Project	**IEEE 802.16 Broadband Wireless Access Working Group** <http://ieee802.org/16>	
Title	**MS connection management by a mobile RS in moving BS mode**	
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Re:	IEEE 802.16j-07/019: "Call for Technical Comments Regarding IEEE Project 802.16j"	
Abstract	We propose the connections between MR-BS and the mobile RS is managed by MR-BS. The connections of MSs associated with a mobile RS in moving BS mode are managed by the RS and informed to the MR-BS.	
Purpose	To incorporate the proposed text into the P802.16j Baseline Document (IEEE 802.16j-06/026r4)	
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MS connection management by a mobile RS in moving BS mode

Hang Zhang, Peiying Zhu, Mo-Han Fong, Wen Tong, David Steer, Gamini Senarath, G.Q. Wang, Derek Yu, Israfil Bahceci, Robert Sun and Mark Naden

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1. Introduction

In current baseline document, a mobile RS can work in moving RS mode or in a moving BS mode (refer to 6.3.22.4.1.1). The corresponding data forwarding protocol is described in section 1.4.3. In this contribution, the address and connection management of MS and a mobile RS in moving BS mode are addressed.

2. Proposal

The key benefit of this operation mode is to reduce the complexity caused by handover of a mobile RS and all of associated MSs. In order to enable this operation, the connections between MR-BS and the mobile RS is managed by MR-BS. The connections of MSs associated with a RS in moving BS mode are managed by the RS and informed to the MR-BS.

2.1 Connections of a RS in moving BS mode

At the initialization of a RS in this mode, the management connections are established in the same way as that of a MS. In addition to the management connections, a transport connection shall be established. This connection is used for the RS and MR-BS to relay traffic of MS between MR-BS and an access RS. The corresponding identity is denoted as F-CID and is valid for both DL and UL. This F-CID shall be assigned during registration. The traffic flow on these transport connections are aggregated traffic of active service flows of MSs associated with this RS.

2.2 Connections of MSs served by a RS in moving BS mode

At MS initial network entry, the CID of management connections are assigned locally by the RS in moving BS mode and informed to the MR-BS so that a MR-BS has the knowledge of coupling between MAC address and its local basic CID of a MS accessed to a RS in moving BS mode.

The CID of a transport connection of a MS is assigned by the RS at the establishment of a service flow of the MS and is informed to MR-BS so that a MR-BS has the knowledge of coupling between a service flow and local CID assigned by the RS.

3. Proposed text change

[Add the section 6.3.1.3.2 as followings]

++++++++++++++ Start text ++

6.3.1.3.2 Connection management of RS in moving BS mode (MBS) and MS served by RS in MBS mode

The connections between MR-BS and a RS in moving BS mode is managed by MR-BS. The connections of MSs associated with a RS in this mode are managed by the RS and informed to the MR-BS.

6.3.1.3. 2.1 Connections of a RS in moving BS mode

At the initialization of a RS in this mode, the management connections are established in the same way as that of a MS. In addition to the management connections, a transport connection shall be established. This connection is used for the RS and MR-BS to relay traffic of MS between MR-BS and an access RS. The corresponding identity is denoted as F-CID and is valid for both DL and UL. This F-CID shall be assigned during registration. The traffic flow on these transport connections are aggregated traffic of active service flows of MSs associated with this RS.

6.3.1.3. 2.2 Connections of MSs served by a RS in moving BS mode

At MS initial network entry, the CID of management connections are assigned locally by the RS in moving BS mode and informed to the MR-BS so that a MR-BS has the knowledge of coupling between MAC address and its local basic CID of a MS accessed to a RS in moving BS mode.

The CID of a transport connection of a MS is assigned by the RS at the establishment of a service flow of the MS and is informed to MR-BS so that a MR-BS has the knowledge of coupling between a service flow and local CID assigned by the RS.

++++++++++++++ End text ++

[Insert the following to the end of 6.3.2.3.8]

++++++++++++++ Start text ++

The REG-RSP may include the following TLV:

DL/UL **Forwarding connection_CID**

The DL Forwarding connection CID assigned by a MR-BS to a RS for forwarding of DL messages and service traffic of MSs serviced by a RS.

UL **Forwarding connection_CID**

The UL Forwarding connection CID assigned by a MR-BS to a RS for forwarding of UL messages and service traffic of MSs serviced by a RS.

++++++++++++++ End text ++

[Insert the following section 11.7.30 Forwarding connection CID]

++++++++++++++ Start text ++
11.7.30 Forwarding connection CID

This TLV is used to indicate the assigned CID of forwarding connections by MR-BS to a RS.

Name	Type	Length	Value	Scope
Forwarding connection CIDs	TBD	2	Forwarding connection CID	REG-RSP

++++++++++++++ End text ++