Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>
Title	**Text proposal for ~~MAC~~ handover cases~~procedure~~ in an MR Network**
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Re:	Text change proposal for IEEE 802.16j amendment
Abstract	This document defines seven handover cases in IEEE 802.16j MR networks.
Purpose	This contribution proposes the text to be inserted into IEEE 802.16j amendment.
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1. **Terminologies and Definitions**

access station: The station at the point of direct access into the network for a given MS or RS. An access station can be a BS, RS, or MR-BS.

serving station: For any MS, the serving station is the station with which the MS has most recently completed registration at initial entry or during a handover. A serving station can be a BS or MR-BS.

target access station: A station which is the primary candidate for MS network access following a handover. The target access station can be an RS, BS, or MR-BS.

target serving station: A station which is the primary candidate for MS registration following a handover. The target serving station can be a BS or MR-BS.

infrastructure station (IS): A station which is not a subscriber. The infrastructure station can be a BS, MR-BS, or RS.

neighbor station: For an MS, an access station whose downlink transmission over the access link can be received by the MS. (This definition follows the definition of the terminology *neighbor BS* in IEEE 802.16e-2005.) For an infrastructure station (IS), any other IS whose transmission over relay link can be received by the IS.

2. **Proposed text change**

[Insert the following in subclause 6.3.22 before subclause 6.3.22.1]

Due to the introduction of RSs into the network infrastructure, seven different handover cases illustrated in can occur in an MR network. The seven cases belong to two main categories of handover: (1)Intra MR-BS handover if the handover is between two RSs controlled by the same MR-BS or between an MR-BS and one of its subordinate RSs; and (2) Inter MR-BS handover if the handover is between two MR-BSs, two RSs each controlled by different MR-BSs, or between an MR-BS and an RS controlled by a different MR-BS.

~~All~~ The six new cases (i.e., Cases 1, 2, 3, 5, 6, and 7) require signaling among involved RSs and MR-BSs to support handover. T~~herefore,~~ this subclause ~~also~~ contains procedures for infrastructure stations to support MS handover if the MS is attached to an MR network.

The h~~H~~andover procedures for these cases shall accommodate various types of RSs ~~of different capabilities~~ depending on the functional split between MR-BS and its subordinate RSs.
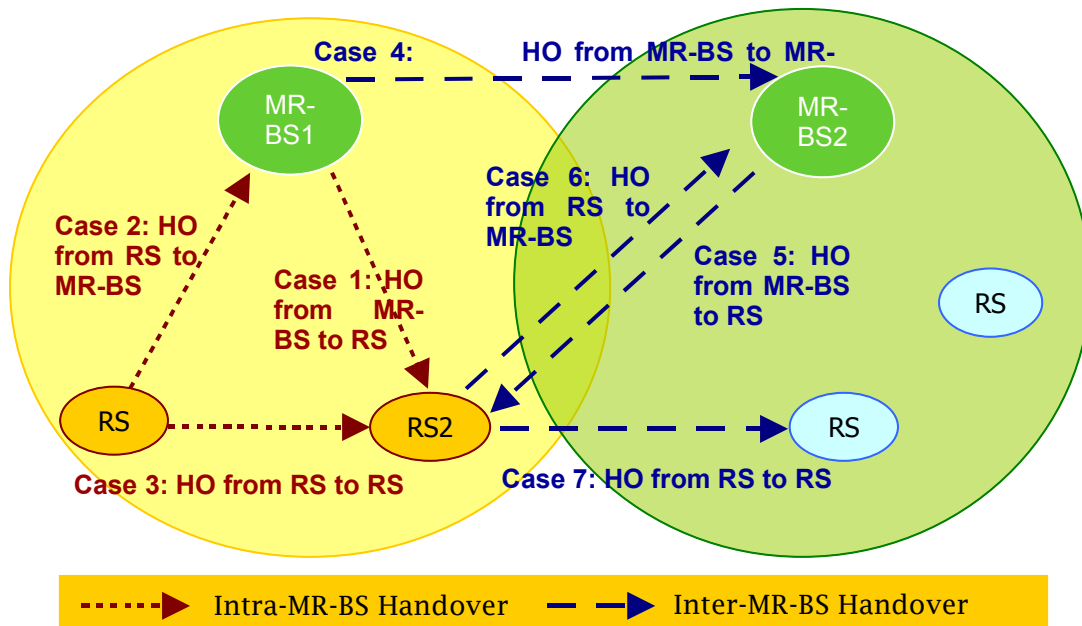
Figure 1 Seven Handover Cases in an MR network

[Insert new subclause 6.3.22.4]

6.3.22.4 Mobile Relay Station Handover

The Mobile RS (MRS) handover process deals with handover of the MRS along with all the subordinate MSs to a target access station. MRS handover follows the handover stages as described in section 6.3.22.2. The differences with respect to 6.3.22.2 are described in this section.