IEEE P802.11  
Wireless LANs

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| SB0 General Clause 3 CIDs | | | | |
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Abstract

**Addressing CIDs** 10143, 10144, 10063, 10064, 10228, 10217, 10219, 10233, 10235, 10239, 10240, 10218 (Clause 3) and 10032 (Clause 7) **of TGac SB0.**

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| **CID** | **Commenter** | **Clause**  **Page** | | **Comment** | | **Proposed Change** | **Resolution** |
| 10143 | Adachi, Tomoko | 3.1  2.10 | | The definition of an A-MPDU subframe does not contain the pad field which is included Fig.8-504. | | Add that it optionally contains a pad field. | Revised. See the editing instruction under CID 10143 in <this document>. |
| 10228 | Hunter, David | 3.1  2.10 | | "A-MPDU subframe" is formally defined in 8.6.1. The purpose of clause 3 is to define terms that are used generally in the document, not to redefine frame names. | | Delete this definition. | Reject. This definition introduces terminology used in multiple clauses. Other similar terms such as MPDU also appear in clause 3 even though they are formally defined elsewhere. |
| **Discussion:** CID 10143 and 10228 refer to the following definition in Clause 3:  **aggregate medium access control (MAC) protocol data unit (A-MPDU) subframe:** A portion of an AMPDU containing a delimiter and optionally containing an associated MPDU.  Regarding CID 10228, it seems a degenaral definition of A-MPDU is useful in Caluse 3.1 as a quick refrence.  **Editing instruction for CID 10143:**  ***TGac Editor, cahneg the following defenition in Clause 3.1:***  **aggregate medium access control (MAC) protocol data unit (A-MPDU) subframe:** A portion of an AMPDU containing a delimiter and optionally containing an associated MPDU plus any necessary padding. | | | | | | | |
| 10144 | Adachi, Tomoko | 3.1  2.32 | The definition of an MU PPDU allows a single STA to be the receiver. But reading the definition of MU-MIMO, which is a larger concept, it seems to be restricted for multiple STAs, more than one. The definition of DL-MU-MIMO can be also read to be restricted for multiple STAs, not for a single STA. Furthermore, is it allowed to carry a same (single) PSDU to multiple STAs? If so, the case should be differentiated with the case using a PSDU using a group address for the RA. | | | Change the definition to have consistency with the definition of MU-MIMO. Reexamine if it is allowed to carry a same PSDU to multiple STAs and clarify the definition from a group RA case if necessary. | Reject. There is no inconsistency. The terms are correct as specified, provided that the transmission of an MU PPDU to a single receiver is considered to be an SU transmission.  It is also possible to send the same PSDU to multiple STAs by appropriately setting the subfields in VHT-SIG-A. This case is no different from normal MU-MIMO operation explained in the spec except that the content of individual PSDUs are the same. It is left to implementation to decide on the most efficient way to send the same PSDU to multiple STAs. |
| **Discussion:** CID 10144 refers to the following definition in Clause 3:  **multi-user (MU) physical layer protocol data unit (PPDU)**: A PPDU that carries one or more PSDUs for one or more STAs using the DL-MU-MIMO technique.  There is no inconsistency. The terms are correct as specified, provided that the transmission of an MU PPDU to a single receiver is considered to be an SU transmission.  It is also possible to send the same PSDU to multiple STAs by appropriately setting the subfields in VHT-SIG-A. This case is no different from normal MU-MIMO operation explained in the spec except that the content of individual PSDUs are the same. It is left to implementation to decide on the most efficient way to send the same PSDU to multiple STAs. | | | | | | | |
| 10233 | Hunter, David | 3.2  4.07 | Need a definition of "non-HT". Specifically, does "non-HT" include VHT? That is, is "non-HT" equivlent to "not HT and not VHT", or is it equivalent to "not HT, but perhaps VHT"? | | Define "non-HT": this definition is crucial to a large number of the statements in this document. | | Reject. non-HT is already defined in 11acD5.0, page 6, line 26. |
| 10063 | Schelstraete, Sigurd | 3.2  6.26 | Definition of non-HT isn't much of a definition | | Essentially the definition states it is "something, unless it isn't". Is there really a need for the second part of the definition ("unless explicitly stated or defined otherwise")? If so, could that be captured better? | | Revised: see changes in <this doc> |
| **Discussion:** CID 10063 refers to the following definition:  **non-high throughput (non-HT)**: neither high throughput (HT) nor very high throughput (VHT), unless explicitly stated or defined otherwise.  It is not clear to me whether the second part is needed. I agree with the commenter to remove the second part.  **Editing instruction for CID 10063:**  ***TGac Editor, add the following definition in clause 3.1:***  **non-high throughput (non-HT)**: neither high throughput (HT) nor very high throughput (VHT). | | | | | | | |
| 10064 | Schelstraete, Sigurd | 3.3  8.06 | The modified definition for PPDU (physical layer protocol data unit) currently only applies to 802.11ac. How do we reconcile that with the fact that this definition goes into the general sections of the document, where PPDU still means "PLCP protocol data unit"? | | Change definition of PPDU: PPDU: PLCP protocol data unit or physical layer protocol data unit (when used in Clause 22) | | Revised: 11ac already deleted PLCP/PMD interface. Other PHYs in the baseline still have this interface. Until 11ac is rolled into 11mc the definition of PPDU needs to cover PHY PDU and PLCP PDU. Currently in 802.11mc, PLCP, PMD interface are being deleted  Change the acronym of PPDU  PPDU: PLCP protocol data unit or physical layer protocol data unit |
| **Chaanges:**  PPDU ~~PLCP~~ PLCP protocol data unit or physical layer protocol data unit. | | | | | | | |
| 10217 | Hamilton, Mark | 3.2  4.51 | MMPDU definition should be with MPDU, MSDU, A-MPDU, etc., in subclause 3.1. | | Remove the editing instructions to move MMPDU's definition to subclause 3.2. | | Reject. The underlined text in the cited definition is specific to 802.11 and therefore unsuitable for inclusion in 3.1. |
| 10218 | Hamilton, Mark | 3.2  4.56 | This added text is helpful, but it is not definitional. | | Keep the added text, but move it to a section where introductory/explanatory text is appropriate, maybe subclause 5.1 or 6.1. | | Reject: The cited text doesn’t fit in clause 5.1 since clause 5.1 is concerned with MAC services not mechanisms. The cited text doesn’t fit in clause 6.1 since clause 6.1 is concerned about the relations between architecture entities. |
| **Discussion:** CID 10217 and 10218 refer to the following definition:  ***“Change the definition for MMPDU as follows and move it from 3.1 to 3.2:***  **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 MPDUs. The MMPDU might include a Mesh Control field or Management MIC element, but does not include a MAC header, an FCS or any other security encapsulation overhead.  NOTE—The MMPDU occupies a position in the management plane similar to that of the MSDU in the data plane. The MMPDU can be fragmented (under certain circumstances) and in that case is carried in multiple management MPDUs. This illustrates the similarity of the MMPDU to the MSDU. ***”***  The cited text doesn’t fit in clause 5.1 since clause 5.1 is concerned with MAC services not mechanisms. The cited text doesn’t fit in clause 6.1 since clause 6.1 is concerned about the relations between architecture entities. | | | | | | | |
| 10219 | Hamilton, Mark | 3.2  7.16 | When is a "group of STAs identified by a single RA"? | | Clarify when this would be applicable, or remove from this definition | | Revised. In the definition group of STAs identified by a single RA referes to multicast group or all STAs in the BSS in the case of broadcast. However the definition doesn’t match the capability of the protocol to transmit group addressed frames in an MU PPDU. So we propose to simplify the definition to read:  user: A recipient of an A-MPDU in an MU PPDU. |
| **Discussion:** CID 10219 refers to the following definition:  **user**: An individual or group of STAs identified by a single RA in the context of single user (SU) multiple input, multiple output (MIMO) or a single STA in the context of multi-user (MU) MIMO.  **Proposed changes**  **user**: A recipient of an A-MPDU in an MU PPDU. | | | | | | | |
| 10235 | Hunter, David | 3.2  4.48 | Transmit power is a concept that is used in many locations in the standard, including frequent references to TPC. Deleting this definition leaves an important and frequently used term undefined, which is unacceptable in an IEEE standard. | | Either replace this definition with a definition of "transmit power" that is acceptable both in 11ac and the rest of 802.11, or limit this definition's use to non-VHT applications (if TPC is not allowed in VHT STAs). | | Revised: restore the original definition. |
| **Discussion:** CID 10235 refers to the following definition that is now deleted in D5.0:  **transmit power**: The effective isotropic radiated power (EIRP) when referring to the operation of an orthogonal frequency division multiplexing (OFDM) physical layer (PHY) in a country where so regulated.  Transmit power is a well-known industry term. The definition in the baseline is not accurate because it is specific to EIRP and some regulatory domains use conducted power. | | | | | | | |
| 10239 | Hunter, David | 3.2  5.07 | A "beamforee' is defined as a "beamformee". Very useful. Also, the "as x, as y" form is confusing at best and a definition is not an index , so reference pointers should not be included. | | Replace "beamformee, as described ... beamforming).F44" with "receiver." | | Rjected: Beamformee is defined on page 7 in the baseline .  Clause 3.2 is specific to 802.11 and can contain references. These references help disambiguate between HT beamformee and VHT beamformee |
| **Discussion:** It seemsCID 10239 refers to the following definition in page 6 line 7 (not page 5) in D5.0:  **high throughput (HT) beamformee**: An HT station (STA) that receives an HT physical layer protocol data unit (PPDU) that was transmitted using a beamforming steering matrix and that supports an HT transmit beamforming mechanism as beamformee, as described in 9.29.2 (HT tTransmit beamforming with implicit feedback) or 9.29.3 (Explicit feedback beamforming). | | | | | | | |
| 10240 | Hunter, David | 3.2  6.51 | If this "can" does not mean "may", then this statement is completely false. Physically and logically there can, of course, be multiple things identified as "primary AC" at the same time. So this statement is trying to sneak in a requirement -- that only one primary AC is \_permitted\_ at a time. | | Replace this normative use of "can be" with "is", so this statement is only a report that there is only one primary AC at a time. (Though this statement really isn't relevant to the definition of primary AC, so it would be better to delete it.) | | Revised. Agree with the commenter to remove the second sentence. |
| **Discussion:** CID 10240 refers to the following definition in D5.0:  **primary access category (AC):** The access category (AC) associated with the enhanced distributed channel access function (EDCAF) that gains channel access. There can be only one primary AC at a time.  By definition there is one AC that gains channel access. So agree with the commenter remove the second sentence in above definition.  **Editing instruction for CID 10240:**  ***TGac Editor, add the following definition in caluse 3.2:***  **primary access category (AC):** The access category (AC) associated with the enhanced distributed channel access function (EDCAF) that gains channel access. | | | | | | | |

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| 10032 | Iwaoka, Mitsuru | 7.3.5.6.3  30.31 | In the second bullet, conditions of dot11MgmtOptionTODImplemented and dot11MgmtOptionTimingMsmtActivated are missing. | "Change second bullet as - When transmitting a non-VHT PPDU, the PLCP has issued PMD.TXSTATUS.request primitive if dot11MgmtOptionTODImplemented and dot11MgmtOptionTODActivated are true or if dot11MgmtOptionTimingMsmtActivated is true.  And insert 3rd bullet as - When transmitting a non-VHT PPDU, If the TXVECTOR parameter TIME\_OF\_DEPARTURE\_REQUESTED in the PHY-TXSTART.request(TXVECTOR) primitive is true." | Rejected:  The cited material has not been modified by 802.11ac except to exclude VHT. Hence the requested material is out of scope of 802.11ac |
| **Discussion:** CID 10032 refers to the following in D5.0:  **7.3.5.6 PHY-TXSTART.confirm**  **7.3.5.6.3 When generated**  This primitive is issued by the PHY to the MAC entity once all of the following conditions are met:  — The PHY has received a PHY-TXSTART.request primitive from the MAC entity.  — When transmitting a non-VHT PPDU, the PLCP has issued PMD.TXSTATUS.request primitive if dot11MgmtOptionTODActivated is true and the TXVECTOR parameter TIME\_OF\_DEPARTURE\_REQUESTED in the PHY-TXSTART.request(TXVECTOR) primitive is true.  — The PHY is ready to begin accepting outgoing data octets from the MAC. | | | | | |