IEEE P802.11
Wireless LANs

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| Comment Resolutions on OFDM preamble and pilot  |
| Date: 2017-09-12 |
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Abstract

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

- 14 CIDs: 282, 283, 284, 285, 286, 287, 288, 289, 423, 424, 487, 488, 489, 490

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 |
| 282 | 150 | 3 | EDMG STF for OFDM mode should be defined for NCB=1 case | Define the EDMG STF for OFDM mode for NCB=1 | Rejected-OFDM EDMG-STF for NCB=1 case is defined in current draft D0.5 (chapter 30.6.3.2)  |
| 283 | 150 | 3 | EDMG STF for OFDM mode should be defined for NCB=2 case | Define the EDMG STF for OFDM mode for NCB=2 | Rejected-OFDM EDMG-STF for NCB=2 case is defined in current draft D0.5 (chapter 30.6.3.2) |
| 284 | 150 | 3 | EDMG STF for OFDM mode should be defined for NCB=3 case | Define the EDMG STF for OFDM mode for NCB=3 | Rejected-OFDM EDMG-STF for NCB=3 case is defined in current draft D0.5 (chapter 30.6.3.2) |
| 285 | 150 | 3 | EDMG STF for OFDM mode should be defined for NCB=4 case | Define the EDMG STF for OFDM mode for NCB=4 | Rejected-OFDM EDMG-STF for NCB=4 case is defined in current draft D0.5 (chapter 30.6.3.2) |
| 286 | 150 | 4 | EDMG CEF for OFDM mode should be defined for NCB=1 case | Define the EDMG CEF for OFDM mode for NCB=1 | Rejected-OFDM EDMG-CEF for NCB=1 case is defined in current draft D0.5 (chapter 30.6.4.2) |
| 287 | 150 | 4 | EDMG CEF for OFDM mode should be defined for NCB=2 case | Define the EDMG CEF for OFDM mode for NCB=2 | Rejected-OFDM EDMG-CEF for NCB=2 case is defined in current draft D0.5 (chapter 30.6.4.2) |
| 288 | 150 | 4 | EDMG CEF for OFDM mode should be defined for NCB=3 case | Define the EDMG CEF for OFDM mode for NCB=3 | Rejected-OFDM EDMG-CEF for NCB=3 case is defined in current draft D0.5 (chapter 30.6.4.2) |
| 289 | 150 | 4 | EDMG CEF for OFDM mode should be defined for NCB=4 case | Define the EDMG CEF for OFDM mode for NCB=4 | Rejected-OFDM EDMG-CEF for NCB=4 case is defined in current draft D0.5 (chapter 30.6.4.2) |
| 423 | 150 | 3 | Need definitin of 30.6.2 EDMG-STF definition. Currently blank | Define and update text | Rejected-OFDM EDMG-STF is defined in current draft D0.5 (chapter 30.6.3.2) |
| 424 | 150 | 4 | Need definitin of 30.6.3 EDMG-CEF definition | Define and update text | Rejected-OFDM EDMG-CEF is defined in current draft D0.5 (chapter 30.6.4.2) |
| 487 | 149 | 18 | Currently, there is no spec text for 30.6 EDMG OFDM mode.When EDMG OFDM tone plan is defined, the number and indices of pilot subcarriers should be define for each channel bonding case | Define the number and indices of pilot subcarrier for each channel bonding case(NCB=1, 2, 3, 4) | Rejected-Pilot tone indices for each channel bonding are defined in current draft D0.5(chapter 30.6.1.4 , table 61) |
| 488 | 149 | 18 | Currently, there is no spec text for 30.6 EDMG OFDM mode.When EDMG OFDM tone plan is defined, pilot sequences up to 8 spatial streams should be defined for each channel bonding case since the maximum number of spatial streams per STA is eight | Define the pilot sequences up to 8 spatial Rejected-streams for each channel bonding case(NCB=1, 2, 3, 4) | Rejected-Pilot sequences up to 8 spatial streams for each channel bonding are defined in current draft D0.5(chapter 30.6.1.6, table 63 and table 64) |
| 489 | 149 | 18 | Currently, there is no spec text for 30.6 EDMG OFDM mode.When EDMG OFDM tone plan is defined, the number and indices of DC and data subcarriers should be define for each channel bonding case | Define the number and indices of DC and data subcarriers for each channel bonding case(NCB=1, 2, 3, 4) | Rejected-The number and indices of data subcarriers for each channel bonding are defined in current draft D0.5(table 59 and table 62 respectively) |
| 490 | 149 | 18 | Currently, there is no spec text for 30.6 EDMG OFDM mode.When EDMG OFDM tone plan is defined, the number and indices of guard subcarriers should be define for each channel bonding case | Define the number and indices of guard subcarriers for each channel bonding case(NCB=1, 2, 3, 4) | Revised- |

**Discussion for CID 490 :**

Propose solution: Revised

The number of left and right guard subcarriers should be defined for each channel bonding caese for clarification

*Modify Table 59 as follows*

Table 59—Timing related parameters

|  |  |
| --- | --- |
| Parameter | Value |
| *NCB* = 1 | *NCB* = 2 | *NCB* = 3 | *NCB* = 4 |
| *NSD*: Number of data subcarriers | 336 | 734 | 1134 | 1532 |
| *NSP*: Number of pilot subcarriers | 16 | 36 | 56 | 76 |
| *NDC*: Number of DC subcarriers | 3 | 3 | 3 | 3 |
| *NST*: Total number of subcarriers | 355 | 773 | 1193 | 1611 |
| *NSR*: Number of subcarriers occupying half of the overall BW | 177 | 386 | 596 | 805 |
| NGuard,Left : Number of left guard subcarriers | 79 | 126 | 172 | 219 |
| NGuard,Right: Number of Right guard subcarriers | 78 | 125 | 171 | 218 |
| ∆*F*: Subcarrier frequency spacing | 5.15625 MHz | 5.15625 MHz | 5.15625 MHz | 5.15625 MHz |
| *Fs*: OFDM sample rate | 2.64 GHz | 5.28 GHz | 7.92 GHz | 10.56 GHz |
| *Ts*: OFDM sample time | 0.38 ns | 0.19 ns | 0.13 ns | 0.09 ns |
| *NDFT:* DFT size | 512 | 1024 | 1536 | 2048 |
| *TDFT*: OFDM IDFT/DFT period | 0.194 µs | 0.194 µs | 0.194 µs | 0.194 µs |
| *TGI short*: short guard interval duration | 18.18 ns | 18.18 ns | 18.18 ns | 18.18 ns |
| *TGI normal*: normal guard interval duration | 36.36 ns | 36.36 ns | 36.36 ns | 36.36 ns |
| *TGI long*: long guard interval duration | 72.72 ns | 72.72 ns | 72.72 ns | 72.72 ns |

**References:**

[1] IEEE 802.11ay D0.3

[2] IEEE 802.11ay D0.5

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**Straw Poll & Motion:**

* **Do you agree to accept comment resolution as proposed in doc 11-17-1404-00-00ay-Comment Resolutions on OFDM preamble and pilot?**