IEEE P802.11
Wireless LANs

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| CC50 CR on U-SIG Part 3 |
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Abstract

This submission contains proposed comment resolutions to comments on P802.11bn D0.1. The changes are based on P802.11bn D0.1.

The submission provides resolutions to the following CIDs in the U-SIG subclause 38.3.15.7.2

* 2, 3, 83, 314, 316, 317, 585, 586, 1157, 1158, 1159, 1160, 1347, 1587, 2701, 2828, 3303, 3305

Revisions:

* Rev 0: Initial version of the document.

**18 CIDs in Table 38-18 (U-SIG field of a UHR MU PPDU) in D0.1, which is Table 38-19 in D0.2:**

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| **CID** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 83 | QINGLAI LIU | 38.3.15.7.2 | 144.37 | In the column header "Number of bits" of Table 38-18, the word "Number" appears in two separate rows. | Adjust the column width to make the word "Number" appear in a single row in the column header. | Revised.Agree to the comment and proposed change. Need to make the proposed change in two tables.Instruction to editor: Adjust the column width to make the word "Number" appear in a single row in the column header in both Table 38-19 and Table 38-22 in D0.2. |
| 2 | Jialing Li | 38.3.15.7.2 | 144.44 | Change "Set to 0 for EHT" to "A value of 0 indicates EHT". Same comment to P151L15 and P155L43. | Refer to the comment. | Accepted.Instruction to editor: Make the proposed change in P154L16 in Table 38-19, P161L15 in Table 38-21 and P165L43 in Table 38-22 in D0.2. |
| 314 | Sigurd Schelstraete | 38.3.15.7.2 | 144.44 | Why do we need this NOTE? We only need to specify UHR behavior here. | Delete NOTE | Revised.Agree to the comment that we don’t need to define EHT behavior “set to 0”. The NOTE was intended to present the EHT case. Revise the sentence to “A value of 0 indicates EHT.”Instruction to editor: No change is needed. It’s been resolved in CID 2. |
| 1157 | Dong Guk Lim | 38.3.15.7.2 | 145.15 | It is not clear what the first coordinated BSS. Define it or replace it with other terminology for MAP. | As the comment. | Revised.Per Motion #307, change “first coordinated BSS” to “first coordinated BSS associated with the sharing AP”.Instruction to editor: Apply the changes marked as [#1157, #1158, #1347] in 11-25/0603r0. |
| 1158 | Dong Guk Lim | 38.3.15.7.2 | 145.21 | It is not clear what the first coordinated BSS. Define it or replace it with other terminology for MAP. | As the comment. | Revised.Per Motion #307, change “first coordinated BSS” to “first coordinated BSS associated with the sharing AP”.Instruction to editor: Apply the changes marked as [#1157, #1158, #1347] in 11-25/0603r0. |
| 1347 | Juan Fang | 38.3.15.7 | 145.15 | it's better to classify clearly what does "first coordianted BSS" mean? | see comment | Revised.Per Motion #307, change “first coordinated BSS” to “first coordinated BSS associated with the sharing AP”.Instruction to editor: Apply the changes marked as [#1157, #1158, #1347] in 11-25/0603r0. |
| 3303 | Tianyu Wu | 38.3.15.7.2 | 145.35 | The TXOP field has 2 expressions not showing correct format. | Correct the expression as TXOP\_DURATION/8 and TXOP\_DURATION /256. | Rejected.The current equations are consistent with the ones in 11be spec and showing correct format. Nothing is wrong. |
| 1159 | Dong Guk Lim | 38.3.15.7.2 | 145.43 | It is not clear what the second coordinated BSS. Define it or replace it with other terminology for MAP. | As the comment. | Revised.Per Motion #307, change “second coordinated BSS” to “second coordinated BSS associated with the shared AP”.Instruction to editor: Apply the changes marked as [#1159, #1160] in 11-25/0603r0. |
| 1160 | Dong Guk Lim | 38.3.15.7.2 | 145.49 | It is not clear what the second coordinated BSS. Define it or replace it with other terminology for MAP. | As the comment. | Revised.Per Motion #307, change “second coordinated BSS” to “second coordinated BSS associated with the shared AP”.Instruction to editor: Apply the changes marked as [#1159, #1160] in 11-25/0603r0. |
| 585 | Eunsung Park | 38.3.15.7.2 | 146.17 | Add "Note-" before "A value of 3 indicates an ELR PPDU" similar to the case with the UL/DL field set to 1. | See the comment. | Accepted.Instruction to editor: Make the proposed change in P156L17. |
| 316 | Sigurd Schelstraete | 38.3.15.7.2 | 146.22 | "A value of 1 indicates a UHR SU transmission.". In EHT, 1 also indicates a sounding PPDU. Do we still need this for UHR sounding? | Clarify | Revised.Per Motion #180, there is no UHR NDP. So, a value of 1 does not indicate a sounding NDP.Instruction to editor: No need to make changes. |
| 2701 | Genadiy Tsodik | 38.3.15.7.2 | 146.24 | Should be value and not values | Change Values to Value | Accepted.Instruction to editor: Make the proposed change in P156L24. |
| 317 | Sigurd Schelstraete | 38.3.15.7.2 | 146.27 | It looks like "A value of 3 indicates an ELR PPDU (...)" is part of the NOTE. It should be on a separate line. | See comment | Rejected.Agree that this sentence is part of the NOTE. To be concise, each case is a sentence in the NOTE paragraph. Otherwise, there would be 2, 2 and 3 NOTE paragraphs in the PPDU Type And Compression Mode field in the U-SIG of MU, TB and ELR PPDUs, respectively. |
| 2828 | Youhan Kim | 38.3.15.7.2 | 146.27 | Value 3 should be in a new line | Start "A value of 3 ..." in a new line. | Rejected.Agree that this sentence is part of the NOTE. To be concise, each case is a sentence in the NOTE paragraph. Otherwise, there would be 2, 2 and 3 NOTE paragraphs in the PPDU Type And Compression Mode field in the U-SIG of MU, TB and ELR PPDUs, respectively. |
| 3 | Jialing Li | 38.3.15.7.2 | 146.31 | Add a blank line to separate two paragraphs. | Refer to the comment. | Accepted.Instruction to editor: Make the proposed change in P156L31. |
| 586 | Eunsung Park | 38.3.15.7.2 | 146.37 | "F" in "the UL/DL Field" and "the PPDU Type And Compression Mode Field" should be a lower case. | See the comment. | Revised.Agree to the comment and proposed change. Need to revise a few more locations in the descriptions of the BSS Color, BSS Color 2 and Co-BF/Co-SR Indication fields.Instruction to editor: Apply the changes marked as [#586] in 11-25/0603r0. |
| 1587 | Jinsoo Choi | 38.3.15.7.2 | 146.39 | Co-SR will be proceeded by a explicit procedure to initiate Co-SR operation based on multi-AP coordination so it's clear whether Co-SR is operating or not. We don't necessarily have to set its status as enabled or disabled and would be good to align with how Co-BF transmission is indicated. | Change "..indicates whether a UHR SU transmission has Co-SR enabled or disabled." to "..indicates whether it is a UHR SU transmission or a DL SU Co-SR transmission" | Accepted.Instruction to editor: Make the proposed change in P156L39. |
| 3305 | Tianyu Wu | 38.3.15.7.2 | 147.08 | The definition of Punctured Channel information is same as EHT case. Refer to 36.3.12.7 instead of repeat the whole page. | Refer this field to what defined in 36.3.12.7 | Rejected.To be self contained, better to keep the full description, similar to other fields that also share same description as in 11be spec, e.g., Bandwidth, UL/DL, TXOP.  |

**Instruction to editor:**

Please apply the changes in the following Table 38-19 to 38.3.15.7.2 in P154-P158 of D0.2.

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| * U-SIG field of a UHR MU PPDU
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| Two parts of U-SIG | Bit | Field | Number of bits[#83] | Description |
| U-SIG-1 | B0–B2 | PHY Version Identifier | 3 | Differentiate between different PHY clauses. Set to 1 for UHR.Values 2–7 are Validate.NOTE— A value of 0 indicates EHT[#2, #314] (see 36.3.12.7.2). |
|  | B3–B5 | Bandwidth | 3 | Set to 0 for 20 MHz.Set to 1 for 40 MHz.Set to 2 for 80 MHz.Set to 3 for 160 MHz.Set to 4 for 320 MHz-1.Set to 5 for 320 MHz-2.See definition of 320 MHz-1 and 320 MHz-2 in 36.3.24.2 (Channelization for 320MHz channel).Values 6 and 7 are Validate. |
|  | B6 | UL/DL | 1 | Indicates whether the PPDU is sent in UL or DL. Set to the TXVECTOR parameter UPLINK\_FLAG.A value of 1 indicates the PPDU is addressed to an AP. A value of 0 indicates the PPDU is addressed to a non-AP STA.  |
|  | B7–B12 | BSS Color | 6 | An identifier of the BSS.Set to the TXVECTOR parameter BSS\_COLOR.If the UL/DL field[#586] is set to 0, the PPDU Type And Compression Mode field[#586] is set to 1 and the Co-BF/Co-SR Indication field[#586] is set to 0, is an identifier of the first coordinated BSS associated with the sharing AP[#1157, #1158, #1347] in a DL SU Co-SR transmission.If the UL/DL field[#586] is set to 0, the PPDU Type And Compression Mode field[#586] is set to 2 and the Co-BF/Co-SR Indication field[#586] is set to 0, is an identifier of the first coordinated BSS associated with the sharing AP[#1157, #1158, #1347] in a DL non-OFDMA Co-BF transmission. |
| B13–B19 | TXOP | 7 | If the TXVECTOR parameter TXOP\_DURATION is UNSPECIFIED, set to 127 to indicate the absence of duration information.If the TXVECTOR parameter TXOP\_DURATION is an integer value, set to a value less than 127 to indicate duration information for NAV setting and protection of the TXOP as follows:If the TXVECTOR parameter TXOP\_DURATION is less than 512, set to 2x**⎣**(TXOP\_DURATION)/8**⎦**.Otherwise, set to 2x**⎣**(TXOP\_DURATION-512)/128**⎦+**1. |
| B20–B25 | BSS Color 2 | 6 | If the UL/DL field[#586] is set to 0, the PPDU Type And Compression Mode field[#586] is set to 1 and the Co-BF/Co-SR Indication field[#586] is set to 0, is an identifier of the second coordinated BSS associated with the shared AP[#1159, #1160] in a DL SU Co-SR transmission. Set to the TXVECTOR parameter BSS\_COLOR\_2.If the UL/DL field[#586] is set to 0, the PPDU Type And Compression Mode field[#586] is set to 2 and the Co-BF/Co-SR Indication field[#586] is set to 0, is an identifier of the second coordinated BSS associated with the shared AP[#1159, #1160] in a DL non-OFDMA Co-BF transmission. Set to the TXVECTOR parameter BSS\_COLOR\_2.Otherwise, B20-B24 are set to all 1s and treat as Disregard. B25 is set to 1 and treat as Validate. |
| U-SIG-2 | B0–B1 | PPDU Type And Compression Mode | 2 | If the UL/DL field is set to 0: A value of 0 indicates a DL OFDMA transmission.A value of 1 indicates a UHR SU transmission or a DL SU Co-SR transmission.A value of 2 indicates a DL non-OFDMA MU-MIMO transmission or a DL non-OFDMA Co-BF transmission.NOTE—[#585]A value of 3 indicates an ELR PPDU. Refer to Table38-22 (U-SIG field of a UHR ELR PPDU).If the UL/DL field is set to 1: A value of 1 indicates a UHR SU transmission.Value[#2701] 2 is Validate.NOTE—A value of 0 indicates a TB PPDU. Refer to Table38-21 (U-SIG field of a UHR TB PPDU). A value of 3 indicates an ELR PPDU. Refer to Table38-22 (U-SIG field of a UHR ELR PPDU).[#3]For further clarifications on all values of this field, refer to Table38-20 (Combination of UL/DL field, PPDU Type And Compression Mode field and B2 of U-SIG-2). |
|  | B2 | Co-BF/Co-SR Indication | 1 | If the UL/DL field[#586] is set to 0 and the PPDU Type And Compression Mode field[#586] is set to 1, indicates whether it is a UHR SU transmission or a DL SU Co-SR transmission[#1587]. Set to the TXVECTOR parameter CoSR\_FLAG.A value of 0 indicates a DL SU Co-SR transmission.A value of 1 indicates a UHR SU transmission.If the UL/DL field[#586] is set to 0 and the PPDU Type And Compression Mode field[#586] is set to 2, indicates whether it is a DL non-OFDMA MU-MIMO transmission or a DL non-OFDMA Co-BF transmission. Set to the TXVECTOR parameter CoBF\_FLAG.A value of 0 indicates a DL non-OFDMA Co-BF transmission.A value of 1 indicates a DL non-OFDMA MU-MIMO transmission.Otherwise, set to 1 and treat as Validate. |
|  | B3–B7 | Punctured Channel Information | 5 | If the PPDU Type And Compression Mode field is set to 1 regardless of the value of the UL/DL field, or the PPDU Type And Compression Mode field is set to 2 and the UL/DL field is 0:Indicates the puncturing information of this non-OFDMA transmission. See Table36-30 (Definition of the Punctured Channel Information field in the U-SIG for an EHT MU PPDU using non-OFDMA transmissions) for the definition. Note that each defined puncturing pattern corresponds to an RU or MRU allocation in the non-OFDMA transmission, as shown in Table36-30 (Definition of the Punctured Channel Information field in the U-SIG for an EHT MU PPDU using non-OFDMA transmissions). Undefined values of this field are Validate.If the PPDU Type And Compression Mode field is set to 0 and the UL/DL field is 0:If the Bandwidth field is set to a value between 2 and 5, which indicates an 80 MHz, 160 MHz or 320 MHz PPDU, then B3–B6 is a 4-bit bitmap that indicates which 20 MHz subchannel is punctured in the 80 MHz frequency subblock where U-SIG processing is performed. The 4-bit bitmap is indexed by the 20 MHz subchannels in ascending order with B3 indicating the lowest frequency 20 MHz subchannel. For each of the bits B3–B6, a value of 0 indicates that the corresponding 20 MHz channel is punctured, and a value of 1 is used otherwise. The following allowed punctured patterns (B3–B6) are defined for an 80 MHz frequency subblock: 1111 (no puncturing), 0111, 1011, 1101, 1110, 0011, 1100, and 1001. Any field values other than the allowed punctured patterns are Validate. Field value may be varied from one 80 MHz to the other. If the Bandwidth field is set to 0 or 1, which indicates a 20/40 MHz PPDU, B3–B6 are set to all 1s. Other values are Validate.B7 is set to 1 and Disregard.For further information on punctured channels, refer to 36.3.12.11 (EHT preamble of preamble punctured EHT MU PPDU). |
|  | B8 | Validate | 1 | Set to 1 and treat as Validate.  |
|  | B9–B10 | UHR-SIG MCS | 2 | Indicates the MCS used for modulating the UHR-SIG field.Set to 0 for UHR-MCS 0.Set to 1 for UHR-MCS 1.Set to 2 for UHR-MCS 3.Set to 3 for UHR-MCS 15. |
|  | B11–B15 | Number Of UHR-SIG Symbols | 5 | Indicates the number of UHR-SIG symbols. Set to a value that is the number of UHR-SIG symbols minus 1. |
|  | B16–B19 | CRC | 4 | CRC for bits 0–41 of the U-SIG field. Bits 0–41 of the U-SIG field correspond to bits 0–25 of the U-SIG-1 field followed by bits 0–15 of the U-SIG-2 field. The CRC computation uses the same polynomial as that in 27.3.11.7.3 (CRC computation). |
|  | B20–B25 | Tail | 6 | Used to terminate the trellis of the convolutional decoder. Set to 0. |