Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Proposed text and ASN.1 code to support MOB_PAG-ADV**
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Re:	
Abstract	This contribution proposes the text and ASN.1 code in wmanIf2mMib to support MOB_PAG-ADV message.
Purpose	Adoption
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Table of Content

1

1

1. Introduction

This contribution proposes the text and ASN.1 code in wmanIf2mMib to support MOB_PAG-ADV message.

2. Proposed changes

2.1 wmanIf2mMib Change

13.1.4.1 wmanIf2mBsObjects

13.1.4.1.1 wmanIf2mBsCm

[Change Figure 19 as the following:]

```
                              wmanIf2mBsCm
                                  ├── wmanIf2mBsCapability
                                  │       ├── wmanIf2mBsSsReqCapabilitiesTable
                                  │       ├── wmanIf2mBsSsRspCapabilitiesTable
                                  │       ├── wmanIf2mBsBasicCapabilitiesTable
                                  │       └── wmanIf2mBsCapabilitiesConfigTable
                                  ├── wmanIf2mBsPowerSavingMode
                                  │       ├── wmanIf2mBsSsPowerSavingStatusTable
                                  │       └── wmanIf2mBsSsPowerSavingClassesTable
                                  ├── wmanIf2mBsNeighborAdv
                                  │       ├── wmanIf2mBsNeighborAdvCommonTable
                                  │       ├── wmanIf2mBsNeighborAdertizementTable
                                  │       ├── wmanIf2mBsNeighborOfdmaUcdTable
                                  │       └── wmanIf2mBsNeighborOfdmaDcdTable
                                  ├── wmanIf2mBsPaging
                                  │       ├── wmanIf2mBsPagingAdvertizementTable
                                  │       ├── wmanIf2mBsMsPagedTable
                                  │       └── wmanIf2mBsPagingGroupsTable
                                  └── wmanIf2mBsConfigurationTable
```
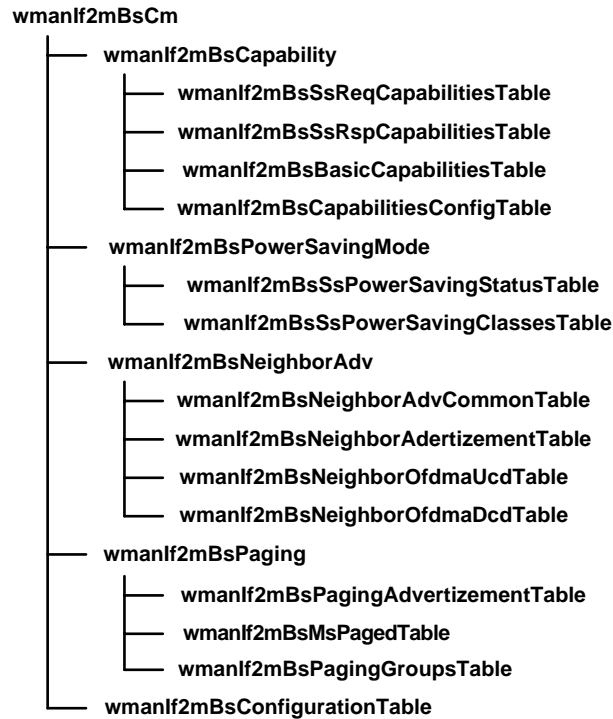
Figure 19—wmanIf2mBsCm structure

[Add the following text to subclause 13.1.4.1.1:]

13.1.4.1.1.4 wmanIf2mBsPaging

13.1.4.1.1.4.1 wmanIf2mBsPagingAdvertizementTable

wmanIf2mBsPagingAdvertizementTable contains the attributes that BS broadcasts in the MOB_PAG-ADV message.

13.1.4.1.1.4.2 wmanIf2mBsMsPagedTable

wmanIf2mBsMsPagedTable contains the MSs that are paged in the MOB_PAG-ADV message.

13.1.4.1.1.4.2 wmanIf2mBsPagingGroupsTable

wmanIf2mBsPagingGroupsTable contains paging group IDs that BS can broadcast in the MOB_PAG-ADV message.

2.2 ASN.1 Code Change

13.2 ASN.1 Definitions of MIB Modules

13.2.4 wmanIf2mMib

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


```
WmanIf2mPagingAction ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
            "Paging action instruction to MS
             0b00 = No Action Required
             0b01 = Perform Ranging to establish location and
                    acknowledge message
             0b10 = Enter Network"
        REFERENCE
            "Subclause 6.3.2.3.56, Table 109p in IEEE Std 802.16e-2005"
        SYNTAX      INTEGER {noAction(0),
                             performRanging(1),
                             enterNetwork(2)}


WmanIf2mSsMacAddrHash ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
          "24 bit SS MAC address hash that is obtained by computing a
           CRC24 on the MS 48-bit MAC address."
        REFERENCE
            "Subclause 6.3.2.3.56, Table 109p in IEEE Std 802.16e-2005"
        SYNTAX      OCTET STRING (SIZE(3))

wmanIf2mBsPaging OBJECT IDENTIFIER ::= { wmanIf2mBsCm 4 }

-- XXX
-- wmanIf2mBsPagingAdvertizementTable
--
wmanIf2mBsPagingAdvertizementTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF WmanIf2mBsPagingAdvertizementEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
            " This table contains the attributes that BS broadcasts in
             the MOB_PAG-ADV message."
        REFERENCE
            "Subclause 6.3.2.3.56, Table 109p in IEEE Std 802.16e-2005"
```

```
1                ::= { wmanIf2mBsPaging 1 }
2
3    wmanIf2mBsPagingAdvertizementEntry OBJECT-TYPE
4            SYNTAX       WmanIf2mBsPagingAdvertizementEntry
5            MAX-ACCESS   not-accessible
6            STATUS       current
7            DESCRIPTION
8                "This table is indexed by ifIndex."
9            INDEX { ifIndex }
10           ::= { wmanIf2mBsPagingAdvertizementTable 1 }
11
12   WmanIf2mBsPagingAdvertizementEntry ::= SEQUENCE {
13           wmanIf2mBsPagingGroupListIndex          INTEGER,
14           wmanIf2mBsPagingRspWindow               INTEGER,
15           wmanIf2BsBsToPagingAdvRowStatus         RowStatus}
16
17   wmanIf2mBsPagingGroupListIndex OBJECT-TYPE
18           SYNTAX       INTEGER (0 .. 65535)
19           MAX-ACCESS   read-create
20           STATUS       current
21           DESCRIPTION
22             "wmanIf2mBsPagingGroupListIndex maps to
23              wmanIf2mBsPagingGroupListId in wmanIf2mBsPagingGroupsTable
24              , and is used to identify the list of paging group IDs."
25           ::= { wmanIf2mBsPagingAdvertizementEntry 1 }
26
27   wmanIf2mBsPagingRspWindow OBJECT-TYPE
28           SYNTAX       INTEGER (0 .. 255)
29           UNITS        "Frames"
30           MAX-ACCESS   read-create
31           STATUS       current
32           DESCRIPTION
33             "OFDMA-PHY specific parameter used to indicate the time
34              window during which the MS shall transmit the CDMA code at
35              the transmission opportunity assigned in the CDMA code and
36              transmission opportunity assignment TLV. The start of the
37              window is the next frame after receiving the MOB_PAG-ADV."
38           REFERENCE
39              "Subclause 11.17.2 in IEEE Std 802.16e-2005"
40           ::= { wmanIf2mBsPagingAdvertizementEntry 2 }
41
42   wmanIf2BsBsToPagingAdvRowStatus OBJECT-TYPE
43           SYNTAX        RowStatus
44           MAX-ACCESS    read-create
45           STATUS        current
46           DESCRIPTION
47               "This object is used to ensure that the write, create,
48                delete operation to multiple columns is guaranteed to
49                be treated as atomic operation by agent."
50           ::= { wmanIf2mBsPagingAdvertizementEntry 3 }
51
52   wmanIf2mBsMsPagedTable OBJECT-TYPE
53           SYNTAX       SEQUENCE OF WmanIf2mBsMsPagedEntry
54           MAX-ACCESS   not-accessible
55           STATUS       current
56           DESCRIPTION
57             "This table contains the MSs that are paged in the
58              MOB_PAG-ADV message."
59           REFERENCE
60              "Subclause 6.3.2.3.56, Table 109p in IEEE Std 802.16e-2005"
61           ::= { wmanIf2mBsPaging 2 }
62
63   wmanIf2mBsMsPagedEntry OBJECT-TYPE
64           SYNTAX       WmanIf2mBsMsPagedEntry
```

```
1              MAX-ACCESS  not-accessible
2              STATUS      current
3              DESCRIPTION
4                  "This table is indexed by wmanIf2mBsSsMacAddress."
5              INDEX { wmanIf2mBsSsMacAddress }
6              ::= { wmanIf2mBsMsPagedTable 1 }
7
8     WmanIf2mBsMsPagedEntry ::= SEQUENCE {
9              wmanIf2mBsSsMacAddrHash                  WmanIf2mSsMacAddrHash,
10             wmanIf2mBsPagingActionCode               WmanIf2mPagingAction,
11             wmanIf2mBsCdmaCodeAndTxOpportunity       INTEGER}
12
13    -- XXX
14    wmanIf2mBsSsMacAddrHash OBJECT-TYPE
15             SYNTAX      WmanIf2mSsMacAddrHash
16             MAX-ACCESS  read-only
17             STATUS      current
18             DESCRIPTION
19               "The hash is obtained by computing a CRC24 on the MS 48-bit
20                  MAC address. The polynomial for the calculation is
21                  0x1864CFB"
22             REFERENCE
23                 "Subclause 6.3.2.3.56, Table 109p in IEEE Std 802.16e-2005"
24             ::= { wmanIf2mBsMsPagedEntry 1 }
25
26    -- XXX
27    wmanIf2mBsPagingActionCode OBJECT-TYPE
28             SYNTAX      WmanIf2mPagingAction
29             MAX-ACCESS  read-only
30             STATUS      current
31             DESCRIPTION
32               "Paging action instruction to MS."
33             REFERENCE
34                 "Subclause 6.3.2.3.56, Table 109p in IEEE Std 802.16e-2005"
35             ::= { wmanIf2mBsMsPagedEntry 2 }
36
37    -- XXX
38    wmanIf2mBsCdmaCodeAndTxOpportunity OBJECT-TYPE
39             SYNTAX      INTEGER (0 .. 65535)
40             MAX-ACCESS  read-only
41             STATUS      current
42             DESCRIPTION
43                 "OFDMA-PHY specific parameter used to indicate CDMA code
44                  and transmission opportunity assigned to one or more MSs
45                  being paged in this message. One CDMA code and
46                  transmission opportunity assignment in the TLV corresponds
47                  to one MS paged. If wmanIf2mBsPagingActionCode is 'No
48                  Action Required', then it should return 0."
49             REFERENCE
50                 "Subclause 11.17.1 in IEEE Std 802.16e-2005"
51             ::= { wmanIf2mBsMsPagedEntry 3 }
52
53    -- XXX
54    wmanIf2mBsPagingGroupsTable OBJECT-TYPE
55             SYNTAX      SEQUENCE OF WmanIf2mBsPagingGroupsEntry
56             MAX-ACCESS  not-accessible
57             STATUS      current
58             DESCRIPTION
59                 "This table contains paging group IDs that BS can broadcast
60                  in the MOB_PAG-ADV message."
61             REFERENCE
62                 "Table 109f and Table 358 in IEEE Std 802.16e-2005"
63             ::= { wmanIf2mBsPaging 3 }
64
```

```
1    wmanIf2mBsPagingGroupsEntry OBJECT-TYPE
2            SYNTAX      WmanIf2mBsPagingGroupsEntry
3            MAX-ACCESS  not-accessible
4            STATUS      current
5            DESCRIPTION
6                "This table is doubled indexed by
7                 wmanIf2mBsPagingGroupListId and wmanIf2mBsPagingGroupId.
8                 Each entry contains a paging group ID. If multiple paging
9                 group IDs are to be formed in a list that will be
10                broadcast by a BS, these paging group IDs should be
11                identified by the same wmanIf2mBsPagingGroupListId value."
12           INDEX { wmanIf2mBsPagingGroupListId,
13               wmanIf2mBsPagingGroupId }
14           ::= { wmanIf2mBsPagingGroupsTable 1 }
15
16   WmanIf2mBsPagingGroupsEntry ::= SEQUENCE {
17           wmanIf2mBsPagingGroupListId            INTEGER,
18           wmanIf2mBsPagingGroupId                INTEGER,
19           wmanIf2BsBsToPageGroupsRowStatus       RowStatus}
20
21   -- XXX
22   wmanIf2mBsPagingGroupListId OBJECT-TYPE
23           SYNTAX      INTEGER (0 .. 65535)
24           MAX-ACCESS  not-accessible
25           STATUS      current
26           DESCRIPTION
27               "The index to the wmanIf2mBsPagingGroupsTable."
28           REFERENCE
29               "Table 109f in IEEE Std 802.16e-2005"
30           ::= { wmanIf2mBsPagingGroupsEntry 1 }
31
32   -- XXX
33   wmanIf2mBsPagingGroupId OBJECT-TYPE
34           SYNTAX      INTEGER (0 .. 65535)
35           MAX-ACCESS  not-accessible
36           STATUS      current
37           DESCRIPTION
38               "This field indicates the ID of the paging group."
39           REFERENCE
40               "Subclause 6.3.2.3.47, Table 109f in IEEE Std 802.16e-2005"
41           ::= { wmanIf2mBsPagingGroupsEntry 2 }
42
43   wmanIf2BsBsToPageGroupsRowStatus OBJECT-TYPE
44           SYNTAX         RowStatus
45           MAX-ACCESS     read-create
46           STATUS         current
47           DESCRIPTION
48               "This object is used to ensure that the write, create,
49                delete operation to multiple columns is guaranteed to
50                be treated as atomic operation by agent."
51           ::= { wmanIf2mBsPagingGroupsEntry 3 }
52
53
54
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```

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