IEEE P802.11  
Wireless LANs

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| Comment Resolution SA1 – TXVECTOR | | | | |
| Date: 2021-11-10 | | | | |
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Abstract

This submission proposes the comment resolution of CIDs 288291, 288290, 288292; as part of SA1, changes are relative to Draft 4.0.

Revisions:

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGax Draft. This introduction is not part of the adopted material.

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

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

**The text preceded by “Discussion” is not part of the adopted changes.**

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| **288291** | 232.1 | 27.2.2 | "LTF\_REP - Set to the number of repetitions." Doule? | Remove "Set to the number of repetitions." | **Revised**  TGaz editor, make changes depicted in  https://mentor.ieee.org/802.11/dcn/21/11-21-1843-01-00az-comment-resolution-sa1-txvector.docx |
| **288290** | 231.2 | 27.2.2 | Table 27-1—TXVECTOR and RXVECTOR | Compare to baseline and provide clear editor instructions by using strike-through and underline. | **Revised**  TGaz editor, make changes depicted in  https://mentor.ieee.org/802.11/dcn/21/11-21-1843-01-00az-comment-resolution-sa1-txvector.docx |
| **288292** | 234.3 | 27.2.3a | "LTF\_KEY"- contains an ltf-key, the context mentioned in the description is not available at the PHY, so the interpretation shouldn't dpend on it, just say, this is an LTF key, use it | Change to "Contains an ltf-key, see 11.21.6.4.5.4 (Secure LTF octet stream generation) used when receiving secure HE-LTFs; see 11.21.6.4.5 (Secure LTF in the TB and non-TB ranging measurement exchange protocol)" | **Revised**  TGaz editor, make changes depicted in  https://mentor.ieee.org/802.11/dcn/21/11-21-1843-01-00az-comment-resolution-sa1-txvector.docx |
|  |  |  |  |  |  |

1. Table 27-1—TXVECTOR and RXVECTOR parameters (#3629)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | | Condition | Value | | TXVECTOR | | | RXVECTOR |
|  | | (…existing fields…) | | | | | | |
| TIME\_OF\_DEPARTURE\_REQUESTED | | Format is HE\_SU | Enumerated type:  True indicates that the MAC entity requests that the PHY entity measures and reports time of departure parameters corresponding to the time when the first frame energy is sent by the transmitting port.  False indicates that the MAC entity requests that the PHY entity neither measures nor reports time of departure parameters. | | O | | | N |
| Format is HE\_ER\_SU, HE\_MU or HE\_TB | Not present | | N | | | N |
| Otherwise | See corresponding entry in Table 21-1(TXVECTOR and RXVECTOR parameters). | |  | | |  |
| RX\_START\_OF\_  FRAME\_OFFSETFRAME\_OFFSET | | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters). | | | | | | |
| LTF\_KEY | | FORMAT is either HE\_SU or HE\_TB and RANGING\_FLAG is 1 and SECURE\_LTF\_FLAG is 1 | Contains an *rsta-ltf-key or ista-ltf-key* (See [11.21.6.4.5.4](#H11o21o6o4o5o4) (Secure LTF Octet Stream Generation)) when the secure HE-LTFs are used (see [11.21.6.4.6](#H11o21o6o4o6) (Secure Non-TB and -TB Ranging Measurement Exchange Protocol)). | | O | | | N |
|  | | Otherwise | Not present | | | | | |
| LTF\_IV | | FORMAT is either HE\_SU or HE\_TB and RANGING\_FLAG is 1 and SECURE\_LTF\_FLAG is 1 | Contains the *ltf-iv* (See [11.21.6.4.5.4](#H11o21o6o4o5o4) (Secure LTF Octet Stream Generation)) used to generate the secure HE-LTFs or null otherwise. | | O | | | N |
|  | | Otherwise | Not present | | | | | |
| LTF\_REP | | FORMAT is either HE\_SU or HE\_TB and RANGING\_FLAG is 1 | Indicate the number of HE-LTF repetitions. | | O | | | N |
|  | | Otherwise | Not present) | | | | | |
| RANGING\_FLAG | | FORMAT is HE\_SU | | | Set to 1 when the PPDU is a HE Ranging NDP. Set to 0 otherwise. | | MU | N | | |
| FORMAT is HE\_TB | | | Set to 1 when the PPDU is HE TB Ranging NDP. Set to 0 otherwise. | | MU |
| Otherwise | | | Not present. | | | | | |
| NUM\_USERS | | FORMAT is HE\_SU, RANGING\_FLAG is 1, and SECURE\_LTF\_FLAG is 1 | | | Indicates the number of users of an HE Ranging NDP with secure LTF (#**2359**)  If NUM\_USERS is larger than 1, NUM\_STS, LTF\_REP, and LTF\_KEY will be MU | | O | N | | |
| FORMAT is HE\_SU, HE\_MU, HE\_ER\_SU or HE\_TB | | | Not present.  NOTE-number of users for an HE SU PPDU, HE ER SU PPDU or HE TB PPDU is always 1. The number of users in an RU in an HE MU PPDU is determined by RU\_ALLOCATION and STA\_ID parameters for that RU. | | N | N | | |
| Otherwise | | | See corresponding entry in Table 21-1 (RXVECTOR and RXVECTOR parameters). | | | | | |
| PSDU\_LENGTH | | FORMAT is HE\_SU, HE\_MU, HE\_ER\_SU or HE\_TB | | | Indicates the number of octets in the PSDU in the range of 0 to *aPDUMaxLength* octets (see Table 27-54 (HE PHY characteristics)). A value of 0 indicates an HE sounding NDP, HE Ranging NDP or HE TB Ranging NDP. | | N | Y | | |
| Otherwise | | | See corresponding entry in Table 21-1 (RXVECTOR and RXVECTOR parameters). | | | | | |
| APEP\_LENGTH | | FORMAT is HE\_SU, or HE\_ER\_SU | | | Integer  If 0 and FORMAT is HE\_SU, indicates an HE sounding NDP, HE Ranging NDP or HE TB Ranging NDP.  Otherwise, indicates the number of octets in the range of 1 to *aPDUMaxLength* in the A-MPDU pre-EOF padding (see Table 27-54) that is carried in the PSDU. | | Y | O | | |
| FORMAT is HE\_MU or HE\_TB | | | MU | O | | |
| Otherwise | | | See corresponding entry in Table 21-1 (RXVECTOR and RXVECTOR parameters). | | | | | |

27.2.2 TXVECTOR and RXVECTOR parameters

(#3215, #3354, #3911, #3920, #4018)

***Modify Table 27-1 at the row PSDU\_LENGTH, and add the following new rows placing them after the last parameter but before the notes in the table:***

1. Table 27-1—TXVECTOR and RXVECTOR parameters (#3629, #5463, #5462, #5148, #5464, #5408, #5434, #5452, #5376)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | | Condition | Value | | TXVECTOR | RXVECTOR |
| PSDU\_LENGTH | | FORMAT is HE\_SU, HE\_MU, HE\_ER\_SU or HE\_TB | Indicates the number of octets in the PSDU in the range of 0 to *a PSDUMaxLength* octets (see Table 27-54). A value of 0 indicates an HE sounding NDP, HE Ranging NDP or HE TB Ranging NDP. (#**5461**, #**5212**) | | N | Y |
| Otherwise | See corresponding entry in Table 21-1. | | | |
|  | | (…existing fields…) | | | | |
| TIME\_OF\_DEPARTURE\_REQUESTED | | Format is HE\_SU | Enumerated type:  True indicates that the MAC entity requests that the PHY entity measures and reports time of departure parameters corresponding to the time when the first frame energy is sent by the transmitting port.  False indicates that the MAC entity requests that the PHY entity neither measures nor reports time of departure parameters. | | O | N |
| Format is HE\_ER\_SU, HE\_MU or HE\_TB | Not present | | N | N |
| Otherwise | See corresponding entry in Table 21-1(TXVECTOR and RXVECTOR parameters). | |  |  |
| RX\_START\_OF\_ FRAME\_OFFSET | | See corresponding entry in Table 21-1 (TXVECTOR and RXVECTOR parameters). | | | | |
| LTF\_KEY | | FORMAT is either HE\_SU or HE\_TB and RANGING\_FLAG is 1 and SECURE\_LTF\_FLAG is 1 | Contains the *rsta-ltf-key or ista-ltf-key* (See [11.21.6.4.5.4](file:///C:\Users\nxf57284\Documents\IEEE\D4.0-TX_VECTOR-CB.docx#H11o21o6o4o5o4)) when the secure HE-LTFs are used (see [11.21.6.4.5](file:///C:\Users\nxf57284\Documents\IEEE\D4.0-TX_VECTOR-CB.docx#H11o21o6o4o5)).  (#**2289**, #**1828**, #**1831**) | | Y | N |
| Otherwise | Not present (#**2356**, #**2357**, #**2359**) | | | |
| LTF\_IV | | FORMAT is either HE\_SU or HE\_TB and RANGING\_FLAG is 1 and SECURE\_LTF\_FLAG is 1 | Contains the *ltf-iv* (See [11.21.6.4.5.4](file:///C:\Users\nxf57284\Documents\IEEE\D4.0-TX_VECTOR-CB.docx#H11o21o6o4o5o4)) used to generate the secure HE-LTFs. | | Y | N |
| Otherwise | Not present (#**2356**, #**2357**, #**2359**) | | | |
| LTF\_REP | | FORMAT is either HE\_SU or HE\_TB and RANGING\_FLAG is 1 (#**1298**) | Indicate the number of HE-LTF repetitions. | | Y | N |
|  | | Otherwise | Not present (#**2356**, #**2357**, #**2359**) | | | |
| RANGING\_FLAG (#**2502**, #**5460**) | | FORMAT is HE\_SU | Set to 1 when the PPDU is a HE Ranging NDP.  Set to 0 otherwise. | | MU | N |
| FORMAT is HE\_TB | Set to 1 when the PPDU is a HE TB Ranging NDP. Set to 0 otherwise. | | MU | N |
| Otherwise | Not present. | | N | N |
| NUM\_USERS | | FORMAT is HE\_SU, RANGING\_FLAG is 1, and and SECURE\_LTF\_FLAG is 1 | | | Indicating the number of users of an HE Ranging NDP with secure LTF (#**2359**)  If NUM\_USERS is larger than 1, NUM\_STS, LTF\_REP, and LTF\_KEY will be MU | Y | N | |
| FORMAT is HE\_SU, HE\_MU, HE\_ER, HE\_ER\_SU or HE\_TB | | | Not present.  NOTE—number of users for an HE SU PPDU, HE ER SU PPDU or HE TB PPDU is otherwise 1. The number of users for an HE MU PPDU is determined by RU\_ALLOCATION. | N | N | |
| Otherwise | | | See corresponding entry in Table 21-1 (RXVECTOR and RXVECTOR parameters). | | | |
| SECURE\_LTF\_FLAG | | FORMAT is either HE\_SU or HE\_TB and RANGING\_FLAG is 1 | | | Set to 1 when the HE Ranging NDP or HE TB Ranging NDP will use secure LTF.  Set to 0 otherwise. | Y | N | |
| Otherwise | | | Not present. | | | |
| TX\_WINDOW\_FLAG | | FORMAT is either HE\_SU or HE\_TB and RANGING\_FLAG is 1 and SECURE\_LTF\_FLAG is 1 | | | Set to 1 when the secure LTF of an HE Ranging NDP or HE TB Ranging NDP will use the optional frequency domain Tx window.  Set to 0 otherwise. | Y | N | |
| Otherwise | | | Not present. | | | |

27.2.3a

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| APEP\_LENGTH | FORMAT is HE\_SU, or HE\_ER\_SU | Integer  If 0 and FORMAT is HE\_SU, indicates an HE sounding NDP, HE Ranging NDP or HE TB Ranging NDP.  Otherwise, indicates the number of octets in the range of 1 to *aPDUMaxLength* in the A-MPDU pre-EOF padding (see Table 27-54) that is carried in the PSDU. | Y | O |
| FORMAT is HE\_MU or HE\_TB | MU | O |
| Otherwise | See corresponding entry in Table 21-1 (RXVECTOR and RXVECTOR parameters). | | |