IEEE P802.11  
Wireless LANs

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| --- |
| **Comment Resolutions on Clause 6 & 8 comments** |
| **Date:** 2016-07-22 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
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|  |  |  |  |  |

Abstract

This submission proposes resolutions for multiple comments on Clause 6 of the IEEE 802.11ax D0.1 with the following 35 CIDs:

* 83, 1227, 1228, 1229, 1238, 1239, 1240, 2292, 2293, 2294, 2304, 2305, 2306 (13 comments),
* 1125, 1230, 1241, 1596 (4 comments),
* 1869, 2420 (two comments),
* 1123 (one comment)
* 2043, 2044, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054. 2055, 2056, 2058, 2059, 2062 (15 comments)

Revision

0.0: Original document

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.***

**CIDs 83, 1227, 1228, 1229, 1238, 1239, 1240, 2292, 2293, 2294, 2304, 2305, and 2306:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **PP.LL** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 83 | 7.01 | 6 | Multiple elements, and MIB variables are added to support the features introduced in 11ax. | Ensure that all elements, and MIB variables are included in the appropriate tables/subclauses of the layer management clause. | Revised.  Agreed in principle. Revised text was proposed. |
| 1227 | 7.42 | 6.3.7.2.2 | The HE Capabilities element does not appear to be optional in the Association Request frame, so it must be supplied in the MLME primitive. | Delete "optionally". Same thing in REASSOCIATE. | Revised  Agreed in principle. Revised text was proposed. |
| 1228 | 8.09 | 6.3.7.3.2 | The HE Capabilities element should be provided in the .confirm in all cases when the STA implements HE, unless the AP didn't provide it in the responst (the AP isn't capable). | Change the sentence to, "The parameter is present if dot11HighEfficiencyOptionImplemented is true and the HE Capabilities element is present in the Association Response frame received from the AP." Same thing in REASSOCIATE. | Accepted |
| 1229 | 8.16 | 6.3.7.4 | Why isn't the HE Capabilities element provided to the MLME/SME at the AP end of the Association? | Add the HE Capabilities element to the MLME-ASSOCIATE.indication and .response primitives. Same thing in REASSOCIATE. | Revised  Agreed in principle. Revised text was proposed. |
| 1238 | 7.11 | 6.3.3.3.2 | The HE Capabilities and HE Operation elements need to be included in the BSSDescription (with corresponding blurb in 6.3.4.2.4 for JOIN.req) | As it says in the comment | Revised  Agreed in principle. Revised text was proposed. |
| 1239 | 7.13 | 6.3.7 | The HE Capabilities element needs to be included in the MLME-ASSOCIATE.indication and .response too | As it says in the comment | Revised  Agreed in principle. Revised text was proposed. |
| 1240 | 8.17 | 6.3.8 | The HE Capabilities element needs to be included in the MLME-REASSOCIATE.indication and .response too | As it says in the comment | Revised  Agreed in principle. Revised text was proposed. |
| 2292 | 7.48 | 6.3.7.2.2 | "HE Operation" should be included as a primitive parameter of the MLME-ASSOCIATE.request to be consistent with the Association Request frame format defined in 9.3.3.5. | Please add the "HE Operation" in the primitive parameter of the MLME-ASSOCIATE.request.  Alternatively, HE Operation element can be removed from the frame body of the Association Requeast. | Revised  Agreed in principle. Revised text was proposed. |
| 2293 | 8.16 | 6.3.7.3.2 | "HE Operation" should be included as a primitive parameter of the MLME-ASSOCIATE.confirm to be consistent with the Association Response frame format defined in 9.3.3.6. | Please add the "HE Operation" in the primitive parameter of the MLME-ASSOCIATE.confirm. | Revised  Agreed in principle. Revised text was proposed. |
| 2294 | 8.00 | 6.3.7.4  6.3.7.5 | Primitive parameters such as HE Capabilities and HE Operation need to be added to the MLME-ASSOCIATE.indication and MLME-ASSOCIATE.response primitives. | Please make necessary modifications in subclauses of 6.3.7.4 MLME-ASSOCIATE.indication and 6.3.7.5 MLME-ASSOCIATE.response. | Revised  Agreed in principle. Revised text was proposed. |
| 2304 | 7.11 | 6.3 | A primitive parameter corresponding to the HE Operation element has to be included in MLME-ASSOCIATE.request, MLME-ASSOCIATE.confirm, MLME-ASSOCIATE.indication, and MLME-ASSOCIATE.response for Association Request/Response. | Add HE Operation as a parameter of those service primitives, if necessary. | Revised  Agreed in principle. Revised text was proposed. |
| 2305 | 24.00 | 9.3.3.7  9.3.3.8 | A primitive parameter corresponding to the HE Operation element has to be included in MLME-REASSOCIATE.request, MLME-REASSOCIATE.confirm, MLME-REASSOCIATE.indication, and MLME-REASSOCIATE.response for Reassociation Request/Response. | Add HE Operation as a parameter of those service primitives, if necessary. | Revised  Agreed in principle. Revised text was proposed. |
| 2306 | 25.00 | 9.3.3.9 | A primitive parameter corresponding to the HE Operation element has to be included in MLME-SCAN.request, MLME-SCAN.confirm for Probe Request/Response. | Add HE Operation as a parameter of those service primitives, if necessary. | Revised  Agreed in principle. Revised text was proposed. |

**Discussion**

All these comments ask for inclulsion of HE Capabilities element and HE Operation elements in relevant service primitives. Some comments additionally ask for consistency between the primitive parameters and information elements of a management frame.

HE Capabilities element is used to exchange the supported features between AP and STA. Therefore this information shall be included in (Re)Association Request and Response, Beacon and Probe Response.

HE Operation element is shall be included in (Re)Association Response, Probe Response and Beacon.

Therefore, primitive parameters for MLME-SCAN.request, MLME-JOIN.reqest, MLME-(RE)ASSOCIATE.request, MLME-(RE)ASSOCIATE.confirm, MLME-(RE)ASSOCIATE.indication, MLME-(RE)ASSOCIATE.response primitives need to be changed.

The information element in (Re)Association Request frame and Probe Request frame have been modified.

**Proposed Text**

**TGax Editor: *Change the subclause below as resolution to primitive parameters (#CID):*** ***83, 1227, 1228, 1229, 1230, 1238, 1239, 1240, 2292, 2293, 2294, 2304, 2305, and 2306.***

* MLME SAP interface
* Scan
* MLME-SCAN.request
* Semantics of the service primitive

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

MLME-SCAN.request(

…

HE Capabilities,

HE Operation,

VendorSpecificInfo

)

***TGax Editor: Add the following rows at the end of the table below the service primitive:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| HE Capabilities | As defined in frame format | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the STA. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |
| HE Operation | As defined in frame format | As defined in 9.4.2.214 (HE Operation element) | Specifies the parameters within the HE Operation element. The parameter is present if dot11HighEfficiencyOptionImplemented is true. |

* MLME-SCAN.confirm
* Semantics of the service primitive

***Add the following rows at the end of the table for BSSDescription:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Type | Valid range | Description | IBSS adoption |
| HE Capabilities | As defined in frame fromat | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the STA. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. | Do not adopt |
| HE Operation | As defined in frame format | As defined in 9.4.2.214 (HE Operation Element) | Specifies the parameters within the HE Operation element that are supported by the AP. The parameter is present if dot11HighEfficiencyOptionImplemented is true. | Adopt |

* Synchronization
* MLME-JOIN.request
* Semantics of the service primitive

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

The primitive parameters are as follows:

MLME-JOIN.request(

…

AdvertisementProtocolInfo,

HE Capabilities,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the STA. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |

* Associate
* MLME-ASSOCIATE.request
* Semantics of the service primitive

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

The primitive parameters are as follows:

MLME-ASSOCIATE.request(

...

HE Capabilities,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the STA. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |

* MLME-ASSOCIATE.confirm
* Semantics of the service primitive

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

The primitive parameters are as follows:

MLME-ASSOCIATE.confirm(

...,

HE Capabilities,

HE Operation,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the AP. The parameter is present if dot11HighEfficiencyOptionImplemented is true and HE Capabilities element is present in the Association Response frame received from the AP; otherwise, this parameter is not present. |
| HE Operation | As defined in HE Operation element. | As defined in 9.4.2.214 (HE Operation element) | Specifies the parameters within the HE Operation element that are supported by the AP. The parameter is present if dot11HighEfficiencyOptionImplemented is true and HE Operation element is present in the Association Response frame received from the AP; otherwise, this parameter is not present. |

* MLME-ASSOCIATE.indication
* Semantics of the service primitive

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

The primitive parameters are as follows:

MLME-ASSOCIATE.indication(

...

HE Capabilities,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the STA. The parameter is present if dot11HighEfficiencyOptionImplemented is true and the HE Capabilities element is present in the Association Request frame received from the STA; otherwise, this parameter is not present. |

* MLME-ASSOCIATE.response
* Semantics of the service primitive

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

The primitive parameters are as follows:

MLME-ASSOCIATE.response(

...,

HE Capabilities,

HE Operation,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the MAC entity. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |
| HE Operation | As defined in HE Operation element. | As defined in 9.4.2.214 (HE Operation element) | Specifies the parameters within the HE Capabilities element that are supported by the MAC entity. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |

* Reassociate
* MLME-REASSOCIATE.request
* Semantics of the service primitive

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

The primitive parameters are as follows:

MLME-REASSOCIATE.request(

...  
HE Capabilities,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the STA. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |

* MLME-REASSOCIATE.confirm
* Semantics of the service primitive

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

The primitive parameters are as follows:

MLME-REASSOCIATE.confirm(

...

HE Capabilities,

HE Operation,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the AP. The parameter is present if dot11HighEfficiencyOptionImplemented is true and HE Capabilities element is present in the Reassociation Response frame received from the AP; otherwise, this parameter is not present. |
| HE Operation | As defined in HE Operation element. | As defined in 9.4.2.214 (HE Operation element) | Specifies the parameters within the HE Operation element that are supported by the AP. The parameter is present if dot11HighEfficiencyOptionImplemented is true and HE Operation element is present in the Association Response frame received from the AP; otherwise, this parameter is not present. |

* MLME-REASSOCIATE.indication
* Semantics of the service primitive

The primitive parameters are as follows:

MLME-REASSOCIATE.indication(

...

HE Capabilities,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the STA. The parameter is present if dot11HighEfficiencyOptionImplemented is true and the HE Capabilities element is present in the Reassociation Request frame received from the STA; otherwise, this parameter is not present. |

* MLME-REASSOCIATE.response
* Semantics of the service primitive

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

The primitive parameters are as follows:

MLME-REASSOCIATE.response(

...

HE Capabilities,

HE Operation,

VendorSpecificInfo

)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the AP. The parameter is present if dot11HighEfficiencyOptionImplemented is true and ; otherwise, this parameter is not present. |
| HE Operation | As defined in HE Operation element. | As defined in 9.4.2.214 (HE Operation element) | Specifies the parameters within the HE Operation element that are supported by the AP. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |

* Association Request frame format

Insert the following new row (header row shown for convenience) into Table 9-29 (Association Request frame body):

|  |  |  |
| --- | --- | --- |
| * Association Request frame body | | |
| **Order** | **Information** | **Notes** |
| TBD | HE Capabilities | The HE Capabilities element is present when dot11HighEfficiencyOptionImplemented(#1313) is true; otherwise it is not present. |
|  |  |  |

* Reassociation Request frame format

Insert the following new row (header row shown for convenience) into Table 9-31 (Reassociation Request frame body):

|  |  |  |
| --- | --- | --- |
| * Reassociation Request frame body | | |
| **Order** | **Information** | **Notes** |
| TBD | HE Capabilities | The HE Capabilities element is present when dot11HighEfficiencyOptionImplemented(#1313) is true; otherwise it is not present. |
|  |  |  |

* Probe Request frame format

Insert the following new rows (header row shown for convenience) into Table 9-33 (Probe Request frame body):

|  |  |  |
| --- | --- | --- |
| * Probe Request frame body | | |
| **Order** | **Information** | **Notes** |
| TBD | HE Capabilities | The HE Capabilities element is present when dot11HighEfficiencyOptionImplemented is true; otherwise it is not present. |
| TBD | HE Operation | The HE Operation element is present when dot11HighEfficiencyOptionImplemented is true; otherwise it is not present. |

**CIDs 1125, 1230, 1241, and 1596:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **PP.LL** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1125 | 9.60 | 6.3.11.2.2 | What is "BSSType = INFRASTRUCRURE"? | Define "BSSType = INFRASTRUCTURE". | Reject  The value of INFRASTRUCTURE for the BSSType has already been defined in the base standard. |
| 1230 | 9.48 | 6.3.11 | The HE Capabilities element is not optional in the Beacon for HE capable STAs, so it must be provided in the MLME-START | Delete "optionally". | Accepted. |
| 1241 | 9.60 | 6.3.11.2.2 | Why is the HE Operation restricted to infrastructure? Why can't an IBSS or PBSS or MBSS use HE? | Remove this restriction. Instead put restrictions on other features elsewhere (e.g. an IBSS STA may not use OFDMA or MU-MIMO features). Also add blurb in 6.3.11.2.4 | Revised  Agreed in principle. Current text of BSSType=INFRASTRUCTURE is restrictive. We need more discussion to decide whether HE features will be available in BSSes other than the infrastructure BSS. |
| 1596 | 9.60 | 6.3.11.2.2 | HE Operation is restricted to infrastructure here but other parts talk about HE in the context of IBSS | Decide whether HE can be used in BSSes other than infrastructure BSSes | Revised  Agreed in principle. Current text of BSSType=INFRASTRUCTURE is restrictive. We need more discussion to decide whether HE features will be available in BSSes other than the infrastructure BSS. |

**Discussion**

These three comments discuss about the primitive parameter of the MLME-START.request.

CID 1125: The base standard has already specified the value of INFRASTRUCTURE for the BSSType parameter.

CIDs 1241 and 1596: These comments ask for clarification whether HE Operation is allowed in IBSS, MBSS and PBSS. HE Operation contains BSS COLOR information for spatial reuse operation which may be used in IBSS and MBSS. The 802.11ac VHT Operation is not restricted to infrastructure BSS. TGax has not discussed about this issue. Therefore, these comments shall be accepted in principle and restriction of “BSSType=INFRASTRUCTURE” is removed for now. Need more discussion to make decision on this.

#### 6.3.11.2 MLME-START.request

**TGax Editor: *Change the Description of primitive parameter for MLME-START.request (#CIDs: 1230, 1241 and 1596)***

* Semantics of the service primitive

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

MLME-START.request(

...,

HE Capabilities,

HE Operation,

VendorSpecificInfo

)

***Insert the following entry to the unnumbered table in this subclause:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| HE Capabilities | As defined in HE Capabilities element.(#1122) | As defined in 9.4.2.213 (HE Capabilities element) | Specifies the parameters within the HE Capabilities element that are supported by the MAC entity. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |
| HE Operation | As defined in HE Operation element.(#1122) | As defined in 9.4.2.214 (HE Operation element) | The additional HE capabilities to be advertised for the BSS. The parameter is present if dot11HighEfficiencyOptionImplemented is true; otherwise, this parameter is not present. |

**CID 1869:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **PP.LL** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1869 | 10.01 | 6.3.28 | MLME-HL-SYNC primitives should include the RU information aw well as MAC address of STA. | Define extensive primitive format of MLME-HL-SYNC which are able to contain the RU information. | Revised.  This comment was considered in the resolution of CID 2420. |

**Discussion**

This comment is considered in the resolution of CID 2420. However, further proposal will be needed to fully address this issue.

**CID 2420:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **PP.LL** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 2420 | 10.01 | 8.3.5.3.2 | For supporting the reception of the frames simultaneously transmitted from the multiple STA (i.e., UL MU transmission), PHY-DATA.indication primitives shall return the USER\_INDEX parameter in additional to DATA parameter.  Add the following USER\_INDEX parameter into the PHY-DATA.indication primitive.  "The USER\_INDEX parameter (typically identified as u for a HE STA) is present for an HE trigger-based PPDU and indicates the index of the user in the RXVECTOR from which the accompanying DATA octet is recevied; otherwise, this parameter is not present." | As per comment | Revised.  Agreed in principle. The USER\_INDEX was added to the primitive parameter for the PHY-DATA.indication. Proposed text is presented. |

**Discussion**

The USER\_INDEX was added to the primitive parameter for the PHY-DATA.indication. Proposed text is presented.

#### 8.3.5 PHY SAP detailed service specification

* PHY-DATA.request

**TGax Editor: *Change the following sentence for description of USER\_INDEX parameter of PHY-DATA.request primitive.***

The USER\_INDEX parameter (typically identified as *u* for a VHT STA or an HE STA; see NOTE 1 at the end of Table 21-1 (TXVECTOR and RXVECTOR parameters (11ac)) and NOTE at the end of Table 26-1 (TXVECTOR and RXVECTOR parameters (11ax), respectively) is present for a VHT MU PPDU and indicates the index of the user in the TXVECTOR to which the accompanying DATA octet applies; otherwise, this parameter is not present.(11ac)

#### 8.3.5.3 PHY-DATA.indication

**TGax Editor: *Change the primitive parameter as the resolution to CID 2420.***

#### 8.3.5.3.2 Semantics of the service primitive

The primitive provides the following parameter:

PHY-DATA.indication(

DATA

USER\_INDEX

)

**TGax Editor: *Add the following sentence at the end of 8.3.5.3.2 as the resolution to CID 2420.***

The USER\_INDEX parameter (typically identified as *u* for an HE STA; see NOTE at the end of Table 26-

1 (TXVECTOR and RXVECTOR parameters)) is present for an HE trigger-based PPDU and indicates the index of

the user in the TXVECTOR to which the accompanying DATA octet applies; otherwise, this parameter is

not present.

**CID 1123:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **PP.LL** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1123 | Kwok Shum Au | 7.43 | 6.3.7.2.2 | "dot11HighEfficiencyOptionImplemented" does not exist. | Define "dot11HighEfficiencyOptionImplemented" in subclause C.3. | Revised  Agreed. Proposed text provided. |

**TGax Editor: *Add the following MIB objects as the resolution to CID 1123.***

**C.3 MIB Detail**

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- \* Major sections

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- Station ManagemenT (SMT) Attributes

-- DEFINED AS "The SMT object class provides the necessary support

-- at the station to manage the processes in the station such that

-- the station may work cooperatively as a part of an IEEE Std 802.11

-- network."

dot11smt OBJECT IDENTIFIER ::= { ieee802dot11 1 }

…

-- dot11STACivicLocationConfigTable ::= { dot11smt 37 }

-- dot11HEStationConfigTable ::= { dot11smt xx}

…

***Change Dot11StationConfigEntry as follows:***

Dot11StationConfigEntry ::= SEQUENCE

{

…,

dot11FutureChannelGuidanceActivated TruthValue,

dot11HighEfficiencyOptionImplemented TruthValule

}

…

dot11HighEfficiencyOptionImplemented OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a capability variable.

Its value is determined by device capabilities.

This attribute indicates whether the entity is High Efficiency Capable."

::= { dot11StationConfigEntry <xxx>}

…

## CIDs 2043, 2044, 2047, 2048, 2049, 2050, 2052, 2053, 2054. 2055, 2056, 2058, and 2062:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **PP.LL** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 2043 | Sigurd Schelstraete | 120.10 | 6.3.9.9 | unclear sentence. | Meaning of "multiplying integer coefficient(s) to each 20 MHz subchannel" is not clear | Transferred.  This comment is about a sentence in 26.3.9.9, not in 6.3.9.9. |
| 2044 | Sigurd Schelstraete | 120.63 | 6.3.9.9 | Wrong references | (25-3) and (25-8) don't exist | Transferred.  This is a editorial comment and the TGax editor will take care of it. |
| 2047 | Sigurd Schelstraete | 121.36 | 6.3.9.9 | wrong reference: 25.3.10.10.x | fix reference | Transferred.  This is a editorial comment and the TGax editor will take care of it. |
| 2048 | Sigurd Schelstraete | 121.45 | 6.3.9.9. | "r" is undefined in (26-36) | Define "r" as RU index | Transferred.  This comment is about an equation in 26.3.9.9, not in 6.3.9.9. |
| 2049 | Sigurd Schelstraete | 128.01 | 6.3.9.10 | Where are R-LTF and L-LTF defined? | Clarify | Transferred.  This comment is about an equation in 26.3.9.10, not in 6.3.9.10. |
| 2050 | Sigurd Schelstraete | 129.01 | 6.3.9.10 | Notation "L-LTF" is confusing | L-LTF is widely understood as non-HT Long Training Field. Use different notation. | Transferred.  This comment is about an equation in 26.3.9.10, not in 6.3.9.10. |
| 2051 | Sigurd Schelstraete | 129.11 | 6.3.9.10 | Notation in (26-49) and (26-50) is not clear | Clarify notations used in these equations | Transferred.  This comment is about the equations in clause 26.3.9.10. |
| 2052 | Sigurd Schelstraete | 132.02 | 6.3.9.10 | There is a scaling mismatch between HE-LTF and Data is n\_HE-LTF = sqrt(2) | Scaling should be the same for data and HE-LTF | Transferred.  This comment is about an equation in 26.3.9.10, not in 6.3.9.10. |
| 2053 | Sigurd Schelstraete | 132.46 | 6.3.10.1 | Wrong reference | (25-x) should be (26-17) | Transferred.  This is a editorial comment and the TGax editor will take care of it. |
| 2054 | Sigurd Schelstraete | 132.51 | 6.3.10.1 | Redundant sentence | "The Data field in UL MU transmissions shall immediately follow the HE-LTF section" should be clear from the definition of the HE PPDU format. In fact, it applies to all formats, not just UL MU. | Transferred.  This is a editorial comment and the TGax editor will take care of it. |
| 2055 | Sigurd Schelstraete | 132.55 | 6.3.10.1 | unclear sentence | Meaning of "(bits for SU and bits for each user u in MU)" is not clear. Propose to delete. | Transferred.  This comment is about a sentence in 26.3.10.1, not in 6.3.10.1. |
| 2056 | Sigurd Schelstraete | 133.01 | 6.3.10.2 | There is no definiton of the scrambler | Scrambler is shown in e.g. Figure 26-32, but never defined. | Transferred.  This comment is about a spec described in 26.3.10.2, not in 6.3.10.2. |
| 2058 | Sigurd Schelstraete | 133.52 | 6.3.10.2 | Clarify terminology | "1st half", "2nd half" should be clarified. Better to use "first N\_CBPS,LAST bits", "last N\_CBPS,LAST bits" | Transferred.  This comment is about a spec described in 26.3.10.2, not in 6.3.10.2. |
| 2059 | Sigurd Schelstraete | 134.17 | 6.3.10.2 | APEP\_LENGTH is not defined | Define APEP\_LENGTH in TXVECTOR or use other appropriate parameter from TXVECTOR | Transferred.  This comment is about a paramter in TXVECTOR described in 26.3.10.2. |
| 2062 | Sigurd Schelstraete | 135.55 | 6.3.10.2 | The MAC pre-FEC padding appears to be the same as the PSDU padding | Clarify relation between (26-67) and A-MPDU padding performed by the MAC, especially the content of the padding bytes (empty subframes, ...) | Transferred.  This comment is about a spec described in 26.3.10.2, not in 6.3.10.2. |

**Discussion**

These comments are for PHY specification described in 26.3.X.Y not 6.3.X.Y.

Proposed to transfer the above comments to the PHY expert(s).