IEEE P802.11
Wireless LANs

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| Comment Resolutions for 11bd D2.0 Clause 32.2 |
| Date: 2021-10-09 |
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Abstract

This submission provisions with resolutions to the following 22 CIDs for clause 31.2 and 32.2 in IEEE P802.11bd D2.0 in Recirculation WG LB 254, including suggested spec text modification to IEEE P802.11bd D2.0 to TGbd editor:

* CIDs: 2026, 2027, 2028, 2063, 2084, 2085, 2086, 2087, 2088, 2092, 2093, 2122, 2157, 2158, 2159, 2174, 2175, 2177, 2178, and 2227
* CIDs: 2163 and 2176

Revisions:

* R0, comment resolutions initial draft, except resolutions for CID 2163 and CID 2176.
* R1, update resolution to CID 2085 and discussion to CID 2092
* R2, provide resolutions to CID 2163 and 2176 and modification implemented in IEEE P802.11bd D2.1

Interpretation of a Motion to Adopt

A motion or majority supported straw poll to approve this submission means that the editing instructions and any changed or added material are actioned in the TGbd Draft. When the baseline spec draft is an unapproved version, a majority supported straw poll to approve this submission means that the editing instructions and any changed or added material are actioned in the unapproved TGbd Draft. This introduction is not part of the adopted material.

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

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

***Comments for clause 17: 7 comments***

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| **CID** | **Pg/Ln** | **Cat.** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 2084 | 49.38 | E | 17.2.2.9 | There is only one bandwidth for the non-NGV duplicate PPDU. That is CBW20. | Suggest changing "bandwidth" to "presence." | **Rejected****Reason:**Though the commenter is correct that non-NGV duplicate PPDUs are always using 20 MHz channel bandwidth, the addressed TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_NGV is named to directly indicate the used bandwidth. The proposed change doesn’t improve the readability. |
| 2157 | 49.54 | E | 17.2.2.10 | Remove extra "." at the end of the line. | as in comment | **Accepted** |
| 2085 | 50.26 | E | 17.2.3.9 | It should be RXVECTOR instead of TXVECTOR. | As in comment. | **Revised****Discussion:**Agree with the comment that the addressed parameter is a RXVECTOR parameter. Note that the original text is a typo “TRXVECTOR”.**Instruction to Tech Editor:**Please replace “TRXVECTOR” with “RXVECTOR” at P50/L26. |
| 2158 | 51.09 | E | 17.3.3 | "17.3.3 PHY preamble (SYNC)" subclause should be "17.3.5 DATA field" subclause as the subsequent changes occur in "17.3.5.5" | as in comment | **Accepted** |
| 2086 | 51.64 | E | 17.3.5.5 | CH\_BANDWIDTH\_IN\_NON\_HT is not applicable to NGV. CBW80 is not allowed for CH\_BANDWIDTH\_IN\_NON\_NGV. | Change "HT" to "NGV" and change CBW80 to CBW20 and the associated values. | **Rejected****Reason:**Though the commenter is correct that CH\_BANDWIDTH\_IN\_NON\_HT is not allowed for NGV, the addressed sub-bullet is not for NGV case. The description for CH\_BANDWIDTH\_IN\_NON\_NGV is as in the following sub-bullet immediately below the addressed sub-bullet. |
| 2087 | 53.01 | E | 17.3.5.5 | Need to include SCRAMBLER\_RESET to the TXVECTOR. | As in comment. | **Rejected****Reason:**Parameter SCRAMBLER\_RESET is already defined in the OFDM TXVECTOR, as in Table 17-1 in IEEE 802.11-2020 |
| 2159 | 53.27 | E | 17.3.5.5 | Replace "a" with "an" before "NGV STA". | as in comment | **Accepted** |

***Comments for sub-clause 31.2: 2 comments***

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| **CID** | **Pg/Ln** | **Cat.** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 2088 | 57.41 | E | 31.2.2 | It appears the different definitions of the slot boundaries were differentiated from those used in 11ah. "Non-S1G" frame is still a term used in 11ah. | Revise to avoid using "non-S1G." | **Revised****Discussion:**As pointed out by the Tech editor, the addressed spec text should be at P56/L41, instead of P57/L41.And agree on the comment that the term “Non-S1G” is not correct here.**Instruction to Tech Editor:**Please remove “Non-S1G” at P56/L41. |
| 2163 | 58.16 | T | 32.2.3 | According to Table 31-1 the maximum NGV MPDU length in octets is 7991 and according to Table 9-25 the maximum A-MSDU size is 7935. Hence the buffer length of 7991 octect would correspond to an MPDU and not to a A-MSDU. Please replace "A-MSDU" with " NGV MPDU". | as in comment | **Revised****Discussion:**The addressed issue should be under sub-clause 31.2.3.Agree on the comment the 7991 octets corresponds to the max MPDU size instead of A-MSDU size. But the purpose of the addressed text is to describe the buffer size requested by the max A-MSDU size. **Instruction to TGbd Editor:**Please replace “7991” with “7935” at pg64/ln16 under sub-clause 31.2.3 in IEEE P802.11bd D2.1 |

***Comments for sub-clause 32.2: 12 comments***

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| **CID** | **Pg/Ln** | **Cat.** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 2026 | 66.46 | T | 32.2.2 | NUM SS should be NUM\_SS | as in comment | **Accepted** |
| 2174 | 66.46 | E | 32.2.2 | A "\_" is missing in the parameter "NUM SS". Replace "NUM SS" with "NUM\_SS". | as in comment | **Accepted** |
| 2175 | 66.46 | T | 32.2.2 | In all parameters of the TX- and RX-Vector, the parameter range is specified in the Value column, but not for NUM SS. Hence, add "The allowed values are 1 or 2." | as in comment | **Accepted** |
| 2176 | 67.26 | T | 32.2.2 | According to 802.11-2020 an A-MPDU is transported in a single PSDU, which has a maximum length of 121320 octets (Table 32-19). Hence the VHT value of "1048575" needs to be replaced by the NGV value of "121320". | as in comment | **Revised****Discussion**Agree on the comment that the addressed value is not accurate for NGV. As updated in 11ax, the description to the value of this parameter refers to the parameter aPSDUMaxLength defined in the PHY characteristics table. **Instruction to TGbd Editor:**Please replace the text in the value column for parameter “APEP\_LENGTH” with following text at pg73/ln26 in Table 32-1 in IEEE P802.11bd D2.1:“Indicates the number of octets in the range 1 to *aPSDUMaxLength* in the A-MPDU pre-EOF padding (see Table 32-19 (NGV PHY characteristics)) that is carried in the PSDU.” |
| 2092 | 68.46 | E | 32.2.2 | The enumerated type of TIME\_OF\_DEPARTURE is not consistent with that used in Table 32-4. | Modify accordingly. | **Revised****Discussion**The comment is correct that parameter “TIME\_OF\_DEPARTURE” is a copy of the same parameter from Table 19-1 but not used for NGV. The same function is carried by parameter “TIME\_OF\_DEPARTURE\_REQUESTED” which has been defined in Table 32-1. So the parameter “TIME\_OF\_DEPARTURE” should be removed.**Instruction to TGbd Editor:**The addressed issue will be resolved if resolution to CID 2177 is approved and no more modification is needed. |
| 2177 | 68.46 | T | 32.2.2 | The parameter "TIME\_OF\_DEPARTURE" is defined in Table 32-1 as the parameter "TIME\_OF\_DEPARTURE\_REQUESTED" in Table 19-1. As the "TIME\_OF\_DEPARTURE\_REQUESTED" parameter is also defined in Table 32-1 as in Table 21-1, there is no need for defining the parameter "Time of DEPARTURE" in the TXVECTOR. Hence, remove the row in Table 32-1 containing the "TIME\_OF\_DEPARTURE" parameter. | as in comment | **Accepted** |
| 2093 | 69.12 | E | 32.2.2 | The instruction "Set to the number of repetitions minus 1" indicates NGV- LTF repetitions must be used (at least one). It may conflict with the statement in L3P117. The word "repetition" denotes the duplicates beyond the first one. | Please clarify and revise accordingly. If the definition is changed in TXVECTOR, need to revise that quoted in L60P116. | **Revised****Discussion:**Agree with the comment that the definition and usage of the parameter LTF\_REP should be of consistence. **Instruction to TGbd Editor:**The issue has been resolved as part of approved resolution to CID 2119 as in 11-21/1389r1. There’s no more modification needed. |
| 2063 | 69.39 | T | 32.2.3 | The meaning of above and below in the context of channel numbers is ambiguous. | Change "if the secondary channel is above the primary channel" to "if the channel number of the secondary channel is greater than the channel number of the primary channel". Similarly for statement at 69.42. Alternatively just say something like: if the channel number of the secondary channel is the channel number of the primary channel plus 2. | **Revised****Discussion:**Agree with the comment that the wording “above” is not accurate. The assignee would prefer the first proposed changes.**Instruction to TGbd Editor:**At pg69/ln39, replace "if the secondary channel is above the primary channel" with "if the channel number of the secondary channel is greater than the channel number of the primary channel". Similarly for statement at 69.42. |
| 2227 | 69.39 | T | 32.2.3 | It is not clear how the MAC knows how to set the secondary channel - Is there a MIB or MLME information missing? How is the SECONDARY\_CHANNEL\_ABOVE or SECONDARY\_CHANNEL\_BELOW value determined? | The specification is clear that the location of the secondary channel is know by the PHYCONFIG\_VECTOR - but it is not clear how the MAC knows how to set the value. This should be controlled by higher layer entities and therefore should probably be provided in the same manner as the primary channel is defined. | **Rejected****Reason:**The comment and the proposed change are not necessary. Assuming the 20 MHz channelization for 11bd is not overlapping, given the primary channel and the bandwidth, the secondary channel is decided. In radio environment request vector, the primary channel and bandwidth are all defined, which implies the existence of the secondary channel and its location if there is.  |
| 2178 | 70.54 | T | 32.2.5.1 | There are references to Sublcauses "32.3.8.11 and 32.3.8 Non-NGV duplicate PPDU " In Figure 32-1 for FORMAT = NON\_NGV\_10 and NON\_NGV\_MODULATION = NON\_NGV\_10\_DUP\_OFDM. However, 11bd D2.0 does not contain a subclause 32.3.8.11. The correct references should be "32.3.9.10 and 32.3.9".For reference see also Figure 21-1 for FORMAT = NON\_HT and NON\_HT\_MODULATION = NON\_HT\_DUP\_OFDM in 802.11-2020. | as in comment | **Accepted** |
| 2027 | 73.07 | T | 32.2.5.3 | aSIFSTime is a fixed value with 32 μs which means it is fixed. The wording "indicated and parameter" is confusing. It should be "The time separation between every two repeated transmissions is aSIFSTime" | as in comment | **Rejected****Reason:**Though the comment is correct that the parameter aSIFSTime is defined with a fixed value for NGV PHY, the parameter is used for various 802.11 PHY with different values. As in an amendment standard, the term should follow its common description style as in IEEE 802.11-2020. |
| 2028 | 73.13 | T | 32.2.5.3 | All N\_PPDU\_REP repetition PPDUs better be "All N\_PPDU\_REP +1 NON\_NGV\_10 PPDUs" | as in comment | **Revised****Discussion:**Agree on the comment that the addressed spec text fails to clearly describe the relation between the repetition PPDUs and the first NON\_NGV\_10 PPDU. **Instruction to TGbd Editor:**At P73/L13, replace "All N\_PPDU\_REP repetition PPDUs” with “All the following N\_PPDU\_REP repetition PPDUs”. |
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***Comments for sub-clause 32.4.4: 1 comments***

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| **CID** | **Pg/Ln** | **Cat.** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 2122 | 119.28 | E | 32.4.4 | Table 9-97 should be Table 9-95. | As in comment. | **Accepted** |

**References:**

1. **IEEE P802.11bd/D2.0, Jul 2021.**