IEEE P802.11
Wireless LANs

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| Resolution Clause 3.2 CIDs: 2, 3, 30, 52, 53, 54, 173, 210, 211, 212, and 213 |
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Abstract

This document provides proposed comment resolutions for some comments submitted in response to the 802.11 TGbd D0.3 internal comment collection. CIDs: 2, 3, 30, 52, 53, 54, 173, 210, 211, 212, and 213 are addressed.

r1: Updated during the Friday 15 May 2020 TGbd teleconference. Green highlighted resolutions were agreed by consensus on the call. Yellow highlighted resolutions require additional work, contributions, or discussion. Text that has be stuck through has been deleted.

r2: Provided additional discussion information and updated proposed resolutions.

r3: Provides proposed resolution for open CIDs: 2, 3, 30, 43, 52, 53, 54, 210, and 212, Cyan highlighted.

The comments are available in: <https://mentor.ieee.org/802.11/dcn/20/11-20-0701-01-00bd-tgbd-d0-3-comments.xlsx>. The proposed resolutions are grouped by clause, page and line number.

**CIDs for Clause 3.2, Page 13, line 07:**

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| CID | Comment  | Proposed Change | Proposed Resolution |
| 2 | NGV transmission needs to be added to the list of 20 MHz mask PHY PPDUs and 20 MHZ PHY PPDUs | Need a contribution to add the NGV transmissions to the 2 paragraphs related to 20 MHZ mask PHY PPDUs and 20 MHz PHY PPDUs. | **Reject:** The proposed change has insufficient detail to be acted on. **Revised:** Contribution required if it is desired to add this definition. Note: Currently there is no definition for a 10 MHz PPDU in the base line specification. The 802.11-2016 and 802.11md\_D3.0 specifications only provide transmit spectrum masks for the 5, 10, and 20 MHz nominal bandwidths for the 5.85-5.925 GHz in Annex D (which is normative), Clause D.2.3 (802.11md\_D3.0, page 4365). Are additional definitions required? Desired? |
| 3 | 10 MHz PPDU definition is missing | Need a contribution to add definition for 10 MHz PHY PPDU and 10 MHz mask PHY PPDU | **Reject:** The proposed change has insufficient detail to be acted on.**Revised:** Contribution required if it is desired to add this definition. Note: Currently there is no definition for a 10 MHz PPDU in the base line specification. The 802.11-2016 and 802.11md\_D3.0 specifications only provide transmit spectrum masks for the 5, 10, and 20 MHz nominal bandwidths for the 5.85-5.925 GHz in Annex D (which is normative), Clause D.2.3 (802.11md\_D3.0, page 4365). Are additional definitions required? Desired? |

**CIDs for Clause 3.2, Page 13, line 12:**

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| CID | Comment  | Proposed Change | Proposed Resolution |
| 53 | The fact that the primary channel is designated by a MLME primitive and that a MIB attribute may also designate the primary channel, really does not belong in the definition of the OCB primary channel, nor does the CS information. Hence, the definition should be simplified to be more in line with the defection of primary channel used in prior amendments and the 802.11 standard. Also, all abbreviations and acronyms in a definition should be expanded. Note also made some editorial changes. | Replace the OCB primary channel definition with:"A designated 10 MHz channel that may be combined with an adjacent secondary OCB channel to form a 20 MHz channel for the transmission of 20 MHz next generation vehicle to everything (V2X) (NGV) physical layer (PHY) protocol data units (PPDUs). | **Reject: the proposed change was discussed and TGbd has agreed to keep the current definition in D0.4. Additional Discussion needed:**Consider 10+10 MHz instead of 20 MHz. ~~Consider changing from OCB to NGV~~Consider call it a primary 10 MHz channelThis impacts the whole draft specificationConsider it a 20 MHz NGV channel, but is it necessary to call it NGV?~~See CID 53 discussion in this contribution.~~**~~Accepted:~~** ~~Replace the OCB primary channel definition with:"~~**~~outside the context of a basic service set (BSS) (OCB) primary channel:~~** ~~A designated 10 MHz channel that may be combined with an adjacent secondary OCB channel to form a 20 MHz channel for the transmission of 20 MHz next generation vehicle to everything (V2X) (NGV) physical layer (PHY) protocol data units (PPDUs).”~~ |
| 210 | (OCB) primary channel should be OCB primary channel to be consistent for another subclauses. | remove bracket from (OCB) primary channel | **Rejected:** In clause 3, each definition must stand alone and must provide the expanded version of all abbreviations and acronyms used in the definition. see the [2014 IEEE Standards Style Manual](https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf): page 15. |

**CIDs for Clause 3.2, Page 13, line 13:**

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| CID | Comment  | Proposed Change | Proposed Resolution |
| 52 | The channel is not designated by MIB access, but by a MIB attribute. | Replace: "MIB access"With: "MIB attribute" | **Accept: 13.13 D0.4****Editorial note– it should read “a MIB attribute”.****Revised:**The text was revised in response to CID 53, and the phase “MIB access” is no longer present. |

**CIDs for Clause 3.2, Page 13, line 15:**

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| CID | Comment  | Proposed Change | Proposed Resolution |
| 173 | Acronym "carrier sense (CS)" is introduced already in line 14. | Replace "carrier sense (CS)" with "CS" in line 15 | Accept: this change is already made at 13.15 D0.4Revised:The text was revised in response to CID 53, and the phase “carrier sense (CS)” is no longer present. |

**CIDs for Clause 3.2, Page 13, line 16:**

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| CID | Comment  | Proposed Change | Proposed Resolution |
| 211 | v2x should be all capital letters e.g. V2X to be consistent in the spec | v2x should be fixed to V2X | Accept: this change is already made at 13.22 D0.4Revised:The text was revised in response to CID 53, and the V2X is now capitalized. |

**CIDs for Clause 3.2, Page 13, line 20:**

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| CID | Comment  | Proposed Change | Proposed Resolution |
| 54 | There is no need to expand abbreviations or acronyms more than once in a definition, but all abbreviations or acronyms should be expanded at least once. Note also made some editorial changes. | Replace the OCB secondary channel definition with:"A designated 10 MHz channel adjacent to an OCB primary channel that together form a 20 MHz channel for the transmission of 20 MHz next generation vehicle to everything (V2X) (NGV) physical layer (PHY) protocol data units (PPDUs). | **Reject: the proposed change was discussed and TGbd has agreed to keep the current definition in D0.4.** See CID 53 ~~Accepted:~~ ~~Replace the OCB secondary channel definition with:“~~**~~outside the context of a basic service set (BSS) (OCB) secondary channel:~~** ~~A designated 10 MHz channel adjacent to an OCB primary channel that together form a 20 MHz channel for the transmission of 20 MHz next generation vehicle to everything (V2X) (NGV) physical layer (PHY) protocol data units (PPDUs).”~~ |
| 212 | (OCB) secondary channel should be OCB secondary channel to be consistent for another subclauses. | remove bracket from (OCB) secondary channel | **Rejected:**In clause 3, each definition must stand alone and must provide the expanded version of all abbreviations and acronyms used in the definition. see the [2014 IEEE Standards Style Manual](https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf): page 15. |

**CIDs for Clause 3.2, Page 13, line 22:**

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| CID | Comment  | Proposed Change | Proposed Resolution |
| 30 | Comparing the definitions of OCB primary and secondary channel, it could be inferred that the state of the secondary channel plays no role in determining when a 20 MHz transmission is allowable. | To the definition of OCB secondary channel append "A virtual CS is applied to determine the current state of use of the 10 MHz wireless medium (WM) for the transmission of a 20 MHz next generation v2X (NGV) physical layer (PHY) protocol data unit (PPDU)." | **Reject: the proposed change was discussed and TGbd has agreed to keep the current definition in D0.4.** Revised:The text was revised in response to CID 54, and the discussion on “carrier sense (CS)” is no longer present. The requirement for CS does not belong in clause 3. |
| 213 | v2x should be all capital letters e.g. V2X to be consistent in the spec | v2x should be fixed to V2X | Accept: this change is already made at 13.22 D0.4Revised:The text was revised in response to CID 54, and the V2X is now capitalized. |

**CID 53:**

**Comment:** The fact that the primary channel is designated by a MLME primitive and that a MIB attribute may also designate the primary channel, really does not belong in the definition of the OCB primary channel, nor does the CS information. Hence, the definition should be simplified to be more in line with the defection of primary channel used in prior amendments and the 802.11 standard. Also, all abbreviations and acronyms in a definition should be expanded. Note also made some editorial changes.

**Commenter’s resolution:** Replace the OCB primary channel definition with:
"A designated 10 MHz channel that may be combined with an adjacent secondary OCB channel to form a 20 MHz channel for the transmission of 20 MHz next generation vehicle to everything (V2X) (NGV) physical layer (PHY) protocol data units (PPDUs).

**Discussion:**

Discussion of this comment during the TGbd Teleconferences on 12 and 15 May 2020 led to some discussion on how to label the 10 MHz channel and the 20 MHz channel, if these labels need to be defined in Clause 3. In the current TGmd D3.0, there are no definitions of channels of a particular bandwidth (e.g. no definition of a 20 MHz channel), there are definitions for types of channels (e.g. primary channel, nonprimary channel, 20 MHz primary channel, 20 MHz secondary channel, secondary 2 MHz channel, secondary 4 MHz channel, etc.), BSSs (e.g. 20 MHz BSS), PPDUs (e.g. 20 MHz PPDU). There are no definitions in Clause 3 for any 10 MHz channel types, BSSs, or PPDUs. Currently all 10 MHz specifications are located in Clause 17,
The 10 MHz channel is defined in clause 17, Annex B, and Annex D.

in 17.1.1 General:

“The OFDM system also provides a “half-clocked” operation using 10 MHz channel spacings with data

communications capabilities of 3, 4.5, 6, 9, 12, 18, 24, and 27 Mb/s. The support of transmitting and

receiving at data rates of 3, 6, and 12 Mb/s is mandatory when using 10 MHz channel spacing. The half-clocked

operation doubles symbol times and clear channel assessment (CCA) times when using 10 MHz

channel spacing. The regulatory requirements and information regarding use of this OFDM PHY are in

Annex D and Annex E.”

The 10 MHz channel is completely defined in clause 17, e.g. the modulation-dependent parameters are defined in Table 17-4, timing-related parameters in Table 17-5, and the transmit spectrum mask in 17.3.9.3.

The 20 MHz channel is also defined in clause 17.

The only other clauses that mention the “10 MHz Channel” are: Annex B PICS proforma, in Annex D Regulatory references, and in Annex E Band-specific operating requirements.

Conclusion: The 10 MHz channel is completely defined, but there is no definition for it in the definition section, and I don’t believe it is necessary to add one.

**References:**

1. [2014 IEEE Standards Style Manual](https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf): <https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf>
2. IEEE Std 802.11-2016: <https://ieeexplore.ieee.org/document/7786995>
3. IEEE Std 802.11md D3.0: <http://www.ieee802.org/11/private/Draft_Standards/11md/Draft%20P802.11REVmd_D3.0.pdf>
4. IEEE Std 802.11bd D0.3: <http://www.ieee802.org/11/private/Draft_Standards/11bd/Draft%20P802.11bd_D0.3.pdf>
5. [802.11-20/0701r1](https://mentor.ieee.org/802.11/dcn/20/11-20-0701-01-00bd-tgbd-d0-3-comments.xlsx), TGbd-D0.3-comments, https://mentor.ieee.org/802.11/dcn/20/11-20-0701-01-00bd-tgbd-d0-3-comments.xlsx