the SBP initiator in the polling phase of TB sensing measurement exchanges (see 11.55.1.5.2 (TB sensing measurement exchange)) of the sensing procedure initiated by the SBP responder.

If the Preferred Responder List field within the SBP Parameters element of the corresponding SBP Request frame is set to 0, the SBP responder may include any STA in the sensing procedure used to satisfy the SBP request that allows for measurements to be obtained with the operational parameters specified in the SBP Request frame.

If the Preferred Responder List field and the Mandatory Preferred Responder field within the SBP Parameters element of the SBP Request frame are both set to 1, the intended sensing responder of the sensing procedure used by the SBP responder shall be equal to one of the MAC addresses listed in the Sensing Responder Addresses field within the corresponding SBP Request frame.

If the Preferred Responder List field and the Mandatory Preferred Responder field within the SBP Parameters element of the SBP Request frame are set to 1 and 0, respectively, the SBP responder should use a sensing procedure initiated with the issue of an MLME-SENSMSMTSESSION.request primitive that results in the transmission of a Sensing Measurement Request frame to a sensing responder with MAC address not equal to any of the MAC addresses listed in the Sensing Responder Addresses field within the corresponding SBP Request frame if a sensing procedure cannot be established with one or more STAs with MAC addresses listed in the Sensing Responder Addresses field.

If the Preferred Responder List field within the SBP Parameters element of the SBP Request frame is set to 1, the Number of Preferred Responders field shall be equal to the number of MAC addresses included in the Sensing Responder Addresses field.

The Preferred Responder List field within the SBP Parameters element of an SBP Response frame shall be set to 1 only if:

— The Status Code field within the SBP Response frame is set to SUCCESS; and

— The Preferred Responder List field within the SBP Parameters element of the corresponding SBP Request frame is equal to 1.

Otherwise, the Preferred Responder List field within the SBP Parameters element of an SBP Response frame shall be set to 0.

If the Preferred Responder List field within the SBP Parameters element of the SBP Response frame is set to 0, neither the Sensing Responder Addresses field nor the Sensing Responder IDs field shall be included in the SBP Response frame. If the Preferred Responder List field within the SBP Parameters element of the SBP Response frame is set to 1, both Sensing Responder Addresses and Sensing Responder IDs fields shall be included in the SBP Response frame. In this case, the Number of Preferred Responders field shall be equal to the number of MAC addresses within the Sensing Responder Addresses field and the number of AID/USIDs within the Sensing Responder IDs field.

If the Preferred Responder List field and Mandatory Preferred Responder field within the SBP Parameters element of the corresponding SBP Request frame are equal to 1 and 0, respectively, the MAC addresses within the Sensing Responder Addresses field of the SBP Response frame shall be a subset of the MAC addresses within the Sensing Responder Addresses field of corresponding SBP Request frame.

If the Status Code field within the SBP Response frame is set to SUCCESS, the Number of Sensing Responders field within the SBP Parameters element shall be equal to the number of sensing responders used in the sensing procedure used by the SBP responder to satisfy the SBP request.

If the Status Code field within the SBP Response frame is set to REJECTED\_WITH\_SUGGESTED\_CHANGES, the Number of Sensing Responders field within the SBP Parameters element should indicate a suggested number of sensing responders.

NOTE—The method used by an SBP responder to select STAs to include in the sensing procedure used in response to

an SBP Request frame in which the Preferred Responder List field within the SBP Parameters element is equal to 0 or in which the Preferred Responder List field and the Mandatory Preferred Responder field within the SBP Parameters element are set to 1 and 0, respectively, is implementation dependent.

NOTE—Only TB sensing measurement exchanges (see 11.55.1.5.2 (TB sensing measurement exchange)) are used in sensing procedures initiated in response to an SBP request.

If the Preferred Responder Role Bitmap Present field within the SBP Parameters element of the SBP Request frame is set to 1, both the Sensing Transmitter and the Sensing Receiver fields within the Sensing Measurement Parameters element of SBP Request frame shall be set to reserved.

If the Preferred Responder Role Bitmap Present field within the SBP Parameters element of the SBP Request frame is set to 1 and if the Status Code field within the SBP Response frame is equal to SUCCESS, the SBP responder shall set the Sensing Transmitter and the Sensing Receiver fields in the Sensing Measurement Parameters element within the Sensing Measurement Request frame sent to initiate a sensing procedure to satisfy the SBP request according to the Preferred Responder Role Bitmap field within the SBP Parameters element of the corresponding SBP Request frame.

The Preferred Responder Role Bitmap Present field within the SBP Parameters element of the SBP Response frame or the SBP Termination frame shall always be set to 0.

If the SR2SR Sounding Request field within the SBP Parameters element of the SBP Request frame is equal to 1, and if the Status Code field within the corresponding SBP Response frame is set to SUCCESS, the SBP responder shall initiate the SR2SR variant of the TF sounding phase with sensing responders that support SR2SR sounding (see 9.4.2.321 (Sensing Capabilities element)) in the sensing procedure initiated by the SBP responder to satisfy the SBP request.

***To TGbf editor: Please modify the text in 11.55.2.4 on P166 as follows.***

**11.55.2.4 Termination (#3025)**

If the SBP responder of an SBP request that has resulted in a received SBP Response frame with the Status Code field equal to SUCCESS is not able to satisfy required parameters specified in the corresponding SBP Request frame after the SBP Response was sent, it shall issue an MLME-SBPTERMINATION.request primitive that resulted in the transmission of an SBP Termination frame to the SBP initiator. The Measurement Session ID Indication field within the Sensing Measurement Termination frame sent by the SBP responder shall be identical to the Measurement Session ID Indication field within the corresponding SBP Response frame.

SP:

Do you agree to the resolution provided for CIDs 3022, 3497, 3498, 3025 in 23/1485r3 to be included in the latest 11bf Draft?

Y/N/A