IEEE P802.11
Wireless LANs

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| --- |
| Comment Resolution for LB 178 D1.0: CIDs 2518, 3621, 3619, 2521, 3622, 2519, 2103, 2178 |
| Date: 20 July 2011 |
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Abstract

This document provides resolutions for CIDs 2518, 3621, 3619, 2521, 3622, 2519, 2103, 2178

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Page | Line | Clause | Comment | Proposed Change | Resolution |
| 2103 | 237.41 | 41 | Annex C | The VHT MIB needs MODULE-COMPLIANCE statement. This statement probably needs an OBJECT-GROUP to be created that contains all the items from the VHT MIB. | Create an OBJECT-GROUP listing all the objects added by 11ac to the MIB. Make a MODULE-COMPLIANCE statement referencing this group. You could be more sophisticated if you wish, and create more groups to split out the mandatory/optional elements, but why bother when almost no-one cares? You just need something to keep smilint happy. | P – Some considerations: create new object for new PhyTxPower extensions. Follow the existing structure other objects. |
| 2178 | 249.11 | 11 | C.3 | Ensure that the MIB is compiled and all the compliance statements are correctly made. | As noted | A - Done |
| 2519 | 236.63 | 63 | C.3 | Seems to be a dup wrt P231L46, x6 | Remove dup | D – This object group is for the conformance section of the MIB |

## Discussion

D1.0 MIB changes have been merged with the MIB in REVmb D9.3. Numbering has been updated.

Conformance statements have been added for all variables.

## Comments

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Page | Line | Clause | Comment | Proposed Change | Resolution |
| 2518 | 229.61 | 61 | C.3 | TXOP PS operation varies by AP/client - a device may be capable of one but not the other | One for AP, one for client? Or simpler, define this capability according to the STA's current AP/client role (i.e. via some other MIB variable? - tho problematic, since can't change 2 MIB variables simultaneously - maybe this is dangerous since it could lead to temporarily invalid states) | D – Devices don’t switch roles (i.e. non-AP STAs don’t become APs) thus the TXOP PS role will not change. |
| 3621 | 230.08 | 8 | C.3 | There's a number of "phyType" variables in the MIB (e.g. in the TGk parts). It's nice that .11ac have chosen to update one of them, but it would be nicer if they did them all. | Search through the baseline MIB and determine any "phyType" variables and update them. | P – Extend all phyType variables by adding “vht(9)”. |
| 3619 | 230.09 | 9 | C.3 | "represented by the octet index." - well it's type is an octet string, so they are not accessible in any indexed fashion.Ditto at 230.36. | Replace with, "The first octet represents stream 1, and so on." | A – As suggested |
| 2521 | 233.01 | 1 | C.3 | I see BFer here but MIB variable name includes BFee (copy/paste error?) | Harmonize | D – BFer here refers to number of tx antennas at the beamformer that the beamformee supports. It’s a beamformee capability. |
| 3622 | 234.16 | 16 | C.3 | In dot11CurrentChannelCenterFrequencyIndex1, what's the meaning of having it writable by an external management entity?Surely you don't want SNMP to come along and arbitrarily write values here. | The responsibility for writing this is not clear. It is either the MLME or SME, but certainly not an external management entity.Clarify who can write this. | A – Change access on dot11CurrentChannelBandwidth, dot11CurrentChannelCenterFrequencyIndex1 and dot11CurrentChannelCenterFrequencyIndex2 to read-only. |

## Resolution

MIB included here as a diff on the MIB from REVmb 9.3 with comment bubbles for CID related changes:

2004a2005,2015

> dot11VHTOptionImplemented 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 VHT Capable."

> ::= { dot11StationConfigEntry 137}

>

7177c7188,7189

< ht(7) }

---

> ht(7),

> vht(9) }

7443c7455,7456

< ht(7) }

---

> ht(7),

> vht(9) }

9638c9651,9652

< ht(7) }

---

> ht(7),

> vht(9) }

14621a14636,14766

> -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

> -- \* dot11VHTStationConfig TABLE

> -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

> dot11VHTStationConfigTable OBJECT-TYPE

> SYNTAX SEQUENCE OF Dot11VHTStationConfigEntry

> MAX-ACCESS not-accessible

> STATUS current

> DESCRIPTION

> "Station Configuration attributes. In tabular form to allow for multiple instances on an agent."

> ::= { dot11smt 28 }

>

> dot11VHTStationConfigEntry OBJECT-TYPE

> SYNTAX Dot11VHTStationConfigEntry

> MAX-ACCESS not-accessible

> STATUS current

> DESCRIPTION

> "An entry (conceptual row) in the dot11HTStationConfig Table.

>

> ifIndex - Each IEEE 802.11 interface is represented by an ifEntry. Interface tables in this MIB module are indexed by ifIndex."

> INDEX { ifIndex }

> ::= { dot11VHTStationConfigTable 1 }

>

> Dot11VHTStationConfigEntry ::=

> SEQUENCE {

> dot11MaxMPDULength INTEGER,

> dot11VHTMaxRxAMPDUFactor Unsigned32,

> dot11VHTControlFieldSupported TruthValue,

> dot11VHTTXOPPowerSaveOptionImplemented TruthValue,

> dot11VHTRxMCSMap OCTET STRING,

> dot11VHTRxHighestDataRateSupported Unsigned32,

> dot11VHTTxMCSMap OCTET STRING,

> dot11VHTTxHighestDataRateSupported Unsigned32

> }

>

> dot11MaxMPDULength OBJECT-TYPE

> SYNTAX INTEGER { short(3895), medium(7991), long(11454) }

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> This attribute indicates the supported maximum MPDU size."

> DEFVAL { short }

> ::= { dot11VHTStationConfigEntry 1 }

>

> dot11VHTMaxRxAMPDUFactor OBJECT-TYPE

> SYNTAX Unsigned32 (0..7)

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> This attribute indicates the maximum length of A-MPDU that the STA can receive. The Maximum Rx A-MPDU defined by this field is equal to 2^(13+dot11VHTMaxRxAMPDUFactor) -1 octets."

> DEFVAL { 0 }

> ::= { dot11VHTStationConfigEntry 2 }

>

> dot11VHTControlFieldSupported 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 station implementation is capable of receiving the VHT Control field."

> DEFVAL { false }

> ::= { dot11VHTStationConfigEntry 3 }

>

> dot11VHTTXOPPowerSaveOptionImplemented 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 station implementation is capable of TXOP Power Save operation."

> DEFVAL { false }

> ::= { dot11VHTStationConfigEntry 4 }

>

> dot11VHTRxMCSMap OBJECT-TYPE

> SYNTAX OCTET STRING (SIZE(8))

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> Each octet represents the highest MCS supported (for Rx) on the number of streams represented by the octet position (first octet represents 1 stream, second octet represents 2 streams, etc.). A value 0 indicates that MCSs 0-7 are supported. A value 1 indicates that MCSs 0-8 are supported. A value 2 indicates that MCSs 0-9 are supported. A value 3 indicates no support for that number of spatial streams."

> ::= { dot11VHTStationConfigEntry 5 }

>

> dot11VHTRxHighestDataRateSupported OBJECT-TYPE

> SYNTAX Unsigned32

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> Represents the highest data rate in Mb/s that the STA is capable of receiving."

> ::= { dot11VHTStationConfigEntry 6 }

>

> dot11VHTTxMCSMap OBJECT-TYPE

> SYNTAX OCTET STRING (SIZE(8))

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> Each octet represents the highest MCS supported (for Tx) on the number of streams represented by the octet position (first octet represents 1 stream, second octet represents 2 streams, etc.). A value 0 indicates that MCSs 0-7 are supported. A value 1 indicates that MCSs 0-8 are supported. A value 2 indicates that MCSs 0-9 are supported. A value 3 indicates no support for that number of spatial streams."

> ::= { dot11VHTStationConfigEntry 7 }

>

> dot11VHTTxHighestDataRateSupported OBJECT-TYPE

> SYNTAX Unsigned32

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> Represents the highest data rate in Mb/s that the STA is capable of transmitting."

> DEFVAL { 0 }

> ::= { dot11VHTStationConfigEntry 8 }

>

> -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

> -- \* End of dot11VHTStationConfigTable TABLE

> -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

>

16627c16772,16773

< ht(7) }

---

> ht(7),

> vht(9) }

16637c16783

< OFDM = 04, HRDSSS = 05, ERP = 06, HT = 07"

---

> OFDM = 04, HRDSSS = 05, ERP = 06, HT = 07, VHT = 09"

16881c17027,17029

< dot11CurrentTxPowerLevel Unsigned32 }

---

> dot11CurrentTxPowerLevel Unsigned32,

> dot11TxPowerLevelExtended OCTET STRING,

> dot11CurrentTxPowerLevelExtended Unsigned32 }

16990c17138

< The TxPowerLevel N currently being used to transmit data. Some PHYs also use this value to determine the receiver sensitivity requirements for CCA."

---

> Set to min(N,8) where N is an index into dot11TxPowerLevel<N> or dot11TxPowerLevelExtended and identifies the transmit power level currently being used to transmit data. Some PHYs also use this value to determine the receiver sensitivity requirements for CCA."

16992a17141,17162

> dot11TxPowerLevelExtended OBJECT-TYPE

> SYNTAX OCTET STRING (SIZE(2..256))

> MAX-ACCESS read-write

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> It must have an even number of octets. It is organized as a variable length list of octet pairs, where each octet pair defines a big-endian 16-bit integer. The N-th integer represents the N-th transmit output power, in units of 250 microWatts. The values dot11TxPowerLevel1 to dot11TxPowerLevel<min(8, dot11NumberSupportedPowerLevelsImplemented)> inclusive, when converted from units of milliWatts to 250 microWatts, shall appear in order as the first to min(8, dot11NumberSupportedPowerLevelsImplemented)-th integers in this variable."

> ::= { dot11PhyTxPowerEntry 11 }

>

> dot11CurrentTxPowerLevelExtended OBJECT-TYPE

> SYNTAX Unsigned32 (1..128)

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a status variable.

> It is written by the PHY.

>

> The N-th integer within dot11TxPowerLevelExtended that identifies the transmit output power currently being used to transmit data. "

> ::= { dot11PhyTxPowerEntry 12 }

>

18617c18787,18794

< dot11NumberCompressedBeamformingMatrixSupportAntenna Unsigned32 }

---

> dot11NumberCompressedBeamformingMatrixSupportAntenna Unsigned32,

> dot11VHTSUBeamformeeOptionImplemented TruthValue,

> dot11VHTSUBeamformerOptionImplemented TruthValue,

> dot11VHTMUBeamformeeOptionImplemented TruthValue,

> dot11VHTMUBeamformerOptionImplemented TruthValue,

> dot11VHTNumberSoundingDimensions Unsigned32,

> dot11VHTBeamformeeNTxSupport Unsigned32

> }

18811a18989,19058

> dot11VHTSUBeamformeeOptionImplemented 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 STA supports the SU Beamformee role."

> DEFVAL { false }

> ::= { dot11TransmitBeamformingConfigEntry 15 }

>

> dot11VHTSUBeamformerOptionImplemented 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 STA supports the SU Beamformer role."

> DEFVAL { false }

> ::= { dot11TransmitBeamformingConfigEntry 16 }

>

> dot11VHTMUBeamformeeOptionImplemented 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 STA supports the MU Beamformee role."

> DEFVAL { false }

> ::= { dot11TransmitBeamformingConfigEntry 17 }

>

> dot11VHTMUBeamformerOptionImplemented 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 STA supports the MU Beamformer role."

> DEFVAL { false }

> ::= { dot11TransmitBeamformingConfigEntry 18 }

>

> dot11VHTNumberSoundingDimensions OBJECT-TYPE

> SYNTAX Unsigned32 (1..8)

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> This attribute indicates the number of antennas used by the beamformer when sending beamformed tansmissions."

> ::= { dot11TransmitBeamformingConfigEntry 19 }

>

> dot11VHTBeamformeeNTxSupport OBJECT-TYPE

> SYNTAX Unsigned32 (1..8)

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> This attribute indicates the number of beamformer transmit antennas the beamformee supports."

> ::= { dot11TransmitBeamformingConfigEntry 20 }

>

18819a19067,19324

> -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

> -- \* dot11 Phy VHT TABLE

> -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

>

> dot11PhyVHTTable OBJECT-TYPE

> SYNTAX SEQUENCE OF Dot11PhyVHTEntry

> MAX-ACCESS not-accessible

> STATUS current

> DESCRIPTION

> "Entry of attributes for dot11PhyVHTTable. Implemented as a table indexed on ifIndex to allow for multiple instances on an Agent."

> ::= { dot11phy 19 }

>

> dot11PhyVHTEntry OBJECT-TYPE

> SYNTAX Dot11PhyVHTEntry

> MAX-ACCESS not-accessible

> STATUS current

> DESCRIPTION

> "An entry in the dot11PhyHTEntry Table. ifIndex - Each IEEE 802.11 interface is represented by an ifEntry. Interface tables in this MIB module are indexed by ifIndex."

> INDEX {ifIndex}

> ::= { dot11PhyVHTTable 1 }

>

> Dot11PhyVHTEntry ::=

> SEQUENCE {

> dot11VHTChannelWidthOptionImplemented INTEGER,

> dot11CurrentChannelBandwidth INTEGER,

> dot11CurrentChannelCenterFrequencyIndex1 Unsigned32,

> dot11CurrentChannelCenterFrequencyIndex2 Unsigned32,

> dot11VHTShortGIOptionIn80Implemented TruthValue,

> dot11VHTShortGIOptionIn80Activated TruthValue,

> dot11VHTShortGIOptionIn160and80p80Implemented TruthValue,

> dot11VHTShortGIOptionIn160and80p80Activated TruthValue,

> dot11VHTLDPCCodingOptionImplemented TruthValue,

> dot11VHTLDPCCodingOptionActivated TruthValue,

> dot11VHTTxSTBCOptionImplemented TruthValue,

> dot11VHTTxSTBCOptionActivated TruthValue,

> dot11VHTRxSTBCOptionImplemented TruthValue,

> dot11VHTRxSTBCOptionActivated TruthValue,

> dot11VHTMUMaxUsersImplemented Unsigned32,

> dot11VHTMUMaxNSTSPerUserImplemented Unsigned32,

> dot11VHTMUMaxNSTSTotalImplemented Unsigned32

> }

>

> dot11VHTChannelWidthOptionImplemented OBJECT-TYPE

> SYNTAX INTEGER { contiguous80(0), contiguous160(1), noncontiguous80plus80(2) }

> MAX-ACCESS read-only

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> This attribute indicates the channel widths supported: 20/40/80 MHz, 20/40/80/160 MHz or 20/40/80/160/80+80 MHz."

> DEFVAL { contiguous80 }

> ::= { dot11PhyVHTEntry 1 }

>

> dot11CurrentChannelBandwidth OBJECT-TYPE

> SYNTAX INTEGER { cbw20(0), cbw40(1), cbw80(2), cbw160(3), cbw80p80(4) }

> MAX-ACCESS read-only

> 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 determines the operating channel width."

> DEFVAL { cbw20 }

> ::= { dot11PhyVHTEntry 2 }

>

> dot11CurrentChannelCenterFrequencyIndex1 OBJECT-TYPE

> SYNTAX Unsigned32 (0..200)

> MAX-ACCESS read-only

> 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.

>

> In 20 MHz, 40 MHz, 80 MHz and 160 MHz channels, denotes the channel center frequency.

> In 80+80 MHz channels, denotes the center frequency of the primary segment."

> DEFVAL { 0 }

> ::= { dot11PhyVHTEntry 3 }

>

> dot11CurrentChannelCenterFrequencyIndex2 OBJECT-TYPE

> SYNTAX Unsigned32 (0..200)

> MAX-ACCESS read-only

> 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.

>

> In 80+80 MHz channels, denotes the center frequency of the secondary segment.

> Undefined for 20 MHz, 40 MHz, 80 MHz and 160 MHz channels."

> DEFVAL { 0 }

> ::= { dot11PhyVHTEntry 4 }

>

> dot11VHTShortGIOptionIn80Implemented 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 device is capable of receiving 80 MHz short guard interval packets."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 5 }

>

> dot11VHTShortGIOptionIn80Activated OBJECT-TYPE

> SYNTAX TruthValue

> MAX-ACCESS read-write

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> This attribute, when true, indicates that the reception of 80 MHz short guard interval packets is enabled."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 6 }

>

> dot11VHTShortGIOptionIn160and80p80Implemented 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 device is capable of receiving 160 MHz and 80+80 MHz short guard interval packets."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 7 }

>

> dot11VHTShortGIOptionIn160and80p80Activated OBJECT-TYPE

> SYNTAX TruthValue

> MAX-ACCESS read-write

> STATUS current

> DESCRIPTION

> "This is a capability variable.

> Its value is determined by device capabilities.

>

> This attribute, when true, indicates that the reception of 160 MHz and 80+80 MHz short guard interval packets is enabled."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 8 }

>

> dot11VHTLDPCCodingOptionImplemented 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 LDPC coding option for VHT packets is implemented."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 9 }

>

> dot11VHTLDPCCodingOptionActivated 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 LDPC coding option for VHT packets is enabled."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 10 }

>

> dot11VHTTxSTBCOptionImplemented 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 device is capable of transmitting VHT frames using STBC."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 11 }

>

> dot11VHTTxSTBCOptionActivated 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 entity's capability for transmitting VHT frames using STBC is enabled."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 12 }

>

> dot11VHTRxSTBCOptionImplemented 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 device is capable of receiving VHT frames using STBC."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 13 }

>

> dot11VHTRxSTBCOptionActivated 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 entity's capability for receiving VHT frames using STBC is enabled."

> DEFVAL { false }

> ::= { dot11PhyVHTEntry 14 }

>

> dot11VHTMUMaxUsersImplemented 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 indicates the maximum number of users to which this device is capable of transmitting within a MU PPDU."

> DEFVAL { 1 }

> ::= { dot11PhyVHTEntry 15 }

>

> dot11VHTMUMaxNSTSPerUserImplemented 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 indicates the maximum number of space-time streams per user that this device is capable of transmitting within a MU PPDU."

> DEFVAL { 1 }

> ::= { dot11PhyVHTEntry 16 }

>

> dot11VHTMUMaxNSTSTotalImplemented 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 indicates the maximum number of space-time streams for all users that this device is capable of transmitting within a MU PPDU."

> DEFVAL { 1 }

> ::= { dot11PhyVHTEntry 17 }

>

> -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

> -- \* End of dot11PhyVHT TABLE

> -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

>

23158a23664,23723

> dot11VHTTransmitBeamformingGroup OBJECT-GROUP

> OBJECTS {

> dot11VHTSUBeamformeeOptionImplemented,

> dot11VHTSUBeamformerOptionImplemented,

> dot11VHTMUBeamformeeOptionImplemented,

> dot11VHTMUBeamformerOptionImplemented,

> dot11VHTNumberSoundingDimensions,

> dot11VHTBeamformeeNTxSupport }

> STATUS current

> DESCRIPTION

> "Attributes that configure VHT transmit beamforming for IEEE 802.11."

> ::= { dot11Groups 63 }

>

> dot11PhyVHTComlianceGroup OBJECT-GROUP

> OBJECTS {

> dot11VHTChannelWidthOptionImplemented,

> dot11CurrentChannelBandwidth,

> dot11CurrentChannelCenterFrequencyIndex1,

> dot11CurrentChannelCenterFrequencyIndex2,

> dot11VHTShortGIOptionIn80Implemented,

> dot11VHTShortGIOptionIn80Activated,

> dot11VHTShortGIOptionIn160and80p80Implemented,

> dot11VHTShortGIOptionIn160and80p80Activated,

> dot11VHTLDPCCodingOptionImplemented,

> dot11VHTLDPCCodingOptionActivated,

> dot11VHTTxSTBCOptionImplemented,

> dot11VHTTxSTBCOptionActivated,

> dot11VHTRxSTBCOptionImplemented,

> dot11VHTRxSTBCOptionActivated,

> dot11VHTMUMaxUsersImplemented,

> dot11VHTMUMaxNSTSPerUserImplemented,

> dot11VHTMUMaxNSTSTotalImplemented }

> STATUS current

> DESCRIPTION

> "Attributes that configure the VHT PHY."

> ::= { dot11Groups 64 }

>

> dot11VHTMACAdditions OBJECT-GROUP

> OBJECTS {

> dot11MaxMPDULength,

> dot11VHTMaxRxAMPDUFactor,

> dot11VHTControlFieldSupported,

> dot11VHTTXOPPowerSaveOptionImplemented,

> dot11VHTRxMCSMap,

> dot11VHTRxHighestDataRateSupported,

> dot11VHTTxMCSMap,

> dot11VHTTxHighestDataRateSupported }

> STATUS current

> DESCRIPTION

> "Attributes that configure the VHT MAC."

> ::= { dot11Groups 65 }

>

> dot11PhyTxPowerComplianceGroup2 OBJECT-GROUP

> OBJECTS {

> dot11TxPowerLevelExtended,

> dot11CurrentTxPowerLevelExtended }

> STATUS current

> DESCRIPTION

> "Additional attributes for Control and Management of transmit power."

> ::= { dot11Groups 66 }

23186c23751,23752

< dot11PhyHTComplianceGroup"

---

> dot11PhyHTComplianceGroup

> dot11PhyVHTComplianceGroup"

23197c23763,23764

< dot11PhyHTComplianceGroup"

---

> dot11PhyHTComplianceGroup

> dot11PhyVHTComplianceGroup"

23208c23775,23776

< dot11PhyHTComplianceGroup"

---

> dot11PhyHTComplianceGroup

> dot11PhyVHTComplianceGroup"

23219c23787,23788

< dot11PhyHTComplianceGroup"

---

> dot11PhyHTComplianceGroup

> dot11PhyVHTComplianceGroup"

23230c23799,23800

< dot11PhyHTComplianceGroup"

---

> dot11PhyHTComplianceGroup

> dot11PhyVHTComplianceGroup"

23241c23811,23812

< dot11PhyHTComplianceGroup"

---

> dot11PhyHTComplianceGroup

> dot11PhyVHTComplianceGroup"

23252c23823,23836

< dot11PhyERPComplianceGroup"

---

> dot11PhyERPComplianceGroup

> dot11PhyVHTComplianceGroup"

>

> GROUP dot11PhyVHTComplianceGroup

> DESCRIPTION

> "Implementation of this group is required when object dot11PHYType has the value of vht.

> This group is mutually exclusive to the following groups:

> dot11PhyIRComplianceGroup

> dot11PhyFHSSComplianceGroup2

> dot11PhyDSSSComplianceGroup

> dot11PhyOFDMComplianceGroup3

> dot11PhyHRDSSSComplianceGroup

> dot11PhyERPComplianceGroup

> dot11PhyHTComplianceGroup"

23273a23858,23861

> GROUP dot11PhyTxPowerComplianceGroup2

> DESCRIPTION

> "The dot11PhyTxPowerComplianceGroup2 group is optional, but dependent on dot11PhyTxPowerConplianceGroup."

>

23317a23906,23913

> GROUP dot11VHTTransmitBeamformingGroup

> DESCRIPTION

> "The dot11VHTTransmitBeamformingGroup group is optional."

>

> GROUP dot11VHTMACAdditions

> DESCRIPTION

> "The dot11VHTMACAdditions group is optional."

>

23336a23933,23935

> -- dot11VHTTransmitBeamformingGroup

> -- dot11PhyVHTComplianceGroup

> -- dot11VHTMACAdditions,