IEEE P802.11
Wireless LANs

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| Clause 11 PEDMG CIDs |
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Abstract

This document presents resolutions to CIDS in clause 11 related to PEDMG/PDMG

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| 2381 | 119.00 | 11.22.6.4.7.1 | Assaf-Kasher | The below sentence shall be removed "An PEDMG ISTA may send a Fine Timing Measurement Request14 frame with the trigger set to 2 only if the RSTA has set the First Path Training Supported subfield to 1 in the Beamforming field of the EDMG capabilities element and the ISTA and RSTA have16 performed beamforming training for first path as defined in 10.39.9.6"as it contradicts to the early statement "For DMG and EDMG, an FTM session shall be preceded by a first path beamforming training as6 described in 10.39.9.6 First Path Beamforming Training." which implicitly means the all PEDMG devices support FPBT. | As suggested. | Revise |

**Discussion:**

We do not agree with the commenter that FPBT must be mandatory for all PEDMG devices. There are features that PEDMG devices may support, such performing direction measurement.

We therefore thing that the text in 11.22.6.4.7 (which is an orphan anyway) should be removed.

***TGaz Editor: Remove the text in P119L5-6 (11.2.6.4.7)***

***TGaz Editor: Add the following text in the beginning of 11.22.6.4.7.1 General:***

An PEDMG ISTA and RSTA that have both indicated support for first path beam forming by setting to one the First Path Trainig Supported field in the Beamforming Capability subelement of the EDMG Capability element, shall perform first path beamforming training as defined in 10.43.9.6 First path beamforming training.

***TGaz Editor: Change the text in P91L32-33 as follows:***

capabilities element to 1. A STA shall not set the Secure ToF Supported field to 1 if it has not also set to 1the First Path Training Supported fieldin the Beamforming Capability subelement of the EDMG Capability element .

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| 1442 | 119.08 | 11.22.6.4.7.1 | "A PDMG/PEDMG ISTA/RSTA performs an FTM exchange that does not require AOA or AODmeasurements as defined in 11.24.6.4.1, with the trigger field set to 1 in the Fine TimingMeasurement Request initiating the exchange." Behaviour here is not clear. If PEDMG STA, capable of doing First Path beamforming but does not require AOA or AOD measurement, would still request trigger 1? On the otehr hand, if Trigger 1 is intended for non-directional measurements, then this contradicts behaviour in 11.22.6.4.7.2 where PDMG (which cannot perform First Path Beamforming thus can only use trigger 1) still requests directional measurements. | please write the behaviour more clearly. | Revise |
| 2345 | 119.08 | 11.22.6.4.7.1 | "that does not require AOA or AOD" measurments is not clear, because AOD/AOD measurements may apparently be done for DMG devices | Please clarify what is the trigger field value for PDMG with AOA/AOD measurements. It can't be 1 and it can't be 2 as 2 is for EDMG only. | Revise |
| 2346 | 119.08 | 11.22.6.4.7.1 | For trigger field 1, it's not clear which AWV shall be used by the STA for FTM frame and ACK as it is done for tigger field 2. This may result in different AWVs applied for (a) each STA or (b) each frame | Please clarify similarly to what has been done for trigger field 2. If one would like to keep open if first path AWV or non-first path AWV should be used, it is still required to specify that it is same for case (a) + (b) | Revise |

***TGaz Editor: Modify the text in P119L8-9 (11.22.4.71)***

A PDMG/PEDMG ISTA/RSTA performs an FTM exchange that does not require AOA or AOD measurements as defined in 11.22.6.4.1. To perform an FTM exchange that does require AOD or AOD measurements, it follows the procedure in 11.22.6.4.7.2. In both these cases, when the first path AWV setting is not used in the exchange, the trigger field shall be set to 1 in the Fine timing Meausrement Request that initiates the exchage. In both cases the same AWV used for data transfer between the devices shall be used for transmission and reception of the preamble and data portion of the PPDUs.

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| 2347 | 119.20 | 11.22.6.4.7.2 | It this subclause, TXVECTOR often refers to DMG devices, e.g. TRN\_LEN, PACKET\_TYPE but the text seems to cover both DMG and EDMG | Please consider clarification. While "TRN\_LEN or EDMG\_TRN\_LEN" is bulky, it may be clarified at the beginning of the subclause in a simple sentence. | **Revise:** See 11-19-666 |
| 1444 | 120.00 | 11.22.6.4.7.2 | "The TRN fields of these PPDUs shall also be transmitted and received using the first path AWV setting, except for AOD TRN fields which may be transmitted with changing AWV setting and AOA TRN fieldswhich may be received with changing AWV setting. " - the same behaviour of keeping the AWV for the PPDU transmission but only changing on TRNs should hold also for DMG case in which PPDU is sent with regular AWV | extend description to all applicable settings in the trigger filed. | **Revise:** See 11-19-666 |

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| 2350 | 120.30 | 11.22.6.4.7.4 | It seems that LOS assesment is only available for PEDMG. Please clarify in the title of 11.22.6.4.7.4 as it is done in 11.22.6.4.8 | as in comment | **Revise** |

***TGaz Editor: Modify the title of 11.22.6.4.7.4 (P120L30) as follows:***

**11.22.6.4.7.4 PEDMG LOS assessment FTM exchange**

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| 1278 | 120.39 | 11.22.6.4.7.4 | "DUAL\_POLARIZATION\_TRNS field": it is actually a TX vector parameter | change to "DUAL\_POLARIZATION\_TRNS TXVECTOR parameter" | **Accept** |

***TGaz Editor: Modify the text in P120L39 as follows:***

DUAL\_POLARIZATION\_TRNS TXVECTOR parameter set to 1, the EDMG\_TRN\_LEN set to a value greater than

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| 1279 | 121.16 | 11.22.6.4.8 | "11.22.6.4.8 PEDMG LOS Assessment negotiation" This is not the right place for this subclause | Insert after 11.22.6.3.5 | **Revise** |

***TGaz Editor: Move subclause 11.22.6.4.8 to after clause 11.22.6.3.6 (*Negotiation of Direction Measurement for PDMG/PEDMG)**

*Note: in the current draft 11.22.6.3.6 is marked is 11.22.6.3.4, but this is an editorial error, as it comes after 11.22.6.4.5.*

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| 1281 | 121.36 | 11.22.6.4.8 | "LOS Assessment field in a PEDMG Direction Measurement Parameters element:: it's a subelement and the field does not exist there | change "element" to "subelement" add the field as was defined in 11-18-1595-01. | **Revise: acctions requested in 11-18-1595-01 are updated here** |

 ***TGaz Editor: Add a new field to table 9-619b –DMG Direction Measurement Parameters, replacing the reserved field (P41L6)***

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|  | B0 | B1 | B2 | B3 | B4 B11 | B12 B14 | B15 |
|  | R2I AOA Request | I2R AOA Request | R2I AOD Request | I2R AOD Request  | L-RX  | Direction Measurement Density | LOSAssessment |
| bits: | 1 | 1 | 1 | 1 | 8 | 3 | 1 |

***TGaz Editor: Add the following text at P41L24 (9.4.2.167)***

The LOS Assessment field is set to 1 in a DMG Direction Measurement Parameters field sent by an ISTA in an initial Fine Timing Measurement Request frame to indicate a request for LOS assessment in the FTM session (see 11.26.6.4.8)

The LOS Assessment field is set to 1 in a DMG Direction Measurement Parameters field sent by an RSTA in an initial Fine Timing Measurement frame indicates an agreement to include LOS assessment in the FTM session.

***TGaz Editor: modify the text at P121L36-37 (11.22.6.4.8 before moving it) 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 initial FTM request in the session.

**References:**