Project	**IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>**
Title	**Inconsistencies and redundancies in WMAN-IF2-MIB and WMAN-IF2M-MIB**
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Re:	IEEE 802.16 Letter Ballot Recirculation #25b, on P802.16i/D3, as announced in IEEE 802.16-07/035
Abstract	P802.16i/D3 requires a BS that supports mobility to implement two MIBs: the WMAN-IF2-MIB and the WMAN-IF2M-MIB. However, these two MIBs are not fully consistent with respect to information related to service flows. The current contribution describes this problem and proposes a remedy.
Purpose	Adopt proposed remedy.
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Inconsistencies and redundancies in WMAN-IF2-MIB and WMAN-IF2M-MIB

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Background

Section 9.3.3 in P802.16i/D3 requires a BS that supports mobility to implement bothe the WMAN-IF2-MIB and the WMAN-IF2M-MIB module. This creates a problem for the tables related to Service Flows.

In the wmanIf2BsProvisionedSfTable in WMAN-IF2-MIB, Service Flow Identifiers (SF ID) are treated as if they were globally unique. The entries of wmanIf2BsProvisionedSfTable, which are indexed by wmanIf2BsSfId, have pointers to wmanIf2BsServiceClassTable. By implication, if two service flows assigned to two different MS share the same SF ID, the two service flows must share the same service class. In a mobile network, this is not necessarily the case, as an SF ID may be assigned by a BS other than the serving BS, and the service class associated with an SF ID may differ at different BS.

Note that there is a second service flow table in WMAN-IF2-MIB, which is the **WmanIf2CmnCpsServiceFlowTable** indexed by both the SF IDs and the SS Mac Address. In addition, the WMAN-IF2M-MIB has a third table, which is **wmanIf2mBsServiceFlowTable** also indexed by the SF ID and the MAC address. On the SS side, the service flows are maintained by the **wmanIf2mSsServiceFlowTable**. For a BS that supports mobility only **wmanIf2mBsServiceFlowTable** would need to be implemented, and likewise for an MS, only the **wmanIf2mSsServiceFlowTable** would be need.

Proposed Solution

The proposed solution is to deprecate managed objects in WMAN-IF2-MIB that do not need to be implemented by a BS that supports mobility, since objects in WMAN-IF2M-MIB adequately replace them. According to RFC2578, the keyword “deprecated”, as opposed to the keyword “obsolete”, does not preclude an implementation of deprecated managed objects:

> “`While the value "deprecated" also indicates an obsolete definition, it permits new/continued implementation in order to foster interoperability with older/existing implementations.`” (ref. RFC2578)

Hence, a deprecation of the managed objects will allow BSs that do not support mobility to continue to implement these objects. Since the problem with indexing service flows by the SF ID alone and not by SF ID and MS MAC Address only exists in mobile networks, it is not necessary to try to correct the tables in the fixed MIB.

Proposed Text Changes

In section 13.1.3.1.1.1 make the following changes:

13.1.3.1.1.1 wmanIf2BsProvisionedSfTable
wmanIf2BsProvisionedSfTable contains provisioned service flow profiles for SSs, and pointers to wmanIf2BsServiceClassTable for QoS parameters.wmanIf2BsClassifierRuleTable includes pointers to this table.
Rationale: This reflects more accurately section 13.2.2.

In section 13.1.4.1.1.6 make the following changes:

13.1.4.1.1.6 wmanIf2mBsServiceFlowTable
wmanIf2mBsServiceFlowTable contains the service flow database. When an SS first registers at the BS, the BS should download the SS' service flow profile (e.g. QoS parameter set and classification rules) from the home AAA server.
For portable or mobile SS, when the SS hands over to another BS, as part of the context transfer, the serving BS should transfer the SS’ service flows to the target BS. After the handover, the old serving BS shall change the wmanIf2mBsServiceflowState of the service flows previously used by the SS to 'inactive'.

The BS may cleanup wmanIf2BsServiceFlowTable periodically, by removing those entries with wmanIf2BsServiceflowState = 'inactive'.

Rationale: The service flows assigned to an SS may change during a session.

In section 13.1.4.2.1.2 make the following changes:

13.1.4.2.1.2 wmanIf2mSsServiceFlowTable

wmanIf2mSsServiceFlowTable contains the service flow database.

Rationale: Deleted text is not needed and is not accurate since service flows may be added, changed or deleted dynamically.

In section 13.2.2, deprecate the following managed objects:

`wmanIf2BsProvisionedSfTable`

`wmanIf2BsProvisionedForSfTable`

`wmanIf2BsServiceClassTable`