IEEE P802.11
Wireless LANs

|  |
| --- |
| PICs baseline |
| Date: 2023-01-01 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Assaf Kasher | Qualcomm |  |  | akasher@qti.qualcomm.com |
| Solomon Trainin | Qualcomm |  |  | strainin@qti.qualcomm.com |

Abstract

This document proposes a baseline for the PICS annex changes

|  |  |  |  |
| --- | --- | --- | --- |
| 673 | The draft doesn't include Annex B on PICS. | I recognize it is still early in the process to develop a comprehensive Annex B. I volunteer to setup an initial Annex B and keep populating it as more items are added to the draft | RevisedTGbf Editor: Please make the changes shown beloe under CID 673 |

***TGaf Editor: Please add to the PICS tables as shown below***

|  |
| --- |
| * General abbreviations for Item and Support columns

SIGM Sub 1 GHz (S1G) medium access control (MAC) featuresSIGP Sub 1 GHz (S1G) physical layer (PHY) featuresSM spectrum managementTDLS tunneled direct-link setupTVHTM television very high throughput medium access control (MAC) featuresTVHTP television very high throughput physical layer (PHY) featuresTVWS television white spacesVHTM Very high throughput MAC VHTP Very high throughput PHYWNM wireless network managementWLS Wireless LAN Sensing |

# *TGaz Editor: Insert the following text before Annex C:*

#  Annex B

(normative)

**Protocol Implementation Conformance Statement (PICS) proforma**

## B.4 PICS proforma—IEEE Std 802.11-2016

Change B.4.3 as follows:

|  |
| --- |
| B.4.3 IUT configuration  |
| Item | IUT configuration | References | Status | Support |
|  | What is the configuration of the IUT? |  |  |  |
| CFSSTA | WLAN Sensing STA | 11.55.1.2 Dependencies | WLS:O | Yes  No  |
| CFDSSTA | DMG Sensing STA | 11.55.3.2 Dependencies | WLS:O | Yes  No  |
| CFDSPASS | DMG Passive Sensing STA | 11.55.3.9 DMG passive sensing | WLS:O | Yes  No  |

### B.4.4 MAC protocol

#### B.4.4.1 MAC protocol capabilities

***Insert the new rows at the end of the table***:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PC<ANA1> | Support for WLAN Sensing Initiator  | 11.55.1 WLAN sensing procedure | CFSSTA:M | Yes  No  |
| PC<ANA3> | Support for WLAN Sensing Responder  | 11.55.1 WLAN sensing procedure | CFSSTA:M | Yes  No  |
| PC<ANA5> | Support for Basic Reporting Phase | 11.55.1.5.2.6.1 Basic reporting phase | CFSSTA:M | Yes  No  |
| PC<ANA6> | Support for Threshold-based reporting phase | 11.55.1.5.2.6.2 Threshold-based reporting phase | CFSSTA:O | Yes  No  |
| PC<ANA7> | Support for Reponder-to-Reponder Sensing | 11.55.1.5.2.5 SR2SR sounding phase | CFSSTA:O | Yes  No  |
| PC<ANA4> | Support for Sesning session setup phase | 11.55.1.3 Sensing session setup | CFSSTA:M | Yes  No  |
| PC<ANA2> | Support for Measurement setup phase | 11.55.1.4 Sensing measurement setup | CFSSTA:M | Yes  No  |
| PC<ANA8> | Support for Sensing Measurement setup termination  | 11.55.1.6 Sensing measurement setup termination | CFSSTA:M | Yes  No  |
| PC<ANA9> | Support for Sensing Measurement session termination  | 11.55.1.7 Sensing session termination | CFSSTA:M | Yes  No  |
| PC<ANA10> | Support for SBP procedure as initiator | 11.55.2 SBP procedure | CFSSTA:O | Yes  No  |
| PC<ANA11> | Support for SBP procedure as respodner | 11.55.2 SBP procedure | CFSSTA:O | Yes  No  |
| PC<ANA12> | Support for DMG Sensing Initiator  | 11.55.3 DMG sensing procedure | CFDSSTA:M | Yes  No  |
| PC<ANA15> | Support for DMG Sensing Responder  | 11.55.3 DMG sensing procedure | CFDSSTA:M | Yes  No  |
| PC<ANA16> | Support for DMG SBP procedure as initiator | 11.55.4 DMG SPB Procedure | CFDSSTA:O | Yes  No  |
| PC<ANA17> | Support for DMG SBP procedure as respodner | 11.55.4 DMG SPB Procedure | CFDSSTA:O | Yes  No  |
| PC<ANA18> | Support for TB Sensing | 11.55.1.5.2 TB sensing measurement instance | CFSSTA:M | Yes  No  |
| PC<ANA19> | Support for non-TB Sensing | 11.55.1.5.3 Non-TB sensing measurement instance | CFSSTA:M | Yes  No  |
| PC<ANA13> | Support for DMG Sensing Session setup phase | 11.55.3.3 DMG sensing session setup | CFDSSTA:M | Yes  No  |
| PC<ANA14> | Support for DMG Sensing Measurement setup phase | 11.55.3.4 DMG sensing measurement setup | CFDSSTA:M | Yes  No  |
| PC<ANA20> | Support for DMG Coordianted Monostatic Sensing | 11.55.3.6.2 Coordinated monostatic DMG sensing instance | (CFDSSTA AND NOT (PC<ANA21> OR PC<ANA23>)):M(CFDSSTA AND (PC<ANA21> OR PC<ANA23>)):O | Yes  No  |
| PC<ANA21> | Support for DMG Bistatic Sensing  | 11.55.3.6.3 Bistatic DMG sensing instance | (CFDSSTA AND NOT (PC<ANA20> OR PC<ANA23>)):M(CFDSSTA AND (PC<ANA20> OR PC<ANA23>)):O | Yes  No  |
|  PC<ANA21>.1 | Support for DMG Bistatic Sensing as Transmitter | 11.55.3.6.3 Bistatic DMG sensing instance | PC<ANA21>:O | Yes  No  |
|  PC<ANA21>.2 | Support for DMG Bistatic Sensing as Receiver | 11.55.3.6.3 Bistatic DMG sensing instance | PC<ANA21>:O | Yes  No  |
| PC<ANA22> | Support for DMG Coordianted Bistatic Sensing | 11.55.3.6.4 Coordinated bistatic DMG sensing instance | CFDSSTA AND PC<ANA21>:O | Yes  No  |
|  PC<ANA22>.1 | Support for DMG Bistatic Sensing as Transmitter | 11.55.3.6.4 Coordinated bistatic DMG sensing instance | (PC<ANA22> AND NOT PC<ANA22>.2):M(PC<ANA22> AND PC<ANA22>.2):O | Yes  No  |
|  PC<ANA22>.2 | Support for DMG Bistatic Sensing as Receiver | 11.55.3.6.4 Coordinated bistatic DMG sensing instance | (PC<ANA22> AND NOT PC<ANA22>.1):M(PC<ANA22> AND PC<ANA22>.1):O | Yes  No  |
| PC<ANA23> | Support for DMG Multistatic Sensing | 11.55.3.6.5 Multistatic EDMG sensing instance | (CFDSSTA AND NOT (PC<ANA21> OR PC<ANA20>)):M(CFDSSTA AND (PC<ANA21> OR PC<ANA20>)):O | Yes  No  |
| PC<ANA24> | Support for DMG Sensing measurement setup termination | 11.55.3.7 DMG sensing Measuremetn termination | CFDSSTA:M | Yes  No  |
| PC<ANA25> | Support for DMG Passive Sensing | 11.55.3.9 DMG passive sensing | CFDSPASS | Yes  No  |

Change B.4.4.2 as follows: (#3281, #3387)

|  |
| --- |
| B.4.4.2 MAC frames  |
| Item | MAC frame | References | Status | Support |
|  | Is transmission of the following MAC frames supported? | 9 (Frame formats) |  |  |
| FT<ANA26> | Sensing Measurement Setup Request frame | 9.6.7.49 Sensing Measurement Setup Request frame format | CFSSTA:M | Yes  No  N/A  |
| FT<ANA27> | Sensing Measurement Setup Response frame | 9.6.7.50 Sensing Measurement Setup Response frame format | CFSSTA:M | Yes  No  N/A  |
| FT<ANA28> | Sensing Measurement Report frame  | 9.6.7.51 Sensing Measurement Report frame format | CFSSTA:M | Yes  No  N/A  |
| FT<ANA29> | Sensing Measurement Setup Termination frame | 9.6.7.52 Sensing Measurement Setup Termination frame format | PC<ANA8>:M | Yes  No  N/A  |
| FT<ANA30> | Sensing Measurement Setup Query frame | 9.6.7.53 Sensing Measurement Setup Query frame format | CFSSTA:M | Yes  No  N/A  |
| FT<ANA31> | SBP Request frame format | 9.6.7.54 SBP Request frame format | CFSSTA:O | Yes  No  N/A  |
| FT<ANA32> | SBP Response frame | 9.6.7.55 SBP Response frame format | CFSSTA:O | Yes  No  N/A  |
| FT<ANA33> | SBP Termination frame | 9.6.7.56 SBP Termination frame format | CFSSTA:O | Yes  No  N/A  |
| FT<ANA34> | SBP Report frame | 9.6.7.57 SBP Report frame format | CFSSTA:O | Yes  No  N/A  |
| FT<ANA35> | DMG Sensing Measurement Setup Request | 9.6.21.8 DMG Sensing Measurement Setup Request frame format | CFDSSTA:M | Yes  No  N/A  |
| FT<ANA36> | DMG Sensing Measurement Setup Response | 9.6.21.9 DMG Sensing Measurement Setup Response frame format | CFDSSTA:M | Yes  No  N/A  |
| FT<ANA37> | DMG Sensing Measurement Report frame | 9.6.21.10 DMG Sensing Measurement Report frame format | CFDSSTA:M | Yes  No  N/A  |
| FT<ANA38> | DMG Sensing Measurement Setup Termination frame | 9.6.21.11 DMG Sensing Measurement Setup Termination frame format | PC<ANA24>:M | Yes  No  N/A  |
| FT<ANA39> | DMG SBP Request frame  | 9.6.21.12 DMG SBP Request frame format | CFDSSTA:O | Yes  No  N/A  |
| FT<ANA40> | DMG SBP Response frame  | 9.6.21.13 DMG SBP Response frame format | CFDSSTA:O | Yes  No  N/A  |
| FT<ANA41> | DMG SBP Report frame | 9.6.21.14 DMG SBP Report frame format | CFDSSTA:O | Yes  No  N/A  |
| FT<ANA42> | DMG SBP Termination frame | 9.6.21.15 DMG SBP Termination frame format | CFDSSTA:O | Yes  No  N/A  |
| FT<ANA43> | DMG Sensing Request frame | 9.3.1.25 TDD Beamforming frame format | CFDSSTA:M | Yes  No  N/A  |
| FT<ANA44> | DMG Sensing Response frame | 9.3.1.25 TDD Beamforming frame format | CFDSSTA:M | Yes  No  N/A  |
| FT<ANA45> | DMG Sensing Poll frame | 9.3.1.25 TDD Beamforming frame format | CFDSSTA:M | Yes  No  N/A  |

Insert a new Subclause B.4.37 as follows:

### B.4.37 WLAN Sensing features

B.4.37.1 WLAN Sensing MAC Features

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Are the following MAC protocol features supported? |  |  |  |
| WLS1 | TB Sensing  | 11.55.1.5.2 TB sensing measurement instance | CFSSTA:M | Yes  No  |
| WLS2 | Non-TB Sensing  | 11.55.1.5.3 Non-TB sensing measurement instance | CFSSTA:M | Yes  No  |
| WLS3 | Responder to Responder Sensing | 11.55.1.5.2.5 SR2SR sounding phase | (CFSSTA AND WLS1):O | Yes  No  |
| WLS4 | Sensing reporting | 11.55.1.5.2.6 Reporting phase | CFSSTA:M | Yes  No  |
| WLS5 | Basic Sensing Reporting  | 11.55.1.5.2.6.1 Basic reporting phase | WLS4:M | Yes  No  |
| WLS6 | Threshold Based Reporting  | 11.55.1.5.2.6.2 Threshold-based reporting phase | WLS5:O | Yes  No  |
| WLS7 | Sensing Measurement Setup Termination  | 11.55.1.6 Sensing measurement setup termination | CFSSTA:M | Yes  No  |
| WLS8 | Sensing Measurement Session Termination  | 11.55.1.6 Sensing measurement setup termination | CFSSTA:M | Yes  No  |
| WLS9 | Sensing By Proxy | 11.55.2 SBP procedure | CFSSTA:M | Yes  No  |
| WLS10 | Sensing by Proxy Reporting | 11.55.2.3 Reporting | CFSSTA:M | Yes  No  |
| WLS11 | Sensing by Proxy Termination | 11.55.2.4 Termination | WLS9:M | Yes  No  |
| WLS12 | DMG Passive Sensing | 11.55.3.9 DMG passive sensing | CFDSPASS:M | Yes  No  |
| WLS13 | DMG Coordinated Monostatic Sequential | 11.55.3.6.2.2 Sequential coordinated monostatic DMG sensing instance | CFDSSTA:O | Yes  No  |
| WLS14 | DMG Coordinated Monostatic Parallel | 11.55.3.6.2.3 Parallel coordinated monostatic DMG sensing instance | CFDSSTA:O | Yes  No  |
| WLS15 | DMG Bistatic Sensing | 11.55.3.6.3 Bistatic DMG sensing instance | CFDSSTA:O | Yes  No  |
| WLS16 | DMG Coordinated Bistatic Sensing | 11.55.3.6.4 Coordinated bistatic DMG sensing instance | CFDSSTA:O | Yes  No  |
| WLS17 | DMG Multistatic Sensing | 11.55.3.6.5 Multistatic EDMG sensing instance | CFDSSTA:O | Yes  No  |
| WLS18 | DMG SBP Procedure | 11.55.4 DMG SBP procedure | CFDSSTA:M | Yes  No  |

B.4.37.2 WLAN Sensing PHY Features

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Protocol capability | References | Status | Support |
|  | Are the following PHY protocol features supported? |  |  |  |
| WLSP1: | EDMG Multistiatic PPDU | 28.9.3.2 EDMG multistatic sensing PPDU structure | CFDSSTA:O | Yes  No  |

**References:**

**P802.11bf\_D0.5**