IEEE P802.11
Wireless LANs

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| Initial SA ballot comments – SBP and OST comments |
| Date: 2024-08-11 |
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**Abstract**

This document proposes the resolutions to the following CIDs:

6045, 6005 (2 in total)

R0: initial version on Aug 11, 2024.

# 6045

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| **CID** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 6045 | Mahmoud Kamel | 11.55.2.2 | 171.13 | The SBP procedure may be unnecessarily compliacted due to the inclusion of the Preferred Responder Role Bitmap and can be simplified. According to current specifications, a single field determines if responders must send sensing measurement reports. This filed is the Sensing Measurement Report Requested field within the Sensing Measurement Parameters field in the Sensing Measurement Parameters element in the SBP Request frame. As it stands, there's no method to specify if preferred responders (including the SBP responder, i.e., the AP) need to send these reports to the SBP initiator without dividing the preferred responders into at least two groups and conducting two SBP sessions. For instance, SBP responders could be divided into one group of transmit-only responders, another group of receive-only responders who do not need to send reports, and a third group of receive-only responders who are required to send reports. This approach allows the Sensing Transmitter and Sensing Receiver fields in the Sensing Measurement Parameters field in the the Sensing Measurement Parameters element to adequately specify the role of all responders in each group (and each SBP Request). Additionally, certain scenarios (DCN: 11-24/464r0) prevent some roles from being assigned to preferred responders, specifically the combined role of sensing transmitter and receiver. Only sensing transmitter or sensing receiver roles are permitted. Therefore, we can simplify the SBP procedure by eliminating the Preferred Responder Role Bitmap field and the Preferred Responder Role Bitmap Present field and all associated specification. | Simplify the SBP procedure by eliminating the Preferred Responder Role Bitmap field and the Preferred Responder Role Bitmap Present field and all associated specification from the latest 11bf draft. |

**Proposed resolution: Rejected**. Please refer to the rejection reasons in DCN 24/1428r0: <https://mentor.ieee.org/802.11/dcn/24/11-24-1428-00-00bf-initial-sa-ballot-comments-sbp-and-ost-comments.docx>

**Rejection reasons:**

Based on the comment, the commenter mainly has 2 concerns:

1. There isn’t an efficient way to indicate the need to send the measurement report for each sensing responder that is assigned either a: sensing receiver role or sensing transmitter and sensing receiver role;
* Rejection reason: This reporting issue (that is “a single field determines if responders must send sensing measurement reports”) is not caused by introducing the Preferred Responder Role Bitmap. Using the Preferred Responder Role Bitmap is one of the two methods to assign roles to the sensing responders in an SBP. Even with the Preferred Responder Role Bitmap feature disabled, when the SBP initiator uses the Sensing Receiver field in the Sensing Measurement Parameter element to assign a sensing receiver role to sensing responders, this reporting issue claimed in the comment still exists. In other words, as long as the SBP initiator specifies the sensing receiver role for more than one sensing responder in the SBP procedure, regardless of how, this reporting issue exists. It is not fair to tie this reporting issue with the Preferred Responder Role Bitmap feature, so, this argument is not a valid reason to delete this feature.
1. The introduction of the Preferred Responder Role Bitmap may bring unnecessary complexity to the SBP procedure.
* Rejection reasons:
	+ Having a Preferred Responder Role Bitmap may bring complexity to the SBP procedure, but, this complexity is limited and totally controllable. For the SBP initiator, the Preferred Responder Role Bitmap feature can only be enabled when the SBP initiator provides a list of N sensing responders, and the SBP initiator can choose to use it or not based on its demands. As for how the SBP initiator determines the role for sensing responders, this should be out of the scope of the specification. For the SBP responder, it should be simple to match N roles to N sensing responders that are given in the Sensing Responder Addresses field.
	+ This complexity is not unnecessary, which is, in some use cases, needed. Without the Preferred Responder Role Bitmap, all sensing responders will be assigned exactly the same role using a Sensing Measurement Parameter element: transmitter, receiver, or transmitter and receiver. If the SBP initiator requests SR2SR in this SBP, the only option is to set all sensing responders to transmitter and receiver role to allow SR2SR sounding. For those that do not support SR2SR, the SBP responder might perform both NDPA sounding and SR2SI sounding with the same sensing responder given the role assignment. For those that support SR2SR, the SBP responder is likely to trigger every and each sensing responder to transmit SR2SR NDP and all the other responders will take measurements. Both cases will result in many redundant, repeated and unwanted measurement results. With the Preferred Responder Role Bitmap enabled, the SBP responder will know which channel to measure as well as the direction of sounding for SR2SR. The channel occupancy time needed for measurement and reporting can be significantly reduced. The implementation for the SBP responder can be simplified in such use cases.

# 6005

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| **CID** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 6005 | Benjamin Rolfe | 9.4.2.329 | 72 | "he Sensing Transmitter and the Sensing Receiver fields cannot both be set to 0" Really? It would appear from the format that in fact it is possible to set both fields to either 0 or 1 in any transmission, though doing so is logically non-sensible. However since the both fields are stated to be reserved when the Preferred Responder Role Bitmap Present field is set to 1, perhaps both being set to zero when reserved is perfectly sensible. What happens if they are? This would seem the more relevant thing to describe, perhaps even as a normative requirement. For example if the behavior at the receiver is undefined, this might be a bad thing and lead to unpredictable results. | Replace sentence with: When the Sensing Measurement Parameters element included in the SBP Request frame when the Preferred Responder Role Bitmap Present field is set to 0 in the SBP Parameters Control field of the SBP Parameters element in the same SBP Request frame, if both Sensing Transmitter and Sensing Receiver fields are 0, the frame shall be ignored. |

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**Proposed resolution: Revised**. Agree with the commenter in principle. Further clarifications are needed. Please refer to the modification labelled with #6005 in DCN 24/1428r0: <https://mentor.ieee.org/802.11/dcn/24/11-24-1428-00-00bf-initial-sa-ballot-comments-sbp-and-ost-comments.docx>

**Discussions:**

The Sensing Measurement Parameters element can be included in a Sensing Measurement Request/Response frame during the establishment of a sensing measurment session, or in an SBP Request/Response frame during the SBP setup.

* When included in a Sensing Measurement Request/Response frame, the Sensing Transmitter and the Sensing Receiver fields cannot both be set to 0.
* When included in an SBP Request frame, it is possible that the Sensing Transmitter and the Sensing Reciver fields are both set to 0 that is reserved value, if the SBP initiator also provides Sensing Responder Role Bitmap. Since the Sensing Responder Role Bitmap field is not included in an SBP Response frame, the Sensing Transmitter and the Sensing Receiver fields in an SBP Response frame cannot both be set to 0 either.

This “cannot both be set to 0” condition should be made a requirement to prevent this from happening. SO, the proposed change is to move the text from clause 9 to clause 11.

***To TGbf editor: Please delete P72L57 as follows.***

**Modifications (#6005):**

***To TGbf editor: Please add the text to P142L14 (sensing measurement session)as follows.***

During a sensing measurement session, the sensing initiator shall assign the role(s) of a sensing responder as one of the following (see 9.4.2.329 (Sensing Measurement Parameters element)):

— Sensing receiver

— Sensing transmitter

— Sensing transmitter and sensing receiver

The sensing initiator shall not set both the Sensing Transmitter field and the Sensing Receiver field within the Sensing Measurement Parameters element of a Sensing Measurement Request frame to 0. If the Status Code field in a Sensing Measurement Response frame is equal to REJECTED\_WITH\_SUGGESTED\_SENSING\_PARAMETERS, the sensing responder shall not set both the Sensing Transmitter field and the Sensing Receiver field within the Sensing Measurement Parameters element of the same Sensing Measurement Response frame to 0. (#6005)

***To TGbf editor: Please add the text to P170L49 (SBP setup) as follows.***

If the Preferred Responder Role Bitmap Present field within the SBP Parameters element of the SBP Request frame is equal to 1 and if the Status Code field within the SBP Response frame is equal to SUCCESS, the SBP responder shall set the Sensing Transmitter and the Sensing Receiver fields ....

If the Preferred Responder Role Bitmap Present field within the SBP Parameters element of the SBP Request frame is equal to 0, the SBP initiator shall not set both the Sensing Transmitter field and the Sensing Receiver field within the Sensing Measurement Parameters element of the same SBP Request frame to 0. If the Status Code field in an SBP Response frame is equal to REJECTED\_WITH\_SUGGESTED\_SENSING\_PARAMETERS, the SBP Responder shall not set both the Sensing Transmitter field and the Sensing Receiver field within the Sensing Measurement Parameters element of the same SBP Response frame to 0. (#6005)

SP:

Do you agree to the resolutions provided for CIDs 6045, 6005 in 24/1428r0 to be included in the latest 11bf Draft?

Y/N/A