IEEE P802.11
Wireless LANs

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| LB276 resolutions on mixed comments  |
| Date: 2023-10-17 |
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**Abstract**

This document proposes the comment resolution for CID 3499, 3203, 3477, 3533, 3494, 3307, 3525, 3524, and 3210.

R0: initial version on Oct 17, 2023.

R1: revised version on Nov 2, 2023. Changed justifications to CID 3203.

R2: revised version on Nov 14. Editorial changes to CID 3494.

# 3499

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| **CID** | **Clause**  | **Page** | **Comment** | **Proposed change** |
| 3499 | 11.55.1 | 0.00 | For sensing procedure, especially sensing measurement session, sensing measurement exchange, the normative texts should describe the relation between the transmission of frames and the issueing of primitives. The activities of SME and MLME should be described. | As in comment. Describe normative behaviors regarding SME and MLME of sensing initiator and sensing responder during a sensing procedure. |

**Proposed resolution:** **REVISED**. Please refer to the modifications labelled with #3499 in <https://mentor.ieee.org/802.11/dcn/23/11-23-1851-02-00bf-lb276-resolutions-on-mixed-comments.docx>.

**Discussions**: For both sub-7 GHz and 60 GHz, we need to describe the behaviors of both sensing initiator and sensing responder at the MLME SAP interface during the sensing procedure (i.e., from sensing measurement session to its termination). For all the MLME primitives listed in clause 6, we have all covered in clause 11, except for the set of DMG-SENSMSMTSESSION primitives, which is of Type 1.

**Modifications**:

***To TGbf editor: Please replace the text on P171L47-48 in D2.1 with the new text below.***

To establish a DMG sensing measurement session, the SME of a sensing initiator shall issue an MLME-DMG-SENSMSMTSESSION.request primitive that results in the transmission of a DMG Sensing Measurement Request frame to the sensing responder. The DMG Sensing Measurement Request frame shall contain a DMG Sensing Measurement Session element. (#3499)

***To TGbf editor: Please replace the text on P173L41-42 in D2.1 with the new text below.***

After receiving a DMG Sensing Measurement Request frame, the sensing responder shall validate the frame and issue an MLME-DMG-SENSMSMTSESSION.indication primitive. Upon reception of an MLME-DMG-SENSMSMTSESSION.indication primitive, the SME of the sensing responder shall issue an MLME-DMG-SENSMSMTSESSION.response primitive that results in the transmission of a DMG Sensing Measurement Response frame to the sensing initiator which transmitted the DMG Sensing Measurement Request frame. (#3499)

***To TGbf editor: Please add the following text to P174L11 in D2.1 as follows.***

Upon reception of a DMG Sensing Measurement Response frame, the sensing initiator shall validate the frame and issue an MLME-DMG-SENSMSMTSESSION.confirm primitive. (#3499)

# 3203, 3477, 3533, 3494

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| **CID** | **Clause**  | **Page** | **Comment** | **Proposed change** |
| 3203 | 11.55.1.2 | 135.36 | Need to constraint the Maximum value of the spatial streams is 8. | as in comment |

**Proposed resolution: REJECTED.**

**Rejection reasons:**

I agree that the maximum number of spatial streams supported in 11bf is 8. Nevertheless, I don’t think we need to specify this constraint explicitly in the spec text. Because the maximum number of spatial streams is already indicated in the Sensing Capabilities element where 3 bits are used to give the upper bound for STS. If the commenter intends to emphasize the number of 8, the current text “five or more spatial streams” covers the case of 8 spatial streams. Thus, we could keep the text as it is.

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| **CID** | **Clause**  | **Page** | **Comment** | **Proposed change** |
| 3477 | 11.55.1.2 | 135.59 | PTKSA should be also be established between the U-STA and AP before U-STA sending the Sensing Measurement Query frame in TB sensing. Should add this case. | As in comment. |

**Proposed resolution: REJECTED.**

**Rejection reasons:**

The comment raised by the commenter makes sense. The proposed change is however rejected. Because the text on P136L5-L9(D2.1) already covers the case/resolves the issue mentioned by the commenter. No further change is required.

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| **CID** | **Clause**  | **Page** | **Comment** | **Proposed change** |
| 3533 | 11.55.1.3 | 137.27 | Does it requires the sensing capabilities shall be exchanged in the (re) association procedure if any non-AP STA intends to associate with an AP. What if the non-AP STA does not support sensing? | Please clarify the condition when the sensing capabilities shall be exchanged in the (re)association procedure. |

**Proposed resolution: REJECTED.**

**Rejection reasons:**

For a sensing STA, the Sensing Capabilities element is included in (Re)Association Request frame and (Re)Association Response frame. Please refer to 9.3.3.5 (Association Request frame format), 9.3.3.6 (Association Response frame format), 9.3.3.7 (Reassociation Request frame format), and 9.3.3.8 (Reassociation Response frame format). It is clearly stated that the Sensing Capabilities element is included if dot11SensingImplemented is true. Otherwise, this element is not included. So, if a STA does not support sensing, which means the dot11SensingImplemented is false, it will not include a Sensing Capabilities element in any (re)association frame. No text change is needed.

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| **CID** | **Clause**  | **Page** | **Comment** | **Proposed change** | **Propose resolution** |
| 3494 | 11.55.1.5.2.6.1 | 152.44 | Add normative text for deplayed reporting in TB sensing for the setting of Invalid Measurement field in the report frame | As in comment. | **REVISED**.Agree with the commenter. The Invalid Measurement field in only defined in the non-TB case, not in the TB case. The corresponding text should be added. Please refer to the changes labelled with #3494 in <https://mentor.ieee.org/802.11/dcn/23/11-23-1851-02-00bf-lb276-resolutions-on-mixed-comments.docx> |

**Discussions:**

For the non-TB sensing measurement exchange, 11.55.1.5.3.3 (Reporting phase) has the following text:



For the TB case, if the sensing responder does not support immediate feedback, the first triggered Sensing Measurement Report frame for a given Measurement Session ID shall set the Invalid Indication field to 1.

**Modifications:**

***To TGbf editor: Please modify the text in 11.55.1.5.2.6.1 on P152L44 as follows.***

Upon receiving a Sensing Reporting Trigger frame, the sensing responder shall transmit a Sensing Measurement Report frame that contains the sensing measurement result with Measurement Exchange ID corresponding to either the current sensing measurement exchange or the previous sensing measurement exchange consistently throughout all TB sensing measurement exchanges with the same Measurement Exchange ID. In the latter case, in the first TB sensing measurement exchange for a given sensing measurement session, the sensing responder shall set the Invalid Indication field in the Sensing Measurement Report frame to 1. (#3949)

# Sensing Responder Bitmap field in SBP Parameters element

# 3307

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| **CID** | **Clause**  | **Page** | **Comment** | **Proposed change** | **Propose resolution** |
| 3307 | 9.4.2.322 | 79.65 | Padding or reserved bits should be described for the 'Preferred Responder Role Bitmap field', since the bitmap itself may not occupy whole octet(s). | As in comment | **REVISED**.Agree with the commenter. The role encoding of a sensing responder uses 2 bits. It’s very possible that this field does not occupy whole octets. Therefore, padding is required to ensure an integer number of octets. Please refer to the changes labelled with #3307 in <https://mentor.ieee.org/802.11/dcn/23/11-23-1851-02-00bf-lb276-resolutions-on-mixed-comments.docx> |

**Modifications:**

***To TGbf editor: Please add the following figure to P80L3 in D2.1 (above Table 9-401v)***

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|  | B0 B1 | B2 B3 |  |  |  |
|  | Role 1 | Role 2 | … | Role *n* | Padding |
| Bits | 2 | 2 | … | 2 | 0, 2, 4, or 6 |

Figure 9-xxx – Sensing Responder Role Bitmap field format (#3307)

***To TGbf editor: Please modify the text on P79L57-L64 as follows in D2.1.***

The Preferred Responder Role Bitmap field is present only if the Preferred Responder Role Bitmap Present field is set to 1. The Preferred Responder Role Bitmap field indicates that the sensing transmitter and/or sensing receiver role for the preferred sensing responders with MAC addresses included in the Sensing Responder Addresses field. The format of the Sensing Responder Role Bitmap field is shown in Figure 9-xxx (Sensing Responder Role Bitmap field format). The Padding field contains 0, 2, 4, or 6 bits to make the total number of bits in the Sensing Responder Role Bitmap field equal to an integer number of octets. If the Padding field is present, the value of the Padding field is set to 0. (#3307) The Preferred Responder Role Bitmap field uses 2*n* bits to indicate the sensing transmitter and/or sensing receiver role for the preferred sensing responders. The sensing transmitter and/or sensing receiver role for each preferred sensing responder is encoded by 2 bits. …

# 3525

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| **CID** | **Clause**  | **Page** | **Comment** | **Proposed change** | **Proposed resolution** |
| 3525 | 9.4.2.322 | 80.06 | The title of Table 9-401v is not correct. | Change to " Table 9-401v-The sensing role encoding in the Preferred Responder Role Bitmap" | **REVISED**.Agree with the commenter. The title of Table 9-401v can be improved. However, in 11bf, we do not have a term defined as “sensing role”. Instead we have “role” of a sensing responder as defined in 11.55.1.4. Please refer to the changes labelled with #3525 in <https://mentor.ieee.org/802.11/dcn/23/11-23-1851-02-00bf-lb276-resolutions-on-mixed-comments.docx> |

**Modifications:**

***To TGbf Editor: Please modify the title of Table 9-401v on P80L5 as follows in D2.1.***

Table 9-401v – The role encoding in the Sensing Responder Role Bitmap field (#3525)

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| **Encoding** | **Meaning** |
| 00 | Reserved |
| 01 | Sensing receiver |
| 10 | Sensing transmitter |
| 11 | Sensing receiver and sensing transmitter |

***To TGbf Editor: Please modify the text on P80L1-2 as follows in D2.1.***

…in the Sensing Responder Addresses field. The encoding of the sensing transmitter and/or sensing receiver role is given in Table 9-401v (The role encoding in the Sensing Responder Role Bitmap field). (#3525)

# 3524

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| **CID** | **Clause**  | **Page** | **Comment** | **Proposed change** | **Propose resolution** |
| 3524 | 9.4.2.322 | 79.58 | The sentence "The Preferred Responder Role Bitmap field indicates that the sensing transmitter and/or sensing receiver role for the preferred sensing responders with MAC addresses included in the Sensing Responder Addresses field." does not read well. | Change to "The Preferred Responder Role Bitmap field indicates the sensing role (sensing transmitter, sensing receiver, or both) of each of the preferred sensing responders with MAC addresses included in the Sensing Responder Addresses field." | **REVISED**.Agree with the commenter that the text can be improved. Please refer to the changes labelled with #3524 in <https://mentor.ieee.org/802.11/dcn/23/11-23-1851-02-00bf-lb276-resolutions-on-mixed-comments.docx> |

**Modifications:**

***To TGbf Editor: Please modify the text on P79L56-L65 as follows in D2.1.***

The Sensing Responder Role Bitmap field is present only if the Preferred Responder Role Bitmap Present field is set to 1. The Sensing Responder Role Bitmap field indicates the role (sensing transmitter, sensing receiver, or both sensing transmitter and sensing receiver) of each of (#3524) the preferred sensing responders with MAC addresses included in the Sensing Responder Addresses field. The Preferred Responder Role Bitmap field uses 2*n* bits to indicate the sensing transmitter and/or sensing receiver role for the preferred sensing responders. The role of (#3524) each preferred sensing responder is encoded by 2 bits. The roles of (#3524) the preferred sensing responders are listed in the same order as the corresponding MAC addresses…

# 3210

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| 3210 | 11.55.2.2 | 160.53 | how the SBP responder intiate the TB measurement type(e.g. NDPA or TF) if the SBP initiator sends the SBP parameter element without the field Sensing Responder Role Bitmap in the SBP request frame, please clarify. | as in comment | **REVISED**.SBP initiator delivers a Sensing Measurement Parameters element in the SBP Request frame. The function of the Sensing Transmitter field and the Sensing Receiver field within the element can be replaced with the Sensing Responder Role Bitmap field (if present) in the SBP Parameters element. To improve clarity, we could describe the behaviors of the SBP responder in both cases (whether or not the Sensing Responder Role Bitmap field is present). Please refer to the changes labelled with #3210 in <https://mentor.ieee.org/802.11/dcn/23/11-23-1851-02-00bf-lb276-resolutions-on-mixed-comments.docx> |

**Modifications:**

***To TGbf Editor: Please add the following text after P164L20 in D2.1.***

If the Preferred Responder Role Bitmap Present field within the SBP Parameters element of the SBP Request frame is set to 0 and if the Status Code field within the SBP Response frame is equal to SUCCESS, the SBP responder should set the Sensing Transmitter and the Sensing Receiver fields in the Sensing Measurement Parameters element within the Sensing Measurement Request frame sent to the sensing responder(s) to initiate a sensing procedure to satisfy the SBP request to the same values in the Sensing Measurement Parameters element of the corresponding SBP Request frame.

SP:

Do you agree to the resolution provided for CIDs 3499, 3203, 3477, 3533, 3494, 3307, 3525, 3524, and 3210 in 23/1851r2 to be included in the latest 11bf Draft?

Y/N/A