

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Clarification on relay function for HR-BS over IEEE 802.16.1a</b>	
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Re:	“IEEE 802.16-12-0142,” in response to Letter Ballot #38 on P802.16.1a/D1	
Abstract	Multimode operation on GRIDMAN Draft Standard	
Purpose	To discuss and adopt the proposed text in the draft amendment document on GRIDMAN	
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# Clarification on relay function for HR-BS over IEEE 802.16.1a

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## 1. Introduction

This document provides clarification on the multimode operation of maintaining relay link of HR-BS.

## 2. References

- [1] IEEE 802.16-12-0132, GRIDMAN System Requirement Document including SARM annex, January 2012.
- [2] IEEE P802.16n<sup>TM</sup>/D1, Air Interface for Broadband Wireless Access Systems - Draft Amendment: Higher Reliability Networks, February 2012.
- [3] IEEE P802.16.1a<sup>TM</sup>/D1, WirelessMAN-Advanced Air Interface for Broadband Access Systems - Draft Amendment: Higher Reliability Networks, February 2012.
- [4] IEEE P802.16Rev3/D4, IEEE Draft Standard for Local and metropolitan area networks; Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems,” February 2012.
- [5] IEEE P802.16.1<sup>TM</sup>/D4, IEEE Draft for WirelessMAN-Advanced Air Interface for Broadband Wireless Access Systems, February 2012.

## 3. Proposed Text on the IEEE 802.16.1a Amendment Draft Standard

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

**[Remedy: Change 6.12.1.14 Relay link release in page 102 on P802.16.1a/D1 as follows:]**

### 6.12.1.1.4 Relay link release

If the HR-BS recovers from failure of backhaul, it may inform network or notify the current serving HR-BS of the HR-BS having recovered backhaul link through the backhaul network interface. The superordinate serving HR-BS may then initiate HR-MS handover back to the HR-BS in which the recovered HR-BS should be listed in the first priority. The HR-BS having recovered backhaul may store MAC context information of the serving MSs (basic capabilities,

security capabilities, etc.). Such context information allows HR-MS to perform optimized network reentry when returning back to the HR-BS upon its recovery.

HR-BS transmits AAI-MM-ADV message with action type = 0b101 described in including expected time of backhaul link up. When receiving the AAI-MM-ADV message, HR-MS performs either handover to neighbor infrastructure station and returns to the HR-BS at the expected time or waiting in the HR-BS until restarting service with available backhaul link.

If the HR-BS receives the request of relay link release from superordinate serving HR-BS but the HR-BS does not recover from failure of backhaul, the HR-BS either tries to establish relay link with another HR-BS having the backhaul link as described in 6.12.1.1.1 or follows standalone network operation described in 6.12.4.

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