IEEE P802.11  
Wireless LANs

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| RESOLUTIONS OF CIDs 7082, 7071, 7077, 7121, 7122. | | | | |
| Date: 2024-3-11 | | | | |
| Author(s): | | | | |
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Abstract

This submission proposes resolution for CIDs 7082, 7071, 7077, 7121, 7122.

Green indicates material agreed to in the group,

yellow material to be discussed, red material rejected by the group and

cyan material not to be overlooked.

The “Final” view should be selected in Word.

V1 – Added reference for CID 7082

V2 – Needed reference in another place

V3 – Added CIDS 7121 and 7122

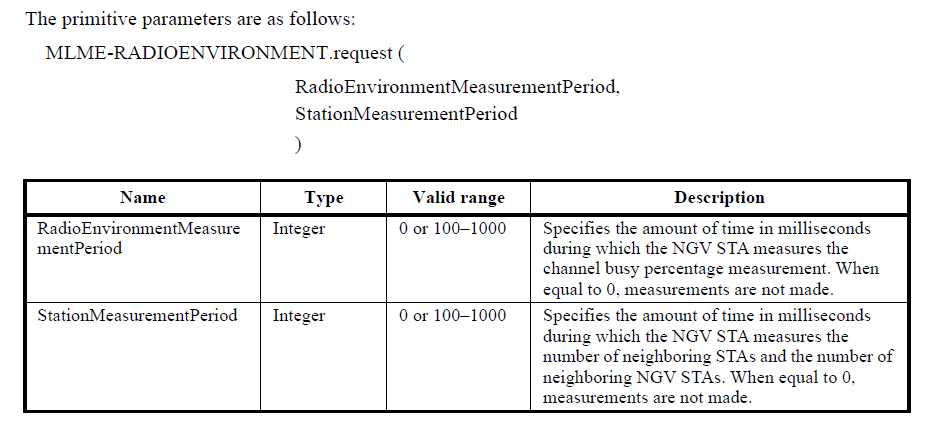
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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **CID** | **Page** | **Clause** | **Resn Status** | **Comment** | **Proposed Change** | **Resolution** | **Owning Ad-hoc** | | 7082 | 4880.38 | 31.6 |  | clause 6 issues- 6.3.127 doesn’t exist | as in comment. |  | MAC |   4880.38  “If requested by a higher layer, an NGV STA with dot11RadioEnvironmentMeasurementPeriod not equal to  0 shall measure the channel busy percentage and report the measurement results to a higher layer as defined  in 6.3.127 (NGV radio environment measurement).  If requested by a higher layer, an NGV STA with dot11StationMeasurementPeriod not equal to 0 shall  measure the number of neighboring STAs (non-NGV STAs and NGV-STAs) and the number of  neighboring NGV STAs, and report these measurement results to a higher layer as defined in 6.3.127 (NGV  radio environment measurement).”  **Discussion**  First note that this text uses “shall” and “defined” with reference to Clause 6.3. This is discouraged as Clause 6.3 has the following introduction.  “These services are described in an abstract way (following the model described in ITU-T  Recommendation X.210 [B64]) and do not imply any particular implementation or exposed interface.” |  |

802.11bd has Clause 6.3.127 “NGV radio environment measurement”

This provides details of the .request, and .indication making it a Type 3.

It also provides details on how to calculate the value which I can’t find in the text.

As per following example.



Hence a simple addition to the Table 6-1 is not enough. Ideally this should be described in text, but the easier way is to add to Clause 6.5. as it meets the criteria.

**RESOLUTION**

Revised

***From 802.11bd-2022 take “Clause 6.3.127 NGV radio environment measurement” in its entirety.***

***Renumber as Clause 6.5.25 and add complete text after Clause 6.5.24 in Draft P802.11 REVme D 5.0.***

***Insert following to end of Table 6-1***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Service Name | MLME-XXX | Type | References | Comments |
| NGV radio environment measurement | RADIOENVIRONMENT | 3 | 6.5.25 | See 31.6 |

***At P392.6 Edit Table 6-1 title adding a “P” to “SA”.***

“Table 6-1 – MLME SAP interface”

***At 4880.33, and at 4880.38***

Replace “6.3.127” with “6.5.25”.

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| 7077 | 2487.13 | 11.1.4.7 |  | Clause 6 issue - couldn’t find 6.3.128.5 | as in comment |  | MAC |

2487.10

“When the STA receives one or more SSW frames with the OCB subfield equal to 1 during an A-BFT or DTI and completes SLS with the peer STA, and the address of the peer STA is an address that is newly discovered, the STA shall issue an MLME-OCB-DMGDISCOVERY.indication with the PeerInfoSet parameter including the PeerInfo vector defined in 6.3.128.5 (MLME-OCB-DMGDISCOVERY.indication) for the peer STA that transmitted the SSW frame.”

The text describes in detail the DMG-OCB-START.request, DMG-OCB-STOP.request and OCB-DMGDISCOVERY.indication where the cross reference to the original clause in 11bd is provided. Also OCB-LINKSTATUS.indication is described.

The text and Figures 11-14 and 11-15 are provided which explain the process in good detail so in this case I think we can simply use an addition to Table 6-1, but we do need to capture the details of the PeerInfo vector in the DMGDISCOVERY.indication.

**RESOLUTION**

Revised

***Insert at end of Table 6-1***

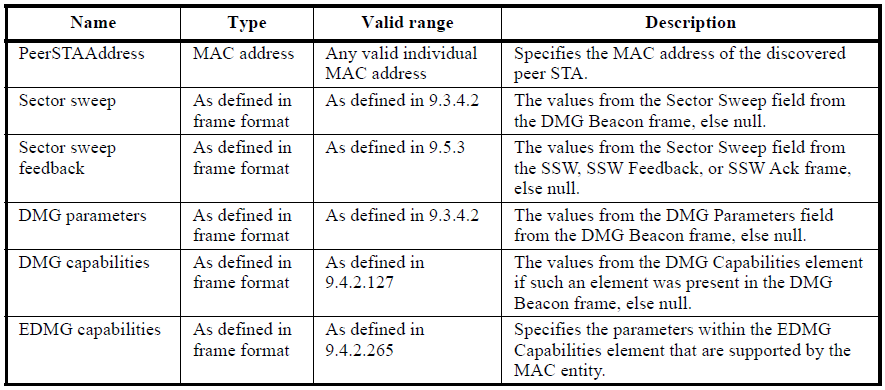
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| DMG operation outside the context of a BSS | DMG-OCB-START | 4 | 9.3.4.2, 9.4.2.127, 9.4.2.265, 9.4.2.279. 9.4.2.25 | See 11.1.4.7 |
| DMG-OCB-STOP | 6 |  |
| OCB-DMGDISCOVERY | 7 | 9.4.2.25, 9.3.4.2, 9.5.3, 9.3.4.2, 9.4.2.127, 9.4.2.265 |
| OCB-LINKSTATUS | 7 | 11.27.1.1, 9.4.2.25 | See 11.27.1.1 |

***At 2487.10 edit as follows:***

“When the STA receives one or more SSW frames with the OCB subfield equal to 1 during an A-BFT or DTI and completes SLS with the peer STA, and the address of the peer STA is an address that is newly discovered, the STA shall issue an MLME-OCB-DMGDISCOVERY.indication with the PeerInfoSet parameter including the PeerInfo vector ~~defined in 6.3.128.5 (MLME-OCB-DMGDISCOVERY.indication)~~ for the peer STA that transmitted the SSW frame. Each PeerInfo vector consists of the parameters shown in Table 11.XX, in which the term peer STA refers to the STA that transmitted the received DMG Beacon frame, SSW frame, SSW Feedback frame, or SSW Ack frame.”

***Insert new Table 11.XX***

Table 11.XX PeerInfo vectors



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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **CID** | **Page** | **Clause** | **Resn Status** | **Comment** | **Proposed Change** | **Resolution** | **Owning Ad-hoc** | | 7071 | 1756.65 | 10.2.3.2 |  | 6.3.55(Timing measurement) was deleted in D2.0. The reference needs to be updated. | as in comment. |  | MAC | |  |

Cited text is

“NOTE—The values specified in the TOD and TOA fields are described in MLME\_TIMINGSMSMT.request

MLME\_TIMINGSMSMT.confirm and MLME\_TIMINGSMSMT.indication primitives.(#1114-Ed1)

***Editor’s Note: 6.3.55(Timing measurement) was deleted in D2.0. The reference needs to be updated”***

Table of MLMEs is in Clause 6.4.

See page 399.51 for the TIMINGMSMT, Type 2 referencing 9.6.14.3 (Timing Measurement frame format)

Type 2 is request, indication, and confirm.

Is it TIMINGMSMT or TIMINGSMSMT? Table 6-1 does not have the “S”, but no matter as proposing to delete this reference.

In this case, simply need to delete the reference.

**RESOLUTION**

Revised

***At 1756.64, edit as follows***:

NOTE – ~~The~~ For the values specified in TOD and TOA fields see 9.6.14.3 (Timing Measurement frame format). ~~are~~ ~~described in MLME\_TIMINGSMSMT.request MLME\_TIMINGSMSMT.confirm and MLME\_TIMINGSMSMT.indication primitives~~

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **CID** | **Page** | **Clause** | **Resn Status** | **Comment** | **Proposed Change** | **Resolution** | **Owning Ad-hoc** | | 7121 | 442.6 | 6.5.5.2.2 |  | The additions made in 802.11az have not been inserted. "Content of PASN Authentication Frame" is not included. | Insert "Content of PASN Authentication Frame" after "Content of FILS Authentication Frame" and before "Vendor SpecificInfo" Note this also applies to 6.5.5.3, |  |  | | 7122 | 442.63 | 6.5.5.3.2 |  | The additions made in 802.11az have not been inserted. "Content of PASN Authentication Frame" is not included. | Insert the Content of PASN Authentication Frame details in the table after Content of FILS Authentication Frame and before Vendor SpecificInfo details. See 802.11az-2022 page 29, 6.3.5.2.2 - for the content of the table |  |  |   The commenter is correct. The following edits are required.  **RESOLUTION CIDs 7121 and 7122**  Revised  6.5.5.2 MLME\_AUTHENTICATE.request  ***At P442.6 Insert new line as shown below:***  Content of FILS Authentication frame  Content of PASN Authentication frame  VendorSpecific  ***At 442.63, add new row after “Content of FILS AUthenication frame” and before “VendorSpecific”***   |  |  |  |  | | --- | --- | --- | --- | | Content of PASN Authentication frame | Sequence of elements and fields | As defined in 12.13.3.2,  9.4.2.24, 9.4.2.241,  9.4.2.187, 9.4.2.303,  9.4.2.48 | The set of elements and fields to be included in PASN Authentication frames. Present if AuthenticationType indicates PASN authentication and dot11PASNActivated is true, otherwise not present. |   6.5.5.3 MLME-AUTHENTICATE.confirm  ***At P443.42 Insert new line as shown below***  Content of FILS Authentication frame  Content of PASN Authentication frame  VendorSpecificInfo  **At 443.61 *Edit the row for “AuthenticationType” adding “PASN” at end of Valid Range box.***   |  |  |  |  | | --- | --- | --- | --- | | AuthenticationType | Enumeration | OPEN\_SYSTEM,  SHARED\_KEY  FAST\_BSS\_TRANSITION,  SAE, FILS\_SHARED  KEY\_WITHOUT\_PFS,  FILS\_SHARED\_KEY\_WI  TH\_PFS,  FILS\_PUBLIC\_KEY,  PASN | Specifies the type of authentication algorithm that was used during the authentication process. This value matches the AuthenticationType parameter specified in the corresponding MLME-AUTHENTICATE.request primitive. |   ***At 444.49, add new row after “Content of FILS AUthenication frame” and before “VendorSpecificInfo”***   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Content of PASN Authentication frame | Sequence of elements and fields | As defined in 12.13.3.2,  9.4.2.24, 9.4.2.241,  9.4.2.187, 9.4.2.303,  9.4.2.48 | The set of elements and fields to be included in PASN Authentication frames. Present if AuthenticationType indicates PASN authentication and dot11PASNActivated is true, otherwise not present. |  |   6.5.5.4 MLME-AUTHENTICATE.indication  ***At P445.22 Insert new line as shown below***  Content of FILS Authentication frame  Content of PASN Authentication frame  VendorSpecificInfo  **At 445.40 *Edit the row for “AuthenticationType” adding “PASN” at end of Valid Range box.***   |  |  |  |  | | --- | --- | --- | --- | | AuthenticationType | Enumeration | OPEN\_SYSTEM,  SHARED\_KEY  FAST\_BSS\_TRANSITION,  SAE, FILS\_SHARED  KEY\_WITHOUT\_PFS,  FILS\_SHARED\_KEY\_WI  TH\_PFS,  FILS\_PUBLIC\_KEY,  PASN | Specifies the type of authentication algorithm that was used during the authentication process. This value matches the AuthenticationType parameter specified in the corresponding MLME-AUTHENTICATE.request primitive. |   ***At 446.18, add new row after “Content of FILS AUthenication frame” and before “VendorSpecificInfo”***   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Content of PASN Authentication frame | Sequence of elements and fields | As defined in 12.13.3.2,  9.4.2.24, 9.4.2.241,  9.4.2.187, 9.4.2.303,  9.4.2.48 | The set of elements and fields to be included in PASN Authentication frames. Present if AuthenticationType indicates PASN authentication and dot11PASNActivated is true, otherwise not present. |  |   6.5.5.5 MLME-AUTHENTICATE.response  ***At P446.54 Insert new line as shown below***  Content of FILS Authentication frame  Content of PASN Authentication frame  VendorSpecificInfo  ***At 447.60, add new row after “Content of FILS AUthenication frame” and before “VendorSpecificInfo”***   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Content of PASN Authentication frame | Sequence of elements and fields | As defined in 12.13.3.2,  9.4.2.24, 9.4.2.241,  9.4.2.187, 9.4.2.303,  9.4.2.48 | The set of elements and fields to be included in PASN Authentication frames. Present if AuthenticationType indicates PASN authentication and dot11PASNActivated is true, otherwise not present. |  |   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |