IEEE P802.11
Wireless LANs

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| Comment Resolution in LB272 for Reporting CID (Part 1) |
| Date: 2023-03-28 |
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Abstract

This document resolves comment in LB272 with CID 1789, 1074, 1002, 1077.

Revision History:

r0 : initial draft

r1 : added CID 1789 and 1074. After further discussion, decided to use the term “WLAN sensing STA” instead of “A STA in which dot11WLANSensingImplemented is true”

r2: changed “subcarrier group size” to just “subcarrier group” in Table 9-127h under CID 1002.

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| **CID** | **Commentor** | **Clause Number** | **Page** | **Comment** | **Proposed Change** |
| 1789 | Robert Stacey | 11.55.1.2 | 170.03 | The term we defined is "WLAN sensing precedure" (or "sensing procedure") not "WLAN sensing". What exactly is supported? Initiator, responder or both. Instead of the cumbersome "STA in which dot11WLANSensingImplented is true" define something a bit shorter, say "sensing STA". | Change to "A STA with dot11WLANSensingImplemented equal to true is referred to as a sensing STA and supports the [WLAN] sensing procedure as both an sensing initiator and as a sensing responder. A sensing STA shall set the WLAN Sensing field in the Extended Capabilities element to 1." |

**Proposed Resolution:** Revise

**Discussion:** Agree withthe commentor in principle. Exact text is provided below

**Modifications:** TgbfEditor, please replace the text in P170L03 to L08 as follows

Implementation of WLAN sensing is optional. ~~A STA in which dot11WLANSensingImplemented is true isdefined as a STA that supports WLAN sensing.~~ A STA with dot11WLANSensingImplemented equal to true is referred to as a WLAN sensing STA and supports the WLAN sensing procedure both as a sensing initiator and as a sensing responder.

~~A STA in which dot11WLANSensingImplemented is true shall set the WLAN Sensing field of the ExtendedCapabilities element to 1.~~

A WLAN sensing STA shall set the WLAN Sensing field in the Extended Capabilities element to 1.

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| **CID** | **Commentor** | **Clause Number** | **Page** | **Comment** | **Proposed Change** |
| 1074 | Claudio da Silva | 11.55.1.2 | 170.05 | Delete the sentence "A STA in which... is defined as a STA that supports WLAN sensing." since this definition is not used in the amendment. (We have already made this change for the SBP procedure.) | As suggested. |

**Proposed Resolution:** Reject

**Discussion:** We keep the definition of “WLAN sensing STA” as per the resolution of CID 1789.

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| **CID** | **Commentor** | **Clause Number** | **Page** | **Comment** | **Proposed Change** |
| 1002 | John Wullert | 11.55.1.2 | 170.14 | Referring to values by their variable names (e.g., Nb, Ng) is precise, but does not aid the reader in understanding the meaning of the requirement. The fact that the search function does not readily detect the definition of "Ng" in the document further thwarts the reader. | Include a descriptive name for the variables in the requirements (e.g., "Nb, the number of bits used in the encoding of each CSI value", "Ng, the size of the subcarrier grouping"). Alternatively, include a link to the frame format where the values are defined (Table 9-127h seems most relevant, but it does not explicitly define Ng.) |
| 1077 | Claudio da Silva | 11.55.1.2 | 170.14-26 | The shalls in each of the four paragraphs only apply to STAs in which dot11WLANSensingImplemented is true. | Change the start of each of the four paragraphs to "A STA in which dot11WLANSensing Implemented..." |

**Proposed Resolution:** Revise

**Discussion:**

**CID 1002:** Agree with the commentor in principle. We take the second suggestion of the commentor and provide a link to the frame format where the values are defined. We also modify some text in Table 9-127h to make the definition of Ng more precise.

**CID 1077**: Agree with the commentor in principle. As per resolution of CID 1789, we have defined “WLAN sensing STA”. So, we can use the phrase “A WLAN sensing STA” rather than using “A STA in which dot11WLANSensingImplemented is true”. Exact changes provided in the text below.

**Modifications:** TgbfEditor, please modify the text in Table 9-127h as shown below

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| Table 9-127h-Sensing Measurement Report Control field definition |
| Field | Size (bits) | Definition | Meaning |
| Report Control Length | 8 | Indicates the number of octets in the Sensing Measurement Report Control field, including the one octet for the Report Control Length subfield | Set to the number of octets in the Sensing Measurement Report Control field. |
| Presence and Control Bitmap | 8 | Includes fields to indicate presence of optional subfields in the Sensing Measurement Report Control field, or other control bits | The fields of the Presence and Control Bitmap field are specified in Figure 9-144m (Presence and Control Bitmap field format) |
| BW | 3 | Bandwidth | Set to a value that corresponds to the bandwidth as defined in Table 9-127i (BW field format). |
|  | 3 | Indicates the number of transmit antennas | Set to the number of transmit antennas minus 1. |
|  | 3 | Indicates the number of receive antennas | Set to the number of receive antennas minus 1. |
|  | 1 | Indicates the number of bits for each CSI value | Set to 0 for an 8-bit word size. Set to 1 for a 10-bit word size. |
|  | 1 | Indicates the subcarrier grouping setting | Set to 0 to indicate a subcarrier grouping, ~~of~~ , if there are less than or equal to four transmit antennas.Set to 0 to indicate a subcarrier grouping, ~~of~~ , if there are five or more transmit antennas and the bandwidth is 80 MHz or less.Set to 0 to indicate a subcarrier grouping, , if there are five or more transmit antennas and the bandwidth is 160 MHz.Set to 1 to indicate a subcarrier grouping, ~~of~~ .NOTE: is optionally supported. |
| Rx\_OP\_Gain\_Type  | 2 | Indicates the type of report in Rx\_OP\_Gain\_Index | Set to 00 to indicate neither Rx OP index nor Rx gain index is reported, and value in Rx\_OP\_Gain\_Index field is invalid.Set to 01 to indicate Rx OP index is reported in Rx\_OP\_Gain\_Index.Set to 10 to indicate Rx gain index is reported in Rx\_OP\_Gain\_Index. Set to 11 to indicate this field is reserved, and value in Rx\_OP\_Gain\_Index field is invalid. |
| Reserved | 2 |  |  |
| Reference Timestamp | 0 or 32 | Optionally present, inclusion signaled by the Timestamp Present subfield within the Presence & Control Bitmap field.  | Optionally present, inclusion signaled by the Timestamp Present subfield within the Presence & Control Bitmap field.  |

Tgbf Editor, please modify the text at P170.14-26 as shown below

A WLAN sensing STA shall support Nb (see Table 9-127h (Sensing Measurement Report Control field definition)) values of 8 and 10 in the Sensing Measurement Report frame.

A WLAN sensing STA with four or less transmit antennas shall support an Ng (see Table 9-127h (Sensing Measurement Report Control field definition)) value of 4 and may optionally support an Ng value of 16 in the Sensing Measurement Report frame.

A WLAN sensing STA with five or more transmit antennas and a bandwidth of 80 MHz shall support an Ng value of 4 and may optionally support an Ng value of 16 in the Sensing Measurement Report frame.

A WLAN sensing STA with five or more transmit antennas and a bandwidth greater than or equal to 160 MHz shall support an Ng value of 8 and may optionally support an Ng value of 16 in the Sensing Measurement Report frame.

**References:**

1. Draft P802.11bf\_D1.0

**Acknowledgement:** The author would like to thank the *Reporting* TTT members for their feedback in resolving these CIDs.