IEEE P802.11
Wireless LANs

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| D5 Comment Resolution, brianh, part 1 |
| Date: 2013-05-23 |
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##### Baseline is 11ac D5.0. Changes indicated by a mixture of Word track-changes and instructions. For equation changes, Tex notation is sometimes used. E.g. a\_{xyz}^b denotes axyzb .

MAC CID: 10319

PHY CID: 10346, 10116, 10080, 10081, 10082, 10347, 10145, 10083, 10084, 10118

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| 10319 | Hunter, David | 149.29 | 9.18.5 | What does 'contains only any subset of "80+" and "UseEirpForVHTTxPowEnv" (including a blank entry)' mean? Does it mean 'a blank entry or either or both "80+" or "UseEirpForVHTTxPowEnv".'? If so, then just say that. | Replace:'contains only any subset of "80+" and "UseEirpForVHTTxPowEnv" (including a blank entry)'with:'contains a blank entry or either or both "80+" or "UseEirpForVHTTxPowEnv".' | Revised. See changes under this CID in 13/0644r<motionedRev> which substantially address the commenter’s concern |

***Discussion:***

Nice proposed change to the language; but we still need the “only”

***Change:***

**9.18.5 Operation with operating classes and the VHT Transmit Power Envelope element**

When dot11OperatingClassesRequired is true, or where operating classes domain information is

present in a STA, the STA shall indicate current operating class information in the Country element

and Supported Operating Classes element, except that a VHT STA may omit, from the Country element,

any Operating Triplet field for an Operating Class for which the Channel spacing (MHz) column

indicates 80 MHz or wider and for which the Behavior limits set column in Annex E contains

only a blank entry or either or both of "80+" and "UseEirpForVHTTxPowEnv".

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| 10346 | Hunter, David | 213.45 | 18.3.5.5 | There is no "CBW\_IN\_NON\_HT\_TEMP" defined in 11ac or in 11mc. The next page refers to table 18-6a, but it is not defined there, either. | Either enter the correct name, create a definition or delete all sentences about CBW\_IN\_NON\_HT\_TEMP. | Accepted |
| 10116 | Inoue, Yasuhiko | 214.18 | 18.3.5.5 | CBW\_IN\_NON\_HT\_TEMP should be replaced with CbwInNonHtTemp according to Table 18-6a. | As in comment. | Accepted |

***Change:***

**18.3.5.5 PLCP DATA scrambler and descrambler**

During reception by a VHT STA the CbwInNotHtTemp variable shall be set to selected bits in the scrambling sequence as shown in Table 18-6a, then mapped as shown in Table 18-6c to the RXVECTOR parameter

CH\_BANDWIDTH\_IN\_NON\_HT. During reception by a VHT STA the RXVECTOR parameter

DYN\_BAND-WIDTH\_IN\_NON\_HT shall be set to selected bits in the scrambling sequence as shown in

Table 18-6a. The fields shall be interpreted as being sent LSB-first.

**Table 18-6c—RXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT values**

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| **CbwInNonHtTemp (see Table 18-6a)** | **dot11CurrentChannelCenter FrequencyIndex1** | **RXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT** |

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| 10080 | Schelstraete, Sigurd | 215.27 | 18.3.5.5 | Wrong reference | G.1.5.2 should be L.1.5.2 | Revised. See changes under this CID in 13/0644r<motionedRev> which substantially address the commenter’s concern |
| 10081 | Schelstraete, Sigurd | 215.27 | 18.3.5.5 | The example given in L.1.5.2 is for a case without BW signaling | Change "An example of scrambler output" to "An example of scrambler output (with CH\_BANDWIDTH\_IN\_NON\_HT not present)" | Revised. See changes under this CID in 13/0644r<motionedRev> which substantially address the commenter’s concern |

***Discussion:***

Reference is indeed stale. The example was written assuming CH\_BANDWIDTH\_IN\_NON\_HT was not present so this should continue, and should be clarified.

***Change:***

**18.3.2.2 Overview of the PPDU encoding process**

An example of the scrambler output is illustrated in L.1.5.2 (Scrambling the BCC example) with CH\_BANDWIDTH\_IN\_NON\_HT not present.

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| 10082 | Schelstraete, Sigurd | 220.27 | 22.1.1 | Note looks out of place | This note looks like it doesn't belong here. Propose to delete. | Rejected. The Note characterizes SU, and immediately follows a paragraph on MU. The two are complementary  |

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| 10347 | Hunter, David | 221.65 | 22.1.4 | "Support for VHT format is mandatory." Uh, no, it's not mandatory in 802.11. | Delete "Support for VHT format is mandatory." or replace it with an adequately qualified statement. | Revised. See changes under this CID in 13/0644r<motionedRev> which substantially address the commenter’s concern |

***Change:***

**22.1.4 PPDU formats**

VHT format (VHT). PPDUs of this format contain a preamble compatible with Clause 18 (Orthogonal

frequency division multiplexing (OFDM) PHY specification) and Clause 20 (High Throughput

(HT) PHY specification) STAs. The non-VHT portion of the VHT format preamble (the parts of

VHT preamble preceding the VHT-SIG-A field) is defined so that it can be decoded by these STAs.

Support for VHT format is mandatory if dot11VHTOptionImplemented is true.

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| 10145 | Adachi, Tomoko | 222.04 | 22.1.4 | Similar point to what being said for the definition of a MU PPDU. "... \*one\* or more PSDUs to \*one\* or more STAs." Is it proper to use "one"s here? | Change the description to have consistency with the definition of MU-MIMO.Reexamine if it is allowed to carry a single PSDU to multiple STAs and clarify the definition from a group RA case if necessary. | Rejected. The definition of an MU PPDU, MU-MIMO and the usage here are consistent.In the PHY clause, it is not appropriate to discuss the content of the MSDUs – i.e. whether or not they contain an individual or group RA.The definition of user is unambiguous: “**user**: An individual or group of STAs identified by a single RA in the context of single user (SU) multiple input, multiple output (MIMO) or a single STA in the context of multi-user (MU) MIMO.” |

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| 10083 | Schelstraete, Sigurd | 225.35 | 22.2.2 | SNR parameter in RXVECTOR should only be included when the PPDU is an NDP | Add note (similar to notes in DELTA\_SNR)NOTE: In the RXVECTOR this parameter is present only for VHT NDP PPDUs | Rejected. SNR is sent in VHT-variant HT Control field, potentially in every VHT frame, in order to support fast rate adaptation. See 8.2.4.6.3 VHT variant. This must be informed by a reent SNR, and accordingly SNR is required for more than just the VHT NDP PPDU.  |

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| 10084 | Schelstraete, Sigurd | 225.57 | 22.2.2 | Make it explicit that STBC = 0 for MU | Add: "The field shall be 0 when the PPDU is an MU PPDU" | Revised. See changes under this CID in 13/0644r<motionedRev> which substantially address the commenter’s concern |

**Discussion**: From Table 22-12, STBC is not permitted with MU PPDUs. Therefore this change is correct. Stylistically we don’t include normative text in this interface so we will do something slightly different.

***Change:***

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| STBC | FORMAT is VHT  | Indicates whether or not STBC is used. 0 indicates no STBC (*NSTS=NSS* in the Data field). 1 indicates STBC is used (*NSTS=2NSS* in the Data field)*.*Set to 0 for an MU transmission. | Y  | Y |

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| 10118 | Inoue, Yasuhiko | 230.15 | 22.2.2 | The cells for TXVECTOR and RXVECTOR are blank. | Add "N" to these cells. | Accepted |

**Discussion**: This is for RX\_START\_OF\_FRAME\_OFFSET, for the “Otherwise” row when dot11MgmtOptionTiming MsmtActivated is false, so N/N is correct.

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| 10086 | Schelstraete, Sigurd | 230.65 | 22.2.4.2 | Wrong reference | Replace 20.3.20.1 (Transmit spectrum mask) with 18.3.9.3 (Transmit spectrum mask) | Accepted |
| 10119 | Inoue, Yasuhiko | 234.40 | 22.2.4.3 | Reference subclause of "18.3.9.3 (Transmit spectrum mask)" is for non-HT PPDUs. "20.3.20.1 (Transmit spectrum mask)" is suitable reference for the spectrum mask for HT PPDUs. | Replace "18.3.9.3 (Transmit spectrum mask)" with "20.3.20.1 (Transmit spectrum mask)". | Accepted |
| 10088 | Schelstraete, Sigurd | 234.40 | 22.2.4.3 | Wrong reference | Replace 18.3.9.3 (Transmit spectrum mask) with 20.3.20.1 (Transmit spectrum mask) | Accepted |

***Discussion:*** References are back to front.

**22.2.4.2 Support for NON\_HT format when NON\_HT\_MODULATION is OFDM**

**-** 22.3.18.1 (Transmit spectrum mask) instead of 18.3.9.3 (Transmit spectrum mask)

**22.2.4.3 Support for HT formats**

22.3.18.1 (Transmit spectrum mask) instead of 20.3.20.1 (Transmit spectrum mask)

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| 10087 | Schelstraete, Sigurd | 232.41 | 22.2.4.2 | Improve notation in Figure 22-1 | In the box "Clause 20 Transmit procedure", the notation +22.3.18.1-20.3.20.1 is used, presumably to indicate that section 20.3.20.1 is to be replaced with section 22.3.18.1. For clarity, it is proposed to use " +22.3.18.1 instead of 20.3.20.1"Similar comment for "Clause 18 transmit procedure" in same figure | Revised. See changes under this CID in 13/0644r<motionedRev> which substantially address the commenter’s concern |

***Discussion***: Basically accept with some wordsmithing.

***Change:***



New Visio file is here 