

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >		
Title	<b>Connection Management</b>		
Date Submitted	<b>2009-03-02</b>		
Source(s)	Haihong Zheng, Shashikant Maheshwari, E-mail: <a href="mailto:haihong.zheng@nsn.com">haihong.zheng@nsn.com</a> Yousuf Saifullah  NSN  Zexian Li, Jan Suumaki <span style="float: right;"><a href="mailto:Zexian.li@nokia.com">Zexian.li@nokia.com</a></span>  Nokia		
Re:	802.16m AWD: IEEE 802.16m-09/0012 - "Call for Contributions on Project 802.16m Amendment Working Document (AWD) content" on Connection Management procedures		
Abstract	This contribution proposes IEEE 802.16m AWD text on Connection Management concept		
Purpose	To be discussed and adopted in 802.16m AWD		
Notice	<i>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.</i>		
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	The contributor is familiar with the IEEE-SA Patent Policy and Procedures: <a href="http://standards.ieee.org/guides/bylaws/sect6-7.html#6">http://standards.ieee.org/guides/bylaws/sect6-7.html#6</a> and <a href="http://standards.ieee.org/guides/opman/sect6.html#6.3">http://standards.ieee.org/guides/opman/sect6.html#6.3</a> . Further information is located at <a href="http://standards.ieee.org/board/pat/pat-material.html">http://standards.ieee.org/board/pat/pat-material.html</a> and <a href="http://standards.ieee.org/board/pat">http://standards.ieee.org/board/pat</a> .		

# Connection Management

## 1 Introduction

This contribution proposes amendment text for connection management for WirelessMAN-OFDMA Advance System.

## 2 Text Proposal

===== *Start of Proposed Text* =====

### 15.2.x Connection Management

Connection is a mapping between MAC peers of an ABS and one or more AMSs. When the mapping applies to ABS and one AMS, the connection is a unicast connection. Otherwise it is a multicast or broadcast connection. Unicast connections are identified by the combination of a 12-bit STID and a 4-bit FID. Multicast and broadcast connections are identified by the reserved STIDs.

Two types of connections are used – management connections and transport connections. Management connections are used to carry MAC management messages. Transport connections are used to carry user data including upper layer signaling messages such as DHCP, etc and data plane signaling such as ARQ feedback. MAC management message shall never be transferred over transport connection, and user data shall never be transferred over management connections.

An AMS requests UL bandwidth on a per-connection basis, and bandwidth is granted by the ABS to an AMS on a per-AMS basis.

#### 15.2.x.1 Management connections

Two pairs of bi-directional unicast management connections - basic connection and primary management connection, are automatically established when an AMS performs initial network entry. The basic connection is used by the ABS MAC and AMS MAC to exchange short, time-urgent MAC management messages. The primary management connection is used by the ABS MAC and AMS MAC to exchange longer, more delay-tolerant MAC management messages. FID with value 0 and 1 are reserved for basic and primary management connection respectively.

The STIDs for management connections shall be assigned in the AAI\_RNG-RSP during network entry/re-entry or AAI\_BSHO-REQ/RSP for pre-allocation during handover. Once the STID is allocated to the AMS, the basic and primary management connections are established automatically. FID for the management connection shall never be changed during handover or network reentry.

#### 15.2.x.2 Transport connections

All the user data communications are in the context of transport connections. A transport connection is uni-directional and established with unique FID assigned using DSA procedure. Each transport connection is associated with an active service flow to provide various levels of QoS required by the service flow. The transport connection is established when the associated active service flow is created, and released when the

associated service flow becomes non-active. Once established, the FID of the transport connection is not changed during handover.

===== *End of Proposed Text* =====