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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** |
| Title | **M2MCID Update Information** |
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| Re: | WG Letter Ballot #33a |
| Abstract | This contribution proposes an efficient method for providing M2MCID update information. |
| Purpose | For discussion in 802.16p TG and adoption in to 16p draft |
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**M2MCID Update Information**

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# Introduction

According to the current draft, a BS doesn’t provide M2M mapping between the current M2M ZONE and neighbor M2M Zone. So, an M2M device has to update M2MCID after going into other M2M ZONE. This may induce service interruption while moving across M2M ZONE boundary. The purpose of this contribution is to provide update information for an M2M device to update M2MCID before going across M2M GROUP ZONE without service interruption.

A similar concept was already adopted in 802.16-2005 standard. We propose to re-use the method adopted in 802.16-2005 to minimize standard changes. In 802.16-2005, MCID Preallocation and Transmission Info TLV and MCID Continuity and Transmission Info TLV are used to provide MCID mapping information. Especially, the first one is used to provide information about changes in mapping of current MCIDs in the selected other MBS Zones and the other one is used to provide consistency of MCID’s mapping used in other selected MBS Zones. Unfortunately, we can’t the same parameters for M2M communications because these parameters are included in MOB\_NBR-ADV messages and a BS shall support human type devices as well as M2M device.

In this contribution, we define two additional TLVs for M2M communications but the format of these TLVs are almost same as ones defined for MBS operation.

# Proposed Texts

----------------- Start of the text proposal --------------------------------------------------------------------------------------

[*Remedy 1: Add following texts on page 4, line 33 as follows;*]

BS’s at M2M GROUP ZONE boundary may transmit M2MCID Pre-allocation and Transmission Info TLV and M2MCID Continuity and Transmission Info TLV through MOB\_NBR-ADV message. If an M2M device receives MOB\_NBR-ADV message that contains M2MCID Pre-allocation and Transmission Info TLV and/or M2MCID Continuity and Transmission Info TLV and enters neighbor M2M GROUP ZONE, it updates M2MCID based on the information included in those TLVs without receiving any information from BS belongs to the neighbor M2M GROUP ZONE.

[*Remedy 2: Add following texts on page 9, line 37 as follows;*]

**6.3.2.3.42 MOB\_NBR-ADV (neighbor advertisement) message**

***Add the following text at the end of subclause 6.3.2.3.42***

For each advertised neighbor BS, the following TLV parameters may be included:

**M2MCID Pre-allocation and Transmission Info (see 11.18.3)**

M2MCID Pre-allocation and Transmission Info TLV is used by the BS’s in one M2M GROUP ZONE to provide information about changes in mapping of current M2MCIDs in the selected other M2M GROUP ZONE as determined by the serving M2M GROUP ZONE.

**M2MCID Continuity and Transmission Info (see 11.18.4)**

M2MCID Continuity and Transmission Info TLV is used by the BS’s in one M2M GROUP ZONE to show consistency of M2MCID’s mapping used in selected other M2M GROUP ZONE as determined by the serving M2M GROUP ZONE

[*Remedy 3: Add following texts on page 38, line 1 as follows;*]

**11.18 MOB\_NBR-ADV management message**

***Add the following text at the end of subclause 11.18***

**11.18.3 M2MCID Pre-allocation and Transmission Info**

This TLV indicates the mapping of M2MCIDs used in the current M2M GROUP ZONE ID to new M2MCID within a neighboring M2M GROUP ZONE.

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| --- | --- | --- | --- |
| Type | Length(bytes) | Value | Scope |
| 5 | Variable(4 + *N* x 4) | See Table xxx | MOB\_NBR-ADV |

**Table xxx – M2MCID Pre-allocation and Transmission Info definition**

|  |  |  |
| --- | --- | --- |
| Field | Length(bits) | Note |
| M2M GROUP ZONE ID | 16 | M2M GROUP ZONE identifier for the current M2M GROUP ZONE (bit 15 is not part of identifier and set to 0) |
| Neighboring M2M GROUP ZONE ID | 16 | M2M GROUP ZONE identifier for neighboring M2M GROUP ZONE (bit 15 is not part of identifier and set to 0) |
| List of M2MCID Mappings | Variable(*N* x 32) | Current M2MCID (1)New M2MCID (1)…Current M2MCID (N)New M2MCID (N) |

**11.18.4 M2MCID Continuity and Transmission Info**

This TLV indicates a certain M2MCID stays the same in one or more M2M GROUP ZONE.

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Length(bytes) | Value | Scope |
| 6 | Variable(4 + *N* x 2) | See Table yyy | MOB\_NBR-ADV |

**Table yyy – M2MCID Pre-allocation and Transmission Info definition**

|  |  |  |
| --- | --- | --- |
| Field | Length(bits) | Note |
| M2M GROUP ZONE ID | 16 | M2M GROUP ZONE identifier for the current M2M GROUP ZONE (bit 15 is not part of identifier and set to 0) |
| Neighboring M2M GROUP ZONE ID | 16 | M2M GROUP ZONE identifier for neighboring M2M GROUP ZONE (bit 15 is not part of identifier and set to 0) |
| List of M2MCID Continued | Variable(*N* x 16) | Current M2MCID (1)…Current M2MCID (N) |

----------------- End of the text proposal ---------------------------------------------------------------------------------------