IEEE P802.11
Wireless LANs

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| Spec Text Proposal for TXSS Sector List Feedback |
| Date: 2018-4-25 |
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Abstract

This submission proposes spec text proposal to clarify TXSS sector list feedback.

**Proposed changes to D1.1:**

 9.4.2.130 DMG Beam Refinement element

***Change Figure 9-512 as follows***

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 B7 | B8 B15 | B16 | B17 | B18 | B19 | B20 | B21 B26 | B27 B28 | B29 B33 |
|  | Element ID | Length | Initiator | TX-train-response | RX-train-response | TX-TRN-OK | TXSS-FBCK-REQ | BS-FBCK | BS-FBCK Antenna ID | FBCK-REQ |
| Bits: | 8 | 8 | 1 | 1 | 1 | 1 | 1 | 6 | 2 | 5 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | B34 B51 | B52 | B53 | B54 B55 | B56 B60 | B61 |
|  | FBCK-TYPE | MID Extension | Capability Request | Reserved | BS-FBCK MSB | BS-FBCK Antenna ID MSB |
| Bits: | 18 | 1 | 1 | 2 | 5 | 1 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B62 B65 | B66 | B67 | B68 B69 | B70 | B71 | B72 | B73 B74 | B75 B79 |
|  | Number of Measurements MSB | EDMG Extension Flag | EDMG Channel Measurement Present | Sector Sweep Frame Type | DBFFBCK REQ | Aggregation Requested  | Aggregation Present | BF Training Type | Reserved |
| Bits: | 4 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 5 |

***Insert the following at the end of the subclause***

The BF Training Type field is set to 0 to indicate that the TXSS sector list feedback is used for SISO BF training; set to 1 to indicate that the TXSS sector list feedback is used for SU-MIMO BF training and set to 2 to indicate that the TXSS sector list feedback is used for MU-MIMO BF training. The value of 3 is reserved.

10.39.6.4 BRP phase execution

10.39.6.4.1 General

**Change the paragragh as follows:**

A STA may request a TXSS sector list feedback by sending a BRP frame with the TXSS-FBCK-REQ field set to 1, the SNR Requested subfield within the FBCK-REQ field set to 1 and the remaining subfields within the FBCK-REQ field set to 0. The responding STA shall respond with a BRP frame with the SNR Present subfield within the FBCK-TYPE field set to 1 and Sector ID Order Present subfield set to 1, with a list of sector IDs indicating the sector IDs of the received SSW frames or DMG Beacon frames, and with the SNR values with which those frames were received in the last TXSS. The Number of Measurements subfield in the FBCK-TYPE field is set to indicate the number of sectors received during the last SLS for which an SNR measurement is included. An EDMG STA may request a TXSS sector list feedback from a peer EDMG STA by sending a BRP frame with the BF Training Type field set to 0, the TXSS-FBCK-REQ field set to 1, the SNR Requested subfield within the FBCK-REQ field set to 1 and the remaining subfields within the FBCK-REQ field set to 0. The responding EDMG STA shall respond with a BRP frame with the BF Training Type field set to 0, the SNR Present and Sector ID Order subfields within the FBCK-TYPE field set to 1, the EDMG Extension Flag field set to 1 and the EDMG Channel Measurement Present field set to 1. …

10.38.9.2.2 SU-MIMO beamforming

10.38.9.2.2.2 SISO phase

**Change the paragragh as follows:**

…

When the SISO phase comprises a SISO feedback procedure, the initiator shall send a BRP frame to the responder. The DMG Beam Refinement element (see 9.4.2.130) included in the BRP frame shall have the BF Training Type, TXSS-FBCK-REQ, EDMG Extension Flag and EDMG Channel Measurement Present fields set to 1, the SNR Requested and Sector ID Order Requested subfields within the FBCK-REQ field set to 1, the remaining subfields within the FBCK-REQ field set to 0, and the SNR Present, Sector ID Order Present, Channel Measurement Present, Tap Delay Present and Link Type subfields within the FBCK-TYPE field set to 1, 1, 0, 0 and 1, respectively.

…

The responder shall send a BRP frame to the initiator within an MBIFS following the reception of the BRP frame from the initiator. The DMG Beam Refinement element included in the BRP frame shall have the BF Training Type, EDMG Extension Flag and EDMG Channel Measurement Present fields set to 1, all the subfields within the FBCK-REQ field set to 0, and the SNR Present, Sector ID Order Present, Channel Measurement Present, Tap Delay Present and Link Type subfields within the FBCK-TYPE field set to 1, 1, 0, 0 and 0, respectively.

10.38.9.2.3 MU-MIMO beamforming

10.38.9.2.3.2 SISO phase

**Change the paragragh as follows:**

The initiator shall perform the SISO Feedback subphase. If the Initiator TXSS is present, the SISO Feedback subphase shall start MBIFS following the end of the Initiator TXSS subphase. During the SISO Feedback subphase, the initiator transmits a BRP frame (see 9.6.22.3) to poll each responder in the MU group. The DMG Beam Refinement element (see 9.4.2.130) of the BRP frame shall have the BF Training Type field set to 2, the TXSS-FBCK-REQ field set to 1, the SNR Requested subfield within the FBCK-REQ field set to 1, the Sector ID Order Requested field within the FBCK-REQ field set to 1, the Channel Measurement Requested subfield within the FBCK-REQ field set to 0, all the subfields within the FBCK-TYPE field set to 0 and the EDMG Channel Measurement Present field set to 0. A responder shall respond with a BRP frame within an MBIFS following the reception of the corresponding BRP frame. The DMG Beam Refinement element of the BRP frame shall have the BF Training Type field set to 2, all the subfields within the FBCK-REQ field set to 0, the SNR Present subfield within the FBCK-TYPE field set to 1, the Sector ID Order Present subfield within the FBCK-TYPE field set to 1, the Channel Measurement Present subfield within the FBCK-TYPE field set to 0, the Tap Delay Present subfield within the FBCK-TYPE field set to 0, the Link Type subfield within the FBCK-TYPE field set to 0, the EDMG Extension Flag field set to 1 and the EDMG Channel Measurement Present field set to 1. The BRP frame shall include an EDMG BRP Request element (see 9.4.2.255), in which the L-TX-RX and Requested EDMG TRN-Unit M fields indicate the number of TRN subfields requested for receive AWV training in the following non-reciprocal MU-MIMO BF training.

**Straw Poll:**

* **Do you agree to accept the spec text change proposed in doc 11-18/0681r0?**