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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** | |
| Title | **Clarification on MAC control messages for multimode operation over IEEE 802.16n** | |
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| Re: | In response to Sponsor Ballot on P802.16n | |
| Abstract | Comments on MAC control messages for multimode operation over IEEE 802.16n | |
| Purpose | To discuss and adopt the proposed text in the draft amendment document on GRIDMAN | |
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**Clarification on MAC control messages for multimode operation over IEEE 802.16n**

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# Introduction

In this contribution, we suggest the corrections of typos and modification of the sentences related to multimode operation over IEEE P802.16n/D5.

* Remedy1: We modified the description of syntax, which is “Maximum Capacity of AMS Battery” shown in MM-STAT-REP message. Ah is a unit generally used for expressing battery capacity of mobile phone. In this regard, we rewrote the notes of the syntax.
* Remedy2: We modified the descriptions of action code in MM-BS-REQ message to make it clearer.
* Remedy3: For the purpose of clarification, we specified action type value in the sentences.

# References

[1] IEEE P802.16nTM/D5, Air Interface for Broadband Wireless Access Systems - Draft Amendment: Higher Reliability Networks, 2012.

[2] IEEE P802.16.1aTM/D5, WirelessMAN-Advanced Air Interface for Broadband Access Systems - Draft Amendment: Higher Reliability Networks, 2012.

[3] IEEE Std 802.16™-2012, IEEE Standard for Air Interface for Broadband Wireless Access Systems,” 2012.

[4] IEEE P802.16.1™/D6, IEEE Draft for WirelessMAN-Advanced Air Interface for Broadband Wireless Access Systems, 2012.

# Proposed Text for the 802.16n/D5

Note:

The text in **BLACK** color: the existing text in the 802.16n/D5

The text in **~~RED~~** color: the removal of existing 802.16n/D5

The text in **BLUE** color: the new text added to the 802.16n/D5

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

***[Remedy1: Modify the following text and table in Section 6.3.2.3.99.9 of IEEE P802.16n/D5.]***

***[Line# 14, Page# 22]***

**6.3.2.3.99.9 MM-STAT-REP (multimode status report) message**

…

**Table 229i – MM-STAT-REP message format**

|  |  |  |
| --- | --- | --- |
| **Syntax** | **Size**  **(bit)** | **Notes** |
| MM-STAT-REP message format () { | — | — |
| Management Message Type = 118 | 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: No support  0b110–0b111: Reserved |
| Max Capacity of MS Battery | 4 | 0b0000: No support  ~~0b0001~0b1110: 1Wh~31Wh (round off to the nearest whole number)~~  ~~0b1111: The maximum capacity of battery is more than 32Wh or the battery is charging.~~  0b0001~0b1111: The value shall be increased by 0.2 from 1.0 in unit of Ah. Values outside this range shall be assigned the closest extreme.  Value: 1.0~4.0  Max. Capacity of AMS Battery: Value + 0.2 |
| } |  |  |

***[Remedy2: Modify the following table in Section 6.3.2.3.99.2 of IEEE P802.16n/D5.]***

***[Line# 1, Page# 15]***

…

**6.3.2.3.99.2 MM-BS-REQ (multimode base station request) message**

…

**Table 229b — MM-BS-REQ message format**

|  |  |  |
| --- | --- | --- |
| **Syntax** | **Size**  **(bit)** | **Notes** |
| MM-BS-REQ message format () { | — | — |
| **Management Message Type = 111** | 8 | — |
| Action code | 2 | Used to indicate the purpose of this message.  0b00: Request ~~to transfer~~ HR-BS role to the multimode HR-MS  0b01: ~~Response for~~ Approval of the unsolicited MM-BS-RSP message by the multimode HR-MS.  0b10: ~~Reject for~~ Rejection of the unsolicited MM-BS-RSP message by the multimode HR-MS.  0b11: *Reserved*. |
| … | … | … |

***[Remedy3: Modify the following text in Section 16.1.1.2 of IEEE P802.16n/D5.]***

***[Line# 26, Page# 71]***

**16.1.1.2 Relay link configuration**

…

The HR-BS acting as relay may transmit MM-ADV message with action type = 0b0000 described in 6.3.2.3.99.1 for its subordinate MSs to update PHY/MAC parameter after receiving RCD or RS\_Config-CMD message.

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