Wireless LANs

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| 802.11[Proposed 802.11az Annex B - PICS](relative to REVmd Dx.x) |
| Date: 2018-10-11 |
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Abstract

This document includes a proposed Annex B PICS section for 11az.

R0: Initial draft

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Protocol Implementation Conformance Statement (PICS) -proforma

* PICS proforma—IEEE Std 802.11-<year>

Change B.4.3 as follows:

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| * IUT configuration
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| Item | IUT configuration | References | Status | Support |
|  | What is the configuration of the IUT? |  |  |  |
| CFRSTA | 11az RSTA operation  | 11.22.6 (Fine timing measurement (FTM) procedure) | OWNM23:M | Yes  No  |
| CFISTA | 11az ISTA operation | 11.22.6 (Fine timing measurement (FTM) procedure) | OWNM23:M | Yes  No  |
| CFASTA | 11az passive location Anchor STA. | 11.22.6.4.9 | O | Yes  No  |
| CFTB | support for 11az Trigger sounding | 11.22.6 (Fine timing measurement (FTM) procedure) | OCFHE:M | Yes  No  |
| CFNTB  | support for 11az None Trigger Base sounding | 11.22.6 | OCFHE:M | Yes  No  |
| CFPASN | support for PASN | 12.13 | OPC34:M | Yes  No  |
| CFPSEC | Support for PHY security, ability to transmit and receive secure LTF waveforms for TB and NTB operation. | 11.2.6.4.6(Trigger Based and Non Trigger Based Secure LTF Measurement Exchange Protocol) | O CFPASN:MCFHE:M | Yes  No  |

* MAC protocol

Change B.4.4.1 as follows:

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| * MAC protocol capabilities
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| Item | Protocol capability | References | Status | Support |
|  | Are the following MAC protocol capabilities supported? |  |  |  |
| FSTB | Support for Trigger Based ranging sounding exchange sequence | 11.22.6 | CFTB:M | Yes  No  |
| FSNTB | Support for EDCA based non trigger based ranging sounding exchange sequence. | 11.22.6 | CFNTB:M | Yes  No  |
| FSPASN | Pre-association security negotiation | 12.13 | CFPASN:M | Yes  No  |

Change B.4.4.2 as follows:

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| * MAC frames
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| Item | MAC frame | References | Status | Support |
|  | Is transmission of the following MAC frames supported? | 9 (Frame formats) |  |  |
| FT43 | Trigger frame | 10 ~~9~~ (Frame formats) | CFHE:M | Yes  No  N/A  |
| FT ANA + 0 | Fine Timing Measurement Request | 11.22.6.3 | CFISTA:M (CFTB OR CFNTB):M | Yes  No  N/A  |
| FT ANA + 1  | Fine Timing Measurement | 11.22.6.3 | CFRSTA:M (CFTB ORCFNTB):M | Yes  No  N/A  |
| FT ANA + 2 | Location Measurement Report | 9.3.6.7.3711.22.6.4.3 | (CFRSTA OR CFISTA):M(CFTB ORCFNTB):M | Yes  No  N/A  |
| FT ANA + 3 | Transmission of TF type Location using 802.11az TB operation. | 9.3.6.7.3711.22.6.4.3 | CFRSTA:MCFTB:M | Yes  No  N/A  |
| FT ANA + 4 | Transmission of NDPA using 802.11az TB operation | 9.3.6.7.3711.22.6.4.3 | CFRSTA:MCFTB:M | Yes  No  N/A  |
| FT ANA + 5 | Transmission of NDPA using 802.11az NTB operation. | 9.3.6.7.3711.22.6.4.4 | CFISTA:MCFNTB:M | Yes  No  N/A  |
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|  | Is reception of the following MAC frames supported? |  |  |  |
| FR ANA + 0 | Fine Timing Measurement Request | 11.22.6.3 | CFRSTA:M (CFTB OR CFNTB):M | Yes  No  N/A  |
| FR ANA + 2 | Fine Timing Measurement | 11.22.6.3 | CFISTA:M(CFTB ORCFNTB):M | Yes  No  N/A  |
| FR ANA + 3 | Location Measurement Report | 9.3.6.7.3711.22.6.4.3 | (CFRSTA OR CFISTA):M (CFTB ORCFNTB ):M | Yes  No  N/A  |
| FR ANA + 4 | Receive of TF of type Location for TB ranging operation | 9.3.6.7.3711.22.6.4.3 | CFISTA:MCFTB:M | Yes  No  N/A  |
| FR ANA + 5 | Receive of NDPA frame for Trigger Based operation | 9.3.6.7.3711.22.6.4.3 | CFISTA:MCFTB:M | Yes  No  N/A  |
| FR ANA + 6 | Receive of NDPA frame for Non Trigger Based operation | 9.3.6.7.3711.22.6.4.6.1 | CFRSTA:MCFNTB:M | Yes  No  N/A  |

Insert a new subclause B.4.28 as follows:

B.4.28 Next Generation Positioning (NGP) features

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| B.4.28.1 NGP MAC features |
| Item | Protocol capability | References | Status | Support |
|  | Are the following MAC protocol features supported? |  |  |  |
| NGPM1 | NGP capability Signaling |  |  |  |
| NGPM1.1 | NGP FTM support advertisement  | 11.22.6.211.22.6.3.1 | (CFTB OR CFNTB):M | Yes  No  N/A  |
| NGPM1.2 | NGP FTM capability negotiation | 11.22.6.3.1 | (CFTB OR CFNTB):M | Yes  No  N/A  |
| NGPM1.3 | NGP secured MAC operation negotiation | 12.1311.22.6.4.6 | CFPASN:M (CFTB OR CFNTB):M | Yes  No  N/A  |
| NGPM2 | Trigger Based Ranging Operation |  |  |  |
| NGPM2.1 | Trigger Based measurement sequence | 11.22.6.4.3 | CFTB:MCFHE:M | Yes  No  N/A  |
| NGPM2.2 | Protected LMR exchange in TB measurement sequence | 12.1311.22.6.4.6 | CFTB:MCFHE:MPC 34.1.10M(CFPASN ORPC 34):M | Yes  No  N/A  |
|  |  |  |  |  |
| NGPM2.2 | Protected LMR exchange in TB measurement sequence | 12.1311.22.6.4.6 | CFTB:MCFHE:MCFPASN:M | Yes  No  N/A  |
| NGPM2.3 | Sequence Authentication Code exchange for TB operation | 12.1311.22.6.4.6 | CFTB:MCFHE:MCFPASN:MCFPSEC:M  | Yes  No  N/A  |
| NGPM3 | NON Trigger Based Location Operation |  |  |  |
| NGPM3.1 | Non Trigger Based measurement sequence | 11.22.6.4.4 | CFNTB:MCFHE:M | Yes  No  N/A  |
| NGPM3.2 | Protected LMR exchange in NTB measurement sequence | 12.1311.22.6.4.6 | CFNTB:MCFHE:MCFPASN:M | Yes  No  N/A  |
| NGPM3.3 | Sequence Authentication Code exchange for NTB operation | 12.1311.22.6.4.6 | CFNTB:MCFHE:MCFPASN:MCFPSEC:M | Yes  No  N/A  |
| NGPM4 | Passive Location operation |  |  |  |
| NGPM4.1 | Operation as RSTA | 11.22.6.4.9 | CFTB:M | Yes  No  N/A  |
| NGPM4.2 | Operation as ASTA | 11.22.6.4.9 | CFTB:M | Yes  No  N/A  |
| NGPM4.3 | Operation as Passive ISTA | 11.22.6.4.9 | CFTB:M | Yes  No  N/A  |
| NGPM5 | EDMG/DMG operation |  |  | Yes  No  N/A  |

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| B.4.28.2 NGP PHY features  |
| Item | Protocol capability | References | Status | Support |
|  | Are the following PHY protocol features supported? |  |  |  |
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| NGPP1 | NGP TB and NTB Sounding waveforms | 28.3 |  |  |
| NGPP1.1 | HEz SU sounding NDP PPDU | 28.3.17a | (CFTB OR CFNTB):M | Yes  No  N/A  |
| NGPP1.2 | HEz sounding NDP PPDU with zero power GI | 28.3.17a | (CFTB OR CFNTB):MCFPASN:MCFPSEC:M | Yes  No  N/A  |
| NGPP1.3 | HEz TB sounding NDP PPDU | 28.3.17b  | CFTB:M | Yes  No  N/A  |
| NGPP1.4 | HEz TB sounding NDP PPDU with zero power GI | 28.3.17a | CFPASN:MCFPSEC:MCFTB:M | Yes  No  N/A  |
| NGPP2 | MIMO operation |  |  |  |
| NGPP2.1 | Multi transmit streams | 11.22.6.4.311.22.6.4.4 | (CFTB or CFNTB):M | Yes  No  N/A  |
| NGPP2.2 | Multi receive streams  | 11.22.6.4.311.22.6.4.4 | (CFTB or CFNTB):M | Yes  No  N/A  |
| NGPP3 | EDMG frame formats |  |  |  |