

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Comments on MS network entry via RS group	
Date Submitted	2008-03-18	
Source(s)	Kanchei (Ken) Loa, Yi-Hsueh Tsai, Yung-Ting Lee, Hua-Chiang Yin, Shiann-Tsong Sheu, Youn-Tai Lee	Voice: +886-2-27399616 Fax: +886-2-23782328 loa@iii.org.tw
	Institute for Information Industry 8F, No. 218, Sec. 2, Dunhua S. Rd., Taipei City 106, Taiwan	
	[add other co-authors here]	
Re:	IEEE 802.16-08/007: "IEEE 802.16 Working Group Letter Ballot Recirc #28b: Announcement"	
Abstract	This contribution proposes to reedit the paragraphs of subclause 6.3.10.3.1.1	
Purpose	Text proposal for 802.16j Draft Document.	
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: < http://standards.ieee.org/guides/bylaws/sect6-7.html#6 > and < http://standards.ieee.org/guides/opman/sect6.html#6.3 >. Further information is located at < http://standards.ieee.org/board/pat/pat-material.html > and < http://standards.ieee.org/board/pat >.	

Comments on MS network entry via RS group

Kanchei (Ken) Loa, Yi-Hsueh Tsai, Yung-Ting Lee, Hua-Chiang Yin, Shiann-Tsong Sheu, Youn-Tai Lee
Institute for Information Industry (III)

Introduction

This contribution proposes to reedit the paragraphs of subclause 6.3.10.3.1.1 since some of the mechanism has been described twice.

In order to facilitate the incorporation of this proposal into IEEE 802.16j standard, specific changes to the draft standard P802.16j/D3 are listed below.

Spec changes

[Modified the following text as indicated:]

6.3.10.3.1.1 MR-BS and RS behavior during contention-based initial ranging

When an SS performs initial ranging in systems with transparent RSs attached to non-transparent RSs that have unique BSIDs, then the MR-BS, superordinate station (a non-transparent RS), and transparent RSs shall perform the following steps:

- The transparent RSs shall monitor the Ranging Channel for initial ranging codes. When the RS detects one or more codes in a frame received on the access link, it shall send the codes it receives with sufficient strength and their adjustment information (e.g. time, power, frequency corrections) in an MR Code-REP message on the RS basic CID to the superordinate station.
- When superordinate station first receives a CDMA ranging code directly or via an MR Code-REP message, it shall set the T48 timer and wait for other MR Code-REP messages to arrive with the same ranging code attributes from other subordinate RSs. Once the T48 timer expires, and the adjustments are required, the superordinate station shall request or allocate bandwidth on the downlink on which to send a RNG-RSP to the SS. ~~When the ranging code requires no further adjustment, the superordinate station shall request bandwidth on the access uplink on which the SS can transmit a RNG-REQ containing its MAC address by following the procedure in 6.3.6.7.2.1.1~~
- When the ranging code requires no further adjustment, the superordinate station shall perform the same steps (described for the underlying scheduling mode, and required after the successful ranging) outlined in this section for the non-transparent RSs, with the exception that if the MAC messages are relayed between the superordinate station and the MS/SS, the superordinate station shall request or allocate bandwidth for relaying the MAC messages between itself and the MSs/SS.

When an SS performs initial ranging in systems ~~operating in centralized scheduling mode~~ with some nontransparent RSs sharing BSIDs, then the superordinate station (the MR-BS or a non-transparent RS-~~operating in centralized scheduling mode~~), and the non-transparent RSs sharing BSIDs shall perform the same steps outlined in the previous paragraph but with the following modifications:

- If management messages are relayed on the uplink, the CDMA_Allocation_IE shall be preceded with an UL_Burst_Receive_IE containing the access RS's basic CID or multicast management CID in the RS_Access-MAP message that is sent to the RSs. The UL_Burst_Receive_IE shall be removed the when composing the (compressed) UL-MAP which the RSs broadcast. A non-transparent RS, whose CID matches the RS basic CID or the multicast management CID of the UL_Burst_Receive_IE, shall receive the RNG-REQ on a burst specified by the CDMA_Allocation_IE and relay it to the MR-BS on the RS basic CID.
- If adjustments are required, the superordinate station shall transmit the RNG-RSP to the SS directly or to

non-transparent RSs with the RS basic CID or the multicast management CID, which shall relay the received RNG-RSP to the MS with the ranging CID.

~~When an SS performs initial ranging in systems with transparent RSs attached to superordinate station as non-transparent RS with unique BSID operated in distributed scheduling mode, or when an SS performs initial ranging in systems with non-transparent RSs using shared BSIDs with other access stations, then superordinate station (MR-BS or non-transparent RS in centralized scheduling mode), and those non-transparent RSs with shared BSIDs shall perform the same steps as transparent RSs with the following modifications:~~

- ~~— The non-transparent RS operated in distributed scheduling mode shall perform adjustments directly with the SS with no interaction with the MR-BS. Instead of forwarding a MR_Code-REP to the MR-BS, the RS may decide on the most appropriate adjustments.~~
- ~~— When the non-transparent RS operated in distributed scheduling mode receives a ranging code successfully, the communication between the RS and the MR-BS shall follow the procedures defined in this section for initial ranging in systems using non-transparent RSs with unique BSIDs and RSs operating in distributed scheduling mode, with the exception that, if the MAC messages are relayed between the distributed mode RS and the MS/SS, this RS shall provide bandwidth allocations for relaying the MAC messages between itself and the MSs/SS.~~