IEEE P802.11
Wireless LANs

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| LB249-Some-DMG-CIDs-Part-I |
| Date: 2020-09-30 |
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Abstract

This document proposes resolutions to CIDs: 3178, 3644, 3645, 3646, 3649, 3652, 3653, 3206, 3207, 3510, 3562, 3478, 3209, 3204, 3939, 4000, 4001, 3919, 3532, 3639, 3937.

Editor instruction based on D2.4

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| 3178 | 126.00 | 11.22.6.3.6 | "FTM request" - not a frame | Replace with "IFTMR frame" |  Revise as in 11-20-1559 |
| 3644 | 126.00 | 11.22.6.3.6 | "The 30requested AOA/AOD I2R/R2I parameters in the initial Fine Timing Measurement shall be the 31same as those requested in the initial Fine Timing Measurement request." -- then they don't carry any useful information | Change to "The fields corresponding to the AOA/AOD I2R/R2I parameters in the initial Fine Timing Measurement are reserved." |  Accept |

***TGaz Editor: Change the text in P132L15-17 as follows***

#3535) Direction Measurement Parameters subelement. The requested AOA/AOD I2R/R2I parameters in the initial Fine Timing Measurement frame are reserved. The L-RX field shall be set to the number of TRN units the RSTA needs for

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| 3645 | 126.00 | 11.22.6.3.6 | "The AOA and AOD requests parameters in the FTM request and the initial Fine Timing 35Measurement frame shall be compatible with the corresponding AOA/AOD TX/RX capabilities 36as shown in Table 11-1000. " is grammatically broken and is unclear | Change to "The AOA and AOD parameters requested in the Fine Timing Measurement Request frame shall be compatible with the corresponding AOA/AOD TX/RX capabilities as shown in Table 11-1000. " Delete "Valid combinations of AOA and AOD requests and the 19corresponding required capabilities are shown in Table 11-1000" above |  Accept |

***TGaz editor: change the text in P132L20-23 as follows:***

The AOA and AOD parameters requested in the requested in the Fine Timing Measurement Request frame shall be compatible with the corresponding AOA/AOD TX/RX capabilities as shown in Table 11-1000 (Valid Combinations of Direction Measurements requests and the required capabilities at the initiator and responder).

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| 3646 | 127.00 | 11.22.6.3.7 | "LOS Assessment FTM Ack PPDU" - no such PPDU | Delete "FTM " |  Accept |

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| 3649 | 127.00 | 11.22.6.3.7 | " The RSTA may set to 1 the LOS 21Assessment TX capability subfield. " -- well, only if it's so capable. And this is already defined in the previous para | Delete the cited text |  Accept |

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| 3652 | 127.00 | 11.22.6.3.7 | "initial ... frame in the session" -- by definition, the initial ... frame is in the context of a session | Delete "in the session" (2x) in the para at line 24, and change "request" to "Request frame" at line 25 |  Revise as in 11-20-1559 |

***TGaz Editor: Modify the text in P133L11-14 as follows:***

The ISTA requests the FTM session by setting to one the LOS Assessment field in a DMG Direction Measurement Parameters subelement in the IFTMR frame. The responding RSTA shall set to 1 the LOS Assessment field in the DMG Direction Measurement Parameters element in the initial Fine Timing Measurement frame. (#**2352**, #**2351**)

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| 3653 | 127.00 | 11.22.6.3.7 | "A EDMG STA in ISTA role for which the dot11LOSassessmentTXImplemented is true may 19establish the FTM session that contain LOS assessment exchanges with other EDMG STA in 20RSTA role if the STA's LOS Assessment TX is set to 1." -- but by para two up the LATX field is guaranteed to be 1. Also wording is wacky | Delete the cited text and then change the first sentence of the next para to "An ISTA requests LOS assessment by setting to 1 the LOS Assessment field in a DMGDirection Measurement Parameters subelement in the initial Fine Timing Measurement Request frame." |  Revise |

***TGaz Editor: Modify the text in P133L6-9 as follows:***

An EDMG STA in ISTA role for which the dot11LOSAssessmentTXImplemented is true may stablish an FTM session that contain LOS assessment exchanges with another EDMG STA that will take the RSTA role if that STA’s LOS Assessment RX capability subfields in the DMG Direction Measurement Capabilities field is set to 1. (#**1280**).

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| 3206 | 214.00 | 28.2 | FIRST\_PATH\_AWV\_TRN parameter name is missing from the line of the table dealing with first path | Add FIRST\_PATH\_AWV\_TRN in the parameter column of this line (first column) |  Revise as in 11-20-1559 (instructions are not clear enough) |

***TGaz Editor: Change Table 28-48 TXVECTOR and RXVECTOR parameters***

***Parameter***

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| Parameter | Condition | Value | TXVECTOR | RXVECTOR |
| SECURED\_TRN | FORMAT is EDMG, EDMG\_MODULATION is EDMG\_SC\_MODE, NUM\_USERS is 1, NUM\_STS is 1 | Indicates whether TRN field, if present in the PPDU, contains Secure TRN sequences.Enumerated type:SECURED\_TRNNON\_SECURED\_TRN | Y | Y |
| Otherwise  | Not present | N | N |
| SECURE\_TRN\_SEQUENCES | FORMAT is EDMG, EDMG\_MODULATION is EDMG\_SC\_MODE, NUM\_USERS is 1, NUM\_STS is 1 | Indicates the Secure TRN Sequences used in the PEDMG secure ranging PPDU.  | Y | N |
| Otherwise  | Not present | N | N |
| FIRST\_PATH\_AWV\_TRN | FORMAT is EDMG, EDMG\_MODULATION is EDMG\_SC\_MODE, NUM\_USERS is 1, NUM\_STS is 1  | Enumerated Type FIRST\_PATH\_AWV\_ON\_TRN BEST\_PATH\_AWV\_ON\_TRN Indicates whether the TRN field of the PPDU is transmitted using the first path AWV or the best path AWV  | Y | N |
| Otherwise  | Not present | N | N |

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| 3207 | 214.00 | 28.3.2.1 | "PDMG secure ranging PPDU" - no such thing | Replace with "EDMG secure ranging PPDU" |  Revise – Already resolved in D2.3 |

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| 3510 |   |   | References to "packet" should be to "PPDU" | Fix in 9.4.2.127.9 DMG Direction Measurement Capabilities field, 10.42.10.6 First Path Beamforming Training (2x) and in PACKET\_TYPE and EDMG\_PACKET\_TYPE throughout. Also change " PACKET-TYPE" to " PPDU\_TYPE" throughout and "EDMG-PACKET-TYPE" to "EDMG\_PPDU\_TYPE" throughout. Also change "the packet type" to "PPDU\_TYPE" in 11.22.6.4.2.1.4 PDMG LOS assessment for EDCA based ranging measurement exchange. Also change "Packet Type" to "PPDU Type" in Table 28-1000--EDMG-A Header fields setting for secure PDMG TRNs (#1173, #2383) |  Revise: D2.4 does not use the term “packet” with the exception of the “Packet Extension field” |

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| 3562 |   |   | Aaargh! This document is just a car crash of inconsistent field names, inconsistent capitalisation and non-adherence of the style guide and the baseline style! | Sigh |  REJECTED The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined. The Comment Resolution Tools are provided by the IEEE-SA. Commenter is referred to Jonathan Goldberg. |

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| 3478 | 20.00 | 17 | 3.2 | Only EDMG secure ranging PPDUs are defined, but the spec also refers to PEDMG and PDMG secure rangin PPDUs | Add definitions for those PPDUs too |  Reject: PDMG and PEDMG are no longer in use D2.4 and references to them are removed. |

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| 3209 | 28.00 | 9 | 216 | Replace "PDMG secure ranging" with "EDMG secure ranging" throughout clause 28. | as in comment |  Revise: replace all occurances of PDMG in the draft with DMG(P228L13) and references thereof |

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| 3204 | 65.00 | 26 | 9.4.2.167 | "The Number of Random Sequences" this field is not reference anywhere in the draft, therefore it should be removed with the whole ranging operation parameters field | Remove Rangin Operation Paramters field and related text |  Revise as in 11-20-1590 (accept in principle) |

***TGaz Editor: Remove the Ranging Operation Parameter filed from figure 9-619c***

***TGaz Editor: Remove lines 19-26in page 66 (including figure 9-619d)***

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| 3939 | 68.00 | 9 | 9.4.2.250.2 | "...as defined in 11.22.6.4.8 (Secure EDMG Measurement Exchange Protocol)." wrong reference | replace by "as defined in 11.22.6.4.2.1.6 Secure measurement exchange for EDMG STAs" |  Revise: Replace by: "as defined in 11.21.6.4.2.1.6 Secure measurement exchange for EDMG STAs" |

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| 4000 | 81.00 | 17 | 9.4.2.299 | Figure 9-1015 has a blank field. What is it? Assume there are multiple Best AWV ID fields. Then, add "..." as in Figure 9-1003. Set the length under "Best AWV ID 1" and "Best AWV ID N", delete "variable", and set "..." therebetween. | As in comment. | Revised: Aready Resolved in D2.4 |

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| 4001 | 81.00 | 21 | 9.4.2.299 | "Each Best AWV ID field is 11bits long." What happens if the total length of the Best AWV ID fields won't be octet length? Add padding? It is better to have each length 2-octet length. | Change the field to 2-octet length. Add a rule how to set the 11-bit ID into the field, for instance B0-4 can be reserved. | Revise as in 11-20-1590 (Accept in principle) |

***TGaz Editor: Modify the text in P83L12-13 (*9.4.2.301 ) *as follows:***

The number of Best AWV ID field indicates the number of attached Best AWV ID fields. Each Best AWV ID field is 16 bits long. Bits B0-B4 are reserved. It indicates the index of either the TRN subfield index or the

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| 3919 | 101.00 | 23 | 10.42.10.6 | "An EDMG STA that has the First Path Beamforming Training Supported subfield in the STA's EDMG Capabilities element set to 1 is FPBT (#1420) capable.An EDMG STA that has the First Path Training Supported subfield in the STA's EDMG Capabilities element equal to 1 is first path beamforming capable (#2446).An EDMG STA shall not initiate first path beamforming training with a peer EDMG STA that is not first path beamforming capable (#2446).An EDMG STA shall not initiate FPBT with a peer EDMG STA that is (#1420) not FPBT capable (#2446)."The First Path Beamforming Training and First Path Training seems to be different per the description in the spec. It looks like these two are mixed up and they should be the same. Note that in 11ay, it is used as "First Path Training" but 11az, we used First Path Beamforming Training. The assumption is 11az will update/overwrite 11ay definition | Remove the strikethrough text below"An EDMG STA that has the First Path Beamforming Training Supported subfield in the STA's EDMG Capabilities element set to 1 is FPBT (#1420) capable.An EDMG STA that has the First Path Training Supported subfield in the STA's EDMG Capabilities element equal to 1 is first path beamforming capable (#2446).An EDMG STA shall not initiate first path beamforming training with a peer EDMG STA that is not capable (#2446).An EDMG STA shall not initiate FPBT with a peer EDMG STA that is (#1420) not FPBT capable (#2446)." |  Revised: resolved by the resolution of 3154 in 11-20-1553 |

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| 3532 | 107.00 | 30 | 11.10.10.2 | "Neighbor DMG/EDMG APs field with " -- no such field | Delete the cited text |  Revise as in 11-20-1553 |

***TGay Editor: Change the text in P112L 16-19 (11.10.10.2) as follows:***To request a list of neighboring APs that support DMG location services, the STA shall transmit a Neighbor Report Request frame that includes a Neighbor DMG Request field with a Measurement Request element with the value of its Measurement Type field equal to Neighboring DMG/EDMG APs. A STA shall not send this type of request to an AP if the AP has set the DMG

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| 3639 | 124.00 | 32 | 11.22.6.3.5 | "A STA that supports secure ToF measurement as described in 11.22.6.4.8 (Secure EDMG 32Measurement Exchange Protocol) shall set the Secure ToF Supported field in the EDMG 33capabilities element to 1." is duplicated at 125.41 | Delete the cited text |  Revise as in 11-20-1590 |
| 3937 | 124.00 | 32 | 11.22.6.3.5 | "11.22.6.4.8 (Secure EDMG Measurement Exchange Protocol)" wrong reference | replace by "11.22.6.4.2.1.6 Secure measurement exchange for EDMG STAs" |  Revise: as in 11-20-1590 |

Discussion: There is some mixed up of DMG capabilities in wrong subclauses.

***TGaz Editor: Add the following text before 11.21.6.3.5***

 ***11.21.6.3.5 Capability Negotiation for EDCA based Ranging with the Format and Bandwidth Field set to 31-43***

A STA that supports first Path Beamforming Training shall set the First Path Beamforming Training Supported field of the Beamforming Capability subelement in the RSNXE (#**3940**) to 1. Otherwise it shall set the First Path Beamforming Training Supported field to 0.

A STA that supports secure RTT measurement as described in 11.21.6.4.2.1.6 (Secure EDMG Measurement Exchange Protocol) shall set the Secure RTT Supported field of the Beamforming Capability subelement in the RSNXE (#**3940**) to 1. Otherwise it shall set the Secure RTT Supported field to 0. A STA shall not set the Secure RTT Supported field of the Beamforming Capability subelement in the RSNXE to 1 if it has not also set the First Path Beamforming Training Supported field of the Beamforming Capability subelement in the RSNXE to 1.

A STA that supports EDMG SC Ranging shall set the EDMG SC Ranging Supported field of the Beamforming Capability subelement in the RSNXE (#**3940**) to 1. Otherwise it shall set the EDMG SC Ranging Supported field to 0. A STA shall not set the Secure RTT Supported field if it has not also set to 1the First Path Beamformign Training Supported field of the Beamforming Capability subelement in the RSNXE (#**3940**).

A STA that supports EDMG OFDM Ranging shall set the EDMG OFDM Ranging Supported field of the Beamforming Capability subelement in the RSNXE (#**3940**) to 1. Otherwise, it shall set the EDMG OFDM Ranging Supported field to 0.

***TGaz Editor: Renumber headings following 11.21.6.3.5 to reflect a new subclause 11.21.6.3.5.***

***TGaz Editor: Remove the text in P 131L20-36 as follows:***

***TGaz Editor: Remove the text in P130L19-23 as follows:***

**References:**