IEEE P802.11 Wireless LANs

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| Proposed Resolution to the Assigned CC8 Comment 1326 |
| Date:2013-07-01 |
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Abstract

This submission proposes resolutions to the assigned CC8 comment, #1326, as indicated in document 13/0495r10[Ref-3].

# Introduction

In TGai CC8 comment database, 13/0495r10 [Ref-3], Comment #1326 is assigned to the contributor of this contribution. It is as follows:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Type of Comment** | **Comment** | **Proposed Change** |
| 1326 | Mitsuru Iwaoka | 8.5.8.34 | 54 | 38 | T | In Table 8-221j, Supported Minimum Rate is defined by bitrate. Though, P802.11af and P802.11ah will have different bitrate set. | Replace bitrate by MCS code and optional PHY type.. |

This contribution proposes resolutions to the assigned CC8 comment #1326.

# Conventions

In this contribution, the proposed 802.11ai Specification Document text will be presented as changes to the current TGai draft specification, 11ai/D0.5[Ref-2]. The following format conventions are used:

1. The new added text is marked as blue underline text;
2. The deleted text is marked as ~~red strikethrough text~~;
3. The unchanged baseline standard text stays in black text in the context of proposed TGai specification text;
4. The editorial instruction is marked as *italic text highlighted by Yellow*; and
5. Any other text, e.g., discussions, proposed motions, etc., is in black text, but not in the context of proposed TGai specification text.

# Discussions of the Proposed Resolutions

Comment #1326 raises two issues:

1. Use MCS setting values, not bit rate values, in Table 8-221j; and
2. Consider adding the minimum supported PHY rates of 11af and 11ah in Table 8-221j.

It is a good point of using MCS settings for those PHYs that specify their throughput in MCS settings, e.g., 11n and 11ac. However, not all the 802.11 PHYs use MCS setting values, e.g., 11a/b/g use bit rates. Therefore, the proposed resolution to address the raised issue 1) is to make Table 8-221j with PHY-specific columns for each PHY type specified in Table 8-221i.

Since 11ah and 11af have not been finally approved yet and also they are not included in the PHY Type subfield in Table 8-221i, in the current 11ai draft spec, 11ai/D0.5 [Ref-2], further discussions should be held in TGai to decide whether or not to include the supported minimum data rates information in Table 8-221j in11ai spec. Therefore, this contribution does not propose any changes required to include minimum supported PHY rates of 11ah and 11af.

In addition, this contribution also includes one proposed change to the resolution for CC8 Comment 1325, i.e., add “Clause 18” to PYH Type=1 in the PHY type subfield definition table, Table 8-221i, based on the EPR-OFDM PHY specifications in the 802.11 standards. Please note that the proposed revised resolution to CC8 Comment 1325 is intended to overwrite the resolution in Contribution 13/0575r1[Ref-4], which was approved in TGai 2012-May meeting.

# Proposed Changes to 802.11ai/D0.5 Specification Text

*To resolve comments: 1326*

*Instructions to Editor: change the paragraph in line 34 on page 54 as follows.*

The 3-bit Supported Minimum Rate subfield specifies the minimum rate, as coded in Table 8-221j. Depending on the PHY Type subfield values specified in Table 8-221i, the supported minimum rate is represented as a bit rate value or as a MCS valuein Table 8-221j. If a MCS value is provided, then the Supported Minimum Rate can be derived by the MCS value, the PHY Type, and the Nss value provided in the FD Capability field.

*Instructions to Editor: replace Table 8-221j in line 38 on page 54 by the following table.*

**Table 8-221j — Supported Minimum Rate subfield**

|  |  |
| --- | --- |
| **Supported Minimum Rate subfield (3 bits)** | **Supported Minimum Rate / MCS** |
| **If PHY type=0 (HR/DSSS)** | **If PHY type=1 (ERP-OFDM)** | **If PHY type=2 (HT)** | **If PHY type=3 (VHT)** |
| 0 | 1 Mbps | 6 Mbps | MCS=0 | MCS=0 |
| 1 | 2 Mbps | 9 Mbps | MCS=1 | MCS=1 |
| 2 | 5.5 Mbps | 12 Mbps | MCS=2 | MCS=2 |
| 3 | 11 Mbps | 18 Mbps | MCS=3 | MCS=3 |
| 4  | Reserved | 24 Mbps | MCS=4 | MCS=4 |
| 5 – 7  | Reserved  | Reserved | Reserved | Reserved |

*The following is a revised propose to resolve CC8 Comment 1325, where the original proposal was in Contribution 13/0575r2:*

*Instructions to Editor: make the following changes in PHY Type descriptions in Table 8-221i in line 16 on page 54.*

**Table 8-221i — PHY Type subfield**

|  |  |
| --- | --- |
| **PHY Type subfield****(3 bits)** | **PHY Type** |
| 0 | ~~DSSS/HR (11b)~~HR/DSSS (Clause 17) |
| 1 | ~~OFDM/ERP (11a/g)~~ERP-OFDM (Clause 18 &Clause 19) |
| 2 | HT ~~(11n)~~(Clause 20) |
| 3 | VHT ~~(11ac)~~(Clause 22) |
| 4 – 7  | Reserved |

# References

1. IEEE Std 802.11 – 2012
2. IEEE Std 802.11ai/D0.5
3. 11-13-0495-10-00ai-tgai-d0-5-call-for-comments-responses-resolutions-cc08
4. 11-13-0575-01-00ai-Proposed-Resolutions-to-Assigned-CC8-Comments