IEEE P802.11  
Wireless LANs

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | CC36 Comment Resolution on Sounding NDP | | | | | | Date: 2021-07-07 | | | | | | Author(s): | | | | | | Name | Affiliation | Address | Phone | email | | Alice Chen | Qualcomm |  |  | alicel@qti.qualcomm.com | | Sameer Vermani | Qualcomm |  |  | svverman@qti.qualcomm.com | | Youhan Kim | Qualcomm |  |  | youhan.kim@qti.qualcomm.com | | Bin Tian | Qualcomm |  |  | btian@qti.qualcomm.com | | Ross Jian Yu | Huawei Technologies | F3-6-A120, Huawei Base, Bantian, Longgang, Shenzhen, Guangdong, China, 518129 |  | ross.yujian@huawei.com | |  |  |  |  |  | |

Abstract

This submission proposes resolutions for the following comments from the CC36 on P802.11be D1.0: All comments in 36.3.18 EHT Sounding NDP.

NOTE – Set the Track Changes Viewing Option in the MS Word to “All Markup” to clearly see the proposed text edits.

**Revision History:**

R0: Initial version. Resolve CID 4786, 4787, 4788, 4912, 5407, 7256, 7480.

R1: Revise the resolution to CID 4787, 4788, 5407 according to comments from Ross Yu.

# CID 4787

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| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 4787 | 36.3.18 | 512 | TXVECTOR description in case of NDP transmission is missing | add TXVECTOR description possibly inside 10.36 (according to baseline) | Revised.  The TXVECTOR parameter setting for EHT sounding NDP is already present in 35.5.5. No change is needed in 36.3.18.  Note to editor: No futher change is needed. |

# CID 4788

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| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 4788 | 36.3.18 | 512 | Description of populated tones within the LTFs for punctured case is missing | add a description of the populated tones in case of punctured transmission or a reference (in case the description is in a different chapter) | Revised.  The description of populated tones within the LTFs in punctured PPDUs is already present in 36.3.12.10 (EHT-LTF). Please see P473L63-P474L11 in D1.0. Note that we had proposed a PDT change (<https://mentor.ieee.org/802.11/dcn/21/11-21-0112-00-00be-pdt-phy-update-to-eht-sounding-ndp.docx>) to include the LTF populated tones in a punctured NDP in 36.3.18. In an IEEE PHY call discussion on this PDT change, we agreed that the LTF populated tones in a punctured NDP was the same as those in other punctured PPDUs, and that this info was better covered in the EHT-LTF subclause (36.3.12.10) instead of in the sounding NDP subclause.  Note to editor: No futher change is needed. |

# CID 7256, 7480

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| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 7256 | 36.3.18 | 512.24 | In Figure 36-63, above EHT-LTF, change "uS" to "us" (i.e. lowercase "s".) | Two instances | Accepted |
| 7480 | 36.3.18 | 512.33 | In the figure, some "uS" should be "us" | Change "uS" to "us" in the figure | Accepted |

# CID 5407

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| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 5407 | 36.3.18 | 513.01 | The "Beamforming field" in EHT-SIG is incorrect. It should be the "Beamformed field". | Change "Beamforming field" to "Beamformed field". | Revised.  Accept the proposed change but change “field” to “subfield”.  Note to editor: Please change “Beamforming field” to “Beamformed subfield”. |

# CID 4786, 4912

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| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 4786 | 36.3.18 | 512.45 | Given that there is a summary of th properties of the NDP, then not only the E-SIG and PE should be mentioned but also the USIG and potentially a reference to the table with the puncturing paterns. | add PPDU Type And Compression Mode=1 in USIG2 as part of properties of the MU PPDU, add a reference to the table with the puncturing patterns | Revised.  Other paragraphs in 36.3.18 are also “properties” or design/signaling specific to sounding NDP. Therefore, revise a few paragraphs in the subclause to incorporate the proposed changes and remove the concept of “properties”.  *Tgbe Editor: Please make changes for CID 4786 as shown in the following document*  [*https://mentor.ieee.org/802.11/dcn/21/11-21-1077-01-00be-cc36-comment-resolution-on-sounding-ndp.docx*](https://mentor.ieee.org/802.11/dcn/21/11-21-1077-01-00be-cc36-comment-resolution-on-sounding-ndp.docx) |
| 4912 | 36.3.18 | 512.47 | NDP mode is not defined in 11be D1.0. clarify it. | As in comment | Revised.  Remove the term “NDP mode”.  *Tgbe Editor: Please make changes for CID 4912 as shown in the following document*  [*https://mentor.ieee.org/802.11/dcn/21/11-21-1077-01-00be-cc36-comment-resolution-on-sounding-ndp.docx*](https://mentor.ieee.org/802.11/dcn/21/11-21-1077-01-00be-cc36-comment-resolution-on-sounding-ndp.docx) |

***Instructions to the editor:***

**Please make the following changes to P512L20-L21 as shown below for CID 4786:**

The EHT sounding NDP is a variant of the EHT MU PPDU. In U-SIG, if the PPDU Type And Compression Mode field is set to 1, the EHT-SIG MCS field is set to 0 and the Number Of EHT-SIG Symbols field is set to 0, it indicates an EHT sounding NDP. The format of an EHT sounding NDP is defined in Figure 36-63 (EHT sounding NDP format).

***Instructions to the editor:***

**Please make the following changes to P512L45-P513L2 as shown below for CID 4786 and 4912:**

The EHT sounding NDP is an EHT MU PPDU with a single EHT-SIG symbol encoded using EHT-MCS 0 and no Data field. The EHT-SIG field only contains a Common field as defined in Table 36-37 (Common field for EHT sounding NDP)

and no User Specific field.

In the EHT sounding NDP, the 242-tone RUs overlapping the 20 MHz channels that are signaled as punctured through the Punctured Channel Indication field of the U-SIG are punctured. The allowed punctured patterns are given in Table 36-30 (5-bit punctured channel indication for the non-OFDMA case in an EHT MU PPDU).

It is mandatory to support the 2´ EHT-LTF with 0.8 µs GI and 2´ EHT-LTF with 1.6 µs GI. It is optional to support the 4´ EHT-LTF with 3.2 µs GI. The other combinations of EHT-LTF type and GI duration are disallowed.

If the Beamformed subfield in EHT-SIG of an EHT sounding NDP is 1, then the receiver of the EHT sounding NDP should not perform channel smoothing when generating the compressed beamforming feedback report.

The EHT sounding NDP h