IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Clause 6.3 – Proposed New Text | | | | |
| Date: 2022-09 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Graham SMITH | SR Technology | Sunrise, FL, USA. | 916 799 9563 | [gsmith@srtrl.com](mailto:gsmith@srtrl.com) |
| Mark HAMILTON | Ruckus (Commscope) |  |  |  |
| Joseph LEVY | InterDigital | 111 W 33 St, NY, NY, USA | +1 631 622 4139 | jslevy@ieee.org |
| Jouni MALINEN | Qualcomm |  |  |  |

Abstract

Proposed Text to replace 6.3

Note: Instructions will also be added to delete 6.3 references from main body. References to the primitives, to be left in. See 21/1822r2.

REV 1 – Work on the Table with Notes.

REV 2 – More references found for the Table

Types have been re-numbered.

Changes required for the main text has been added

REV 3 – Changes made based on TG meeting June 11, 2022

REV 4 – Changes from meeting 7/12/2022.

REV 5 – edits

REV 6 – Changes resulting from presentation 8/25/2022

REV 7 – Table 11-xx edited

REV 8 – Two new primitives added to Table.

**Editor – Please note that TEXT REFERENCED TO DRAFT 802.11me 1.1**

**Replace existing 6.3 with the following new 6.3, 6.4 and 6.5 and move the existing 6.4 to be 6.6, and existing 6.5 to be 6.7.**

**6.3 MLME SAP interface**

**6.3.1 Introduction**

The services provided by the MLME to the SME are specified in this subclause. These services are described in an abstract way (following the model described in ITU-T Recommendation X.210 [B55]) and do not imply any particular implementation or exposed interface. MLME SAP primitives are of the general form ACTION.request primitive followed by ACTION.confirm primitive (for an exchange initiated by the SAP client) and ACTION.indication primitive followed by ACTION.response primitive (for an exchange initiated by the MLME). The SME uses the services provided by the MLME through the MLME SAP.

The primitives generally include a STA Address or a Peer STA address parameter. The .response and .confirm primitives generally contain a ResultCode parameter. A high-level description of the primitives is provided in 6.4. The description in 6.4 is a guide to the detailed formats of the primitives and other parameters. Information that is known to the MLME is not passed in the primitive parameters.

There are seven general forms of MLME-SAP interface primitives.

**6.3.2 Type 1**

Figure 6.x depicts Type 1. The Type 1 general form is used for the exchange of request/response frames between an initiating STA and a peer STA.

**FIGURE 6.x – Type 1 form of MLME SAP primitives for request/response process**



The .request primitive is generated by the SME of the initiating STA to request that a request frame is sent to a peer STA.

The .indication primitive is generated by the MLME of the peer STA when the request frame is received.

The .response primitive is generated by the SME of the peer to request that a response frame be sent to the initiating STA.

The .confirm primitive includes a Result Code parameter reporting success or failure of the request, and is generated by the MLME of the initiating STA when either the response frame from the peer STA is acknowledged, or the (re)transmission of the request frame fails.

**6.3.3 Type 2**

Figure 6.xx depicts Type 2. The Type 2 general form is used for the transmission of a frame from one STA to a peer STA that does not require a response from the peer STA but does require a confirmation that the frame was transmitted and either acknowledged or timed out.

**FIGURE 6.xx – Type 2 form of MLME SAP primitives for frame transmission not requiring a response, but requiring a confirmation**

The .request primitive is generated by the SME of the initiating STA to request that a request frame is sent to a peer STA.

The .confirm primitive generally includes a Result Code parameter reporting success or failure of the request, and is generated by the MLME when the requested action or process is completed, or fails.

The .indication primitive is generated by the MLME of the peer STA when the request frame is received.

**6.3.4 type 3**

Figure 6.xxx depicts Type 3. The Type 3 general form is used for the transmission of a frame from one STA to a peer STA that does not require a response from the peer STA or a confirmation.

**FIGURE 6.xxx – Type 3 form of MLME SAP primitives for frame transmission not requiring a response or a confirmation**

The .request primitive is generated by the SME of the initiating STA to request that a request frame is sent to a peer STA.

The .indication primitive is generated by the MLME of the peer STA when the request frame is received.

**6.3.5 Type 4**

Figure 6.xxxx depicts Type 4. The Type 4 general form is used for the transmission of a frame that does not require a response, but does require a confirmation that it was sent.

**FIGURE 6.xxxx – Type 4 form of MLME SAP primitives for a frame transmission from a STA, but does require a confirmation that it was sent**



The .request primitive is generated by the SME to request that the MLME transmits a frame.

The .confirm primitive generally includes a Result Code parameter reporting success or failure of the request, and is generated by the MLME when the requested frame transmission is completed, or fails.

**6.3.6 Type 5**

Figure 6.xxxxx depicts Type 5. The Type 5 general form is used when the SME requests a process to be initiated or information to be provided by the MLME.

**FIGURE 6.xxxxx – Type 5 form of MLME SAP primitives for SME requesting MLME to perform a process**



The .request primitive is generated by the SME to request that a process is initiated by the MLME or information is requested to be provided by the MLME.

The .confirm primitive generally includes a Result Code parameter reporting success or failure of the request, and is generated by the MLME when the request completes or fails.

**6.3.7 Type 6**

Figure 6.xxxxxx depicts Type 6. The Type 6 general form is used when the SME requests a process to be initiated by the MLME and the SME does not require a confirmation.

**FIGURE 6.xxxxxx – Type 6 form of MLME SAP primitives for SME requesting MLME to perform a process not requiring a confirmation**



The .request primitive is generated by the SME to request that a process is initiated by the MLME.

**6.3.8 Type 7**

Figure 6.xxxxxxx depicts Type 7. The Type 7 general form is used when the MLME informs the SME of an event.

**FIGURE 6.xxxxxxx – Type 7 form of MLME SAP primitives for MLME informing SME of an event**



The .indication primitive is generated by the MLME to inform the SME of an event.

*Editor – add new section 6.4*

**6.4 Table of MLME SAP interfaces**

Table 6-vv lists the service name, the MLME SAP interface name (MLME-XXX), the Type as defined in 6.3.1, together with references that can be used to derive the primitive’s parameters, triggers, and semantics.

**Table 6-vv MLME SA interface**

| **Service Name** | **MLME-XXX** | **Type** | **References** | **Comments** |
| --- | --- | --- | --- | --- |
| Power management | POWERMGT | 5 | 6.5.2 | See 11.2 |
| Scan | SCAN | N/A | 6.5.3 | See 11.1.4 |
| SCAN-STOP | 6 |  |
| Synchronization | JOIN | 5 | 6.5.4 | See 11.1 |
| Authenticate | AUTHENTICATE | 1 | 6.5.5 | See 11.3.4 |
| Deauthenticate | DEAUTHENTICATE | 2 | 6.5.6 |
| Associate | ASSOCIATE | 1 | 6.5.7 | See 11.3.5 |
| Reassociate | REASSOCIATE | 1 | 6.5.8 |
| Disassociate | DISASSOCIATE | 2 | 6.5.9 |
| Reset | RESET | 6 | 6.5.10 |  |
| Start | START | 5 | 6.5.11 |  |
| Stop | STOP | 6 | 6.5.12 |  |
| Measurement request | MREQUEST | 3 | 6.5.13, 9.6.2, 9.6.6 |  |
| Channel measurement | MEASURE | 2 | 6.5.13, 9.4.2.20, 9.4.2.21 |  |
| Measurement report | MREPORT | 3 | 6.5.13, 9.4.2.21 |  |
| Channel switch | CHANNELSWITCH | 1 | 6.5.13, 9.6.2.6, 9.4.2.18 |  |
| TPC request | TPCADAPT | 4 | 6.5.13, 9.6.2.4, 9.6.2.5 | See 11.7.7 |
| SetKeys | SETKEYS | 6 | 6.5.14 |  |
| DeleteKeys | DELETEKEYS | 6 | 6.5.15 |  |
| MIC (michael) failure event | MICHAELMICFAILURE | 7 | 12.5.2.4, 12.7.2 |  |
| EAPOL | EAPOL | 5 | 12.7.2 |  |
| SetProtection | SETPROTECTION | 6 | 6.5.16 |  |
| Protected frame dropped | PROTECTEDFRAMEDROPPED | 7 | 12.6.18 |  |
| TS management interface | ADDTS | 1 | 9.6.3.3, 9.6.3.2 | See 10.23.3, 10.23.4 |
|  | DELTS | 7 | 9.6.3.4, 9.4.1.16 |
|  | ADDTSRESERVE | 1 | 9.6.3.7, 9.6.3.8 |
| Higher layer synchronization support | HL-SYNC | 3 | 11.6 |  |
| Block Ack | ADDBA | 1 | 9.3.1.7, 9.6.4.2, 9.6.4.3 | See 10.25 |
| DELBA | 3 | 9.6.4.4, 9.4.1.16 |
| Schedule element management | SCHEDULE | 3 | 9.4.2.33 |  |
| Vendor-specific action | VSPECIFIC | 3 | 9.6.5 |  |
| Neighbor report | NEIGHBORREPREQ | 3 | 9.6.6.6 | See 11.10.10 |
| NEIGHBORREPRESP | 3 | 9.6.6.7 |
| Link Measure Request | LINKMEASUREREQ | 3 | 9.6.6.4 | See 11.10.11 |
| LINKMEASURERES | 3 | 9.6.6.5 |
| Resource request | RESOURCE-REQUEST | 1 | 13.9.1 | See 13.6.2, 13.9 |
| RESOURCE-REQUEST-LOCAL | 5 | 13.11.2, 13.11.3.2 |
| Remote request | REMOTE-REQUEST | 3 | 9.6.8 | See 13.5.3, 13.9, 13.10.1 |
| Extended channel switch announcement | EXTCHANNELSWITCH | 1 | 9.6.7.7,  9.4.2.52 | See 11.8.8.4.3 |
| DSE power constraint announcement | DSETPC | 1 | 9.6.7.10 | See 11.11.5, 4.3.12 |
| Enablement | ENABLEMENT | 1 | 9.6.7.4 | See 11.11.2 |
| Deenablement | DEENABLEMENT | 3 | 9.6.7.5 | See 11.11.2 |
| SA Query support | SA-QUERY | 1 | 9.6.9.2 | See 11.3.5.3 |
| Get TSF timer | GETTSFTIME | 5 | 11.19.1 |  |
| Timing Advertisement | TIMING-ADVERTISEMENT | 3 | 9.4.2.60 | See 11.19.2 |
| TDLS Discovery | TDLSDISCOVERY | 1 | 9.6.12.12, 9.6.7.16 | See 11.20.3 |
| TDLS direct-link establishment | TDLSSETUPREQUEST | 3 | 9.6.12.2 | See 11.20  . |
| TDLSSETUPRESPONSE | 3 | 9.6.12.3 |
| TDLSCONFIRM | 3 | 9.6.12.4 |
| TDLSPOTENTIALPEERSTA | 5 | Figure 11yy |
| TDLS direct link teardown | TDLSTEARDOWN | 3 | 9.6.12.5 | See 11.20 |
| TDLS peer U-APSD | TDLSSPTI | 1 | 9.6.12.6 |
| TDLS channel switch | TDLSCHANNELSWITCH | 1 | 9.6.12.7, 9.6.12.8 |
| TDLS peer PSM | TDLSPEERPSM | 1 | 9.6.12.9, 9.6.12.10 |
| Event | EVLREQUEST | 3 | 6.5.18 | See 11.21.2 |
| EVLREPORT | 3 | 6.5.19 |
| EVLOG | 5 | 6.5.20 |
| Diagnostic request report | DIAGREQUEST | 3 | 9.6.13.4, 9.4.2.69 | See 11.21.3 |
| DIAGREPORT | 3 | 9.6.13.5, 9.4.2.69 |
| Location configuration request | LOCATIONCFG | 1 | 9.6.13.6, 9.6.13.7,  9.4.2.70 | See 11.21.4 |
| Location track notification | LOCATIONTRACKNOTIF | 3 | 9.6.13.6, 9.4.2.70 |
| Timing measurement | TIMINGMSMTRQ | 3 | 9.6.13.28 | See 11.21.5 |
| TIMINGMSMT | 2 | 9.6.14.3 |
| Fine timing measurement (FTM) | FINETIMINGMSMTRQ | 3 | 9.6.7.32 | See 11.21.6 |
| FINETIMINGMSMT | 2 | 9.6.7.33 |
| BSS transition management | BTMQUERY | 3 | 9.6.13.8 | See 11.21.7.2 |
| BTM | 1 | 9.6.13.9, 9.6.13.10 | See 11.21.7.3 and 11.21.7.4 |
| FMS setup | FMS | 1 | 9.4.2.75, 9.4.2.76 | See 11.21.8 |
| Collocated Interference request report | CLINTERFERENCEREQUEST | 3 | 9.6.13.13 | See 11.21.9 |
| CLINTERFERENCEREPORT | 3 | 9.6.13.14, 9.4.2.84 |
| TFS setup | TFS | 1 | 9.6.13.15, 9.6.13.16, 9.4.2.79, 9.4.2.80 | See 11.21.12 |
| WNM sleep mode request | SLEEPMODE | 1 | 9.4.2.79, 9.4.2.80 | See 11.2.3.16 |
| TIM broadcast setup | TIMBROADCAST | 1 | 9.4.2.82, 9.4.2.83 | See 11.2.3.15 |
| QoS traffic capability update | QOSTRAFFICCAPUPDATE | 3 | 9.6.13.23 | See 11.21.10 |
| Channel Usage request | CHANNELUSAGE | 1 | 9.6.13.24, 9.6.13.25, 9.4.2.85 | See 11.21.15 |
| DMS or GCR request and response procedure | GATS | 1 | 9.6.12.26, 9.4.2.87, 9.6.12.2, 9.4.2.88 | See 11.21.16 |
| GATS-TERM | 3 | 9.6.12.2, 9.4.2.88 |
| WNM notification request response | WNMNOTIFICATIONREQUEST | 3 | 9.6.13.29 | See 11.21.17 |
|  | WNMNOTIFICATIONRESPONSE | 3 | 9.6.13.30 |
| Network discovery and selection support | GAS | 1 | 9.6.7.12  9.6.7.13 | See 11.22.3, 11.23 |
| QoS Map element management | QOS-MAP | 3 | 9.6.3.6 | See 11.22.9 |
| Mesh peering management | MESHPEERINGMANAGEMENT | 1 | 9.6.15.2, 9.6.15.3,  9.6.15.4 | See 14.3, 14.4 |
| Mesh power management | MESHPOWERMGT | 5 | 14.14.1 |  |
| Mesh neighbor offset synchronization | MESHNEIGHBOROFFSETSYNCSTART | 5 | 14.13 |  |
| MESHNEIGHBOROFFSETCALCULATE | 5 |
| MESHNEIGHBOROFFSETSYNCSTOP | 5 |
| Mesh TBTT adjustment | MESHTBTTADJUSTMENT | 1 | 9.6.16.11, 9.6.16.12 | See 14.13.4 |
| MCCA management interface | ACTIVATEMCCA | 6 | 10.24.3.2 |  |
| MCCASETUP | 1 | 9.6.16.6, 9.6.16.7 | See 10.24.3.6 |
| MCCAADVERTISEMENT | 1 | 9.6.16.8, 9.6.16.9 | See 10.24.3.7 |
| MCCATEARDOWN | 3 | 9.6.16.10 | See 10.24.3.8 |
| MBSS congestion control | MBSSCONGESTIONCONTROL | 3 | 9.6.16.5 | See 14.12.2 |
| MBSS proxy update | MBSSPROXYUPDATE | 1 | 9.6.17.2, 9.6.17.3 | See 14.11.4.3 |
| MBSS mesh gate announcement | MBSSGATEANNOUNCEMENT | 3 | 9.6.16.4 | See 14.11.2 |
| Mesh link metric | MESHLINKMETRICREAD | 5 |  | See 14.9.2 |
| MESHLINKMETRICREPORT | 3 | 9.6.16.2 | See 14.8.3, 14.9 |
| HWMP mesh path selection | HWMPMESHPATHSELECTION | 3 | 9.6.16.3 | See 14.10 |
| QMF policy | QMFPOLICY | 3 | 9.6.7.18 | See 11.24.2 |
| QMFPOLICYCHANGE | 3 | 9.6.7.19 |
| QMFPOLICYSET | 6 | 11.24.2.2 |
| SCS request and response procedure | SCS | 1 | 9.6.18.2, 9.6.18.3 | See 11.25.2 |
| SCS-TERM | 3 | 11.25.2 |
| QLoad report management | QLOAD | 1 | 9.6.7.20, 9.6.7.21 | See 11.26.2 |
| HCCA TXOP advertisement management | TXOPADVERTISEMENT | 1 | 9.6.7.22, 9.6.7.23 | See 11.26.3 |
| GCR group membership management | GROUP-MEMBERSHIP | 1 | 9.6.18.4, 9.6.18.5 | See 11.21.16.3.2 |
| AP PeerKey management | APPEERKEY | 3 | 9.6.7.24 | See 12.10.2 |
| On-channel Tunneling operation | OCTunnel | N/A | 6.5.21 | See 11.31.5 |
| Multi-band operation | FST-SETUP | 1 | 9.6.20.2, 9.6.20.3 | See 11.31.3  . |
| FST-ACK | 1 | 9.6.20.5, 9.6.20.6 | See 11.31.3 |
| FST-TEARDOWN | 3 | 9.6.20.4 | See 11.31.4 |
| FST-INCOMING | 6 | 11.31.3.2 |  |
| DMG relay operation | RELAY-SEARCH | 1 | 9.6.19.8, 9.6.19.9 | See 11.34.2  . |
| RLS | 1 | 9.6.19.12, 9.6.19.13 | See 11.34.2.4 |
| RLS-TEARDOWN | 3 | 9.6.19.15 | See 11.34.4 |
| Quieting adjacent BSS operation | QAB | 1 | 9.6.7.34, 9.6.7.35 | See 11.35 |
| DMG beamforming | BF-TRAINING | N/A | 6.5.22 | . |
| SU-MIMO-BF-TRAINING |
| MLME-MU-MIMO-BF-TRAINING |
| SU-MIMO-HYBRID-BF-PROTOCOL |
| MU-MIMO-HYBRID-BF-PROTOCOL |
| PN event report | PN-EXHAUSTION | 7 | 6.5.17 | See 12.5.3.3.2  12.5.4.4  12.5.5.3.2  12.6.1.18 |
| PN-WARNING | 7 | See 12.6.21 |
| Channel Availability Query | CHANNELAVAILABILITYQUERY | 1 | 9.6.7.25 | See 11.42.4  . |
| Channel schedule management | CHANNELSCHEDULEMANAGEMENT | 1 | 9.6.7.26 | See 11.42.5 |
| Contact verification signal | CVS | 3 | 9.6.7.27 | See 11.42.6 |
| GDD Enablement | GDDENABLEMENT | 1 | 9.6.7.28, 9.6.7.29 | See 11.42.2, 11.42.3 |
| Network channel control management | NETWORKCHANNELCONTROL | 1 | 9.6.7.30 | See 11.42.7 |
| White space map (WSM) | WSM | 3 | 9.6.7.31 | See 11.42.8 |
| Estimated Throughput | ESTIMATED-THROUGHPUT | 5 | 6.5.23 | See 11.44  . |
| Get authentication and association state | GETAUTHASSOCSTATE | 5 | 11.3.1 |  |
| FILS Container | FILSContainer | 1 | 9.6.23.2,  9.4.2.184 | See 11.45.3.3 |
| Dynamic AID assignment operation | AIDSWITCH | 1 | 9.6.24.2,  9.6.24.3 | See 10.20 |
| Sync Control | SYNCCONTROL | 3 | 9.6.24.4 | See 10.49 |
| STA Information Announcement | STAINFORMATION | 3 | 9.6.24.5 | See 10.20 and 10.54.5.3 |
| EDCA Parameter Set update | EDCAPARAMETERSET | 3 | 9.6.24.6 | See 10.2.3.2 |
| EL Operation | ELOPERATION | 3 | 9.6.24.7 | See 10.62 |
| TWT Setup | TWTSETUP | 1 | 9.6.24.8 | See 10.47.7 |
| TWT Teardown | TWTTEARDOWN | 3 | 9.6.24.9 | See 10.47.8 |
| Sectorized Group ID List management | SECTORIZEDGROUPID | 3 | 9.6.24.10 | See 10.53.3 |
| Header Compression procedure | HEADERCOMPRESSION | 1 | 9.6.25.5 | See 10.58 |
| Reachable Address Update | REACHABLEADDRESSUPDATE | 3 | 9.6.25.2 | See 10.54.2 |
| Control response MCS negotiation operation | CONTROLRESPONSEMCS | 1 | 9.6.27.2,  9.6.27.3 | See 10.6.5.3 |
| S1G relay (de)activation | S1GRELAYACTIVATE | 1 | 9.6.25.3,  9.6.25.4 | See 10.54.2 |
| DCS procedure | DCSMEASUREMENT | 1 | 9.6.7.37,  9.6.7.38 | See 11.47 |
| Update | UPDATE | 5 | 6.5.24 | See 11.23.2 |
| MSCS request and response procedure | MSCS | 1 | 9.6.18.6,  9.6.18.7 | See 11.25.3 |
| MSCS-TERM | 3 | 9.6.18.7 |
| MAC Address Update | UPDATEMACADDRESS | 5 | 12.2.10 |  |
| Quiet time period | QTP | 1 | 9.6.31.3 | See 26.17.5.2,  26.17.5.3 |
| TDD beamforming | TDD-BF-TRAINING | 2 | 10.42 | TDD beamforming training procedures |
| TDD sector switch | TDD-SECTOR-SWITCH | 2 | 11.36.3 |  |
| TDD beam measurement | TDD-BEAM-MEASUREMENT | 2 | 10.42.11 | See 11.36.4  TDD beamforming  TDD beam measurement |
| TDD structure and schedule | TDD-SLOT-STRUCTURE | 5 | 9.4.2.281 | See 10.39.6.2.2  See 11.54 |
| TDD-SLOT-SCHEDULE | 5 | 9.4.2.282 |
| TDD-SLOT-ANNOUNCE | 2 | 9.4.2.281,  9.4.2.282 |
| TDD-BANDWIDTH | 2 | 9.4.2.285 |
| WUR mode setup | WURMODESETUP | 1 | 9.6.33.2 | See 29.8.2 |
| WUR mode teardown | WURMODETEARDOWN | 3 | 9.6.33.3 | See 29.8.2 |
| WUR Discovery | WURDISCOVERY | 5 | 9.9.3.3 | See 29.12 |
| MU EDCA Reset | MUEDCARESET | 3 | 9.6.32.3 | See 26.2.6.2 |
| HE BSS color change announcement | HEBSSCOLORCHANGEANNOUNCEMENT | 3 | 9.4.2.254 | See 26.17.3.4 |

*Editor – add new section 6.5*

**6.5 MLME SAP primitives**

6.5.1 Introduction

MLME SAP primitives are detailed in this clause when they do not directly correspond to frame exchanges described in subsequent clauses, where the primitive parameters differ significantly from the fields in the respective frames, or when the primitives may not be clear from the descriptions in those clauses.

See 6.4 for a table of all MLME SAP primitives.

***Editor: Include the following subclauses in full, renumbering the subclause:***

Old subclause New subclause

6.3.2 6.5.2 Power management

6.3.3 6.5.3 Scan

6.3.4 6.5.4 Synchronization

6.3.5 6.5.5 Authenticate

6.3.6 6.5.6 Deauthenticate

6.3.7 6.5.7 Associate

6.3.8 6.5.8 Reassociate

6.3.9 6.5.9 Disassociate

6.3.10 6.5.10 Reset

6.3.11 6.5.11 Start

6.3.12 6.5.12 Stop

6.3.13 6.5.13 Protocol layer model for spectrum management and radio

measurement

6.3.19 6.5.14 SetKeys

6.3.20 6.5.15 DeleteKeys

6.3.23 6.5.16 SetProtection

6.3.92 6.5.17 PN event report

6.3.48 6.5.18 Event request

6.3.49 6.5.19 Event report

6.3.50 6.5.20 Event

6.3.87 6.5.21 On-channel Tunneling operation

6.3.91 6.5.22 DMG Beamforming

6.3.99 6.5.23 Estimated Throughput

6.3.115 6.5.24 Update

*Editor –all remaining 6.3 subclauses are deleted*

*Editor – Existing clause 6.4 is renumbered to 6.6. Existing clause 6.5 is renumbered to 6.7*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Editor - At the following locations, referenced to draft 802.11me 1.1 edit as shown***

**10.3.1 DCF General**

At P2084.35

All non-DMG STAs that are members of a BSS are able to receive and transmit at all of the data rates in the BSSBasicRateSet parameter of the MLME-START.request primitive or BSSBasicRateSet parameter of the SelectedBSS parameter of the MLME-JOIN.request primitive; see ~~6.3.4.2.4~~ 6.4.3.2.4 (Effect of receipt) and ~~6.3.11.2.4~~ 6.4.10.2.4 (Effect of receipt).

At P2084.61

All DMG STAs that are members of a BSS are able to receive and transmit using all of the MCSs in the OperationalRateSet parameter of the MLME-START.request primitive or OperationalRateSet parameter of the SelectedBSS parameter of the MLME-JOIN.request primitive; see ~~6.3.4.2.4~~ 6.4.3.2.4 (Effect of receipt) and ~~6.3.11.2.4~~ 6.4.10.2.4 (Effect of receipt).

**11.1.4.3.4 - Criteria for sending a response**

P2675.51

A FILS STA shall not respond to a Probe Request frame if….

7) If the OUI Response Criteria field is present in the FILS Request Parameters element and if any of the OUIs specified by the OUI Response Criteria field are not in the list of known OUIs configured in the AP (see Known OUIs, ~~6.3.5.2.2~~ 6.4.10.2.2 (Semantics of the service primitive)).

**11.1.4.5. Synchronizing with a BSS**

P2685.63

In addition to adopting the synchronization parameters as described in the first paragraph of this subclause, a STA joining an IBSS shall adopt each of the parameters found in the SelectedBSS parameter of the MLME-JOIN.request primitive according to the rule found for that parameter in the “IBSS adoption” column of the matching row of the BSSDescription table found in ~~6.3.3.3.2~~ 6.4.2.3.2 (Semantics of the service primitive) when those parameters exist at the STA.

P2686.7

In addition to the table entries in ~~6.3.3.3.2~~ 6.4.2.3.2 (Semantics of the service primitive), if dot11MultiDomainCapabilityActivated is true, a S TA that is joining an IBSS and receives a Beacon or Probe Response frame containing a Country element shall adopt the applicable parameters included in that Country element, and the dot11RegDomainsSupportedEntry shall be set to Other

**11.2.3.16.1 WNM sleep mode capability**

2715.12

To prevent key reinstallation attacks, a non-AP STA in which dot11WNMSleepModeActivated is true shall maintain a copy of the most recent GTK, most recent IGTK and most recent BIGTK installed when exiting WNM sleep mode and shall not install a GTK, IGTK or BIGTK when the key to be set upon exiting WNM sleep mode matches either of the two maintained keys (see 6.3.~~19~~13(SetKeys)).

*Editor – make edits as shown below and insert new Table*

**11.4.4.4 TS setup procedures for both AP and non-AP STA initiation**

2769.13

~~The contents of the TSPEC or DMG TSPEC field, TCLAS element(s) (if present), TCLAS Processing element (if present), and ResultCode field contain values specified in 6.3.25.5.2 (Semantics of the service primitive). and~~ The Result Code field of the MLMEADDTS.response frame shall be set to one of the values in Table 11-xx.

*Editor – add Table 11-xx as shown below*

Table 11-xx Status Code for MLMEADDTS.response

|  |  |
| --- | --- |
| VALID RANGE | DESCRIPTION |
| REJECTED\_FOR\_DELAY\_PERIOD,  REJECTED\_WITH\_SUGGESTED\_BSS\_TRANSITION,  REQUESTED\_TCLAS\_NOT\_SUPPORTED, TCLAS\_RESOURCES\_EXHAUSTED,  REJECTED\_HOME\_WITH\_SUGGESTED\_CHANGES,  REJECTED\_FOR\_SSP\_PERMISSIONS,  SUCCESS\_STA\_IN\_PS\_MODE,  REJECT\_U-PID\_SETTING | Indicates the results of  the corresponding MLMEADDTS.indication primitive |

*Editor –add text as shown*

**11.19.1 Introduction**

P2866.26

A STA may advertise a time standard by transmitting a Timing Advertisement element in one of the following

frames: Timing Advertisement, Probe Response, Beacon, DMG Beacon or Announce. As defined in 9.4.2.60

(Time Advertisement element) the Time Advertisement element contains two estimates. The Time Value field

contains an estimate of the difference between a time standard and the timestamp included in the same frame. The SME shall use the MLME-GETTFSTIME.request primitive to obtain the current value of the TSF timer. The Time Error field contains an estimate of the standard deviation of the error in the estimate in the Time Value field. The time standard might be derived from an external time source. A STA with an external time source might implement an estimator in a variety of ways, which are beyond the scope of this standard.

**11.20.1 General**

*Editor - At end of 11.20.1 add following sentences and then insert Figure 6-7 (P563.1) renumbered as Figure 11-yy*

Figure 11-yy (TDLS direct-link establishment) depicts the TDLS direct-link establishment process. The figure is an example of only the basic procedure and is not meant to be exhaustive of all possible uses of the protocol.

*Editor – make the following change to the Figure 6-7 (before insertion as Figure 11-yy)*

At P563.11 delete “PEERSTA.indication” and replace with “PEERSTA.confirm”

*Editor – Now insert Figure 6-7 (from Page 563 line 1), renumbered as Figure 11-yy*

**11.21.5 Timing Measurement procedure** P2891.55

The receiving STA captures the time at which the Timing Measurement frame arrives (t2) and the time at which the Ack frame response is transmitted (t3). The sending STA captures the time at which the Ack frame arrives (t4). ~~See Figure 6-16 (Timing measurement primitives and timestamps capture) in 6.3.55 (Timing measurement).~~

2892.1

The offset of the clock at the receiving STA with respect to the clock at the sending STA is calculated using Equation (11-4) (assuming a symmetric wireless channel). ~~See Figure 6-16 (Timing measurement primitives and timestamps capture) in 6.3.55 (Timing measurement).~~

**11.23.2 Unsolicited PAD procedure**

*Editor - At end of first para P2960.23 edit as follows:*

When dot11UnsolicitedPADActivated is true, an AP shall advertise services from an SIR using a Service Hint

element or a Service Hash element, or both, in Beacon and Probe Response frames. Each service may be

advertised using either a Service Hint element or a Service Hash element, but not both, in a Beacon or Probe

Response frames. The MLME-UPDATE.request primitive shall be used by the SME to indicate the Service Hint and Service Hash elements to the MLME.

**11.24.2.2 QMF policy change in an infrastructure BSS or in an MBSS**

*Editor - At P2967.57 edit as follows*

The SME of a peer QMF STA uses the MLME-QMFPOLICY primitives ~~(see 6.3.81.2 (MLMEQMFPOLICY.request) to 6.3.81.3 (MLME-QMFPOLICY.indication))~~ to transmit a QMF Policy frame to a peer STA

At 2968.1

The SME of a peer QMF STA uses the MLME-QMFPOLICYCHANGE primitives ~~(see 6.3.81.4 (MLMEQMFPOLICYCHANGE. request) to 6.3.81.7 (MLME-QMFPOLICYCHANGE.response))~~ to exchange the QMF Policy Change and QMF Policy frames

*Editor – modify text as shown below*

**11.25.2** atP2972.23

The AP may use the MLME-SCS-TERM.request primitive to send an unsolicited SCS Response frame at any time to terminate an SCS stream.

**11.31.5 On-channel Tunneling (OCT) operation At** P3011.10

Figure 11-57 (On-channel tunneling procedure) depicts the overall OCT procedure. In this figure, <primitive> refers to the name of any of the MLME primitives defined in ~~6.3~~ 6.4 (MLME SAP interface) that meets all of the following conditions:

**12.7.1.5 Integrity group key hierarchy At** P3198.58

The IGTK is configured via the MLME-SETKEYS.request primitive; see ~~6.3.19~~ 6.4.13(SetKeys). IGTK configuration is described in the EAPOL-Key state machines; see 12.7.9 (RSNA Supplicant key management state machine) and 12.7.10 (RSNA Authenticator key management state machine).

**12.7.1.7 Beacon protection key hierarchy At** P3205.56

The BIGTK is configured via the MLME-SETKEYS.request primitive; see ~~6.3.19~~ 6.4.13(SetKeys). The BIGTK configuration is described in the EAPOL-Key state machines; see 12.7.9 (RSNA Supplicant key management state machine) and 12.7.10 (RSNA Authenticator key management state machine).

**12.7.1.8 Wake-up radio integrity group temporal key (WIGTK) hierarchy At** P3206.11

The WIGTK is configured via the MLME-SETKEYS.request primitive; see ~~6.3.19~~ 6.4.13 (SetKeys). The WIGTK configuration is described in the EAPOL-Key state machines

**14.14.1** **General** At P3407.57

A mesh STA may use mesh power management modes to reduce its power consumption. A mesh STA manages each of its mesh peerings with a peer-specific mesh power management mode as described in 14.14.2.2 (Peer-specific mesh power management modes). A mesh STA may use the MLME-MESHPOWERMGT.request primitive to set the mesh power management mode for a mesh peering independently of the mesh power management modes for its other mesh peerings.