IEEE P802.11
Wireless LANs

|  |
| --- |
| 802.11[Refining the resolution to CID 1918(relative to IEEE 802.11 REVmd D3.0 and P802.11az D1.5) |
| Date: 2019-11-06 |
| Author(s): |
| Name | Company | Address | Phone | Email |
| Ganesh Venkatesan | Intel Corporation | 2111 NE 25th Ave, Hillsboro, OR 97124 | 503 334 6720 | ganesh.venkatesan@intel.com |
| Ali Raissinia | Qualcomm |  |  | alirezar@qti.qualcomm.com |

**Abstract**

submission 11-19-1587r2 provides a resolution to CID #1918. However not all .11az MIB definitions are aligned to the WG recommendation for MIB variable definitions (document 11-15-335). This submission refines the resolution proposed in submission 11-19-1587r2 and extends the conformance of MIB variable definitions in TGaz to align with submission 11-15-355.

History:

R0: Initial Version – initial version

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1918 | 171.19 | 19 | C.3 | Rename MIB attributes per WG recommendations | Control variables should use Activated (nor Allowed), not Implemented, per naming conventions. Capability variables should be Implemented, not Activated (see P174.26). | Revise Agree in principle. Annex C is written according IEEE styple guidline. TGaz editor to incorporate editor instruction in submissions 11-19-1587 and 11-19-1902. |

Discussion:

Summary of MIB patterns described in 11-15-355:

|  |  |  |
| --- | --- | --- |
| dot11<feature>Implemented (no DEFVAL attribute) | MAX-ACCESS=nonee.g. dot11RSNImplemented | Static capability; not changed during operation; used exclusively within the 802.11 subsystem; no access to external entities  |
| MAX-ACCESS=read-only | read-only access to external entities to configure related/dependent features/sub-features |
| dot11<feature>Activated (A DEFVAL attribute is present) | MAX-ACCESS=noneMAX-ACCESS=read-onlye.g. dot11ExtendedChannelSwitchActivatedMAX-ACCESS=read-writee.g. dot11RSNAProtectedManagementFramesActivated | Dynamic capability that could be turned on/off by 802.11 subsystem (internally) or an external entity |
| dot11<feature>Required(A DEFVAL attribute is present) | MAX-ACCESS=noneMAX-ACCESS=read-onlye.g. dot11OFDMCCAEDRequireddot11LCIDSERequired | Static behavior that is not changed during operation; typically used when a primary/secondary relationship exists; the primary advertises, the secondary on observing the advertisement, sets the corresponding version of the variable (and operates accordingly) |
| dot11<feature>Directed (A DEFVAL attribute is present) | MAX-ACCESS=noneMAX-ACCESS=read-onlyMAX-ACCESS=read-writee.g. dot11FortyMHzIntolerantDirected | Dynamic behavior that is set based on operational/locally detected conditions. Typically used when a primary/secondary relationship exists; primary advertises and secondary adapts or secondary indicates and the primary sets corresponding version of the variable (and advertises the change) |
| dot11<feature>PolicyActive (A DEFVAL attribute is present) | MAX-ACCESS=read-writee.g.dot11OperatingClassesPolicyActivedot11RSNAPBACPolicyActive | Dynamic behavior that is set ON/OFF during operation. |
| No need for a MIB variable |  | Describe it in words in the specification |

MIB Variables in 802.11az (D1.4 plus 11-19-1587r1):

By “does not change during operation” we mean that the setting of the corresponding variable does not change and in order to change it, the value of the variable needs to be set to the new value and MLME-RESET is invoked.

Note that the designations, read-only, read, read-write applies to access by external entities when the instance is instantiated. Access to the MIB variable when the instantiation is not active is outside the scope of IEEE802.11.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **MIB Variable** | **I** | **A** | **R** | **D** | **PA** | **Notes** | **Recommendation** |
| dot11PASNActivated  | X |  |  |  |  | Does not change during operation; DEFVAL is false | No change. Already exists. |
| dot11NoAuthPASNAllowed |  |  | X |  |  | Does not change during operation; if this is changed to Required need to advertise this. DEFVAL=false. | dot11PASNRequired (need discussion) |
| dot11SecureLTFImplemented | X |  |  |  |  | Does not change during operation | No change required |
| dot11NonTriggerBasedRangingRespImplemented | X |  |  |  |  | Does not change during operation | No change required |
| Dot11TriggerBasedRangingRespImplemented | X |  |  |  |  | Does not change during operation | No change required |
| dot11RSTARequiresPMFActivated |  |  | x |  |  | This is a primary/secondary relationship, the RSTA advertises requirement, the ISTA initiates PASN negotiation; DEFVAL=falseAdvertised using Extended Capabilities element | dot11PASNPMFRequired |
| dot11PassiveLocationRangingResponderImplemented | X |  |  |  |  | Does not change during operation | No change required- Remove the default value (already in D1.5) |
| dot11PassiveLocationRangingInitiatorImplemented | X |  |  |  |  | Does not change during operation | No change required- Remove the default value (already in D1.5) |
| dot11AoAMeasurementAvailable  |  | X |  |  |  | AoA measurement capability can be dynamically turned on/off. However if an active session with AoA Measurement enabled exists, the setting of this variable cannot be turned off. Cannot be dynamic  | dot11AoAMeasurementImplemented |
| dot11ISTA2RSTALMRFeedbackPolicy |  |  |  |  | x | Indicates a policy. The existing semantics can still be maintained. Dot11ISTA2RSTALMRFeedbackPolicyActive = 1 implies ISTA2RSTALMR not required and = 0 implies that the ISTA and RSTA negotiate ISTA2RSTA LMR Feedback for the session; DEFVAL=true | dot11ISTA2RSTALMRFeedbackPolicyActived |
| dot11PhaseShiftFeedbackImplemented | x |  |  |  |  | Static capability that does not change during the operation of the device. ~~DEFVAL = false.~~ | No change proposed. |

Question for 60GHz – if dot11FineTimingMsmtRespActivated is true or dot11FineTimingMsmstInitActivated is true and if the implementation is DMG/EDMG capable, is the implementation PDMG/PEDMG?

Question on the Device Class parameter (Bit 30 of the Ranging Parameters field): Do we need a MIB variable and/or an Extended Capabilities bit corresponding to this?

Resolution: Revise.

***TGaz Editor: Apply the following changes to D1.5***

1. ***Replace all occurrences of*** dot11NoAuthPASNAllowed ***with*** dot11NoAuthPASNRequired
2. ***Replace all occurrences of*** dot11RSTARequiresPMFActivated ***with*** dot11RSTARequiresPMFRequired
3. ***Replace all occurrences of*** dot11RSTARequiresPMFActivated ***with*** dot11PASNPMFRequired
4. ***Replace all occurrences of*** dot11AoAMeasurementAvailable ***with*** dot11AoAMeasurementImplemented
5. ***Replace all occurrences of*** dot11ISTA2RSTALMRFeedbackPolicy ***with*** dot11ISTA2RSTALMRFeedbackPolicyActivated