Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**	
Title	**Proposal for Optimizing MS HO**	
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Re:	This contribution is a response to "IEEE 802.16 Working Group Letter Ballot Recirc #28a: announcement".	
Abstract	This contribution proposes a method for optimizing MS HO in MR network.	
Purpose	Text proposal for 802.16j Draft Document 2.0.	
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Proposal for Optimizing MS HO

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Introduction

As defined in 802.16Rev2/D1, Serving BS criteria for recommendation of target BS may include factors such as expected MS performance at potential target BS, BS and network loading conditions, and MS QoS requirements. This means that the MS performance such as MS UL CINR obtained by a potential target BS during MS association procedure is a factor for the Serving BS to determine whether to recommend the potential target BS for the MS through an MOB_BSHO-REQ/RSP message.

In MR networks, when MS's potential target station is a non-transparent RS, MS performance at the RS such as UL CINR during MS association procedure is also a factor for recommendation of target station by the MS's Serving MR-BS. However, such information is not obtained by an MS's Serving MR-BS in the current Draft, and the lack of this may cause inaccurate of the recommended target station(s) determined by the MS's Serving MR-BS.

Proposal

During MS association procedure, a non-transparent RS may learned information such as MS UL PHY quality. The RS may notify its Serving MR-BS of such information.

When the RS's Serving MR-BS is the MS's neighbor MR-BS, the RS's Serving MR-BS may forward the information obtained from the RS to the MS's Serving MR-BS through backbone.

At the HO decision stage, when obtaining information such as MS UL PHY quality learned by a non-transparent RS, the MS's Serving MR-BS may take such information as a factor to determine whether to recommend the RS as the MS's target station.

Proposed Text

[Insert the following sentence at the end of the paragraph in subclause 6.3.22.1.4.2:]

Additionally, the RNG-REQ message the RS forwards to its Serving MR-BS may include an Association Info TLV (see 11.5), in which information may be used by the MS's serving MR-BS to determine whether to recommend the RS as the MS's target station at the HO decision stage.

[Insert the following sentence at the end of the paragraph in subclause 6.3.22.1.4.3:]

Additionally, the RNG-REQ message with the TLV parameters (Serving BS ID, MS MAC address) the RS forwards to its Serving MR-BS may include an Association Info TLV, in which information may be used by the MS's serving MR-BS to determine whether to recommend the RS as the MS's target station at the HO decision stage.

[Insert the following text after the first paragraph in subclause 6.3.22.5.1:]

At the HO decision stage, if the MS's Serving MR-BS has obtained information of MS UL PHY quality learned by an associated RS, it may take such information as a factor to determine whether to recommend the RS as the MS's target station.

[Insert the following text at the end of 6.3.2.3.5:]

The following parameter may be included in the RNG-REQ message which an RS forwards to its Serving MR-BS when an MS is attempting to perform association at the RS:

Association Info TLV

[Insert the following row in Table 622:]

Name	Type	Length	Value	PHY Scope
Association Info	TBD	2	Bit#0~Bit#7:MS CINR mean Bit#8~Bit#15:MS RSSI mean	OFDMA