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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** | |
| Title | ***Proposal for MM-STAT-REP message in multimode operation*** | |
| Date Submitted | **2012-03-13** | |
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| Re: | “IEEE 802.16-12-0142,” in response to Letter Ballot #37 on P802.16n/D1 | |
| Abstract | This contribution is a proposal related to multimode operation in IEEE 802.16n/D1 to be consistent with P802.16.1a/D1 | |
| Purpose | To discuss and adopt the proposed text in the IEEE 802.16n/D1 | |
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**Proposal for MM-STAT-REP message in multimode operation**

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# Introduction

IEEE 802.16n/D1 describes MM-STAT-REP (multimode status report) message to inform the multimode HR-MS’ status information such as the battery level to the superordinate HR-BS. In this contribution, we propose the additional fields and operations for the MM-STAT-REP message which is transmitted by multimode HR-MS.

# Proposed Texts

Note:

The text in **BLACK** color: the existing text in the p802.16n/D1

The text in **~~RED~~** color: the removal of existing p802.16n/D1

The text in **BLUE** color: the new text added to the p802.16n/D1

[-------------------------------------------------Start of Text Proposal---------------------------------------------------]

**[*Remedy1: Insert the following text in Table 53 of section 6.3.2.3 of p802.16n/D1.*]**

Table 53 — MAC management messages

| Type | Message Name | Message Description | Connection |
| --- | --- | --- | --- |
| … | … | … | … |
| TBD | MM-STAT-REP | Multimode Status Report message |  |
| … | … | … | … |

**[*Remedy2: Insert the following sub-section in section 6.3.2.3.98 of p802.16n/D1.*]**

**6.3.2.3.98.xx MM-STAT-REP (multimode status report) message**

Multimode HR-MS transmits MM-STAT-REP message for the purpose as follows:

- when the battery level or the maximum capacity of battery changes

- when the MS is plugged in a charger

- when the trigger condition is met

**Table xxx – MM-STAT-REP message format**

|  |  |  |
| --- | --- | --- |
| **Syntax** | **Size**  **(bit)** | **Notes** |
| MM-STAT-REP message format () { | — | — |
| Management Message Type = [TBD] | 8 | — |
| MS Battery Status | 1 | 0b0: The HR-MS is plugged into a power source.  0b1: The HR-MS is not plugged into a power source. |
| MS Battery Level | 3 | 0b000: Battery level is > 75% and ≤ 100%  0b001: Battery level is > 50% and ≤ 75%  0b010: Battery level is > 25% and ≤ 50%  0b011: Battery level is > 5 % and ≤ 25%  0b100: Battery level is below 5%  0b101–0b111: Reserved |
| Max Capacity of MS Battery | 4 | 0b0000: Reserved  0b0001~0b1110: 0.1Wh~1.4Wh (round off to the nearest whole number)  0b1111: The maximum capacity of battery is more than 1.5Wh or the battery is charging. |
| } |  |  |

**[*Remedy3: Insert the following text in section 16.1.3.1 of p802.16n/D1.*]**

**16.1.3.1 Proactive Operation**

A superordinate HR-BS may select a target HR-MS among its subordinate HR-MSs which are capable of role changing to HR-BS, according to the measured signal power at HR-BS and/or subordinate HR-MS’ status information such as the battery level. The superordinate HR-BS may transmit MM-ADV message with trigger condition for which the subordinate HR-MSs capable of role changing to HR-BS shall report its status information. When the trigger condition is met, the subordinate HR-MS capable of role changing to HR-BS may report its status information to the superordinate HR-BS via MM-STAT-REP message as described in 6.3.2.3.98.xx.

[-------------------------------------------------End of Text Proposal----------------------------------------------------]