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Title	**OFDMA PHY MIB Object**	
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Re:	802.16 Letter ballot #16	
Abstract	This contribution defines the wmanIfCmnOfdmaPhy MIB object for the OFDMA PHY parameters as part of the general management database for WirelessMAN.	
Purpose	Adopt into working draft P80216f_D1	
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OFDMA PHY MIB Object

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1. General

This contribution defines the wmanIfCmnOfdmaPhy MIB object for the OFDMA PHY parameters as part of the general management database for WirelessMAN.

2. Specific changes

[Add new section 5.3.5]

5.3.5 wmanIfCmnOfdmaPhy

wmanIfOfdmaPhy is a group containing objects specific to OFDMA PHY.

5.3.5.1 wmanIfOfdmaUplinkChannelTable

This table contains the uplink channels that the BS is able to receive. In the SS, this table should have an entry indicating the uplink channel that the SS can transmit. Each entry contains the parameters needed to describe uplink channel descriptor as defined in section 11, Table 349 and 353 of IEEE 802.16-2004 standard.

5.3.5.2 wmanIfOfdmaDownlinkChannelTable

This table contains the downlink channels that the BS is able to transmit. In the SS, this table should have an entry indicating the downlink channel that the SS can receive. Each entry contains the parameters needed to describe downlink channel descriptor as defined in section 11, Table 358 and 363 of IEEE 802.16-2004 standard.

5.3.5.3 wmanIfOfdmaUcdBurstProfileTable

Each entry in this table contains the parameters needed for the UCD burst profile as defined in section 11, Table 357 of IEEE 802.16-2004 standard.

5.3.5.4 wmanIfOfdmaDcdBurstProfileTable

Each entry in this table contains the parameters needed for the UCD burst profile as defined in section 11, Table 363 of IEEE 802.16-2004 standard.

[Add to the end of section 6, before the 'END' tag]

```
--
-- wmanIfCmnOfdmaPhy contain the OFDMA PHY objects that are common to both
-- Base Station and Subscriber Station. When the objects are implemented
-- in the BS, they should have the read-write access. When the objects
-- are implemented the SS, they should have the read-only access.
--
wmanIfCmnOfdmaPhy OBJECT IDENTIFIER ::= { wmanIfCommonObjects 4 }

wmanIfCmnOfdmaUplinkChannelTable OBJECT-TYPE
        SYNTAX       SEQUENCE OF WmanIfCmnOfdmaUplinkChannelEntry
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
            "This table contains UCD channel attributes, defining the
            transmission characteristics of uplink channels"
        REFERENCE
            "Section 11.3.1, table 349 and 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaPhy 1 }

wmanIfCmnOfdmaUplinkChannelEntry OBJECT-TYPE
        SYNTAX       WmanIfCmnOfdmaUplinkChannelEntry
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
            "This table provides one row for each uplink channel of multi-
            sector BS, and is indexed by BS ifIndex. An entry in this table
            exists for each ifEntry of BS with an ifType of propBWAp2Mp.
            The objects in each entry will be implemented as read-create in BS
            and read-only in SS."
        INDEX { ifIndex }
        ::= { wmanIfCmnOfdmaUplinkChannelTable 1 }

WmanIfCmnOfdmaUplinkChannelEntry ::= SEQUENCE {
        wmanIfCmnOfdmaCtBasedResvTimeout        INTEGER,
        wmanIfCmnOfdmaBwReqOppSize              INTEGER,
        wmanIfCmnOfdmaRangReqOppSize            INTEGER,
        wmanIfCmnOfdmaUplinkCenterFreq          INTEGER,
        wmanIfCmnOfdmaInitRngCodes              INTEGER,
        wmanIfCmnOfdmaPeriodicRngCodes          INTEGER,
        wmanIfCmnOfdmaBWReqCodes                INTEGER,
        wmanIfCmnOfdmaPerRngBackoffStart        INTEGER,
        wmanIfCmnOfdmaPerRngBackoffStartEnd     INTEGER,
        wmanIfCmnOfdmaStartOfRngCodes           INTEGER,
        wmanIfCmnOfdmaPermutationBase           INTEGER,
        wmanIfCmnOfdmaULAllocSubchBitmap        OCTET STRING,
        wmanIfCmnOfdmaOptPermULAllocSubchBitmap OCTET STRING,
```

```
        wmanIfCmnOfdmaBandAMCAllocThreshold     INTEGER,
        wmanIfCmnOfdmaBandAMCReleaseThreshold   INTEGER,
        wmanIfCmnOfdmaBandAMCAllocTimer         INTEGER,
        wmanIfCmnOfdmaBandAMCReleaseTimer       INTEGER,
        wmanIfCmnOfdmaBandStatRepMAXPeriod      INTEGER,
        wmanIfCmnOfdmaBandAMCRetryTimer         INTEGER,
        wmanIfCmnOfdmaSafetyChAllocThreshold    INTEGER,
        wmanIfCmnOfdmaSafetyChReleaseThreshold  INTEGER,
        wmanIfCmnOfdmaSafetyChAllocTimer        INTEGER,
        wmanIfCmnOfdmaSafetyChReleaseTimer      INTEGER,
        wmanIfCmnOfdmaBinStatRepMAXPeriod       INTEGER,
        wmanIfCmnOfdmaSafetyChaRetryTimer       INTEGER,
        wmanIfCmnOfdmaHARQAackDelayULBurst      INTEGER,
        wmanIfCmnOfdmaCQICHBandAMCTranaDelay    INTEGER,
        wmanIfCmnOfdmaUplinkChannelRowStatus    RowStatus
        }

wmanIfCmnOfdmaCtBasedResvTimeout OBJECT-TYPE
        SYNTAX       INTEGER (1..255)
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "The number of UL-MAPs to receive before contention-based
            reservation is attempted again for the same connection."
        REFERENCE
            "Section 11.3.1, table 278, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 1 }

wmanIfCmnOfdmaBwReqOppSize OBJECT-TYPE
        SYNTAX       INTEGER (1..65535)
        UNITS        "PS"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Size (in units of PS) of PHY payload that SS may use to format
            and transmit a bandwidth request message in a contention request
            opportunity. The value includes all PHY overhead as well as
            allowance for the MAC data the message may hold."
        REFERENCE
            "Section 11.3.1, table 278, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 2 }

wmanIfCmnOfdmaRangReqOppSize OBJECT-TYPE
        SYNTAX       INTEGER (1..65535)
        UNITS        "PS"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Size (in units of PS) of PHY payload that SS may use to format
            and transmit a RNG-REQ message in a contention request
            opportunity. The value includes all PHY overhead as well as
            allowance for the MAC data the message may hold and the maxiumum
            SS/BS roundtrip propagation delay."
        REFERENCE
```

```
            "Section 11.3.1, table 278, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmUplinkChannelEntry 3 }

wmanIfCmnOfdmaUplinkCenterFreq OBJECT-TYPE
        SYNTAX      INTEGER
        UNITS       "KHz"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " Uplink center frequency (KHz)"
        REFERENCE
            "Section 11.3.1, table 278, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 4 }

wmanIfCmnOfdmaInitRngCodes OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Number of initial ranging CDMA codes. Possible values are 0-255.
            The     total     number     of     wmanIfCmnOfdmaInitRngCodes,
            wmanIfCmnOfdmaPeriodicRngCodes and wmanIfCmnOfdmaBWReqCodes shall
            be equal or less than 256."
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        DEFVAL      { 30 }
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 5 }

wmanIfCmnOfdmaPeriodicRngCodes OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Number of periodic ranging CDMA codes. Possible values are 0-255.
            The     total     number     of     wmanIfCmnOfdmaInitRngCodes,
            wmanIfCmnOfdmaPeriodicRngCodes and wmanIfCmnOfdmaBWReqCodes shall
            be equal or less than 256."
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        DEFVAL      { 30 }
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 6 }

wmanIfCmnOfdmaBWReqCodes OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Number of bandwidth request codes. Possible values are 0-255. The
            total        number        of        wmanIfCmnOfdmaInitRngCodes,
            wmanIfCmnOfdmaPeriodicRngCodes and wmanIfCmnOfdmaBWReqCodes shall
            be equal or less than 256."
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        DEFVAL      { 30 }
```

```
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 7 }

    wmanIfCmnOfdmaPerRngBackoffStart OBJECT-TYPE
        SYNTAX      INTEGER (0..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Initial backoff window size for periodic ranging contention,
            expressed as a power of 2. Range: 0-15 (the highest order bits
            shall be unused and set to 0)."
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        DEFVAL      { 0 }
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 8 }

    wmanIfCmnOfdmaPerRngBackoffEnd OBJECT-TYPE
        SYNTAX      INTEGER (0..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Final backoff window size for periodic ranging contention,
            expressed as a power of 2. Range: 0-15 (the highest order bits
            shall be unused and set to 0)."
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        DEFVAL      { 15 }
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 9 }

    wmanIfCmnOfdmaStartOfRngCodes OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Indicates the starting number, S, of the group of codes used for
            this uplink.All the ranging codes used on this uplink will be
            between S and ((S+N+M+L) mod 256). Where, N is the number of
            initial-ranging codes M is the number of periodic-ranging codes L
            is the number of bandwidth-request codes The range of values is
            0 ≤ S ≤ 255"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        DEFVAL      { 0 }
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 10 }

    wmanIfCmnOfdmaPermutationBase OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "Determines the UL_IDcell parameter for the subcarrier permutation
            to be used on this uplink channel"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        DEFVAL      { 0 }
```

```
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 11 }

wmanIfCmnOfdmaULAllocSubchBitmap OBJECT-TYPE
        SYNTAX       OCTET STRING (SIZE (9))
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " This is a bitmap describing the sub-channels allocated to the
            segment in the UL, when using the uplink PUSC permutation. The LSB
            of the first byte shall corrspond to subchannel 0. For any bit
            that is not set, the corresponding subchannel shall not be used by
            the SS on that segment"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 12 }

wmanIfCmnOfdmaOptPermULAllocSubchBitmap OBJECT-TYPE
        SYNTAX       OCTET STRING (SIZE (13))
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " This is a bitmap describing the sub-channels allocated to the
            segment in the UL, when using the uplink optional PUSC permutation
            (see 8.4.6.2.5 in IEEE 802.16-2004). The LSB of the first byte
            shall correspond to subchannel 0. For any bit that is not set, the
            corresponding subchannel shall not be used by the SS on that
            segment"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 13 }

wmanIfCmnOfdmaBandAMCAllocThreshold OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "dB"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " dB unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 14 }

wmanIfCmnOfdmaBandAMCReleaseThreshold OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "dB"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " dB unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 15 }

wmanIfCmnOfdmaBandAMCAllocTimer OBJECT-TYPE
```

```
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 16 }

wmanIfCmnOfdmaBandAMCReleaseTimer OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 17 }

wmanIfCmnOfdmaBandStatRepMAXPeriod OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 18 }

wmanIfCmnOfdmaBandAMCRetryTimer OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 19 }

wmanIfCmnOfdmaSafetyChAllocThreshold OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "dB"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " dB unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 20 }
```

```
wmanIfCmnOfdmaSafetyChReleaseThreshold OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "dB"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " dB unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 21 }

wmanIfCmnOfdmaSafetyChAllocTimer OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 22 }

wmanIfCmnOfdmaSafetyChReleaseTimer OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 23 }

wmanIfCmnOfdmaBinStatRepMAXPeriod OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 24 }

wmanIfCmnOfdmaSafetyChaRetryTimer OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 25 }
```

```
wmanIfCmnOfdmaHARQAackDelayULBurst OBJECT-TYPE
        SYNTAX       INTEGER {oneframeoffset(1),
                              twoframesoffset(2),
                              threeframesoffset(3),
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "1 = one frame offset
             2 = two frames offset
             3 = three frames offset”
        REFERENCE
            Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmUplinkChannelEntry 26 }

wmanIfCmnOfdmaCQICHBandAMCTranaDelay OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "Frame"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Frame unit"
        REFERENCE
            "Section 11.3.1, table 353, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUplinkChannelEntry 27 }

wmanIfCmnOfdmaUplinkChannelRowStatus OBJECT-TYPE
        SYNTAX       RowStatus
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "This object is used to create a new row or modify or delete an
            existing row in this table. If the implementator of this MIB has
            choosen not to implement 'dynamic assignment' of profiles, this
            object is not useful and should return noSuchName upon SNMP
            request."
        ::= { wmanIfCmnOfdmUplinkChannelEntry 7 }

wmanIfCmnOfdmaDownlinkChannelTable OBJECT-TYPE
        SYNTAX       SEQUENCE OF WmanIfCmnOfdmaDownlinkChannelEntry
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
            "This table contains DCD channel attributes, defining the
            transmission characteristics of downlink channels"
        REFERENCE
            "Section 11.4.1, Table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmPhy 2 }

wmanIfCmnOfdmaDownlinkChannelEntry OBJECT-TYPE
        SYNTAX       WmanIfCmnOfdmaDownlinkChannelEntry
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
```

```
            "This table provides one row for each downlink channel of multi-
            sector BS, and is indexed by BS ifIndex. An entry in this table
            exists for each ifEntry of BS with an ifType of propBWAp2Mp. The
            objects in each entry will be implemented as read-create in BS and
            read-only in SS."
        INDEX { ifIndex }
        ::= { wmanIfCmnOfdmDownlinkChannelTable 1 }

WmanIfCmnOfdmaDownlinkChannelEntry ::= SEQUENCE {
        wmanIfCmnOfdmaBsEIRP                    INTEGER,
        wmanIfCmnOfdmaChannelNumber             INTEGER,
        wmanIfCmnOfdmaTTG                       INTEGER,
        wmanIfCmnOfdmaRTG                       INTEGER,
        wmanIfCmnOfdmaInitRngMaxRSS             INTEGER,
        wmanIfCmnOfdmaChSwitchFrameNmr          INTEGER,
        wmanIfCmnOfdmaDownlinkCenterFreq        INTEGER,
        wmanIfCmnOfdmaBsId                      OCTET STRING,
        wmanIfCmnOfdmaMacVersion                INTEGER,
        wmanIfCmnOfdmaFrameDurationCode         INTEGER,
        wmanIfCmnOfdmaFrameNumber               INTEGER,
        wmanIfCmnOfdmaSizeCQICH_IDField         INTEGER,
        wmanIfCmnOfdmaHARQAackDelayBurst        INTEGER,
        wmanIfCmnOfdmaDownlinkChannelRowStatus  RowStatus
        }

wmanIfCmnOfdmaBsEIRP OBJECT-TYPE
        SYNTAX       INTEGER (0..65535)
        UNITS        "dbM"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Signed in units of 1 dBM."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 1 }

wmanIfCmnOfdmaChannelNumber OBJECT-TYPE
        SYNTAX       INTEGER (1..255)
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Downlink channel number as defined in 8.5. Used for license-
            exempt operation only."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 2 }

wmanIfCmnOfdmaTTG OBJECT-TYPE
        SYNTAX       INTEGER (0..255)
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            " Transmit / Receive Transition Gap."
        REFERENCE
```

```
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 3 }

    wmanIfCmnOfdmaRTG OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " Receive / Transmit Transition Gap."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 4 }

    wmanIfCmnOfdmaInitRngMaxRSS OBJECT-TYPE
        SYNTAX      INTEGER (0..65535)
        UNITS       "dbM"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " Initial Ranging Max. Received Signal Strength at BS Signed in
            units of 1 dBm."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 5 }

    wmanIfCmnOfdmaChSwitchFrameNmr OBJECT-TYPE
        SYNTAX      INTEGER (0..16777215)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " Channel switch frame number as defined in 6.4.14.7, Used for
            license-exempt operation only."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 6 }

    wmanIfCmnOfdmaDownlinkCenterFreq OBJECT-TYPE
        SYNTAX      INTEGER
        UNITS       "KHz"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " Downlink center frequency (kHz)."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 7 }

    wmanIfCmnOfdmaBsId OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(6))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " Base station ID."
        REFERENCE
```

```
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 8 }

    wmanIfCmnOfdmaMacVersion OBJECT-TYPE
        SYNTAX      INTEGER {ieee802Dot16-2001(1),
                             ieee802Dot16c-2002(2),
                             ieee802Dot16a-2003(3),
                             ieee802Dot16-2004(4)}
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " This parameter specifies the version of 802.16 to which the
            message originator conforms."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 9 }

    wmanIfCmnOfdmaFrameDurationCode OBJECT-TYPE
        SYNTAX      INTEGER {AASGap(0)
                             duration2ms(1)
                             duration2dot5ms(2),
                             duration4ms(3),
                             duration5ms(4),
                             duration8ms(5),
                             duration10ms(6),
                             duration12dot5ms(7),
                             duration20ms(8)}
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " The duration of the frame. The frame duration code values are
            specified in Table 272."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16/2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 10 }

    wmanIfCmnOfdmaFrameNumber OBJECT-TYPE
        SYNTAX      INTEGER (0..16777215)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            " The number of frame containing the DCD message."
        REFERENCE
            "Section 11.4.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 11 }

    wmanIfCmnOfdmaSizeCQICH_IDField OBJECT-TYPE
        SYNTAX      INTEGER {threebits(1),
                             fourbits(2),
                             fivebits(3),
                             sixbits(4),
                             sevenbits(5),
                             eightbits(6),
                             ninebits(7),
```

```
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "0 = Reserved
             1 = 3 bits
             2 = 4 bits
             3 = 5 bits
             4 = 6 bits
             5 = 7 bits
             6 = 8 bits
             7 = 9 bits
             8...255 = Reserved”
        REFERENCE
            Section 11.3.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 13 }

wmanIfCmnOfdmaHARQAackDelayBurst OBJECT-TYPE
        SYNTAX       INTEGER {oneframeoffset(1),
                              twoframesoffset(2),
                              threeframesoffset(3),
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "1 = one frame offset
             2 = two frames offset
             3 = three frames offset”
        REFERENCE
            Section 11.3.1, table 358, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 13 }

wmanIfCmnOfdmaDownlinkChannelRowStatus OBJECT-TYPE
        SYNTAX       RowStatus
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "This object is used to create a new row or modify or delete an
            existing row in this table. If the implementator of this MIB has
            choosen not to implement 'dynamic assignment' of profiles, this
            object is not useful and should return noSuchName upon SNMP
            request."
        ::= { wmanIfCmnOfdmaDownlinkChannelEntry 14 }

wmanIfCmnOfdmaUcdBurstProfileTable OBJECT-TYPE
        SYNTAX       SEQUENCE OF WmanIfCmnOfdmaUcdBurstProfileEntry
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
            "This table contains UCD burst profiles for each uplink channel"
        REFERENCE
            "Section 11.3.1.1, table 288 and 357, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaPhy 3 }

wmanIfCmnOfdmaUcdBurstProfileEntry OBJECT-TYPE
        SYNTAX       WmanIfCmnOfdmaUcdBurstProfileEntry
```

```
        MAX-ACCESS   not-accessible
        STATUS       current
        DESCRIPTION
            "This table provides one row for each UCD burst profile. This
            table is double indexed. The primary index is an ifIndex with an
            ifType of propBWAp2Mp. The secondary index is
            wmanIfCmnOfdmaUcdBurstProfIndex. The objects in each entry will be
            implemented as read-create in BS and read-only in SS."
        INDEX { ifIndex, wmanIfCmnOfdmaUiucIndex }
        ::= { wmanIfCmnOfdmaUcdBurstProfileTable 1 }

WmanIfCmnOfdmaUcdBurstProfileEntry ::= SEQUENCE {
        wmanIfCmnOfdmaUiucIndex                 INTEGER,
        wmanIfCmnOfdmaUplinkFrequency           INTEGER,
        wmanIfCmnOfdmaUcdFecCodeType            INTEGER,
        wmanIfCmnOfdmaRangingDataRatio          INTEGER,
        wmanIfCmnOfdmaNorCOverNOverride         OCTET STRING,
        wmanIfCmnOfdmaUcdBurstProfileRowStatus  RowStatus
        }

wmanIfCmnOfdmaUiucIndex OBJECT-TYPE
        SYNTAX       INTEGER (5..12)
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "The Uplink Interval Usage Code indiates the uplink burst profile
            in the UCD message, and is used along with ifIndex to identify an
            entry in the wmanIfCmnOfdmaUcdBurstProfileTable."
        REFERENCE
            "Section 8.4.5.4.1, in IEEE 802.16/2004"
        ::= { wmanIfCmnOfdmaUcdBurstProfileEntry 1 }

wmanIfCmnOfdmaUplinkFrequency OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "KHz"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "Uplink Frequency (kHz)."
        REFERENCE
            "Section 11.3.1.1, table 357, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUcdBurstProfileEntry 2 }

wmanIfCmnOfdmaUcdFecCodeType OBJECT-TYPE
        SYNTAX       INTEGER {qpskCc1-2(0),
                              qpskCc3-4(1),
                              sixteenQamCc1-2(2),
                              sixteenQamCc3-4(3),
                              sixtyFourQamCc2-3(4),
                              sixtyFourQamCc3-4(5),
                              qpskBtc1-2(6),
                              qpskBtc2-3(7),
                              sixteenQamBtc3-5(8),
                              sixteenQamBtc4-5(9),
```

```
                                sixtyFourQamBtc5-8(10),
                                sixtyFourQamBtc4-5(11),
                                qpskCtc1-2(12),
                                qpskCtc2-3(13),
                                qpskCtc3-4(14),
                                sixteenQamCtc1-2(15)
                                sixteenQamCtc3-4(16),
                                sixtyFourQamCtc2-3(17),
                                sixtyFourQamCtc3-4(18),
                                sixtyFourQamCtc5-6(19),
                                qpskZtCc1-2(20),
                                qpskZtCc3-4(21),
                                sixteenQamZtCc1-2(22)
                                sixteenQamZtCc3-4(23),
                                sixtyFourQamZtCc2-3(24),
                                sixtyFourQamZtCc3-4(25)}
            MAX-ACCESS   read-only
            STATUS       current
            DESCRIPTION
                " 0 = QPSK (CC) 1/2
                  1 = QPSK (CC) 3/4
                  2 = 16-QAM (CC) 1/2
                  3 = 16-QAM (CC) 3/4
                  4 = 64-QAM (CC) 2/3
                  5 = 64-QAM (CC) 3/4
                  6 = QPSK (BTC) 1/2
                  7 = QPSK (BTC) 2/3
                  8 = 16-QAM (BTC) 3/5
                  9 = 16-QAM (BTC) 4/5
                  10 = 64-QAM (BTC) 5/8
                  11 = 64-QAM (BTC) 4/5
                  12 = QPSK (CTC) 1/2
                  13 = QPSK (CTC) 2/3
                  14 = QPSK (CTC) 3/4
                  15 = 16-QAM (CTC) 1/2
                  16 = 16-QAM (CTC) 3/4
                  17 = 64-QAM (CTC) 2/3
                  18 = 64-QAM (CTC) 3/4
                  19 = 64-QAM (CTC) 5/6
                  20 = QPSK (ZT CC) 1/2
                  21 = QPSK (ZT CC) 3/4
                  22= 16-QAM (ZT CC) 1/2
                  23= 16-QAM (ZT CC) 3/4
                  24= 64-QAM (ZT CC) 2/3
                  25= 64-QAM (ZT CC) 3/4
                  26..255 = Reserved”
            REFERENCE
                "Section 11.3.1.1, table 357, in IEEE 802.16-2004"
            ::= { wmanIfCmnOfdmaUcdBurstProfileEntry 3 }

    wmanIfCmnOfdmaRangingDataRatio OBJECT-TYPE
            SYNTAX       INTEGER
            MAX-ACCESS   read-only
            STATUS       current
```

```
        DESCRIPTION
            " Reducing factor in units of 1 dB, between the power used for this
            burst and power should be used for CDMA Ranging."
        REFERENCE
            "Section 11.3.1.1, table 357, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUcdBurstProfileEntry 4 }

wmanIfCmnOfdmaNorCOverNOverride OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE (5))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "This is a list of numbers, where each number is encoded by one
            nibble, and interpeted as a signed integer. The nibbles corrsepond
            in order to the list define by Table 334 in IEEE 802.16-2004
            starting from the second line, such that the LS nibble of the
            first byte corresponds to the second line in the table. The number
            encoded by each nibble represents the difference in normalized C/N
            relative to the previous line in the table"
        REFERENCE
            "Section 11.3.1.1, table 357, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaUcdBurstProfileEntry 5 }

wmanIfCmnOfdmaUcdBurstProfileRowStatus OBJECT-TYPE
        SYNTAX      RowStatus
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "This object is used to create a new row or modify or delete an
            existing row in this table. If the implementator of this MIB has
            choosen not to implement 'dynamic assignment' of profiles, this
            object is not useful and should return noSuchName upon SNMP
            request."
        ::= { wmanIfCmnOfdmaUcdBurstProfileEntry 6 }

wmanIfCmnOfdmaDcdBurstProfileTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF WmanIfOfdmaDcdBurstProfileEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "This table provides one row for each DCD burst profile. This
            table is double indexed. The primary index is an ifIndex with an
            ifType of propBWAp2Mp. The secondary index is wmanIfCmnOfdmDiucIn
            dex."
        ::= { wmanIfCmnOfdmaPhy 4 }

wmanIfCmnOfdmaDcdBurstProfileEntry OBJECT-TYPE
        SYNTAX      WmanIfOfdmaDcdBurstProfileEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            "This table provides one row for each DCD burst profile. This
            table is double indexed. The primary index is an ifIndex with an
            ifType    of    propBWAp2Mp.    The    secondary    index    is
```

```
            wmanIfCmnOfdmDcdBurstProfIndex. The objects in each entry will be
            implemented as read-create in BS and read-only in SS."
        INDEX { ifIndex, wmanIfCmnOfdmaDiucIndex }
        ::= { wmanIfCmnOfdmaDcdBurstProfileTable 1 }

WmanIfOfdmaDcdBurstProfileEntry ::= SEQUENCE {
        wmanIfCmnOfdmaDiucIndex                 INTEGER,
        wmanIfCmnOfdmaDownlinkFrequency         INTEGER,
        wmanIfCmnOfdmaDcdFecCodeType            INTEGER,
        wmanIfCmnOfdmaDiucMandatoryExitThresh   INTEGER,
        wmanIfCmnOfdmaDiucMinEntryThresh        INTEGER,
        wmanIfCmnOfdmaDcdBurstProfileRowStatus  RowStatus
        }

wmanIfCmnOfdmaDiucIndex OBJECT-TYPE
        SYNTAX       INTEGER (1..11)
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "The Downlink Interval Usage Code indiates the downlink burst
            profile in the UCD message, and is used along with ifIndex to
            identify an entry in the wmanIfCmnOfdmaDcdBurstProfileTable."
        REFERENCE
            "Section 8.4.5.3.1, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDcdBurstProfileEntry 1 }

wmanIfCmnOfdmaDownlinkFrequency OBJECT-TYPE
        SYNTAX       INTEGER
        UNITS        "KHz"
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "Downlink Frequency (kHz)."
        REFERENCE
            "Section 11.4.2, table 359, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDcdBurstProfileEntry 2 }

wmanIfCmnOfdmaDcdFecCodeType OBJECT-TYPE
        SYNTAX       INTEGER {qpskCc1-2(0),
                              qpskCc3-4(1),
                              sixteenQamCc1-2(2),
                              sixteenQamCc3-4(3),
                              sixtyFourQamCc2-3(4),
                              sixtyFourQamCc3-4(5),
                              qpskBtc1-2(6),
                              qpskBtc3-4or2-3(7),
                              sixteenQamBtc3-5(8),
                              sixteenQamBtc4-5(9),
                              sixtyFourQamBtc2-3or5-8(10),
                              sixtyFourQamBtc5-6or4-5(11),
                              qpskCtc1-2(12),
                              qpskCtc2-3(13),
                              qpskCtc3-4(14),
                              sixteenQamCtc1-2(15)
```

```
                                sixteenQamCtc3-4(16),
                                sixtyFourQamCtc2-3(17),
                                sixtyFourQamCtc3-4(18),
                                sixtyFourQamCtc5-6(19),
                                qpskZtCc1-2(20),
                                qpskZtCc3-4(21),
                                sixteenQamZtCc1-2(22)
                                sixteenQamZtCc3-4(23),
                                sixtyFourQamZtCc2-3(24),
                                sixtyFourQamZtCc3-4(25)}
            MAX-ACCESS   read-only
            STATUS       current
            DESCRIPTION
                " 0 = QPSK (CC) 1/2
                  1 = QPSK (CC) 3/4
                  2 = 16-QAM (CC) 1/2
                  3 = 16-QAM (CC) 3/4
                  4 = 64-QAM (CC) 2/3
                  5 = 64-QAM (CC) 3/4
                  6 = QPSK (BTC) 1/2
                  7 = QPSK (BTC) 3/4 or 2/3
                  8 = 16-QAM (BTC) 3/5
                  9 = 16-QAM (BTC) 4/5
                  10 = 64-QAM (BTC) 2/3 or 5/8
                  11 = 64-QAM (BTC) 5/6 or 4/5
                  12 = QPSK (CTC) 1/2
                  13 = QPSK (CTC) 2/3
                  14 = QPSK (CTC) 3/4
                  15 = 16-QAM (CTC) 1/2
                  16 = 16-QAM (CTC) 3/4
                  17 = 64-QAM (CTC) 2/3
                  18 = 64-QAM (CTC) 3/4
                  19 = 64-QAM (CTC) 5/6
                  20 = QPSK (ZT CC) 1/2
                  21 = QPSK (ZT CC) 3/4
                  22= 16-QAM (ZT CC) 1/2
                  23= 16-QAM (ZT CC) 3/4
                  24= 64-QAM (ZT CC) 2/3
                  25= 64-QAM (ZT CC) 3/4
                  26..255 = Reserved”
            REFERENCE
                "Section 11.4.2, table 363, in IEEE 802.16-2004"
            ::= { wmanIfCmnOfdmaDcdBurstProfileEntry 3 }

    wmanIfCmnOfdmaDiucMandatoryExitThresh OBJECT-TYPE
            SYNTAX       INTEGER (0..255)
            MAX-ACCESS   read-only
            STATUS       current
            DESCRIPTION
                "DIUC mandatory exit threshold: 0 - 63.75 dB CINR at or below
                where this DIUC can no longer be used and where this change to a
                more robust DIUC is required, in 0.25 dB units."
            REFERENCE
                "Section 11.4.2, table 363, in IEEE 802.16-2004"
```

```
        ::= { wmanIfCmnOfdmaDcdBurstProfileEntry 4 }

wmanIfCmnOfdmaDiucMinEntryThresh OBJECT-TYPE
        SYNTAX       INTEGER (0..255)
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "DIUC minimum entry threshold: 0 - 63.75 dB The minimum CINR
            required to start using this DIUC when changing from a more robust
            DIUC is required, in 0.25 dB units."
        REFERENCE
            "Section 11.4.2, table 363, in IEEE 802.16-2004"
        ::= { wmanIfCmnOfdmaDcdBurstProfileEntry 5 }

wmanIfCmnOfdmaDcdBurstProfileRowStatus OBJECT-TYPE
        SYNTAX       RowStatus
        MAX-ACCESS   read-only
        STATUS       current
        DESCRIPTION
            "This object is used to create a new row or modify or delete an
            existing row in this table. If the implementator of this MIB has
            choosen not to implement 'dynamic assignment' of profiles, this
            object is not useful and should return noSuchName upon SNMP
            request."
        ::= { wmanIfCmnOfdmaDcdBurstProfileEntry 6 }
END
```