IEEE P802.11
Wireless LANs

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| Comment Resolutions for MISC PHY Comments |
| Date: 2020-09-15 |
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Abstract

This submission proposes resolutions to 18 comments received on miscellaneous PHY comments in TGbd D0.3, including CIDs: 159, 162, 243, 244, 261

And CIDs: 7, 108, 109, 132, 133, 134, 160, 185, 241, 245, 246, 262, 263

R0: intial revision

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| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 159 | 32.1.1 |  | If STBC is not used, please state it somewhere in section 32.1 (Introduction). |  | Revised.Agree with the comment.Added a sentence “STBC is not employed” at line 37, page 25, clause 32.1.1. |
| 162 |  |  | It seems max N\_TX is 2 in NGV. | Fix the number of TX chains to 2 in Figures 32-5 and 32-6 as shown in Figure 32-7. | Rejected.The number of tansmit chains is up to implementation. The current spatial mapping matrix Q in the draft spec supports more than 2 transmit chains. There seems no agreement in limiting the number of transmit chains to 2 in TGbd yet.  |
| 243 | 32.1.1 | 25.45 | Fill TBD |  | Revised.Agree with the comment. Added mandatory features.  |
| 244 | 32.1.1 | 25.52 | Fill TBD |  | Revised. Agree with the comment.Added optional features. |
| 261 |  |  | Since BCC is not supported, related blocks should be removed. For example, c) FEC encoder and e) step removed | As in comment | Rejected.BCC encoder and interleaver are used for generating the NGV preamble. Figure 32-5 needs both blocks. Table 32-6 also needs a BCC parameter, tail bit length.For completeness BCC should be mentioned to a certain extend.  |

*TGbd Editor: Please make the following changes in Section 32.3 of D0.3.*

32.1 Introduction

32.1.1 Introduction to NGV PHY

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The NGV PHY data subcarriers are modulated using binary phase shift keying (BPSK), BPSK dual-carrier

modulation (DCM), quadrature phase shift keying (QPSK), 16-quadrature amplitude modulation (16-

QAM), 16-QAM DCM, 64-QAM, and 256-QAM. The NGV PHY preamble is encoded by convolution code

and the NGV PHY data payload are encoded by LDPC. STBC is not employed.

…

An NGV PHY shall support the following features:

— ~~Round trip time (RTT) based ranging using 10 and 20 MHz bandwidth PPDUs~~

~~--- <TBD>~~

-Single spatial stream

-NGV-MCS 0 to 10

-All LTF formats

-LDPC (transmit and receive)

-Midamble periodicity of 4, 8, 16

-10MHz NGV PPDU

-Repetitive NON\_NGV\_10 PPDU

-Interoperability with 11p devices

-Class C of spectrum mask requirement for 10 MHz NGV PPDU

-Class C2 of spectrum mask requirement for 20 MHz NGV PPDU

An NGV PHY may support the following features:

— Transmission and reception of single user (SU) MIMO with 2 spatial streams

~~--- <TBD>~~

— Classes A, B, and D of spectrum mask requirement for 10 MHz bandwidth

--Round trip time (RTT) based ranging using 10 and 20 MHz bandwidth PPDUs

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| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 7 | 32.1.1 | 25.35 | We did not decide that DCM is applied on 16QAM for 11bd | delete the "16-QAM DCM " in P25L25 | Duplicate of CID 101 |
| 108 | 32.3.2 | 34.47 | "Replication over multiple 2 10 MHz channels (for BW = 20 MHz)", replace "multiple 2" with "two" | "Replication over two 10 MHz channels (if BW = 20MHz)" | Duplicate of CID 191 |
| 109 | 32.3.2 | 35.37 | "The DCM tone mapping, which is part of the Tone Mapper and Pilot Insertion block, is applied only if DCM is indicated by <TBD>." There is no separate DCM indication. DCM is defined only MCS0. | Replace 'if DCM is indicated by <TBD>' to 'NGV-MCS is set to 10' | Duplicate of CID 10 |
| 132 | 32.3.2 | 34.47 | "h) Replication over multiple 2 10 MHz channels (for BW = 20MHz)", need to rephrase. | "h) Replication over multiple 2 10 MHz channels (for BW = 20MHz)", need to rephrase. | Duplicate of CID 191 |
| 133 | 32.3.2 | 34.51 | "j) ... per STS insertion", no STBC in NGV | Change "STS" to "SS". | AcceptEditor: apply changes as in the cmment. |
| 134 | 32.3.2 | 36.06 | Figure 32-7, block "Spatial and Frequency Mapping" is not accurate, as "Frequency Mapping" is done in "Tone Mapper". | Change "Spatial and Frequency Mapping" to "Spatial Mapping" | Accept Editor: apply changes as in the cmment. |
| 160 | 32.1.1 | 25.35 | DCM is not applied to 16-QAM in the MCS tables. | remove it or fix the MCS tables. | Duplicate of CID 101 |
| 185 | 32.1.1 | 25.35 | Line 35 contains a modulation option for "16-QAM DCM", but in the SFD and in the remainder of Draft P802.11bd D0.3 DCM is only considered with BPSK. | Remove "16-QAM DCM," | Duplicate of CID 101 |
| 241 | 32.1.1 | 25.23 | mid-amble should be midamble to be consistent through the spec | as in comment | AcceptEditor: apply changes as in the cmment. |
| 245 | 32.1.2 | 25.60 | 11bd does not support multiple STAs. It does not make sense to consdier "more than one receiving STA" delete "or more" in A function that maps the PSDU received from the MAC into a PPDU for transmission to one ormore receiving STAs. | it should be .... one receiving STA. | RejectBroadcast, primary mode of communication, is transmission to multiple STAs. It is also possible to form multicast groups thru 1609 |
| 246 | 32.1.2 | 25.62 | 11bd does not support multiple STAs. It does not make sense to consdier "between two or more STAs" delete "or more" in A function that defines the characteristics and method of transmitting and receiving data through awireless medium between two or more STAs. | it should be .... Between two STAs | RejectBroadcast, primary mode of communication, is transmission to multiple STAs. It is also possible to form multicast groups thru 1609 |
| 262 | 32.3.2 | 34.46 | Tone mapper is meant to be DCM tone mapper. If not | As in comment | RejectThe tone mapper is generic and not specific to DCM. |
| 263 | 32.3.2 | 35.36 | fill TBD. When MCS field is set to 10, DCM is applied to the data portion. | As in comment | Duplicate of CID 10 |