IEEE P802.11  
Wireless LANs

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| 802.11  [Resolutions to LB240 CID #1433.  (relative to IEEE 802.11 REVmd D2.0 and P802.11az D1.0) | | | | |
| Date: 2019-08-07 | | | | |
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**Abstract**

This submission proposes resolutions to the following LB240 CID1433.

History:

R0: Initial Version

R1: Updates from the discussion in the July 31st teleconference

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| 1433 | Dana Ciochina | 11.22.6.2 | 82.10 | Missing sentence to clarify to what the bullets relate to. | If the STA in which dot11FineTimingMsmtRespActivated is true supports, .. And correct the changing fonts | Revise. Incorporate the editor instructions in submission 11-19-1276. |

Discussion: The list should not be bulleted. The contents of the (now bulleted) list should conform to how the related statements are constructed in the baseline.

The relationship between MIB variables and the corresponding field in the Extended Capabilities element is described in Table 9-153. However Table 9-153 is not normative. Hence it has to be restated (in normative language) in Clause 11.

Cl. 11.22.6.2 is missing details on how the setting of the MIB variables dot11SecureLTFImplemented and dot11RSTARequiresPMFActivated relate to the corresponding fields in the Extended Capabilities element.

Need discussion on

Resolution: REVISE

***TGaz Editor: The following paragraphs in Cl. 11.22.6.2 already exist in the baseline and should not be shown as new text (should not be underlined).***

A STA in which dot11FineTimingMsmtRespActivated is false shall set the Fine Timing Measurement Responder field of the Extended Capabilities element to 0.

A STA in which dot11FineTimingMsmtInitActivated is false shall set the Fine Timing Measurement Initiator field of the Extended Capabilities element to 0.

***TGaz Editor: Modify the inserted paragraphs in Cl. 11.22.6.2 as shown below:***

A STA in which (#1433) dot11NonTriggerBasedRangingRespImplemented is true shall set the non-TB Ranging Responder field of the Extended Capabilities element to 1. Otherwise it shall set the non-TB Ranging Responder field of the Extended Capabilities element to 0.

A STA in which (#1433) dot11TriggedBasedRangingRespImplemented is true shall set the TBRanging Responder field of the Extended Capabilities element to 1. Otherwise it shall set the TB Ranging Responder field of the Extended Capabilities element to 0.

A STA in which dot11FineTimingMsmtRespActivated is true and dot11SecureLTFImplemented is true shall set the Secure LTF Support field of the Extended Capabilities element to 1. Otherwise it shall set the Secure LTF Support field to 0.

A STA in which dot11RSTARequiresPMFActivated is true shall set the Protection of Range Negotiation and Measurement Management Frames Required field of the Extended Capabilities element to 1. Otherwise it shall set the Protection of Range Negotiation and Measurement Management Frames Required field to 0.

A STA in which dot11PositioningDMGRangingImplemented is true (#1433) shall set the DMG Range Measurement field of the Extended Capabilities element to 1. Otherwise it shall set the DMG Range Measurement field of the Extended Capabilities element to 0. A STA that supports

* Inclusion of a TRN field in the transmitted Fine Timing Measurement frame to facilitate Angle of Arrival measurements at the recipient shall set the AoA TX Capability subfield in the DMG Direction Measurement Capabilities field in the DMG Capabilities element to 1. Otherwise it shall set the AoA TX Capability subfield to 0.
* Angle of Arrival estimation using the TRN field included in the received Fine Timing Measurement frame shall set the AoA RX Capability subfield in the DMG Direction Measurement Capabilities field in the DMG Capabilities element to 1. Otherwise it shall set the AoA RX Capability subfield to 0.
* Inclusion of antenna setting specific TRN field(s) in the transmitted Fine Timing Measurement frame to facilitate Angle of Departure estimation(s) at the recipient shall set the AoD TX Capability subfield in the DMG Direction Measurement Capabilities field in the DMG Capabilities element to 1. Otherwise it shall set the AoD TX Capability subfield to 0.
* Angle of Departure estimation using the TRN field(s) included in the received Fine Timing Measurement frame shall set the AoD RX Capability subfield in the DMG Direction Measurement Capabilities field in the DMG Capabilities element to 1. Otherwise it shall set the AoD RX Capability subfield to 0.

A STA in which dot11PositioningEDMGRangingImplemented is true (#1433)shall set the EDMG Range Measurement field of the Extended Capabilities element to 1. Otherwise it shall set the EDMG Range Measurement field of the Extended Capabilities element to 0.

A STA that supports

* Inclusion of a TRN field in the transmitted Fine Timing Measurement frame to facilitate Angle of Arrival measurements at the recipient shall set the AoA TX Capability subfield in the DMG Direction Measurement Capabilities field in the DMG Capabilities element to 1. Otherwise it shall set the AoA TX Capability subfield to 0.
* Angle of Arrival estimation using the TRN field included in the received Fine Timing Measurement frame shall set the AoA RX Capability subfield in the DMG Direction Measurement Capabilities field in the DMG Capabilities element to 1. Otherwise it shall set the AoA RX Capability subfield to 0.
* Inclusion of antenna setting specific TRN field(s) in the transmitted Fine Timing Measurement frame to facilitate Angle of Departure estimation(s) at the recipient shall set the AoD TX Capability subfield in the DMG Direction Measurement Capabilities field in the DMG Capabilities element to 1. Otherwise it shall set the AoD TX Capability subfield to 0.
* Angle of Departure estimation using the TRN field(s) included in the received Fine Timing Measurement frame shall set the AoD RX Capability subfield in the DMG Direction Measurement Capabilities field in the DMG Capabilities element to 1. Otherwise it shall set the AoD RX Capability subfield to 0.

In addition, if the STA supports

* First Path Beamforming Training it shall set the First Path Beamforming Training Supported field of the Beamforming Capability subelement in the EDMG Capabilities element to 1. Otherwise it shall set the First Path Beamforming Training Supported field to 0.
* Secure ToF it shall set the Secure ToF Supported field of the Beamforming Capability subelement in the EDMG Capabilities element to 1. Otherwise it shall set the Secure ToF Supported field to 0.
* EDMG SC Ranging it shall set the EDMG SC Ranging Supported field of the Beamforming Capability subelement in the EDMG Capabilities element to 1. Otherwise it shall set the EDMG SC Ranging Supported field to 0. A STA shall not set the Secure ToF Supported field if it has not also set to 1the First Path Beamformign Training Supported field of the Beamforming Capability subelement in the EDMG Capabilities element.
* EDMG OFDM Ranging it shall set the EDMG OFDM Ranging Supported field of the Beamforming Capability subelement in the EDMG Capabilities element to 1. Otherwise it shall set the EDMG OFDM Ranging Supported field to 0.

# *A*nnex C

# (normative)

# ASN.1 encoding of the MAC and PHY MIB

**C. 3 MIB detail**

***TGaz Editor: Insert the following entries after dot11ISTA2RSTALMRFeedbackPolicy into*** *Dot11WirelessMgmtOptionsEntry* ***as shown below:***

….

dot11ISTA2RSTALMRFeedbackPolicy TruthValue,

dot11PositioningDMGRangingImplemented TruthValue,

dot11PositioningEDMGRangingImplemented TruthValue,

}

***TGaz Editor: Insert the following after the description of dot11STA2RSTALMRFeedbackPolicy as shown below:***

dot11IPositioningDMGRangingImplemented OBJECT-TYPE

SYNTAX TruthValue  
MAX-ACCESS read-write  
STATUS current  
DESCRIPTION

"This is a control variable.  
It is written by an external management entity or the SME.  
Changes take effect at the next occurrence of an MLME-START.request or  
MLME-JOIN.request primitive.

This attribute, when true, indicates that the station supports the PDMG Measurement Exchange (See 11.22.6.4.7 PDMG/PEDMG measurement exchange)."

DEFVAL { false }

::= { dot11WirelessMgmtOptionsEntry <tbd>}

dot11IPositioningEDMGRangingImplemented OBJECT-TYPE

SYNTAX TruthValue  
MAX-ACCESS read-write  
STATUS current  
DESCRIPTION

"This is a control variable.  
It is written by an external management entity or the SME.  
Changes take effect at the next occurrence of an MLME-START.request or  
MLME-JOIN.request primitive.

This attribute, when true, indicates that the station supports the PEDMG Measurement Exchange (See 11.22.6.4.7 PDMG/PEDMG measurement exchange)."

DEFVAL { false }

::= { dot11WirelessMgmtOptionsEntry <tbd>}