Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>
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Re:	IEEE 802.16j-07/007r2: “Call for Technical Comments and Contributions regarding IEEE Project 802.16j”
Abstract	This contribution proposes procedures for MS handover to target MR-BS with transparent RS
Purpose	Text proposal for 802.16j Baseline Document
Notice	
Release	
Patent Policy and Procedures	

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>.

MS Handover to target MR-BS with transparent RS

Introduction

This contribution describes the MS handover procedures to target MR-BS with transparent RS. As described in the baseline working document IEEE 802.16j-06/026r2, the fixed RS or nomadic RS shall relay HO related management messages between MS and MR-BS. Moreover, the associated MS handover procedures should be defined in the document for interoperability. In order to facilitate the incorporation of this proposal into IEEE 802.16j standard, specific changes to the baseline working document IEEE 802.16j-06/026r2 are listed below.

Text Proposal

Inset the following text at the end of 6.3.22.5.1

6.3.22.5.1.1 MS handover to target MR-BS with transparent RS

6.3.22.5.1.1.1 Network topology advertisement

A serving MR-BS shall broadcast information about the network topology using the MOB_NBR-ADV message to MS for cell reselection consideration.

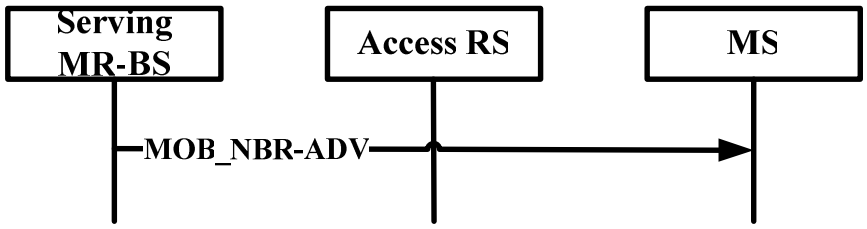

Figure xxx – Network Advertisement

6.3.22.5.1.1.2 MS scanning of neighbor access stations

A serving MR-BS may allocate time intervals to MS through access RS for the purpose of MS seeking and monitoring suitability of neighbor access stations as targets for HO.

Upon receiving MOB_SCN-REQ message from MS through access RS, the serving MR-BS may negotiate over the backbone with a BS recommended for Association allocation unicast ranging opportunities if the candidate access station is located at another MR-BS cell.

Upon reception of the MOB_SCN-REQ message through access RS, the serving MR-BS shall respond with a MOB_SCN-RSP message through access RS. The serving MR-BS may also send MOB_SCN-RSP message unsolicited through access RS.

The serving MR-BS may buffer the incoming data addressed to the MS during the scanning interval and transmit that data after the scanning interval during any interleaving interval or after exit of the Scanning mode.

If the serving MR-BS receives through access RS a MAC PDU message during any scanning interval from an

MS that is supposed to be in Scanning Mode, the serving MR-BS shall assume that the MS is no longer in Scanning Mode. The group of intervals is terminated at any time if the MS sends MOB_SCN-REQ message to the serving MR-BS through access RS or serving MR-BS sends MOB_SCN-RSP message to MS through access RS during any interleaving interval with Scan Duration set to zero.

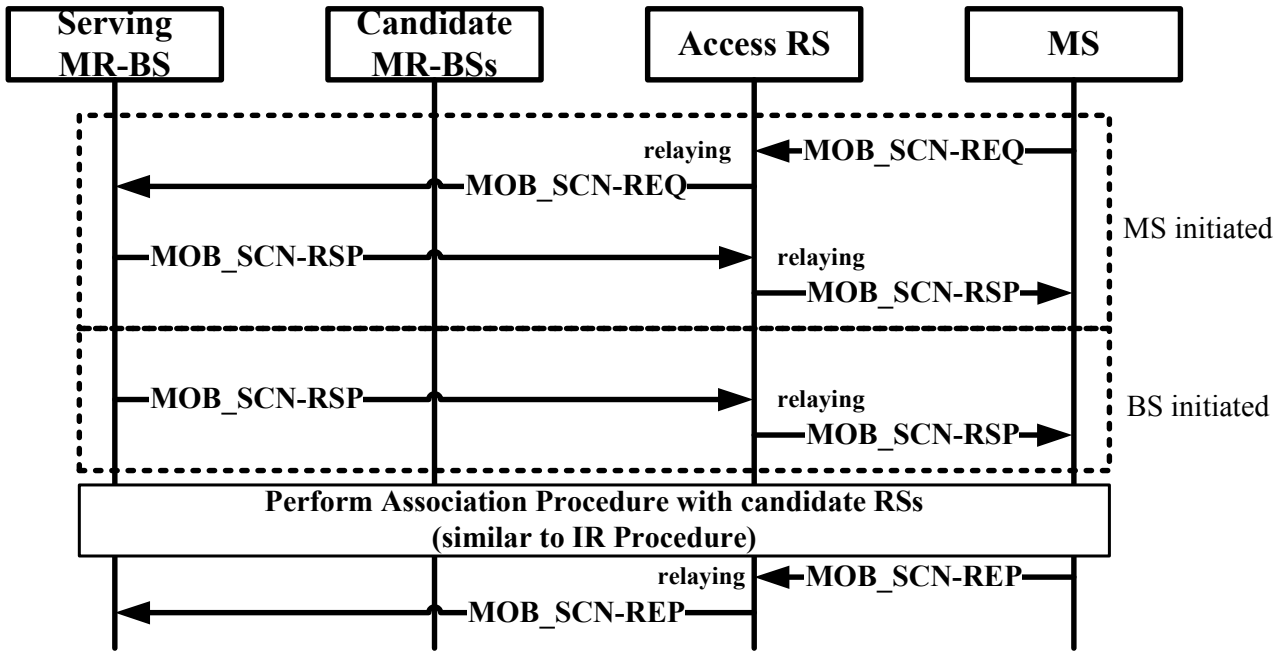

Figure xxx –MS scanning of neighbor access stations

6.3.22.5.1.1.3 Association procedure

The MR-BS may direct the MS through access RS to associate with recommended access stations by setting scanning type to 0b010 or 0b011in MOB_SCN-RSP message.

6.3.22.5.1.1.3.1 Association Level 0—Scan / Association without coordination

To support a MS perform Association Level 0, the process is similar to that defined in the section 6.3.22.1.3.1 (Association Level 0—Scan / Association without coordination).

6.3.22.5.1.1.3.2 Association Level 1—Association with coordination

To support a MS perform Association Level 1, the process is similar to that defined in the section 6.3.22.1.3.2 (Association Level 1—Association with coordination).

6.3.22.5.1.1.3.3 Association Level 2—Network Assisted Association Reporting

To support a MS perform Association Level 2, the process is similar to that defined in the section 6.3.22.1.3.3 (Association Level 2—Network Assisted Association Reporting).

6.3.22.5.1.1.4 Handover Decision and Initiation

A handover begins with a decision for an MS to handover from a serving access station to a target access station. The decision may originate either at the MS, the serving MR-BS, or on the network. The HO may proceed with a notification through either MOB_MSHO-REQ or MOB_BSHO-REQ messages.

The serving MR-BS upon reception of the MOB_MSHO-REQ message through access RS, the serving MR-BS shall respond with a MOB_BSHO-RSP message through access RS. The serving MR-BS may also send MOB_BSHO-REQ message through access RS.

As an acknowledgement to the MOB_BSHO-RSP or MOB_BSHO-REQ message, the MS should send a MOB_HO-IND message through access RS.

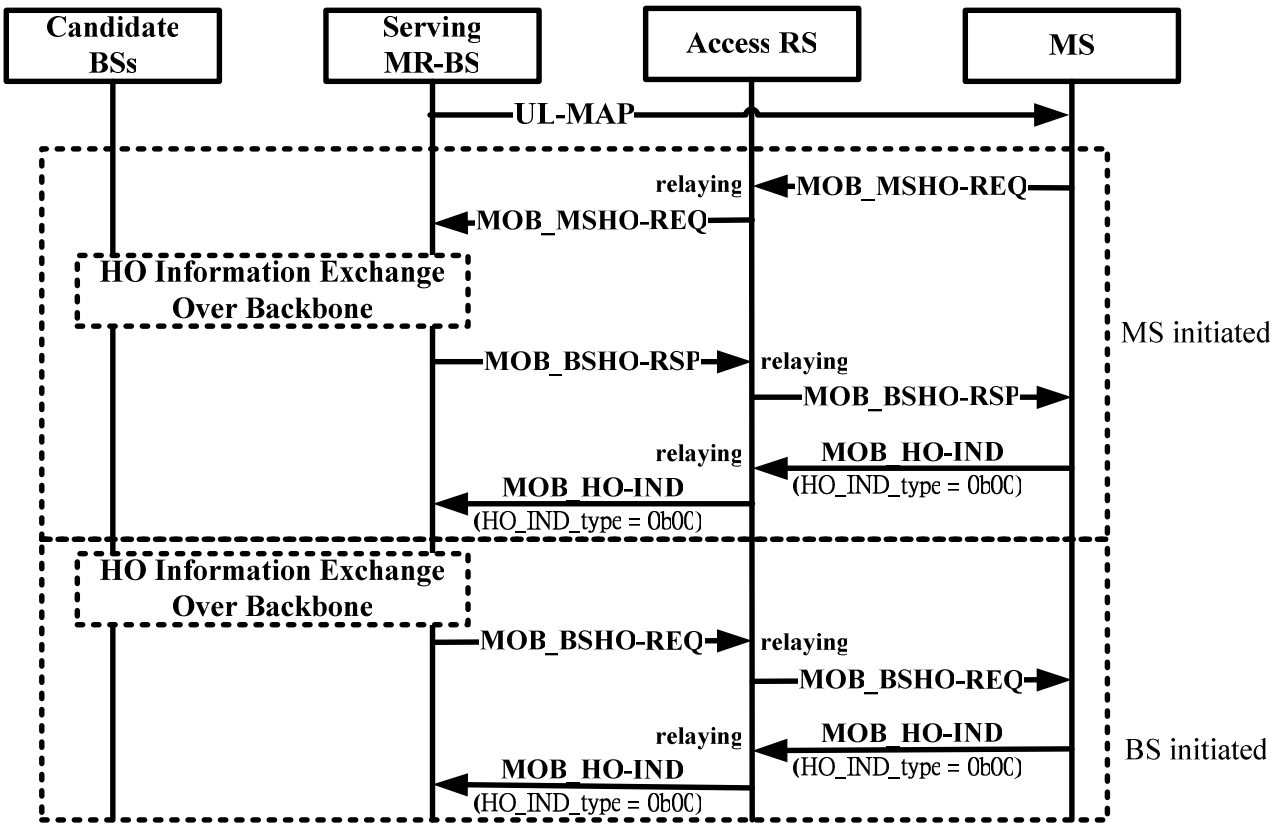

Figure xxx –MS Handover Initial and Decision

6.3.22.5.1.1.5 Handover Ranging procedure

MS Handover Ranging with RS is defined in the section xxx (MS Handover Ranging with RS).

6.33.22.5.1.1.6 Network Entry/Termination

After an MS or serving MR-BS has initiated an HO using either MOB_MSHO-REQ or MOB_BSHO_REQ message, the MS may cancel HO at any time.

The cancellation shall be made through transmission of a MOB_HO-IND messages the HO cancel option (HO_IND_type=0b01).

When MS transmits and serving BS receives MOB_HO-IND message through access RS with the HO cancel

option (HO_IND_type=0b01) during Resource Retain Time (when Resource Retain Flag=1), regardless of MS attempt at HO, the MS and serving BS shall resume Normal Operation communication.

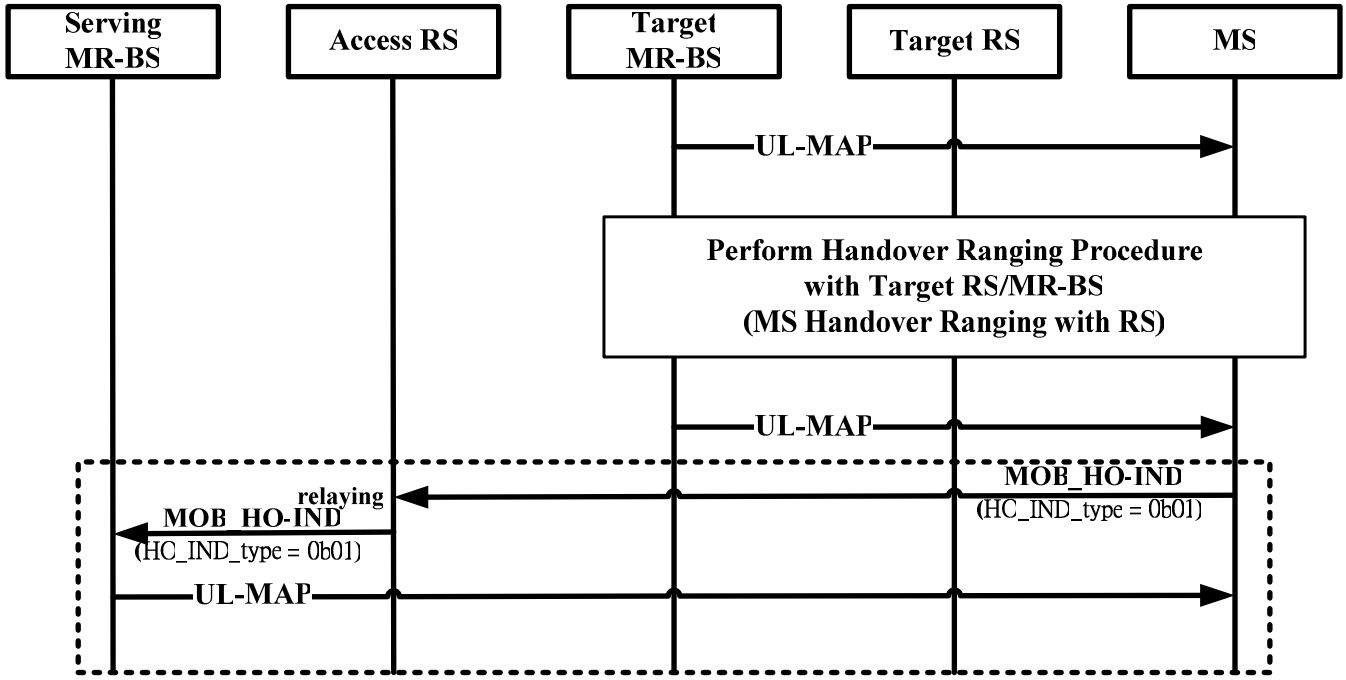

Figure xxx –MS Network Entry/Termination of Handover