IEEE P802.11  
Wireless LANs

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| **Resolutions for Miscellaneous CIDs** |
| **Date:** 2019-1-14 |

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Abstract

This submission proposes resolution for the following 9 CIDs:

* 15000, 16130
* 15001, 16100, 16101, 16102, 16918
* 15929, 16170

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGax Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGax Editor: Editing instructions preceded by “TGax Editor” are instructions to the TGax editor to modify existing material in the TGax draft. As a result of adopting the changes, the TGax editor will execute the instructions rather than copy them to the TGax Draft.***

# CID 15000 and 16130

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 15000 | Abhishek Patil | 36.60 | It is possible that a STA is in coverage range of an OBSS AP that has assigned the same AID value to one of it's associated STA. Therefore, "STA-ID in HE-SIG-B" is not sufficient to identify the desired STA. | STA-ID should be referred to in conjunction with a particular BSS color to identify the user in a particular BSS. | Revised.  Agreed in principle.  CID 15000 is resolved by adopting the proposed change of CID 16130. |
| 16130 | Mark RISON | 36.60 | "user: An individual station or group of stations (STAs) identified by a single receiver address (RA) or a STA-ID in HE-SIG-B in the context of single-user multiple input, multiple output (SU-MIMO), multi-user multiple input, multiple output (MU-MIMO), or orthogonal frequency division multiple access (OFDMA)." has confusing precedence. Also it omits SISO users and the signalling for users for VHT DL MU-MIMO, which does not use a STA-ID | Change the definition to "An individual station or group of stations (STAs) using a single identifier, in the context of single input single output (SISO), single-user multiple input, multiple output (SU-MIMO), multi-user  multiple input, multiple output (MU-MIMO), or orthogonal frequency division multiple access (OFDMA)." | Accepted. |
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# CID 15001, 16100, 16101, 16102 and 16918

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 15001 | Abhishek Patil | 37.54 | Definition of HE ER SU PHY appears twice | Consolidate the two definitions. | Revised.  Agreed in principle.  TGax Editor: Please implement the proposed changes in 11-18/1807r5 for CID 15001. |
| 16100 | Mark RISON | 37.00 | There are two definitions of "high efficiency (HE) extended range (ER) single user (SU) physical layer (PHY) protocol data unit (PPDU)" | Delete the first | Revised.  Agreed in principle.  TGax Editor: Please implement the proposed changes in 11-18/1807r5 for CID 16100. |
| 16101 | Mark RISON | 37.00 | There are two definitions of "high efficiency (HE) extended range (ER) single user (SU) physical layer (PHY) protocol data unit (PPDU)" | Delete the second | Revised.  Agreed in principle.  TGax Editor: Please implement the proposed changes in 11-18/1807r5 for CID 16101. |
| 16102 | Mark RISON | 37.00 | There are two definitions of "high efficiency (HE) extended range (ER) single user (SU) physical layer (PHY) protocol data unit (PPDU)" | Delete the one that does not match the form used for other PPDUs | Revised.  Agreed in principle.  TGax Editor: Please implement the proposed changes in 11-18/1807r5 for CID 16102. |
| 16918 | Tomoko Adachi | 37.00 | There are two similar definitions, one is for "high efficiency (HE) extended range (ER) single user (SU) physical layer (PHY) protocol data unit (PPDU)" starting from line 54 and the other is for "high efficiency (HE) extended range (ER) single-user (SU) physical layer (PHY) protocol data unit (PPDU)" starting from line 59. The second term is correct, as a hypen should be needed between singla and user. But for the sentence for the definition, the first one aligns with other definitions in the baseline. | Delete the second definition starting from pp.ll 37.59 and add "-" between "single" and "user" in pp.ll 37.54. | Revised.  Agreed in principle.  TGax Editor: Please implement the proposed changes in 11-18/1807r5 for CID 16918. |

**Discussion**

None

**Proposed text changes Re: CID 15001, 16100, 16101, 16102 and 16918**

* Definitions, acronyms, and abbreviations
* Definitions specific to IEEE 802.11

***TGax Editor: Delete the first definition of the HE ER SU PPDU as shown below:***

(#15001, #16100, #16101, #16102, #16918)**high efficiency (HE) extended range (ER) single-user (SU) physical layer (PHY) protocol data unit (PPDU):** An HE PPDU transmitted with HE ER SU PPDU format that carries one PHY service data unit (PSDU) for one user.

# CID 15929, 16170

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| **CID** | **Commenter** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 15929 | Mark Hamilton | 33.10 | The intention seems to be that A-MSDUs can now be fragmented. There are assumptions in legacy MAC/PHY that will likely break (because the baseline text now assumes all A-MSDUs could be a fragment unless stated otherwise, so it needs to be clearly stated otherwise where things will break), and there are other places in the text that are inconsistent with this. | Add to the definition of GCR frame, that it must be an unfragmented A-MSDU. Correct the statement in the Note following the defintion of MMPDU that says, "An A-MSDU is trasmitted in one MPDU." In the first sentence of 10.4, add that the MAC may fragment and reassemble A-MSDUs, also, (but only if it is HE and the peer is HE and both support A-MSDU Fragmentation). Clarify the extent of the Editor's instruction at P109.6. Does this apply to \_every\_ occurance of A-MSDU in the entire rest of the Standard? (Surely, not.) There are probably more examples. | Revised.  Agreed in principle.  TGax Editor: Please implement the proposed changes in 11-18/1807r5 for CID 15929. |
| 16170 | Mark RISON | 33.10 | The baseline definition "aggregate medium access control (MAC) service data unit (A-MSDU): A structure that contains one or more MSDUs and is transported within a single (unfragmented) data medium access control (MAC) protocol data unit (MPDU)." is no longer true with dynamic fragmentation. | Extend the definition to allow for dynamic fragmentation. | Revised.  Agreed in principle.  The suggested change has been already made in the D3.2. |
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##### Discussion

This CID makes several points.

1. Clarification to the definition of CGR frame that it must be an unfragmented A-MSDU:

Since only the individually addressed MSDU or MMPDU can be fragmented as described 802.11REVmd D2.0 clause 10.4, the fragmentation is not applied to the GCR frames. Therefore, current definition of GCR frame will be good enough.

1. Correction of the NOTE under the definition of MMPDU:

Agreed. The NOTE under the definition of MMPDU is revised.

1. Additional text in 10.4 - the MAC may fragment and reassemble A-MSDUs, also, (but only if it is HE and the peer is HE and both support A-MSDU Fragmentation).

Agreed. Additional text is proposed.

1. Editing instruction just before the 9.3.3.

* Need more discussion.

**Proposed Text Updates: CID 15929**

* Definitions specific to IEEE 802.11

**medium access control (MAC) management protocol data unit (MMPDU):** The unit of data exchanged between two peer MAC entities, using services of the physical layer (PHY), to implement the MAC management protocol. The MMPDU is transported in one or more Management frames. The MMPDU might include a Mesh Control field or management message integrity code element (Management MIC element), but does not include a MAC header, a frame check sequence (FCS), or any other security encapsulation overhead.

* The MMPDU occupies a position in the management plane similar to that of the MAC service data unit (MSDU) in the data plane. An MSDU, A-MSDU (#15929) or MMPDU is transmitted in one or more MAC protocol data units (MPDUs) (with the Type field set to Data, Data or Management, respectively). An MSDU can be carried in an aggregate MAC service data unit (A‑MSDU). (#15929) An MSDU, A‑MSDU, or MMPDU can be carried (in an MPDU) in an A-MPDU.

TGax editor: In this subclause and until the end of the combination of this amendment and the baseline, please change "fragment of an MSDU" to "fragment of an MSDU or an A-MSDU"

TGax editor: In this subclause and until the end of the combination of this amendment and the baseline, please change "MSDU (or fragment thereof) or A-MSDU" to "MSDU (or fragment thereof) or A-MSDU (or fragment thereof)"

TGax editor: In this subclause and until the end of the combination of this amendment and the baseline, please change "fragmented MSDU" to "fragmented MSDU or A-MSDU"

* Management frames
* MSDU and MMPDU fragmentation(#1070)(11ai)

***TGax Editor: Modify the first paragraph of the subclause 10.4 as follows:***

The MAC may fragment and reassemble MSDUs or MMPDUs that are carried in individually addressed MPDUs. The fragmentation and defragmentation mechanisms allow for fragment retransmission. An HE MAC may fragment and reassemble A-MSDUs if supported by the receipient (see 27.3) (#15929).