IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Resolutions for SBP CIDs for LB281-Part 2 | | | | |
| Date: 2024-01-31 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Cheng Chen | Intel |  |  | cheng.chen@intel.com |

Abstract

This submission proposes resolutions to the following comments submitted in LB281 under SBP topic. The CIDs are referring to D3.0. The text used as reference is D3.0.

CIDs: 4048 4050 4056

Revision history:

R0: Original version

R1: Revised the resolution to CID 4056 based on offline discussions

R2: Minor editorial fixes during the TGbf call on Feb. 6th.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Page** | **Comment** | **Proposed change** | **Proposed resolution** |
| 4048 | Chaoming Luo | 165.28 | The word "should be identical" is incorrect, because some fields (e.g., TX role, RX role) of Sensing Measurement Parameters element is reserved in some cases in SBP request but shall be set in MS request, some other fields even shall not be identical, e.g., Sensing Measurement Report Requested field, see the note in P165L63. | Change to "... within the corresponding SBP Request frame, except the fields specified as reserved in the SBP Request frame or specified as exeception"; Or we list out the all the exception fields here explicitly; Or if there are too many exception fields, why not add the fields needed into SBP parameters element and remove sensing measurement parameters element from SBP frames? | Revised. See proposed resolution in <DCN0210r2>. |

**Discussion:** We used to use the wording “shall be identical”. However, exactly because of the fact that we realized some fields in the Sensing Measurement Parameters element in the Sensing Measurement Request frame sent to sensing responders cannot be the same as the ones within the SBP Request frame, we changed to “should be identical”. The information included in the Senning Measurement Parameters element within the SBP Request frame is supposed to be recommendation for the AP to consider anyways, because there are many scenarios where the AP may not be able to use exactly the same parameters.

**TGbf editor, make the following change in the following paragraph (P165L28) in 11.55.2.2**

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~~ take into account the Sensing Measurement Parameters element within the corresponding SBP Request frame.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Page** | **Comment** | **Proposed change** | **Proposed resolution** |
| 4050 | Chaoming Luo | 168.13 | if the Beacon Interval is 200TUs, "exactly one Availability Window Information field" may be not sufficient, since the SBP inititiator may request 10TUs/20TUs (i.e., 10TUs available, 10TUs not available, repeat, so the Availability Bitmap is 10101010101010101010), if the SBP responder assigns the requested ones, the Availability Window Information field has to contain 5 Availability Window Information fields, each assigns one 10TU slot per 100TUs (see the Periodicity subfield in the Availability Window Information subfield). | Change "The RSTA Availability Information field in the RSTA Availability Window element shall contain exactly one Availability Window Information field. The Availability Window Information field represents the sensing availability window assigned by the SBP responder to the SBP initiator. " To "The RSTA Availability Information field in the RSTA Availability Window element shall contain at least one Availability Window Information field. Each Availability Window Information field represents one sensing availability window assigned by the SBP responder to the SBP initiator." | Rejected. See rejection reason below in <DCN0210r2>. |

**Discussion:** The scenario mentioned in the example is not achievable for TB sensing measurement exchange. That is, we cannot do sensing measurement every 20 TUs within a 200-TU BI. This is because due to current definition and design, we can only do 1 slot (10 TUs) per BI, not 10 slots as indicated in the example. Otherwise, we will be overusing the channel with sensing.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Page** | **Comment** | **Proposed change** | **Proposed resolution** |
| 4056 | Chaoming Luo | 79.24 | Suggest to add a "Poll Assigned" field and a "CSI Variation Threshold field" into the "SBP Parameters Control field", because it's a waste to include a TB Sensing Specific subelement in the Sensing Measurement Parameter element of a SBP Request/Response frame. "Poll Assigned" is needed in case SBP initiator is an unassociated STA and not a sensing responder. "CSI Variation Threshold field" is needed because it is a value decided and came from the application in the SBP initiator. Note that we've already add "SR2SR Sounding Request" in the SBP request frame and a "RSTA Availability Window element" in the SBP response frame. | As in comment | Revised. We can add these two fields to SBP Parameters element and add the corresponding normative behavior texts in terms of how to set these fields. See proposed text shown below in <DCN0210r2>. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Element ID | Length | Element ID Extension | SBP Parameters Control | Sensing Responder Addresses | Sensing Responder IDs | Sensing Responder Role Bitmap |
| Octets | 1 | 1 | 1 | ~~3~~4 | 0 or nx6 | 0 or variable | 0 or variable |

Figure 9-1001bj---SBP Parameters element format

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | SBP Request | SBP Procedure Expiry Exponent | Sensing Responder | Number of Sensing Responders | Mandatory Number of Responders | Preferred Responder List1 |
| Bits | 1 | 4 | 1 | 4 | 1 | 1 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Number of Preferred Responders | Mandatory Preferred Responder | SR2SR Sounding Request | Preferred Responder Role Bitmap Present | Poll Assigned | CSI Variation Threshold | Reserved |
| Bits | 4 | 1 | 1 | 1 | 1 | 4 | ~~5~~8 |

Figure 9-1001bk---SBP Parameters Control field format

***Add the following bullets to the end of the following paragraph:***

If the SBP Request field is equal to 1,

---The Poll Assigned field is reserved.

---The CSI Variation Threshold field values are defined in Table 9-404v (CSI Variation Threshold field definition).

If the SBP Request field is equal to 0,

---The Poll Assigned field is set to 1 to indicate that the SBP responder polls the SBP initiator in eachavailability window; and it is set to 0 otherwise.

--- The CSI Variation Threshold field values are defined in Table 9-404v (CSI Variation Threshold field definition).

***Add the following paragraph in 11.55.2.2:***

If the SBP initiator is unassociated with the SBP responder, the SBP responder shall set the Poll Assigned field in the SBP Parameters element in the SBP Response frame to 1 and poll the SBP initiator in the polling phase of TB sensing measurement exchanges (see 11.55.1.5.2 (TB sensing measurementexchange)) of the sensing procedure initiated by the SBP responder.

If the Preferred Responder Role Bitmap Present field within the SBP Parameters field 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 should determine the sensing transmitter role and the sensing receiver role for the sensing responders that participate in the SR2SR variant of the TF sounding phase in the SBP procedure according to the Sensing Responder Role Bitmap field within the SBP Parameters element of the corresponding SBP Request frame.

If the SBP initiator requests for the threshold-based reporting, the CSI Variation Threshold field shall be set to a value in the range of 0 to 10 to indicate the CSI variation threshold (see Table 9-404v (CSI Variation Threshold field definition)). Otherwise, the CSI Variation Threshold field shall be set to 15 to indicate basic reporting is used in the corresponding TB sensing measurement exchanges.

***Modify the following paragraphs in 9.4.2.320***

The Sensing subelements field contains zero, one or more subelements. The subelement format and ordering of the subelements are defined in 9.4.3 (Subelements). The Subelement ID field values for the defined subelements are shown in Table 9-404u (Sensing subelement IDs for Sensing Parameters).

If the Sensing measurement parameters element is included in an SBP Request frame or SBP Response frame, the Sensing subelements field contains zero subelements.

If the sensing initiator is a non-AP STA, it includes a non-TB Sensing Specific subelement in the Sensing Measurement Parameter element to describe the set of parameters that the sensing initiator assigns for the sensing measurement session. The format of the Non-TB Sensing Specific subelement is as shown in Figure 9-1001be (Non-TB Sensing Specific subelement format).

***Modify the following paragraphs in 11.55.1.5.2.2***

In the polling phase, an AP sends a Sensing Polling Trigger frame to one or more STAs that are assigned to be polled in the TB sensing measurement exchange and expected to participate during the sensing availability window. The AP shall set the Polled Assigned field to 1 to request the non-AP STA to be polled in the TB sensing measurement exchange. Otherwise, it shall set the Poll Assigned field to 0.

***Modify the following paragraphs in 11.55.1.5.2.2***

If the sensing initiator is an AP in which it assigns operational parameters to a sensing responder, it shall include a TB Sensing Specific subelement in the Sensing Measurement Parameters element in a Sensing Measurement Request frame and shall assign the following:

— The AID or USID in the AID/USID field.

— The Poll Assigned field shall be set to 1 if the Poll Required field within the last Sensing Capabilities

element received from the sensing responder is set to 1, or it requests to poll the non-AP STA in the TB sensing measurement exchange.

## SP

Do you support the proposed resolutions to the CIDs and incorporate the text changes into the latest TGbf draft?

Y/N/A