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| Project | IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**> |
| Title | MS Handover with Non-transparent RS |
| Date Submitted | 2006-01-08 |
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| Re: | IEEE 802.16j-06/034: “Call for Technical Proposals regarding IEEE Project P802.16j” |
| Abstract | This contribution proposes procedures for MS Handover with Non-transparent RS |
| Purpose | Text proposal for 802.16j Baseline Document |
| Notice |  |
| Release |  |
| Patent Policy and Procedures |  |

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 with Non-transparent RS

**Text Proposal**

**6.3.22 MAC layer handover procedures**

6.3.22.5 Relay support for MS handover

6.3.22.5.2 MS handover with non-transparent RS

6.3.22.5.2.1 Network topology advertisement

A serving MR-BS shall send a RLY-BST message including network topology to RS. The RLY-BST message is defined in xxx. Afterward, the RS should construct MOB_NBR-ADV message from received RLY-BST message and broadcast it.

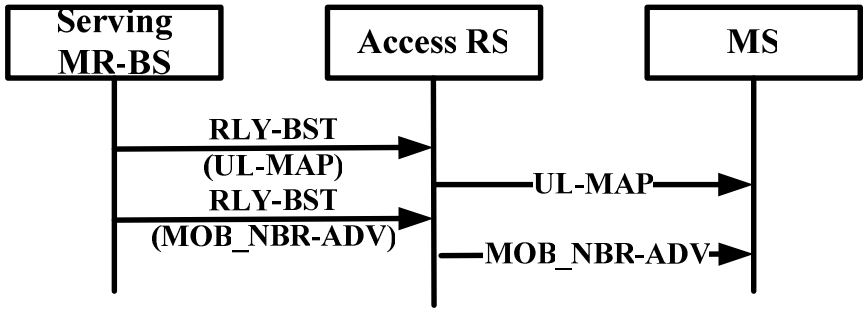


Figure xxx – Network Advertisement

6.3.22.5.2.2 MS scanning of neighbor access stations

A serving MR-BS may allocate time intervals to MS through the 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 the access RS, the serving MR-BS may reserve Association allocation unicast ranging opportunities if the candidate access station is located at the same serving MR-BS cell, otherwise 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 the access RS, the serving MR-BS shall respond with a MOB_SCN-RSP message through the access RS. The serving MR-BS may also send MOB_SCN-RSP message unsolicited through the 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 the 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 MR-BS through the access RS or serving MR-BS sends MOB_SCN-RSP message to MS through the access RS during any interleaving interval with Scan Duration set to zero.

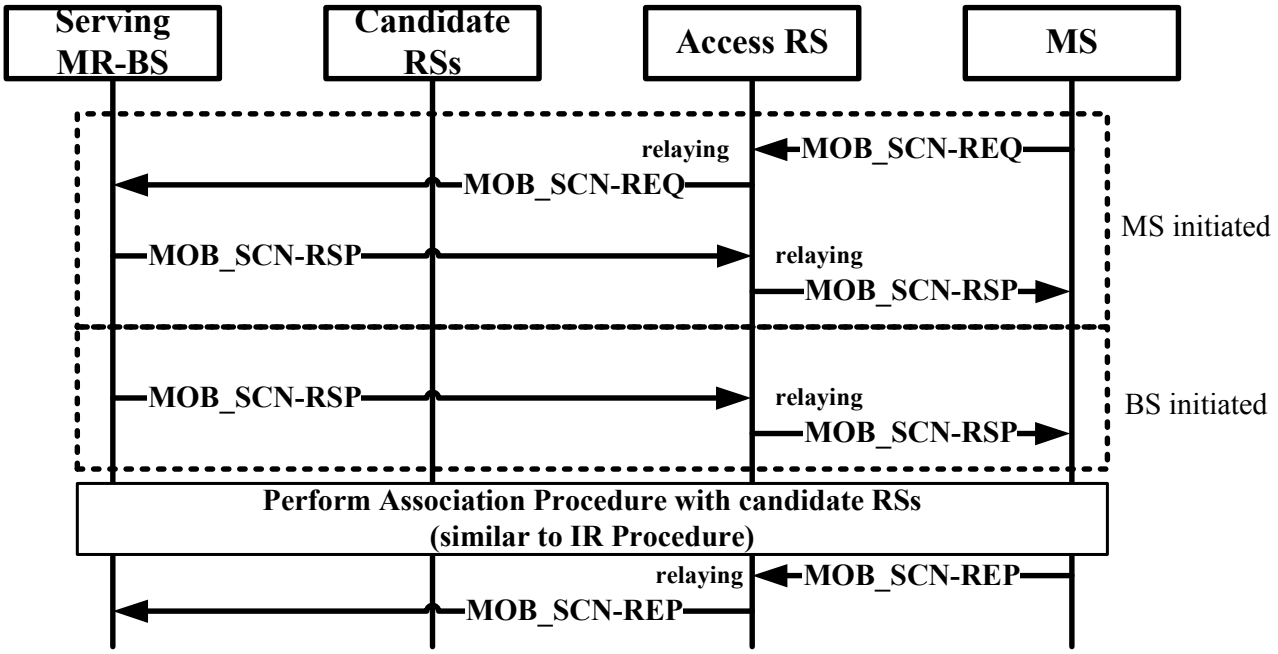


Figure xxx –MS scanning of neighbor access stations (Intra MR-BS)

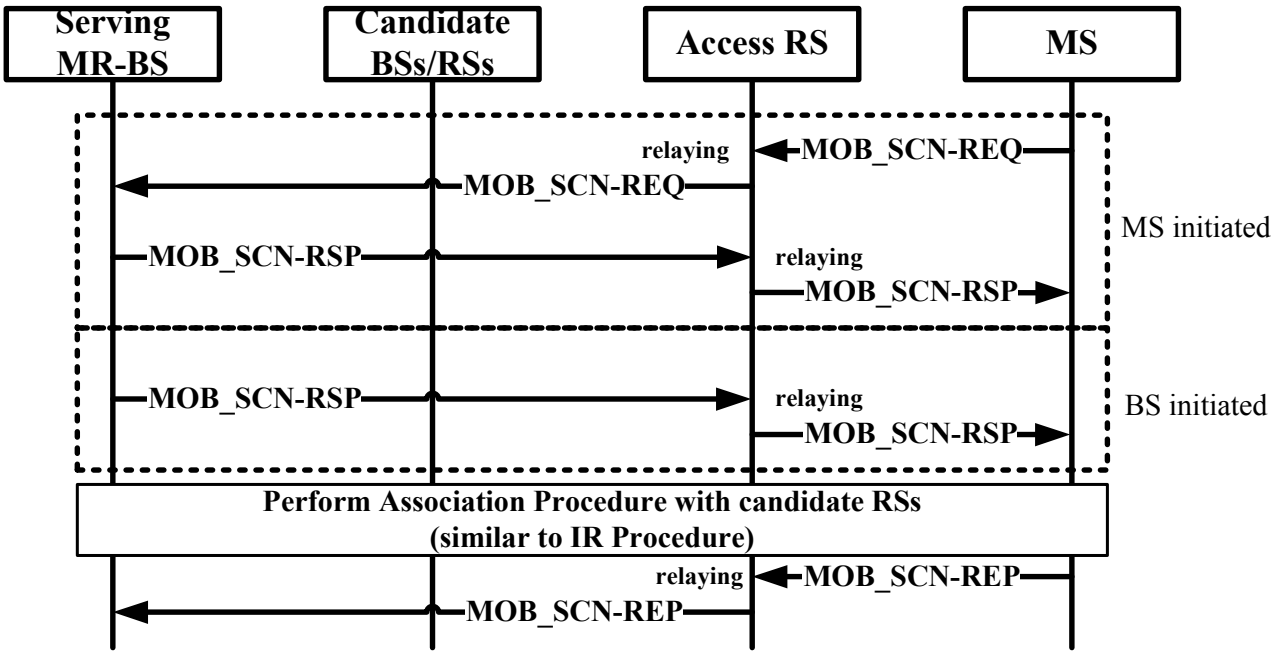


Figure xxx –MS scanning of neighbor access stations (Inter MR-BS)

6.3.22.5.2.3 Association procedure

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

6.3.22.5.2.3.1 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).

6.3.22.5.2.3.2 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).

6.3.22.5.2.3.3 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).

6.3.22.5.2.4 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 the access RS, the serving MR-BS shall respond with a MOB_BSHO-RSP message through the acccess RS. The serving MR-BS may also send MOB_BSHO-REQ message through the 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 the access RS.

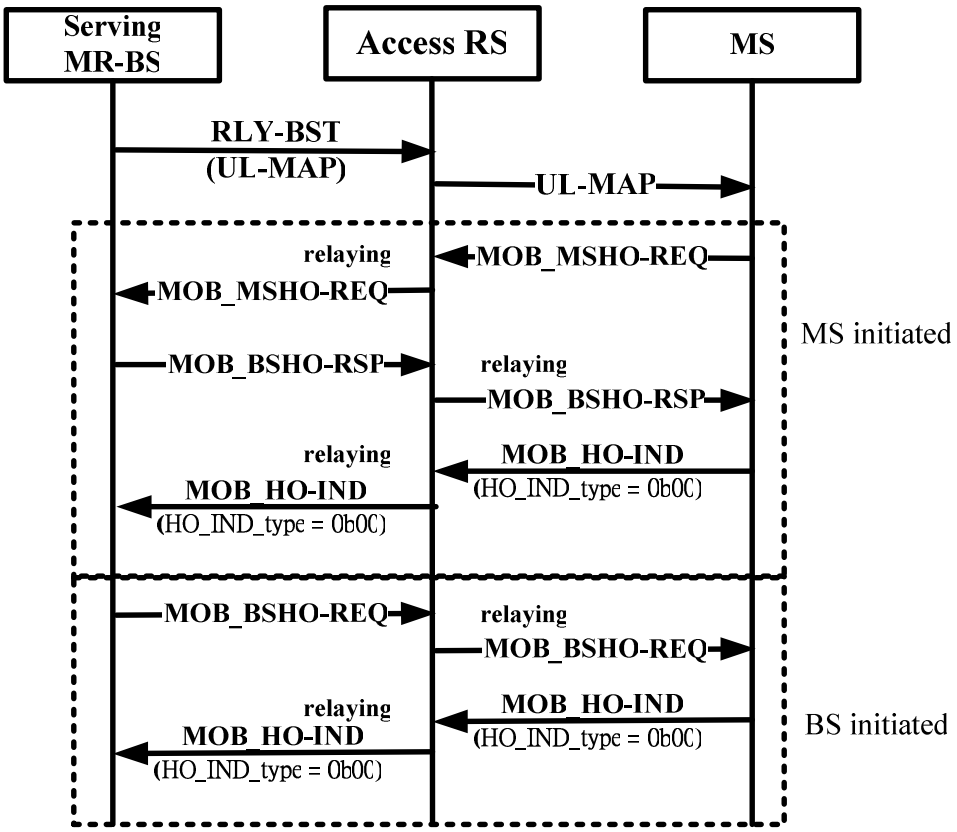

Figure xxx –MS Handover Initial and Decision (Intra MR-BS)

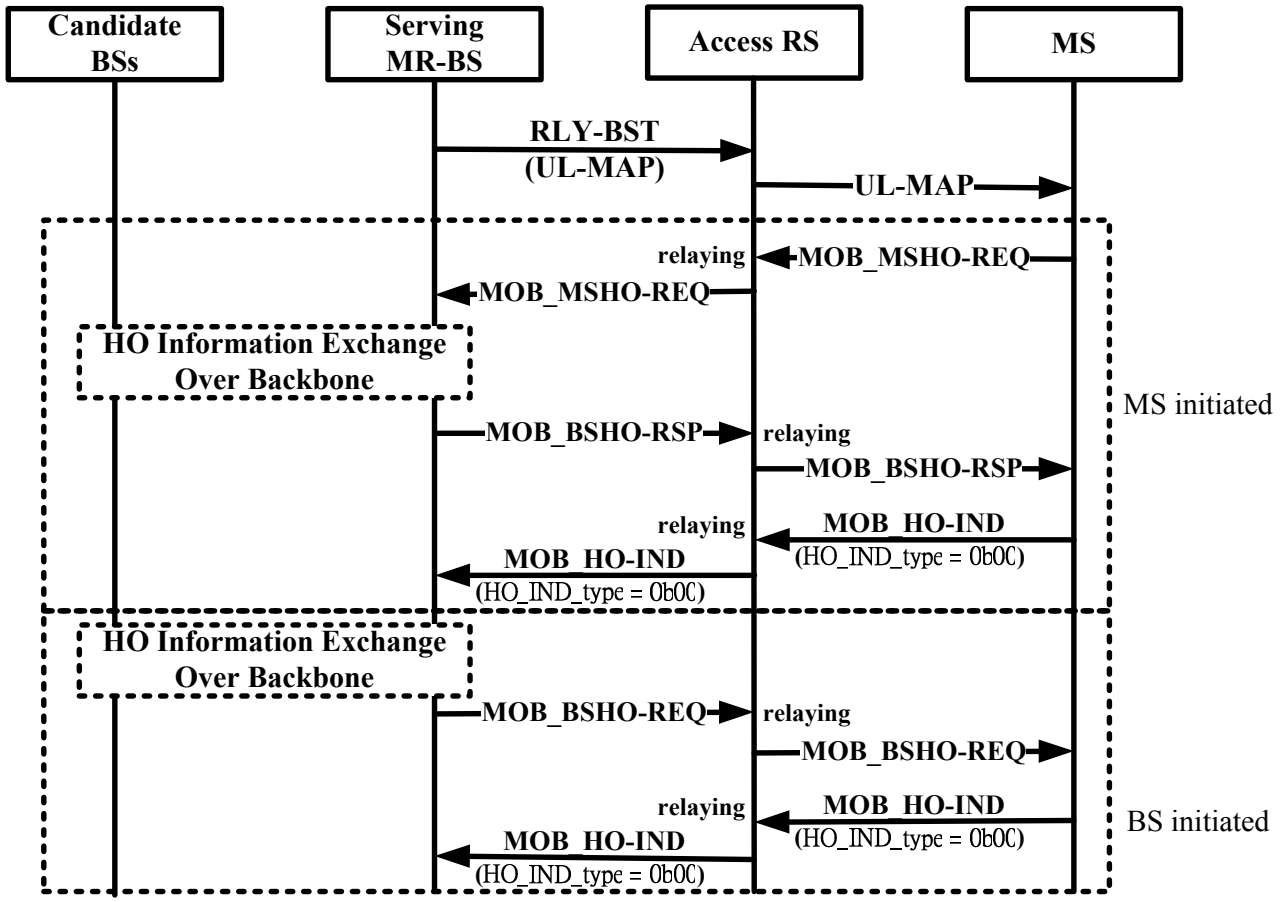


Figure xxx –MS Handover Initial and Decision (Inter MR-BS)

6.3.22.5.2.5 Handover Ranging procedure

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

6.33.22.5.2.6 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 MR-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 MR-BS shall resume Normal Operation communication.

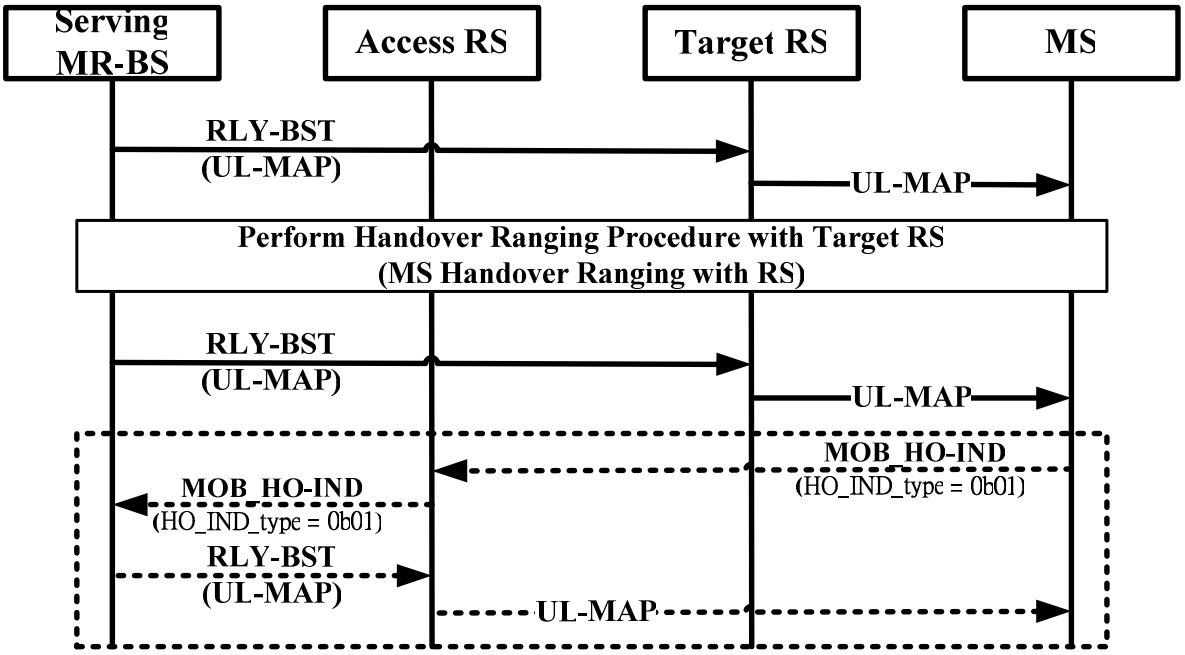


Figure xxx –MS Network Entry/Termination of Handover (Intra MR-BS)

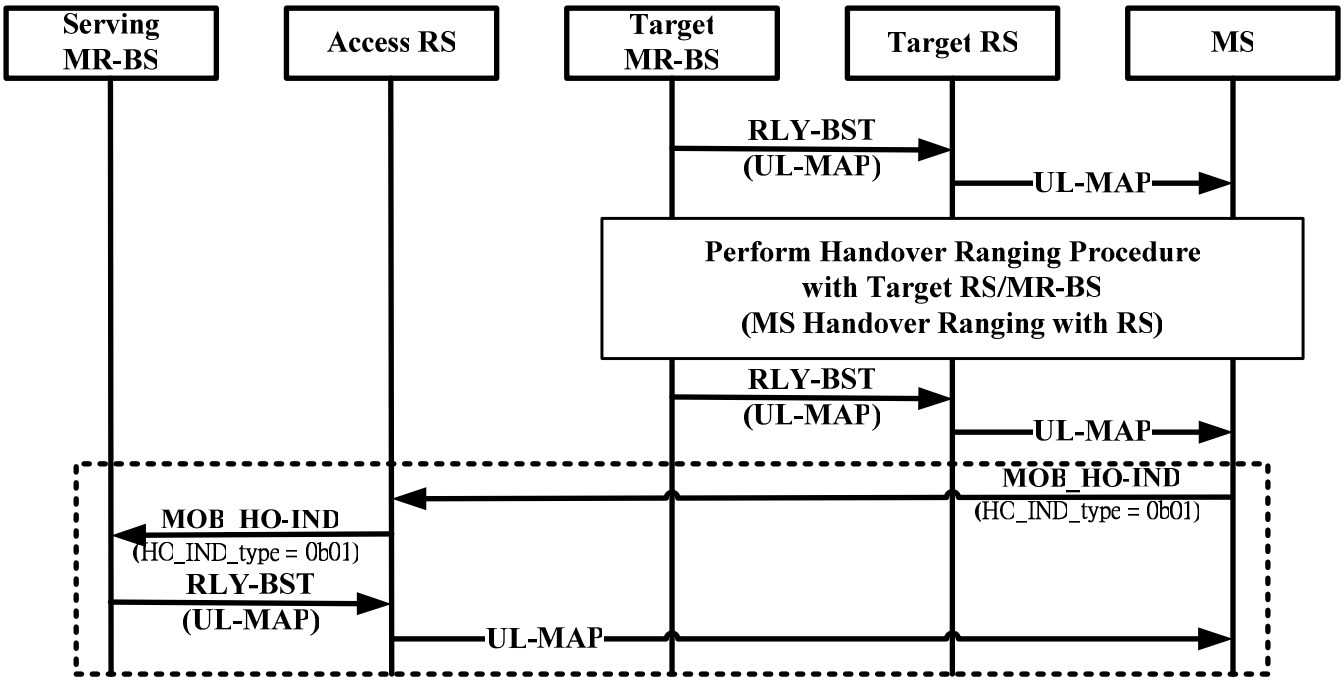


Figure xxx –MS Network Entry/Termination of Handover (Inter MR-BS)