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Re:	
Abstract	This contribution proposes the new text for wmanIf2mMib.
Purpose	Adoption
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Table of Content

1. Introduction *3*
2. NRM IRP SNMP Solution Set change Proposal *3*
2.1 wmanIf2mMib Change *3*
2.2 wmanIf2mMib ASN.1 Code Change *5*

1

1. Introduction

This contribution proposes the new text for wmanIf2mMib.

2. NRM IRP SNMP Solution Set change Proposal

2.1 wmanIf2mMib Change

15.2.2 wmanIf2mMib

[Add the following text to subclause 15.2.2:]

Figure 31 shows the high level MIB structure of wmanIf2mMib for IEEE 802.16e-2005. The MIB structure is organized based on the the FCAPS reference model.

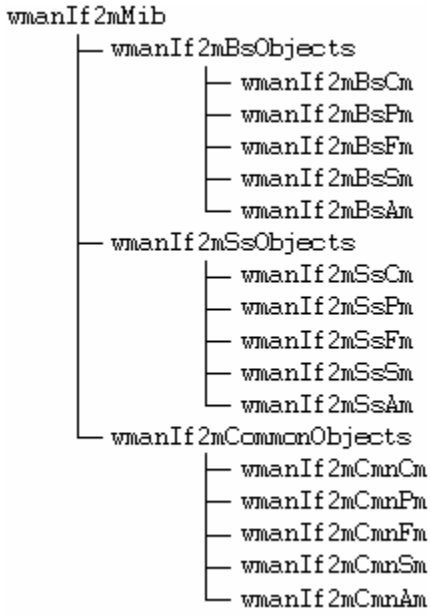

Figure 31—wmanIf2mMib Structure

15.2.1 wmanIf2mBsObjects

15.2.1.1 wmanIf2mBsCm

Figure 32 shows the structure of wmanIf2mBsCm subtree that contains BS managed objects related to Configuration Management.

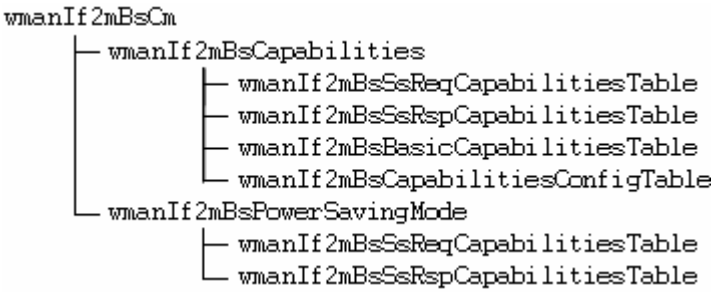

Figure 32—wmanIf2mBsCm Structure

15.2.1.1.1 wmanIf2mBsCapabilities

15.2.1.1.1.1 wmanIf2mBsSsReqCapabilitiesTable

wmanIf2mBsSsReqCapabilitiesTable contains the basic capability information of SSs that have been reported by SSs to BS using RNG-REQ, SBC-REQ and REG-REQ messages

15.2.1.1.1.2 wmanIf2mBsSsRspCapabilitiesTable

wmanIf2mBsSsRspCapabilitiesTable contains the basic capability information of SSs that have been negotiated and agreed between BS and SS via RNG-REQ/RSP, SBC-REQ/RSP and REG-REQ/RSP messages

15.2.1.1.1.3 wmanIf2mBsBasicCapabilitiesTable

wmanIf2mBsBasicCapabilitiesTable contains the basic capabilities of the BS as implemented in BS hardware and software. These capabilities along with the configuration for them (wmanIf2mBsCapabilitiesConfigTable) are used for negotiation of basic capabilities with SS using RNG-RSP, SBC-RSP and REG-RSP messages.

15.2.1.1.1.4 wmanIf2mBsCapabilitiesConfigTable

wmanIf2mBsCapabilitiesConfigTable contains the configuration for basic capabilities of BS. The table is intended to be used to restrict the Capabilities implemented by BS, for example in order to comply with local regulatory requirements. The BS should use the configuration along with the implemented Capabilities (wmanIf2mBsBasicCapabilitiesTable) for negotiation of basic capabilities with SS using RNG-RSP, SBC-RSP and REG-RSP messages.

15.2.1.1.2 wmanIf2mBsPowerSavingMode

15.2.1.1.2.1 wmanIf2mBsSsPowerSavingStatusTable

wmanIf2mBsSsPowerSavingStatusTable contains the power saving status for each CID in an SS.

15.2.1.1.1.2 wmanIf2mBsSsPowerSavingClassesTable

wmanIf2mBsSsPowerSavingClassesTable contains the power saving classes definitions, and activation / deactivation information that are provided by MOB_SLP-REQ and MOB_SLP-RSP messages..

15.2.1.2 wmanIf2mBsPm

Figure 33 shows the structure of wmanIf2mBsPm subtree that contains BS managed objects related to Performance Management.

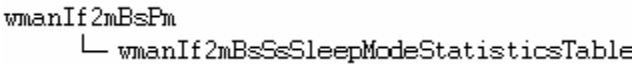

Figure 33—wmanIf2mBsPm Structure

15.2.1.2.1 wmanIf2mBsSsSleepModeStatisticsTable

wmanIf2mBsSsSleepModeStatisticsTable contains the sleep mode statistic for SS.

2.2 wmanIf2mMib ASN.1 Code Change

15.2.3 ASN.1 Definitions of 802.16 MIB for SNMP

15.2.3.2 WMAN-IF2M-MIB

[Replace WMAN-IF2M-MIB with the following MIB module:]

```
WMAN-IF2M-MIB DEFINITIONS ::= BEGIN

  IMPORTS
        MODULE-IDENTITY,
        OBJECT-TYPE,
        NOTIFICATION-TYPE,
        Unsigned32, Integer32, Counter32,
        Counter64, transmission
                FROM SNMPv2-SMI
        SnmpAdminString
                FROM SNMP-FRAMEWORK-MIB
        TEXTUAL-CONVENTION,
        MacAddress, RowStatus, TruthValue,
        TimeStamp, DateAndTime
                FROM SNMPv2-TC
        InetAddressType, InetAddress
                FROM INET-ADDRESS-MIB
        OBJECT-GROUP,
        MODULE-COMPLIANCE,
        NOTIFICATION-GROUP
                FROM SNMPv2-CONF
        ifIndex
                FROM IF-MIB;

wmanIf2mMib MODULE-IDENTITY
        LAST-UPDATED    "200610160000Z" -- October 16, 2006
        ORGANIZATION    "IEEE 802.16"
        CONTACT-INFO
            "WG E-mail: stds-802-16@ieee.org
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```
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                           Chandler, AZ 85227, USA
                E-mail:    joey.chou@intel.com"
            DESCRIPTION
                "This material is from IEEE Std 802.16i
                 Copyright (c) 2006 IEEE.
                 This MIB Module defines managed objects for
                 Subscriber Station and Base Station based on IEEE Std
                 802.16-2004 and its amendment IEEE Std 802.16e-2005.
                 The MIB contains managed objects that are specific
                 to mobile Broadband Wireless Networks."
            REVISION        "200610160000Z"
            DESCRIPTION
                "The 1st revision of WMAN-IF2M-MIB module."
            ::= { iso std(0) iso8802(8802) wman(16) 3 }

    wmanIf2mMibObjects    OBJECT IDENTIFIER ::= { wmanIf2mMib 1 }
    wmanIf2mBsObjects     OBJECT IDENTIFIER ::= { wmanIf2mMibObjects 1 }
    wmanIf2mSsObjects     OBJECT IDENTIFIER ::= { wmanIf2mMibObjects 2 }
    wmanIf2mCommonObjects OBJECT IDENTIFIER ::= { wmanIf2mMibObjects 3 }

    --
    -- Textual Conventions
    --
    WmanIf2mOfdmaMobility ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                "This field indicates whether or not the MS supports
                 mobility hand-over, Sleepmode, and Idle-mode. A bit
                 value of 0 indicates 'not supported' while 1 indicates
                 it is supported."
            REFERENCE
                "Subclause 11.7.14.1 in IEEE Std 802.16e-2005"
            SYNTAX      BITS {handoverSupport(0),
                              sleepModeSupport(1),
                              idleModeSupport(2)}

    WmanIf2mHandoverType ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                "Indicates what type(s) of Handover the BS and the MS
                 supports.
                   bit#0: when it is set to 1, MDHO/FBSS HO not supported.
                          the BS shall ignore all other bits.
                   bit#1: when it is set to 1, FBSS/MDHO DL RF Combining
                          is supported with monitoring MAPs from active BSs
                   bit#2: when it is set to 1, MDHO DL soft Combining is
                          supported with monitoring single MAP from
                          anchor BS
                   bit#3: when it is set to 1, MDHO DL soft combining is
                          supported with monitoring MAPs from active BSs
                   bit#3: when it is set to 1, MDHO UL Multiple
                          transmission is supported"
            REFERENCE
```

```
                "Subclause 11.7.8.12 in IEEE Std 802.16e-2005"
            SYNTAX      BITS {mdhcFbssHoNotSpported(0),
                              mdhcFbssDlMapsFromActiveBss(1),
                              mdhcDlMapFromAnchorBs(2),
                              mdhcDlMapsFromActiveBss(3),
                              mdhcUlMultipleTx(4)}

    WmanIf2mCidType ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                "Type of CID."
            SYNTAX      INTEGER (0 .. 65535)

    WmanIf2mPsClassId ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                "Indicates the index to Power Saving Classes. The ID shall
                 be unique within the group of Power Saving Classes
                 associated with the MS. This ID may be used in further
                 MOB_SLP-REQ/RSP messages for activation / deactivation
                 of Power Saving Class."
            REFERENCE
                "Subclause 6.3.2.3.44 in IEEE Std 802.16e-2005"
            SYNTAX      INTEGER (0..63)

    WmanIf2mPsClassType ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                "The types of power saving classes."
            REFERENCE
                "Table 374a in IEEE Std 802.16e-2005"
            SYNTAX      INTEGER {powerSavingClassTypeI(1),
                                 powerSavingClassTypeII(2),
                                 powerSavingClassTypeIII(3)}

    WmanIf2mPsClassCidDir ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                "The direction of power saving class's CIDs.
                 0b00 = Unspecified. Each CID has its own direction
                        assign in its connection creation. Can be
                        DL, UL, or both (in the case of management
                        connections).
                 0b01 = Downlink direction only.
                 0b10 = Uplink direction only."
            REFERENCE
                "Subclause 6.3.2.3.44 in IEEE Std 802.16e-2005"
            SYNTAX      INTEGER {unspecified(0),
                                 downlink(1),
                                 uplink(2)}

    WmanIf2mPowerSavingMode ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                "Power saving class mode active or not active."
            REFERENCE
                "Subclause 6.3.2.3.44 in IEEE Std 802.16e-2005"
            SYNTAX      INTEGER {psNotActive(0),
                                 psActive(1)}

    --
    -- wmanIf2mBsObjects - containing tables and objects to be implemented in
    -- the Base station
    --
```

```
-- wmanIf2mBsCm contain the Base Station Configuration Management objects
--
wmanIf2mBsCm OBJECT IDENTIFIER ::= { wmanIf2mBsObjects 1 }

--
-- Base Station capabilities
--
wmanIf2mBsCapabilities OBJECT IDENTIFIER ::= { wmanIf2mBsCm 1 }

wmanIf2mBsSsReqCapabilitiesTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF WmanIf2mBsSsReqCapabilitiesEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "This table contains the SS's capabilities that are necessary
             for supporting mobility. SS reports these capabilities in
             the REG-REQ messages."
        REFERENCE
            "Subclause 6.3.2.3.7 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsCapabilities 1 }

wmanIf2mBsSsReqCapabilitiesEntry OBJECT-TYPE
        SYNTAX      WmanIf2mBsSsReqCapabilitiesEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "This table provides one row for each SS that has entered and
             registered into the BS. The primary index is the ifIndex
             with an ifType of ieee80216WMAN, indicating the BS sector
             with which the SS is associated. wmanIf2mBsSsMacAddress
             identifies the SS being registered."
        INDEX { ifIndex, wmanIf2mBsSsMacAddress }
        ::= { wmanIf2mBsSsReqCapabilitiesTable 1 }

WmanIf2mBsSsReqCapabilitiesEntry ::= SEQUENCE {
        wmanIf2mBsSsMacAddress                  MacAddress,
        wmanIf2mBsSsReqCapHandoverSupported     WmanIf2mHandoverType,
        wmanIf2mBsSsReqCapHoProcessTimer        Unsigned32,
        wmanIf2mBsSsReqCapMobilityFeature       WmanIf2mOfdmaMobility,
        wmanIf2mBsSsReqCapSleepRecoveryTime     Unsigned32,
        wmanIf2mBsSsReqCapPreviousIpAddr        OCTET STRING,
        wmanIf2mBsSsReqCapIdleModeTimeout       Unsigned32,
        wmanIf2mBsSsReqCapHoConnProcessTime     Unsigned32,
        wmanIf2mBsSsReqCapHoTekProcessTime      Unsigned32}

wmanIf2mBsSsMacAddress OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "The MAC address of SS is received from the RNG-REQ
             message, and used as the identifier to the SS."
        REFERENCE
            "Subclause 6.3.2.3.5 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsReqCapabilitiesEntry 1 }

wmanIf2mBsSsReqCapHandoverSupported OBJECT-TYPE
        SYNTAX      WmanIf2mHandoverType
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Indicates what type(s) of Handover the BS or MS supports."
        REFERENCE
            "Subclause 11.7.12 in IEEE Std 802.16e-2005"
```

```
        ::= { wmanIf2mBsSsReqCapabilitiesEntry 2 }

wmanIf2mBsSsReqCapHoProcessTimer OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "frames"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The duration in frames the MS shall wait until receipt of
             the next unsolicited network re-entry MAC management
             message as indicated in the HO Process Optimization
             element of the RNG-RSP message."
        REFERENCE
            "Subclause 11.7.13.2 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsReqCapabilitiesEntry 3 }

wmanIf2mBsSsReqCapMobilityFeature OBJECT-TYPE
        SYNTAX      WmanIf2mOfdmaMobility
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The field indicates whether or not the MS supports
             mobility hand-over, Sleepmode, and Idle-mode."
        REFERENCE
            "Subclause 11.7.14.1 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsReqCapabilitiesEntry 4 }

wmanIf2mBsSsReqCapSleepRecoveryTime OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "frames"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The object indicates the time required for an MS that is
             in a sleep mode to return to awake-mode. This may be used
             by the BS to determine sleep interval window sizes when
             initiating sleep mode with an MS."
        REFERENCE
            "Subclause 11.7.15 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsReqCapabilitiesEntry 5 }

wmanIf2mBsSsReqCapPreviousIpAddr OBJECT-TYPE
        SYNTAX      OCTET STRING
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The object indicates the IP address that the MS was assigned
             on the secondary management connection based on an
             association with its last serving BS. An IPv4 address shall
             be specified in conventional dotted format; e.g.,
             '134.234.2.3'. An IPv6 address may be expressed in abridged
             or unabridged form; however, the form chosen shall be
             consistent with RFC 2373."
        REFERENCE
            "Subclause 11.7.16 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsReqCapabilitiesEntry 6 }

wmanIf2mBsSsReqCapIdleModeTimeout OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "seconds"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Max time interval between MS Idle Mode Location Updates."
```

```
            REFERENCE
                "Subclause 11.7.20.1 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsReqCapabilitiesEntry 7 }

    wmanIf2mBsSsReqCapHoConnProcessTime OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "milliseconds"
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "The duration that the MS needs to process information
                 on connections provided in RNG-RSP or REG-RSP message
                 during Handoff."
            REFERENCE
                "Subclause 11.7.24 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsReqCapabilitiesEntry 8 }

    wmanIf2mBsSsReqCapHoTekProcessTime OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "milliseconds"
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "The duration that the MS needs to completely process
                 TEK information during Handoff."
            REFERENCE
                "Subclause 11.7.24 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsReqCapabilitiesEntry 9 }

    wmanIf2mBsSsRspCapabilitiesTable OBJECT-TYPE
            SYNTAX      SEQUENCE OF WmanIf2mBsSsRspCapabilitiesEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "This table contains the SS's capabilities that are necessary
                 for supporting mobility. BS acknowledges the capabilities in
                 the REG-RSP message in response to REG-REQ messages."
            REFERENCE
                "Subclause 6.3.2.3.7 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsCapabilities 2 }

    wmanIf2mBsSsRspCapabilitiesEntry OBJECT-TYPE
            SYNTAX      WmanIf2mBsSsRspCapabilitiesEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "This table provides one row for each SS that has entered and
                 registered into the BS. The primary index is the ifIndex
                 with an ifType of ieee80216WMAN, indicating the BS sector
                 with which the SS is associated. wmanIf2mBsSsMacAddress
                 identifies the SS being registered."
            INDEX { ifIndex, wmanIf2mBsSsMacAddress }
            ::= { wmanIf2mBsSsRspCapabilitiesTable 1 }

    WmanIf2mBsSsRspCapabilitiesEntry ::= SEQUENCE {
            wmanIf2mBsSsRspCapHandoverSupported     WmanIf2mHandoverType,
            wmanIf2mBsSsRspCapRetrainTime           Unsigned32,
            wmanIf2mBsSsRspCapHoProcessTimer        Unsigned32,
            wmanIf2mBsSsRspCapRetransmissionTimer   Unsigned32,
            wmanIf2mBsSsRspCapMobilityFeature       WmanIf2mOfdmaMobility,
            wmanIf2mBsSsRspCapNewSaid               Integer32,
            wmanIf2mBsSsRspCapOldSaid               Integer32,
            wmanIf2mBsSsRspCapIdleModeTimeout       Unsigned32,
            wmanIf2mBsSsRspCapHoConnProcessTime     Unsigned32,
```

```
        wmanIf2mBsSsRspCapHoTekProcessTime      Unsigned32}

wmanIf2mBsSsRspCapHandoverSupported OBJECT-TYPE
        SYNTAX      WmanIf2mHandoverType
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
           "Indicates what type(s) of Handover the BS or MS supports."
        REFERENCE
            "Subclause 11.7.12 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsRspCapabilitiesEntry 1 }

wmanIf2mBsSsRspCapRetrainTime OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "100 milliseconds"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
           "Indicates the duration for MS's connection information that
            will be retained in serving BS. BS shall start
            Resource_Retain_Time timer at MS notification of pending HO
            attempt through MOB_HO-IND or by detecting an MS drop."
        REFERENCE
            "Subclause 11.7.13.1 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsRspCapabilitiesEntry 2 }

wmanIf2mBsSsRspCapHoProcessTimer OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "frames"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The duration in frames the MS shall wait until receipt of
             the next unsolicited network re-entry MAC management
             message as indicated in the HO Process Optimization
             element of the RNG-RSP message. On HO Process Optimization
             MS Timer timeout and while HO Process Optimization MS
             Timer Retries is valid, MS shall send the network re-entry
             MAC management request message corresponding to the
             expected and pending network re-entry MAC management
             response message as indicated in HO Process Optimization
             and recycle HO Process Optimization MS Timer."
        REFERENCE
            "Subclause 11.7.13.2 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsRspCapabilitiesEntry 3 }

wmanIf2mBsSsRspCapRetransmissionTimer OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "frames"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "When an MS transmits MOB_MSHO-REQ to initiate a handover
             process, it shall start MS Handover Retransmission Timer
             and shall not transmit another MOB_MSHO-REQ until the
             expiration of the MS Handover Retransmission Timer."
        REFERENCE
            "Subclause 11.7.13.3 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsRspCapabilitiesEntry 4 }

wmanIf2mBsSsRspCapMobilityFeature OBJECT-TYPE
        SYNTAX      WmanIf2mOfdmaMobility
        MAX-ACCESS  read-only
        STATUS      current
```

```
            DESCRIPTION
                "The field indicates the mobility hand-over, Sleepmode,
                 and Idle-mode negotiated for MS."
            REFERENCE
                "Subclause 11.7.14.1 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsRspCapabilitiesEntry 5 }

    wmanIf2mBsSsRspCapNewSaid OBJECT-TYPE
            SYNTAX      Integer32 (0 .. 65535)
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "The field indicates New SAID after handover to new BS. It
                 provides a translation table that allows an MS to update
                 its security associations so that it may continue security
                 service after a handover to a new serving BS."
            REFERENCE
                "Subclause 11.7.18 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsRspCapabilitiesEntry 6 }

    wmanIf2mBsSsRspCapOldSaid OBJECT-TYPE
            SYNTAX      Integer32 (0 .. 65535)
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "The field indicates Old SAID after handover to new BS. It
                 provides a translation table that allows an MS to update
                 its security associations so that it may continue security
                 service after a handover to a new serving BS."
            REFERENCE
                "Subclause 11.7.18 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsRspCapabilitiesEntry 7 }

    wmanIf2mBsSsRspCapIdleModeTimeout OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "seconds"
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "Max time interval between MS Idle Mode Location Updates."
            REFERENCE
                "Subclause 11.7.20.1 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsRspCapabilitiesEntry 8 }

    wmanIf2mBsSsRspCapHoConnProcessTime OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "milliseconds"
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "The duration that the MS needs to process information
                 on connections provided in RNG-RSP or REG-RSP message
                 during Handoff."
            REFERENCE
                "Subclause 11.7.24 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsRspCapabilitiesEntry 9 }

    wmanIf2mBsSsRspCapHoTekProcessTime OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "milliseconds"
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "The duration that the MS needs to completely process
```

```
                TEK information during Handoff."
            REFERENCE
                "Subclause 11.7.24 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsRspCapabilitiesEntry 10 }

    wmanIf2mBsBasicCapabilitiesTable OBJECT-TYPE
            SYNTAX      SEQUENCE OF WmanIf2mBsBasicCapabilitiesEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "This table contains the basic capabilities of the BS as
                 implemented in BS hardware and software. These capabilities
                 along with the configuration for them
                 (wmanIf2mBsCapabilitiesConfigTable) are used for negotiation
                 of basic capabilities with SS using RNG-RSP, SBC-RSP and
                 REG-RSP messages. The negotiated capabilities are obtained
                 by interSubclause of SS raw reported capabilities, BS raw
                 capabilities and BS configured capabilities. The objects in
                 the table have read-only access. The table is maintained
                 by BS."
            ::= { wmanIf2mBsCapabilities 3 }

    wmanIf2mBsBasicCapabilitiesEntry OBJECT-TYPE
            SYNTAX      WmanIf2mBsBasicCapabilitiesEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "This table provides one row for each BS sector and is
                 indexed by ifIndex."
            INDEX { ifIndex }
            ::= { wmanIf2mBsBasicCapabilitiesTable 1 }

    WmanIf2mBsBasicCapabilitiesEntry ::= SEQUENCE {
            wmanIf2mBsCapHandoverSupported          WmanIf2mHandoverType,
            wmanIf2mBsCapRetrainTime                Unsigned32,
            wmanIf2mBsCapHoProcessTimer             Unsigned32,
            wmanIf2mBsCapRetransmissionTimer        Unsigned32,
            wmanIf2mBsCapMobilityFeature            WmanIf2mOfdmaMobility,
            wmanIf2mBsCapIdleModeTimeout            Unsigned32,
            wmanIf2mBsCapHoConnProcessTime          Unsigned32,
            wmanIf2mBsCapHoTekProcessTime           Unsigned32}

    wmanIf2mBsCapHandoverSupported OBJECT-TYPE
            SYNTAX      WmanIf2mHandoverType
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "Indicates what type(s) of Handover the BS or MS supports."
            REFERENCE
                "Subclause 11.7.12 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsBasicCapabilitiesEntry 1 }

    wmanIf2mBsCapRetrainTime OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "100 milliseconds"
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
               "Indicates the duration for MS's connection information that
                will be retained in serving BS. BS shall start
                Resource_Retain_Time timer at MS notification of pending HO
                attempt through MOB_HO-IND or by detecting an MS drop."
            REFERENCE
                "Subclause 11.7.13.1 in IEEE Std 802.16e-2005"
```

```
        ::= { wmanIf2mBsBasicCapabilitiesEntry 2 }

wmanIf2mBsCapHoProcessTimer OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "frames"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The duration in frames the MS shall wait until receipt of
             the next unsolicited network re-entry MAC management
             message as indicated in the HO Process Optimization
             element of the RNG-RSP message."
        REFERENCE
            "Subclause 11.7.13.2 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsBasicCapabilitiesEntry 3 }

wmanIf2mBsCapRetransmissionTimer OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "frames"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "When an MS transmits MOB_MSHO-REQ to initiate a handover
             process, it shall start MS Handover Retransmission Timer
             and shall not transmit another MOB_MSHO-REQ until the
             expiration of the MS Handover Retransmission Timer."
        REFERENCE
            "Subclause 11.7.13.3 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsBasicCapabilitiesEntry 4 }

wmanIf2mBsCapMobilityFeature OBJECT-TYPE
        SYNTAX      WmanIf2mOfdmaMobility
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The field indicates the mobility hand-over, Sleepmode,
             and Idle-mode supported by BS."
        REFERENCE
            "Subclause 11.7.14.1 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsBasicCapabilitiesEntry 5 }

wmanIf2mBsCapIdleModeTimeout OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "seconds"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Max time interval between MS Idle Mode Location Updates."
        REFERENCE
            "Subclause 11.7.20.1 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsBasicCapabilitiesEntry 6 }

wmanIf2mBsCapHoConnProcessTime OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "milliseconds"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The duration that the MS needs to process information
             on connections provided in RNG-RSP or REG-RSP message
             during Handoff."
        REFERENCE
            "Subclause 11.7.24 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsBasicCapabilitiesEntry 7 }
```

```
wmanIf2mBsCapHoTekProcessTime OBJECT-TYPE
        SYNTAX      Unsigned32
        UNITS       "milliseconds"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The duration that the MS needs to completely process
             TEK information during Handoff."
        REFERENCE
            "Subclause 11.7.24 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsBasicCapabilitiesEntry 8 }

wmanIf2mBsCapabilitiesConfigTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF WmanIf2mBsCapabilitiesConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "This table contains the configuration for basic
             capabilities of BS. The table is intended to be used to
             restrict the Capabilities implemented by BS, for example in
             order to comply with local regulatory requirements. The BS
             should use the configuration along with the implemented
             Capabilities (wmanIf2mBsBasicCapabilitiesTable) for
             negotiation of basic capabilities with SS using RNG-RSP,
             SBC-RSP and REG-RSP messages. The negotiated capabilities
             are obtained by interSubclause of SS reported capabilities,
             BS raw capabilities and BS configured capabilities. The
             objects in the table have read-write access. The rows are
             created by BS as a copy of wmanIf2mBsBasicCapabilitiesTable
             and can be modified by NMS."
        ::= { wmanIf2mBsCapabilities 4 }

wmanIf2mBsCapabilitiesConfigEntry OBJECT-TYPE
        SYNTAX      WmanIf2mBsCapabilitiesConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "This table provides one row for each BS sector and is
             indexed by ifIndex."
        INDEX { ifIndex }
        ::= { wmanIf2mBsCapabilitiesConfigTable 1 }

WmanIf2mBsCapabilitiesConfigEntry ::= SEQUENCE {
        wmanIf2mBsCapCfgHandoverSupported       WmanIf2mHandoverType,
        wmanIf2mBsCapCfgRetrainTime             Unsigned32,
        wmanIf2mBsCapCfgHoProcessTimer          Unsigned32,
        wmanIf2mBsCapCfgRetransmissionTimer     Unsigned32,
        wmanIf2mBsCapCfgMobilityFeature         WmanIf2mOfdmaMobility,
        wmanIf2mBsCapCfgIdleModeTimeout         Unsigned32,
        wmanIf2mBsCapCfgHoConnProcessTime       Unsigned32,
        wmanIf2mBsCapCfgHoTekProcessTime        Unsigned32}

wmanIf2mBsCapCfgHandoverSupported OBJECT-TYPE
        SYNTAX      WmanIf2mHandoverType
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
            "Indicates what type(s) of Handover the BS or MS supports."
        REFERENCE
            "Subclause 11.7.12 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsCapabilitiesConfigEntry 1 }

wmanIf2mBsCapCfgRetrainTime OBJECT-TYPE
```

```
            SYNTAX      Unsigned32
            UNITS       "100 milliseconds"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
               "Indicates the duration for MS's connection information that
                will be retained in serving BS. BS shall start
                Resource_Retain_Time timer at MS notification of pending HO
                attempt through MOB_HO-IND or by detecting an MS drop."
            REFERENCE
                "Subclause 11.7.13.1 in IEEE Std 802.16e-2005"
            DEFVAL         { 1 }
            ::= { wmanIf2mBsCapabilitiesConfigEntry 2 }

    wmanIf2mBsCapCfgHoProcessTimer OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "frames"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                "The duration in frames the MS shall wait until receipt of
                 the next unsolicited network re-entry MAC management
                 message as indicated in the HO Process Optimization
                 element of the RNG-RSP message."
            REFERENCE
                "Subclause 11.7.13.2 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsCapabilitiesConfigEntry 3 }

    wmanIf2mBsCapCfgRetransmissionTimer OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "frames"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                "When an MS transmits MOB_MSHO-REQ to initiate a handover
                 process, it shall start MS Handover Retransmission Timer
                 and shall not transmit another MOB_MSHO-REQ until the
                 expiration of the MS Handover Retransmission Timer."
            REFERENCE
                "Subclause 11.7.13.3 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsCapabilitiesConfigEntry 4 }

    wmanIf2mBsCapCfgMobilityFeature OBJECT-TYPE
            SYNTAX      WmanIf2mOfdmaMobility
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                "The field indicates the mobility hand-over, Sleepmode,
                 and Idle-mode configured for the BS."
            REFERENCE
                "Subclause 11.7.14.1 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsCapabilitiesConfigEntry 5 }

    wmanIf2mBsCapCfgIdleModeTimeout OBJECT-TYPE
            SYNTAX      Unsigned32
            UNITS       "seconds"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                "Max time interval between MS Idle Mode Location Updates."
            REFERENCE
                "Subclause 11.7.20.1 in IEEE Std 802.16e-2005"
            DEFVAL         { 4096 }
            ::= { wmanIf2mBsCapabilitiesConfigEntry 6 }
```

```
1
2     wmanIf2mBsCapCfgHoConnProcessTime OBJECT-TYPE
3             SYNTAX      Unsigned32
4             UNITS       "milliseconds"
5             MAX-ACCESS  read-write
6             STATUS      current
7             DESCRIPTION
8                 "The duration that the MS needs to process information
9                  on connections provided in RNG-RSP or REG-RSP message
10                 during Handoff."
11            REFERENCE
12                "Subclause 11.7.24 in IEEE Std 802.16e-2005"
13            ::= { wmanIf2mBsCapabilitiesConfigEntry 7 }
14
15    wmanIf2mBsCapCfgHoTekProcessTime OBJECT-TYPE
16            SYNTAX      Unsigned32
17            UNITS       "milliseconds"
18            MAX-ACCESS  read-write
19            STATUS      current
20            DESCRIPTION
21                "The duration that the MS needs to completely process
22                 TEK information during Handoff."
23            REFERENCE
24                "Subclause 11.7.24 in IEEE Std 802.16e-2005"
25            ::= { wmanIf2mBsCapabilitiesConfigEntry 8 }
26
27    --
28    -- Base Station Power Saving Mode
29    --
30    wmanIf2mBsPowerSavingMode OBJECT IDENTIFIER ::= { wmanIf2mBsCm 2 }
31
32    --
33    -- wmanIf2mBsSsPowerSavingStatusTable contains the power saving status
34    --
35    wmanIf2mBsSsPowerSavingStatusTable OBJECT-TYPE
36            SYNTAX      SEQUENCE OF WmanIf2mBsSsPowerSavingStatusEntry
37            MAX-ACCESS  not-accessible
38            STATUS      current
39            DESCRIPTION
40                "This table contains the power saving status for each CID
41                 in an MS. When the BS roams to a different BS, all entries
42                 associated with such MS will be deleted."
43            ::= { wmanIf2mBsPowerSavingMode 1 }
44
45    wmanIf2mBsSsPowerSavingStatusEntry OBJECT-TYPE
46            SYNTAX      WmanIf2mBsSsPowerSavingStatusEntry
47            MAX-ACCESS  not-accessible
48            STATUS      current
49            DESCRIPTION
50                "This table provides one row for each CID in an MS, and
51                 is indexed by ifIndex, wmanIf2mBsSsMacAddress, and
52                 wmanIf2mBsSsCid."
53            INDEX     { ifIndex,
54                        wmanIf2mBsSsMacAddress,
55                        wmanIf2mBsSsCid  }
56            ::= { wmanIf2mBsSsPowerSavingStatusTable 1 }
57
58    WmanIf2mBsSsPowerSavingStatusEntry::= SEQUENCE {
59            wmanIf2mBsSsCid                          WmanIf2mCidType,
60            wmanIf2mBsSsPowerSavingClassId           WmanIf2mPsClassId}
61
62    wmanIf2mBsSsCid OBJECT-TYPE
63            SYNTAX      WmanIf2mCidType
64            MAX-ACCESS  read-only
```

```
            STATUS      current
            DESCRIPTION
                "A 16 bit channel identifier to identify a connection."
            ::= { wmanIf2mBsSsPowerSavingStatusEntry 1 }

    wmanIf2mBsSsPowerSavingClassId OBJECT-TYPE
            SYNTAX      WmanIf2mPsClassId
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "wmanIf2mBsSsPowerSavingClassId identifies the power
                 saving class associated with this CID. It maps to an
                 entry in wmanIf2mBsSsPowerSavingClassesTable."
            ::= { wmanIf2mBsSsPowerSavingStatusEntry 2 }

    --
    -- wmanIf2mBsSsPowerSavingClassesTable contains the power saving classes
    -- information
    --
    wmanIf2mBsSsPowerSavingClassesTable OBJECT-TYPE
            SYNTAX      SEQUENCE OF WmanIf2mBsSsPowerSavingClassesEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "This table contains the power saving classes definitions,
                 and activation / deactivation information that are provided
                 by MOB_SLP-REQ and MOB_SLP-RSP messages. When the BS roams
                 to a different BS, all entries associated with such MS will
                 be deleted."
            ::= { wmanIf2mBsPowerSavingMode 2 }

    wmanIf2mBsSsPowerSavingClassesEntry OBJECT-TYPE
            SYNTAX      WmanIf2mBsSsPowerSavingClassesEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "This table is indexed by ifIndex, wmanIf2mBsSsMacAddress,
                 and wmanIf2mBsSsPsClassesId. It is intended to support both
                 unicast and multicast service flows.
                 wmanIf2mBsSsMacAddress contains the MAC address of the MS
                 to which the power saving classes are associated."
            INDEX { ifIndex,
                    wmanIf2mBsSsMacAddress,
                    wmanIf2mBsSsPsClassId }
            ::= { wmanIf2mBsSsPowerSavingClassesTable 1 }

    WmanIf2mBsSsPowerSavingClassesEntry ::= SEQUENCE {
            wmanIf2mBsSsPsClassId                   WmanIf2mPsClassId,
            wmanIf2mBsSsStartFrameNumber            INTEGER,
            wmanIf2mBsSsPowerSavingClassType        WmanIf2mPsClassType,
            wmanIf2mBsSsPsClassCidDirection         WmanIf2mPsClassCidDir,
            wmanIf2mBsSsTrafficTriggeredWakening    INTEGER,
            wmanIf2mBsSsInitialSleepWindow          INTEGER,
            wmanIf2mBsSsFinalSleepWindowBase        INTEGER,
            wmanIf2mBsSsFinalSleepWindowExponent    INTEGER,
            wmanIf2mBsSsListeningWindow             INTEGER,
            wmanIf2mBsSsPowerSavingMode             WmanIf2mPowerSavingMode,
            wmanIf2mBsSsSlpId                       INTEGER}

    wmanIf2mBsSsPsClassId OBJECT-TYPE
            SYNTAX      WmanIf2mPsClassId
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
```

```
            "This object uniquely identifies the power saving classes
             in a MS."
        ::= { wmanIf2mBsSsPowerSavingClassesEntry 1 }

wmanIf2mBsSsStartFrameNumber OBJECT-TYPE
        SYNTAX      INTEGER
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
            "Start frame number for first sleep window."
        REFERENCE
            "Subclause 6.3.2.3.44 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsPowerSavingClassesEntry 2 }

wmanIf2mBsSsPowerSavingClassType OBJECT-TYPE
        SYNTAX      WmanIf2mPsClassType
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
            "Power saving classes type I - BE & NRT-VR,
             Power saving classes type II - UGS & RT-VR,
             Power saving classes type III - multicast, management CID"
        REFERENCE
            "Subclause 6.3.21.2-4, in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsPowerSavingClassesEntry 3 }

wmanIf2mBsSsPsClassCidDirection OBJECT-TYPE
        SYNTAX      WmanIf2mPsClassCidDir
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
            "The direction of power saving class's CIDs."
        REFERENCE
            "Subclause 6.3.2.3.44, in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsPowerSavingClassesEntry 4 }

wmanIf2mBsSsTrafficTriggeredWakening OBJECT-TYPE
        SYNTAX      INTEGER (0..1)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
            "0 = Power Saving Class shall not be deactivated if
             traffic appears at the connection as per 6.3.19.2.
             1 = Power Saving Class shall be deactivated if
             traffic appears at the connection as 6.3.19.2."
        REFERENCE
            "Subclause 6.3.19.2, in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsPowerSavingClassesEntry 5 }

wmanIf2mBsSsInitialSleepWindow OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "frame"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
            "The initial duration for the sleep window. It is not
             relevant for Power Saving Class type III, and shall
             return '0'."
        REFERENCE
            "Subclause 6.3.2.3.44, in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsSsPowerSavingClassesEntry 6 }

wmanIf2mBsSsFinalSleepWindowBase OBJECT-TYPE
        SYNTAX      INTEGER (0..1023)
```

```
            UNITS       "frame"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                "The final value for the sleep interval. It is not
                 relevant for Power Saving Class type II, and shall
                 return '0'. For Power Saving Class type III, it is the
                 base for duration of single sleep window request."
            REFERENCE
                "Subclause 6.3.2.3.44, in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsPowerSavingClassesEntry 7 }

    wmanIf2mBsSsFinalSleepWindowExponent OBJECT-TYPE
            SYNTAX      INTEGER (0..7)
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                "The factor by which the final-sleep window base is
                 multiplied in order to calculate the final-sleep window.
                 The following formula is used:
                 final-sleep window = final-sleep window base x
                                      2^(final-sleep window exponent)
                 For Power Saving Class type III, it is the exponent for
                 the duration of single sleep window request."
            REFERENCE
                "Subclause 6.3.2.3.44, in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsPowerSavingClassesEntry 8 }

    wmanIf2mBsSsListeningWindow OBJECT-TYPE
            SYNTAX      INTEGER (0..255)
            UNITS       "frame"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                "The Duration of MS listening window. It is not
                 relevant for Power Saving Class type III, and shall
                 return '0'."
            REFERENCE
                "Subclause 6.3.2.3.44, in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsPowerSavingClassesEntry 9 }

    wmanIf2mBsSsPowerSavingMode OBJECT-TYPE
            SYNTAX      WmanIf2mPowerSavingMode
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                "Indicate whether the power saving class mode of such
                 CID is active or not.
                 wmanIf2mBsSsPowerSavingMode = Sleep_Approved && Operation."
            REFERENCE
                "Subclause 6.3.2.3.45, in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsPowerSavingClassesEntry 10 }

    wmanIf2mBsSsSlpId OBJECT-TYPE
            SYNTAX      INTEGER (0..1023)
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "wmanIf2mBsSsSlpId is assigned by the BS whenever an MS is
                 instructed to enter sleep mode. This number shall be unique
                 among all MSs that are in sleep mode."
            REFERENCE
                "Subclause 6.3.2.3.45, in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsSsPowerSavingClassesEntry 11 }
```

```
wmanIf2mBsPm OBJECT IDENTIFIER ::= { wmanIf2mBsObjects 2 }

--
-- Mobile Station Sleep Mode Statistics Table
--
wmanIf2mBsSsSleepModeStatisticsTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF   WmanIf2mBsSsSleepModeStatisticsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "This table contains the sleep mode statistic for MS. This
             table shall be maintained as FIFO to store the sleep mode
             statistics over a period of time that is subject to
             implementation. This statistics information can be to
             monitor, fine tuning, or debugging the power saving
             performance of each MS. When the statistics entry for an
             MS reaches the limit, it wraps around to the beginning, and
             overwrites the oldest entry with the new entry. When the BS
             roams to a different BS, all entries associated with such
             MS will be deleted."
        REFERENCE
            "6.3.21 in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsPm 1 }

wmanIf2mBsSsSleepModeStatisticsEntry OBJECT-TYPE
        SYNTAX      WmanIf2mBsSsSleepModeStatisticsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "Each entry in the table contains the event of an MS
             entering the sleep mode. It is indexed by ifIndex,
             wmanIf2mBsSsMacAddress, and wmanIf2mBsSsStatisticsIndex.
             wmanIf2mBsSsStatisticsIndex is the index to sleep mode event
             entry in the table, and should be increased monotonically,
             and wraps around when it reaches the implementation
             specific limit. A time stamp is provided in each entry to
             indicate when the sleep mode event took place."
        INDEX       { ifIndex,
                      wmanIf2mBsSsMacAddress,
                      wmanIf2mBsSsCid,
                      wmanIf2mBsSsStatisticsIndex }
        ::= { wmanIf2mBsSsSleepModeStatisticsTable  1 }

WmanIf2mBsSsSleepModeStatisticsEntry ::= SEQUENCE {
        wmanIf2mBsSsStatisticsIndex             Unsigned32,
        wmanIf2mBsSsSleepWindowStarted          Unsigned32,
        wmanIf2mBsSsListeningWindowStarted      Unsigned32,
        wmanIf2mBsSsPendingMsdu                 INTEGER,
        wmanIf2mBsSsSleepWindowTimeStamp        DateAndTime}

wmanIf2mBsSsStatisticsIndex OBJECT-TYPE
        SYNTAX      Unsigned32 (1 .. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "wmanIf2mBsSsStatisticsIndex identifies the entry in the
             table where the latest sleep mode event took place."
        ::= { wmanIf2mBsSsSleepModeStatisticsEntry 1 }

wmanIf2mBsSsSleepWindowStarted OBJECT-TYPE
        SYNTAX      Unsigned32 (1 .. 166777215)
        UNITS       "frame"
        MAX-ACCESS  read-only
```

```
            STATUS      current
            DESCRIPTION
                "wmanIf2mBsSsSleepWindowStarted identifies when the sleep
                 mode is activated.
                 wmanIf2mBsSsSleepWindowStarted = current frame number +
                                                  Start_frame_number.
                 The frame number is provided in the DL-MAP, and is
                 incremented by 1 MOD 2^24 each frame."
            ::= { wmanIf2mBsSsSleepModeStatisticsEntry 2 }

    wmanIf2mBsSsListeningWindowStarted OBJECT-TYPE
            SYNTAX      Unsigned32 (1 .. 166777215)
            UNITS       "frame"
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "wmanIf2mBsSsListeningWindowStarted identifies when the sleep
                 mode is deactivated.
                 wmanIf2mBsSsListeningWindowStarted =
                 wmanIf2mBsSsListeningWindowStarted + sleep window
                 The frame number is provided in the DL-MAP, and is
                 incremented by 1 MOD 2^24 each frame."
            ::= { wmanIf2mBsSsSleepModeStatisticsEntry 3 }

    wmanIf2mBsSsPendingMsdu OBJECT-TYPE
            SYNTAX      INTEGER
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "Indicate the number of MAC SDU that are received from the
                 network during the sleep window."
            ::= { wmanIf2mBsSsSleepModeStatisticsEntry 4 }

    wmanIf2mBsSsSleepWindowTimeStamp OBJECT-TYPE
            SYNTAX      DateAndTime
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                "This is the time when sleep window is started in seconds.
                 The definition of time is as in IETF RFC 868."
            ::= { wmanIf2mBsSsSleepModeStatisticsEntry 5 }

    wmanIf2mBsFm OBJECT IDENTIFIER ::= { wmanIf2mBsObjects 3 }

    wmanIf2mBsSm OBJECT IDENTIFIER ::= { wmanIf2mBsObjects 4 }

    wmanIf2mBsAm OBJECT IDENTIFIER ::= { wmanIf2mBsObjects 5 }

    --
    -- wmanIf2mSsObjects - containing tables and objects to be implemented in
    -- the Mobile station
    --
    -- wmanIf2mSsCm contain the Mobile Station Configuration Management
    -- objects
    --
    wmanIf2mSsCm OBJECT IDENTIFIER ::= { wmanIf2mSsObjects 1 }

    wmanIf2mSsPm OBJECT IDENTIFIER ::= { wmanIf2mSsObjects 2 }

    wmanIf2mSsFm OBJECT IDENTIFIER ::= { wmanIf2mSsObjects 3 }

    wmanIf2mSsSm OBJECT IDENTIFIER ::= { wmanIf2mSsObjects 4 }

    wmanIf2mSsAm OBJECT IDENTIFIER ::= { wmanIf2mSsObjects 5 }
```

```
--
-- wmanIf2mCommonObjects - containing tables and objects to be
-- implemented in the Mobile station
--
-- wmanIf2mCmnCm contain the Mobile Station Configuration Management
-- objects
--
wmanIf2mCmnCm OBJECT IDENTIFIER ::= { wmanIf2mCommonObjects 1 }

wmanIf2mCmnPm OBJECT IDENTIFIER ::= { wmanIf2mCommonObjects 2 }

wmanIf2mCmnFm OBJECT IDENTIFIER ::= { wmanIf2mCommonObjects 3 }

wmanIf2mCmnSm OBJECT IDENTIFIER ::= { wmanIf2mCommonObjects 4 }

wmanIf2mCmnAm OBJECT IDENTIFIER ::= { wmanIf2mCommonObjects 5 }

END
```