IEEE P802.11
Wireless LANs

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| D3.0 Comment Resolution for CIDs on Clause 6 |
| Date: 2018-07-11 |
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Abstract

This document proposes resolutions for following CIDs that are related to MLME SAP interface (Clause 6):

CIDs: 15003, 15004, 15187, 15189, 15191, 15192, 15808, 15809, 15852, and 15853.

Changes in the text refer to: Draft P802.11ax/D3.0, 802.11ah-2016 and 802.11-2016.

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGax Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGax Editor: Editing instructions preceded by “TGax Editor” are instructions to the TGax editor to modify existing material in the TGax draft. As a result of adopting the changes, the TGax editor will execute the instructions rather than copy them to the TGax Draft.***

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| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause**  | **Page** | **Line** | **Comment** | **Proposed Change** | **Proposed****Resolution** |
| 15003 | 6.3 | 43 | 10 | The tables in section 6.3 are missing entries for NDP Feedback and HE BSS Load element. | Add rows for NDP Feedback and HE BSS Load element wherever appropriate and consistent with clause 9.3.3 | Revise.Agree with the commenter. See the proposed text change in 11-18/1252r0 |

**Proposed text changes (for CID 15003)**:

***Add the following rows at the end of the table in Section 6.3.3.3.2 (MLME-SCAN.confirm) of TGax Draft D3.0: (P45L30)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** | **IBSS adoption** |
| NDP Feedback Report Parameter Set | As defined in frame format | As defined in 9.4.2.242 (NDP Feedback Report Parameter Set element) | The value from NDP Feedback Report Parameter Set element. The parameter is optionally present if dot11HEOptionImplemented is true and an NDP Feedback Report Parameter Set element was present in the Probe Response or Beacon frame from which the BSSDescriptionSet(#10189) was determined. Otherwise, the parameter is not present. (#5426, #7469, #7704) | Do not adopt |
| HE BSS Load | As defined in frame format | As defined in 9.4.2.247 (HE BSS Load element) | The value from HE BSS Load element. The parameter is optionally present if dot11QosOptionImplemented and dot11QBSSLoadImplemented and dot11HEOptionImplemented are true and an HE BSS Load element was present in the Probe Response or Beacon frame from which the BSSDescriptionSet(#10189) was determined. Otherwise, the parameter is not present. (#5426, #7469, #7704) | Do not adopt |

***Add the following row at the end of the table in Section 6.3.7.2.2 (MLME-ASSOCIATE.confirm) of TGax Draft D3.0: (P47L65)***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| NDP Feedback Report Parameter Set | As defined in NDP Feedback Report Parameter Set element | As defined in 9.4.2.242 (NDP Feedback Report Parameter Set element) | Indicates NDP Feedback Report parameter values. The parameter is optionally present if dot11HEOptionImplemented is true; otherwise not present. |

***Add the following row at the end of the table in Section 6.3.7.5.2 (MLME-ASSOCIATE.response) of TGax Draft D3.0: (P50L65)***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| NDP Feedback Report Parameter Set | As defined in NDP Feedback Report Parameter Set element | As defined in 9.4.2.242 (NDP Feedback Report Parameter Set element) | Indicates NDP Feedback Report parameter values. The parameter is optionally present if dot11HEOptionImplemented is true; otherwise not present. |

***Add the following row at the end of the table in Section 6.3.8.2.2 (MLME-REASSOCIATE.confirm) of TGax Draft D3.0: (P52L65)***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| NDP Feedback Report Parameter Set | As defined in NDP Feedback Report Parameter Set element | As defined in 9.4.2.242 (NDP Feedback Report Parameter Set element) | Indicates NDP Feedback Report parameter values. The parameter is optionally present if dot11HEOptionImplemented is true; otherwise not present. |

***Add the following row at the end of the table in Section 6.3.8.5.2 (MLME-REASSOCIATE.response) of TGax Draft D3.0: (P55L65)***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| NDP Feedback Report Parameter Set | As defined in NDP Feedback Report Parameter Set element | As defined in 9.4.2.242 (NDP Feedback Report Parameter Set element) | Indicates NDP Feedback Report parameter values. The parameter is optionally present if dot11HEOptionImplemented is true; otherwise not present. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause**  | **Page** | **Line** | **Comment** | **Proposed Change** | **Proposed****Resolution** |
| 15004 | 6.3.7 | 46 | 46 | The description for TWT is unnecessarily long and repetitive. Consolidate the two sentences to one with an OR to cover both conditions. Same comment applies to description on pg 49 (6.3.7.5.2), page 51 (6.3.8.2.2) and page 54 (6.3.8.5.2) | Please replace the text in the description column as: "Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is true and the TWT element is present in the Association Request frame that elicited the Association Response frame or the TWT Requester Support field in the HE Capabilities element in the Association Request frame that elicited the Association Response frame is 1; otherwise not present." | Accept. Agree with the commenter. See the proposed text change in 11-18/1252r0. |
| 15187 | 6.3.7.2.2 | 46 | 45 | This list of conditionals is difficult to read. One interpretation is that three (four, technically) conditions need to be fulfilled for this parameter to be set: an Association Request frame should have set the TWT Requester support to field to 1 in the HE Capabilities element, AND have a TWT element, AND the dot11TWTOptionActived MIB variable should be set to true, in both the AP and the non-AP. This wording expands considerably on the wording in 802.11ah, where only the MIB variable was required to indicate the TWT element. The draft Privacy Recommendations of P802E caution against superfluous identifier requirements, and because the TWT parameter in either case is only optionally set it might be sufficient to stay with the language in 802.11ah. | Change to "Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is set to true; otherwise, this parameter is not present." (this would amount to returning to the formulations of 802.11ah, but specifying that the MIB variable is set on both ends of the transmission)or, alternatively, change the text to"Specifies the parameters in the TWT element. This parameter is optionally present if the Association Request frame has set the TWT Request field in the HE Capabilities element to 1, and contains a TWT element, and dot11TWTOptionActivated is set to true at both the requesting and the responding STA; otherwise, this parameter is not present." | Revise.See the proposed text change in 11-18/1252r0. |
| 15189 | 6.3.7.5.2 | 49 | 5 | This list of conditionals is difficult to read. One interpretation is that three (four, technically) conditions need to be fulfilled for this parameter to be set: an Association Request frame should have set the TWT Requester support to field to 1 in the HE Capabilities element, AND have a TWT element, AND the dot11TWTOptionActived MIB variable should be set to true, in both the AP and the non-AP. This wording expands considerably on the wording in 802.11ah, where only the MIB variable was required to indicate the TWT element. The draft Privacy Recommendations of P802E caution against superfluous identifier requirements, and because the TWT parameter in either case is only optionally set it might be sufficient to stay with the language in 802.11ah. | Change to "Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is set to true; otherwise, this parameter is not present." (this would amount to returning to the formulations of 802.11ah, but specifying that the MIB variable is set on both ends of the transmission)or, alternatively, change the text to"Specifies the parameters in the TWT element. This parameter is optionally present if the Association Request frame has set the TWT Request field in the HE Capabilities element to 1, and contains a TWT element, and dot11TWTOptionActivated is set to true at both the requesting and the responding STA; otherwise, this parameter is not present." | Revise.See the proposed text change in 11-18/1252r0. |
| 15191 | 6.3.8.2.2 | 51 | 31 | This list of conditionals is difficult to read. One interpretation is that three (four, technically) conditions need to be fulfilled for this parameter to be set: an Association Request frame should have set the TWT Requester support to field to 1 in the HE Capabilities element, AND have a TWT element, AND the dot11TWTOptionActived MIB variable should be set to true, in both the AP and the non-AP. This wording expands considerably on the wording in 802.11ah, where only the MIB variable was required to indicate the TWT element. The draft Privacy Recommendations of P802E caution against superfluous identifier requirements, and because the TWT parameter in either case is only optionally set it might be sufficient to stay with the language in 802.11ah. | Change to "Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is set to true; otherwise, this parameter is not present." (this would amount to returning to the formulations of 802.11ah, but specifying that the MIB variable is set on both ends of the transmission)or, alternatively, change the text to"Specifies the parameters in the TWT element. This parameter is optionally present if the Association Request frame has set the TWT Request field in the HE Capabilities element to 1, and contains a TWT element, and dot11TWTOptionActivated is set to true at both the requesting and the responding STA; otherwise, this parameter is not present." | Revise.See the proposed text change in 11-18/1252r0. |
| 15192 | 6.3.8.5.2 | 54 | 5 | This list of conditionals is difficult to read. One interpretation is that three (four, technically) conditions need to be fulfilled for this parameter to be set: an Association Request frame should have set the TWT Requester support to field to 1 in the HE Capabilities element, AND have a TWT element, AND the dot11TWTOptionActived MIB variable should be set to true, in both the AP and the non-AP. This wording expands considerably on the wording in 802.11ah, where only the MIB variable was required to indicate the TWT element. The draft Privacy Recommendations of P802E caution against superfluous identifier requirements, and because the TWT parameter in either case is only optionally set it might be sufficient to stay with the language in 802.11ah. | Change to "Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is set to true; otherwise, this parameter is not present." (this would amount to returning to the formulations of 802.11ah, but specifying that the MIB variable is set on both ends of the transmission)or, alternatively, change the text to"Specifies the parameters in the TWT element. This parameter is optionally present if the Association Request frame has set the TWT Request field in the HE Capabilities element to 1, and contains a TWT element, and dot11TWTOptionActivated is set to true at both the requesting and the responding STA; otherwise, this parameter is not present." | Revise.See the proposed text change in 11-18/1252r0. |

**Proposed text changes (for CID 15004, 15187, 15189, 15191, and 15192)**:

***Change the following table in Section 6.3.7.2.2 (MLME-ASSOCIATE.confirm) of TGax Draft D3.0: (P46L45)***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| TWT | TWT element | As defined in ~~9.4.2.237 (HE Capabilities element)~~9.4.2.200 (TWT element) | Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is true and the TWT element is present in the Association Request frame that elicited the Association Response frame~~; The TWT element is optionally present if dot11TWTOptionActivated is true and~~ or the TWT Requester Support field in the HE Capabilities element in the Association Request frame that elicited the Association Response frame is 1; otherwise not present. |

***Change the following table in Section 6.3.7.5.2 (MLME-ASSOCIATE.response) of TGax Draft D3.0: (P49L5)***

***:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| TWT | TWT element | As defined in ~~9.4.2.237 (HE Capabilities element)~~9.4.2.200 (TWT element) | Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is true and the TWT element is present in the Association Request frame that elicited the Association Response frame~~; The TWT element is optionally present if dot11TWTOptionActivated is true and~~ or the TWT Requester Support field in the HE Capabilities element in the Association Request frame that elicited the Association Response frame is 1; otherwise not present. |

***Change the following table in Section 6.3.8.2.2 (MLME-REASSOCIATE.confirm) of TGax Draft D3.0: (P51L31)***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| TWT | TWT element | As defined in ~~9.4.2.237 (HE Capabilities element)~~9.4.2.200 (TWT element) | Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is true and the TWT element is present in the Association Request frame that elicited the Association Response frame~~; The TWT element is optionally present if dot11TWTOptionActivated is true and~~ or the TWT Requester Support field in the HE Capabilities element in the Association Request frame that elicited the Association Response frame is 1; otherwise not present. |

***Change the following table in Section 6.3.8.5.2 (MLME-REASSOCIATE.response) of TGax Draft D3.0: (P54L5)***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| TWT | TWT element | As defined in ~~9.4.2.237 (HE Capabilities element)~~9.4.2.200 (TWT element) | Specifies the parameters in the TWT element. This parameter is optionally present if dot11TWTOptionActivated is true and the TWT element is present in the Association Request frame that elicited the Association Response frame~~; The TWT element is optionally present if dot11TWTOptionActivated is true and~~ or the TWT Requester Support field in the HE Capabilities element in the Association Request frame that elicited the Association Response frame is 1; otherwise not present. |

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| **CID** | **Clause**  | **Page** | **Line** | **Comment** | **Proposed Change** | **Proposed****Resolution** |
| 15808 | 6.3.7.2 | 46 | 17 | 6.3.7.2 is MLME-ASSOCIATE.request, not as shown MLME-ASSOCIATE.confirm. Section 6.3.7.2 should not be renamed to .confirm. | Correct the paragraph numbering 6.3.7.3 is MLME-ASSOCIATE.confirm | Revise.Agree with the commenter. The clause number should be changed to 6.3.7.3The clause number 6.3.8.2 should also be changed to 6.3.8.3.See the proposed text change in 11-18/1252r0 |

**Proposed text changes (for CID 15808)**:

***Change the clause number of TGax Draft D3.0 as follows: (P46L17)***

**~~6.3.7.2~~ 6.3.7.3 MLME-ASSOCIATE.confirm**

**~~6.3.7.2.2~~ 6.3.7.3.2 Semantics of the service primitive**

***Change the clause number of TGax Draft D3.0 as follows: (P51L3)***

**~~6.3.8.2~~ 6.3.8.3 MLME-REASSOCIATE.confirm**

**~~6.3.8.2.2~~ 6.3.8.3.2 Semantics of the service primitive**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause**  | **Page** | **Line** | **Comment** | **Proposed Change** | **Proposed****Resolution** |
| 15809 | 6.3.7.2 | 46 | 15 | 6.3.7.2 MLME-ASSOCIATE.request, is not being modified to include HE parameters. I believe that it is necessary to do so. | Add HE parameters to MLME-ASSOCIATE.request | Revise.802.11ax added HE Capabilities element and Channel Switch Timing element to Association Request frame. Since HE Capabilities element is already contained in MLME-JOIN.request primitive and the association process is triggered when the MLME-JOIN.request primitive is issued by the local SME, it is not necessary to include HE Capabilities element inMLME-ASSOCIATE.request primitive (Reference: Resolution to CID 11926 on Draft 2.0, 11-17-1766r2).However, Channel Switch Timing element is not included and it should be included in MLME-ASSOCIATE.request primitive.See the proposed text change in 11-18/1252r0 |

**Proposed text changes (for CID 15809)**:

***Amend Clause 6.3.7.2.2 of P802.11-2016 as follows:***

* + - 1. **MLME-ASSOCIATE.request**

**6.3.7.2.2 Semantics of the service primitive**

***Change the primitive parameters as follows (not all existing parameters in the baseline are shown):***

The primitive parameters are as follows:

MLME-ASSOCIATE.request(

...,

Channel Switch Timing,

VendorSpecificInfo

)

***Insert the following row into the parameter table in 6.3.7.2.2 before the “VendorSpecificInfo” row:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| Channel Switch Timing | As defined in Channel Switch Timing element | As defined in 9.4.2.64 (Channel Switch Timing element) | Provides information regarding the channel switch timing. The parameter is optionally present if dot11HESubchannelSelectiveTransmissionImplemented is true; otherwise not present. |

***Change Clause 6.3.7.4.2 of 802.11ax D3.0 as follows:***

* + - 1. **MLME-ASSOCIATE.indication**

**6.3.7.4.2 Semantics of the service primitive**

Change the primitive parameters as follows (not all existing parameters in the baseline are shown):

The primitive parameters are as follows:

MLME-ASSOCIATE.indication(

...,

HE Capabilities,

Channel Switch Timing,

VendorSpecificInfo

)

Insert the following entry into the unnumbered table in this subclause maintaining the primitive order above:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element | As defined in 9.4.2.237 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the peer STA. The parameter is present if it is present in the Association Request frame received from the STA; otherwise, this parameter is not present. |
| Channel Switch Timing | As defined in Channel Switch Timing element | As defined in 9.4.2.64 (Channel Switch Timing element) | Provides information regarding the channel switch timing. The parameter is optionally present if dot11HESubchannelSelectiveTransmissionImplemented is true; otherwise not present. |

***Amend Clause 6.3.8.2.2 of P802.11-2016 as follows:***

* + - 1. **MLME-REASSOCIATE.request**

**6.3.8.2.2 Semantics of the service primitive**

***Change the primitive parameters as follows (not all existing parameters in the baseline are shown):***

The primitive parameters are as follows:

MLME-REASSOCIATE.request(

...,

Channel Switch Timing,

VendorSpecificInfo

)

***Insert the following row into the parameter table in 6.3.7.2.2 before the “VendorSpecificInfo” row:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| Channel Switch Timing | As defined in Channel Switch Timing element | As defined in 9.4.2.64 (Channel Switch Timing element) | Provides information regarding the channel switch timing. The parameter is optionally present if dot11HESubchannelSelectiveTransmissionImplemented is true; otherwise not present. |

***Change Clause 6.3.8.4.2 of 802.11ax D3.0 as follows:***

* + - 1. **MLME-REASSOCIATE.indication**

**6.3.8.4.2 Semantics of the service primitive**

Change the primitive parameters as follows (not all existing parameters in the baseline are shown):

The primitive parameters are as follows:

MLME-REASSOCIATE.indication(

...,

HE Capabilities,

Channel Switch Timing,

VendorSpecificInfo

)

Insert the following entry into the unnumbered table in this subclause maintaining the primitive order above:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element | As defined in 9.4.2.237 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the peer STA. The parameter is present if it is present in the Association Request frame received from the STA; otherwise, this parameter is not present. |
| Channel Switch Timing | As defined in Channel Switch Timing element | As defined in 9.4.2.64 (Channel Switch Timing element) | Provides information regarding the channel switch timing. The parameter is optionally present if dot11HESubchannelSelectiveTransmissionImplemented is true; otherwise not present. |

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| **CID** | **Clause**  | **Page** | **Line** | **Comment** | **Proposed Change** | **Proposed****Resolution** |
| 15852 | 6.3.4.2.4 | 46 | 7 | Basic HE-MCS And NSS Set field is defined in the HE Operation element. | change "HE Operation parameter" to "HE Operation element" | Reject. In this paragraph, HE Operation parameter means a parameter used in MLME primitives whose value is from HE Operation element.The same language is used in baseline spec such as HT Operation parameter, VHT Operation parameter, etc in clause 6.3.4.2.4 |
| 15853 | 6.3.11.2.4 | 56 | 47 | Basic HE-MCS And NSS Set field is defined in the HE Operation element. | change "HE Operation parameter" to "HE Operation element" | Reject. In this paragraph, HE Operation parameter means a parameter used in MLME primitives whose value is from HE Operation element.The same language is used in baseline spec such as HT Operation parameter, VHT Operation parameter, etc in clause 6.3.11.2.4 |