Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**	
Title	The mobility management signal transfer	
Date Submitted	**2005-07-12**	
Source(s)	Jianjun Wu, Yongmao Li, John Lee, Duke Dang HUAWEI	Voice: 86-10-82882959 Fax: 86-10-82882966 mailto:dsjun@huawei.com
Re:	Call for contribution and comments.	
Abstract	The mobility management signal transfer.	
Purpose	Adoption	
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.	
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.	
Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <mailto:chair@wirelessman.org> as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.16 Working Group. The Chair will disclose this notification via the IEEE 802.16 web site <http://ieee802.org/16/ipr/patents/notices>.	

The mobility management signal transfer

Jianjun Wu, Yongmao Li, John Lee, Duke Dang
HUAWEI

1. Introduction

When IEEE 802.16d/e network access the operator core network, the SS/MS need some information exchange for core network, such as the layer 3 or higher layer signal etc.
We propose the current draft defining a MAC management message for transferring mobility management signal between core network and SS/MS.
Based on this, we can use this MAC management message to extend transferring some message which cannot be processed by the BS, such as EAP-Transfer message, DHCP process, etc.
For example:
When the SS/MS performs DHCP renew process with DHCP Server. The DHCP renew messages are transmitted on a certain data plane service flow, which is transparent to the BS. The BS has no information about if the DHCP renew process is acknowledged by the DHCP server or not. When DHCP renew process fails, the SS/MS need notify the BS the result of the DHCP renew process, so that the BS can help the SS/MS fulfill de-register process with backend network.
When the SS/MS performs a DHCP release process with DHCP sever, the MS only needs unicast the DHCP release message to the DHCP server on a certain data plane service flow. The BS does not know the MS has released the IP address, it need maintain the MS's IP binding with the backend network, which may results in big hazard (IP packets forwarding/routing error, etc.) to the backend network in case the released IP address is allocated to another network elements, e.g. another SS/MS. So, the SS/MS need notify the BS the release of the IP address, so that the BS can help the SS/MS fulfill de-register process with backend network.

2. Proposed Solution

Add the following in IEEE P802.16g_04/03r2 in section 14.5.13.2 shown as following

14.5.13.2 High Layer Management Signal Transfer Message

[Add the following entries to Table 14:]

Type	Message name	Message description	Connection
Xxx	HLMS_Transfer Message	MAC Management Message	Primary Management

[Add the following text to the end of 6.3.2.3:]

6.3.2.3.63 HLMS_Transfer Message

Table xxx HLMS_Transfer Message Format

Syntax	**Size**	**Notes**
HLMS_Transfer Request Message format() {		
Management Message Type = 66	8 bits	

Code	4 bits	0b0000: High Management Signal Message 0b0001~0b1111: reserved.
TLV Signal message Attributes	variable	Dependent on the actual condition, TLV specific
HMAC/CMAC Tuple		Message integrity code of this message

TLV Signal message Attributes depend on the actual condition, TLV specific, maybe including the sender ID and the reception ID.

Code

The code field can be defined according to the different signal and transfer direction in actual condition, and maybe dependent on the actual network structure.