Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>
Title	NEMO Basic Support Capability for Mobile RS
Date Submitted	2007-01-08

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Re:	This is a response to Call for Technical Proposals regarding IEEE Project P802.16j.

Abstract	The document contains technical proposals for IEEE 802.16j that would provide NEMO Basic Support Capability for Mobile RS.

Purpose	[Description of what the author wants 802.16 to do with the information in the document.]

contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.

Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives 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>.

NEMO Basic Support Capability for Mobile RS

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Introduction

Several proposals for Mobile RS (MRS) handover scheme have been proposed to provide an efficient handover of each MS attached to MRS [1,2,3,4,5]. Since the MRS may be mounted on a moving vehicle such as a train orsubway, for example, it should be able to handle as many as MSs attached to the MRS. Since many MSs are attached to a MRS, such a group handover scheme is required. It is the case especially for a handover between two MR-BSs. All the proposals concern MAC layer handover.

Since such a handover may cause massive handover for all the MSs attached to the MRS, it is important to maintain session of each MS during handover. Without NEMO basic support [7] for MRS, each MS should maintain its session and IP mobility individually.

We propose that each MRS have NEMO basic support capability.

Proposed Solution

In this section, we describe briefly the NEMO basic support capability of the MRS. The scope of the capability can be depicted in Figure 1 below.

When the MRS and the attached MSs as shown Figure 1 approaches a new MR-BS, the MRS initiates the group handover. Once the handover is done successfully, the MRS and its attached MSs are connected to the new MR-BS. In this case, the session of each MS should be maintained with NEMO basic support capability.
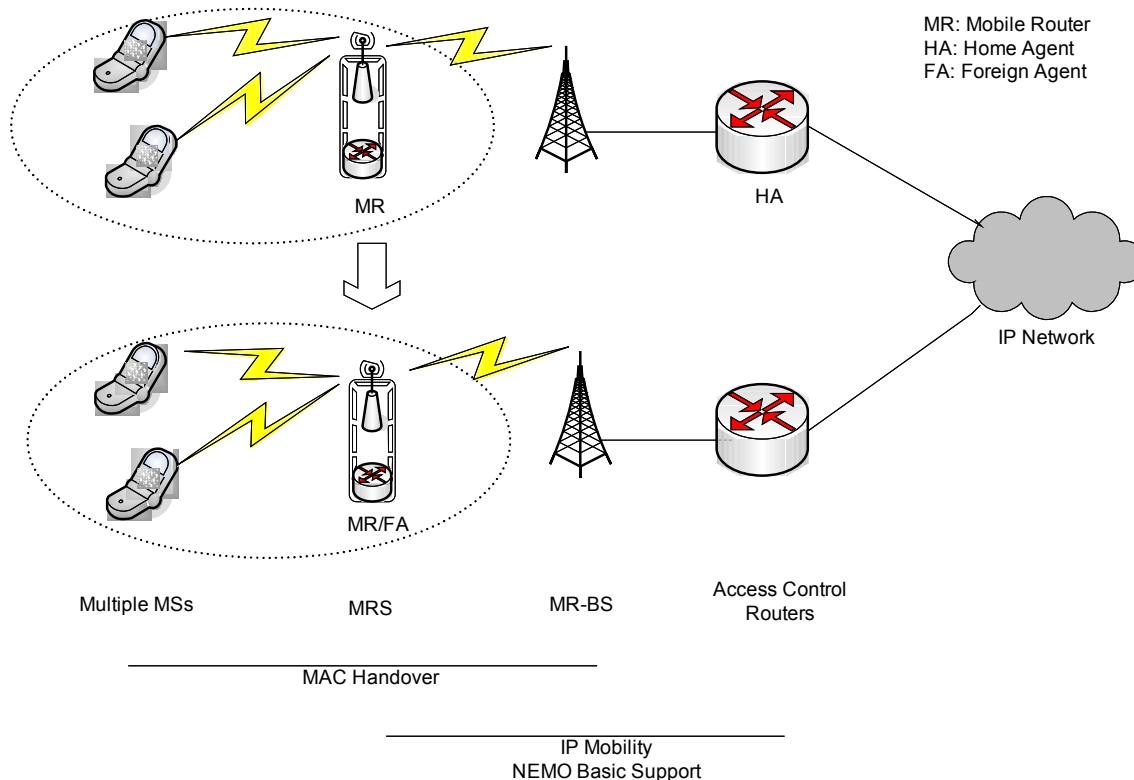
Figure 1: Scope of MAC Handover and NEMO Basic Support

Text Proposal

The proposed text is listed below.

Insert the following new subsection.
3.1 Terminology

The Mobile RS is an RS that has HO capability defined in 6.3.22.2 and NEMO basic support capability defined in [7].

The Fixed RS is an RS that has only HO capability with MS or MRS through its reporting MR-BS.

Insert the following new subsection.
9.4.1 MRS
The Mobile RS shall have HO capability defined in 6.3.22.2 and NEMO basic support capability defined in [7].

References

[1] IEEE C802.16j-06/7r1, S. Kim, S. Chang, and C. Yoon, "Group Handover on the Mobile RS," ETRI, November 2006.
[2] IEEE C802.16j-06/190, Y. Saiffullah, S. Maheshwari, and H. Zheng, "Relay

Handover," Nokia, November 2006.

[3] IEEE C802.16j-06/220, "MS MAC Handover Procedure in an MR Network Handover - Execution," November 2006.

[4] IEEE C802.16j-06/219, "MS MAC Handover Procedure in an MR Network Handover - Decision and Initiation," November 2006.

[5] IEEE C802.16j-06/218, "MS MAC Handover Procedure in an MR Network Handover – Network Topology Acquisition and MS Scanning," November 2006.

[6] IEEE C802.16j-06/253, "Route Update with Efficient CID Management," November 2006.

[7] IETF 3963, "Network Mobility (NEMO) Basic Support Protocol," January 2005.

[8] Charles E. Perkins, Mobile IP, Addison-Wesley, 1998.