IEEE P802.11
Wireless LANs

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| LB225 CR PHY Miscellaneous Part1 |
| Date: 2017-04-11 |
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Abstract

This submission proposes resolutions of comments received from TGax LB225.

(The proposed change is based on TGax Draft 1.2.)

* CIDs: 9734, 10146, 9052 (3 CID)

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.***

| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 9734 | 371.15 | 28.4 | The PHY MIB for HE PLME is missing.Also update the PHY MIB in Annex C. | As per comment. | Revised- Agree in principle.Add PHY MIB. TGax editor makes changes as shown in the as specified in 11-17/0532r0. |
| 10146 | 371.15 | 28.4 | add PHY MIB in new sub-clause in 28.4 HE PLME | As in the comment. | Revised- Agree in principle. Add PHY MIB.TGax editor makes changes as shown in the as specified in 11-17/0532r0. |
| 9052 | 371.20 | 28.4.1 | Wrong reference "Table 25-1" | Correct reference | Revised- Agree in principle. TGax editor makes changes as shown in the as specified in 11-17/0532r0. |

***TGax editor: Insert the following new subclause 28.4.2 (PHY MIB) after 28.4.1 (PLME\_SAP sublayer management primitives):***

* + 1. PHY MIB

HE PHY MIB attributes are defined in Annex C with specific values defined in Table 28-xx (HE PHY MIB attributes). The “Operational semantics” column in Table 28-xx (HE PHY MIB attributes) contains two types: static and dynamic.

* Static MIB attributes are fixed and cannot be modified for a given PHY implementation.
* Dynamic MIB attributes are interpreted according to the MAX-ACCESS field of the MIB attribute. When MAX-ACCESS is equal to read-only, the MIB attribute value may be updated by the PLME and read from the MIB attribute by management entities. When MAX-ACCESS is equal to read-write, the MIB attribute may be read and written by management entities.

|  |
| --- |
| Table 28-xx HE PHY MIB attributes (11ac) |
| Managed Object | Default value/range | Operational Semantics |
| **dot11PHYOperationTable** |
| dot11PHYType | he(<ANA>) | Static |
| **dot11PHYTxPowerTable** |
| dot11NumberSupportedPowerLevelsImplemented(#5046) | Implementation dependent | Static |
| dot11TxPowerLevel1 | Implementation dependent | Static |
| dot11TxPowerLevel2 | Implementation dependent | Static |
| dot11TxPowerLevel3 | Implementation dependent | Static |
| dot11TxPowerLevel4 | Implementation dependent | Static |
| dot11TxPowerLevel5 | Implementation dependent | Static |
| dot11TxPowerLevel6 | Implementation dependent | Static |
| dot11TxPowerLevel7 | Implementation dependent | Static |
| dot11TxPowerLevel8 | Implementation dependent | Static |
| dot11CurrentTxPowerLevel | Implementation dependent | Static |
| dot11TxPowerLevelExtended | Implementation dependent | Static |
| dot11CurrentTxPowerLevelExtended | Implementation dependent | Static |
| **dot11PHYHTTable** |
| dot11CurrentPrimaryChannel | Implementation dependent | Dynamic |
| dot11CurrentSecondaryChannel | Implementation dependent | Dynamic |
| dot11FortyMHzOperationImplemented | false(MDR)/Boolean | Static |
| dot11FortyMHzOperationActivated | false(MDR)/Boolean | Dynamic |
| dot11NumberOfSpatialStreamsImplemented | Implementation dependent | Static |
| dot11NumberOfSpatialStreamsActivated | Implementation dependent | Dynamic |
| dot11HTGreenfieldOptionImplemented | false(MDR)/Boolean | Static |
| dot11HTGreenfieldOptionActivated | false(MDR)/Boolean | Dynamic |
| dot11ShortGIOptionInTwentyImplemented | false(MDR)/Boolean | Static |
| dot11ShortGIOptionInTwentyActivated | false(MDR)/Boolean | Dynamic |
| dot11ShortGIOptionInFortyImplemented | false(MDR)/Boolean | Static |
| dot11ShortGIOptionInFortyActivated | false(MDR)/Boolean | Dynamic |
| dot11LDPCCodingOptionImplemented | false(MDR)/Boolean | Static |
| dot11LDPCCodingOptionActivated | false(MDR)/Boolean | Dynamic |
| dot11TxSTBCOptionImplemented | false(MDR)/Boolean | Static |
| dot11TxSTBCOptionActivated | false(MDR)/Boolean | Dynamic |
| dot11RxSTBCOptionImplemented | false(MDR)/Boolean | Static |
| dot11RxSTBCOptionActivated | false(MDR)/Boolean | Dynamic |
| dot11BeamFormingOptionImplemented | false(MDR)/Boolean | Static |
| dot11BeamFormingOptionActivated | false(MDR)/Boolean | Dynamic |
| **dot11PHYVHTTable** |
| dot11CurrentChannelWidth | Implementation dependent | Dynamic |
| dot11CurrentChannelCenterFrequencyIndex0 | Implementation dependent | Dynamic |
| dot11CurrentChannelCenterFrequencyIndex1 | Implementation dependent | Dynamic |
| dot11VHTChannelWidthOptionImplemented | Implementation dependent | Static |
| dot11VHTShortGIOptionIn80Implemented | false(MDR)/Boolean | Static |
| dot11VHTShortGIOptionIn80Activated | false(MDR)/Boolean | Dynamic |
| dot11VHTShortGIOptionIn160and80p80Implemented | false(MDR)/Boolean | Static |
| dot11VHTShortGIOptionIn160and80p80Activated | false(MDR)/Boolean | Dynamic |
| dot11VHTLDPCCodingOptionImplemented | false(MDR)/Boolean | Static |
| dot11VHTLDPCCodingOptionActivated | false(MDR)/Boolean | Dynamic |
| dot11VHTTxSTBCOptionImplemented | false(MDR)/Boolean | Static |
| dot11VHTTxSTBCOptionActivated | false(MDR)/Boolean | Dynamic |
| dot11VHTRxSTBCOptionImplemented | false(MDR)/Boolean | Static |
| dot11VHTRxSTBCOptionActivated | false(MDR)/Boolean | Dynamic |
| dot11VHTMaxNTxChainsImplemented | Implementation dependent | Static |
| dot11VHTMaxNTxChainsActivated | Implementation dependent | Dynamic |
| **dot11TransmitBeamformingConfigTable** |
| dot11ReceiveStaggerSoundingOptionImplemented | false(MDR)/Boolean | Static |
| dot11TransmitStaggerSoundingOptionImplemented | false(MDR)/Boolean | Static |
| dot11ReceiveNDPOptionImplemented | false(MDR)/Boolean | Static |
| dot11TransmitNDPOptionImplemented | false(MDR)/Boolean | Static |
| dot11ImplicitTransmitBeamformingOptionImplemented | false(MDR)/Boolean | Static |
| dot11CalibrationOptionImplemented | Implementation dependent | Static |
| dot11ExplicitCSITransmitBeamformingOptionImplemented | false(MDR)/Boolean | Static |
| dot11ExplicitNonCompressedBeamformingMatrixOptionImplemented | false(MDR)/Boolean | Static |
| dot11ExplicitTransmitBeamformingCSIFeedbackOptionImplemented | Implementation dependent | Static |
| dot11ExplicitNoncompressedBeamformingFeedbackOptionImplemented | Implementation dependent | Static |
| dot11ExplicitCompressedBeamformingFeedbackOptionImplemented | Implementation dependent | Static |
| dot11NumberBeamFormingCSISupportAntenna | Implementation dependent | Static |
| dot11NumberNonCompressedBeamformingMatrixSupportAntenna | Implementation dependent | Static |
| dot11NumberCompressedBeamformingMatrixSupportAntenna | Implementation dependent | Static |
| **dot11VHTTransmitBeamformingConfigTable** |
| dot11VHTSUBeamformeeOptionImplemented | false(MDR)/Boolean | Static |
| dot11VHTSUBeamformerOptionImplemented | false(MDR)/Boolean | Static |
| dot11VHTMUBeamformeeOptionImplemented | false(MDR)/Boolean | Static |
| dot11VHTMUBeamformerOptionImplemented | false(MDR)/Boolean | Static |
| dot11VHTNumberSoundingDimensions | Implementation dependent | Static |
| dot11VHTBeamformeeNTxSupport | Implementation dependent | Static |
| **dot11PHYHETable** |
| dot11HEDualBandImplemented | false(MDR)/Boolean | Static |
| dot11HECurrentChannelWidthSet | Implementation dependent | Dynamic |
| dot11HEPuncturedPreambleTxImplemented | Implementation dependent | Static |
| dot11HEPuncturedPreambleTxActivated | Implementation dependent | Dynamic |
| dot11HEPuncturedPreambleRxImplemented | Implementation dependent | Static |
| dot11HEPuncturedPreambleRxActivated | Implementation dependent | Dynamic |
| dot11HEDeviceClass | Implementation dependent | Static |
| dot11HELPDCCodingInPayloadImplemented | false(MDR)/Boolean | Static |
| dot11HELPDCCodingInPayloadActivated | false(MDR)/Boolean | Dynamic |
| dot11HESUPPDUwith1xHELTFand0point8GIlmplemented | false(MDR)/Boolean | Static |
| dot11HESUPPDUwith1xHELTFand0point8GIActivated | false(MDR)/Boolean | Dynamic |
| dot11HESUPPDUwith4xHELTFand0point8GIlmplemented | false(MDR)/Boolean | Static |
| dot11HESUPPDUwith4xHELTFand0point8GIActivated | false(MDR)/Boolean | Dynamic |
| dot11HENDPwith4xHELTFand3point2GIImplemented | false(MDR)/Boolean | Static |
| dot11HENDPwith4xHELTFand3point2GIActivated | false(MDR)/Boolean | Dynamic |
| dot11HESTBCTxLessThanOrEqualTo80Implemented | false(MDR)/Boolean | Static |
| dot11HESTBCTxLessThanOrEqualTo80Activated | false(MDR)/Boolean | Dynamic |
| dot11HESTBCRxLessThanOrEqualTo80Implemented | false(MDR)/Boolean | Static |
| dot11HESTBCRxLessThanOrEqualTo80Activated | false(MDR)/Boolean | Dynamic |
| dot11HESTBCTxGreaterThan80Implemented | false(MDR)/Boolean | Static |
| dot11HESTBCTxGreaterThan80Activated | false(MDR)/Boolean | Dynamic |
| dot11HESTBCRxGreaterThan80Implemented | false(MDR)/Boolean | Static |
| dot11HESTBCRxGreaterThan80Activated | false(MDR)/Boolean | Dynamic |
| dot11HEDopplerImplemented | false(MDR)/Boolean | Static |
| dot11HEDopplerActivated | false(MDR)/Boolean | Dynamic |
| dot11HEDCMImplemented | Implementation dependent | Static |
| dot11HEDCMActivated | Implementation dependent | Dynamic |
| dot11HEFullBWULMUMIMOImplemented | false(MDR)/Boolean | Static |
| dot11HEFullBWULMUMIMOActivated | false(MDR)/Boolean | Dynamic |
| dot11HEPartialBWULMUMIMOImplemented | false(MDR)/Boolean | Static |
| dot11HEPartialBWULMUMIMOActivated | false(MDR)/Boolean | Dynamic |
| dot11HEPartialBWDLMUMIMOImplemented | false(MDR)/Boolean | Static |
| dot11HEPartialBWDLMUMIMOActivated | false(MDR)/Boolean | Dynamic |
| dot11HEULMUPayloadImplemented | false(MDR)/Boolean | Static |
| dot11HEULMUPayloadActivated | false(MDR)/Boolean | Dynamic |
| dot11HEPowerBoostFactorImplemented | false(MDR)/Boolean | Static |
| dot11HEPowerBoostFactorActivated | false(MDR)/Boolean | Dynamic |
| dot11HEPartialBWERSUPayloadImplemented | false(MDR)/Boolean | Static |
| dot11HEPartialBWERSUPayloadActivated | false(MDR)/Boolean | Dynamic |
| **dot11HETransmitBeamformingConfigTable** |
| dot11HESUBeamformerOptionImplemented | false(MDR)/Boolean | Static |
| dot11HESUBeamformeeOptionImplemented | false(MDR)/Boolean | Static |
| dot11HEMUBeamformerOptionImplemented | false(MDR)/Boolean | Static |
| dot11HEBeamformeeSTSSupportLessThanOrEqualTo80 | false(MDR)/Boolean | Static |
| dot11HEBeamformeeSTSSupportGreaterThan80 | false(MDR)/Boolean | Static |
| dot11HENumberSoundingDimensionsLessThanOrEqualTo80 | false(MDR)/Boolean | Static |
| dot11HENumberSoundingDimensionsGreaterThan80 | false(MDR)/Boolean | Static |
| dot11HENG16SUFeedbackSupport | false(MDR)/Boolean | Static |
| dot11HENG16MUFeedbackSupport | false(MDR)/Boolean | Static |
| dot11HECodebookSizePhi4Psi2SUFeedbackSupport | false(MDR)/Boolean | Static |
| dot11HECodebookSizePhi7Psi5MUFeedbackSupport | false(MDR)/Boolean | Static |
| dot11HETriggeredSUBeamformingFeedbackImplemented | false(MDR)/Boolean | Static |
| dot11HETriggeredMUBeamformingFeedbackImplemented | false(MDR)/Boolean | Static |
| dot11HETriggeredCQIFeedbackSupportImplemented | false(MDR)/Boolean | Static |

***TGax editor:Change the dot11PHYType object as follows:***

dot11PHYType OBJECT-TYPE

 SYNTAX INTEGER {

 fhss(1),

 dsss(2),

 irbaseband(3),

 ofdm(4),

 hrdsss(5),

 erp(6),

 ht(7)

 dmg(8),

 vht(9),

 tvht(10),

 HE(11),

 cdmg(12),

 CMMG(13),

 he (<ANA>) }

 MAX-ACCESS read-only

 STATUS current

 DESCRIPTION

 "This is a status variable.

 It is written by the PHY.

 This is an 8-bit integer value that identifies the PHY type supported by the attached PLCP and PMD. Currently defined values and their corresponding PHY types are:

 FHSS 2.4 GHz = 01, DSSS 2.4 GHz = 02, IR Baseband = 03,

 OFDM = 04, HRDSSS = 05, ERP = 06, HT = 07, DMG = 08, VHT = 09, TVHT = 10,

 HE = 11, CDMG = 12, CMMG = 13, HE = <ANA>"

 ::= { dot11PhyOperationEntry 1 }

TGax editor: Change the dot11 Phy HE TABLE as follows:

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

-- \* dot11 Phy HE TABLE

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

dot11PhyHETable OBJECT-TYPE

SYNTAX SEQUENCE OF Dot11PhyHEEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Entry of attributes for dot11PhyHETable. Implemented as a table indexed on ifIndex to allow for multiple instances on an Agent."

::= { dot11phy <ANA> }

dot11PhyHEEntry OBJECT-TYPE

SYNTAX Dot11PhyHEEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the dot11PhyHEEntry Table. ifIndex - Each IEEE Std 802.11 interface is represented by an ifEntry. Interface tables in this MIB module are indexed by ifIndex."

INDEX {ifIndex}

::= { dot11PhyHETable 1 }

Dot11PhyHEEntry ::=

SEQUENCE {

dot11HECCAIndicationMode INTEGER,

 dot11HEDualBandImplemented TruthValue,

 dot11HECurrentChannelWidthSet BITS,

 dot11HEPuncturedPreambleTxImplemented BITS,

 dot11HEPuncturedPreambleTxActivated BITS,

 dot11HEPuncturedPreambleRxImplemented BITS,

 dot11HEPuncturedPreambleRxActivated BITS,

 dot11HEDeviceClass BITS,

 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 BITS,

 dot11HEDCMActivated BITS,

 dot11HEFullBWULMUMIMOImplemented TruthValue,

 dot11HEFullBWULMUMIMOActivated TruthValue,

 dot11HEPartialBWULMUMIMOImplemented TruthValue,

 dot11HEPartialBWULMUMIMOActivated TruthValue,

 dot11HEPartialBWDLMUMIMOImplemented TruthValue,

 dot11HEPartialBWDLMUMIMOActivated TruthValue,

 dot11HEULMUPayloadImplemented TruthValue,

 dot11HEULMUPayloadActivated TruthValue,

 dot11HEPowerBoostFactorImplemented TruthValue,

 dot11HEPowerBoostFactorActivated TruthValue,

 dot11HEPartialBWERSUPayloadImplemented TruthValue,

 dot11HEPartialBWERSUPayloadActivated TruthValue

}

dot11HECCAIndicationMode OBJECT-TYPE

SYNTAX INTEGER {

singleelement (0),

per20bitmap (1),

per20bitmapsifs (2) }

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.

The current CCA method in operation for an HE PHY. Valid values are:

When the channel-list of a PHY-CCA.indication primitive contains only single element, it is set to 0 (singleelement).

When the channel-list of a PHY-CCA.indication primitive contains a per20MHz bitmap and the channel-list is used for the preamble puncturing transmission, it is set to 1 (per20bitmap).

When the channel-list of a PHY-CCA.indication primitive contains a per20MHz bitmap measured during the SIFS time and the channel-list is used for the HE trigger-based PPDU transmission and BQR operation, it is set 2 (per20bitmapsifs)."

::= { dot11PhyHEEntry 1 }

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

-- \* End of dot11PhyHE TABLE

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

***TGax editor: Insert the following after dot11PhyHE TABLE:***

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

-- \* dot11 HE Transmit Beamforming Config TABLE

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

dot11HETransmitBeamformingConfigTable OBJECT-TYPE

 SYNTAX SEQUENCE OF Dot11HETransmitBeamformingConfigEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION

 "Entry of attributes for dot11HETransmitBeamformingConfigTable. Implemented as a table indexed on ifIndex to allow for multiple instances on an Agent."

 ::= { dot11phy <ANA> }

dot11HETransmitBeamformingConfigEntry OBJECT-TYPE

 SYNTAX Dot11HETransmitBeamformingConfigEntry

 MAX-ACCESS not-accessible

 STATUS current

 DESCRIPTION

 "An entry in the dot11HETransmitBeamformingConfig Table.

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

 INDEX {ifIndex}

 ::= { dot11HETransmitBeamformingConfigTable 1 }

Dot11HETransmitBeamformingConfigEntry ::=

 SEQUENCE {

 dot11HESUBeamformerOptionImplemented TruthValue,

 dot11HESUBeamformeeOptionImplemented TruthValue,

 dot11HEMUBeamformerOptionImplemented TruthValue,

 dot11HEBeamformeeSTSSupportLessThanOrEqualTo80 Unsigned32,

 dot11HEBeamformeeSTSSupportGreaterThan80 Unsigned32,

 dot11HENumberSoundingDimensionsLessThanOrEqualTo80 Unsigned32,

 dot11HENumberSoundingDimensionsGreaterThan80 Unsigned32,

 dot11HENG16SUFeedbackSupport TruthValue,

 dot11HENG16MUFeedbackSupport TruthValue,

 dot11HECodebookSizePhi4Psi2SUFeedbackSupport TruthValue,

 dot11HECodebookSizePhi7Psi5MUFeedbackSupport TruthValue,

 dot11HETriggeredSUBeamformingFeedbackImplemented TruthValue,

 dot11HETriggeredSUBeamformingFeedbackActivated TruthValue,

 dot11HETriggeredMUBeamformingFeedbackImplemented TruthValue,

 dot11HETriggeredMUBeamformingFeedbackActivated TruthValue,

 dot11HETriggeredCQIFeedbackSupportImplemented TruthValue,

 dot11HETriggeredCQIFeedbackSupportActivated TruthValue

 }

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

-- \* End of dot11 HE Transmit Beamforming Config TABLE

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

***TGax editor: Insert the following after the dot11HEComplianceGroup:***

dot11HETransmitBeamformingGroup OBJECT-GROUP

 OBJECTS {

 dot11HESUBeamformerOptionImplemented,

 dot11HESUBeamformeeOptionImplemented,

 dot11HEMUBeamformerOptionImplemented,

 dot11HEBeamformeeSTSSupportLessThanOrEqualTo80,

 dot11HEBeamformeeSTSSupportGreaterThan80,

 dot11HENumberSoundingDimensionsLessThanOrEqualTo80,

 dot11HENumberSoundingDimensionsGreaterThan80,

 dot11HENG16SUFeedbackSupport,

 dot11HENG16MUFeedbackSupport,

 dot11HECodebookSizePhi4Psi2SUFeedbackSupport,

 dot11HECodebookSizePhi7Psi5MUFeedbackSupport,

 dot11HETriggeredSUBeamformingFeedbackImplemented,

 dot11HETriggeredMUBeamformingFeedbackImplemented,

 dot11HETriggeredCQIFeedbackSupportImplemented }

 STATUS current

 DESCRIPTION

 "Attributes that configure HE transmit beamforming for IEEE 802.11."

 ::= { dot11Groups <ANA> }

dot11PhyHEComplianceGroup OBJECT-GROUP

 OBJECTS {

 dot11HEDualBandImplemented,

 dot11HECurrentChannelWidthSet,

 dot11HEPuncturedPreambleTxImplemented,

 dot11HEPuncturedPreambleTxActivated,

 dot11HEPuncturedPreambleRxImplemented,

 dot11HEPuncturedPreambleRxActivated,

 dot11HEDeviceClass,

 dot11HELPDCCodingInPayloadImplemented,

 dot11HELPDCCodingInPayloadActivated,

 dot11HESUPPDUwith1xHELTFand0point8GIlmplemented,

 dot11HESUPPDUwith1xHELTFand0point8GIActivated,

 dot11HESUPPDUwith4xHELTFand0point8GIlmplemented,

 dot11HESUPPDUwith4xHELTFand0point8GIActivated,

 dot11HENDPwith4xHELTFand3point2GIImplemented,

 dot11HENDPwith4xHELTFand3point2GIActivated,

 dot11HESTBCTxImplemented,

 dot11HESTBCTxActivated,

 dot11HESTBCRxImplemented,

 dot11HESTBCRxActivated,

 dot11HEDopplerImplemented,

 dot11HEDopplerActivated,

 dot11HEDCMImplemented,

 dot11HEDCMActivated,

 dot11HEFullBWULMUMIMOImplemented,

 dot11HEFullBWULMUMIMOActivated,

 dot11HEPartialBWULMUMIMOImplemented,

 dot11HEPartialBWULMUMIMOActivated,

 dot11HEPartialBWDLMUMIMOImplemented,

 dot11HEPartialBWDLMUMIMOActivated,

 dot11HEULMUPayloadImplemented,

 dot11HEULMUPayloadActivated,

 dot11HEPowerBoostFactorImplemented,

 dot11HEPowerBoostFactorActivated,

 dot11HEPartialBWERSUPayloadImplemented,

 dot11HEPartialBWERSUPayloadActivated }

 STATUS current

 DESCRIPTION

 "Attributes that configure the HE PHY."

 ::= { dot11Groups <ANA> }

Change the dot11Compliance object as follows:

dot11Compliance MODULE-COMPLIANCE

 STATUS current

 DESCRIPTION

 "The compliance statement for SNMPv2 entities that implement the IEEE 802.11 MIB."

 MODULE -- this module

 MANDATORY-GROUPS {

 dot11SMTbase12,

 dot11MACbase3,

 dot11CountersGroup3,

 dot11SmtAuthenticationAlgorithms,

 dot11ResourceTypeID,

 dot11PhyOperationComplianceGroup2 }

 GROUP dot11PhyDSSSComplianceGroup

 DESCRIPTION

 "Implementation of this group is required when object dot11PHYType is dsss.

 This group is mutually exclusive to the following groups:

 dot11PhyIRComplianceGroup

 dot11PhyFHSSComplianceGroup2

 dot11PhyOFDMComplianceGroup3

 dot11PhyHRDSSSComplianceGroup

 dot11PhyERPComplianceGroup

 dot11PhyHTComplianceGroup

 dot11DMGComplianceGroup

 dot11PhyVHTComplianceGroup

 dot11PhyTVHTComplianceGroup

 dot11PhyHEComplianceGroup"

 GROUP dot11PhyOFDMComplianceGroup3

 DESCRIPTION

 "Implementation of this group is required when object dot11PHYType is ofdm.

 This group is mutually exclusive to the following groups:

 dot11PhyIRComplianceGroup

 dot11PhyFHSSComplianceGroup2

 dot11PhyDSSSComplianceGroup

 dot11PhyHRDSSSComplianceGroup

 dot11PhyERPComplianceGroup

 dot11PhyHTComplianceGroup

 dot11DMGComplianceGroup

 dot11PhyVHTComplianceGroup

 dot11PhyTVHTComplianceGroup

 dot11PhyHEComplianceGroup"

 GROUP dot11PhyHRDSSSComplianceGroup

 DESCRIPTION

 "Implementation of this group is required when object dot11PHYType is hrdsss.

 This group is mutually exclusive to the following groups:

 dot11PhyIRComplianceGroup

 dot11PhyFHSSComplianceGroup2

 dot11PhyDSSSComplianceGroup

 dot11PhyOFDMComplianceGroup3

 dot11PhyERPComplianceGroup

 dot11PhyHTComplianceGroup

 dot11DMGComplianceGroup

 dot11PhyVHTComplianceGroup

 dot11PhyTVHTComplianceGroup

 dot11PhyHEComplianceGroup"

 GROUP dot11PhyERPComplianceGroup

 DESCRIPTION

 "Implementation of this group is required when object dot11PHYType is ERP.

 This group is mutually exclusive to the following groups:

 dot11PhyIRComplianceGroup

 dot11PhyFHSSComplianceGroup2

 dot11PhyDSSSComplianceGroup

 dot11PhyOFDMComplianceGroup3

 dot11PhyHRDSSSComplianceGroup

 dot11PhyHTComplianceGroup

 dot11DMGComplianceGroup

 dot11PhyVHTComplianceGroup

 dot11PhyTVHTComplianceGroup

 dot11PhyHEComplianceGroup"

 GROUP dot11PhyHTComplianceGroup

 DESCRIPTION

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

 This group is mutually exclusive to the following groups:

 dot11PhyIRComplianceGroup

 dot11PhyFHSSComplianceGroup2

 dot11PhyDSSSComplianceGroup

 dot11PhyOFDMComplianceGroup3

 dot11PhyHRDSSSComplianceGroup

 dot11PhyERPComplianceGroup

 dot11DMGComplianceGroup

 dot11PhyVHTComplianceGroup

 dot11PhyTVHTComplianceGroup

 dot11PhyHEComplianceGroup"

 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

 dot11DMGComplianceGroup

 dot11PhyHTComplianceGroup

 dot11PhyTVHTComplianceGroup

 dot11PhyHEComplianceGroup"

 GROUP dot11PhyTVHTComplianceGroup

 DESCRIPTION

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

 This group is mutually exclusive to the following groups:

 dot11PhyIRComplianceGroup

 dot11PhyFHSSComplianceGroup2

 dot11PhyDSSSComplianceGroup

 dot11PhyOFDMComplianceGroup3

 dot11PhyHRDSSSComplianceGroup

 dot11PhyERPComplianceGroup

 dot11PhyHTComplianceGroup

 dot11DMGComplianceGroup

 dot11PhyVHTComplianceGroup

 dot11PhyHEComplianceGroup"

 GROUP dot11PhyHEComplianceGroup

 DESCRIPTION

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

 This group is mutually exclusive to the following groups:

 dot11PhyIRComplianceGroup

 dot11PhyFHSSComplianceGroup2

 dot11PhyDSSSComplianceGroup

 dot11PhyOFDMComplianceGroup3

 dot11PhyHRDSSSComplianceGroup

 dot11PhyERPComplianceGroup

 dot11PhyHTComplianceGroup

 dot11DMGComplianceGroup

 dot11PhyVHTComplianceGroup

 dot11PhyTVHTComplianceGroup"

 GROUP dot11DMGComplianceGroup

 DESCRIPTION

 This group is mutually exclusive to the following groups:

"Implementation of this group is required when the object dot11PHYType is dmg.

This group is mutually exclusive to the following groups:

 dot11PhyIRComplianceGroup

 dot11PhyFHSSComplianceGroup2

 dot11PhyDSSSComplianceGroup

 dot11PhyOFDMComplianceGroup3

 dot11PhyHRDSSSComplianceGroup

 dot11PhyERPComplianceGroup

 dot11PhyHTComplianceGroup

 dot11PhyVHTComplianceGroup

 dot11PhyTVHTComplianceGroup

 dot11PhyHEComplianceGroup"

Insert the following after GROUP dot11VHTMACAdditions:

 GROUP dot11HETransmitBeamformingGroup

 DESCRIPTION

 "The dot11HETransmitBeamformingGroup group is optional."

 GROUP dot11HEComplianceGroup

 DESCRIPTION

 "The dot11HEComplianceGroup group is optional."

Change OPTIONAL-GROUPS as follows:

-- OPTIONAL-GROUPS {

 -- dot11SMTprivacy

 -- dot11MACStatistics,

 -- dot11PhyAntennaComplianceGroup,

 -- dot11PhyTxPowerComplianceGroup,

 -- dot11PhyRegDomainsSupportGroup,

 -- dot11PhyAntennasListGroup,

 -- dot11PhyRateGroup,

 -- dot11MultiDomainCapabilityGroup,

 -- dot11PhyFHSSComplianceGroup2,

 -- dot11RSNAadditions,

 -- dot11OperatingClassesGroup,

 -- dot11Qosadditions,

 -- dot11RMCompliance,

 -- dot11FTComplianceGroup

 -- dot11PhyAntennaComplianceGroup2,

 -- dot11HTMACadditions,

 -- dot11PhyMCSGroup,

 -- dot11TransmitBeamformingGroup,

 -- dot11VHTTransmitBeamformingGroup,

 -- dot11PhyVHTComplianceGroup,

 -- dot11VHTMACAdditions,

 -- dot11TVHTTransmitBeamformingGroup,

 -- dot11PhyTVHTComplianceGroup,

 -- dot11HETransmitBeamformingGroup,

 -- dot11PhyHEComplianceGroup,

 -- dot11HEComplianceGroup,

 -- dot11WNMCompliance}

TGax editor: Change the dot11HECompliance as follows:

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

-- \* Compliance Statements – HE

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

dot11HECompliance MODULE-COMPLIANCE

 STATUS current

 DESCRIPTION

 "This object class provides the objects from the IEEE 802.11

 MIB used to operate at high efficiency."

 MODULE -- this module

 MANDATORY-GROUPS { dot11PhyHEComplianceGroup, dot11PhyTxPowerComplianceGroup2, dot11HETransmitBeamformingGroup, dot11HEComplianceGroup }

-- OPTIONAL-GROUPS { }

 ::= { dot11Compliances <ANA> }