IEEE P802.11  
Wireless LANs

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| Resolution of multiple LB239 CIDs | | | | |
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Abstract

Resolution of CIDs: 4215, 4230, 4257, 4280, 4291, 4295, 4234, 4346, 4348, 4350, 4372, 4428, 4435, 4436, 4439, 4443, 4444, 4445, 4446, 4447, 4452, 4453, 4454, 4455, 4463

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** | **Comment Group** |
| 4215 | 25.27 | 4.9.5 | The statement that STAs using co-channel coordinated management operation can share the same PHY, antenna or DMG antenna, immediately following the statement that each STA can have its own PHY and MAC sublayer, is confusing. It would be clearer if the specification simply stated that there is a choice of STA configuration for co-channel coordinated management operation. Also, it is confusing to state that the STAs can share an antenna or DMG antenna, when the proceeding sentence states that each STA is associated with a different antenna or DMG antenna configuration. | Change: "Each STA can have its own PHY and MAC sublayer for channel access and MPDU processing. The STAs using co-channel coordinated management operation can share the same PHY, antenna or DMG antenna." to: "Each STA can have its own PHY and MAC sublayer for channel access and MPDU processing or each STA can its own MAC sublayer and share a PHY sublayer with other co-channel STAs in the device." | **Revised**  Remove the sentence “The STAs using co-channel coordinated management operation can share the same PHY, antenna or DMG antenna.” | CME |
| 4230 | 24.10 | 4.3.22 | Sentence reads: "A DMG STA does not use any of the following: HCCA, power save multi-poll (PSMP), DLS, TDLS, HT-11 delayed block ack, GCR." How does DMG/EDMG STA enable STA to STA communication? To form distribution network, or allow STA-STA direct link communication, there should be a procedure to set up the link. | Please describe how the STA-STA communication can be initiated with DMG/EDMG STA, i.e., discovery of the STA, authentication, and then channel .access. | **Reject**  The relevant services are introduced in 4.7 “In 4.3.2 (The independent BSS (IBSS)) the concept of the IBSS LAN was introduced, and in 4.3.3 (The personal BSS (PBSS)) the concept of the PBSS LAN was introduced. In an IBSS or PBSS, a STA  communicates directly with one or more other STAs.” The details are specified in the clauses 10, 11, and 12. | Channel access |
| 4257 | 107.09 | 9.4.2.127.7 | There is no field description for 'TDD synchronization Mode' | add field description | **Reject**  It is defined in the page 109 lines 28, 29 | Capabilities |
| 4280 | 349.05 | 11.1.7 | "A STA with dot11DMGSyncModeActivated set to true shall not update the STA's TSF timer based on the Timestamp field of a received DMG Beacon or Announce frame"  But a non-AP STA (dot11DMGSyncModeActivated set to true) still needs to update its TSF timer from AP first time when associated to make sure TSF timer at TBTT is multiple of BIs, or whenever AP changes BI | add exceptions to the rule such that non-AP STA's TSF timer at TBTT has the right value | **Reject**  As already stated, “The following rules apply to the communication between an AP or PCP and an associated non-AP and non- PCP STA”  The STA shall update the TSF time to be in synch with TBTT before association. Once associated it gets the TDD time synchronisation. | Synchronization |
| 4291 | 25.28 | 4.9.5 | "The STAs using co-channel coordinated management operation can share the same PHY, antenna or DMG antenna". If they share PHY-layer aspects, there needs to be coordination between the multiple MACs trying to access the same PHY or same antennas. Where is this described? | Such sharing needs definition of facilities to support the coordination. | **Revised**  Remove the sentence | CME |
| 4295 | 26.02 | 4.9.5 | Figure 1 is an example of a reference mode for co-channel coordinated management operation. There should be other cases where the PHY, authenticator,.. Are shared between the two STAs | Consider changing the title of the figure to "Example reference model for co-channel coordinated management operation" | **Reject**  The reference model belongs to the same class of other reference models in clause 4.9. No one is mentioned as an example | CME |
| 4324 | 235.30 | 10.28.6 | "The protection mechanism may not be used if all PPDUs in the obtained TXOP are 30 transmitted by MCS 0." | Please clarify. Does this mean that no matter how long the TXOP is, if we transmit with MCS 0, we do not have to use protection? Why ? | **Reject**  The rule is clear and is not related to the TXOP length limitation rules that are defined separately. Each one of the frames does the same work as the frames used for protection. | Protection |
| 4346 | 26.00 | 4.95 | Figure 1 the word "PHY" should be changed to "PHY Sublayer | As in comment | **Reject**  It is convenient terminology in the reference models in the subclause 4.9 | CME |
| 4348 | 26.00 | 4.95 | Figure 1 the "PHY Management Entity" should be changed to "PHY Sublayer Management Entity" | As in comment | **Reject**  It is convenient terminology in the basic spec | CME |
| 4350 | 26.00 | 4.95 | Figure 1, It is unclear from the figure if (1) STA1 and STA2 has a same SME that control both STA or (2) if there is additional layer called Co-Channel Coordinated Management that interfaces and control each of the SMEs ? | In case option (2) Add interface between SME and the Co-channel.... In the figure (should it be the "coordinated management entity" ? | **Reject**  Figure 1 use the same notation as other figures in the subclause 4.9 of the basic spec. The local SMEs and the common part are presented | CME |
| 4372 | 86.03 | 9.3.1.8.8 | below text is not accurate since An A-MPDU does not have an ack policy  All-ack context: Sent as a response to an A-MPDU that solicits an immediate response, or solicits a response to an A-MPDU with ack policy set to Scheduled Ack, and all MPDUs for a given TID and contained in the A-MPDU are received successfully. | Change to the following:  All-ack context: Sent as a response to an A-MPDU that contains MPDUs with Ack Policy set to Normal Ack or Scheduled Ack, and all MPDUs for a given TID that contained in the A-MPDU are received successfully. | **Accept** | Aggr/block ack |
| 4428 | 346.23 | 11.1.3.3.4 | Due to that the Beacon under the TDD channel access operation is not sent in the BTI, a duration of the beacon frame shall follow the rule of the reserved value when transmitted in the TDD slot | In reference to (IEEE P802.11-REVmd/D2.1, February 2019) 9.3.4.2 DMG Beacon P880L9 Modify: When the beacon is sent out of the TDD slot, the Duration field is set to the time remaining until the end of the beacon transmission interval (BTI). When the beacon is sent in the TDD slot the Duration field is set to - use the notation in Table 9-9--Duration/ID field encoding: Bits 0-13 set to 0, Bit14 and Bit 15 set to 1, Usage set to In the simplex TDD slot | **Revised**  *Propose to implement the rule of the Beacon duration field in the subclause 11.1.3.3.4 Beacon generation under TDD channel access.*  At end of P346 append new sentence  - The Duration field in DMG Beacon frames shall be set as follows: bits 0-13 set to 0, and bit 14 and bit 15 set to 1, and | Synchronization |
| 4435 | 213.17 | 10.13.2 | "A STA indicates in the Maximum A-MPDU Length Exponent field in its EDMG Capabilities element the maximum length of the A-MPDU pre-EOF padding that it can receive in an EDMG PPDU." The condition of pre-EOF" is not relevant for EDMG PPDU. | Remove "pre-EOF" from the sentence | **Revised**  Agree in principal Remove the “pre-EOF padding” | Aggr/block ack |
| 4436 | 210.07 | 10.6.7.2 | "...In case the PPDU containing the Ack frame or a BlockAck frame carries a control trailer that provides spatial stream feedback, it shall be sent using non-EDMG duplicate mode..." The spatial stream feedback is not limited to channel bonding/aggregation and may be useful for single 2.16GHz channel as well, hence mandating of non-EDMG duplicate mode is irrelevant. | Replace "it shall be sent using non-EDMG duplicate mode" by "it shall be transmitted using MCS 0" | **Accept** | Multirate |
| 4439 | 344.41 | 10.73.2 | "The recipient of an A-MPDU contained in an EDMG MU-MIMO PPDU shall set the AckType subfield to 1 and the TID field of each Per-TID Info subfield to the TID value of the MPDU with no block ack agreement contained in the EDMG MU MIMO PPDU." The rule in the sentence is duplication of the rule in the previous sentence. | Remove the sentence | **Accept** | Aggr/block ack |
| 4443 | 344.06 | 10.73.1 | The text that starts with "When a multi-TID A-MPDU is sent in response ..." and ends with "... MPDU does not cause the STA to exceed the current SP duration" belongs to the rules for the RD responder and shall be moved to the appropriated place. | Move the text to the subclause 10.30.4 Rules for RD responder and place it starting from P238L21 after the paragraph: "A Multi-TID BlockAck frame is used to acknowledge the MPDUs in a multi-TID A-MPDU. The rules for Multi-TID BlockAck are defined in 10.73." | **Accept** | Aggr/block ack |
| 4444 | 343.20 | 10.73.1 | It is not defined how the EDMG Multi-TID Aggregation Support subfield limits number of different TIDs that MPDUs of the TIDs are aggregated in the Multi-TID A-MPDU | Insert new paragraph after the paragraph that starts with "An EDMG STA may transmit a multi-TID A-MPDU to a peer EDMG STA..." An EDMG STA may transmit a multi-TID A-MPDU to a peer EDMG STA with number of TIDs not exceeds MT + 1, where MT is the value indicated in the EDMG Multi-TID Aggregation subfield within the EDMG Capabilities element transmitted by the peer EDMG STA. | **Accept** | Aggr/block ack |
| 4445 | 156.16 | 9.4.2.262 | "The MPDU Split in Buffer subfield is set to 1 to indicate that an S-MPDU can... " There is no such a term "S-MPDU" | Replace S-MPDU by MPDU | **Accept** | Aggr/block ack |
| 4446 | 231.03 | 10.26.6.7.1 | "...shall not transmit a frame with a Frame Body field of size greater than..." wrong use of Frame Body term. Frame Body is a variable length field that contains information specific to individual frame types and subtypes and in this case the rule is about PSDU. | Replace "Frame Body field of" by PSDU The same at P230L23 | **Accept** | Aggr/block ack |
| 4447 | 234.20 | 10.26.11.3 | "When the recipient flushes buffers in the reordering buffer control, the bitmap position in the block acknowledgement record...are set to 0" The sentence is not clear that the bit in the mentioned position is set to 0. | Replace with "the bits in the bitmap position in the block..." | **Accept** | Aggr/block ack |
| 4452 | 218.12 | 10.26.1 | "...are performed modulo 2MSDU\_Modulo " It was once commented that it does not sound good that the word Modulo appears in the name of the exponent. It will be better to replace it by more neutral. Propose to replace MSDU\_Modulo and MPDU\_Modulo by MSDU\_SN\_Range and MPDU\_SN\_Range respectively. | Replace MSDU\_Modulo and MPDU\_Modulo by MSDU\_SN\_Range and MPDU\_SN\_Range respectively. | **Accept** | Aggr/block ack |
| 4453 | 219.32 | 10.26.2 | "...divided by the maximum MSDU size as indicated in Table 9-19" The reference is not accurate. It should consider that the table contains the maximum MSDU size with SAR as well. | Replace by "... divided by the maximum MSDU size without SAR agreement as indicated in Table 9-25" The same fix is applicable for P158L25 Replace all appearances of Table 9-19 by Table 9-25. | **Accept** | Aggr/block ack |
| 4454 | 226.13 | 10.26.6.6.1 | "...where WinSizeB is set to the smaller of 1024 and the value of the Buffer Size field of the ADDBA Response...". The Buffer Size field is of 10 bits, so the value in the Buffer Size field always is less than 1024 hence no need to compare with the 1024 value. | Remove "the smaller of 1024 and" in the sentence. | **Accept** | Aggr/block ack |
| 4455 | 228.25 | 10.26.6.6.3 | "For each received BlockAckReq frame that is related with a specific block ack agreement that uses segmentation and reassembly, the receive reordering buffer record is modified as follows, where MPDU\_SSN and MSDU\_SSN are, respectively, the MPDU Starting Sequence Number and MSDU Starting Sequence Number subfield values of the received BlockAckReq frame" There is no MSDU Starting Sequence Number subfield defined in the BlockAckReq frame, and the mentioned MSDU Starting Sequence Number is not used in the normative behavior of the SAR declared in the forthcoming text and in any other place dedicated to the SAR. Propose to remove the MSDU Starting Sequence Number of the BlockAckReq from the text. | P228L24 Replace by "... where MPDU\_SSN is the MPDU Starting Sequence Number of the Starting Sequence Number subfield value of the received BlockAckReq frame:" P230L7 Replace by "Under a block ack agreement with segmentation and reassembly, the BlockAckReq shall contain only MPDU\_SSN and robust ADDBA Request frame shall contain only MPDU\_SSN and MSDU\_SSN fields of an MPDU that has the value of the Start of MSDUn subfield equal to 1." P218L20 Replace by "The Block Ack Starting Sequence Control subfield within the BlockAckReq frame represents the MPDU starting sequence number." | **Accept** | Aggr/block ack |
| 4463 | 83.16 | 9.3.1.8.1 | Not having a Multi-STA BlockAck in 11ay won't be a reason to reject the comment saying the Ack Type subfield can be used instead of the Management Ack subfield. If there is same function in another amendment, do not try to invent a new format, but try to reuse it. Or, the standard will be messed up. | Use a similar format with a Multi-STA BlockAck frame to acknowledge a Management. | **Reject**  The TID values 8-15 can be reused in 11ax as HCCA is not used by HE  STAs, and TID=15 is used to acknowledge a management frame in the  Multi-STA BlockAck frame. It is not possible in TGay where full range  of TIDs (0-15) is in use to identify QoS MPDUs | Aggr/block ack |

**References:**

1. IEEE P802.11ay/D3.0, February 2019