IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CRs on Timing-Related Parameters | | | | |
| Date: 2021-02-23 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Lin Yang | Qualcomm |  |  | linyang@qti.qualcomm.com |
| Bin Tian | Qualcomm |  |  |  |

Abstract

This submission shows

* Resolution for a comment received from TGbe comment collection (TGbe Draft D0.3)
* The proposed changes are based on 11be D0.3.

The submission provides resolutions to following

* 1256, 2609, 1257, 1325, 1327, 1326, 1258, 1558, 1317, 2608, 1320, 1322, 1323, 1324, 1328, 3285, 1611

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Correct some format issue in the text

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1256 | 211.43 | 36.3.9 | Add T\_U-SIG=16us for Extended range preamble U-SIG |  | REVISED  Agreed in principle  **Instructions to the editor:**  Please make the changes as shown in 11/21-0328r1 |
| 2609 | 211.44 | 36.3.9 | Missing timing-related constant definition for ER preamble | Define T\_U-SIG-R for repeated U-SIG in ER preamble | REVISED  Agreed in principle  **Instructions to the editor:**  Please make the changes as shown in 11/21-0328r1 |

***Instructions to the editor: Please make the following changes to 36.3.9 highlighted in red*** (P211L43)

**Table 36-9—Timing-related constants *(continued)***

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Values** | **Description** |
| *T*RL-SIG | 4 µs | Repeated non-HT SIGNAL field duration |
| *T*U-SIG | 8 µs = 2 × 4 µs | U-SIG field duration in an EHT PPDU |
| *T*U-SIG-R | 16 µs = 4 × 4 µs | U-SIG field duration in an EHT ER preamble |
| *T*EHT-SIG | 4 µs = *TDFT,*Pre-EHT + *TGI,*Pre-EHT | Duration of each OFDM symbol in the EHT-SIG field |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1257 | 212.31 | 36.3.9 | In table 36-10 and 11, remove the text "per frequency segment" since 11be PPDU only has one frequency segment |  | REVISED  Agree that 11be only defines one frequency segment and doesn’t support 80+80 etc. There is no need to define segment.  **Instructions to the editor:**  Please   1. remove the text “per frequency segment” and the text “per segment” in table 36-10 and 11 2. Remove the row of Nseg in table 36-10 and 36-11 |
| 1325 | 212.49 | 36.3.9 | "Number of 80MHz frequency subblocks" is likely to be a useful term, and will help prevent confusion with the mal-named "80MHz frequency segments" | Define as 1,1,1,2,4 for 20,40,80,150,320M respectively. | REVISED  Number of 80MHz frequency subblocks is already defined in P296 (36.3.12.5 Segment parser)  *NSeg* here is defined as number of non-contiguous frequency segment segment, same as in HE and VHT. Since EHT PPDU only has one frequency segment, propose to remove this parameter to be consistent with other amendments, instead of changing its definition.  **Instructions to the editor:**  **The change required for CID 1325 is the same as for CID 1257** |
| 1327 | 213.40 | 36.3.9 | "Number of 80MHz frequency subblocks" is likely to be a useful term, and will help prevent confusion with the mal-named "80MHz frequency segments" | Define as 1?,2?,2?,3?,3,4? for each MRU column in Table 36-11 respectively | REVISED  Number of 80MHz frequency subblocks is already defined in P296 (36.3.12.5 Segment parser)  *NSeg* here is defined as number of non-contiguous frequency segment segment, same as in HE and VHT. Since EHT PPDU only has one frequency segment, propose to remove this parameter to be consistent with other amendments, instead of changing its definition.  **Instructions to the editor:**  **The change required for CID 1327 is the same as for CID 1257** |
| 1326 | 212.53 | 36.3.9 | "per segment" is improper terminology | Change to "per 80MHz frequency subblock". Ditto P213L43 | REJECTED  "per segment" here is per non-contiguous frequency segment, not per 80MHz segment, same definition as in HE and VHT |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1258 | 214.11 | 36.3.9 | In Table 36-12, remove "3x996" column since it is an MRU and covered in 36-13 |  | ACCEPTED |
| 1558 | 214.40 | 36.3.9 | the 240MHz is not defined as BW in 11be. And, since 3x996 is MRU, the 7th column "3x996' should be deleted in table 36-13 | as in comment. | REVISED  Agreed that the 240MHz is not defined as BW in 11be. So we should remove "3x996" column in Table 36-12 rather than in 36-13  **Instructions to the editor:**  **The change required for CID 1558 is the same as for CID 1258** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1317 | 210.60 | 36.3.9 | Typo "T GI L-EHT" | "T GI L-EHT" should be "T GI L-LTF" (e.g .se (36-14) | ACCEPTED |
| 2608 | 210.59 | 36.3.9 | Incorrect Parameter name for L-LTF guard interval | Change parameter name for L-LTF guard interval from "T\_GI,L-EHT" to "T\_GI,L-LTF" | ACCEPTED  Same as CID1317 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1320 | 211.11 | 36.3.9 | "EHT PPDU fields." is an undefined term | Change to "EHT modulated fields" - you can check this at fig 36-32 | REVISED  Agreed in principle. EHT data field is the more accurate term for this description.  **Instructions to the editor:**  Please make changes in P211L31;  Replace "EHT PPDU fields." to "EHT data fields." and remove the text afterwards “See Table 36-17….” which is irrelevant to this paramter |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1322 | 211.51 | 36.3.9 | "non-TB" is historical | For EHT, use "MU" instead of "non-TB". Rename T\_EHT-STF-NT to T\_EHT-STF-M. Also check out P56L37 which refers to "EHT non-TB sounding" and the non-existent Table 9-29b!? | REJECTED  In case there is other PPDU format defined in R2 in which case may require to change all the variables and equations that using these variables. It may be future proof to use the non-TB term.  EHT non-TB sounding is a well-defined term to describe a sound sequence different from the TB based sounding.  Table 9-29b can be found in P119L45 in P802.11ax D8.0 |
| 1323 | 212.13 | 36.3.9 | There is a better term than "prior to the EHT-STF field" | Change to "during the pre-EHT modulated fields" - you can check this at fig 36-32 | ACCEPTED |
| 1324 | 212.17 | 36.3.9 | Term is incomplete in "actual extension duration" | Change to "actual packet extension duration" | ACCEPTED |
| 1328 | 213.40 | 36.3.9 | For LDPC, NDBPS,u is not well defined | Insert "NOTE - For LDPC coding, this is the nominal number of data bits per OFDM symbol" | Revised  Agree with the commentor but the page number is wrong.  **Note to the editor:**  **Please make change in P215L31** |
| 3285 | 213.15 | 36.3.9 | In Table 36-11, clarify (484+242) to (3x996+ 484) | (484+242) to (3x996+484) should be 484+242-tone MRU to 3x996+484-tone MRU | ACCEPTED |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1611 | 212.28 | 36.3.9 | In 80MHz EHT Dup mode two 484 RUs are used which is different from the normal 80MHz non-OFDMA case. Since a full bandwidth non-OFDMA EHT PPDU includes EHT Dup mode, Table 36-10 needs to specify this case. | In Table 36-10, add column for 80MHz EHT Dup mode and define each value. | REVISED  Agreed in principle.  **Instructions to the editor:**  Please make the changes as shown in 11/21-0328r1 |

***Instructions to the editor: Please make the following changes to 36.3.9 (P212L28) highlighted in red***

### Table 36-10—Subcarrier allocation related constants for the EHT-modulated fields in a full bandwidth non-OFDMA EHT PPDU

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **CBW20** | **CBW40** | **CBW80**  **(non-MCS14)** | **CBW80**  **(MCS14)** | **CBW160** | **CBW320** | **Description** |
| *NSD* | 234 | 468 | 980 | 936 | 1 960 | 3 920 | Number of data subcarriers |
| *NSP* | 8 | 16 | 16 | 32 | 32 | 64 | Number of pilot subcarriers |
| *NST* | 242 | 484 | 996 | 968 | 1 992 | 3 984 | Total number of subcarriers |
| *NSR* | 122 | 244 | 500 | 500 | 1 012 | 2 036 | Highest data subcarrier index |
| *NDC* | 3 | 5 | 5 | 23 | 23 | 23 | Number of null subcarriers at DC |
| *NGuard,Left* | 6 | 12 | 12 | 12 | 12 | 12 | Number of low frequency guard subcarriers |
| *NGuard,Right* | 5 | 11 | 11 | 11 | 11 | 11 | Number of high frequency guard subcarriers |