IEEE P802.11
Wireless LANs

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| Resolutions for SBP Comments in CC40 - Part 1 |
| Date: 2022-10-28 |
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Abstract

This submission proposes resolutions to comments submitted in CC40. The text used as reference is D0.3.

CIDs covered in this document include:

14 15 16 205 305 318 322

Revision history:

R0: Original version

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 14 | 11.21.19.2 | 73.58 | For an SBP procedure, where SBP is implemented with multiple responders, how are the links identified over which SBP is performed? For example, and SBP initiating STA initiates an SBP to which an SBP responder responds and then multiple non-AP STAs participate in SBP, how will the SBP initiator identify which links are being measured? | Link identification or SBP initiator/respodner and STAs aprticipating in SBP must be assigned some IDs based on which the SBP initiator may understand that sensing is performed on which link. |
| 15 | 11.21.19.3 | 73.31 | For the case when multiple STAs are involved in an SBP procedure, how does the SBP initiator know about the sensing measurement report is from which STA? | The sensing measurement report must conatin sensing measurment link info over which the sensing is performed for SBP initiator. Measurement Setup ID would also work. |
| 16 | 11.21.19.3 | 73.31 | In case of multiple sensing respodners, how will the SBP intitiator differentiate the sensing measurement report? | The sensing measurment report may contain sequence number of the identification of the STA which generated the sensing measurement report. If the Measurement setup IDs are same something link sensing measurement report sequence number would work, else the sensing measurement ID may also work. |
| 205 | 11.21.9.3 | 73.33 | We should define a means for the SBP initiator to map the received SBP measurement reports to different responders. The SBP initiator does not need to know the exact identities of the corresponding responder, but it needs to know which part of the report is from STA 1 and which part of the report is from STA2. Probably we need to include AID/UID value in the SBP measurement report corresponding to each sensing responder. | As in comment. |
| 305 | 9.6.7.54 | 60.60 | If there are more than one link involved in the SBP procedure, how are the links corresponding to the sensing measurements identified? Is the same sensing measurement setup ID used for SBP as well as for the respective measurement links? | Clarify, when there are more than one link involved in the SBP procedure, how are the links corresponding to the sensing measurements identified in the SBP Response frame. |
| 318 | 11.21.19.2 | 73.01 | If there are more than one link involved in the SBP procedure, how are the links corresponding to the sensing measurements identified? Is the same sensing measurement setup ID used for SBP as well as for the respective measurement links? | Clarify, when there are more than one link involved in the SBP procedure, how are the links corresponding to the sensing measurements identified in the SBP Response frame. |
| 322 | 11.21.19.3 | 73.33 | The SBP procedure reporting is missing. Is the same frame (sensing measurement report) also used for SBP procedure reporting? It would be better to define a new frame type exclusively for SBP procedure Reporting. Also, if there are more than one link involved in the SBP procedure, how are the links corresponding to the sensing measurements identified? | Add details of the SBP procedure reporting:1. define a new frame type exclusively for SBP procedure Reporting.2. Clarify, when there are more than one link involved in the SBP procedure, how are the links corresponding to the sensing measurements identified in the SBP procedure report? |

**Proposed resolution**: Revised to all.

**Discussion**:

1. All these CIDs are requesting to have a mechanism to differentiate sensing measurement results coming from different sensing respodners in the SBP Report frame. To resolve these CIDs, the proposal is to include a new field “AID/UID” in the Sensing Meaurement Report Control field in the Sensing Measurement Report element within the SBP Report frame. The technical arguments are as follows:
* AID/UID is a unique identifier for a sensing responder, so it is feasible to serve the diffferntiation purpose.
* AID/UID does not reveal the true identity of a sensing responder, thus preserving security and privacy, particularly in scenarios where the SBP initiator does not even know the sensing responders.
* In scenarios where the SBP initiator does provide the Preferred Responder List, the SBP responder AP will includes the Sensing Responder IDs field in the SBP Response frame to identify the corresponding list of AID/USID of the sensing responders in the same order as the corresponding MAC addresses in the Sensing Responder Address field. Therefore, in this scenario the SBP initiator can identify the mapping between the known MAC addresses and the AID/USIDs in the SBP Report frame. Please refer to DCN1396r5 for details.
* In 60 GHz DMG sensing, we already agreed to use the same approach, i.e., including the AID/USID in the DMG Sensing Report element to differentiate the sensing measurement reports coming from different responders. See DCN1495r4 for details.
1. For the 1st bulllet of CID 322, in DCN0977r10, it was already proposed to define a new Sensing by Proxy (SBP) Report frame format to deliver sensing measurement reports in SBP scenarios.

**Modifications: TGbf editor, make the following changes**

**9.4.2.318.2 Sensing Measurement Report Control field if the Sensing Measurement Report Type field is 0**

The Sensing Measurement Report Control field provides the information needed to process the Sensing
Measurement Report field. ~~If the Sensing Measurement Report Type field is equal to 0, the Sensing
Measurement Report Control field signals the channel width (CW), the number of transmit antennas ,
the number of receive antennas , the number of bits used for each encoded CSI value, and an
indicator of the subcarrier grouping.~~The fields of the Sensing Measurement Report Control field if the Sensing Measurement Report Type field
is 0 are specified in Table 9-401t (Sensing Measurement Report Control field definition if the Sensing Measurement Report Type is 0).

Table 9-401t --- Sensing Measurement Report Control field definition if the Sensing Measurement Report Type is 0

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Size (bits) | Definition | Meaning |
| AID/USID | 12 | Indicates the sensing responder to whom the sensing measurement report belongs. | Set to the same value of the sensing responder’s AID/USID to whom the sensing measuremernt report belongs. |
| CW | 4 | Channel width | (Encoding of CW subfield is TBD) |
| … | … | … | … |
| Last SBP Report | 1 | Indicates the last SBP report in the current availability window | The Last SBP Report subfield 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 subfield is reserved if sent in a Sensing Measurement Report frame. |
| Reserved | ~~3~~7 |  |  |

## SP

Do you support the proposed resolutions to the following CIDs and incorporate the text changes into the latest TGbf draft: 14 15 16 205 305 318 322?

Y/N/A