IEEE P802.11
Wireless LANs

|  |
| --- |
| Comment Resolutions for 11bf D1.0 Sensing Measurement Report Container field CIDs |
| Date: 2023-06-26 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Rojan Chitrakar | Huawei |  |  | Rojan.chitrakar@huawei.com |
| Lei Huang |  |  |  |
| Mengshi Hu |  |  |  |
| Stephen McCann |  |  |  |
|  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This submission proposes resolutions of comments received from TGbf LB272 (TGbf Draft 1.0).

* CIDs: 1053 1153 1155 1281 1412 1575 1576 1577 1578 1579 1580 1581 1584 1586 1587 1680 1691 1692 1870 1871 1891 1937 2256 2267 (24 CIDs)

Revisions:

* Rev 0: Initial version of the document.
1. **Introduction**

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 TGbf Draft. The introduction and the explanation of the proposed changes are not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbf Draft (i.e. they are instructions to the 802.11bf editor on how to merge the text with the baseline documents).***

***TGbf Editor: Editing instructions preceded by “TGbf Editor” are instructions to the TGbf editor to modify existing material in the TGbf draft. As a result of adopting the changes, the TGbf editor will execute the instructions rather than copy them to the TGbf Draft.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Commenter | Clause  | Page | Comment | Proposed Change | Resolution |
| 1053 | Li Ma | 9.4.1.75.1 | 90.14 | "Remaining Report Segments" has 5 bits, which defines value form 0 ~ 31. "Set to a value between 1 and 32 for a feedback segment that is not thelast report segment of a segmented report." should be modified accordingly. | change 'between 1 and 32' to 'between '0 and 31'. | **REVISED.**Agree with the comment that “between 1 and 32” is incorrect, should be “between 1 and 31”. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1053. |
| 1153 | Claudio da Silva | 9.4.1.75.1 | 89.34 | Statement "The Sensing Measurement Report Container field contains a single sensing measurement report" is not accurate given that the Container field may include a fraction of a sensing measurement report (if segmented). | Revise the sentence. | **REVISED.**Agree with the comment that the Sensing Measurement Report Container field may also contain a report segment. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1153. |
| 1155 | Claudio da Silva | 9.4.1.75.1 | 90.38 | CSI Variation Feedback subfield must be moved from the Segmentation Control field to the Sensing Measurement Report Control field. | As noted. | **REVISED.**Agree with the comment that the CSI Variation Feedback subfield must be moved from the Segmentation Control field to the Sensing Measurement Report Control field. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1155. |
| 1281 | Xiandong Dong | 9.4.1.75.1 | 89.44 | because the lengths of the control field and sensing measurement report field are not variable, please fix it. | as in the comment | **REVISED.**Partially agree with the comment; the length of the Sensing Measurement Report Container field is deterministic (either 32 or 64 bits) but the length of the sensing measurement report field is variable. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1281. |
| 1412 | Shuling feng | 9.4.1.75.1 | 90.19 | "Remaining Report Segments" has 5 bits. The defination field says "Set to a value between 1 and 32 for a feedback segment that is not the last report segment of a segmented report. " | Change from "between 1 and 32" to "between 1 and 31". | **REVISED.**Agree with the comment that “between 1 and 32” is incorrect, should be “between 1 and 31”. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1412. |
| 1575 | Mahmoud Kamel | 9.4.1.75.1 | 89.63 | It is not clear what scenario(s) the Sensing Measurement Report Control may be not present in the Sensing Measurement Report Container field. | Add a note to state what scenario(s) in which the Sensing Measurement Report Control may be not present | **REVISED.**The Report Control Present field and the cited row is deleted as part of the resolution of CID 1587 in IEEE 802.11-23/1071r1. No further action required from the TGbf editor. |
| 1576 | Mahmoud Kamel | 9.4.1.75.1 | 89.44 | If the Measurement Report Control may be not present in some scenarios, then the field size may be 0. | Change 'variable' to '0 or variable' in Figure 9-144l | **REVISED.**The proposed change has already been applied in 11bf D1.1.No further action required from the TGbf editor. |
| 1577 | Mahmoud Kamel | 9.4.1.75.1 | 90.26 | If the reported measurement result may be invalid, why do we need to include them in the he Sensing Measurement Report Container field. This seems inefficient! | Change 'variable' to '0 or variable' in Figure 9-144l and indicate that in case the reported measurement results are invalid there is no Sensing Measurement Report field | **REVISED.**Agree with the comment that the Sensing Measurement Report Control field and the Sensing Measurement Report field need not be included in the Sensing Measurement Report contatiner. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1577. |
| 1578 | Mahmoud Kamel | 9.4.1.75.1 | 90.09 | The size of the Sensing Transmitter STA ID should be 16 | change 12 to 16 | **REVISED.**The STA ID carries the 12 LSBs of AID/USID. This is clarfified in the text. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1578. |
| 1579 | Mahmoud Kamel | 9.4.1.75.1 | 90.12 | The size of the Sensing Receiver STA ID should be 16 | change 12 to 16 | **REVISED.**The STA ID carries the 12 LSBs of AID/USID. This is clarfified in the text. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1579. |
| 1580 | Mahmoud Kamel | 9.4.1.75.1 | 90.09 | Does the "Sensing Transmitter" in "Sensing Transmitter STA ID" refer to the sensing transmitter role or the transmitter of the Sensing Measurement Report frame" | Change the text to " AID or USID of the transmitter correspondingto the Sensing Measurement Report frame" | **REJECTED.**The sensing transmitter is clearly defined in 11bf as: a station (STA) that transmits PPDUs used for measurements in a sensing procedureor a directional multi-gigabit (DMG) sensing procedure. |
| 1581 | Mahmoud Kamel | 9.4.1.75.1 | 90.12 | Does the "Sensing Receiver" in "Sensing Receiver STA ID" refer to the sensing receiver role or the receiver of the Sensing Measurement Report frame" | Change the text to " AID or USID of the receiver correspondingto the Sensing Measurement Report frame" | **REJECTED.**The sensing transmitter is clearly defined in 11bf as: a station (STA) that is the intended recipient of PPDUs sent by a sensing transmitter and obtains measurements in either a sensing procedure or a directional multi-gigabit (DMG) sensing procedure. |
| 1584 | Mahmoud Kamel | 9.4.1.75.1 | 90.20 | The maximum value of the Remaining Report Segments should be 31 | Change the text to "... Set to a value between 1 and 31 for a feedback segment ... " | **REVISED.**Agree with the comment that “between 1 and 32” is incorrect, should be “between 1 and 31”. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1584. |
| 1586 | Mahmoud Kamel | 9.4.1.75.1 | 90.16 | Missing identifier | change "Sensing Measurement Report" to "Sensing Measurement Report frame" | **REVISED.**Agree with the comment that the identifier is missing, however the proposed changes have already been applied in 11bf D1.1.No further action required from the TGbf editor. |
| 1587 | Mahmoud Kamel | 9.4.1.75.1 | 89.63 | If the Report Control is present only in the first segment of multiple segments, then there is no need for the field/subfield Report Control Present. The First Report Segment field/subfield is enough to indicate if the Report Control is present or not | Remove the Report Control Present field/subfield from the Segmentation Control field and consider all the required modifications according to this change | **REVISED.**Agree with the comment that the First Report Segment field is enough and the Report Control Present field is not necessary. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1587. |
| 1680 | James Yee | 9.4.1.75.1 | 90.09 | In Table 9-127f, the AID and USID fields probably should be AID12 and USID12 in order to fit into 6 octets. | Please clarify. | **REVISED.**Agree with the comment that the AID/USID are same as AID12/USID12. The resolution is same as that for CIDs 1578 and 1579 in IEEE 802.11-23/1071r1. No further action required from the TGbf editor. |
| 1691 | Alireza Raissinia | 9.4.1.75.1 | 90.26 | Change the text "The Invalid Indication subfield indicates whether the reported measurement result is invalid in the case of the CSI Variation Feedback field set to 15, and indicates whether the CSI variation feedback value is invalid in the case of the CSI Variation Feedback field set to a value between 0 and 10. An Invalid Indication field value of 1 indicates that the reported measurement result or the reported CSI variation feedback value is invalid. A value of 0 indicates that the reported measurement result or the reported CSI variation feedback value is valid" to | The Invalid Indication subfield indicates whether the reported measurement result is invalid for basic reporting (i.e., CSI Variation Feedback subfield set to 15) or CSI variation feedback reporting value is invalid (i.e., CSI Variation Feedback subfield set to a value between 0 and 10). An Invalid Indication field value of 1 indicates that the reported measurement result or the reported CSI variation feedback reporting value is invalid. A value of 0 indicates that the reported measurement result or the reported CSI variation feedback value is valid. | **REVISED.**Agree with the comment to clarify the cited text along the line of the proposed text. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1691. |
| 1692 | Alireza Raissinia | 9.4.1.75.1 | 90.13 | Transmitter STA ID and Receiver STA ID for Non-TB sensing measurement instance are not defined. Additionally, in the case of TB sensing measurement instance we should define that AP AID is zero. | We need to decide on how to define transmitter and receiver STA ID for the Non-Tb measurement instance | **REVISED.**Agree with the comment that the STA ID fields in the non-TB case should be clarified. Similar to the Sensing NDPA frame, for AP the STA ID can be set to 0 while AID12/USID12 can be used for non-AP STAs. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1692. |
| 1870 | Hassan Omar | 9.4.1.75.1 | 90.15 | The word "corresponding to" is useless | Remove "corresponding to" | **REJECTED.**The CR for CID 1585 (in D1.1) deleted the word “for” in the cited sentence, so “corresponding to” is now required. |
| 1871 | Hassan Omar | 9.4.1.75.1 | 91.24 | Table 9-127g indicates ranges on the "CSI variation threshold" not the "CSI variation value", as described in Table 9-127f | In Table 9-127g, change "CSI variation threshold" to "CSI variation value" | **REVISED.**Agree with the comment that in Table 9-127g, "CSI variation threshold" should be "CSI variation value" The CR for CID 1434 (in D1.1) has already made this change.No further action required from the TGbf editor. |
| 1891 | RUI YANG | 9.4.1.75.1 | 90.27 | The first sentence of the description for Invalid Indication is confusing and cumbersome. It carries redundant info as the one for "CSI Variation Feedback" below. Suggest simplify the description. | Just keep the last two sentences in the definition for "Invalid Indication": "An Invalid Indication field value of 1 indicates that the reported measurement result or the reported CSI variation feedback value is invalid. A value of 0 indicates that the reported measurement result or the reported CSI variation feedback value is valid." | **REJECTED.**The cited first sentence has been clarified as part of the resolution of CID 1691 in IEEE 802.11-23/1071r1 and provides the context for the succeeding sentence. |
| 1937 | Chris Beg | 9.4.1.75 | 90.38 | The CSI Variation Feedback subfield was added to the Segmentation Control field of the Sensing Measurement Report Container. By adding the CSI Variation Feedback field to the Segmentation Control, it is required even for cases where the threshold reporting feature is not used/supported. Further, it will be required to be repeated for each report container fragment, since the Segmentation Control is present for each fragment. A better location for CSI Variation Feedback may be to define it as an optionally included subfield within the Sensing Measurement Report Control. | Move the CSI Variation Feedback subfield to the end of the Sensing Measurement Report Control field. Define it to be optionally present. Indicate its size to be 0 or 4 bits. Allocate one of the reserved bits in the Presence and Control Bitmap to signal the inclusion of the CSI Variation Feedback subfield in the Sensing Measurement Report Control field. Finally, value 15 no longer needs to be used to signal the Basic Reporting, since that can be done by excluding the CSI Variation Feedback subfield. | **REVISED.**Agree with the comment that the STA ID fields in the CSI Variation Feedback field need not be present in all segments and is better to be moved to the Sensing Measurement Report Control field. However, using the CSI Variation Feedback value of 15 to indicate basic reporting was agreed after much discussion in the past and is not changed at this stage. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 1937. |
| 2256 | kaiying Lu | 9.4.1.75.1 | 90.14 | "Remaining Report Segments" has 5 bits. The definition field says "Set to a value between 1 and 32 for a feedback segment that is not the last report segment of a segmented report. " | Change 32 to 31. | **REVISED.**Agree with the comment that “between 1 and 32” is incorrect, should be “between 1 and 31”. TGbf editor to make the changes shown in IEEE 802.11-23/1071r1 under all headings that include CID 2256. |
| 2267 | Li-Hsiang Sun | 9.4.1.75.1 | 90.09 | If AP is sensing transmitter or receiver, AID=0 or Multiple BSSID index is used in the Sensing Transmitter/Receiver STA ID subfield in Segmentation Control | as in comment | **REVISED.**Agree with the comment that the STA ID should be clarified for AP. The resolution is same as that for CID 1692 in IEEE 802.11-23/1071r1. No further action required from the TGbf editor. |

SP: Do you agree to incorporate the changes proposed in IEEE 802.11-23/1071r1 to the latest 11bf draft for the following CIDs?

1053 1153 1155 1281 1412 1575 1576 1577 1578 1579 1580 1581 1584 1586 1587 1680 1691 1692 1870 1871 1891 1937 2256 2267 (24 CIDs)

***Discussion:***

The main technical changes are related to CID 1577 and 1937, 1155.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CID | Commenter | Clause  | Page | Comment | Proposed Change |
| 1577 | Mahmoud Kamel | 9.4.1.75.1 | 90.26 | If the reported measurement result may be invalid, why do we need to include them in the he Sensing Measurement Report Container field. This seems inefficient! | Change 'variable' to '0 or variable' in Figure 9-144l and indicate that **in the case that the reported measurement results are invalid there is no Sensing Measurement Report field** |

CID 1577 suggests to not include the Sensing Measurement Report field in the Sensing Measurement Report Container field if the Invalid Indication bit is set to 1. We agree to the proposed change in principle. Further, since the Sensing Measurement Report control field carries parameters needed to interpret the Report field, by extension the Sensing Measurement Report control field also need not be present if the report is invalid.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CID | Commenter | Clause  | Page | Comment | Proposed Change |
| 1937 | Chris Beg | 9.4.1.75 | 90.38 | The CSI Variation Feedback subfield was added to the Segmentation Control field of the Sensing Measurement Report Container. By adding the CSI Variation Feedback field to the Segmentation Control, it is required even for cases where the threshold reporting feature is not used/supported. Further, it will be required to be repeated for each report container fragment, since the Segmentation Control is present for each fragment. A better location for CSI Variation Feedback may be to define it as an optionally included subfield within the Sensing Measurement Report Control. | **Move the CSI Variation Feedback subfield to the end of the Sensing Measurement Report Control field.** Define it to be optionally present. Indicate its size to be 0 or 4 bits. **Allocate one of the reserved bits in the Presence and Control Bitmap to signal the inclusion of the CSI Variation Feedback subfield in the Sensing Measurement Report Control field**. Finally, value 15 no longer needs to be used to signal the Basic Reporting, since that can be done by excluding the CSI Variation Feedback subfield. |

CID 1937 suggests 2 things:

1. Move the CSI Variation Feedback subfield to the end of the Sensing Measurement Report Control field.
2. Make the field optional and define a presence bit to indicate the presence.

While we agree to the first suggestion and have moved the CSI Variation Feedback subfield to the Sensing Measurement Report Control field, we think that since the Sensing Measurement Report Control field is only present in the first segment, further optimization is not required and hence the second suggestion is not implemented.

***Baseline text: P802.11bf\_D1.2***

* Sensing Measurement Report Container field

***TGbf editor: Modify the subclause as the following (Track Changes ON):***

* General

The Sensing Measurement Report Container field contains a single sensing measurement report (#1153) or a report segment. The format of the Sensing Measurement Report Container field is defined in Figure 9-144l (Sensing Measurement Report Container field format)(#1154).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Container Length |  Segmentation Control | Sensing Measurement Report Control | Sensing Measurement Report |
| Octets: | 2 | (#1937) 5 | 0, (#1281) (#1937, #1155) 5 or 9 | (#1577)0 or variable |
| * Sensing Measurement Report Container field format
 |

The Container Length field indicates the number of octets in the Sensing Measurement Report Container field, including the two octets for the Container Length field.

The Segmentation Control field provides the information related to the type and segments of the Sensing Measurement Report. The fields of the Segmentation Control field are specified in Table 9-127f (Segmentation Control field).

|  |
| --- |
| * Segmentation Control field
 |
| Field | Size (bits) | Definition |
| (#1587) |  |  |
| Measurement Session ID | 3 | Identifies the sensing measurement session corresponding to the Sensing Measurement Report frame |
| Measurement Exchange ID | 6 | Identifies the sensing measurement exchange corresponding to the Sensing Measurement Report frame |
| Sensing Transmitter STA ID | 12 | (#1578, #1680) For TB measurement reporting: set to the 12 LSBs of AID or USID of the sensing transmitter corresponding to the Sensing Measurement Report frame (#1692) if the sensing transmitter is a non-AP STA. Set to 0 if the sensing transmitter is an AP. Reserved for non-TB measurement reporting. |
| Sensing Receiver STA ID  | 12 | (#1579, #1680) For TB measurement reporting: set to the 12 LSBs of AID or USID of the sensing receiver corresponding to the Sensing Measurement Report frame (#1692) if the sensing receiver is a non-AP STA. Set to 0 if the sensing receiver is an AP. Reserved for non-TB measurements reporting. |
| Remaining Report Segments | 5 | Indicates the number of remaining report segments corresponding(#1585) to the Sensing Measurement Report frame:Set to 0 for the last report segment of a segmented report or the only report segment of an unsegmented report.Set to a value between 1 and (#1053, #1412, #1584, #2256)31 for a feedback segment that is not the last report segment of a segmented report. |
| First Report Segment | 1 | Set to 1 for the first report segment of a segmented report or the only feedback segment of an unsegmented report. Otherwise set to 0. |
| Invalid Indication | 1 | The Invalid Indication field indicates whether the reported measurement result is invalid (#1691) for basic reporting or the CSI variation feedback value is invalid for the threshold based reporting (i.e. An Invalid Indication field value of 1 indicates that the reported measurement result or the reported CSI variation feedback value is invalid **(#**1577**)** in which case, the Remaining Report Segments field is set to 0 and the Sensing Measurement Report Control field and Sensing Measurement Report field are not included in the frame. A value of 0 indicates that the reported measurement result or the reported CSI variation feedback value is valid. |
| (#1937, #1155)  |  |  |
| (#1937, #1155)  |  |  |

|  |
| --- |
| *
 |
|  |  |
|  |  |
|  |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

* Sensing Measurement Report Control field(Motion 125)

***TGbf editor: Modify the subclause as the following (Track Changes ON):***

The Sensing Measurement Report Control field provides the information needed to process the Sensing Measurement Report field. The Sensing Measurement Report Control field signals the bandwidth (BW), the number of transmit antennas , the number of receive antennas , the number of bits  used for each encoded CSI value, an indicator  of the subcarrier grouping, an indicator of reporting receiver operating point (OP) index or gain index (Rx\_OP\_Gain\_Type), and an optional reference timestamp.

(#1577) The Sensing Measurement Report Control field is not included in a Sensing Measurement Report Container in which the Invalid Indication field in the Segmentation Control field is equal to 1.

The fields of the Sensing Measurement Report Control field are specified in Table 9-127h (Sensing Measurement Report Control field definition).

|  |
| --- |
| * 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. |
| (#1937, #1155) CSI Variation Feedback | 4 | The value between 0 and 10 reflects the CSI variation value obtained by the sensing receiver. The above values are used for the feedback of CSI variation triggered by the Sensing Threshold-based Reporting Trigger frame. The value equal to 15 indicates that the CSI variation feedback is not used and the corresponding frame is used for the feedback of sensing measurement result transmitted in the measurement reporting phase of the threshold-based reporting phase or in the basic reporting phase. See Table 9-127g (CSI Variation Feedback field(#1434)). |  |
| Reserved | (#1937, #1155)7 |  |  |
| 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.  |

The format of the Presence and Control Bitmap field is defined in Figure 9-144m (Presence and Control Bitmap field format).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Last SBP Report | Timestamp Present | Reserved |
| Bits: | 1 | 1 | 6 |
| * Presence and Control Bitmap field format
 |

The Last SBP Report field indicates the last SBP report in the current sensing availability window. The Last SBP Report field is set to 1 in an SBP Report frame sent in the SBP reporting procedure, if there is no more SBP Report frame to be sent in the current sensing availability window. Otherwise, it is set to 0. This field is reserved if sent in a Sensing Measurement Report frame.

The Timestamp Present field indicates the presence of the Reference Timestamp within the Sensing Measurement Report Control field. The Timestamp Present field is set to 1 if the Reference Timestamp is present. Otherwise, it is set to 0. The Reference Timestamp field contains the lower 4 octets of the TSF timer value, TSF[31:0], sampled when the PHY-RXSTART.indication corresponding to the SI2SR, SR2SI, or SR2SR NDP(s) is received by the sensing receiver(#1693).

|  |
| --- |
| * BW field format
 |
| BW field value | Description |
| 0 | 20 MHz |
| 1 | 40 MHz |
| 2 | 80 MHz |
| 3 | 160 MHz |
| 4 | 320 MHz |
| 5-7 | Reserved |

The format of the BW field is defined in Table 9-127i (BW field format).

Rx\_OP\_Gain\_Type is reported by the sensing receiver to indicate the type of index reported in the Rx\_OP\_Gain\_Index field. The same type of index is indicated for all receive antennas, and it can be an OP index, a gain index, or invalid. The sensing receiver determines the value of Rx\_OP\_Gain\_Type as it sees the best fit based on its implementation.

|  |
| --- |
|  |
|  |  |
|  |  |
|  |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

* 9.4.1.75.4 Sensing Measurement Report field

***TGbf editor: Modify the subclause as the following (Track Changes ON):***

The size of the Sensing Measurement Report field depends on the values in the Sensing Measurement Report Control field. The Sensing Measurement Report field contains a Sensing Measurement Report information or successive portions thereof in the case of segmented sensing measurement report (see 11.55.1.5.3.4 (Rules for generating segmented sensing measurement reports)). (#1577) The Sensing Measurement Report field is not included in a Sensing Measurement Report Container in which the Invalid Indication field in the Segmentation Control field is equal to 1.

* Rules for generating segmented sensing measurement reports

***TGbf editor: Modify the subclause as the following (Track Changes ON):***

If a Sensing Measurement Report information exceeds *aSensingReportSegmentSize*, then the Sensing Measurement Report information shall be divided into up to 32 report segments.

*aSensingReportSegmentSize* shall be 3750 octets.

Each report segment shall be included in a separate Sensing Measurement Report Container and shall contain successive portions of the Sensing Measurement Report information. The Sensing Measurement Report Control field shall be included in the Sensing Measurement Report Container that carries the first report segment (#1587) (a report segment in which the First Report Segment field in the Segmentation Control field is equal to 1) (#1577) and the Invalid Indication field in the Segmentation Control field is equal to 0. The Sensing Measurement Report Control field shall not be included in a Sensing Measurement Report Container that does not carry the first report segment (#1587) (a report segment in which the First Report Segment field in the Segmentation Control is equal to 0) (#1577) or in a Sensing Measurement Report Container in which the Invalid Indication field in the Segmentation Control field is equal to 1. Each report segment shall be of equal length, the length of each report segment being equal to *aSensingReportSegmentSize*, except the last report segment that may be smaller.

Each report segment is identified by the value of the Remaining Report Segments field and the First Report Segment field in the Sensing Measurement Report Control field as defined in Table 9-127f (Segmentation Control field). The other non-reserved fields of the Segmentation Control field shall be the same for all report segments. All report segments shall be sent in a single A-MPDU contained in a PPDU and shall be included in the A-MPDU in the descending order of the values of the Remaining Report Segments field.