IEEE P802.11
Wireless LANs

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| CC50 CR for UHR-SIG General and Content Channels |
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Abstract

This submission contains the proposed comment resolutions of CIDs in 25/0296 IEEE 802.11bn CC50 comments on D0.1.

The only comment for subclause 38.3.15.9.1 (General) and 36.3.15.9.2 (UHR-SIG content channels) is resolved.

Resolved CID: **1635.**

Revision Notes

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| R0 | Initial revision |

## CID 1635

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| --- | --- | --- | --- | --- | --- |
| CID | Page.Line | Clause Number | Comment | Proposed Change | Resolution |
| 1635 | 161.56 | 38.3.15.9 | Define general and UHR-SIG content channels for UHR-SIG, at least refer to EHT-SIG | as in comment | REVISED.The corresponding paragraphs are added.***Instructions to the editor:*** **Please make the changes as shown under CID 1635 in 11-25/0582r0.** |

***Instructions to the editor: please make the following changes to Page 171, Line 51 in the subclause 38.3.15.9 (UHR-SIG) in D0.2 as shown below:***

The text in 802.11bn D0.2:

**38.3.15.9 UHR-SIG (#1635)**

**38.3.15.9.1 General**

The UHR-SIG field provides additional signaling to the U-SIG field for STAs to interpret a UHR MU PPDU. In a UHR MU PPDU, the UHR-SIG field contains U-SIG overflow bits that are common to all users. The UHR-SIG field further contains resource allocation information to allow the STAs to look up the corresponding resources to be used in the UHR modulated fields of the PPDU. The integer fields of the UHR-SIG field are transmitted in unsigned binary format, LSB first, where the LSB is in the lowest numbered bit position.

**38.3.15.9.2 UHR-SIG content channels**

The EHT-SIG field of a 20 MHz UHR MU PPDU contains one UHR-SIG content channel. For OFDMA transmission, non-OFDMA transmission to multiple users, and non-OFDMA Co-BF transmission, the UHR-SIG field of a UHR MU PPDU that is 40 MHz or 80 MHz contains two UHR-SIG content channels. For OFDMA transmission, non-OFDMA transmission to multiple users, and non-OFDMA Co-BF transmission, the UHR-SIG field of an UHR MU PPDU that is 160 MHz or wider contains two UHR-SIG content channels per 80 MHz frequency subblock. The UHR-SIG content channels per 80 MHz frequency subblock are allowed to carry different information when UHR MU PPDU bandwidth for OFDMA transmission is wider than 80 MHz. The UHR-SIG field of an UHR SU transmission (including SU transmission and SU Co-SR transmission)contains one UHR-SIG content channel and it is duplicated in each non-punctured 20 MHz subchannel when the UHR PPDU is equal to or wider than 40 MHz.

The figures of content channel formats described in EHT-SIG also apply to UHR-SIG (See 36.3.12.8.2 (EHT-SIG content channels)). Note that there is no UHR sounding NDP. For a UHR MU PPDU, each UHR-SIG content channel consists of a Common field followed by a User Specific field.

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Discussion (related text in 802.11be):

**36.3.12.8 EHT-SIG**

**36.3.12.8.1 General**

The EHT-SIG field provides additional signaling to the U-SIG field for STAs to interpret an EHT MU PPDU. In an EHT MU PPDU, the EHT-SIG field contains U-SIG overflow bits that are common to all users. The EHT-SIG field further contains resource allocation information to allow the STAs to look up the corresponding resources to be used in the EHT modulated fields of the PPDU. The integer fields of the EHTSIG field are transmitted in unsigned binary format, LSB first, where the LSB is in the lowest numbered bit position.

**36.3.12.8.2 EHT-SIG content channels**

The EHT-SIG field of a 20 MHz EHT MU PPDU contains one EHT-SIG content channel. For OFDMA transmission and for non-OFDMA transmission to multiple users, the EHT-SIG field of an EHT MU PPDU that is 40 MHz or 80 MHz contains two EHT-SIG content channels. For OFDMA transmission and for nonOFDMA transmission to multiple users, the EHT-SIG field of an EHT MU PPDU that is 160 MHz or wider contains two EHT-SIG content channels per 80 MHz frequency subblock. The EHT-SIG content channels per 80 MHz frequency subblock are allowed to carry different information when EHT MU PPDU bandwidth for OFDMA transmission is wider than 80 MHz. The EHT-SIG field of an EHT SU transmission or the EHT-SIG field of an EHT sounding NDP contains one EHT-SIG content channel and it is duplicated in each nonpunctured 20 MHz subchannel when the EHT PPDU is equal to or wider than 40 MHz.

The EHT-SIG content channel format is shown in Figure 36-31 (EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 20/40/80 MHz), Figure 36-32 (EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 160 MHz), Figure 36-33 (EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 320 MHz), Figure 36-34 (EHT-SIG content channel format for an EHT SU transmission), Figure 36-35 (EHT-SIG content channel format for EHT sounding NDP), and Figure 36-36 (EHT-SIG content channel format for non-OFDMA transmission to multiple users). For an EHT MU PPDU except for an EHT sounding NDP, each EHT-SIG content channel consists of a Common field followed by a User Specific field. For an EHT sounding NDP, the User Specific field is not present and the EHT-SIG content channel consists of only a Common field.



**Figure 36-31—EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 20/40/80 MHz**



**Figure 36-32—EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 160 MHz**



**Figure 36-33—EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 320 MHz**

For OFDMA transmission, the Common field of an EHT-SIG content channel contains information regarding the resource unit allocation such as the RU assignment to be used in the EHT modulated fields of the PPDU, the RUs allocated for MU-MIMO and the number of users in MU-MIMO allocations. The Common field for OFDMA transmission is defined in 36.3.12.8.3 (Common field for OFDMA transmission). The Common field is organized into one or two common encoding blocks.

In non-OFDMA transmission, the Common field of the EHT-SIG content channel does not contain the RU Allocation subfield. For non-OFDMA transmission except for EHT sounding NDP, the Common field of the EHT-SIG content channel is encoded together with the first User field and this encoding block contains a CRC and Tail, referred to as a common encoding block.

For EHT sounding NDP, the Common field of the EHT-SIG content channel consists of U-SIG overflow information, CRC, and Tail. The Common field for non-OFDMA transmission is defined in 36.3.12.8.4 (Common field for non-OFDMA transmission). The Common field is organized into one common encoding block.

The union of the User Specific fields in the EHT-SIG content channels contains information for all users in the PPDU on how to decode their payload. As shown in Figure 36-31 (EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 20/40/80 MHz), Figure 36-32 (EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 160 MHz), and Figure 36-33 (EHT-SIG content channel format for OFDMA transmission if bandwidth is equal to 320 MHz), the User Specific field is organized into user encoding blocks that in turn contain User fields in OFDMA transmission. As shown in Figure 36-34 (EHT-SIG content channel format for an EHT SU transmission), the User Specific field in an EHT SU transmission contains one User field but there exists no user encoding block. As shown in Figure 36-35 (EHT-SIG content channel format for EHT sounding NDP), EHT-SIG content channel for EHT sounding NDP does not contain the User Specific field. As shown in Figure 36-36 (EHT-SIG content channel format for non-OFDMA transmission to multiple users), in the non-OFDMA transmission to multiple users, the User Specific field is organized into user encoding blocks that in turn contain User fields except for the first User field. The contents of the User Specific field are described in 36.3.12.8.5 (User Specific field).



**Figure 36-34—EHT-SIG content channel format for an EHT SU transmission**



**Figure 36-35—EHT-SIG content channel format for EHT sounding NDP**

Examples of EHT-SIG are shown in Annex Z.