

## Changes to IEEE Std. 802.11-1997 to Address Requests for Interpretation

**Abstract:** This submission provides detailed changes required to be made to IEEE Std 802.11-1997 to resolve the requests for interpretation from Matt Fischer, Johnny Zweig, Bob O'Hara, Anil Sanwalka, and Henri Moelard.

Directions to the editor are in bold type.

1. In clause 7.3.2.3, replace "particular set" with "current set (aCurrentSet)", "individual pattern" with "current pattern (aCurrentPattern)", and "current channel index" with "current index (aCurrentIndex)". Add the following statement to the end of the clause: "The description of the attributes used in this clause can be found in clause 14.8.2.1."
2. In clause 14.8.2.1.39, replace "26 patterns" with "78 patterns", "what pattern the station is using to determine the hopping sequence." with "the  $x$  value used in the equation for  $f_x(i)$  in clause 14.6.8 to calculate the current channel number.", and "1 to 26" with "0 to 77".
3. In clause 14.8.2.1.40, replace "defines what index the station will use to determine the next hop channel number" with "is the  $i$  value used in the equation for  $f_x(i)$  in clause 14.6.8 to calculate the current channel number", and "1 to 26" with "1 to 79".
4. In clause 14.6.8, replace "72" in set 3 for North America/most of Europe with "71".
5. In clause 6.2.1.3, replace the following text in item k): replace "the key referenced by aWEPDefaultKeyID or a specific key mapping is null" with "cannot encrypt with a null key".
6. In clause 10.3.10.1 in the Description column of the BSSBasicRateSet, add "and transmit" after "must be able to receive".
7. In clause 7.3.2.2, replace "all the rates which this STA is capable of receiving" with "the rates in the OperationalRateSet as described in the MLME\_Join.request and MLME\_Start.request primitives".
8. In clause 11.4, delete all text in this clause, delete all of it subclauses and replace with the following text: "The MIB comprises the managed objects, attributes, actions and notifications required to properly manage a station. The definition of these managed objects, attributes, actions and notifications, as well as their structure, is presented in Annex D."
9. In clause 13, delete all text in this clause, delete all of it subclauses and replace with the following text: "The MIB comprises the managed objects, attributes, actions and notifications required to properly manage a station. The definition of these managed objects, attributes, actions and notifications, as well as their structure, is presented in Annex D."
10. In Annex D, delete all text in this clause and replace it with the text on the following pages.

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-- *****
-- * IEEE 802.11 Management Information Base
-- *****
IEEE802dot11-MIB DEFINITIONS ::= BEGIN
    IMPORTS
        MODULE-IDENTITY, OBJECT-TYPE,
        NOTIFICATION-TYPE, Integer32, Counter32 FROM SNMPv2-SMI
        DisplayString, MacAddress, RowStatus FROM SNMPv2-TC
        MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF
        ifIndex FROM RFC1213-MIB;

-- *****
-- * MODULE IDENTITY
-- *****
ieee802dot11 MODULE-IDENTITY
    LAST-UPDATED "9712020000Z"
    ORGANIZATION "IEEE 802.11"
    CONTACT-INFO
        "WG E-mail: stds-802-11@ieee.org

        Chair: Vic Hayes
        Postal: Lucent Technologies, Inc.
              Zadelstede 1-10
              Nieuwegein, Netherlands
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              151A Charles Street
              New York, NY 10014 USA
        Tel: +1 212 463 7937
        Fax: +1 212 645 6719
        E-mail: bob@informed-technology.com"
    DESCRIPTION
        "The MIB module for IEEE 802.11 entities.
         iso(1).member-body(2).us(840).ieee802dot11(10036) "
        ::= { 1 2 840 10036 }

-- *****
-- * Major sections
-- *****
-- Station Management (SMT) Attributes
--   DEFINED AS "The SMT object class provides the necessary support at the
--   station to manage the processes in the station such that the
--   station may work cooperatively as a part of an IEEE 802.11 network.";

dot11smt OBJECT IDENTIFIER ::= { ieee802dot11 1}

-- dot11smt GROUPS
-- dot11StationConfigTable ::= {dot11smt 1}
-- dot11AuthenticationAlgorithmsTable ::= {dot11smt 2}
-- dot11WEPEDefaultKeysTable ::= {dot11smt 3}
-- dot11WEPEKeyMappingsTable ::= {dot11smt 4}
-- dot11PrivacyTable ::= {dot11smt 5}
-- dot11SMTnotification ::= {dot11smt 6}

```

```

-- MAC Attributes
--   DEFINED AS "The MAC object class provides the necessary support
--   for the access control, generation, and verification of frame check
--   sequences, and proper delivery of valid data to upper layers.";

dot11mac OBJECT IDENTIFIER ::= {ieee802dot11 2}

--   MAC GROUPS
--   reference IEEE Std 802.1f-1993
--   dot11OperationTable ::= {dot11mac 1}
--   dot11CountersTable ::= {dot11mac 2}
--   dot11GroupAddressesTable ::= {dot11mac 3}

-- Resource Type ID
dot11res OBJECT IDENTIFIER ::= {ieee802dot11 3}
dot11resAttribute OBJECT IDENTIFIER ::= {dot11res 1 }

-- PHY Attributes
--   DEFINED AS "The PHY object class provides the necessary support
--   for required PHY operational information that may vary from PHY
--   to PHY and from STA to STA to be communicated to upper layers."

dot11phy OBJECT IDENTIFIER ::= {ieee802dot11 4}

--   phy GROUPS
--   dot11PhyOperationTable ::= {dot11phy 1}
--   dot11MPDUMaxLength ::= {dot11phy 2}
--   dot11PhyAntennaTable ::= {dot11phy 3}
--   dot11PhyTxPowerTable ::= {dot11phy 4}
--   dot11PhyFHSSTable ::= {dot11phy 5}
--   dot11PhyDSSSTable ::= {dot11phy 6}
--   dot11PhyIRTable ::= {dot11phy 7}
--   dot11RegDomainsSupportTable ::= {dot11phy 8}
--   dot11AntennasListTable ::= {dot11phy 9}
--   dot11SupportedDataRatesTxTable ::= {dot11phy 10}
--   dot11SupportedDataRatesRxTable ::= {dot11phy 11}

-- *****
-- * Textual conventions from 802 definitions
-- *****
WEPKeytype ::= OCTET STRING (SIZE (5))

-- *****
-- * MIB attribute OBJECT-TYPE definitions follow
-- *****

-- *****
-- * SMT Station Config Group Table
-- *****
dot11StationConfigTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11StationConfigEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Station Configuration attributes. In tabular form to
        allow for multiple instances on an agent."
    ::= { dot11smt 1 }

dot11StationConfigEntry OBJECT-TYPE

```

SYNTAX Dot11StationConfigEntry  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION

"An entry in the dot11StationConfiggrp Table. It is possible for there to be multiple IEEE 802.11 interfaces on one agent, each with its unique MAC address. The relationship between an IEEE 802.11 interface and an interface in the context of the Internet-standard MIB is one-to-one. As such, the value of an ifIndex object instance can be directly used to identify corresponding instances of the objects defined herein.

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

INDEX {ifIndex}  
 ::= { dot11StationConfigTable 1 }

Dot11StationConfigEntry ::=

SEQUENCE {	
dot11StationID	MacAddress,
dot11MediumOccupancyLimit	Integer32,
dot11CFPollable	INTEGER,
dot11AuthenticationType	Integer32,
dot11CFPPeriod	Integer32,
dot11CFPMaxDuration	Integer32,
dot11AuthenticationResponseTimeOut	Integer32,
dot11WEPUndecryptableCount	Counter32,
dot11PrivacyOptionImplemented	INTEGER
}	

dot11StationID OBJECT-TYPE  
 SYNTAX MacAddress  
 MAX-ACCESS read-only  
 STATUS current  
 DESCRIPTION

"The purpose of dot11StationID is to allow a manager to rename a station for its own purposes. This attribute provides for that eventuality while keeping the true MAC address independent. Its syntax is MAC address and default value is the station's assigned, unique MAC address."

::= { dot11StationConfigEntry 1 }

dot11MediumOccupancyLimit OBJECT-TYPE  
 SYNTAX Integer32  
 MAX-ACCESS read-write  
 STATUS current  
 DESCRIPTION

"This attribute shall indicate the maximum amount of time, in TU, that a point coordinator may control the usage of the wireless medium without relinquishing control for long enough to allow at least one instance of DCF access to the medium. The default value of this attribute shall be 100,

and the maximum value shall be 1000."

::= { dot11StationConfigEntry 2 }

dot11CFPollable OBJECT-TYPE

SYNTAX INTEGER { true(1), false (2) }

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"When this attribute is true, it shall indicate that the STA is able to respond to a CF-Poll with a data frame within a SIFS time. This attribute shall be false if the STA is not able to respond to a CF-Poll with a data frame within a SIFS time."

::= { dot11StationConfigEntry 3 }

dot11AuthenticationType OBJECT-TYPE

SYNTAX Integer32 (1..2)

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute shall indicate the authentication algorithms acceptable to the STA during the authentication sequence. The value of this attribute shall be selected from the set in the aAuthenticationAlgorithms attribute. The default value of this attribute shall be {1}."

REFERENCE "IEEE Std 802.11-1997, 8.3.1"

::= { dot11StationConfigEntry 4 }

dot11CFPPeriod OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The attribute shall describe the number of DTIM intervals between the start of CFPs. It is modified by MLME-START.request primitive."

::= { dot11StationConfigEntry 5 }

dot11CFPMaxDuration OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The attribute shall describe the maximum duration of the CFP in TU that may be generated by the PCF. It is modified by MLME-START.request primitive."

::= { dot11StationConfigEntry 6 }

dot11AuthenticationResponseTimeOut OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current  
DESCRIPTION

"This attribute shall specify the number of TU that a responding STA should wait for the next frame in the authentication sequence."

::= { dot11StationConfigEntry 7 }

dot11WEPUndecryptableCount OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This counter shall increment when a frame is received with the WEP subfield of the Frame Control field set to one and the WEPOn value for the key mapped to the TA's MAC address indicates that the frame should not have been encrypted or that frame is discarded due to the receiving STA not implementing the privacy option."

::= { dot11StationConfigEntry 8 }

dot11PrivacyOptionImplemented OBJECT-TYPE

SYNTAX INTEGER { true (1), false (2) }

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This attribute, when true, shall indicate that the IEEE 802.11 WEP option is implemented. The default value of this attribute shall be false."

::= { dot11StationConfigEntry 9 }

```
-- *****
-- *      End of dot11StationConfig TABLE
-- *****
```

```
-- *****
-- *      AuthenticationAlgorithms TABLE
-- *****
```

dot11AuthenticationAlgorithmsTable OBJECT-TYPE

SYNTAX SEQUENCE OF Dot11AuthenticationAlgorithmsEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This (conceptual) table of attributes shall be a set of all the authentication algorithms supported by the stations. The following are the default values and the associated algorithm:

Value = 1: Open System

Value = 2: Shared Key"

REFERENCE "IEEE Std 802.11-1997, 7.3.1.1"

::= { dot11smt 2 }

dot11AuthenticationAlgorithmsEntry OBJECT-TYPE

SYNTAX Dot11AuthenticationAlgorithmsEntry

MAX-ACCESS not-accessible

```

STATUS current
DESCRIPTION

    "An Entry (conceptual row) in the Authentication
    Algorithms Table.

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

INDEX { ifIndex,
        dot11AuthenticationAlgorithmsIndex}
 ::= { dot11AuthenticationAlgorithmsTable 1 }

Dot11AuthenticationAlgorithmsEntry ::= SEQUENCE {
        dot11AuthenticationAlgorithmsIndex      Integer32,
        dot11Algorithm                          INTEGER}

dot11AuthenticationAlgorithmsIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The auxillary variable used to indentify instances
        of the columnar objects in the Authentication Algorithms Table."
    ::= { dot11AuthenticationAlgorithmsEntry 1 }

dot11Algorithm OBJECT-TYPE
    SYNTAX INTEGER { openSystem (1), sharedKey (2) }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION

        "This attribute shall be a set of all the authentication
        algorithms supported by the STAs. The following are the
        default values and the associated algorithm.
        Value = 1: Open System
        Value = 2: Shared Key"

    ::= { dot11AuthenticationAlgorithmsEntry 2 }

-- *****
-- *      End of AuthenticationAlgorithms TABLE
-- *****

-- *****
-- *      WEPDefaultKeys TABLE
-- *****

dot11WEPDefaultKeysTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11WEPDefaultKeysEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "Conceptual table for WEP default keys. This table shall
        contain the four WEP default secret key values
        corresponding to the four possible KeyID values. The WEP
        default secret keys are logically WRITE-ONLY. Attempts to
        read the entries in this table shall return unsuccessful

```

status and values of null or zero. The default value of each WEP default key shall be null."

REFERENCE "IEEE Std 802.11-1997, 8.3.2"  
 ::= { dot11smt 3 }

dot11WEPDefaultKeysEntry OBJECT-TYPE  
 SYNTAX Dot11WEPDefaultKeysEntry  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION

"An Entry (conceptual row) in the WEP Default Keys Table.

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

INDEX {ifIndex, dot11WEPDefaultKeyIndex}  
 ::= { dot11WEPDefaultKeysTable 1 }

Dot11WEPDefaultKeysEntry ::= SEQUENCE {  
     dot11WEPDefaultKeyIndex Integer32,  
     dot11WEPDefaultKeyValue WEPKeytype}

dot11WEPDefaultKeyIndex OBJECT-TYPE  
 SYNTAX Integer32 (0..3)  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION  
     "The auxillary variable used to identify instances  
     of the columnar objects in the WEP Default Keys Table."  
 ::= { dot11WEPDefaultKeysEntry 1 }

dot11WEPDefaultKeyValue OBJECT-TYPE  
 SYNTAX WEPKeytype  
 MAX-ACCESS read-write  
 STATUS current  
 DESCRIPTION  
     "A WEP default secret key value OCTET STRING (SIZE(5))."  
 ::= { dot11WEPDefaultKeysEntry 2 }

-- \*\*\*\*\*  
 -- \* End of WEPDefaultKeys TABLE  
 -- \*\*\*\*\*

-- \*\*\*\*\*  
 -- \* WEPKeyMappings TABLE  
 -- \*\*\*\*\*

dot11WEPKeyMappingsTable OBJECT-TYPE  
 SYNTAX SEQUENCE OF Dot11WEPKeyMappingsEntry  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION  
     "Conceptual table for WEP Key Mappings. The MIB supports  
     the ability to share a separate WEP key for each RA/TA  
     pair. The Key Mappings Table contains zero or one entry  
     for each MAC address and contains two fields for each  
     entry: WEPOn and the corresponding WEP key. The WEP key  
     mappings are logically WRITE-ONLY. Attempts to read the



entries in this table shall return unsuccessful status and values of null or zero. The default value for all WEPOn fields is false."

REFERENCE "IEEE Std 802.11-1997, 8.3.2"

```
::= { dot11smt 4 }
```

dot11WEPKeyMappingsEntry OBJECT-TYPE  
SYNTAX Dot11WEPKeyMappingsEntry  
MAX-ACCESS not-accessible  
STATUS current  
DESCRIPTION

"An Entry (conceptual row) in the WEP Key Mappings Table.

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

INDEX {ifIndex, dot11WEPKeyMappingIndex}

```
::= { dot11WEPKeyMappingsTable 1 }
```

Dot11WEPKeyMappingsEntry ::= SEQUENCE {  
dot11WEPKeyMappingIndex Integer32,  
dot11WEPKeyMappingAddress MacAddress,  
dot11WEPKeyMappingWEPOn INTEGER,  
dot11WEPKeyMappingWEPkey WEPKeytype }

dot11WEPKeyMappingIndex OBJECT-TYPE  
SYNTAX Integer32 (0..4)  
MAX-ACCESS not-accessible  
STATUS current  
DESCRIPTION  
"The auxillary variable used to identify instances of the columnar objects in the WEP Key Mappings Table."  
::= { dot11WEPKeyMappingsEntry 1 }

dot11WEPKeyMappingAddress OBJECT-TYPE  
SYNTAX MacAddress  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"The MAC address of the STA for which the values from this key mapping entry are to be used."  
::= { dot11WEPKeyMappingsEntry 2 }

dot11WEPKeyMappingWEPOn OBJECT-TYPE  
SYNTAX INTEGER { true(1), false(2) }  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"Boolean as to whether WEP is to be used when communicating with the dot11WEPKeyMappingAddress STA."  
::= { dot11WEPKeyMappingsEntry 3 }

dot11WEPKeyMappingWEPkey OBJECT-TYPE  
SYNTAX WEPKeytype  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"A WEP secret key value OCTET STRING (SIZE(5))."

```

 ::= { dot11WEPKeyMappingsEntry 4 }

-- *****
-- *      End of WEPKeyMappings TABLE
-- *****

-- *****
-- *      dot11Privacygrp TABLE
-- *****
dot11PrivacyTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11PrivacyEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Group containing attributes concerned with IEEE 802.11
        Privacy. Created as a table to allow multiple
        instantiations on an agent."

 ::= { dot11smt 5 }

dot11PrivacyEntry OBJECT-TYPE
    SYNTAX Dot11PrivacyEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot11Privacygrp Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry. Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex}
 ::= { dot11PrivacyTable 1 }

Dot11PrivacyEntry ::= SEQUENCE {
    dot11PrivacyInvoked          INTEGER,
    dot11WEPDefaultKeyID        Integer32,
    dot11WEPKeyMappingLength    Integer32,
    dot11ExcludeUnencrypted     INTEGER,
    dot11WEPICVErrorCount       Integer32,
    dot11WEPExcludedCount       Integer32}

dot11PrivacyInvoked OBJECT-TYPE
    SYNTAX INTEGER { true (1), false (2) }
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "When this attribute is true, it shall indicate that the IEEE
        802.11 WEP mechanism is used for transmitting frames of type
        Data. The default value of this attribute shall be false."
 ::= { dot11PrivacyEntry 1 }

dot11WEPDefaultKeyID OBJECT-TYPE
    SYNTAX Integer32 (0..3)
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION

```

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        "This attribute shall indicate the use of the first,
        second, third, or fourth element of the WEPDefaultKeys
        array when set to values of zero, one, two, or three. The
        default value of this attribute shall be 0."
    REFERENCE "IEEE Std 802.11-1997, 8.3.2"
    ::= { dot11PrivacyEntry 2 }

dot11WEPKeyMappingLength OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The maximum number of tuples that dot11WEPKeyMappings can hold."
    REFERENCE "IEEE Std 802.11-1997, 8.3.2"
    ::= { dot11PrivacyEntry 3 }

dot11ExcludeUnencrypted OBJECT-TYPE
    SYNTAX INTEGER { true (1), false (2) }
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "When this attribute is true, the STA shall not indicate at
        the MAC service interface received MSDUs that have the WEP
        subfield of the Frame Control field equal to zero. When this
        attribute is false, the STA may accept MSDUs that have the WEP
        subfield of the Frame Control field equal to zero. The default
        value of this attribute shall be false."

    ::= { dot11PrivacyEntry 4 }

dot11WEPICVErrorCount OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This counter shall increment when a frame is received with the
        WEP subfield of the Frame Control field set to one and the value
        of the ICV as received in the frame does not match the ICV value
        that is calculated for the contents of the received frame."
    ::= { dot11PrivacyEntry 5 }

dot11WEPExcludedCount OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "This counter shall increment when a frame is received with the
        WEP subfield of the Frame Control field set to zero and the value
        of aExcludeUnencrypted causes that frame to be discarded."
    ::= { dot11PrivacyEntry 6 }

-- *****
-- *      End of dot11Privacy TABLE
-- *****

-- *****
-- *      SMT notification Objects
-- *****
dot11SMTnotification OBJECT IDENTIFIER ::= { dot11smt 6 }

```

```

dot11Disassociate NOTIFICATION-TYPE
    OBJECTS { ifIndex, dot11StationID }
    STATUS current
    DESCRIPTION

        "The disassociate notification shall be sent when the STA
        receives a Disassociate frame. The value of the notification
        shall be the BSSID of the BSS from which the Disassociate
        frame was received.

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

        REFERENCE "IEEE Std 802.11-1997, 11.4.5.1.1"
        ::= { dot11SMTnotification 1 }

-- *****
-- *      End of SMT notification Objects
-- *****

-- *****
-- *      MAC Attribute Templates
-- *****

-- *****
-- *      dot11Operationgrp  TABLE
-- *****
dot11OperationTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11OperationEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "Group contains MAC attributes pertaining to the operation
        of the MAC. This has been implemented as a table in order
        to allow for multiple instantiations on an agent."

    ::= { dot11mac 1 }

dot11OperationEntry OBJECT-TYPE
    SYNTAX Dot11OperationEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "An entry in the dot11OperationEntry Table.

            ifIndex - Each 802.11 interface is represented by an
            ifEntry. Interface tables in this MIB module are indexed
            by ifIndex."
    INDEX {ifIndex}
    ::= { dot11OperationTable 1 }

Dot11OperationEntry ::= SEQUENCE {
    dot11MACAddress          MacAddress,
    dot11RTSThreshold        Integer32,
    dot11ShortRetryLimit     Integer32,
    dot11LongRetryLimit      Integer32,
    dot11FragmentationThreshold Integer32,

```

dot11MaxTransmitMSDULifetime	Integer32,
dot11MaxReceiveLifetime	Integer32,
dot11ManufacturerID	DisplayString,
dot11ProductID	DisplayString}

dot11MACAddress OBJECT-TYPE

SYNTAX MacAddress

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Unique MAC Address assigned to the STA."

::= { dot11OperationEntry 1 }

dot11RTSThreshold OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute shall indicate the number of bytes in an MPDU, below which an RTS/CTS handshake shall not be performed. An RTS/CTS handshake shall be performed at the beginning of any frame exchange sequence where the MPDU is of type Data or Management, the MPDU has an individual address in the Address1 field, and the length of the MPDU is equal to or larger than this threshold. (For additional details, refer to Table 21 in 9.7.) Setting this attribute to be larger than the maximum MSDU size shall have the effect of turning off the RTS/CTS handshake for frames of Data or Management type transmitted by this STA. Setting this attribute to zero shall have the effect of turning on the RTS/CTS handshake for all frames of Data or Management type transmitted by this STA. The default value of this attribute shall be 3000."

::= { dot11OperationEntry 2 }

dot11ShortRetryLimit OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute shall indicate the maximum number of transmission attempts of a frame, the length of which is less than or equal to aRTSThreshold, that shall be made before a failure condition is indicated. The default value of this attribute shall be 7."

::= { dot11OperationEntry 3 }

dot11LongRetryLimit OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This attribute shall indicate the maximum number of transmission attempts of a frame, the length of which is greater than aRTSThreshold, that shall be made before a

failure condition is indicated. The default value of this attribute shall be 4."

::= { dot11OperationEntry 4 }

dot11FragmentationThreshold OBJECT-TYPE

SYNTAX Integer32  
MAX-ACCESS read-write  
STATUS current  
DESCRIPTION

"This attribute shall specify the current maximum size, in octets, of the MPDU that may be delivered to the PHY. An MSDU shall be broken into fragments if its size exceeds the value of this attribute after adding MAC headers and trailers. The default value for this attribute shall be equal to aMPDUMaxLength of the attached PHY and shall never exceed aMPDUMaxLength of the attached PHY. The value of this attribute shall never be less than 256. The default value of this attribute is 2346."

::= { dot11OperationEntry 5 }

dot11MaxTransmitMSDULifetime OBJECT-TYPE

SYNTAX Integer32  
MAX-ACCESS read-write  
STATUS current  
DESCRIPTION

"The MaxTransmitMSDULifetime shall be the elapsed time in TU, after the initial transmission of an MSDU, after which further attempts to transmit the MSDU shall be terminated. The default value of this attribute shall be 512."

::= { dot11OperationEntry 6 }

dot11MaxReceiveLifetime OBJECT-TYPE

SYNTAX Integer32  
MAX-ACCESS read-write  
STATUS current  
DESCRIPTION

"The MaxReceiveLifetime shall be the elapsed time in TU, after the initial reception of a fragmented MMPDU or MSDU, after which further attempts to reassemble the MMPDU or MSDU shall be terminated. The default value shall be 512."

::= { dot11OperationEntry 7 }

dot11ManufacturerID OBJECT-TYPE

SYNTAX DisplayString  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The ManufacturerID shall include, at a minimum, the name of the manufacturer. It may include additional information at the manufacturer's discretion. The default value of this attribute shall be null."

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 ::= { dot11OperationEntry 8 }

dot11ProductID OBJECT-TYPE
    SYNTAX DisplayString
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION

        "The ProductID shall include, at a minimum, an identifier
        that is unique to the manufacturer. It may include
        additional information at the manufacturer's discretion.
        The default value of this attribute shall be null."

 ::= { dot11OperationEntry 9 }

-- *****
-- *      End of dot11OperationEntry TABLE
-- *****

-- *****
-- *      dot11Counters TABLE
-- *****
dot11CountersTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11CountersEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "Group containing attributes that are MAC counters.
        Implemented as a table to allow for multiple
        instantiations on an agent."

 ::= { dot11mac 2 }

dot11CountersEntry OBJECT-TYPE
    SYNTAX Dot11CountersEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "An entry in the dot11CountersEntry Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry. Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex}
 ::= { dot11CountersTable 1 }

Dot11CountersEntry ::= SEQUENCE {
    dot11TransmittedFragmentCount      Counter32,
    dot11MulticastTransmittedFrameCount Counter32,
    dot11FailedCount                   Counter32,
    dot11RetryCount                    Counter32,
    dot11MultipleRetryCount             Counter32,
    dot11FrameDuplicateCount            Counter32,
    dot11RTSSuccessCount                Counter32,
    dot11RTSFailureCount                Counter32,
    dot11ACKFailureCount                Counter32,
    dot11ReceivedFragmentCount          Counter32,
    dot11MulticastReceivedFrameCount    Counter32,
    dot11FCSErrorCount                 Counter32}

```

dot11TransmittedFragmentCount OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall be incremented for each successfully delivered fragment of type Data or Management."

::= { dot11CountersEntry 1 }

dot11MulticastTransmittedFrameCount OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall increment only when the multicast/broadcast bit is set in the destination MAC address of a transmitted frame."

::= { dot11CountersEntry 2 }

dot11FailedCount OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall increment when a frame is not transmitted due to the number of transmit attempts exceeding either the aShortRetryLimit or aLongRetryLimit."

::= { dot11CountersEntry 3 }

dot11RetryCount OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall increment when a frame is successfully transmitted after one or more retransmissions."

::= { dot11CountersEntry 4 }

dot11MultipleRetryCount OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall increment when a frame is successfully transmitted after more than one retransmission."

::= { dot11CountersEntry 5 }

dot11FrameDuplicateCount OBJECT-TYPE

SYNTAX Counter32



MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall increment when a frame is received  
that the Sequence Control field indicates is a  
duplicate."

::= { dot11CountersEntry 6 }

dot11RTSSuccessCount OBJECT-TYPE  
SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall increment when a CTS is received in  
response to an RTS."

::= { dot11CountersEntry 7 }

dot11RTSFailureCount OBJECT-TYPE  
SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall increment when a CTS is not received in  
response to an RTS."

::= { dot11CountersEntry 8 }

dot11ACKFailureCount OBJECT-TYPE  
SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall increment when an ACK is not received  
when expected."

::= { dot11CountersEntry 9 }

dot11ReceivedFragmentCount OBJECT-TYPE  
SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"This counter shall be incremented for each successfully  
received fragment of type Data or Management."

::= { dot11CountersEntry 10 }

dot11MulticastReceivedFrameCount OBJECT-TYPE  
SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

```

        "This counter shall increment when a frame is received
        with the multicast/broadcast bit set in the destination
        MAC address."
 ::= { dot11CountersEntry 11 }

dot11FCSErrorCount OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION

        "This counter shall increment when an FCS error is
        detected in a received frame."

 ::= { dot11CountersEntry 12 }

-- *****
-- *      End of dot11CountersEntry  TABLE
-- *****

-- *****
-- *      GroupAddresses  TABLE
-- *****
dot11GroupAddressesTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11GroupAddressesEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "A conceptual table containing a set of MAC addresses
        identifying the multicast addresses for which this STA
        will receive frames.  The default value of this attribute
        shall be null."

 ::= { dot11mac 3 }

dot11GroupAddressesEntry OBJECT-TYPE
    SYNTAX Dot11GroupAddressesEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An Entry (conceptual row) in the Group Addresses Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry.  Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex, dot11GroupAddressesIndex}
 ::= { dot11GroupAddressesTable 1 }

Dot11GroupAddressesEntry ::= SEQUENCE {
    dot11GroupAddressesIndex  Integer32,
    dot11Address              MacAddress,
    dot11GroupAddressesStatus RowStatus}

dot11GroupAddressesIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The auxillary variable used to indentify instances

```

```

        of the columnar objects in the Group Addresses Table."
 ::= { dot11GroupAddressesEntry 1 }

dot11Address OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "MAC address identifying a multicast addresses
        from which this STA will receive frames."
 ::= { dot11GroupAddressesEntry 2 }

dot11GroupAddressesStatus OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The status column used for creating, modifying, and
        deleting instances of the columnar objects in the Group
        Addresses Table."

    DEFVAL {active}
 ::= { dot11GroupAddressesEntry 3 }
-- *****
-- *      End of GroupAddress  TABLE
-- *****

-- *****
-- *      Resource Type Attribute Templates
-- *****
dot11ResourceTypeIDName OBJECT-TYPE
    SYNTAX DisplayString (SIZE(4))
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Contains the name of the Resource Type ID managed object.
        The attribute is read-only and always contains the value
        RTID. This attribute value shall not be used as a naming
        attribute for any other managed object class."

    REFERENCE "IEEE Std 802.1F-1993, Clause A.7"
    DEFVAL {"RTID"}
 ::= { dot11resAttribute 1 }

-- *****
-- *      aResourceInfo  TABLE
-- *****
dot11ResourceInfoTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11ResourceInfoEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Provides a means of indicating, in data readable from a
        managed object, information that identifies the source of
        the implementation."

    REFERENCE "IEEE Std 802.1F-1993, Clause A.7"
```

```

 ::= { dot11resAttribute 2 }

dot11ResourceInfoEntry OBJECT-TYPE
    SYNTAX Dot11ResourceInfoEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot11ResourceInfo Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry. Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex}
 ::= { dot11ResourceInfoTable 1 }

Dot11ResourceInfoEntry ::= SEQUENCE {
    dot11manufacturerOUI OCTET STRING,
    dot11manufacturerName DisplayString,
    dot11manufacturerProductName DisplayString,
    dot11manufacturerProductVersion DisplayString}

dot11manufacturerOUI OBJECT-TYPE
    SYNTAX OCTET STRING
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Takes the value of an organizationally unique identifier."
    ::= { dot11ResourceInfoEntry 1 }

dot11manufacturerName OBJECT-TYPE
    SYNTAX DisplayString
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "A printable string used to identify the manufacturer of the
        resource. Maximum string length is 128 octets."
    ::= { dot11ResourceInfoEntry 2 }

dot11manufacturerProductName OBJECT-TYPE
    SYNTAX DisplayString
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "A printable string used to identify the manufacturer's product
        name of the resource. Maximum string length is 128 octets."
    ::= { dot11ResourceInfoEntry 3 }

dot11manufacturerProductVersion OBJECT-TYPE
    SYNTAX DisplayString
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Printable string used to identify the manufacturer's product
        version of the resource. Maximum string length is 128 octets."
    ::= { dot11ResourceInfoEntry 4 }

-- *****
-- *      End of dot11ResourceInfo TABLE
-- *****

```

```

-- *****
-- *   PHY Attribute Templates
-- *****

-- *****
-- *   dot11PhyOperationGroup  TABLE
-- *****

dot11PhyOperationTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11PhyOperationEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "PHY level attributes concerned with
        operation.  Implemented as a table indexed on
        Station ID to allow for multiple instantiations on an
        Agent."

    ::= {  dot11phy 1  }

dot11PhyOperationEntry OBJECT-TYPE
    SYNTAX Dot11PhyOperationEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot11PhyOperationGroup Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry.  Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex}
    ::= {  dot11PhyOperationTable 1  }

Dot11PhyOperationEntry ::= SEQUENCE {
    dot11PHYType      INTEGER,
    dot11CurrentRegDomain  Integer32,
    dot11SlotTime  Integer32,
    dot11CCATime    Integer32,
    dot11RxTxTurnaroundTime Integer32,
    dot11TxPLCPDelay Integer32,
    dot11RxTxSwitchTime Integer32,
    dot11TxRampOnTime Integer32,
    dot11TxRFDelay Integer32,
    dot11SIFSTime Integer32,
    dot11RxRFDelay Integer32,
    dot11RxPLCPDelay Integer32,
    dot11MACProcessingDelay Integer32,
    dot11TxRampOffTime Integer32,
    dot11PreambleLength Integer32,
    dot11PLCPHeaderLength Integer32,
    dot11MPDUDurationFactor Integer32,
    dot11AirPropagationTime Integer32,
    dot11TempType     INTEGER,
    dot11CWmin        Integer32,
    dot11CWmax        Integer32}

dot11PHYType OBJECT-TYPE
    SYNTAX INTEGER {fhss(1), dsss(2), irbaseband(3)}
    MAX-ACCESS read-only

```

STATUS current  
DESCRIPTION

"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"

::= { dot11PhyOperationEntry 1 }

dot11CurrentRegDomain OBJECT-TYPE  
SYNTAX Integer32  
MAX-ACCESS read-write  
STATUS current  
DESCRIPTION

"The current regulatory domain this instance of the PMD is supporting. This octet corresponds to one of the RegDomains listed in dot11RegDomainsSupported."

::= { dot11PhyOperationEntry 2 }

dot11SlotTime OBJECT-TYPE  
SYNTAX Integer32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The time in microseconds that the MAC will use for defining the PIFS and DIFS periods. The Slot- Time is defined as a function of the following the equation:

$CCATime + RxTxTurnaroundTime + AirPropagationTime + aMACProcessingDelay.$

AirPropagationTime is defined as 1 's."

::= { dot11PhyOperationEntry 3 }

dot11CCATime OBJECT-TYPE  
SYNTAX Integer32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The minimum time in microseconds the CCA mechanism has available to assess the medium within every time slot to determine whether the medium is busy or idle."

::= { dot11PhyOperationEntry 4 }

dot11RxTxTurnaroundTime OBJECT-TYPE  
SYNTAX Integer32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The maximum time in microseconds that the PHY requires to change from receiving to transmitting the start of the first

symbol. The following equation is used to derive the  
RxTxTurnaroundTime:

$$aTxPLCPDelay + aRxTxSwitchTime + aTxRampOnTime + aTxRFDelay."$$

```
::= { dot11PhyOperationEntry 5 }
```

dot11TxPLCPDelay OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The nominal time in microseconds the PLCP uses to deliver a symbol from the MAC interface to the transmit data path of the PMD"

```
::= { dot11PhyOperationEntry 6 }
```

dot11RxTxSwitchTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The nominal time in microseconds the PMD takes to switch from Receive to Transmit"

```
::= { dot11PhyOperationEntry 7 }
```

dot11TxRampOnTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The maximum time in microseconds the PMD takes to turn the Transmitter on"

```
::= { dot11PhyOperationEntry 8 }
```

dot11TxRFDelay OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The nominal time in microseconds between the issuance of a PMD-DATA.request to the PMD and the start of the corresponding symbol at the air interface. The start of a symbol is defined to be 1/2 symbol period prior to the center of the symbol for FH, or 1/2 chip period prior to the center of the first chip of the symbol for DS, or 1/2 slot time prior to the center of the corresponding slot for IR."

```
::= { dot11PhyOperationEntry 9 }
```

dot11SIFSTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current  
DESCRIPTION

"The nominal time in microseconds that the MAC and PHY will require to receive the last symbol of a frame at the air interface, process the frame, and respond with the first symbol on the air interface of the earliest possible response frame. The following equation is used to determine the SIFSTime:

$$\text{aRxRFDelay} + \text{aRxPLCPDelay} + \text{aDOT11MACProcessingDelay} + \text{aRxTxTurnaroundTime}$$

::= { dot11PhyOperationEntry 10 }

dot11RxRFDelay OBJECT-TYPE  
SYNTAX Integer32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The nominal time in microseconds between the end of a symbol at the air interface to the issuance of a PMD-DATA.indicate to the PLCP. The end of a symbol is defined to be 1/2 symbol period after the center of the symbol for FH, or 1/2 chip period after the center of the last chip of the symbol for DS, or 1/2 slot time after the center of the corresponding slot for IR."

::= { dot11PhyOperationEntry 11 }

dot11RxPLCPDelay OBJECT-TYPE  
SYNTAX Integer32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The nominal time in microseconds that the PLCP uses to deliver a bit from the PMD receive path to the MAC"

::= { dot11PhyOperationEntry 12 }

dot11MACProcessingDelay OBJECT-TYPE  
SYNTAX Integer32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The nominal time in microseconds that the MAC uses to process a frame and prepare a response to the frame."

::= { dot11PhyOperationEntry 13 }

dot11TxRampOffTime OBJECT-TYPE  
SYNTAX Integer32  
MAX-ACCESS read-only  
STATUS current



## DESCRIPTION

"The nominal time in nanoseconds that the PMD takes to turn the Transmit Power Amplifier off"

```
::= { dot11PhyOperationEntry 14 }
```

## dot11PreambleLength OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The current PHY's Preamble Length in microseconds. If the actual value of the length of the modulated pre-amble is not an integral number of microseconds, the value shall be rounded up to the next higher value."

```
::= { dot11PhyOperationEntry 15 }
```

## dot11PLCPHeaderLength OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The current PHY's PLCP Header Length in microseconds. If the actual value of the length of the modulated header is not an integral number of microseconds, the value shall be rounded up to the next higher value."

```
::= { dot11PhyOperationEntry 16 }
```

## dot11MPDUDurationFactor OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The overhead added by the PHY to the MPDU as it is transmitted through the wireless medium."

```
::= { dot11PhyOperationEntry 17 }
```

## dot11AirPropagationTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The anticipated time it takes a transmitted signal to go from the transmitting station to the receiving station."

```
::= { dot11PhyOperationEntry 18 }
```

## dot11TempType OBJECT-TYPE

```

SYNTAX INTEGER {type1(1), type2(2), type3(3)}
MAX-ACCESS read-only
STATUS current
DESCRIPTION

    "There are different operating temperature requirements
    dependent on the anticipated environmental conditions. This
    attribute describes the current PHY's operating temperature
    range capability. Currently defined values and their
    corresponding temperature ranges are:

    Type 1 = X'01'-Commercial range of 0 to 40 degrees C,

    Type 2 = X'02'-Industrial range of -20 to 55 degrees C,

    Type 3 = X'03'-Industrial range of -30 to 70 degrees C."

 ::= {   dot11PhyOperationEntry 19 }

dot11CWmin OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The minimum size of the contention window, in units of aSlotTime."

    ::= {   dot11PhyOperationEntry 20 }

dot11CWmax OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION

        "The maximum size of the contention window, in units of
        aSlotTime."

    ::= {   dot11PhyOperationEntry 21 }

-- *****
-- *       End of dot11PhyOperationGroup  TABLE
-- *****

dot11MPDUMaxLength OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION

        "The maximum number of octets in a MPDU that can be
        conveyed by a PLCPPDU."

    ::= {   dot11phy 2 }

-- *****
-- *       dot11PhyAntennaGroup  TABLE
-- *****
dot11PhyAntennaTable OBJECT-TYPE

```

SYNTAX SEQUENCE OF Dot11PhyAntennaEntry  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION

"Group of attributes for PhyAntenna. Implemented as a table indexed on STA ID to allow for multiple instances on an Dot11ent."

::= { dot11phy 3 }

dot11PhyAntennaEntry OBJECT-TYPE  
 SYNTAX Dot11PhyAntennaEntry  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION

"An entry in the dot11PhyAntennaGroup Table.

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

INDEX {ifIndex}

::= { dot11PhyAntennaTable 1 }

Dot11PhyAntennaEntry ::= SEQUENCE {  
     dot11CurrentTxAntenna Integer32,  
     dot11DiversitySupport INTEGER}

dot11CurrentTxAntenna OBJECT-TYPE  
 SYNTAX Integer32 (0..255)  
 MAX-ACCESS read-write  
 STATUS current  
 DESCRIPTION

"The current antenna being used to transmit. This value is one of the values appearing in dot11SupportedTx-Antennas."

::= { dot11PhyAntennaEntry 1 }

dot11DiversitySupport OBJECT-TYPE  
 SYNTAX INTEGER {fixedlist(1), notsupported(2), dynamic(3)}  
 MAX-ACCESS read-only  
 STATUS current  
 DESCRIPTION

"This implementation's support for diversity, encoded as:

X'01'-diversity is available and is performed over the fixed list of antennas defined in dot11DiversitySelectionRx.

X'02'-diversity is not supported.

X'03'-diversity is supported and control of diversity is also available, in which case the attribute adiversitySelectionRx can be dynamically modified by the LME."

::= { dot11PhyAntennaEntry 2 }

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

```

-- *      End of dot11PhyAntennaGroup  TABLE
-- *****

-- *****
-- *      dot11PhyTxPowerGroup  TABLE
-- *****
dot11PhyTxPowerTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11PhyTxPowerEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "Group of attributes for dot11PhyTxPowerGroup.  Implemented
        as a table indexed on STA ID to allow for mulitple
        instances on an Agent."

    ::= { dot11phy 4}

dot11PhyTxPowerEntry OBJECT-TYPE
    SYNTAX Dot11PhyTxPowerEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot11PhyTxPowerGroup Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry.  Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex}
    ::= { dot11PhyTxPowerTable 1 }

Dot11PhyTxPowerEntry ::= SEQUENCE {
    dot11NumberSupportedPowerLevels  Integer32,
    dot11TxPowerLevel1                Integer32,
    dot11TxPowerLevel2                Integer32,
    dot11TxPowerLevel3                Integer32,
    dot11TxPowerLevel4                Integer32,
    dot11TxPowerLevel5                Integer32,
    dot11TxPowerLevel6                Integer32,
    dot11TxPowerLevel7                Integer32,
    dot11TxPowerLevel8                Integer32,
    dot11CurrentTxPowerLevel          Integer32}

dot11NumberSupportedPowerLevels OBJECT-TYPE
    SYNTAX Integer32 (1..8)
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of power levels supported by the PMD.
        This attribute can have a value of 1 to 8."
    ::= { dot11PhyTxPowerEntry 1 }

dot11TxPowerLevel1 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The transmit output power for LEVEL1 in mW.
        This is also the default power level."
    ::= { dot11PhyTxPowerEntry 2 }

```

```
dot11TxPowerLevel2 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The transmit output power for LEVEL2 in mW."
    ::= { dot11PhyTxPowerEntry 3 }

dot11TxPowerLevel3 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The transmit output power for LEVEL3 in mW."
    ::= { dot11PhyTxPowerEntry 4 }

dot11TxPowerLevel4 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The transmit output power for LEVEL4 in mW."
    ::= { dot11PhyTxPowerEntry 5 }

dot11TxPowerLevel5 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The transmit output power for LEVEL5 in mW."
    ::= { dot11PhyTxPowerEntry 6 }

dot11TxPowerLevel6 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The transmit output power for LEVEL6 in mW."
    ::= { dot11PhyTxPowerEntry 7 }

dot11TxPowerLevel7 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The transmit output power for LEVEL7 in mW."
    ::= { dot11PhyTxPowerEntry 8 }

dot11TxPowerLevel8 OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The transmit output power for LEVEL8 in mW."
    ::= { dot11PhyTxPowerEntry 9 }

dot11CurrentTxPowerLevel OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
```

```

STATUS current
DESCRIPTION

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

 ::= {   dot11PhyTxPowerEntry 10 }

-- *****
-- *       End of dot11PhyTxPowerGroup  TABLE
-- *****

-- *****
-- *       dot11PhyFHSSGroup  TABLE
-- *****
dot11PhyFHSSTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11PhyFHSSEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "Group of attributes for dot11PhyFHSSGroup.  Implemented as a
        table indexed on STA ID to allow for mulitple instances on
        an Agent."

 ::= {   dot11phy 5 }

dot11PhyFHSSEntry OBJECT-TYPE
    SYNTAX Dot11PhyFHSSEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "An entry in the dot11PhyFHSSGroup Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry.  Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex}
 ::= {   dot11PhyFHSSTable 1 }

Dot11PhyFHSSEntry ::= SEQUENCE {
    dot11HopTime      Integer32,
    dot11CurrentChannelNumber Integer32,
    dot11MaxDwellTime Integer32,
    dot11CurrentDwellTime Integer32,
    dot11CurrentSet   Integer32,
    dot11CurrentPattern Integer32,
    dot11CurrentIndex Integer32}

dot11HopTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION

        "The time in microseconds for the PMD to change from
        channel 2 to channel 80"
 ::= {   dot11PhyFHSSEntry 1 }

dot11CurrentChannelNumber OBJECT-TYPE

```

```

    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The current channel number of the frequency output by the RF
        synthesizer"
    ::= { dot11PhyFHSSEntry 2 }

dot11MaxDwellTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The maximum time in TU that the transmitter
        is permitted to operate on a single channel."
    ::= { dot11PhyFHSSEntry 3 }

dot11CurrentDwellTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The current time in Kms that the transmitter shall operate
        on a single channel, as set by the MAC. Default is 19 TU."
    ::= { dot11PhyFHSSEntry 4 }

dot11CurrentSet OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The current set of patterns the PHY
        LME is using to determine the hop sequence. "
    ::= { dot11PhyFHSSEntry 5 }

dot11CurrentPattern OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The current pattern the PHY LME is
        using to determine the hop sequence."
    ::= { dot11PhyFHSSEntry 6 }

dot11CurrentIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The current index value the PHY LME is using to determine
        the CurrentChannelNumber."

    ::= { dot11PhyFHSSEntry 7 }

-- *****
-- *      End of dot11PhyFHSS  TABLE
-- *****
-- *****

```

```

-- *      dot11PhyDSSSEntry  TABLE
-- *****
dot11PhyDSSSTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11PhyDSSSEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION

        "Entry of attributes for dot11PhyDSSSEntry.  Implemented as a
        table indexed on ifIndex allow for mulitple instances on
        an Agent."

    ::= {  dot11phy 6  }

dot11PhyDSSSEntry OBJECT-TYPE
    SYNTAX Dot11PhyDSSSEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot11PhyDSSSEntry Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry.  Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex}
    ::= {  dot11PhyDSSSTable 1  }

Dot11PhyDSSSEntry ::= SEQUENCE {
    dot11CurrentChannel      Integer32,
    dot11CCAModeSupported    INTEGER,
    dot11CurrentCCAMode      INTEGER,
    dot11EDThreshold         Integer32}

dot11CurrentChannel OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The current operating frequency channel of the DSSS
        PHY.  Valid channel numbers are as defined in 15.4.6.2"
    ::= {  dot11PhyDSSSEntry 1  }

dot11CCAModeSupported OBJECT-TYPE
    SYNTAX INTEGER { edonly (1), csonly(2), edandcs (3)}
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "A list of the DSSS PHY CCA modes that are
        supported.  Valid values are:

        energy detect only (ED_ONLY) = 01,

        carrier sense only (CS_ONLY) = 02,

        carrier sense and energy detect (ED_and_CS)= 03"
    ::= {  dot11PhyDSSSEntry 2  }

dot11CurrentCCAMode OBJECT-TYPE
    SYNTAX INTEGER { edonly (1), csonly(2), edandcs (3)}
    MAX-ACCESS read-only

```



```

STATUS current
DESCRIPTION
    "The current CCA method in operation.  Valid values are:
        energy detect only (ED_ONLY) = 01,
        carrier sense only (CS_ONLY) = 02,
        carrier sense and energy detect (ED_and_CS)= 03."
 ::= {  dot11PhyDSSSEntry 3 }

dot11EDThreshold OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The current Energy Detect Threshold being used by the DSSS PHY."
    ::= {  dot11PhyDSSSEntry 4}

-- *****
-- *      End of dot11PhyDSSSEntry  TABLE
-- *****

-- *****
-- *      dot11PhyIRGroup  TABLE
-- *****
dot11PhyIRTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11PhyIREntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Group of attributes for dot11PhyIREntry.  Implemented as a
        table indexed on ifIndex to allow for mulitple instances on
        an Agent."

    ::= {  dot11phy 7 }

dot11PhyIREntry OBJECT-TYPE
    SYNTAX Dot11PhyIREntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot11PhyIRGroup Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry.  Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex}
    ::= {  dot11PhyIRTable 1 }

Dot11PhyIREntry ::= SEQUENCE {
    dot11CCAWatchdogTimerMax      Integer32,
    dot11CCAWatchdogCountMax      Integer32,
    dot11CCAWatchdogTimerMin      Integer32,
    dot11CCAWatchdogCountMin      Integer32}

dot11CCAWatchdogTimerMax OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION

```

"This parameter, together with CCAWatchdogCountMax, determines when energy detected in the channel can be ignored."

```
::= { dot11PhyIREntry 1 }
```

dot11CCAWatchdogCountMax OBJECT-TYPE

```
SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION
```

"This parameter, together with CCAWatchdogTimerMax, determines when energy detected in the channel can be ignored."

```
::= { dot11PhyIREntry 2 }
```

dot11CCAWatchdogTimerMin OBJECT-TYPE

```
SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION
```

"The minimum value to which CCAWatchdogTimerMax can be set."

```
::= { dot11PhyIREntry 3 }
```

dot11CCAWatchdogCountMin OBJECT-TYPE

```
SYNTAX Integer32
MAX-ACCESS read-write
STATUS current
DESCRIPTION
```

"The minimum value to which CCAWatchdogCount can be set."

```
::= { dot11PhyIREntry 4 }
```

```
-- *****
-- *      End of dot11PhyIRGroup  TABLE
-- *****
```

```
-- *****
-- *      dot11RegDomainsSupported  TABLE
-- *****
```

dot11RegDomainsSupportedTable OBJECT-TYPE

```
SYNTAX SEQUENCE OF Dot11RegDomainsSupportEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
```

"There are different operational requirements dependent on the regulatory domain. This attribute list describes the regulatory domains the PLCP and PMD support in this implementation. Currently defined values and their corresponding Regulatory Domains are:

FCC (USA) = X'10', DOC (Canada) = X'20', ETSI (most of Europe) = X'30', Spain = X'31', France = X'32', MKK (Japan) = X'40', list terminator = X'00'"

```

 ::= {   dot11phy 8}

dot11RegDomainsSupportEntry OBJECT-TYPE
    SYNTAX Dot11RegDomainsSupportEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot11RegDomainsSupport Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry. Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex, dot11RegDomainsSupportIndex}
 ::= {   dot11RegDomainsSupportedTable 1 }

Dot11RegDomainsSupportEntry ::= SEQUENCE {
    dot11RegDomainsSupportIndex      Integer32,
    dot11RegDomainsSupportValue      INTEGER}

dot11RegDomainsSupportIndex OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The auxillary variable used to indentify instances
        of the columnar objects in the RegDomainsSupport Table."
 ::= {   dot11RegDomainsSupportEntry 1 }

dot11RegDomainsSupportValue OBJECT-TYPE

    SYNTAX INTEGER {fcc(16), doc(32), etsi(48), spain (49), france
    (50), mkk (64), terminator (0)}
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "There are different operational requirements dependent on
        the regulatory domain. This attribute list describes the
        regulatory domains the PLCP and PMD support in this
        implementation. Currently de- fined values and their
        corresponding Regulatory Domains are:

        FCC (USA) = X'10', DOC (Canada) = X'20', ETSI (most of
        Europe) = X'30', Spain = X'31', France = X'32', MKK
        (Japan) = X'40', list terminator = X'00'"
 ::= {   dot11RegDomainsSupportEntry 2 }

-- *****
-- *      End of dot11RegDomainsSupported TABLE
-- *****

-- *****
-- *      dot11AntennasList TABLE
-- *****
dot11AntennasListTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11AntennasListEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "This attribute represent a table of 3 columns, where each
        column respresents a list. The three lists are:

```

```

        SupportedTxAntennas
        SupportedRxAntennas
        DiversitySelectRx
    Each list can contain one or more antennas where each
    antenna is define as an integer starting with
    antenna 1 to antenna N, where N <= 255."
 ::= { dot11phy 9 }

dot11AntennasListEntry OBJECT-TYPE
    SYNTAX Dot11AntennasListEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot11AntennasList Table.

        ifIndex - Each 802.11 interface is represented by an
        ifEntry. Interface tables in this MIB module are indexed
        by ifIndex."
    INDEX {ifIndex, dot11AntennasListIndex}
 ::= { dot11AntennasListTable 1 }

Dot11AntennasListEntry ::= SEQUENCE {
    dot11AntennasListIndex      Integer32,
    dot11SupportedTxAntenna     Integer32,
    dot11SupportedRxAntenna     Integer32,
    dot11DiversitySelectionRx   Integer32 }

dot11AntennasListIndex OBJECT-TYPE
    SYNTAX Integer32 (0..255)
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The auxillary variable used to indentify instances
        of the columnar objects in the dot11AntennasList Table."
 ::= { dot11AntennasListEntry 1 }

dot11SupportedTxAntenna OBJECT-TYPE
    SYNTAX Integer32 (0..255)
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        " An antenna that can be used as the transmit antenna.
        One entry in the SupportedTxAntennas list. Each antenna is
        represented by an integer, starting with antenna 1, and
        through antenna N, where N <= 255."

 ::= { dot11AntennasListEntry 2 }

dot11SupportedRxAntenna OBJECT-TYPE
    SYNTAX Integer32 (0..255)
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        " An antenna that can be used as the receive antenna. One
        element in the SupportedRxAntenna list.Each antenna is
        represented by an integer, starting with antenna 1, and
        through antenna N, where N <= 255."

```

```
::= { dot11AntennasListEntry 3 }
```

```
dot11DiversitySelectionRx OBJECT-TYPE
    SYNTAX Integer32 (0..255)
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
```

"This attribute represents an antenna that can be used as receive antenna. Each antenna is represented by an integer starting with antenna 1, and through antenna N, where N <= 255."

```
::= { dot11AntennasListEntry 4 }
```

```
-- *****
-- *      End of dot11AntennasList  TABLE
-- *****
```

```
-- *****
-- *      SupportedDataRatesTx  TABLE
-- *****
```

```
dot11SupportedDataRatesTxTable OBJECT-TYPE
    SYNTAX SEQUENCE OF Dot11SupportedDataRatesTxEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
```

"The Transmit bit rates supported by the PLCP and PMD, represented by a count from 00h-7fh, corresponding to data rates in increments of 500Kb/s from 0 to 63.5 Mb/s subject to limitations of each individual PHY."

```
::= { dot11phy 10 }
```

```
dot11SupportedDataRatesTxEntry OBJECT-TYPE
    SYNTAX Dot11SupportedDataRatesTxEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
```

"An Entry (conceptual row) in the dot11SupportedDataRatesTx Table."

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

```
INDEX {ifIndex, dot11SupportedDataRatesTxIndex}
```

```
::= { dot11SupportedDataRatesTxTable 1 }
```

```
Dot11SupportedDataRatesTxEntry ::= SEQUENCE {
    dot11SupportedDataRatesTxIndex Integer32,
    dot11SupportedDataRatesTxValue Integer32}
```

```
dot11SupportedDataRatesTxIndex OBJECT-TYPE
    SYNTAX Integer32 (0..8)
    MAX-ACCESS not-accessible
```

STATUS current  
DESCRIPTION

"Index object which identifies which data rate to access.  
Range is 0..8."

::= { dot11SupportedDataRatesTxEntry 1 }

dot11SupportedDataRatesTxValue OBJECT-TYPE

SYNTAX Integer32 (0..255)  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The Transmit bit rates supported by the PLCP and PMD,  
represented by a count from 00h-7fh, corresponding to data  
rates in increments of 500Kb/s from 0 to 63.5 Mb/s subject  
to limitations of each individual PHY."

::= { dot11SupportedDataRatesTxEntry 2 }

```
-- *****
-- *      End of dot11SupportedDataRatesTx  TABLE
-- *****
```

```
-- *****
-- *      SupportedDataRatesRx  TABLE
-- *****
```

dot11SupportedDataRatesRxTable OBJECT-TYPE

SYNTAX SEQUENCE OF Dot11SupportedDataRatesRxEntry  
MAX-ACCESS not-accessible  
STATUS current  
DESCRIPTION

"The receive bit rates supported by the PLCP and PMD,  
represented by a count from 00h-7fh, corresponding to data  
rates in increments of 500Kb/s from 0 to 63.5 Mb/s."

::= { dot11phy 11 }

dot11SupportedDataRatesRxEntry OBJECT-TYPE

SYNTAX Dot11SupportedDataRatesRxEntry  
MAX-ACCESS not-accessible  
STATUS current  
DESCRIPTION

"An Entry (conceptual row) in the  
dot11SupportedDataRatesRx Table.

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

INDEX {ifIndex, dot11SupportedDataRatesRxIndex}

::= { dot11SupportedDataRatesRxTable 1 }

Dot11SupportedDataRatesRxEntry ::= SEQUENCE {  
dot11SupportedDataRatesRxIndex Integer32,  
dot11SupportedDataRatesRxValue Integer32}

```

dot11SupportedDataRatesRxIndex OBJECT-TYPE
    SYNTAX Integer32 (0..8)
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Index object which identifies which data rate to access.
        Range is 0..8."
    ::= { dot11SupportedDataRatesRxEntry 1 }

dot11SupportedDataRatesRxValue OBJECT-TYPE
    SYNTAX Integer32 (0..255)
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The receive bit rates supported by the PLCP and PMD,
        represented by a count from 00h-7fh, corresponding to data
        rates in increments of 500Kb/s from 0 to 63.5 Mb/s."
    ::= { dot11SupportedDataRatesRxEntry 2 }

-- *****
-- *      End of dot11SupportedDataRatesRx  TABLE
-- *****

-- *****
-- *      conformance information
-- *****

dot11Conformance OBJECT IDENTIFIER ::= { ieee802dot11 5 }
dot11Groups OBJECT IDENTIFIER ::= { dot11Conformance 1 }
dot11Compliances OBJECT IDENTIFIER ::= { dot11Conformance 2 }

-- *****
-- *      compliance statements
-- *****

dot11Compliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The compliance statement for SNMPv2 entities
        that implement the IEEE 802.11 MIB."

MODULE -- this module
    MANDATORY-GROUPS {
        dot11SMTbase,
        dot11MACbase,
        dot11SmtAuthenticationAlgorithms, dot11MacGroupAddresses,
        dot11ResourceTypeID, dot11PhyOperationComplianceGroup,
        dot11PhyAntennaComplianceGroup, dot11PhyTxPowerComplianceGroup,
        dot11PhyRegDomainsSupportGroup,
        dot11PhyAntennasListGroup, dot11PhyRateGroup }

GROUP dot11PhyDSSSComplianceGroup
    DESCRIPTION
        "Implementation of this group is required when object
        dot11PHYType has the value of dsss. This group is
        mutually exclusive with the groups dot11PhyIRComplianceGroup and
        dot11PhyFHSSComplianceGroup."

GROUP dot11PhyIRComplianceGroup
    DESCRIPTION

```

"Implementation of this group is required when object dot11PHYType has the value of irbaseband. This group is mutually exclusive with the groups dot11PhyDSSSComplianceGroup and dot11PhyFHSSComplianceGroup."

GROUP dot11PhyFHSSComplianceGroup

DESCRIPTION

"Implementation of this group is required when object dot11PHYType has the value of fhss. This group is mutually exclusive with the groups dot11PhyDSSSComplianceGroup and dot11PhyIRComplianceGroup."

```
-- OPTIONAL-GROUPS { dot11SMTprivacy, dot11MACStatistics
--                      dot11CountersGroup }
```

```
::= { dot11Compliances 1 }
```

```
-- *****
```

```
-- * Groups - units of conformance
```

```
-- *****
```

dot11SMTbase OBJECT-GROUP

```
OBJECTS { dot11StationID, dot11MediumOccupancyLimit,
dot11CFPollable,
dot11AuthenticationType,
dot11CFPPeriod,
dot11CFPMaxDuration,
dot11AuthenticationResponseTimeOut,
dot11WEPUndecryptableCount
}
```

STATUS current

DESCRIPTION

"The SMT object class provides the necessary support at the STA to manage the processes in the STA such that the STA may work cooperatively as a part of an IEEE 802.11 network."

```
::= {dot11Groups 1 }
```

dot11SMTprivacy OBJECT-GROUP

```
OBJECTS { dot11PrivacyInvoked,
dot11WEPKeyMappingLength, dot11ExcludeUnencrypted,
dot11WEPICVErrorCount , dot11WEPExcludedCount ,
dot11WEPUndecryptableCount,
dot11PrivacyOptionImplemented,
dot11WEPDefaultKeyID,
dot11WEPDefaultKeyIndex,
dot11WEPDefaultKeyValue,
dot11WEPKeyMappingIndex, dot11WEPKeyMappingWEPOn,
dot11WEPKeyMappingWEPkey , dot11WEPKeyMappingAddress }
```

STATUS current

DESCRIPTION

"The SMTPrivacy package is a set of attributes that shall be present if WEP is implemented in the STA."

```
::= {dot11Groups 2 }
```

dot11MACbase OBJECT-GROUP

```
OBJECTS { dot11MACAddress, dot11Address,
dot11GroupAddressesIndex,
```



```

        dot11GroupAddressesStatus,
        dot11RTSThreshold, dot11ShortRetryLimit,
        dot11LongRetryLimit, dot11FragmentationThreshold,
        dot11MaxTransmitMSDULifetime,
        dot11MaxReceiveLifetime, dot11ManufacturerID,
        dot11ProductID
    }
    STATUS current
    DESCRIPTION
        "The MAC object class provides the necessary support for the
        access control, generation, and verification of frame check
        sequences, and proper delivery of valid data to upper
        layers."
    ::= {dot11Groups 3 }

```

#### dot11MACStatistics OBJECT-GROUP

```

    OBJECTS { dot11RetryCount, dot11MultipleRetryCount,
        dot11RTSSuccessCount, dot11RTSFailureCount,
        dot11ACKFailureCount, dot11FrameDuplicateCount }

    STATUS current
    DESCRIPTION
        "The MACStatistics package provides extended statistical
        information on the operation of the MAC. This
        package is completely optional."
    ::= {dot11Groups 4 }

```

#### dot11ResourceTypeID OBJECT-GROUP

```

    OBJECTS { dot11ResourceTypeIDName, dot11manufacturerOUI,
        dot11manufacturerName, dot11manufacturerProductName,
        dot11manufacturerProductVersion }
    STATUS current
    DESCRIPTION
        "Attributes used to identify a STA, its manufacturer,
        and various product names and versions."

    ::= {dot11Groups 5 }

```

#### dot11SmtAuthenticationAlgorithms OBJECT-GROUP

```

    OBJECTS {
        dot11AuthenticationAlgorithmsIndex,
        dot11Algorithm}
    STATUS current
    DESCRIPTION
        "Authentication Algorithm Table."
    ::= {dot11Groups 6 }

```

#### dot11MacGroupAddresses OBJECT-GROUP

```

    OBJECTS { dot11GroupAddressesIndex, dot11Address }
    STATUS current
    DESCRIPTION
        "Set of Group Addresses for AP."
    ::= {dot11Groups 7 }

```

#### dot11PhyOperationComplianceGroup OBJECT-GROUP

```

OBJECTS { dot11PHYType, dot11CurrentRegDomain, dot11TempType,
  dot11CCATime, dot11MACProcessingDelay ,
  dot11SlotTime,
  dot11RxTxTurnaroundTime,
  dot11TxPLCPDelay,
  dot11RxTxSwitchTime,
  dot11TxRampOnTime,
  dot11TxRFDelay,
  dot11SIFSTime,
  dot11RxRFDelay,
  dot11RxPLCPDelay,
  dot11TxRampOffTime,
  dot11PreambleLength,
  dot11PLCPHeaderLength,
  dot11MPDUDurationFactor,
  dot11AirPropagationTime,
  dot11CWmin, dot11CWmax}
STATUS current
DESCRIPTION
  "PHY layer operations attributes."
 ::= { dot11Groups 8 }

```

```

dot11PhyAntennaComplianceGroup OBJECT-GROUP
  OBJECTS {dot11CurrentTxAntenna, dot11DiversitySupport}
  STATUS current
  DESCRIPTION
    "Attributes for Data Rates for IEEE 802.11."
  ::= { dot11Groups 9 }

```

```

dot11PhyTxPowerComplianceGroup OBJECT-GROUP
  OBJECTS {dot11NumberSupportedPowerLevels, dot11TxPowerLevel1,
    dot11TxPowerLevel2, dot11TxPowerLevel3, dot11TxPowerLevel4,
    dot11TxPowerLevel5, dot11TxPowerLevel6, dot11TxPowerLevel7,
    dot11TxPowerLevel8, dot11CurrentTxPowerLevel }
  STATUS current
  DESCRIPTION
    "Attributes for Control and Management of Access Point power."
  ::= { dot11Groups 10 }

```

```

dot11PhyFHSSComplianceGroup OBJECT-GROUP

  OBJECTS {dot11HopTime, dot11CurrentChannelNumber, dot11MaxDwellTime,
    dot11CurrentDwellTime, dot11CurrentSet, dot11CurrentPattern,
    dot11CurrentIndex}

  STATUS current
  DESCRIPTION

    "Attributes that configure the Frequency Hopping for IEEE
    802.11."

  ::= { dot11Groups 11 }

```

```

dot11PhyDSSSComplianceGroup OBJECT-GROUP

  OBJECTS {dot11CurrentChannel, dot11CCAModeSupported,
    dot11CurrentCCAMode, dot11EDThreshold}

  STATUS current

```

```

        DESCRIPTION
            "Attributes that configure the DSSS for IEEE 802.11."
        ::= { dot11Groups 12 }

dot11PhyIRComplianceGroup OBJECT-GROUP
    OBJECTS {dot11CCAWatchdogTimerMax, dot11CCAWatchdogCountMax,
        dot11CCAWatchdogTimerMin, dot11CCAWatchdogCountMin}
    STATUS current
    DESCRIPTION
        "Attributes that configure the DSSS for IEEE 802.11."
    ::= { dot11Groups 13 }

dot11PhyRegDomainsSupportGroup OBJECT-GROUP
    OBJECTS {dot11RegDomainsSupportIndex, dot11RegDomainsSupportValue}
    STATUS current
    DESCRIPTION
        "Attributes that specify the supported Regulation Domains."
    ::= { dot11Groups 14}

dot11PhyAntennasListGroup OBJECT-GROUP
    OBJECTS { dot11AntennasListIndex, dot11SupportedTxAntenna,
        dot11SupportedRxAntenna, dot11DiversitySelectionRx }
    STATUS current
    DESCRIPTION
        "Attributes that specify the supported Regulation Domains."
    ::= { dot11Groups 15 }

dot11PhyRateGroup OBJECT-GROUP
    OBJECTS {dot11SupportedDataRatesTxValue,
        dot11SupportedDataRatesRxValue, dot11MPDUMaxLength,
        dot11SupportedDataRatesTxIndex,
        dot11SupportedDataRatesRxIndex}
    STATUS current
    DESCRIPTION
        "Attributes for Data Rates for IEEE 802.11."
    ::= { dot11Groups 16 }

dot11CountersGroup OBJECT-GROUP
    OBJECTS {
        dot11TransmittedFragmentCount ,
        dot11MulticastTransmittedFrameCount ,
        dot11FailedCount, dot11ReceivedFragmentCount,
        dot11MulticastReceivedFrameCount ,
        dot11FCSErrorCount }

    STATUS current
    DESCRIPTION
        "Attributes from the dot11Countersgrp that are not described
        in the dot11MACStatistics group. These objects are
        mandatory."
    ::= {dot11Groups 17 }

-- *****
-- *      End of 80211 MIB
-- *****
END

```

