IEEE P802.11  
Wireless LANs

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| Comment Resolutions on CID 1052 and 2519 | | | | |
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Abstract

This document provides PHY resolutions for the following CIDs on subclause 26.3.9 and 26.3.5. The baseline for this comment resolution document is 802.11ax Draft 0.2.

* CIDs: 1052, 2519

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| **CID** | **Clause Number** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 1052 | 26.3.9.9 | 121 | 34 | T CS,HE(n) value should refer to HE CSD, but not pre-HE CSD subclause. There should be a subclause "Cyclic shift for HE modlulated fileds" corredponding to 11ac subclause "Cyclic shift for VHT modulated fileds | add the subclause of HE CSD and update all HE CSD references | Revised: Subclause text on CSD in pre-HE amd HE modulated fields are added. Some variable errors related to CSD have also been corrected.  Instruction to editor:  Please modify the text according to the change indicated under CID 1052 in 11-16/0900r0 |

**Red Lined Text Change for the Proposed Resolutions:**

**Changes to D0.2 Related to CID 1052**

***Instructions for Editor: please make the following changes to D0.2 in P102 under subclause 26.3.9.2:***

26.3.9.2 Cyclic shift ~~for pre-HE modulated fields~~

**26.3.9.2.1 Cyclic shift for pre-HE modulated fileds**

When beam\_change=1 in HE-SIG-A, the cyclic shift value for the L-STF, L-LTF, L-SIG, RL-SIG, HE-SIG-A, and HE-SIG-B fields of the PPDU for transmit chain *iTX* out of a total of *NTX* are defined in Table 22-10 (Cyclic shift values for L-STF, L-LTF, L-SIG, and VHT-SIG-A fields of the PPDU). In UL MU transmission the cyclic shift value is based on the transmit chain index of each STA.

When beam\_change=0 in HE-SIG-A, the cyclic shift value for the L-STF, L-LTF, L-SIG, RL-SIG, and HE-SIG-A fields is not specified.

* + - * 1. Cyclic shift for HE modulated fields

The cyclic shift values defined in this subclause apply to the HE-STF, HE-LTF, and Data fields of the HE PPDU when beam change =1, and apply to the entire PPDU when beam change = 0.

Throughout the HE modulated fields of the preamble, cyclic shifts are applied to prevent unintended beamforming when correlated signals are transmitted in multiple space-time streams. The same cyclic shift is also applied to these streams during the transmission of the Data field of the HE PPDU. The cyclic shift value for the HE modulated fields for space-time stream *n* out of *NSTS,total* total space-time streams is shown in Table 22-11 (Cyclic shift values for the VHT modulated fields of a PPDU).

***Instructions for Editor: please make the following changes to the D0.2 P102 Ln48 under subclause 26.3.9.3***

represents the cyclic shift for transmitter chain *i*TX with a value given in 26.3.9.2.1 (Cyclic shift for pre-HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P103 Ln13 under subclause 26.3.9.3***

Replace

is given in 26.3.9.2 (Cyclic shift for pre-HE modulated fields.)

by

represents the cyclic shift for the mth stream with its value given in 26.3.9.2.2 (Cyclic shift for HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P103 Ln42 under subclause 26.3.9.4***

represents the cyclic shift for transmitter chain *i*TX with a value given in 26.3.9.2.1 (Cyclic shift for pre-HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P104 Ln14 under subclause 26.3.9.4***

Replace

is given in 26.3.9.2 (Cyclic shift for pre-HE modulated fields.)

by

represents the cyclic shift for the mth stream with its value given in 26.3.9.2.2 (Cyclic shift for HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P105 Ln44 under subclause 26.3.9.5***

represents the cyclic shift for transmitter chain *i*TX with a value given in 26.3.9.2.1 (Cyclic shift for pre-HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P106 Ln1 under subclause 26.3.9.5***

Replace

is given in 26.3.9.2 (Cyclic shift for pre-HE modulated fields.)

by

represents the cyclic shift for the mth stream with its value given in 26.3.9.2.2 (Cyclic shift for HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P112 Ln26 under subclause 26.3.9.7.4***

represents the cyclic shift for transmitter chain *i*TX with a value given in 26.3.9.2.1 (Cyclic shift for pre-HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P112 Ln45 under subclause 26.3.9.7.4***

Replace

is given in 26.3.9.2 (Cyclic shift for pre-HE modulated fields.)

by

represents the cyclic shift for the mth stream with its value given in 26.3.9.2.2 (Cyclic shift for HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P124 Ln56 under subclause 26.3.9.9***

Replace

is given in 26.3.9.2 (Cyclic shift for pre-HE modulated fields.)

by

represents the cyclic shift for the th stream with its value given in 26.3.9.2.2 (Cyclic shift for HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P135 Ln25 under subclause 26.3.9.10***

Replace

is given in 26.3.9.2 (Cyclic shift for pre-HE modulated fields.)

by

represents the cyclic shift for the th stream with its value given in 26.3.9.2.2 (Cyclic shift for HE modulated fields).

***Instructions for Editor: please make the following changes to the D0.2 P154 Ln40 under subclause 26.3.10.13***

Replace

is given in 26.3.9.2 (Cyclic shift for pre-HE modulated fields.)

by

represents the cyclic shift for the th stream with its value given in 26.3.9.2.2 (Cyclic shift for HE modulated fields).

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| **CID** | **Clause Number** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 2519 | 26.3.5 | 121 | 82 | Pre-HE portion and HE portion are not defined in Table 26-3. | Define "pre-HE portion" and "HE portion". If defined later in the draft, move up the definition to where Table 26-3 can referecen them. | Revised: In Table 26-3 of D0.2, the “pre-HE portion’ and “HE portion” have been changed to “pre-HE modulated fields” and “HE modulated fields” as part of CID 729. The Pre-HE and HE modulated fields are defined in subclause 26.3.2.  Instructor:  This CID has been resolved in D0.2 as part of resolution to CID 729. |

**References:**

1. **IEEE P802.11ax™/D0.2, May 2016**