IEEE P802.11  
Wireless LANs

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| Comment Resolutions for 11be D0.3 Clause 36.2 Part 1 | | | | |
| Date: 2021-04-02 | | | | |
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Abstract

This submission provisions with resolutions to the following 31 CIDs related to clause 36.2 of IEEE P802.11be D0.3 in WG CC 34, including suggested spec text modification to IEEE P802.11be D0.3 to TGbd editor:

* CIDs: 3239, 3077, 2146, 1260, 1520, 1521, 1955, 2016, 3162, 1240, 1522, 1523, 1274, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 3126, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 2777, and 2778

Revisions:

* R0, comment resolutions initial draft.
* R1, updating based on discussion in PHY adhoc discussion on Apr 19, ET.
* R2, updating RU\_ALLOCATION and TXOP\_DURATION based on group discussion.
* R3, remedy for resolution to CID 1523

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 TGbe 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 TGbe Draft. This introduction is not part of the adopted material.

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

***TGbe Editor: Editing instructions preceded by “TGbe Editor” are instructions to the TGbe 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.***

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| --- | --- | --- | --- | --- | --- |
| **CID** | **Pg/Ln** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 3239 | 125.46 | 35.1.2.2 | Table 36-1 does not include INACTIVE\_SUBCHANNELS. Please add this parameter in 36-1 | As shown in the comment. | **Revised**  **Discussion:**  Agree on the issue addressed by this comment. The definition of INACTIVE\_SUBCHANNELS is proposed in the doc as part of the resolution.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 3239 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 3077 | 165.20 | 36.2 | INACTIVE\_ SUBCHANNELS is missing the indication in 11be since NDPA doesn't support AID=2047 | Clarify where this information comes from | **Revised**  **Discussion:**  Agree on the issue addressed by this comment. The definition of INACTIVE\_SUBCHANNELS is proposed in the doc as part of the resolution.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 3077 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 2146 | 0.0 | 36.2.2 | Inactive\_Subchannels in the TxVector table needs to be defined in order to account for static puncturing indicated in the Transmit Power Envelope Element, as defined in 11ax and that needs to be extended for 320 MHz | as in comment | **Revised**  **Discussion:**  Agree on the issue addressed by this comment. The definition of INACTIVE\_SUBCHANNELS is proposed in the doc as part of the resolution.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 2146 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1260 | 160.06 | 36.2.2 | The TXVECTOR and RXVECTOR parameters table need to be updated and remove TBDs | An updated PDT will be provided to update the parameters that have been used in the spec. | **Revised**  **Discussion:**  This comment resolution merged the updated PDT and comment resolutions to other comments to TXVECTOR/RXVECTOR parameters. And as suggested by the tech editor, a comment resolution document is a better form to update the spec text. Therefore, the comment resolution to this CID works as an updated PDT to the TXVECTOR and RXVECTOR parameters clause.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1260 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1520 | 160.45 | 36.2.2 | In the 3th row " NON\_HT\_MODULATION" of table 36-1, chage the color with black and delete the TBD. | as in comment. | **Revised**  **Discussion:**  The parameter “NON\_HT\_MODULCATION” refers to the same definition in Table 19-2 without change.Therefore it could be removed from Table 36-1 with a reference note added to the definition of FORMAT value “NON\_HT” .  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1520 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1521 | 160.51 | 36.2.2 | The L-length of the EHT TB PPDU is obtained from the trigger frame that solicit the TB PPDU. delete the TBD in row " L\_LENGTH" and add the description as in comment | as in comment. | **Revised**  **Discussion:**  Agree on the comment. An updated description is provided as part of the resolution.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1521 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1955 | 160.06 | 36.2.2 | Many TX/RX vectors are missing | Define them | **Rejected**  **Reason:**  It’s not clear what TX/RX vectors are referred by this comment. The table 36-1 will be improved based on other valid comments. |
| 2016 | 160.06 | 36.2.2 | We need to organize TXVECTOR and RXVECTOR parameters about non-HT format | see the Comment | **Revised**  **Discussion:**  There’re 3 parameters related to non-HT format:  NON\_HT\_MODULATION should be removed since it refers to the same definition in Table 19-1 without change.  “DYN\_BANDWIDTH\_IN\_NON\_HT” should be removed since it refers to the same definition in Table 27-1 without change.  “CH\_BANDWIDTH\_IN\_NON\_HT” should be updated to accommodate more bandwidth cases in EHT.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 2016 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 3162 | 160.11 | 36.2.2 | TXVECTOR and RXVECTOR is very long, with many of them not used by EHT PHY, but rather included here for use by OFDM/HT/VHT/HE. Instead, consider adding a generic sentence that TXVECTOR/RXVECTOR not listed here should be referred to Clause 27. | Change P160L8-11 to "The parameters in Table 36-1 are defined as part of the TXVECTOR parameter list in the PHY-TXSTART.request primitive when transmitting an EHT PPDU and/or as part of the RXVECTOR parameter list in the PHY-RXSTART.indication and PHY-RXEND.indication primitives when receiving EHT PPDUs. TXVECTOR and RXVECTOR parameters when transmitting or receiving a DSSS, HR/DSSS, OFDM, ERP, HT, VHT or HE PPDU is defined in Table 27-1".  And delete parameters in Table 36-1 which are not used by EHT PPDUs. | **Revised**  **Discussion:**  Agree on the comment in principle. Table 36-1 should contain parameters that’re valid only for EHT PPDU. Those parameters that have no change in definition and are only for non-EHT format PPDU will be removed from Table 36-1.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 3162 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx.** |
| 1240 | 161.55 | 36.2.2 | In TX/Rxvector, STBC should be Not present for EHT MU and EHT TB PPDU | as in comment | **Revised**  **Discussion:**  Agree on the comment in principle. Table 36-1 should contain parameters that’re valid only for EHT PPDU. Those parameters that have no change in definition and are only for non-EHT format PPDU will be removed from Table 36-1.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1240 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1522 | 161.52 | 36.2.2 | STBC is not used in 11be. Replace the TBD in row " STBC " with " Not present " | as in comment. | **Revised**  **Discussion:**  Agree on the comment in principle. Table 36-1 should contain parameters that’re valid only for EHT PPDU. Those parameters that have no change in definition and are only for non-EHT format PPDU will be removed from Table 36-1.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1522 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1523 | 161.59 | 36.2.2 | for the GI, three types are used (0.8μs, 1.6μs, 3.2μs). Delete the TBD in row " GI\_TYPE" and apply the defined three GI types. | as in comment. | **Revised**  **Discussion:**  Agree on the issue the comment raised.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1523 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-03-00be-cr-d0-3-clause-36-2.docx**. |
| 1274 | 162.26 | 36.2.2 | The TXVECTOR/RXVECTOR tables are already long and replication by amendment will lead to O(N^2) entries to no good purpose | Merge all HE\_\* and EHT\_\* parameters. For instance EHT/HE\_LTF\_TYPE, EHT/HE\_LTF\_MODE, NUM\_HE/EHT\_LTF, HE/EHT\_TB\_PE\_DISAMBIGUITY, MCS\_SIG\_B/MCS\_EHT\_SIG, EHT\_/PRE\_FEC\_PADDING\_FACTOR. Either give them the same names (HE\_LTF\_TYPE also applies to EHT\_LTF\_TYPE) or introduce a new convention in the table "HE\_LTF\_TYPE or EHT\_LTF\_TYPE | EHT\_LTF\_TYPE indicate XXXX / See entry for HE\_LTF\_TYPE in Table XXXX" | **Revised**  **Discussion:**  Agree on the issue the comment raised. To provide a clear and consistent naming, the author of this doc prefer to rename parameters with prefix “HE-” to prefix “EHT-” for EHT PPDUs.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1274 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1524 | 164.46 | 36.2.2 | MCS indices is defined upto 15. replace TBD with 15 in row "MCS" of table 36-1. | as in comment. | **Revised**  **Discussion:**  Agree on the comment that MCS up to 15 is current group consensus.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1524 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1525 | 164.60 | 36.2.2 | for the EHT-SIG, MCS0,MCS1,MCS3 and MCS0+DCM can be used. So. delete the TBD and apply to above MCSs in row "MCS" . | as in comment. | **Revised**  **Discussion:**  The comment is actually addressing the parameter MCS\_EHT\_SIG. Per that parameter, agree on the comment and the range of value is proposed reflecting the group’s consensus.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1525 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1526 | 165.10 | 36.2.2 | EHT supports the following BWs ( 20/40/80/160/320MHz) and these BW is indicated by U-SIG. so. delete the TBDs and apply to thoes BW in row " CH\_BANDWIDTH" of table 36-1. | as in comment. | **Revised**  **Discussion:**  Agree on the comment. A definition for CH\_BANDWIDTH is provided in consistence with BW subfield in U-SIG field of an EHT MU PPDU or an EHT TB PPDU.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1525 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1527 | 165.18 | 36.2.2 | The preamble puncturing defined in Table 36-21 is supported in EHT-MU PPDU/EHT-TB PPDU. Change TBD in row "INACTIVE\_SUBCHANNELS" to relevant description by considering the definded puncturing patterns. | as in comment. | **Revised**  **Discussion:**  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1527 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1528 | 165.29 | 36.2.2 | 11be supports the Non HT transmission. thus, to support the non-HT transmission, the row " DYN\_BANDWIDTH\_IN\_NON\_HT" should be presented in table 36-1. so, delete the TBD and change the color to black. | as in comment. | **Revised**  **Discussion:**  The parameter “DYN\_BANDWIDTH\_IN\_NON\_HT” is removed from Table 36-1 since the definition of this parameter is not changed.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1528 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1529 | 165.38 | 36.2.2 | Since11be supports the Non HT transmission, to support the non-HT transmission, the row " CH\_BANDWIDTH\_IN\_NON\_HT" should be presented in table 36-1. so, delete the TBD and change the color to black. | as in comment. | **Revised**  **Discussion:**  The definition of parameter “CH\_BANDWIDTH\_IN\_NON\_HT” is updated to support additional bandwidth for EHT STAs.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1529 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1530 | 165.48 | 36.2.2 | Since11be supports the Non HT transmission, to support the non-HT transmission, the row " LENGTH" should be presented in table 36-1. so, delete the TBD and change the color to black. | as in comment. | **Revised**  **Discussion:**  The parameter “LENGTH” is removed from Table 36-1 since the definition of this parameter is not changed.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1528 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 3126 | 165.21 | 36.2.2 | It's unclear what populates the INACTIVE\_SUBCHANNELS, its format and the behavior for EHT | Suggested change: define an element that defines a container for INACTIVE\_SUBCHANNELS and specify the format and relative behavior | **Revised**  **Discussion:**  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 3126 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1531 | 166.19 | 36.2.2 | 11be can support the maximum upto 16 spatial stream in DL/UL OFDMA transmission. Replace the TBDs with 16 in row" NUM\_STS" of table 36-1. | as in comment. | **Revised**  **Discussion:**  Agree on the comment.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1531 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1532 | 166.46 | 36.2.2 | It was agreed to use the same value of TXOP as defined in 11ax. delete the TBD in row "TXOP\_DURATION " and add the value for TXOP | as in comment. | **Revised**  **Discussion:**  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1532 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1533 | 166.58 | 36.2.2 | a subfield relating to doppler is not defined in both U-SIG and EHT-SIG fields. So, it seems that it was not supported in 11be. Change TBD in row " DOPPLER" to "not present. " | as in comment. | **Revised**  **Discussion:**  Agree that “DOPPLER” parameter is not present in EHT MU or EHT TB PPDU. To be aligned with the principle that this table only contains parameters working for EHT MU or EHT TB PPDU, it’s proposed to remove the parameter “DOPPLER”.  **TGbe Editor:**  Please implement the proposed spec text modification (remove parameter “DOPPLER” from Table 36-1) as part of resolution to CID 1533 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1534 | 167.09 | 36.2.2 | RU allocation table was defined for EHT-MU and ENT-TB, separately. By using the defined RA field in EHT-SIG common field, define the value in a row "RU\_ALLOCATION " | as in comment. | **Revised**  **Discussion:**  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1534 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1535 | 167.13 | 36.2.2 | in the 11be, the RU allocation table is defined as the 9-bit table. And based on the defined RA, add each condition that how to set the RU\_ALLOCATION for the Non-HT dup and EHT-NDP PPDU, separately. | as in comment. | **Revised**  **Discussion:**  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1535 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1536 | 167.16 | 36.2.2 | the beamformed bit is defined at table Table 36-28 and Table 36-31. reflect the defined content and change the TBD in a row "BEAMFORMED" to appropriate value. | as in comment. | **Revised**  **Discussion:**  Agree on the comment. The definition of parameter “BEAMFORMED” will use another parameter “EHT\_PPDU\_TYPE” to differentiate the case of EHT Sounding NDP and other cases.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1536 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1537 | 167.34 | 36.2.2 | In 11be, a single stream pilot LTF mode is used in TB PPDU when 2x/4x LTF is used. And when 1x LTF is used in TB PPDU, LTF does not include the pilot. Delete the TBD in a row "EHT\_LTF\_MODE" and reflect the above comment. | as in comment. | **Revised**  **Discussion:**  Agree that the parameter “EHT\_LTF\_MODE” needs to be updated but not agree to keep this parameter because the mentioned difference of pilot in 1x LTF and 2x/4x LTF could simply indicated by the parameter “EHT\_LTF\_TYPE” implicitly.  ***TGbe Editor:***  Please implement the proposed spec text modification as part of resolution to CID 1537 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 1538 | 167.53 | 36.2.2 | we defined the nominal packet padding values, i.e., 0, 8,16, 20us. Delete the TBD in a row "NOMINAL\_PACKET\_PADDING" and reflect the definded value for nominal packet padding values | as in comment. | **Revised**  **Discussion:**  Agree on the comment. And the values provided in the comment are only defined for EHT\_MU PPDU.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 1538 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
| 2777 | 167.34 | 36.2.2 | Do we need EHT\_LTF\_MODE? In 11ax, this is used to signal masked mode in UL MU-MIMO. This mode does not exist in EHT. | Remove | **Accepted** |
| 2778 | 167.44 | 36.2.2 | STARTING\_STS\_NUM should be defined for EHT\_TB only. | Correct | **Revised**  **Discussion:**  Agree on the comment. The current spec text seems incorrect implementation of proposed PDT 11-20/1403r4.  **TGbe Editor:**  Please implement the proposed spec text modification as part of resolution to CID 2778 as in document **https://mentor.ieee.org/802.11/dcn/21/11-21-0635-02-00be-cr-d0-3-clause-36-2.docx**. |
|  |  |  |  |  |  |

*-----------------------****Proposed Spec Text Modifications for sub-clause 36.2.2****--------------------------*

***TGbe Editor: please implement following proposed modification to Table 36-1 (TXVECTOR and RXVECTOR parameters) in sub-clause 36.2.2 (TXVECTOR and RXVECTOR parameters) in IEEE P802.11be D0.3 as proposed below as part of resolution to CID 3239, 3077, 2146, 1260, 1520, 1521, 1955, 2016, 3162, 1240, 1522, 1523, 1274, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 3126, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 2777, and 2778 respectively.***

**36.2 EHT PHY service interface**

**36.2.1 Introduction**

The PHY provides an interface to the MAC through an extension of the generic PHY service interface defined in 8.3.4 (Basic service and options). The interface includes TXVECTOR, RXVECTOR, PHYCONFIG\_VECTOR and TRIG\_VECTOR.

The MAC uses the TXVECTOR to supply the PHY with per-PPDU transmit parameters. The PHY uses the RXVECTOR to inform the MAC of the received PPDU parameters. The MAC uses the PHYCONFIG\_VECTOR to configure the PHY for operation that is independent of frame transmission or reception. The MAC uses the TRIG\_VECTOR to configure the PHY to receive EHT TB PPDUs over each assigned RU. *[CID# 1260]*

**36.2.2 TXVECTOR and RXVECTOR parameters**

The parameters in Table 36-1 (TXVECTOR and RXVECTOR parameters) are defined as part of the TXVECTOR parameter list in the PHY-TXSTART.request primitive for EHT PPDU transmitting and/or as part of the RXVECTOR parameter list in the PHY-RXSTART.indication and PHY-RXEND.indication primitives for EHT PPDU receiving. TXVECTOR and RXVECTOR parameters used for an EHT STA to transmit or receive a DSSS, HR/DSSS, OFDM, ERP, HT, VHT or HE PPDU is defined in Table 27-1. *[CID# 3162]*

**Table 36-1 -- TXVECTOR and RXVECTOR parameters**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Condition** | **Value** | **TXVECTOR** | **RXVECTOR** |
| FORMAT |  | Determines the format of the PPDU.  Enumerated type:  NON\_HT indicates Clause 15, Clause 16, Clause 17, Clause 18 or non-HT duplicate PPDU format. In this case, the modulation is determined by the NON\_HT\_MODULATION parameter defined in Table 19-1. *[CID# 1520/2016]*  HT\_MF indicates HT-mixed format.  HT\_GF indicates HT-greenfield format.  VHT indicates VHT format.  HE\_SU indicates HE SU PPDU format.  HE\_MU indicates HE MU PPDU format.  HE\_ER\_SU indicates HE ER SU PPDU format.  HE\_TB indicates HE TB PPDU format.  EHT\_MU indicates EHT MU PPDU format.  EHT\_TB indicates EHT TB PPDU format. | Y | Y |
| ~~NON\_HT\_MODULATION~~ | ~~See corresponding entry in Table 19-1 (TXVECTOR and RXVECTOR parameters). (TBD)~~ *[CID# 1520/2016]* | | | |
| EHT\_PPDU\_TYPE | FORMAT is EHT\_MU and UPLINK\_FLAG is 0 | Set to 0 to indicate a DL OFDMA PPDU;  Set to 1 to indicate an DL SU or EHT Sounding NDP;  Set to 2 to indicate a DL non-OFDMA transmission to a single user; | Y | Y |
| FORMAT is EHT\_MU and UPLINK\_FLAG is 1 | Set to 0 to indicate an UL OFDMA PPDU;  Set to 1 to indicate an UL SU or EHT Sounding NDP; | Y | Y |
| FORMAT is EHT\_TB | Always set to 0. | O | O |
| Otherwise | Not present | N | N |
| L\_LENGTH | FORMAT is EHT\_MU | Not present.  NOTE—The LENGTH field of the L-SIG field for EHT MU PPDU is defined in Equation (36-15) using the TXTIME value defined in 36.4.3 (TXTIME and PSDU\_LENGTH calculation), which in turn depend on other parameters including the TXVECTOR parameter APEP\_LENGTH. *[CID# 1521]* | N | N |
| FORMAT is EHT\_TB | ~~TBD~~  Indicates the value used to calculate the LENGTH field of the L-SIG field. See sub-clause 36.3.12.5 for details.  The value of this parameter comes from the triggering frame to which the EHT TB PPDU is a response.  *[CID# 1260/1521]* | ~~TBD~~Y | ~~TBD~~N |
| Otherwise | See corresponding entry in Table 19-1 (TXVECTOR and RXVECTOR parameters), Table 21-1 (TXVECTOR and RXVECTOR parameters), or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| N\_TX | FORMAT is EHT\_MU or EHT\_TB | Indicates the number of transmit chains. | Y | N |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| EXPANTION\_MAT | FORMAT is EHT\_MU | ~~TBD~~  For each user, contains a vector in the number of all the subcarriers in a RU/MRU that is assigned to this user. The vector for each subcarrier contains feedback matrices as defined in 36.3.16.2 (EHT beamforming feedback matrix V) based on the channel measured during the training symbols of previous EHT sounding NDPs, HE NDPs or VHT NDPs. | ~~TBD~~Y | ~~TBD~~N |
| FORMAT is EHT\_TB | ~~TBD~~  Contains a vector in the number of selected subcarriers containing feedback matrices as defined in 36.3.16.2 (EHT beamforming feedback matrix V) based on the channel measured during the training symbols of previous EHT sounding NDPs, HE NDPs or VHT NDPs.  *[CID# 1260]* | ~~TBD~~Y | ~~TBD~~N |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| CHAN\_MAT | FORMAT is EHT\_MU and PSDU\_LENGTH is 0 | Contains a vector in the number of selected subcarriers containing feedback matrices as defined in 36.3.16.2 (EHT beamforming feedback matrix V) based on the channel measured during the training symbols of previous EHT sounding NDP.  ~~TBD~~ | ~~TBD~~N | ~~TBD~~Y |
| FORMAT is EHT\_TB, or  FORMAT is EHT\_MU and PSDU\_LENGTH is greater than 0 | Not present.  ~~TBD~~  *[CID# 1260]* | ~~TBD~~N | ~~TBD~~N |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| DELTA\_SNR | FORMAT is EHT\_MU and PSDU\_LENGTH is 0 | Contains an array of delta SNR values as defined in 9.4.1.67c (EHT MU Exclusive Beamforming Report field) based on the channel measured during the training symbols of the received EHT sounding NDP.  ~~TBD~~  *[CID# 1260]* | ~~TBD~~N | ~~TBD~~Y |
| FORMAT is EHT\_MU and PSDU\_LENGTH is greater than 0 | ~~TBD~~MU | ~~TBD~~N |
| FORMAT is EHT\_TB | ~~TBD~~O | ~~TBD~~N |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| RCPI | See corresponding entry in Table 19-1 (TXVECTOR and RXVECTOR parameters), Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | | |
| NO\_SIG\_EXTN | FORMAT is EHT\_MU or EHT\_TB | Indicates whether signal extension needs to be applied at the end of transmission.  Boolean:  true indicates that no signal extension is present.  false indicates that a signal extension is present. | Y | N |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| SNR | FORMAT is EHT\_MU and PSDU\_LENGTH is 0 | ~~TBD~~  Contains an array of average values of received SNR measurements for each spatial stream. SNR indications of 8 bits are supported. Average value of SNR shall be the sum of the decibel values of SNR per subcarrier divided by the number of subcarriers represented in each stream as described in 9.4.1.67b (EHT Compressed Beamforming Report field).  *[CID# 1260]* | N | Y |
| FORMAT is EHT\_TB, or FORMAT is EHT\_MU and PSDU\_LENGTH is greater than 0 | Not present | N | N |
| Otherwise | See corresponding entry in Table 19-1 (TXVECTOR and RXVECTOR parameters), Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| CQI | FORMAT is EHT\_MU and PSDU\_LENGTH is 0 | ~~TBD~~  Contains an array of received per-RU average SNRs for each spatial stream, where each per-RU average SNR is the arithmetic mean of the SNR in decibels over a 26-tone RU as described in 9.4.1.67d (EHT CQI Report field).  *[CID# 1260]* | N | Y |
| FORMAT is EHT\_TB, or FORMAT is EHT\_MU and PSDU\_LENGTH is greater than 0 | Not present | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| ~~STBC~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~TBD~~ |  |  |
| ~~Otherwise~~ | ~~See corresponding entry in Table 19-1 (TXVECTOR and RXVECTOR parameters), Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 1240/1522]* | | |
| GI\_TYPE | FORMAT is EHT\_MU or EHT\_TB | ~~TBD~~  Indicates the length of the GI for the EHT-LTF and Data fields.  Enumerated type:  0u8s\_GI indicates 0.8 µs  1u6s\_GI indicates 1.6 µs  3u2s\_GI indicates 3.2 µs  NOTE -- the length of GI for pre-EHT modulated fields is 0.8 µs  *[CID# 1523/1260]* | Y | Y |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| ~~MCS\_SIG\_B~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| ~~DCM\_SIG\_B~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| ~~SIG\_B\_COMPRESSION\_MODE~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| ~~HE\_LTF\_TYPE~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162/1274]* | | |
| ~~HE\_LTF\_MODE~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162/1274]* | | |
| ~~NUM\_HE\_LTF~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162/1274]* | | |
| ~~HE\_SIG\_A2\_RESERVED~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162/1274]* | | |
| ~~TXOP\_PS\_NOT\_ALLOWED~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| ~~RX\_START\_OF\_FRAME\_OFFSET~~ | ~~See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | | |
| ~~PREAMBLE\_TYPE~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| ~~SCRAMBLER\_INITIAL\_VALUE~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| ~~TRIGGER\_RESPONDING~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| ~~HE\_PRE\_FEC\_PADDING\_FACTOR~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162/1274]* | | |
| ~~HE\_TB\_PE\_DISAMBIGUITY~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162/1274]* | | |
| MU\_COMPRESSION\_MODE | FORMAT is EHT\_MU | Indicates whether or not the RU Allocation subfield(s) is included in the Common field of the EHT-SIG.  Integer:  0 indicates that the RU Allocation subfield is present  1 indicates that the RU Allocation subfield is not present | Y | N |
| Otherwise | Not present | | |
| FEC\_CODING | FORMAT is EHT\_MU or EHT\_TB | Indicates the FEC encoding used.  Enumerated type:  BCC\_CODING indicates BCC coding.  LDPC\_CODING indicates LDPC coding. | MU | MU |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| LDPC\_EXTRA\_SYMBOL | FORMAT is EHT\_TB | Indicates the presence of the LDPC extra symbol segment in an EHT TB PPDU.  Integer:  1 indicates that an LDPC extra symbol segment is present.  0 indicates that an LDPC extra symbol segment is not present. | Y | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| TXPWR\_LEVEL\_INDEX | FORMAT is EHT\_MU or EHT\_TB | The allowed values for the TXPWR\_LEVEL\_INDEX parameter are in the range from 1 to numberOfOctets (dot11TxPowerLevelExtended)/2. This parameter is used to indicate which of the available transmit output power levels defined in dot11TxPowerLevelExtended shall be used for the current transmission. | Y | N |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| RSSI | FORMAT is EHT\_MU or EHT\_TB | The allowed values for the RSSI parameter are in the range 0 to 255 inclusive. This parameter is a measure by the PHY of the power observed at the antennas used to receive the current PPDU measured during the reception of the EHT-LTF field. RSSI is intended to be used in a relative manner, and it is a monotonically increasing function of the received power. | N | Y |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| RSSI\_LEGACY | FORMAT is EHT\_MU or EHT\_TB | The allowed values for the RSSI\_LEGACY parameter are in the range 0 to 255 inclusive. This parameter is a measure by the PHY of the power observed at the antennas used to receive the current PPDU measured during the reception of non-EHT portion of the EHT PPDU preamble. RSSI\_LEGACY is intended to be used in a relative manner, and it is a monotonically increasing function of the received power. | N | Y |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| MCS | FORMAT is EHT\_MU or EHT\_TB | Indicates the modulation and coding schemes used in the transmission of the PPDU.  Integer: range 0 to 15*~~TBD~~ [CID# 1524]* | MU | MU |
| Otherwise | See corresponding entry in Table 19-1 (TXVECTOR and RXVECTOR parameters), Table 21-1 (TXVECTOR and RXVECTOR parameters), or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| ~~DCM~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | *~~TBD~~* | ~~MU~~ | ~~MU~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 1260]* | | |
| MCS\_EHT\_SIG | FORMAT is EHT\_MU or EHT\_TB | Indicates the modulation and coding scheme used for EHT\_SIG field.  Integer: ~~TBD~~  0 indicates EHT-MCS 0  1 indicates EHT-MCS 1  2 indicates EHT-MCS 3  3 indicates EHT-MCS 15  *[CID# 1525]* | Y | Y |
| Otherwise | Not present | | |
| REC\_MCS | FORMAT is EHT\_MU | Indicates the EHT-MCS that the receiver recommends | N | O |
| FORMAT is EHT\_TB | Not present | N | N |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| CH\_BANDWIDTH | FORMAT is EHT\_MU or EHT\_TB | ~~TBD~~ Indicates the channel width of the PPDU.  Enumerated type:  CBW20 for 20 MHz  CBW40 for 40 MHz  CBW80 for 80 MHz  CBW160 for 160 MHz  CBW320-1 for 320 MHz-1  CBW320-2 for 320 MHz-2  *[CID# 1526]* | Y | Y |
| ~~FORMAT is EHT\_TB~~ | ~~TBD~~ | ~~Y~~ | ~~Y~~ |
| Otherwise | See corresponding entry in Table 19-1 (TXVECTOR and RXVECTOR parameters), Table 21-1 (TXVECTOR and RXVECTOR parameters), or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| INACTIVE\_SUBCHANNELS | FORMAT is EHT\_MU, or FORMAT is NON\_HT and NON\_HT\_MODULATION is NON\_HT\_DUP\_  OFDM, | ~~TBD~~  Indicates the 20 MHz subchannels that are punctured.  A bitmap indexed by the 20 MHz subchannels in ascending order with the LSB indicating the lowest frequency 20 MHz subchannel. A bit is set to 1 to indicate that the corresponding 20 MHz subchannel is punctured and set to 0 to indicate the corresponding 20 MHz subchannel is not punctured. | Y | N |
| FORMAT is EHT\_TB | ~~TBD~~  Not present  *[CID# 3239/3077/2146/1527/3126]* | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
|  |  |  |  |  |
| ~~DYN\_BANDWIDTH\_IN\_NON\_HT~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 2016/1528]* | | |
| CH\_BANDWIDTH\_IN\_NON\_HT | FORMAT is EHT\_MU or EHT\_TB | Not present | N | N |
| FORMAT is NON\_HT | In TXVECTOR, if present, indicates the channel width of the transmitted PPDU, which is signaled via the scrambling sequence.  In RXVECTOR, if valid, indicates the channel width of the received PPDU, which is signaled via the scrambling sequence.  Enumerated type:  CBW20, CBW40, CBW80, CBW160, CBW320  NOTE—In the RXVECTOR, the validity of this parameter is determined by the MAC based on the contents of the currently received MPDU (e.g., RTS) or the previous MPDU in an exchange (e.g., the RTS preceding a CTS).  *[CID# 3162/1529]* | O | Y |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| ~~LENGTH~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162/1530]* | | |
| APEP\_LENGTH | FORMAT is EHT\_MU or EHT\_TB | ~~TBD~~  Integer.  If 0 and FORMAT is EHT\_MU, indicates an EHT sounding NDP.  Otherwise, indicates the number of octets in the range 1 to aPSDUMaxLength in the A-MPDU pre-EOF padding (see Table 36-57 (EHT PHY characteristics)) that is carried in the PSDU.  *[CID# 1260]* | MU | O |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| PSDU\_LENGTH | FORMAT is EHT\_MU or EHT\_TB | ~~TBD~~  Indicates the number of octets in the PSDU in the range of 0 to aPSDUMaxLength octets (see Table 36-57 (HE PHY characteristics)). A value of 0 indicates an EHT sounding NDP.  *[CID# 1260]* | N | Y |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| ~~USER\_POSITION~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| NUM\_STS | FORMAT is EHT\_MU | Indicates the number of spatial~~space-time~~ streams. Integer in the range:  1-4 per user per MU-MIMO RU in the TXVECTOR  1-4 per MU-MIMO RU in the RXVECTOR  1-8~~tbd~~ per RU assigned to no more than 1 user in the TXVECTOR and RXVECTOR  NUM\_STS summed over all users per RU is not greater than 8~~tbd~~. | MU | Y |
| FORMAT is EHT\_TB | Indicates the number of spatial~~space-time~~ streams. Integer in the range:  1-4 for a MU-MIMO RU  1-8~~tbd~~ for an RU assigned to no more than 1 user  NUM\_STS summed over all users per RU is not greater than 8~~tbd~~. *[CID# 1531]* | Y | N |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| ~~GROUP\_ID~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| ~~PARTIAL\_AID~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 3162]* | | |
| TXOP\_DURATION | FORMAT is EHT\_MU or EHT\_TB | ~~TBD~~  Indicates the TXOP duration.  Enumerated type or integer:  UNSPECIFIED indicates no NAV value specified.  0 – 8448 indicates a value in units of 1 µs that is used to update the NAV for this TXOP (see 26.2.4 (Updating two NAVs)).  TXVECTOR parameter TXOP\_DURATION (7 bits integer B0-B6) is converted to a value in the TXOP subfield of U-SIG (see Table 36-19 (U-SIG field of an EHT MU PPDU) and Table 36-22 (U-SIG field of an EHT TB PPDU)) as follows:  TXOP\_DURATION = UNSPECIFIED: B0-B6 = 127  TXOP\_DURATION < 512: B0 = 0, B1-B6 = floor(TXOP\_DURATION / 8)  Otherwise: B0 = 1, B1-B6 = floor((TXOP\_DURATION – 512) / 128)  RXVECTOR parameter TXOP\_DURATION is determined from the value in the TXOP subfield (7 bits integer B13-B19) of U-SIG field (see Table 36-19 (U-SIG field of an EHT MU PPDU) and Table 36-22 (U-SIG field of an EHT TB PPDU)) as follows:  B13-B19 = 127: TXOP\_DURATION = UNSPECIFIED  B13 = 0: TXOP\_DURATION = 8 × B14-B19  Otherwise: TXOP\_DURATION = 512 + 128 × B14-B19  *[CID# 1532]* | Y | Y |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| SPATIAL\_REUSE | FORMAT is EHT\_MU ~~or EHT\_TB~~ | ~~TBD~~ Not present | N | N |
| FORMAT is EHT\_TB | Indicates the spatial reuse parameter value. There is one value of the parameter for an EHT MU PPDU. There are one to two values of the parameter for an EHT TB PPDU, with the number of values present dependent on the bandwidth of the PPDU. See the Spatial Reuse field definition in 36.3.11.7.2 (Content), 36.3.11.8.3 (Common field for OFDMA transmission), and 36.3.11.8.4 (Common field for non-OFDMA transmission) .  See 35.7 (Spatial reuse operation).  *[CID# 1260]* | Y | Y |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| ~~DOPPLER~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~TBD~~ | ~~Y~~ | ~~Y~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~ *[CID# 1533/1260/3162]* | | |
| ~~NUM\_USERS~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~Not present~~ |  |  |
| ~~Otherwise~~ | ~~See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters)~~. *[CID# 3162]* | | |
| RU\_ALLOCATION | FORMAT is EHT\_MU and EHT\_PPDU\_TYPE equals to 0 | ~~TBD~~  For the TXVECTOR, indicates the 9-bit RU Allocation-1 and RU Allocation-2 (if present) subfields in the Common field for a DL OFDMA transmission.  9 bits for a 20 MHz PPDU;  18 bits for a 40 MHz PPDU;  36 bits for a 80 MHz PPDU;  72 bits for a 160 MHz PPDU;  144 bits for a 320 MHz-1 or 320 MHz-2 PPDU.  See 36.3.11.8.3 (Common field for OFDMA transmission) for details.  For the RXVECTOR, 9 bits are used to indicate the RU allocated to the user in the whole band.  See 9.3.1.22 (Trigger frame format) for details. | Y | Y |
| FORMAT is EHT\_MU and EHT\_PPDU\_TYPE doesn’t equal to 0 | Not present | N | N |
| FORMAT is EHT\_TB | ~~TBD~~  9 bits are used to indicate the RU allocated in the whole bandwidth per user.  See 9.3.1.22 (Trigger frame format) for details. | Y | N |
| FORMAT is NON\_HT, NON\_HT\_MODULATION is NON\_HT\_DUP\_OFDM, and CH\_BANDWIDTH is not CBW20 or CBW40 | For the TXVECTOR, indicates the active RUs.  36 bits for an 80 MHz PPDU  72 bits for a 160 MHz PPDU  144 bits for a 320 MHz PPDU  See 36.3.12.8.3 (Common field for OFDMA transmission) for details.  *[CID# 1534/1535]* | Y | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| BEAMFORMED | FORMAT is EHT\_MU ~~or EHT\_TB~~ and APEP\_LENGTH is not 0 | ~~TBD~~  For an RU or MRU with no more than 1 user allocated, set to 1 if a beamforming steering matrix is applied to this non-MU MIMO allocation and set to 0 otherwise. | MU | O |
| FORMAT is EHT\_MU, and APEP\_LENGTH is 0 | Set to 1 if a beamforming steering matrix is applied to the EHT modulated fields and set to 0 otherwise | Y | O |
| FORMAT is EHT\_TB | For an RU or MRU with no more than 1 user allocated, set to 1 if a beamforming steering matrix is applied to this non-MU MIMO allocation and set to 0 otherwise.  *[CID# 1260/1536]* | Y | O |
| Otherwise | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters) or Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| EHT\_LTF\_TYPE | FORMAT is EHT\_MU or EHT\_TB | Indicates the type of EHT-LTF.  Enumerated type:  1xEHT-LTF indicates a 1x EHT-LTF  2xEHT-LTF indicates a 2x EHT-LTF  4xEHT-LTF indicates a 4x EHT-LTF  See 34.3.11.10 (EHT-LTF). | Y | Y |
| Otherwise | Not present | | |
| ~~EHT\_LTF\_MODE~~ | ~~FORMAT is EHT\_MU or EHT\_TB~~ | ~~TBD~~ |  |  |
| ~~Otherwise~~ | ~~Not present.~~ *[CID# 1537/2777/1260]* | | |
| NUM\_EHT\_LTF | FORMAT is EHT\_MU or EHT\_TB | ~~TBD~~  Indicates the number of OFDM symbols in the EHT-LTF field.  See Table 36-24 (Common field for OFDMA transmission), Table 36-27 (Common field for non-OFDMA transmission to a single user and non-OFDMA transmission to multiple users), Table 36-28 (Common field for EHT sounding NDP) and sub-clause 36.3.11.10 (EHT-LTF). *[CID# 1260]* | Y | N |
| Otherwise | Not present. | | |
| STARTING\_STS\_NUM | FORMAT is ~~EHT\_MU~~EHT\_TB | Set to the starting spatial stream number minus 1 (spatial streams in a given PPDU transmission are numbered starting from 1) | Y | N |
| FORMAT is ~~EHT\_TB~~EHT\_MU  *[CID# 2778]* | Not present ~~(TBD)~~ | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| NOMINAL\_PACKET\_PADDING | FORMAT is EHT\_MU ~~or EHT\_TB~~ | ~~TBD~~  The nominal packet padding as defined in 9.4.2.248.5 (PPE  Thresholds field).  Possible values are 0 µs, 8 µs, 16 µs and 20 µs | MU | N |
| FORMAT is EHT\_TB | Not present  *[CID# 1538]* | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| TRIGGER\_METHOD | FORMAT is EHT\_TB | ~~TBD~~  Indicates the method used to trigger this HE TB PPDU transmission.  Enumerated type:  TRIGGER\_FRAME for Trigger frame  TRS for TRS Control subfield | Y | N |
| FORMAT is EHT\_MU | Not present ~~(TBD)~~ *[CID# 1260]* | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| DEFAULT\_PE\_DURATION | FORMAT is EHT\_TB | ~~TBD~~  When TRIGGER\_METHOD is TRS, indicates the duration of the PE field to be transmitted. A value 0, 4, 8, 12 or 16 indicating the PE field duration in µs. Otherwise not present. *[CID# 1260]* | Y | N |
| FORMAT is EHT\_MU | Not present | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| BSS\_COLOR | FORMAT is EHT\_MU or EHT\_TB | ~~TBD~~  Set to a value in the range 0 to 63 (see 35.10 (Rules for setting some TXVECTOR parameters for PPDUs transmitted by an EHT STA)).  *[CID# 1260]* | Y | Y |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| UPLINK\_FLAG | FORMAT is EHT\_MU | ~~TBD~~  Set to 1 if the PPDU is addressed to an AP  Set to 0 otherwise. *[CID# 1260]* | Y | Y |
| FORMAT is EHT\_TB | Not present | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| STA\_ID | FORMAT is EHT\_MU | ~~TBD~~  Indicates the list of STA-IDs for an EHT MU PPDU (see 35.10 (Rules for setting some TXVECTOR parameters for PPDUs transmitted by an EHT STA)). *[CID# 1260]* | MU | MU |
| FORMAT is EHT\_TB | Not present | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters). | | |
| ~~NDP\_REPORT~~ | ~~FORMAT is EHT\_TB and PSDU\_LENGTH=0~~ | ~~TBD~~ | ~~N~~ | ~~Y~~ |
| ~~FORMAT is EHT\_MU~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~  *[CID# 1260]* | | |
| ~~FEEDBACK\_STATUS~~ | ~~FORMAT is EHT\_TB and APEP\_LENGTH=0~~ | ~~TBD~~ | ~~Y~~ | ~~N~~ |
| ~~FORMAT is EHT\_MU~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~  *[CID# 1260]* | | |
| ~~RU\_TONE\_SET\_INDEX~~ | ~~FORMAT is EHT\_TB and APEP\_LENGTH=0~~ | ~~TBD~~ | ~~Y~~ | ~~N~~ |
| ~~FORMAT is EHT\_MU~~ | ~~Not present~~ | ~~N~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~  *[CID# 1260]* | | |
|  |  |  |  |  |
| ~~MIDAMBLE\_~~  ~~PERIODICITY~~ | ~~FORMAT is EHT\_MU or EHT\_TB, and DOPPLER is 1~~ | ~~TBD~~ | ~~Y~~ | ~~N~~ |
| ~~Otherwise~~ | ~~See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).~~  *[CID# 1260]* | | |
| EHT\_PRE\_FEC\_PADDING\_FACTOR | FORMAT is EHT\_TB | ~~TBD~~  When TRIGGER\_METHOD is TRIGGER\_FRAME, indicates the pre-FEC padding factor used by the EHT TB PPDU transmission. Otherwise not present. | Y | N |
| FORMAT is EHT\_MU~~Otherwise~~ | Not present | N | N |
| Otherwise | See corresponding entry in Table 27-1 (TXVECTOR and RXVECTOR parameters).  *[CID# 1260]* | | |
| EHT\_TB\_PE\_DISAMBIGUITY | FORMAT is EHT\_TB and TRIGGER\_METHOD is TRIGGER\_FRAME | ~~TBD~~  Indicates PE disambiguity for the EHT TB PPDU transmission.  Set to 0 to indicate no PE disambiguity  Set to 1 to indicate PE disambiguity  *[CID# 1260]* | Y | N |
| Otherwise | Not present | N | N |
| Note: In the “TXVECTOR” and “RXVECTOR” columns, the following apply:  Y = ‘Present’;  N = ‘Not present’;  O = ‘Optional’;  See also Table 27-1 for other TXVECTOR and RXVECTOR parameters used to transmit and/or receive a DSSS, HR/DSSS, OFDM, ERP, HT, VHT or HE PPDU. *[CID# 3162]* | | | | |

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-------------------- ***End of proposed changes for Table 36-1 -------------------------------------------***

**References:**

1. **IEEE P802.11be/D0.3, Dec 2020.**