IEEE P802.11  
Wireless LANs

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| 11ax Comment Resolutions for Clause 26.3.9 | | | | |
| Date: 2016-08-23 | | | | |
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Abstract: This document contains proposed resolutions for comments in *Clause 26.3.9* from 11ax D0.2 with the CIDs below.

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| ***Clause 26.3.9*** |  | |
| * 294 | |  |
| * 1099 * 1997 * 1998 * 1999 * 2000 * 2019 * 2531 * 2540 * 2541 | |  |
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| 294 | Bin Tian | 26.3.9.6 | 106.17 | Eqn (26-20) is not completely right, RL-SIG should have different polarity value p\_1 (not p\_0) on top of pilot sequence applied on pilot tones | Add statement or new equation | **Revised.**  Change to as in the resolution of CID1099 in doc IEEE802.11-16/1137r1. |

ax editor: please make the following changes in *Clause 26.3.9.9*:

* On P106L17 (CID #294):



If the TXVECTOR parameter BEAM\_CHANGE is 1, the time domain waveform of the RL-SIG field shall be as given by Equation (26‑20).

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|  | (26‑20) |

If the TXVECTOR parameter BEAM\_CHANGE is 1, the time domain waveform of the RL-SIG field shall be as given by Equation (26‑21).

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|  | (26‑21) |

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| CID | Commenter | Section | Page | Comment | Proposed Change | Resolution |
| 1099 | Koichi Ishihara | 26.3.9.7.4 | 112.21 | There is no reference of N^Tone\_HE-SIG-A. | "N^Tone\_HE-SIG-A" should be defined in Table 26-6 as follow:  "The number of OFDM symbols in the HE-SIG-A field" | **Revised.**  Change to as in the resolution of CID1099 in doc IEEE802.11-16/1137r1. |

* On P112L21 (CID #1099): Refer to comment resolution of CID #476.

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| CID | Commenter | Section | Page | Comment | Proposed Change | Resolution |
| 1997 | Siguard Schelstraete | 26.3.9.5 | 104.60 | unclear language | "two at each edge of the subcarriers used by data and pilot tones" is not clear. Either way, it is redundant given the next sentence. Remove "two at each edge of the subcarriers used by data and pilot tones". | **Revised.**  Change to as in the resolution of CID1997 in doc IEEE802.11-16/1137r1. |

ax editor: please make the following changes in *Clause 26.3.9.5*:

* On P104L60 (CID #1997):

Extra 4 BPSK modulated tones are added.

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| CID | Commenter | Section | Page | Comment | Proposed Change | Resolution |
| 1998 | Siguard Schelstraete | 26.3.9.5 | 105.21 | TBD | TBD has been resolved. See line 28. | **Revised.**  Change to as in the resolution of CID1998 in doc IEEE802.11-16/1137r1. |

* On P10521 (CID #1998): Refer to comment resolution of CID #1684.

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| 1999 | Siguard Schelstraete | 26.3.9.5 | 105.39 | missing reference | Change "<reference>" to Table 26-13. | **Revised.**  Change to as in the resolution of CID1999 in doc IEEE802.11-16/1137r1. |

* On P105L39 (CID #1999): Refer to comment resolution of CID #476.

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| 2000 | Siguard Schelstraete | 26.3.9.5 | 106.25 | TBD | Define | **Revised.**  Change to as in the resolution of CID2000 in doc IEEE802.11-16/1137r1. |

* On P106L25 (CID #2000): Refer to comment resolution of CID #1846.

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| 2019 | Siguard Schelstraete | 26.3.9.7.4 | 112.21 | Wrong reference | Correct reference is Table 26-13 | **Revised.**  Change to as in the resolution of CID2019 in doc IEEE802.11-16/1137r1. |

* On P112L21 (CID #2019): Refer to comment resolution of CID #476.

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| 2531 | Youhan Kim | 26.3.9.3 | 103.6 | What is N\_{STS,total} in L-STF? | Define what N\_{STS,total} is in the context of L-STF. This also applies to equations in other fields using BEAM\_CHANGE = 0. | **Revised.**  Change to as in the resolution of CID2522 in doc IEEE802.11-16/1137r1. |

**Discussions:**

The commentor is right that *NSTS,total* has not been defined for pre-HE fields yet. When BEAM\_CHANGE=0, the pre-HE fields are modulated as the first HELTF symbol, which means the total number of spatial streams for the pre-HE fields is , defined as the total number of spatial streams for an HE SU PPDU.

ax editor: please make the following changes in *Clause 26.3.9.3*:

* On P103L13 (CID #2531): add a new line after L64

*NSTS* is total number of space-time streams for pre-HE fields when BEAM\_CHANGE=0 asdefined in Table 26-6 (Frequently used parameters)

Table 26‑6 - Frequently used parameters

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| **Symbol** | **Explanation** |
| *NSTS,r,total* | For HE modulated fields, *NSTS,r,total* is the total number of space-time streams at the *r*-th RU in a PPDU.  For pre-HE modulated fields, *NSTS,r,total* is undefined when BEAM\_CHANGE=1; and when BEAM\_CHANGE = 0.  Note that *NSTS,r,total* = *NSTS* for an HE SU PPDU. |

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| In addition, replace *NSTS,total*with in equations (26-14), (26-16), (26-19 and (26-21). | (26-14) |

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|  | (26-16) |

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|  | (26-19) |

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|  | (26-22) |

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| 2540 | Youhan Kim | 26.3.9.7.4 | 111.41 | HE-SIG-A has 52 data tones, so cannot use the interleaver procedure of 11a. | Change the reference "18.3.5.7 (Data intereleaving)" to a suitable section of 11n or 11ac. | **Revised.**  Change to as in the resolution of CID2540 in doc IEEE802.11-16/1137r1. |

ax editor: please make the following changes in *Clause 26.3.9.7.4*:

* On P111L41 (CID #2540):

21.3.10.8(BCC interleaver),

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| 2541 | Youhan Kim | 26.3.9.7.4 | 112.58 | Transmit process for HE-SIG-A2 is not clear. Shouldn't it be highlighted that there is no interleaver? | Clarify the HE-SIG-A2 transmit process. | **Revised.**  Change to as in the resolution of CID2541 in doc IEEE802.11-16/1137r1. |

* On P112L58 (CID #2541): Refer to comment resolution of CID #912.

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| 2542 | Youhan Kim | 26.3.9.7.4 | 112.64 | HE-SIG-A4 should not be using an interleaver. | Remove data interleaving from P110L35. | **Revised.**  Change to as in the resolution of CID2542 in doc IEEE802.11-16/1137r1. |

* On P112L64 (CID #2542): Refer to comment resolution of CID #913.