IEEE P802.11
Wireless LANs

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| --- |
| DMG TRN capability |
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Abstract

This document suggests small changes to enable requesting that only DMG type TRN fields are sent to a STA.

**Discussion**:

The following change modifies the Beamforming capabilities and the EDMG-A Header to enable a STA to request only DMG type TRN fields if it is limited to SISO training. This will enable re-use of DMG based implementation when used in SISO.

***TGay Editor: Modify the Beamforming capability field (figure 25) as follows***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | B0 B4 | B5 | B6 | B7 | B8 | B9 |
|  | Requested BRP SC Blocks | MU-MIMO Supported | UL MU-MIMO Supported | SU-MIMO Supported | Grant Required | NoRSS Supported |
| Bits: | 5 | 1 | 1 | 1 | 1 | 1 |

|  |  |  |
| --- | --- | --- |
|  | B10 | B11 B15 |
|  | DMG TRN RX only capable | Reserved |
| Bits | 1 | 4 |

***TGay Editor: Add the following text at the end of subclause 9.4.2.250.2 (Beamforming field)***

A STA that indicated support for channels 1-13 only, may set the DMG TRN RX only capable subfield to 1, to indicates that the STA can receive only DMG type TRNs as defined in 20.10.2.2.2 even when appended to an EDMG packet.

***TGay Editor: Add the following field to table 23-*** ***EDMG-Header-A2 subfield definition***

|  |  |  |  |
| --- | --- | --- | --- |
| DMG TRN field | 1 | 2 | When set to 1, indicates that the TRN field appended to this packet has the structure of a DMG TRN field as defined in 20.10.2.2.2. In this case the RX-TRN-Unit per Each TX TRN-Unit, the EDMG TRN-Unit P, The EDMG TRN-Unit M, EDMG TRN-Unit N, TRN Subfield Sequence Length are reserved. This field is reserved when the EDMG TRN Length is equal to 0. |

***TGay Editor: Add the following field to table 19-*** ***EDMG-Header-A field structure and definition for a SU PPDU***

|  |  |  |  |
| --- | --- | --- | --- |
| DMG TRN field | 1 | 95 | When set to 1, indicates that the TRN field appended to this packet has the structure of a DMG TRN field as defined in 20.10.2.2.2. In this case the RX-TRN-Unit per Each TX TRN-Unit, the EDMG TRN-Unit P, The EDMG TRN-Unit M, EDMG TRN-Unit N, TRN Subfield Sequence Length are reserved. This field is reserved when the EDMG TRN Length is equal to 0. |

***TGay Editor: Add the following text at the end 30.9.2.2.3***

When the DMG TRN field is set to 1 in a packet in which the EDMG TRN Length is greater than 0, the TRN field appended to the packet will have the structure of a DMG TRN field defined in 20.10.2.2.2. In this case the value of the EMDG TRN Length shall be smaller than 32.

***TGay Editor: Add the following field to table 8 TXVECTOR and RXVECTOR parameters***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DMG\_TRN\_FIELD | FORMAT is EDMG | When set to 1, indicates that the TRN field appended to this packet has the structure of a DMG TRN field as defined in 20.10.2.2.2. In this case the RX\_TRN\_PER\_TX\_TRN, EDMG\_TRN\_P, EMDG\_TRN\_M, EDMG\_TRN\_N and TRN\_SEQ\_LENGTH are reserved. The EMDG\_TRN\_LEN shall have a value greater than 0 and less than 31. | Y | Y |