Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Proposed ASN.1 code to support new TLVs in MOB_NBR-ADV**
Date Submitted	**2007-03-13**
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Re:	
Abstract	This contribution proposes the text and ASN.1 code in wmanIf2mMib to support new TLVs in MOB_NBR-ADV.
Purpose	Adoption
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1. Introduction

This contribution proposes ASN.1 code in wmanIf2mMib to new TLVs in 11.18 MOB_NBR-ADV management message encodings

2. Proposed changes

2.1 ASN.1 Code Changes

13.2 ASN.1 Definitions of MIB Modules

13.2.3 wmanIf2mMib

[Add the following code to WMAN-IF2m-MIB:]

```
-- XXX
WmanIf2mOfdmaFftSize ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
            "FFT size for OFDMA PHY
             0b000 = 2048
             0b001 = 1024
             0b010 = 512
             0b100 = 128"
        REFERENCE
            "Subclause 11.18.1, Table 384b in IEEE Std 802.16e-2005"
        SYNTAX      INTEGER {fft2048(0),
                             fft1024(1),
                             fft512(2),
                             reserved(3),
                             fft128(4)}

-- XXX
WmanIf2mOfdmaCp ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
            "Cycle prefix for OFDMA PHY
             0b00 = 1/4
             0b01 = 1/8
             0b10 = 1/16
             0b11 = 1/32"
        REFERENCE
            "Subclause 11.18.1, Table 384b in IEEE Std 802.16e-2005"
        SYNTAX      INTEGER {oneForth(0),
                             oneEighth(1),
                             oneSixteenth(2),
                             oneThirtySecond(3)}

-- XXX
WmanIf2mOfdmaFrame ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
            "Frame duration for OFDMA PHY
             0b0000 = 2.0 ms
```

```
                0b0001 = 2.5 ms
                0b0010 = 4 ms
                0b0011 = 5 ms
                0b0100 = 8 ms
                0b0101 = 10 ms
                0b0110 = 12.5 ms
                0b0111 = 20 ms"
            REFERENCE
                "Subclause 11.18.1, Table 384b in IEEE Std 802.16e-2005"
            SYNTAX      INTEGER {twoMs(0),
                                 twoPointFiveMs(1),
                                 fourMs(2),
                                 fiveMs(3),
                                 eightMs(4),
                                 tenMs(5),
                                 twelvePointFiveMs(6),
                                 twentyMs(7)}

    wmanIf2mBsNeighborAdvertizementTable OBJECT-TYPE
            SYNTAX      SEQUENCE OF WmanIf2mBsNeighborAdvertizementEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "This table contains the attributes specific to each neighbor
                 BS for the MOB_NBR-ADV message."
            REFERENCE
                "Subclause 6.3.2.3.47, in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsNeighborAdv 2 }

    wmanIf2mBsNeighborAdvertizementEntry OBJECT-TYPE
            SYNTAX      WmanIf2mBsNeighborAdvertizementEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "This table provides one row for each neighboring BSs, and
                 is indexed by ifIndex and wmanIf2mBsNeighborBsIndex."
            INDEX     { ifIndex, wmanIf2mBsNeighborBsIndex }
            ::= { wmanIf2mBsNeighborAdvertizementTable 1 }

    WmanIf2mBsNeighborAdvertizementEntry::= SEQUENCE {
            wmanIf2mBsNeighborBsIndex               INTEGER,
            wmanIf2mBsNeighborBsId                  WmanIf2mNbrBsId,
            wmanIf2mBsPhyProfileId                  WmanIf2mPhyProfileId,
            wmanIf2mBsFaIndex                       Unsigned32,
            wmanIf2mBsEirp                          INTEGER,
            wmanIf2mBsPreampleSubchIndex            Unsigned32,
            wmanIf2mBsHandoverProcOptimization      WmanIf2mHoProcOptm,
            wmanIf2mBsSchedulingService             WmanIf2mSchedulingSupp,
            wmanIf2mBsChannelBandwidth              INTEGER,
            wmanIf2mBsFftSize                       WmanIf2mOfdmaFftSize,
            wmanIf2mBsCyclicPrefix                  WmanIf2mOfdmaCp,
            wmanIf2mBsFrameDurationCode             WmanIf2mOfdmaFrame,
            wmanIf2mBsMobilityFeatureSupported      WmanIf2mOfdmaMobility,
            wmanIf2mBsNrbBsPagingGroupListIndex     INTEGER,
            wmanIf2BsNeighborAdvertizementRowStatus RowStatus}

    wmanIf2mBsNeighborBsIndex OBJECT-TYPE
            SYNTAX      INTEGER (0 .. 15)
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                "Index to entries in wmanIf2mBsNeighborAdvertizementTable."
            ::= { wmanIf2mBsNeighborAdvertizementEntry 1 }
```

```
wmanIf2mBsNeighborBsId OBJECT-TYPE
        SYNTAX      WmanIf2mNbrBsId
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "The least significant 24 bits of the Base Station ID
             parameter in the DL-MAP message of the Neighbor BS. The
             'Neighbor BSID' field is present only if Bit #1 of
             wmanIf2mBsSkipOptions bitmap is 0."
        ::= { wmanIf2mBsNeighborAdvertizementEntry 2 }

wmanIf2mBsPhyProfileId OBJECT-TYPE
        SYNTAX      WmanIf2mPhyProfileId
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "Aggregated IDs of Co-located FA Indicator, FA Configuration
             Indicator, FFT size, Bandwidth, Operation Mode of the
             starting subchannelization of a frame, and Channel Number."
        REFERENCE
            "Subclause 6.3.2.3.47, Table 109f in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsNeighborAdvertizementEntry 3 }

wmanIf2mBsFaIndex OBJECT-TYPE
        SYNTAX      Unsigned32 (0..255)
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "This field is present only if the faIndexInd bit in
             WmanIf2mPhyProfileId is set to 1. Its definition shall be
             determined by a service provider or a governmental body
             like FCC after the licensed band is determined."
        REFERENCE
            "Subclause 6.3.2.3.47, Table 109f in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsNeighborAdvertizementEntry 4 }

wmanIf2mBsEirp OBJECT-TYPE
        SYNTAX      INTEGER (-128 .. 127)
        UNITS       "dBm"
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "This field is present only if the bsEirpInd bit in
             WmanIf2mPhyProfileId is not set. Otherwise, the BS has the
             same EIRP as the serving BS."
        REFERENCE
            "Subclause 6.3.2.3.47, Table 109f in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsNeighborAdvertizementEntry 5 }

wmanIf2mBsPreampleSubchIndex OBJECT-TYPE
        SYNTAX      Unsigned32 (0 .. 255)
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "SCa and OFDMA PHY - this field defines the PHY specific
                                 preamble.
             OFDM PHY - the 5 LSB contain the active DL subchannel
                        index. The 3 MSB shall be Reserved and set to
                        '0b000'"
        REFERENCE
            "Subclause 6.3.2.3.47, Table 109f in IEEE Std 802.16e-2005"
        ::= { wmanIf2mBsNeighborAdvertizementEntry 6 }

wmanIf2mBsHandoverProcOptimization OBJECT-TYPE
```

```
            SYNTAX      WmanIf2mHoProcOptm
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
                "This field is present only if omitHoProcOptimization bit in
                 WmanIf2mPhyProfileId is not set. Each bit in this field
                 indicates certain reentry message may be omitted."
            REFERENCE
                "Subclause 6.3.2.3.47, Table 109f in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsNeighborAdvertizementEntry 7 }

    wmanIf2mBsSchedulingService OBJECT-TYPE
            SYNTAX      WmanIf2mSchedulingSupp
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
                "This field is present only if omitQosRelatedField bit in
                 WmanIf2mPhyProfileId is not set."
            REFERENCE
                "Subclause 6.3.2.3.47, Table 109f in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsNeighborAdvertizementEntry 8 }

    -- XXX
    wmanIf2mBsChannelBandwidth OBJECT-TYPE
            SYNTAX      INTEGER (0 .. 127)
            UNITS       "125KHz"
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
                "This field indicates the channel BW in units of 125 kHz."
            REFERENCE
                "Subclause 11.18.1 in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsNeighborAdvertizementEntry 9 }

    -- XXX
    wmanIf2mBsFftSize OBJECT-TYPE
            SYNTAX      WmanIf2mOfdmaFftSize
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
                "This field indicates the channel BW in units of 125 kHz
                 for OFDMA PHY."
            REFERENCE
                "Subclause 11.18.1, Table 384b in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsNeighborAdvertizementEntry 10 }

    -- XXX
    wmanIf2mBsCyclicPrefix OBJECT-TYPE
            SYNTAX      WmanIf2mOfdmaCp
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
                "This field indicates the CP for OFDMA PHY."
            REFERENCE
                "Subclause 11.18.1, Table 384b in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsNeighborAdvertizementEntry 11 }

    -- XXX
    wmanIf2mBsFrameDurationCode OBJECT-TYPE
            SYNTAX      WmanIf2mOfdmaFrame
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
                "This field indicates the frame duration for ODMA PHY."
```

```
            REFERENCE
                "Subclause 11.18.1, Table 384b in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsNeighborAdvertizementEntry 12 }

    -- XXX
    wmanIf2mBsMobilityFeatureSupported OBJECT-TYPE
            SYNTAX      WmanIf2mOfdmaMobility
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
                "This field indicates whether the neighbor BS supports
                 mobility features."
            REFERENCE
                "Subclause 6.3.2.3.47, Table 109f in IEEE Std 802.16e-2005"
            ::= { wmanIf2mBsNeighborAdvertizementEntry 13 }

    -- XXX
    wmanIf2mBsNrbBsPagingGroupListIndex OBJECT-TYPE
            SYNTAX      INTEGER (0 .. 65535)
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
              "If idle mode is supported, this index maps to
               wmanIf2mBsPagingGroupListId in wmanIf2mBsPagingGroupsTable
               , and is used to identify the list of paging group IDs,
               assigned to a neighbor BS."
            ::= { wmanIf2mBsNeighborAdvertizementEntry 14 }

    wmanIf2BsNeighborAdvertizementRowStatus OBJECT-TYPE
            SYNTAX      RowStatus
            MAX-ACCESS  read-create
            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."
            ::= { wmanIf2mBsNeighborAdvertizementEntry 15 }
```