IEEE P802.11
Wireless LANs

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| Comment Resolutions for 11bd D1.0 Clause 17.2 and 17.3 |
| Date: 2021-01-01 |
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Abstract

This submission provisions with resolutions to the following 13 CIDs related to sub-clause 17.2 and sub-clause 17.3 of IEEE P802.11bd D1.0 in WG LB 251, including suggested spec text modification to IEEE P802.11bd D1.0 to TGbd editor:

* CIDs: 1150, 1151, 1218, 1412, 1559, 1560, 1561, 1562, 1563, 1564, 1619, 1620, and 1763

Revisions:

* R0, comment resolutions initial draft.
* R1, add referred URL of the cr document and update resolution to CID 1218

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 TGbd draft. As a result of adopting the changes, the TGbd editor will execute the instructions rather than copy them to the TGbd Draft.***

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| **CID** | **Pg/Ln** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 1218 | 31.49 | 17.2.2.9 | There is an ambiguity in the Note of 17.2.2.9 regarding CH\_BANDWIDTH\_IN\_NON\_NGV. The note says, in part, this parameter is not present when the frame is transmitted by an NGV STA to a non-NGV STA. It is amgibuous whether this means it is not present for a unicast transmission from NGV to non-NGV STA, or whether thi statement also covers a group addressed (e.g. broadcast) transmission from an NGV STA. In the latter case there could be a mix of NGV and non-NGV STAs receiving the frame, and the transmitting STA will not generally know who is receiving it. I believe this statement is intended to apply to a unicast transmission from an NGV STA to a non-NGV STA. This same amgibuity exists in clause 7.2.2.10 with respect to the DYN\_BANDWIDTH\_IN\_NON\_NGV parameter, and the same solution can be used. | In Clause 7.2.2.9 Change "when the frame is transmitted by an NGV STA to a non-NGV STA" to "when a unicast frame is transmitted by an NGV STA to a non-NGV STA".In Clause 7.2.2.10 similarly insert "unicast" before "frame is transmitted by an NGV STA" | **Revised****Discussion:**The original text could be improved, e.g. “the CH\_BANDWIDTH\_IN\_NON\_NGV parameter is not present when the frame is transmitted by an NGV STA and a non-NGV STA is an intended recipient.” The intention of the context includes the case of broadcast. **TGbd Editor:** Please implement the proposed spec text modification as part of resolution to CID 1218 as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0006-01-00bd-cr-d1-0-clause-17-2-17-3.docx> |

*----------------------------****Proposed Spec Text Modifications for CID 1218****--------------------------------*

***TGbd Editor: please implement the following modification in sub-clause 17.2.2.9 and 17.2.2.10 in IEEE P802.11bd D1.0 as part of resolution to CID 1218.***

**17.2.2.9 TXVECTOR CH\_BANDWIDTH\_IN\_NON\_NGV**

If present, the allowed values for CH\_BANDWIDTH\_IN\_NON\_NGV are CBW10, CBW20. If present, this parameter is used to modify the first 7 bits of the scrambling sequence to indicate the bandwidth of the non-NGV duplicate PPDU.

NOTE—The CH\_BANDWIDTH\_IN\_NON\_NGV parameter is not present when the frame is transmitted by a non-NGV STA. The CH\_BANDWIDTH\_IN\_NON\_NGV parameter is not present when the frame is transmitted by an NGV STA and a non-NGV STA is one of the intended recipients (including group-addressed transmissions)~~to a non-NGV STA~~. ~~See 10.6.12 (Channel Width in non-HT and non-HT duplicate PPDUs).~~ *[CID 1218]*

**17.2.2.10 TXVECTOR DYN\_BANDWIDTH\_IN\_NON\_NGV**

If present, the allowed values for DYN\_BANDWIDTH\_IN\_NON\_NGV are Static and Dynamic. If present, this parameter is used to modify the first 7 bits of the scrambling sequence to indicate if the transmitter is capable of Static or Dynamic bandwidth operation. If DYN\_BANDWIDTH\_IN\_NON\_NGV is present, then CH\_BANDWIDTH\_IN\_NON\_NGV is also present.

NOTE—The DYN\_BANDWIDTH\_IN\_NON\_NGV parameter is not present when the frame is transmitted by a non-NGV STA. The DYN\_BANDWIDTH\_IN\_NON\_NGV parameter is not present when the frame is transmitted by an NGV and a non-NGV STA is one of the intended recipients (including group-addressed transmissions)~~to a non-NGV STA~~. ~~See 10.6.12 (Channel Width in non-HT and non-HT duplicate PPDUs).~~ *[CID 1218]*

------------------------------ ***End of proposed changes for resolution to CID 1218****---------------------------*

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| **CID** | **Pg/Ln** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 1560 | 33.26 | 17.3.5.5 | The annotation "First 7 bits of Scrambling Sequence as defined in Table 17-7" is missing on the top line of the switch. | As in the comment. | **Revised****Discussion:**Agree on the comment. The Figure 17-7 is updated to recover the missing text. **TGbd Editor:** Please implement the proposed spec text modification as part of resolution to CID 1469 as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0006-01-00bd-cr-d1-0-clause-17-2-17-3.docx> |

*----------------------------****Proposed Spec Text Modifications for CID 1560****--------------------------------*

**17.3.5.5 PHY DATA scrambler and descrambler**

**17.3.5.5 .2.9 TXVECTOR CH\_BANDWIDTH\_IN\_NON\_NGV**

*Make the following changes in Figure 17-7 (Data scrambler) and the following paragraphs:*

***TGbd Editor: please replace Figure 17-7 with following figure in IEEE P802.11bd D1.0 as part of resolution to CID 1560.***

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------------------------------ ***End of proposed changes for resolution to CID 1560****---------------------------*

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| **CID** | **Pg/Ln** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 1561 | 33.51 | 17.3.5.5 | "DYN\_BANDWIDTH\_IN\_NON\_NGV" associated with Table 17-10 should be "DYN\_BANDWIDTH\_IN\_NON\_HT." | As in the comment. | **Accepted****Discussion:**Agree on the comment. The baseline description should be kept unchanged. |
| 1151 | 33.52 | 17.3.5.5 | Table 17-10 is "DYN\_BANDWIDTH\_IN\_NON\_HT values" in baseline | Modify "DYN\_BANDWIDTH\_IN\_NON\_NGV values" to "DYN\_BANDWIDTH\_IN\_NON\_HT" | **Accepted****Discussion:**Agree on the comment. The baseline description should be kept unchanged. |
| 1150 | 33.53 | 17.3.5.5 | Table number is mismatched with P35L58 | Align the Table number | **Revised****Discussion:**Agree on the comment. The referred table (Table 17-10a) is numbered as Table 17-10b. The referred table number should be aligned. **TGbd Editor:** Please change the Table number “Table 17-10b” to “Table 17-10a” at pg35/ln58 in IEEE P802.11bd D1.0. |
| 1559 | 33.64 | 17.3.5.5 | "If the TXVECTOR parameter SCRAMBLER\_RESET is set to RESET\_SCRAMBLER and ..." But, SCRAMBLER\_RESET can not be found in Table 32-1 (TXVECTOR and RXVECTOR parameters). | Please clarify. | **Rejected****Reason:**The TXVECTOR parameter SCRAMBLER\_RESET is available when the value of FORMAT is OFDM. It’s defined for devices compliant with sub-clause 17. While Table 32-1 is used to define parameters for NGV.  |
| 1619 | 34.38 | 17.3.5.5 | The inserted text reads "or CH\_BANDWIDTH\_IN\_NON\_NGV is present and DYN\_BANDWIDTH\_IN\_NOT\_NGV is not present in TXVECTOR". However the DYN\_BANDWIDTH\_IN\_NON\_NGV should be present in this row. Otherwise the parameters would be the same as in the previous row | Remove "not" before present | **Revised****Discussion:**Agree on the comment. The intention of the second TXVECTOR row is to define the case when DYN\_BANDWIDTH\_IN\_NON\_NGV is present. And the parameter “ DYN\_BANDWIDTH\_IN\_NOT\_NGV” is a typo which should be “ DYN\_BANDWIDTH\_IN\_NON\_NGV”**TGbd Editor:** In Table 17-7 in page 34 in IEEE P802.11bd D1.0, please replace “ DYN\_BANDWIDTH\_IN\_NOT\_NGV” with “ DYN\_BANDWIDTH\_IN\_NON\_NGV” in the condition cell of the first TXVECTOR row; and replace “ DYN\_BANDWIDTH\_IN\_NOT\_NGV is not present in TXVECTOR” with “DYN\_BANDWIDTH\_IN\_NON\_NGV is present in TXVECTOR” in the condition cell of the second TXVECTOR row. |
| 1412 | 34.49 | 17.3.5.5 | I think none of those 4 parameters can be present, for the last row of the table | Change "or" to "and" in the second cell from left at the referenced location | **Rejected****Reason:**For RXVECTOR, the “Condition” cell is more like the interpretation of the “First 7 bits of scrambling sequence” field in a received PPDU. Agree that the 2 Non-HT parameters cannot be present together with the 2 Non-NGV parameters in RXVECTOR. But depending on the parameter FORMAT, only one set of parameters will be present. So “add” here is not correct.  |
| 1620 | 34.51 | 17.3.5.5 | Reference to Table 17-9 reads: (see Table 17-9 (RXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_NGV values) | Replace Reference to Table 17-9 with following text: (see Table 17-9 (RXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT values) | **Accepted****Discussion:**Typo in the title of the referred Table 17-9.  |
| 1763 | 35.18 | 17.3.5.5 | ITS spectrum is shrinking. So the utlility of 20MHz NGV is very sketchy. Furthermore, the 20MHz NGV mode isn't even coexistent or backward compatible with 11a (like every other modern PHY). | Remove the 20MHz CBW | **Rejected****Reason:**20 MHz CBW is one of the primary factors to enable the requested NGV performance as defined in PAR. |
| 1562 | 35.27 | 17.3.5.5 | "DYN\_BANDWIDTH\_IN\_NON\_NGV shall be ..." appears twice in the same paragraph. The first appearance should be CH\_BANDWIDTH\_IN\_NON\_NGV based on the context (Table 17-9a). | As in the comment. | **Accepted****Discussion:**According to the context, the first “DYN\_BANDWIDTH\_IN\_NON\_NGV” should be “CH\_BANDWIDTH\_IN\_NON\_NGV” since it’s determined “from selected bits in the scrambling sequence as shown in Table 17-7 (Contents of the first 7 bits of the scrambling sequence) and Table 17-9a (RXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_NGV values). |
| 1563 | 35.33 | 17.3.5.5 | Add "and Table 17-10a (DYN\_BANDWIDTH\_IN\_NON\_NG values)" at the end of "Table 17-7 (Contents of the first 7 bits of the scrambling sequence)." | As in the comment. | **Revised****Discussion:**Agree that adding reference to Table 17-10a will be clearer. The original comment has some typo in proposed changes. An improved modification is proposed as below.**TGbd Editor:** Please add “and Table 17-10a (DYN\_BANDWIDTH\_IN\_NON\_NGV values)” at the end of “Table 17-7 (Contents of the first 7 bits of the scrambling sequence)” at ln33/pg35 in sub-clause 17.3.5.5 in IEEE P802.11bd D1.0. |
| 1564 | 35.58 | 17.3.5.5 | "Table 17-10b" should be "Table 17-10a." | As in the comment. | **Accepted****Discussion:**The same issue was addressed by CID 1550 and same change was proposed to change “Table 17-10b” to “Table 17-10a”. |
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**References:**

1. **IEEE P802.11bd/D1.0, Oct 2020.**