IEEE P802.11
Wireless LANs

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| --- |
| CR for MIB comments on D2.0 |
| Date: 2018-05-07 |
| Author: |
| Name | Affiliation | Address | Phone | Email |
| Edward Au | Huawei Technologies | 303 Terry Fox Drive, Suite 400, Ottawa, Ontario K2K 3J1 |  | edward.ks.au@huawei.com  |

This submission present a resolution for CIDs 12995, 12260, 12882, 12648, 13965, and 12862. The proposed changes are based P802.11ax D2.3.

##### Revision history:

##### R0 – initial version

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Resolution |
| 12995 | 9.3.3.3 | 98 | 50 | What is the difference between "dot11HighEfficiencyOptionImplemented" and "ot11HEOptionImplemented"? I think there is none, and "dot11HEOptionImplemented" should be preferred. The term "dot11HighEfficiencyOptionImplemented" appears at several places in the document, please correct those occurences. | As in comment | Revised.Agree in principle.TGax Editor: Please change the text as indicated in doc.: IEEE 802.11-18/0781r0. |

***Discussion:***

dot11HighEfficiencyOptionImplemented and dot11HEOptionImplemented have no difference.

***Proposed resolution:***

***Revised***

***To TGax editor: Please replace dot11HighEfficiencyOptionImplemented with dot11HEOptionImplemented at the following locations:***

* 108.51
* 108.54
* 110.40
* 110.45
* 110.49
* 112.40
* 112.44
* 112.48
* 113.49
* 113.53

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Resolution |
| 12660 | C.3 | 574 | 49 | 27.5.2.3 indicates a STA is generally required to include an UPH Control for TB PPDUs (The STA shall include an HE Control field containing the UPH Control field in MPDUs carried in the A-MPDU of the HE TB PPDU except when [doesn't fit]), so dot11HEUPHControlActivated is broken in two ways: only applies to APs, and must be true at APs | Delete dot11HEUPDControlActivated | Revised.Agree in principle.TGax Editor: Please change the text as indicated in doc.: IEEE 802.11-18/0781r0. |

***Discussion:***

The commenter refers to the following text in 284.48 and 630.52:

The STA shall include an HE variant HT Control field(#12665) containing the UPH Control sub-field(#14137) in the MPDUs carried in the A-MPDU of the HE TB PPDU except when:

 — The remaining space in the A-MPDU, after inclusion of solicited MPDUs that cannot contain an HE variant HT Control field(#12665), is not sufficient to contain MPDU(s) that contain an HE variant HT Control field(#12665).

 — The STA includes other Control fields in the HE variant HT Control field(#12665) and the available space in the HE variant HT Control field(#12665) is not sufficient to contain an ad- ditional UPH Control subfield(#14137).

 — The MPDU is a control frame.(#13919)

dot11HEUPHControlActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION

 "This is a control variable.

 Its value is determined by device capabilities.

 This attribute, when true, indicates that the station implementation is capable of receiving frames with an UPH Control subfield. The capability is disabled otherwise."

 DEFVAL { false }

 ::= { dot11HEStationConfigEntry 19}

***Proposed resolution:***

***Revised***

***To TGax editor: Delete dot11HEUPHControlActivated at the following locations:***

* **211.33**
* **626.43**
* **630.53 to 630.65**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comment | Proposed Change | Resolution |
| 12882 | C.3 | 569 | 1 | The non-generic part of the description of many of the MIB variables is missing (e.g. dot11HEBeamformeeSTSSupportLessThanOrEqualTo80) | Make sure each MIB variable has a specific description | Revised.Agree in principle.TGax Editor: Please change the text as indicated in doc.: IEEE 802.11-18/0781r0. |
| 12648 | C.3 | 569 | 1 | "SYNTAX BITS" is not valid | Make sure the MIB compiles | Revised.Agree in principle.TGax Editor: Please change the text as indicated in doc.: IEEE 802.11-18/0781r0. |

***Proposed resolution:***

***Revised***

***To TGax editor: Implement the following changes in Annex C.3.***

Dot11PhyHEEntry ::=

 SEQUENCE {

 dot11HECCAIndicationMode INTEGER,

 dot11HEDualBandImplemented TruthValue,

 dot11HECurrentChannelWidthSet Unsigned32,

 dot11HEPuncturedPreambleRxImplemented Unsigned32,

 dot11HEPuncturedPreambleRxActivated Unsigned32,

 dot11HEDeviceClass TruthValue,

 dot11HELPDCCodingInPayloadImplemented TruthValue,

 dot11HELPDCCodingInPayloadActivated TruthValue,

 dot11HESUPPDUwith1xHELTFand0point8GIlmplemented TruthValue,

 dot11HESUPPDUwith1xHELTFand0point8GIActivated TruthValue,

 dot11HESUPPDUwith4xHELTFand0point8GIlmplemented TruthValue,

 dot11HESUPPDUwith4xHELTFand0point8GIActivated TruthValue,

 dot11HENDPwith4xHELTFand3point2GIImplemented TruthValue,

 dot11HENDPwith4xHELTFand3point2GIActivated TruthValue,

 dot11HESTBCTxLessThanOrEqualTo80Implemented TruthValue,

 dot11HESTBCTxLessThanOrEqualTo80Activated TruthValue,

 dot11HESTBCRxLessThanOrEqualTo80Implemented TruthValue,

 dot11HESTBCRxLessThanOrEqualTo80Activated TruthValue,

 dot11HESTBCTxGreaterThan80Implemented TruthValue,

 dot11HESTBCTxGreaterThan80Activated TruthValue,

 dot11HESTBCRxGreaterThan80Implemented TruthValue,

 dot11HESTBCRxGreaterThan80Activated TruthValue,

 dot11HEDopplerImplemented TruthValue,

 dot11HEDopplerActivated TruthValue,

 dot11HEDCMImplemented TruthValue,

 dot11HEDCMActivated TruthValue,

 dot11HEFullBWULMUMIMOImplemented TruthValue,

 dot11HEFullBWULMUMIMOActivated TruthValue,

 dot11HEPartialBWULMUMIMOImplemented TruthValue,

 dot11HEPartialBWULMUMIMOActivated TruthValue,

 dot11HEPartialBWDLMUMIMOImplemented TruthValue,

 dot11HEPartialBWDLMUMIMOActivated TruthValue,

 dot11HEULMUPayloadImplemented TruthValue,

 dot11HEULMUPayloadActivated TruthValue,

 dot11HEPowerBoostFactorImplemented TruthValue,

 dot11HEPowerBoostFactorActivated TruthValue,

 dot11HEPartialBWERSUPayloadImplemented TruthValue,

 dot11HEPartialBWERSUPayloadActivated TruthValue

 }

dot11HEDualBandImplemented 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, when true, indicates that the non-AP STA implementation supports dual band operation. This capability is disabled otherwise."

::= { dot11PhyHEEntry 2 }

dot11HECurrentChannelWidthSet OBJECT-TYPE

 SYNTAX Unsigned32 (0..6)

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION

 "This is a status variable.

 This attribute specifies the channel width set, equal to 0 for a 40 MHz channel width in the 2.4 GHz band, equal to 1 for a 40 MHz and 80 MHz channel width in the 5 GHz band, equal to 2 for a 160 MHz channel width in

 the 5 GHz band, equal to 3 for a 160/80+80 MHz channel width in the 5 GHz band, equal to 4 for 242-tone RUs in a 40 MHz HE MU PPDU in the 2.4 GHz band, equal to 5 for 242-tone RUs in a 40 MHz, 80 MHz, 160 MHz, and 80+80 MHz HE MU PPDU in the 5 GHz band, and the value 6 is reserved. "

::= { dot11PhyHEEntry 3 }

dot11HEPuncturedPreambleRxImplemented OBJECT-TYPE

 SYNTAX Unsigned (0..3)

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION

 "This is a capability variable.

 Its value is determined by device capabilities.

 This attribute indicates the preamble prunctured channel, equal to 0 for the reception of an 80 MHz preamble where the secondary 20 MHz subchannel is punctured, equal to 1 for the reception of an 80 MHz preamble where one of the two 20 MHz subchannels in the secondary 40 MHz is punctured, equal to 2 for the reception of a 160 MHz or 80+80 MHz preamble where in the primary 80 MHz of the preamble only the secondary 20 MHz is punctured, and equal to 3 for the reception of a 160 MHz or 80+80 MHz preamble where in the primary 80 MHz of the preamble, the primary 40 MHz is present."

::= { dot11PhyHEEntry 6 }

dot11HEPuncturedPreambleRxActivated OBJECT-TYPE

 SYNTAX Unsigned (0..3)

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute indicates the preamble prunctured channel, equal to 0 for the reception of an 80 MHz preamble where the secondary 20 MHz subchannel is punctured and that this has been enabled, equal to 1 for the reception of an 80 MHz preamble where one of the two 20 MHz subchannels in the secondary 40 MHz is punctured and that this has been enabled, equal to 2 for the reception of a 160 MHz or 80+80 MHz preamble where in the primary 80 MHz of the preamble only the secondary 20 MHz is punctured and that this has been enabled, and equal to 3 for the reception of a 160 MHz or 80+80 MHz preamble where in the primary 80 MHz of the preamble, the primary 40 MHz is present and that this has been enabled.::= { dot11PhyHEEntry 7 }

dot11HEDeviceClass 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, when true, indicates that the non-AP STA is operating as

 a class A device. When false, this attribute indicates that the non-AP STA

 is operating as a class B device."(#12107)

::= { dot11PhyHEEntry 8 }

dot11HELPDCCodingInPayloadImplemented 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, when true, indicates that the non-AP STA is capable of transmitting and receiving LDPC encoded packets. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 9 }

dot11HELPDCCodingInPayloadActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the transmission and reception of the LDPC encoded packets are enabled. This capability is disabled otherwise. DEFVAL { false }

::= { dot11PhyHEEntry 10 }

dot11HESUPPDUwith1xHELTFand0point8GIlmplemented 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, when true, indicates that the non-AP STA is capable of receiving an HE SU PPDU with 1x LTF and 0.8 µs guard interval duration. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 11 }

dot11HESUPPDUwith1xHELTFand0point8GIActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of an HE SU PPDU with 1x LTF and 0.8 µs guard interval duration is enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 12 }

dot11HESUPPDUwith4xHELTFand0point8GIlmplemented 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, when true, indicates that the non-AP STA is capable of receiving an HE SU PPDU and HE MU PPDU with 4x LTF and 0.8 µs guard interval duration. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 13 }

dot11HESUPPDUwith4xHELTFand0point8GIActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of an HE SU PPDU and HE MU PPDU with 4x LTF and 0.8 µs guard interval duration is enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 14 }

dot11HENDPwith4xHELTFand3point2GIImplemented 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, when true, indicates that the non-AP STA is capable of receiving an NDP with 4x LTF and 3.2 µs guard interval duration. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 15 }

dot11HENDPwith4xHELTFand3point2GIActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of an NDP with 4x LTF and 3.2 µs guard interval duration is enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 16 }

dot11HESTBCTxLessThanOrEqualTo80Implemented 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, when true, indicates that the non-AP STA is capable of transmitting an HE PPDU that has a bandwidth less than or equal to 80 MHz and is using STBC with one spatial stream. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 17 }

dot11HESTBCTxLessThanOrEqualTo80Activated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the implementation of the transmission of an HE PPDU that has a bandwidth less than or equal to 80 MHz and that is using STBC and one sptial stream is enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 18 }

dot11HESTBCRxLessThanOrEqualTo80Implemented 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, when true, indicates that the non-AP STA is capable of receiving an HE PPDU that has a bandwidth less than or equal to 80 MHz and is using STBC with one spatial stream. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 19 }

dot11HESTBCRxLessThanOrEqualTo80Activated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the implementation of the reception of an HE PPDU that has a bandwidth less than or equal to 80 MHz and that is using STBC and one sptial stream is enabled. This capability is disabled otherwise."

"

 DEFVAL { false }

::= { dot11PhyHEEntry 20 }

dot11HESTBCTxGreaterThan80Implemented 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, when true, indicates that the non-AP STA is capable of transmitting an HE PPDU that has a bandwidth greater than 80 MHz and is using STBC with one spatial stream. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 21 }

dot11HESTBCTxGreaterThan80Activated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the implementation of the transmission of an HE PPDU that has a bandwidth greater than 80 MHz and is using STBC with one spatial stream is enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 22 }

dot11HESTBCRxGreaterThan80Implemented 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, when true, indicates that the non-AP STA is capable of receiving an HE PPDU that has a bandwidth greater than 80 MHz and is using STBC with one spatial stream. This capability is disabled otherwise. DEFVAL { false }

::= { dot11PhyHEEntry 23 }

dot11HESTBCRxGreaterThan80Activated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the implementation of the reception of an HE PPDU that has a bandwidth greater than 80 MHz and is using STBC with one spatial stream is enabled. This capability is disabled otherwise. DEFVAL { false }

::= { dot11PhyHEEntry 24 }

dot11HEDopplerImplemented 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, when true, indicates that the non-AP STA is capable of transmitting and receiving HE PPDUs with midamble. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 25 }

dot11HEDopplerActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the implementation of the transmission and reception of HE PPDUs with midamble are enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 26 }

dot11HEDCMImplemented 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, when true, indicates that the non-AP STA implementation supports DCM. This capability is disabled otherwise."

::= { dot11PhyHEEntry 27 }

dot11HEDCMActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the non-AP STA implementation enables DCM. This capability is disabled otherwise."

::= { dot11PhyHEEntry 28 }

dot11HEFullBWULMUMIMOImplemented 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, when true, indicates that for an AP implementation, the MU- MIMO reception of an HE TB PPDU on an RU that spans the entire PPD bandwidth is supported; and for a non-AP STA implementation, the transmission of an HE TB PPDU on an RU that spans the entire PPDU bandwidth is supported. This capability is disabled otherwise. DEFVAL { false }

::= { dot11PhyHEEntry 29 }

dot11HEFullBWULMUMIMOActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that for an AP implementation, the MU- MIMO reception of an HE TB PPDU on an RU that spans the entire PPD bandwidth is enabled; and for a non-AP STA implementation, the transmission of an HE TB PPDU on an RU that spans the entire PPDU bandwidth is enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 30 }

dot11HEPartialBWULMUMIMOImplemented 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, when true, indicates that an AP is capable of receiving an RU in an HE TB PPDU where MU-MIMO is employed in the RU, the RU size is greater than or equal to 106-tones, and the RU does not span the entire PPDU bandwidth; and a non-AP STA is capable of transmitting an RU in an HE TB PPDU where MU-MIMO is employed in the RU, the RU size is greater than or equal to 106-tones, and the RU does not span the entire PPDU bandwidth. This capability is disabled otherwise. DEFVAL { false }

::= { dot11PhyHEEntry 31 }

dot11HEPartialBWULMUMIMOActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of an RU in an HE TB PPDU is enabled by an AP where MU-MIMO is employed in the RU, the RU size is greater than or equal to 106-tones, and the RU does not span the entire PPDU bandwidth, and the transmission of an RU in an HE TB PPDU by a non-AP STA where MU-MIMO is employed in the RU, the RU size is greater than or equal to 106-tones, and the RU does not span the entire PPDU bandwidth. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 32 }

dot11HEPartialBWDLMUMIMOImplemented 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, when true, indicates that the non-AP STA is capable of receiving a DL MU-MIMO transmission on an RU in an HE MU PPDU where the RU does not span the entire PPDU bandwidth. This capability is disabled otherwise. DEFVAL { false }

::= { dot11PhyHEEntry 33 }

dot11HEPartialBWDLMUMIMOActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of a DL MU-MIMO transmission on an RU in an HE MU PPDU is enabled by the non-AP STA where the RU does not span the entire PPDU bandwidth. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 34 }

dot11HEULMUPayloadImplemented 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, when true, indicates that the AP is capable of receiving the payload on an RU in an HE MU PPDU where RU spans the entire PPDU bandwidth or a 106-tone RU within 20 MHz PPDU bandwidth. This capability is disabled otherwise. DEFVAL { false }

::= { dot11PhyHEEntry 35 }

dot11HEULMUPayloadActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of the payload on an RU in an HE MU PPDU by an AP is enabled where RU spans the entire PPDU bandwidth or a 106-tone RU within 20 MHz PPDU bandwidth. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 36 }

dot11HEPowerBoostFactorImplemented 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, when true, indicates that the non-AP STA implementation supports a power boost factor αr for the r-th RU in the range [0.5, 2]. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 37 }

dot11HEPowerBoostFactorActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the power boost factor αr for the r-th RU in the range [0.5, 2] is enabled by the non-AP STA. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 38 }

dot11HEPartialBWERSUPayloadImplemented 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, when true, indicates that the non-AP STA is capable of transmitting and receiving the Data field of the HE ER SU PPDU when transmitted over the high frequency 106-tone within primary 20 MHz channel. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 39 }

dot11HEPartialBWERSUPayloadActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the transmission and reception of the Data field of the HE ER SU PPDU when transmitted over the high frequency 106-tone within primary 20 MHz channel is enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11PhyHEEntry 40 }

dot11HESUBeamformerOptionImplemented 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, when true, indicates that for a non-AP STA implementation, the operation as an SU beamformer is supported; for an AP implementation, the operation as an SU beamformer is supported when the AP is equipped with 4 or more spatial streams. When false, this attribute indicates that for the non-AP STA implementation, the operation as an SU beamformer is not supported."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 1}

dot11HESUBeamformeeOptionImplemented 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, when true, indicates that for an AP implementation, the operation as an SU beamformee is supported; for a non-AP STA implementation, the operation as an SU beamformee is supported. When false, this attribute indicates that for an AP implementation, the operation as an SU beamformee is not supported."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 2 }

dot11HEMUBeamformerOptionImplemented 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, when true, indicates that for an AP implementation, the operation as an MU beamformer is supported when the SU Beamformer field is 1. When false, this attribute indicates that for an AP implementation, the operation as an MU beamformer is not supported; for a non-AP STA implementation, the operation as an MU beamformer is not supported."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 3 }

dot11HEBeamformeeSTSSupportLessThanOrEqualTo80 OBJECT-TYPE

 SYNTAX Unsigned32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION

 "This is a capability variable.

 Its value is determined by device capabilities.

 This attribute, when true, indicates the maximum number of space-time streams that the non-AP STA can receive in an HE NDP, the maximum value for the total number of space-time streams over all the users in RU *r*, N*STS,r,total* that can be sent in a DL MU-MIMO transmission on an RU where the RU might or might not span the entire PPDU bandwidth, which includes that non-AP STA."

::= { dot11HETransmitBeamformingConfigEntry 4 }

dot11HEBeamformeeSTSSupportGreaterThan80 OBJECT-TYPE

 SYNTAX Unsigned32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION

 "This is a capability variable.

 Its value is determined by device capabilities.

 This attribute, when true, indicates the maximum number of space-time streams that the non-AP STA can receive in an HE NDP, the maximum value for the total number of space-time streams over all the users in RU *r*, N*STS,r,total* that can be sent in a DL MU-MIMO transmission on an RU where the RU might or might not span the entire PPDU bandwidth, which includes that STA."

::= { dot11HETransmitBeamformingConfigEntry 5 }

dot11HENumberSoundingDimensionsLessThanOrEqualTo80 OBJECT-TYPE

 SYNTAX Unsigned32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION

 "This is a capability variable.

 Its value is determined by device capabilities.

 This attribute specifies, for bandwidth less than or equal to 80 MHz, the beamformer’s capability to indicate the maximum value of the TXVECTOR parameter NUM\_STS for an HE NDP."

::= { dot11HETransmitBeamformingConfigEntry 6 }

dot11HENumberSoundingDimensionsGreaterThan80 OBJECT-TYPE

 SYNTAX Unsigned32

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION

 "This is a capability variable.

 Its value is determined by device capabilities.

 This attribute specifies, for bandwidth greater than 80 MHz, the beamformer’s capability to indicate the maximum value of the TXVECTOR parameter NUM\_STS for an HE NDP."::= { dot11HETransmitBeamformingConfigEntry 7 }

dot11HENG16SUFeedbackSupport 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, when true, indicates the HE beamformee support for a tone grouping of 16 in the HE Compressed Beamforming Report field for SU-type feedback. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 8 }

dot11HENG16MUFeedbackSupport 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, when true, indicates the HE beamformee support for a tone grouping of 16 in the HE Compressed Beamforming Report field for MU-type feedback. This capability is disabled otherwise.

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 9 }

dot11HECodebookSizePhi4Psi2SUFeedbackSupport 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, when true, indicates the HE beamformee support for a codebook size (ϕ, ψ) = {4, 2} in the HE Compressed Beamforming Report field for SU-type feedback. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 10 }

dot11HECodebookSizePhi7Psi5MUFeedbackSupport 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, when true, indicates the HE beamformee support for a codebook size (ϕ, ψ) = {7, 5} in the HE Compressed Beamforming Report field for MU-type feedback. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 11 }

dot11HETriggeredSUBeamformingFeedbackImplemented 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, when true, indicates that for an AP implementation, the reception of partial and full bandwidth SU-type feedback in an HE TB sounding sequence is supported; for a non-AP STA implementation, the transmission of partial and full bandwidth SU-type feedback in an HE TB sounding sequence is supported. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 12 }

dot11HETriggeredSUBeamformingFeedbackActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of partial and full bandwidth SU-type feedback in an HE TB sounding sequence by an AP is enabled; the transmission of partial and full bandwidth SU-type feedback in an HE TB sounding sequence by a non-AP STA is enabled. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 13 }

dot11HETriggeredMUBeamformingFeedbackImplemented 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, when true, indicates that for an AP implementation, the reception of partial bandwidth MU-type feedback in an HE TB sounding sequence is supported; for a non-AP STA implementation, the transmission of partial bandwidth MU-type feedback in an HE TB sounding sequence is supported. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 14 }

dot11HETriggeredMUBeamformingFeedbackActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of partial bandwidth MU-type feedback in an HE TB sounding sequence is enabled by an AP; the transmission of partial bandwidth MU-type feedback in an HE TB sounding sequence is enabled by a non-AP STA. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 15 }

dot11HETriggeredCQIFeedbackSupportImplemented 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, when true, indicates that for an AP implementation, the reception of partial and full bandwidth CQI-only feedback in an HE TB sounding sequence is supported; for a non-AP STA implementation, the transmission of partial and full bandwidth CQI-only feedback in an HE TB sounding sequence is supported. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 16 }

dot11HETriggeredCQIFeedbackSupportActivated OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity.

 Changes take effect as soon as practical in the implementation.

 This attribute, when true, indicates that the reception of partial and full bandwidth CQI-only feedback in an HE TB sounding sequence is enabled by an AP; the transmission of partial and full bandwidth CQI-only feedback in an HE TB sounding sequence is enabled by a non-AP STA. This capability is disabled otherwise."

 DEFVAL { false }

::= { dot11HETransmitBeamformingConfigEntry 17 }

|  |  |  |  |
| --- | --- | --- | --- |
| CID | Comment | Proposed Change | Resolution |
| 13965 | "HEDynamicFragmentationLevel1 indicates that the STA allows transmission or reception of one fragment at a time and does not need block ack agreement negotiation.HEDynamicFragmentationLevel2 indicates that the STA allows transmission or reception of multiple fragments at a time, up to one per MSDU or A-MSDU, needs block ack agreement negotiation, and uses HT-immediate blockack signalling.HEDynamicFragmentationLevel3 indicates that the STA allows transmission or reception of multiple fragments at a time, up to four per MSDU or A-MSDU, needs block ack agreement negotiation, and uses block ack signaling that is specific to dynamic fragmentation level 3"This MIB variable only represents a support of a reception of a dynamic fragment as the following:"An HE STA shall set dot11HEDynamicFragmentationLevel to the value of Fragmentation Support subfield of the HE Capabilities element it transmits if it supports reception of dynamic fragments."Remove a transmission capability of a dynamic fragment. | Change as the following:"HEDynamicFragmentationLevel1 indicates that the STA allows a reception of one fragment at a time and does not need block ack agreement negotiation.HEDynamicFragmentationLevel2 indicates that the STA allows a reception of multiple fragments at a time, up to one per MSDU or A-MSDU, needs block ack agreement negotiation, and uses HT-immediate blockack signalling.HEDynamicFragmentationLevel3 indicates that the STA allows a reception of multiple fragments at a time, up to four per MSDU or A-MSDU, needs block ack agreement negotiation, and uses block ack signaling that is specific to dynamic fragmentation level 3" | Accepted |

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| --- | --- | --- | --- |
| CID | Comment | Proposed Change | Resolution |
| 12862 | dot11AMPDUwithMultipleTIDOptionImplemented should be about rx, not tx, because that's what others need to know | At 302.1 change "For an HE STA with dot11AMPDUwithMultipleTIDOptionImplemented set to true and having a single A-MPDU containing MPDUs with different value of TIDs, the MPDUs with the same TID value may beaggregated in non-contiguous A-MPDU subframes." to "In a multi-TID A-MPDU, MPDUs with the same TID are not necessarily contiguous.", at 302.7 and 302.20 change "HE STA withdot11AMPDUwithMultipleTIDOptionImplemented set to true" to "HE STA that transmits a multi-TID A-MPDU to the AP", at 572.37 change "generating" to "receiving", at 300.28 change dot11MultipleTIDAMPDUOptionImplemented to dot11AMPDUwithMultipleTIDOptionImplemented, at 300.30 change dot11MultipleTIDAMPDUOptionImlemented to dot11AMPDUwithMultipleTIDOptionImplemented | Accepted |

***Discussion:***

As per subclause 27.10.4.1,

An HE STA with dot11AMPDUwithMultipleTIDOptionImplemented equal to true shall set the Multi-TID Aggregation Rx Support subfield in the HE MAC Capabilities Information field in the HE Capabilities element it transmits to a nonzero value. An HE STA with dot11AMPDUwithMultipleTIDOptionImplemented equal to false shall set the Multi-TID Aggregation Rx Support subfield to 0.

Multi-TID Aggregation Rx Support subfield is defined in Table 9-262z as follows:

|  |  |  |
| --- | --- | --- |
| Multi-TID Aggregation Rx Support(#12379) | Indicates the number of TIDs (#12700)of QoS Data frames that an HE STA can receive in a multi-TID A-MPDU as described in 27.10.4 (Multi-TID A-MPDU and ack-enabled A-MPDU). | Set to the number of TIDs minus 1 of QoS Data frames that an HE STA can receive in a multi-TID A-MPDU. |

The commenter is correct that dot11AMPDUwithMultipleTIDOptionImplemented shouldbe about rx, not tx.