IEEE P802.11  
Wireless LANs

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| **TGax D0.1 Comment Resolutions on 26.3.9.9 and 26.3.5** |
| **Date:** 2016-05-16 |
| **Author(s):** |

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Abstract

This submission proposes resolutions for multiple comments related to TGax D0.1 with the following CIDs (11 **CIDs**):

* 313, 316, 529, 848, 530, 849 for Clause 26.3.9.9
* 355, 1933, 2518, 2154, 2155 for Clause 26.3.5

#### *CIDs for Clause 26.3.9.9*

#### *CID 313*

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 313 | Bin Tian | 120.11 | This sentecne "and inserting appropriate coefficients into tone indices which are null after mapping M sequences." is confusing. What coefficients are inserted? | as in comment | Revised.  Modify the original text by the suggested remedy in [16/0659r1]. |

**Suggested remedy:**

* Specify the coefficients.
* Refine the paragraph to make it clearer.

*TGax Editor: Please make the following changes on Line 10 to 12, Page 120 for clause 26.3.9.9:*

The HE-STF field is constructed from the *M* sequence(s) ~~by multiplying integer coefficient(s) to each 20 MHz subchannel~~multiplied by  or  and ~~inserting appropriate~~extra coefficients selected out of  or ~~into~~ at tone indices which are null but shall have the HE-STF coefficients after mapping *M* sequence(s) to each 20MHz subchannel.

#### *CID 316*

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 316 | Bin Tian | 121.45 | Per RU scaling like alpha and beta are not needed for trigger based PPDU since each STA only transmits one RU | as in comment | Revised.  Modify Equation 26-36 by the suggested remedy in [16/0659r1]. |

**Suggested remedy:**

* Delete alpha and beta.
* Insert  into the denominator of the first term to normalize the power.

*TGax Editor: Please replace Equation 26-36 with the following equation on Line 45, Page 121 for clause 26.3.9.9:*

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|  | (26‑36) |

#### *CID 529, 848*

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 529 | Eunsung Park | 120.39 | HE-STF sequences for HE PPDUs except HE trigger-based PPDUs in 160/80+80MHz was approved but no corresponding text is present in the draft. | Add HE-STF sequences for for HE PPDUs except HE trigger-based PPDUs in 160/80+80MHz based on the PHY Motion 132 [11-16/0235r7]. | Revised.  Add the 160/80+80MHz HE-STF sequence for non-HE trigger-based PPDU as in [16/0659r1]. |
| 848 | Jinsoo Choi | 120.39 | The STF sequence for 160MHz non-HE trigger based PPDU transmission is need to be added. | Add the 160MHz STF sequence for non-HE trigger based PPDU transmission. | Revised.  See the resolutin of CID 529. |

*TGax Editor: Please add the following text and equation on Line 39, Page 120 for clause 26.3.9.9:*

For a 160 MHz transmission, the frequency domain sequence for HE PPDUs except HE trigger-based PPDUs is given by Equation 26‑xx.

|  |  |
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|  | (26‑xx) |

For an 80+80 MHz transmission, the primary 80MHz segment for HE PPDUs except HE trigger-based PPDUs shall use the HE-STF pattern for the 80MHz defined in Equation 26‑31.

For an 80+80 MHz transmission, the frequency domain sequence of the secondary 80MHz segment for HE PPDUs except HE trigger-based PPDUs is given by Equation 26‑xx.

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|  | (26‑xx) |

#### *CID 530, 849*

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 530 | Eunsung Park | 120.62 | HE-STF sequences for HE trigger-based PPDUs in 160/80+80MHz was approved but no corresponding text is present in the draft | Add HE-STF sequences for HE trigger-based PPDUs in 160/80+80MHz based on the PHY Motion 132 [11-16/0235r7]. | Revised.  Add the 160/80+80MHz HE-STF sequence for HE trigger-based PPDU as in [16/0659r1]. |
| 849 | Jinsoo Choi | 120.61 | The STF sequence for 160MHz HE trigger based PPDU transmission is need to be added. | Add the 160MHz STF sequence for HE trigger based PPDU transmission. | Revised.  See the resolutin of CID 530. |

*TGax Editor: Please add the following text and equation on Line 62, Page 120 for clause 26.3.9.9:*

For a 160 MHz transmission, the frequency domain sequence for HE trigger-based PPDUs is given by Equation 26‑xx.

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|  | (26‑xx) |

For an 80+80 MHz transmission, the primary 80MHz segment for HE trigger-based PPDUs shall use the HE-STF pattern for the 80MHz defined in Equation 26‑34.

For an 80+80 MHz transmission, the frequency domain sequence of the secondary 80MHz segment for HE trigger-based PPDUs is given by Equation 26‑xx.

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|  | (26‑xx) |
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#### *CIDs for Clause 26.3.5*

#### *CID 355*

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 355 | Bo Sun | 82.12 | "non-OFDMA" is never defined before its first citation. | Define "non-OFDMA" somewhere in the spec | Revised.  Add NOTE to define “non-OFDMA” on Line 20, Page 82 as in [16/0659r1]. |

*TGax Editor: Please add the following NOTE on Line 20, Page 82 for clause 26.3.5:*

NOTE- Non-OFDMA means the case where all recipients of the PPDU are allocated to the whole bandwidth for a PPDU transmission.

#### *CID 1933, 2518*

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 1933 | Sigurd Schelstraete | 82.06 | Rewrite first sentence for clarity | HE-MCS is a compact representation of the coding and modulation. Both the Data field and the HE-SIG-B field use an HE-MCS. When HE-SIG-B is present, the HE-MCS for HE-SIG-B is carried in HE-SIG-A. For an HE MU PPDU, the HE-MCS for the Data field is carried in HE-SIG-B. For an HE SU PPDU and HE extended range SU PPDU, the HE-MCS for the Data field is carried in HE-SIG-A. | Revised.  Modify the original text by the suggested remedy in [16/0659r1]. |
| 2518 | Youhan Kim | 82.03 | "Table 25-x to Table 25-y" do not contain rate-dependent parameters for HE-SIG-B modulation. Also, in REVmc D5.0, HT-MCS and HE-MCS are used to refer to the MCS used in the Data field, while it seems the HE-MCS is used for both the HE-SIG-B field and the Data field. It is probably better to separate out the two. | Come up with a separate name for MCS of HE-SIG-B, such as HE-SIG-B-MCS" instead of using "HE-MCS" | Revised.  Modify the original text by the suggested remedy in [16/0659r1]. |

**Suggested remedy:**

* Change the MCS of HE-SIG-B to HE-SIG-B-MCS, and delete the text related to the HE-SIG-B-MCS in the paragraph on Line 6, Page 82.
* Instead, include the paragraph on Line 20, Page 82 to introduce the HE-SIG-B-MCS.
* Except for the HE-SIG-B MCS in the paragraph on Line 6, Page 82, modify the text as the commenter of CID 1933 suggests.

*TGax Editor: Please make the following changes on Line 6 to 10, Page 82 for clause 26.3.5:*

The HE-MCS is a ~~value that determines~~compact representation of the modulation and coding used in ~~the HE-SIG-B field and~~ the Data field of the PPDU. For an HE SU PPDU and HE extended range SU PPDU, ~~I~~it is ~~a compact representation that is~~ carried in the HE-SIG-A field. ~~for the HE-SIG-B field in an HE MU PPDU and for the Data field in an HE SU PPDU and HE extended range SU PPDU and~~ For an HE MU PPDU, it is carried in the HE-SIG-B field. ~~for the Data field in an HE MU PPDU.~~ For an HE trigger-based PPDU, it is carried in the Per User Info field in the trigger frame.

*TGax Editor: Please add the following paragraph on Line 20, Page 82 for clause 26.3.5:*

The HE-SIG-B-MCS is a compact representation of the modulation and coding used in the HE-SIG-B field of the PPDU. For an HE MU PPDU, it is carried in the HE-SIG-A field. HE-SIG-B-MCS consists of indices 0 to 5 and each HE-SIG-B-MCS represents the same modulation and coding as the HE-MCS with the same index.

#### *CID 2154, 2155*

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 2154 | Sriram Venkateswaran | 82.18 | Is HE Range extension + STBC possible? |  | Rejected.  In this clause, we don't need to clarify whether HE extended range SU PPDU can be combined with STBC because this clause is intended for the MCSs and I think HE extended range SU PPDU and STBC are not related to the MCSs. |
| 2155 | Sriram Venkateswaran | 82.21 | Is following DCM combination allowed? DCM+Nss>1, DCM+STBC, DCM+MUMIMO, DCM+all RU size? | Include details | Rejected.  In this clause, we don’t need to further clarify the DCM because this clause is intended for the MCSs and there is another clause for DCM, 26.3.10.14. |