IEEE P802.11  
Wireless LANs

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| Changes to D0.5 | | | | |
| Date: 2016-11-05 | | | | |
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Abstract

This submission proposes clarifications and corrections to D0.5

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 TGax Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGax Editor: Editing instructions preceded by “TGax Editor” are instructions to the TGax editor to modify existing material in the TGax draft. As a result of adopting the changes, the TGax editor will execute the instructions rather than copy them to the TGax Draft.***

**Proposed change 1: Subclause 25.5.1.2, Page 130, Line 20**

Discussion: The statement ‘An AP shall not set more than one STA-ID field in the HE-SIG-B field to indicate the same value.’ is not accurate. There can be two empty RUs indicated by the dummy STA ID 2046.

*To the TGax Editor: change this line as follows*

~~An AP shall not set more than one STA-ID field in the HE-SIG-B field to indicate the same value.~~ Except for the AID 2046 used to indicate unallocated RUs, no two STA-ID fields in HE-SIG-B shall have the same value.

**Proposed change 2: Subclause 26.3.7, Page 201, Line 3**

Discussion: Meaning of the word 'right' in the following line is unclear: "The 106-tone RU location within the 20MHz tone plan is fixed as the right one".

*To the TGax Editor: change this line as follows*

The 106-tone RU location within the 20MHz tone plan is fixed as the ~~right~~ one that is higher in frequency.

**Proposed change 3: Subclause 26.3.11, Page 208, Line 63**

Discussion: It would help to add a pointer to the tables from which *Kr* can be derived.

*To the TGax Editor: change this line as follows*

For HE modulated fields in an OFDMA HE PPDU, Kr is the set of subcarrier indices for the tones in the r-th RU as defined in Tables 26-3, 26-4 and 26-5.

**Proposed change 4: Subclause 26.3.10.8.5, Page 239, Line 17-37**

Discussion: Two sub-bullets that are grouped under a main bullet relating to ‘broadcast allocation’. However, the two sub-bullets are valid more generally. This can be clarified by adding the words ‘*and further*’ before the last two sub-bullets

*To the TGax Editor: make the following changes*

For RUs that carry a broadcast allocation:

* For single BSS AP, the STAID for broadcast  
  will be 0
* For Multiple BSS AP, the STAID for  
  broadcast to a specific BSS will follow the  
  group addressed AID assignment in the TIM  
  according to the existing Multi-BSSID TIM  
  operation
* For multiple BSS AP, the STAID for  
  broadcast to all BSS of the AP is set to  
  2047(#2681)

**And further:**

* STAID value 2046 is used to indicate that the  
  RU carries no data
* When a STA transmits on the uplink using the  
  HE MU PPDU format, the STA-ID field is populated by the AID of the transmitter  
  assigned by the AP

**Proposed change 5: Subclause 26.3.10.7.2, Page 218, Line 27**

Discussion: Number of bits for ‘GI+LTF Size’ is wrongly set to 3. Should be 2 bits

*To the TGax Editor: make the following changes to Table 26-16*

|  |  |  |  |
| --- | --- | --- | --- |
| B21-B22 | GI+LTF Size | ~~3~~ 2 | Indicates the GI duration and HE-LTF size.  Set to 0 to indicate a 1x HE-LTF and 0.8 μs GI  Set to 1 to indicate a 2x HE-LTF and 0.8 μs GI  Set to 2 to indicate a 2x HE-LTF and 1.6 μs GI  Set to 3 to indicate a 4x HE-LTF and 3.2 μs GI |

**Proposed change 6: Subclause 26.3.10.8, Page 233, Line 18**

Discussion: The number of data tones for HE-SIG-B *NSD* isn’t clearly specified anywhere in D0.5

*To the TGax Editor: add the text shown in red*

… and 17.3.5.9 (Pilot subcarriers), respectively. Each HE-SIG-B symbol shall have *NSD* = 52 data tones.

**Proposed change 7: Nsts.total is not defined, but used in multiple places**

Discussion: The variable Nsts.total is not defined anywhere in D0.5, but is used in a few places. In two of these places, it is more appropriate to use Nsts.r.total, which has been defined.

*To the TGax Editor: make the following change to Page 210, Line 36*

*… ~~N~~~~sts,total~~ Nsts,r,total* columns.

*To the TGax Editor: make the following change to Page 212, Line 23*

For the rth RU, ~~T~~the cyclic shift value for the HE modulated fields for space-time stream *n* out of *~~N~~~~sts,total~~ Nsts,r,total* total space-time streams is shown in Table 21-11 (Cyclic shift values for the VHT modulated fields of a PPDU)

**Proposed change 8: Subclause 9.3.1.23, page 33, line 22**

Discussion: The sentence *"The number of HE-LTF symbols is a function of the total number of space-time streams. The number of HE-LTF subfield encoding is defined in Table 22-13."*  isn't valid for OFDMA PPDUs as it refers to 11ac table mapping Nsts.total to number of LTFs. For OFDMA PPDUs, the number of HE-LTFs is >= *maxr (Nsts.r.total)*

*To the TGax Editor: make the following change to Page 212, Line 23*

For non-OFDMA PPDUs, ~~T~~the number of HE-LTF subfield encoding is defined in Table 22-13. For OFDMA PPDUs, the number of HE-LTFs is greater than or equal to the maximum across RUs of the total number of space time streams.

**Proposed change 9: Subclause 26.3.16.4.4, Page 297, Line 30**

Discussion: The text here is based on the 802.11ac spec. We need more symbols to measure EVM accurately over 26 RUs, since each symbol has fewer tones.

*To the TGax Editor: make the following change to Page 297, Line 30-31*

The test shall be performed over at least 20 PPDUs (*Nf* as defined in Equation (26-125)). When the occupied RU has 26 tones, the PPDUs under test shall be at least 32 data OFDM symbols long. For occupied RUs that have more than 26 tones, the PPDUs under test shall be at least 16 data OFDM symbols long.