IEEE P802.11
Wireless LANs

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| LB225 CR on TXOP\_DURATION (28.2.2) |
| Date: 2017-01-26 |
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Abstract

This submission proposes resolutions for multiple comments related to TGax D1.0 with the following CIDs:

* 3 CIDs: 8774, 9142, 9143

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 TGax Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

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

# TXOP\_DURATION

| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 9143 | 223.20 | 28.2.2 | all 1s in TXOP denotes the no duration information, but it does not mean it is an invalid value. | Describe all 1 case (127) with better wording | Revised- Agree in principal. As the comment, it indicates no NAV duration information. Modified.For more clarification, I updated the followings. TXVECTOR parameter TXOP\_DURATION has the unit of 1us which is same as Duration field of MAC header. Based on TXOP\_DURATION with 1us unit, the exact values of 7 bits TXOP field of HE-SIG-A is decided.The TXOP Duration of HE-SIG-A is changed to TXOP field to distinguish with TXOP\_DUATION.TGax editor makes changes as shown in the as specified in 11-17/0345r2. |
| 8774 | 223.25 | 28.2.2 | Remove paragraph starting at line 25. This is too much detail and refers to B0-B7 that are not used in this section. Alse delete NOTE. | See comment | Revised- Agree in principal. The description of B0~B6 is related to TXOP Duration field of HE-SIG-A. So, the related text should be modified (In RX perspective). And the text of how to set the TXOP field in HE-SIG-A should be described in HE-SIG-A field (in TX perspective)TGax editor makes changes as shown in the as specified in 11-17/0345r2. |
| 9142 | 223.28 | 28.2.2 | Improve the description on note for B1-B6. Integer can be in decimal, in octal, or in binary format, so 'B1-B6 is integer' description is not sufficient. | Update the note to express decimal value, e.g., Note. B1-B6 indicates a decimal integer of a binary number from B1 to B6, where B1 is MSB. | Revised- Agree in principal. B1~B6 is not for TXOP\_DURATION but TXOP field of HE-SIG-A. The related texts is updated in the resolution of CID 8774. So, the indicated sentence is deleted in this table.TGax editor makes changes as shown in the as specified in 11-17/0345r2. |

**TGax Editor: Modify the texts for TXOP\_DURATION parameter into the Table 28-1 (TXVECTOR and RXVECTOR parameters)**

**Table 28-1—TXVECTOR and RXVECTOR parameters**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Condition | Value | TXVECTOR | RXVECTOR |
| … | … | … | … | … |
| TXOP\_DURATION |

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| --- |
| FORMAT is HE\_SU or HE\_MU or HE\_EXT\_SU or HE\_TRIG |

 | Provide the duration of TXOP.Enummerated type or integer:UNSPECIFIED indicates no NAV duration information (see 27.11.5 (TXOP\_DURATION)).(#9143)0 – 8448 ~~I~~indicates a duration ~~of time~~, in the units of 1 us, that is used to update the NAV for this TXOP (see 27.2.2 (Updating two NAVs)). ~~except for a value of 127 (i.e., all 1s) which indicates an invalid value of TXOP Duration in the HE-SIG-A field (see 27.11.5 (TXOP\_ DURATION)).~~~~B0 indicates whether the granularity is 8 μs or 128 μs. When B0 is 0, then B1 to B6 indicate a duration, in units of 8 μs, starting from 0 to 504 us (i.e, duration = (8 μs x value of (B1-B6)) μs). When B0 is 1, then B1 to B6 indicate a duration, in units of 128 μs, starting from 512 μs until 8448 μs (i.e, duration = (512 + 128 x value of (B1-B6)) μs).~~ When the value of the TXOP field in the HE-SIG-A of a received HE PPDU is less than 127, if B0 of the TXOP field is 0, the RXVECTOR parameter TXOP\_DURATION is set to (8 \* value of (B1-B6) of the TXOP field). Otherwise, the RXVECTOR parameter TXOP\_DURATION is set to (512 + 128 \* value of (B1-B6) of the TXOP field). (#8774)See 27.11.5 (TXOP\_DURATION) for more details. ~~NOTE—B1-B6 indicates an integer, where B1 is MSB. (#9142)~~ | Y | Y |
| Otherwise  | Not present | N | N |
| … | … | … | … | … |

**TGax Editor: Modify the 6th paragraph in subclause 27.11.5 (TXOP\_DURATION) as follows**

When ~~If~~ the TXVECTOR parameter TXOP\_DURATION of an HE PPDU is not set to UNSPECIFIED ~~all 1s,~~ and there exists Duration field in the MAC header of the HE PPDU, if the value of the Duration field is smaller than 8448us, the ~~duration information indicated by the~~ TXVECTOR parameter TXOP\_DURATION is ~~determined based on~~ set to the duration information indicated by the Duration field ~~in the MAC header and shall indicate the largest feasible durationinformation that is smaller than or equal to the duration information indicated by the Duration field~~. Otherwise, the TXVECTOR parameter TXOP\_DURATION is set to 8448. (#9143)

**TGax Editor: Modify the paragraph (line 23~34, page 205, D1.1) in subclause 27.11.5 (TXOP\_DURATION) as follows**

For a TXOP responder that transmits an HE trigger-based PPDU carrying a PS-Poll frame, if the TXOP responder does not set the TXVECTOR parameter TXOP\_DURATION of the HE trigger-based PPDU to UNSPECIFIED ~~all 1s~~, the TXOP responder first calculates potential duration information equal to the duration information indicated by the Duration field of the frame that solicits the response minus the time, in microseconds, between the end of the PPDU carrying the frame that soliciting the HE trigger-based PPDU and the end of the HE trigger-based PPDU. If the calculated potential duration information includes a fractional microsecond, the potential duration information is rounded up to the next higher integer. Then if the calculated potential duration information is smaller than 8448us, ~~the duration information indicated by~~ the TXVECTOR parameter TXOP\_DURATION is set to ~~determined based on the calculated potential duration information and shall indicate the largest feasible duration information that is smaller than or equal to~~ the calculated potential duration information. Otherwise, the TXVECTOR parameter TXOP\_DURATION is set to 8448. (#9143)

**TGax Editor: Delete the last paragraph in subclause 27.11.5 (TXOP\_DURATION) as follows**

~~The encoding of TXVECTOR/RXVECTOR parameter TXOP\_DURATION for indicating duration information is defined in Table 28-1 (TXVECTOR and RXVECTOR parameters).~~ (#9143)

**TGax Editor: Modify texts related to the TXOP Duration field in Table 28-16, Table 28-17 and Table 28-18 as follows:**

Table 28-16— HE-SIG-A for an HE SU PPDU and HE extended range SU PPDU

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| **Two Parts of HE-SIG-A** |

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|  |
| --- |
| **Bit** |

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|  |
| --- |
| **Field** |

 |

|  |
| --- |
| **Number of bits** |

 | **Description** |
| … | … | … | … | … |
| HE-SIGA2 | B0-B6 | TXOP ~~Duration~~(#8774) | 7 | Set to 127 to indicate no duration information when TXVECTOR parameter TXOP\_DURATION is set to UNSPECIFIED. Set to a value less ~~other~~ than 127 to indicate duration information for NAV setting and protection of the TXOP as follows:~~.~~ (#8774) (#9143)* If TXVECTOR parameter TXOP\_DURATION is less than 512, then B0 is set to 0 and B1-B6 is set to floor(TXOP\_DURATION/8) where B1 is the LSB.
* Otherwise, B0 is set to 1 and B1-B6 is set to floor ((TXOP\_DURATION – 512 ) / 128) where B1 is the LSB.

Where* B0 indicates the TXOP length granularity. Set to 0 for 8 us; otherwise set to 1 for 128 us.
* B1-B6 indicates the scaled value of the TXOP\_DURATION

~~NOTE – The encoding of TXOP Duration field for indicating duration information is defined in Table 28-1 (TXVECTOR and RXVECTOR parameters).~~ (#8774) |
| … | … | … | … | … |

Table 28-17—HE-SIG-A for an HE MU PPDU

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| **Two Parts of HE-SIG-A** |

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|  |
| --- |
| **Bit** |

 |

|  |
| --- |
| **Field** |

 |

|  |
| --- |
| **Number of bits** |

 | **Description** |
| … | … | … | … | … |
| HE-SIGA2 | B0-B6 | TXOP ~~Duration~~(#8774) | 7 | Set to 127 to indicate no duration information when TXVECTOR parameter TXOP\_DURATION is set to UNSPECIFIED. Set to a value less ~~other~~ than 127 to indicate duration information for NAV setting and protection of the TXOP as follows:~~.~~ (#8774) (#9143)* If TXVECTOR parameter TXOP\_DURATION is less than 512, then B0 is set to 0 and B1-B6 is set to floor(TXOP\_DURATION/8) where B1 is the LSB.
* Otherwise, B0 is set to 1 and B1-B6 is set to floor ((TXOP\_DURATION – 512 ) / 128) where B1 is the LSB.

Where* B0 indicates the TXOP length granularity. Set to 0 for 8 us; otherwise set to 1 for 128 us.
* B1-B6 indicates the scaled value of the TXOP\_DURATION

~~NOTE – The encoding of TXOP Duration field for indicating duration information is defined in Table 28-1 (TXVECTOR and RXVECTOR parameters).~~ |
| … | … | … | … | … |

Table 28-18—HE-SIG-A for an HE trigger-based PPDU

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| **Two Parts of HE-SIG-A** |

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|  |
| --- |
| **Bit** |

 |

|  |
| --- |
| **Field** |

 |

|  |
| --- |
| **Number of bits** |

 | **Description** |
| … | … | … | … | … |
| HE-SIGA2 | B0-B6 | TXOP ~~Duration~~(#8774) | 7 | Set to 127 to indicate no duration information when TXVECTOR parameter TXOP\_DURATION is set to UNSPECIFIED. Set to a value less ~~other~~ than 127 to indicate duration information for NAV setting and protection of the TXOP as follows:~~.~~ (#8774) (#9143)* If TXVECTOR parameter TXOP\_DURATION is less than 512, then B0 is set to 0 and B1-B6 is set to floor(TXOP\_DURATION/8) where B1 is the LSB.
* Otherwise, B0 is set to 1 and B1-B6 is set to floor ((TXOP\_DURATION – 512 ) / 128) where B1 is the LSB.

Where* B0 indicates the TXOP length granularity. Set to 0 for 8 us; otherwise set to 1 for 128 us.
* B1-B6 indicates the scaled value of the TXOP\_DURATION

~~NOTE – The encoding of TXOP Duration field for indicating duration information is defined in Table 28-1 (TXVECTOR and RXVECTOR parameters).~~ |
| … | … | … | … | … |