IEEE P802.11
Wireless LANs

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| D2.0 Comment Resolutions on Hybrid Beamforming – Part 2  |
| Date: 2019-01-11 |
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Introduction

This submission proposes resolutions for the following 2 comments on Hybrid Beamforming: 3054 and 3523

Revisions:

- Rev 0: Initial version of document.

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGay Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGay Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGay Editor: Editing instructions preceded by “TGay Editor” are instructions to the TGay editor to modify existing material in the TGay draft. As a result of adopting the changes, the TGay editor will execute the instructions rather than copy them to the TGay Draft.***

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| **CID** | **Commenter** | **Clause**  | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 3054 | Allen Heberling | 9.4.2.250.2 | 108 | 30 | Please provide Normative Text to describe the behavior of the "Largest Ng Supported" subfield and the "Dynamic Grouping Supported" subfield | Add appropriate normative text into appropriate locations in sections 10 and 11. | RevisedNormative text added to Section 10.43.10.2.4.4 Feedback Phase to describe use of fields TGay editor to make the changes shown in 11-19/0075r0 under all headings that include CID 3054/3523 |
| 3523 | Oghenekome Oteri | 9.4.2.250.2 | 108 | 30 | No normative behavior for dynamic grouping and Largest Ng support needed. | Normative behavior for dynamic grouping and Largest Ng support needed. | RevisedNormative text added to Section 10.43.10.2.4.4 Feedback Phase to describe use of fields. Same as CID 3054TGay editor to make the changes shown in 11-19/0075r0 under all headings that include CID 3054/3523 |

*Changes to D2.2*

***TGay Editor: Please make the following change from Pg 287 line 11 (#3054, #3523)***

**10.43.10.2.4.4 General**

The feedback phase is used by the hybrid beamforming protocol to feed back the hybrid beamforming information to the transmitter for use in a subsequent hybrid beamforming transmission.

The feedback is carried in the MIMO BF Feedback frame and its contents are as follows:

* For the EDMG SC mode, when the BRP frame used during the sounding phase has the DBF FBCK REQ field equal to 1 within the DMG Refinement element, the MIMO BF Feedback frame contains the Digital BF Feedback element (see **9.4.2.269)** carrying the digital beamforming matrix information. When DBF FBCK REQ field equal to 0, the MIMO BF Feedback frame contains the ~~DMG~~ Channel Measurement Feedback element defined in 9.4.2.136 and the EDMG channel measurement Feedback element defined in 9.4.2.253. *(#3054, #3523)*
* For the EDMG OFDM mode, the MIMO BF Feedback frame contains the Digital BF Feedback element carrying the digital beamforming matrix information.

The capabilities governing the subcarrier grouping of an EDMG STA whose feedback is in the EDMG OFDM mode are contained in the Largest Ng Supported field and the Dynamic Grouping Supported fields in the Beamforming Capability subelement (see 9.4.2.250.2) of a STA’s EDMG Capabilities element.

An EDMG STA shall not transmit Digital BF feedback with a subcarrier grouping value larger than the Largest Ng Supported by the STA receiving the feedback. An EDMG STA shall not transmit Digital BF feedback using dynamic grouping if the STA receiving the feedback indicates that it does not support dynamic grouping. *(#3054, #3523).*

The Digital Fbck Control Field of the MIMO Feedback Control element (see 9.4.2.260) defines the parameters of the accompanying Digital BF feedback. *(#3054, #3523)*

**REFERENCES**

1. IEEE P802.11ayTM/D2.2

**Straw Poll**

Do you agree to accept comment resolutions for CIDs 3054 and 3523 as proposed in 11-18/0075r0?