IEEE P802.11
Wireless LANs

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| 11aj Comment Resolution for 25.6  |
| Date: 2014-08-25 |
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Abstract

This submission proposes resolutions for comments in subclause 25.6 of TGaj Draft 0.5 with the following CIDs:

-32, 33, 61,62,71,72

Revisions:

* Rev 0.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 32 | James June Wang | 81.16 | 25.6 | Current no MCSs for CDMG SC PHY that required lower SNR for devices which do not have beamforming. CDMG MCS allows more robust data transmission modes to be supported. | Add CDMG MCSs for CDMG SC PHY such that a robust data transmission mode that reuires less SNR is supported. | Reviseded –Accept the concept. Please see the discussion part for detailed resolution.  |
| 33 | James June Wang | 81.62 | 25.6.3.1.1 | A robust mobile support mode indication in SC Header fields should be added. | Use one of the 3 Reserved bits to indicate the robust mobile support mode in SC Header fields. | Reviseded –Accept the concept.  Please see the discussion part for detailed resolution. |
| 61 | Jianhan Liu | 81.16 | 25.6 | To better support modile devices that are equipped with less number of Tx and Rx antenna elements, the SNR gap between CDMG Control PHY and CDMG SC PHY should be reduced. | Add an robust SC PHY mode to better support mobile devices use. These modes can be easily implemented using modified control PHY. | Reviseded –Please see the discussion part for detailed resolution.  |
| 62 | Jianhan Liu | 81.62 | 25.6.3.1.1 | Add two bits indication to indicate the robust mobile support mode in SC Header fields. | Using two reserved bits to indicate the robust mobile support mode in SC Header fields. | Reviseded –Accept the concept. Please see the discussion part for detailed resolution.  |
| 63 | Jianhan Liu | 83.83 | 25.6.3.1.2 | Adding the Modulation and Coding Scheme for mobile support mode. | Adding the Modulation and Coding Scheme for mobile support mode. | Reviseded –Accept the concept. Please see the discussion part for detailed resolution.  |
| 71 | Tianyu Wu | 81.16 | 25.6 | Add MCSs for CDMG SC PHY that required lower SNR such that more robust data transmission modes are supported. | Add CDMG MCSs for CDMG SC PHY such that a robust data transmission mode that reuires less SNR is supported. | Reviseded –Accept the concept. Please see the discussion part for detailed resolution.  |
| 72 | Tianyu Wu | 81.62 | 25.6.3.1.1 | Add indication for robust mobile support mode in SC Header fields. | There are 3 Reserved bits can be used to indicate the robust mobile support mode in SC Header fields. | Reviseded –Accept the concept. Please see the discussion part for detailed resolution.  |

**Discussion:**

To resolve the comments 32, 33, 61,62,71,72, the following modifications are introduced.



Change the two reserved bits starting from 22 in Table 21-11 as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| Robust PHY Mode Indication/Reserved bits | 2 | 22 | Set to 00: Ctrl PHYSet to 01: robust PHY mode 0Set to 10: robust PHY mode 1Set to 11: Reserved |

25.6.1 Introduction

Transmission and reception of SC PHY PPDUs is mandatory for CDMG-MCS 1-9 and robust PHY mode 0-1, and optional for CDMG-MCS 10-16.

25.6.2 Frame format

The SC frame is composed of the Short Training Field (STF), the channel estimation field (CE), the Header, SC blocks and optional training fields, as shown in Figure 25-10.Figure 25-10—SC frame format

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Insert the following paragraph:

The robust PHY modes use the CDMG CTRL PHY format with short spreading sequences for the data. The following Golay complementary sequences Ga(8) and Ga(4) are used as spreading sequences for robust PHY mode 0 and 1 respectively.

Ga(8)=(+1, +1, +1, −1, +1, +1, −1, +1)

Ga(4)=(+1, +1, +1, −1)

**Table 25.6.2. CDMG robust PHY modes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CDMG-Robust Mode** | **Modulation** | **Code rate** | **Spreading sequence** | **Data rate** |
| **0** | **DBPSK** | **1/2** | **Ga(8)** | **108 Mbps** |
| **1** | **DBPSK** | **1/2** | **Ga(4)** | **216 Mbps** |