IEEE P802.11  
Wireless LANs

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| Comment Resolution on 10.38.9.2.3.1 | | | | |
| Date: 2017-7-31 | | | | |
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Abstract

This submission proposes resolution of comment received from TGay comment collection (TGay Draft 0.3).

- 2 CID: 502, 549

1. **Introduction**

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. The introduction and the explanation of the proposed changes are 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 | Page Number | Line Number | Comment | Proposed Change | Resolution |
| 502 | 67 | 24 | Please provide details on how a single spatial stream can be transmitted over serval DMG antennas. For me this sounds like "duplicate mode" which does however not require a previous MIMO training | Clarify what is meant by "single spatial stream transmitted through multiple antennas". STBC? | Revised-  Agreed that further clarification is necessary.  Basically, the SU-MIMO BF protocol enables the determination of multiple transmit antenna settings and corresponding multiple receive antenna settings. For transmit BF and receive BF operation, a single spatial stream can be transmitted through multiple DMG antennas using the determined transmit antenna settings and received through multiple DMG antennas using the determined corresponding receive antenna settings.  TGay editor to make the changes shown in 11-17/1185r0 under all headings that include CID 502. |
| 549 | 67 | 25 | In this SU-MIMO section, "a single spatial stream is transmitted" may cause people confused. The primary goal of this section is to support SU multiple spatial stream transmission. It is better to illustrate how this process which enables a single spatial stream is different from legacy DMG SISO process. | Suggest to illustrate how this process which enables a single spatial stream is different from legacy DMG SISO process. | Revised-  Agreed that further clarification is necessary.  Basically, the SU-MIMO BF protocol enables the determination of multiple transmit antenna settings and corresponding multiple receive antenna settings. For transmit BF and receive BF operation, a single spatial stream can be transmitted through multiple DMG antennas using the determined transmit antenna settings and received through multiple DMG antennas using the determined corresponding receive antenna settings.  However, for legacy DMG SISO transmission, a spatial stream is transmitted through a single DMG antenna and received through a single DMG antenna.  TGay editor to make the changes shown in 11-17/1185r0 under all headings that include CID 549. |

**Discussion:**

Propose:

Revised for 2 CIDs 502, 549 as per discussion and editing instructions in 11-17/1185r0.

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10.38.9.2.3.1 General

***#: Change this clause as follows (CID #502, #549):***

An EDMG STA is SU-MIMO capable if the SU-MIMO Supported field in the STA’s EDMG Capabilities element is one. A SU-MIMO capable STA supports both SU-MIMO transmission and reception and the SU-MIMO beamforming protocol described in this subclause.

The SU-MIMO beamforming protocol supports beamforming training for subsequent transmission and reception of multiple spatial streams between a SU-MIMO capable initiator and a SU-MIMO capable responder. The SU-MIMO beamforming protocol enables the determination of transmit antenna settings and the corresponding receive antenna settings for simultaneous transmission of multiple spatial streams from the initiator to the responder or vice versa.

The SU-MIMO beamforming protocol can also be used to enable transmit beamforming and receive beamforming operation between the initiator and the responder in which a single spatial stream is transmitted through multiple DMG antennas using the determined transmit antenna settings and received through multiple DMG antennas using the determined corresponding receive antenna settings.

The SU-MIMO beamforming protocol comprises the following consecutive phases:

* SISO phase, and
* MIMO phase

**Straw Poll:**

* **Do you agree to accept comment resolution as proposed in doc 11-17/1185r0?**