|  |  |
| --- | --- |
| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** |
| Title | **Modification of AAI-MM-ADV message in IEEE 802.16.1a**  |
| Date Submitted | **2012-07-09** |
| Source(s) | Seokjoo ShinChosun UniversityWon-Ik Kim, Eunkyung Kim, Miyoung Yun, Seokki Kim, Sungkyung Kim, Hyun Lee, Chulsik Yoon, Sungcheol ChangETRI  | E-mail: sjshin@chosun.ac.krwoniks@etri.re.krscchang@etri.re.kr |
| Re: | “IEEE 802.16-12-400-00-Gdoc,” in response to Letter Ballot Recirc #38b on P802.16.1a/D3 |
| Abstract | This provides AWD text proposals for clarification of message fields for multimode operation over IEEE 802.16.1a |
| Purpose | To discuss and adopt the proposed text in the draft amendment document on GRIDMAN |
| Notice | *This document does not represent the agreed views of the IEEE 802.16 Working Group or any of its subgroups*. It represents only the views of the participants listed in the “Source(s)” field above. It is offered as a basis for discussion. It is not binding on the contributor(s), who reserve(s) the right to add, amend or withdraw material contained herein. |
| Copyright Policy | The contributor is familiar with the IEEE-SA Copyright Policy <http://standards.ieee.org/IPR/copyrightpolicy.html>. |
| Patent Policy | The contributor is familiar with the IEEE-SA Patent Policy and Procedures:<<http://standards.ieee.org/guides/bylaws/sect6-7.html#6>> and <<http://standards.ieee.org/guides/opman/sect6.html#6.3>>.Further information is located at <<http://standards.ieee.org/board/pat/pat-material.html>> and <<http://standards.ieee.org/board/pat>>. |

**Modification of AAI-MM-ADV message in IEEE 802.16.1a**

Seokjoo Shin

Chosun University

Won-Ik Kim, Eunkyung Kim, Miyoung Yun, Seokki Kim, Sungkyung Kim, Hyun Lee, Chulsik Yoon, Sungcheol Chang

ETRI

# Introduction

According to Section 6.12.1.3.1 Proactive Operation of IEEE P802.16.1a/D3, multimode HR-MSs can transmit their status information to the superordinate HR-BS after receiving AAI-MM-ADV message. In the current standard, however, AAI-MM-ADV message does not have an Action Type for requesting HR-MS’s status information response.

In this contribution, we suggest to insert an additional value of Action Type in AAI-MM-ADV for requesting multimode HR-MS’s status information.

# References

[1] IEEE P802.16nTM/D3, Air Interface for Broadband Wireless Access Systems - Draft Amendment: Higher Reliability Networks, June 2012.

[2] IEEE P802.16.1aTM/D3, WirelessMAN-Advanced Air Interface for Broadband Access Systems - Draft Amendment: Higher Reliability Networks, June 2012.

[3] EEE P802.16Rev3/D6, IEEE Draft Standard for Local and metropolitan area networks; Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems,” June 2012.

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

# Proposed Text for the 802.16.1a AWD

Note:

The text in **BLACK** color: the existing text in the 802.16.1a AWD

The text in **~~RED~~** color: the removal of existing 802.16.1a AWD

The text in **BLUE** color: the new text added to the 802.16.1a AWD

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

***[Remedy1: Insert the sentence and type in Section 6.2.3.65.1 in IEEE P802.16.1a/D3.]***

 ***[Page# 54, Line# 18]***

**6.2.3.65.1 AAI-MM-ADV message**

Infrastructure stations and HR-MS acting as HR-BS or HR-RS may transmit AAI-MM-ADV message to support multimode operation in the case as follows:

* When the backhaul link is down or up
* During maintaining relay link due to unavailable backhaul link, PHY/MAC layer parameters need be reconfigured such as
	+ Power down
	+ Power reduction
	+ FA change
* Multimode service establish/release/change to inform subordinate stations to perform handover
* Scanning operation for HR-MS acting as relay to maintain synchronization with the serving HR-BS
* Neighbor cell scanning operation
* Report status information of multimode station

**Table 106a – AAI-MM-ADV message field description**

| **Field** | **Size****(bits)** | **Value/Description** | **Condition** |
| --- | --- | --- | --- |
| Action Type | 4 | Used to indicate the purpose of this message0b0000: Reconfiguration of HR-BS/RS including multimode BS/RS0b0001: Restart of HR-BS/RS including multimode BS/RS0b0010: Power down (including FA down) of HR-BS/RS including multimode BS/RS0b0011: Power reduction of HR-BS/RS including multimode BS/RS0b0100: Backhaul link down of HR-BS0b0101: Backhaul link up of HRBS0b0110: FA change of HR-BS/RS including multimode BS/RS0b0111: Multimode service end of HR-MS0b1000: Scanning operation for HR-MS acting as relay to maintain synchronization with the serving HR-BS0b1001: Neighbor cell scanning0b1010 : Handover of multimode station with access link reconfiguration0b1011: Report status information of multimode station0b1100 – 0b1111: reserved~~0b1011 – 0b1111:~~ *~~reserved~~* | Mandatory |
| … | … | … | … |