IEEE P802.11
Wireless LANs

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| Bug fix: SBP response  |
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Abstract

This submission contains the proposed modifications for SBP response when its Status Code equals to SUCCESS.

R0: initial document

Discussion 1

In currernt SBP procedure, the Preferred Responder List field within the SBPParameters parameter of an MLME-SBP.response primitive shall be set to 1 only if:

— The StatusCode parameter within the MLME-SBP.response primitive is set to SUCCESS; and

* The Preferred Responder List field within the SBPParameters parameter of the corresponding MLME-SBP.indication primitive is equal to 1.

Once the Preferred Responder List field is set to 1, both SensingResponderAddresses and SensingResponderIDs parameters shall be included in the MLME-SBP.response primitive. In this case, the Number of Preferred Responders field shall be equal to the number of MAC addresses within the SensingResponderAddresses parameter and the number of AID/USIDs within the SensingResponderIDs parameter.

To avoid privacy problem, SBP responder shall not transmit sensing responders’ MAC addresses which is not included in the Sensing Responder Addresses field within SBP request frame to SBP initiator. In other words, the MAC addresses included in the Sensing Responder Addresses field within SBP response frame shall be a subset of the MAC addresses included in the SBP request frame. This can be summaried into to cases as follows.

Case 1: The Mandatory Preferred Responder field in SBP request frame is set to 1.

In this case, if the Status Code in MLME-SBP.response primitive equals to SUCCESS, the MAC addresses included in the Sensing Responder Addresses field within SensingResponderAddresses parameter are same with the MAC addresses included in the SensingResponderAddresses parameter within MLME-SBP.request primitive. In this case, the Number of Preferred Responders field shall be equal to the number of MAC addresses within the SensingResponderAddresses parameter and the number of AID/USIDs within the SensingResponderIDs parameter.

Case 2: The Mandatory Preferred Responder field in SBP request frame is set to 0.

In this case, if the Status Code in MLME-SBP.response primitive equals to SUCCESS, the MAC addresses included in the Sensing Responder Addresses field within SensingResponderAddresses parameter is a subset of the MAC addresses included in the SensingResponderAddresses parameter within MLME-SBP.request primitive. In this case, the Number of Preferred Responders field shall be equal to the number of MAC addresses within the SensingResponderAddresses parameter and the number of AID/USIDs within the SensingResponderIDs parameter.

Discussion 1 end

Discussion 2

For above case 2, when Status Code in MLME-SBP.primitive euqals to SUCCESS, relevant parameters could be set in 2 ways.

1. Number of Preferred Responders field = the number of Mac Addresses (which is a subset of the MAC addresses included in corresponding SBP request frame) = the number of IDs

SBP responder only includes the IDs of the sensing responders present in the Sensing Responder Addresses field, i.e. SBP responder only share part the sensing responders’ ID to SBP initiator.

E.g. STA A/B/C is provided by SBP initiator, STA A/C/D are selected by the AP to satisfy the SBP request. In SBP response frame, AP includes STA A/C’s MAC addresses and STA A/C’s IDs.

1. Number of Preferred Responder filed = the numner of Mac Addresses < the number of IDs = Number of Sensing Responders field.

SBP responder includes the IDs of the all sensing responders (some of them may not present in the Sensing Responder Addressed field) used to satisfy the corresponding SBP request, i.e. SBP responder share all the sensing responders’ ID to SBP intiator.

E.g. STA A/B/C is provided by SBP initiator, STA A/C/D are selected by the AP to satisfy the SBP request. In SBP response frame, AP includes STA A/C’s MAC addresses and STA A/B/D’s IDs.

Either way could be chosen, but the 2nd way may have some advantages: SBP intiator could know all the IDs of the sensing responders by receving the SBP response frame (Status Code equals to SUCCESS) during the SBP setup exchange. SBP initiator may futher indentify if these sensing responder are good for the sensing application by some methods (e.g. check the IDs in cloud). If not, SBP initiator could terminate the SBP procedure at the very beginning to save time/power/…

Discussion 2 end

***Instructions to the editor: please make the following changes to paragraphs from P155L11 to P155L40 in the subclause 11.55.2.2 Setup exchange in D1.1 as shown below:***

The Preferred Responder List field within the SBPParameters parameter of an MLME-SBP.response primitive shall be set to 1 only if:

— The StatusCode parameter within the MLME-SBP.response primitive is set to SUCCESS; and

* The Preferred Responder List field within the SBPParameters parameter of the corresponding MLME-SBP.indication primitive is equal to 1.

Otherwise, the Preferred Responder List field within the SBPParameters parameter of an MLMESBP.response primitive shall be set to 0.

If the Preferred Responder List field within the SBPParameters parameter of the MLME-SBP.response primitive is set to 0, neither the SensingResponderAddresses nor the SensingResponderIDs parameters shall be included in the primitive. If the Preferred Responder List field within the SBPParameters parameter of the MLME-SBP.response primitive is set to 1, both SensingResponderAddresses and SensingResponderIDs parameters shall be included in the primitive.

If the Mandatory Preferred Responder field within the SBPParameters parameter of the corresponding MLME-SBP.indication primitive is equal to 1, the MAC addresses within the SensingResponderAddresses parameter of an MLME-SBP.response primitive shall be same with the MAC addresses within the SensingResponderAddresses parameter of corresponding MLME-SBP.indication primitive. In this case, the Number of Preferred Responders field shall be equal to the number of MAC addresses within the SensingResponderAddresses paratmeter and the number of AID/USIDs within the SensingResponderIDs parameter of the MLME-SBP.response primitive. If the Mandatory Preferred Responder field within the SBPParameters parameter of the corresponding MLME-SBP.indication primitive is equal to 0, the MAC addresses within the SensingResponderAddresses parameter of an MLME-SBP.response primitive shall be a subset of the MAC addresses within the SensingResponderAddresses parameter of corresponding MLME-SBP.indication primitive. In this case, the Number of Preferred Responders field shall be equal to the number of MAC addresses within the SensingResponderAddresses paratmeter within the MLME-SBP.response primitive.

If the StatusCode parameter within the MLME-SBP.response primitive is set to SUCCESS, the Number of Sensing Responders field within the SBPParameters parameter shall be equal to the number of sensing responders used in the sensing procedure used by the SBP responder to satisfy the SBP request. If the Mandatory Preferred Responder field within the SBPParameters parameter of the corresponding MLME-SBP.indication primitive is equal to 1, the Number of Sensing Responders field within the SBPParameters parameter of an MLME-SBP.response primitive shall be equal to the number of MAC addresses within the SensingResponderAddresses paratmeter and the number of AID/USIDs within the SensingResponderIDs parameter the MLME-SBP.response primitive. If the Mandatory Preferred Responder field within the SBPParameters parameter of the corresponding MLME-SBP.indication primitive is equal to 0, the Number of Sensing Responders field within the SBPParameters parameter of an MLME-SBP.response primitive shall be equal to the number of AID/USIDs within the SensingResponderIDs parameter the MLME-SBP.response primitive.

# SP

Do you support the proposed changes to fix the bug and incorporate the text changes in 11-23/xxxxr0 into the latest TGbf draft?

Y/N/A