IEEE P802.11
Wireless LANs

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| Setting of Duration field during BRP |
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Abstract

This submission addresses issues identified relating to the setting of the Duration field during beamforming.

There is no CID associated with this change.

The proposed changes are in reference to Draft P802.11REVmc\_D3.2.

Discussion 1: The description of Duration setting for BRP frames may be misinterpreted in the context of BRP during a CBAP. This causes confusion in implementation and may impact channel access. A clarification is proposed.

**9.38.3 Beam Refinement Protocol (BRP) phase**

**9.38.3.1 General**

*Change the 11th paragraph as follows*

A beam refinement response is separated from a preceding beam refinement request by at least a SIFS interval and at most a BRPIFS interval provided sufficient time is available for the complete transmission of those frames within the SP allocation or TXOP. Similarly, a beam refinement request, if any, is separated from a preceding beam refinement response by at least a SIFS interval and at most a BRPIFS interval provided sufficient time is available for the complete transmission of the beam refinement request within the SP allocation or TXOP.

**9.38.6.4 BRP phase execution**

**9.38.6.4.1 General**

*Change the last paragraph as follows*

The Duration field within each BRP frame is set to the time remaining until the end of the current allocation when transmitted within an SP. Otherwise it is set to the time remaining until the end of the TXOP.

Discussion 2: The value of TXOP Limit should not constrain the BRP protocol since beamforming is fundamental to actual DMG operation. Propose to allow BRP sequences regardless of the TXOP Limit.

**9.22.2.8 TXOP Limits**

*Change the 7th paragraph as follows*

The TXOP holder may exceed the TXOP Limit only if it does not transmit more than one Data or Management frame in the TXOP or when performing BRP as specified in 9.38 (DMG beamforming(11ad)), and only for:

— Retransmission of an MPDU, not in an A-MPDU consisting of more than one MPDU

— Initial transmission of an MSDU under a Block Ack agreement, where the MSDU is not in an AMPDU consisting of more than one MPDU and the MSDU is not in an A-MSDU

— Transmission of a Control MPDU or a QoS Null MPDU, not in an A MPDU consisting of more than one MPDU

— Initial transmission of a fragment of an MSDU or MMPDU, if a previous fragment of that MSDU or MMPDU was retransmitted

— Transmission of a fragment of an MSDU or MMPDU fragmented into 16 fragments

— Transmission of an A-MPDU consisting of the initial transmission of a single MPDU not containing an MSDU and that is not an individually addressed Management frame

— Transmission of a group addressed MPDU, not in an A-MPDU consisting of more than one MPDU

— Transmission of a Null Data Packet (NDP)

— Transmission of a VHT NDP Announcement frame and NDP or transmission of a Beamforming Report Poll frame that fit within the TXOP limit but the response and the immediately preceding SIFS cause the TXOP limit to be exceeded.

— Transmission of a BRP frame

Discussion 3: The instructions for a responding STA to a TXSS sector list feedback request are incorrect.

**9.38.6.4 BRP phase execution**

**9.38.6.4.1 General**

*Change the 8th paragraph 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.