IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Resolutions for comments on Subsection 36.3.2.1 of P802.11be D0.3 – part 2 | | | | |
| Date: 04-15-2021 | | | | |
| Author: | | | | |
| Name | Affiliation | Address | Phone | Email |
| Shimi Shilo | Huawei Technologies | 4 Ha’harash St., Hod Hasharon, Israel |  | shimi.shilo@huawei.com |
| Yan Xin | Huawei Technologies | 303 Terry Fox Drive, Suite 400, Ottawa, Ontario, Canada |  | yan.xin@huawei.com |

This submission includes resolutions for comments on Subsection 36.3.2.1 of P802.11be D0.3. The related 10 CIDs are 1542, 1543, 1607, 1984, 2448, 2449, 2779, 3078, 3094 and 3164.

The baseline document is 11be draft 0.4.

##### Revision history:

##### R0 – initial version

##### R1 – Updated Fig. 36-4 (resolution to CIDs 1984, 2779), revised the resolution to CID 1607

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 1542 | 36.3.2.1 | 175 | 43 | to clarify, change "Clause 27 (High Efficiency (HE) PHY specification) " to " 27.3.2 Subcarrier and resource allocation " | as in comment. | REVISED  Agree with the comment in principle with modification of text.  TGbe editor: Please revise the text as in 11-21-0675. |

TGbe editor: please revise the text in 261.43 in Subsection 36.3.2.1 as below.

The EHT tone plan and RU locations for a 20 MHz PPDU and 40 MHz PPDU are identical to those of HE PHY defined in 27.3.2 (Subcarrier and resource allocation).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 1607 | 36.3.2.1 | 176 | 31 | Secondary 160 MHz channel needs to be defiend. | Define secondary 160 MHz channel. | REVISED.  Agree with the comment – definition of Secondary 160 MHz is required. This is related to CID 1604, the resolution of which was to add a definition of a primary 160 MHz channel.  TGbe editor: Please revise the text as in 11-21-0675. |

TGbe editor: Please add the following definition to clause 3.2

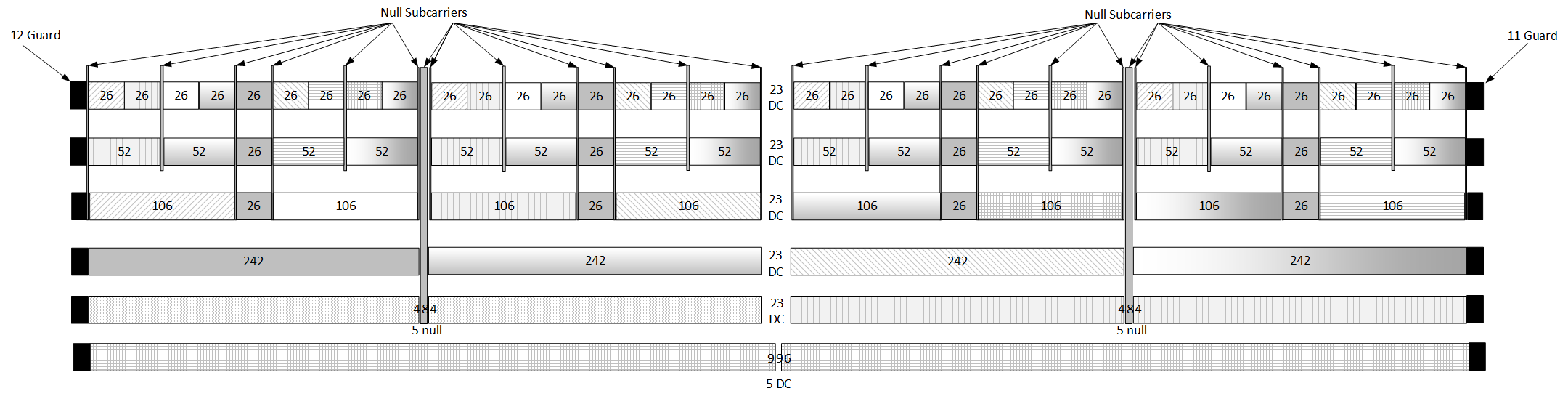
Secondary 160 MHz channel: In a 320 MHz EHT basic service set (BSS), the 160 MHz

channel not including the primary 20 MHz channel, that together with the primary 160 MHz channel form the 320 MHz channel of the 320 MHz EHT BSS.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 1984 | 36.3.2.1 | 176 | 17 | In Figure 36-4, 484 (left) and 484 (right) are confusing like they are two different RUs that is not in fact. Suggest to simply update the figure by putting a 484 term in the middle of 484 RU block similarly with 996-tone RU. | As in comment. | REVISED.  Figure is updated accordingly (with additional minor graphic updates).  TGbe editor: Please revise the figure as in 11-21-0675. |
| 2779 | 36.3.2.1 | 176 | 17 | The use of "484 (left)" and "484 (right)" is never defined and can be confusing, since the labeled blocks are not 484 tones, but half of 484. | Remove this notation | REVISED.  Figure 36-4 is updated such that it now says ‘484’ in the middle of the RU.  TGbe editor: Please edit the revised text as in 11-21-0675.  Note to TGbe Editor: same resolution as CID 1984. |

TGbe editor: please replace Fig. 36-4 with the updated Visio figure attached here.





|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 2448 | 36.3.2.1 | 175 | 43 | In difference to tone plan and RU locations for 20/40Mhz, sentence "The EHT tone plan and RU locations for an 80 MHz PPDU is given in Figure 36-4" let us think there are differences. It shall be better advertized that tone plan and RU locations are different for HE (notably in the Tables like 36-5). In addition, reason for such difference is not specified (at least a NOTE is required). | as per comment | REJECTED.  The tone plan for 20/40 MHz is identical in HE and EHT; the tone plan for 80 MHz is different, and this matches the description in the text as well as Fig. 36-4 and Table 36-5. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 2449 | 36.3.2.1 | 175 | 43 | In difference to tone plan and RU locations for 20/40Mhz, sentence "The EHT tone plan and RU locations for an 80 MHz PPDU is given in Figure 36-4" let us think there are differences. It shall be described if interoperability issues have to be considered (as example: triggering both HE and EHT in RUs of collocated 20Mhz channels ?, NFRP tone plan usage ? ,...) | as per comment. Consequence of the changes have to be detailled. | REJECTED  The tone plan for 20/40 MHz is identical in HE and EHT; the tone plan for 80 MHz is different, and this matches the description in the text. Furthermore, at this stage, there is no support for interoperability between HE and EHT, specifically not within the same 80 MHz subblock. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 3078 | 36.3.2.1 | 176 | 20 | 996 tone RU in figure 36-4 is the same as 11ax. No need to draw again. | as commented. Also change "Each nonpunctured 80 MHz segment in a 160/320 MHz PPDU uses a 996-tone RU as shown in Figure 36-4 (RU locations in an 80 MHz EHT PPDU)." to "is identical to the 996 tone RU defined in clause 27" | REJECTED.  Though it is true that the 996-tone RU design is the same as in 11ax, and there is no change or new information respective to this RU, it should be maintained in the figure for completeness (this figure shows all possible RUs within 80 MHz, not just RUs for which location has been modified since 11ax). |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 3094 | 36.3.2.1 | 176 | 27 | "For an EHT PPDU using non-OFDMA transmission, The tone plan of an 80/160 MHz EHT PPDU is identical to that of HE PHY defined in Clause 27 (High Efficiency (HE) PHY specification), with the exception of pilot locations and the exception of any punctured 80 MHz segment". This sentence is not accurate for 80 MHz EHT PPDU using non-OFDMA transmission with one of the 20MHz channel punctured. It only applies to non-punctured non-OFDMA 80MHz EHT PPDU transmission. | Separate 80 and 160 MHz EHT PPDU description, and add a bullet "The tone plan of an nonpunctured 80MHz EHT PPDU ..." | REVISED.  This text has been updated in D0.4 and there is now a distinction between 80 MHz and 160 MHz. Furthermore, the text explicitly states that this applies only to non-punctured non-OFDMA transmissions.  Nevertheless, in order to make this clearer, a revised text is suggested.  TGbe editor: Please edit the revised text as in 11-21-0675. |
| 1543 | 36.3.2.1 | 176 | 28 | to clarify, change "Clause 27 (High Efficiency (HE) PHY specification) " to " 27.3.2 Subcarrier and resource allocation " | as in comment. | REVISED  Agree with the comment in principle with modification of text (and following changes in D0.4).  TGbe editor: Please edit the revised text as in 11-21-0675.  Note to TGbe Editor: same resolution as CID 3094 |

TGbe editor: please revise the text in 262.31 in Subsection 36.3.2.1 as below.

For an EHT PPDU using non-OFDMA transmission:

* The tone plan of an 80 MHz EHT MU PPDU in EHT DUP mode (described in 36.3.5 (EHT duplicate transmission)) is identical to that of a DL-OFDMA transmission comprising two 484-tone RUs as shown in Figure 36-4 (RU locations in an 80 MHz EHT PPDU).
* The tone plan of a nonpunctured 80 MHz EHT PPDU that is not an EHT MU PPDU in EHT DUP mode is identical to that of HE PHY defined in 27.3.2 (Subcarrier and resource allocation), with the exception of pilot locations.
* The tone plan of a nonpunctured 160 MHz EHT PPDU is identical to that of the HE PHY defined in 27.3.2 (Subcarrier and resource allocation), with the exception of pilot locations.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 3164 | 36.3.2.1 | 176 | 6 | At P175L46: "Any 80 MHz segment in an 80/160/320 MHz EHT PPDU, if it is punctured or used with an OFDMA transmission, uses the tone plan shown in Figure 36-4."  But Figure 36-4 does not contain any M-RUs. So does this mean OFDMA does not use M-RU? | Add M-RUs to Figure 36-4. | REJECTED.  Multi-RUs are defined in Section 36.3.2.3. It is explicitly stated that ‘the tone indices of the (underlying) various RUs are…defined in 36.3.2’. Furthermore, drawing all possible Multi-RUs on top of the single RUs will make for a very cumbersome figure. |