## NEMO Basic Support Capability for Mobile RS

#### IEEE 802.16 Presentation Submission Template (Rev. 8.3)

Document Number: S802.16j-07/133r1 Date Submitted: January 16, 2007 Source: [Jai H Eu] Voice: [+82-31-476-6989] [Jcast Networks Korea] Fax: [+82-31-476-6930] [jeu@jcastnet.com] [#1004 Anyang K-Center, Burim-Dong 1591-9] E-mail: [Anyang-Si, Gyeonggi-Do, Korea] [Young Man Lee and Man Jong Lee] Voice: [+82-2-526-5354] [KT, Network Infra Tech. Lab.] Fax: [+82-31526-5216] 17 Woomyeon-dong, Seocho-gu ] E-mail: lim@kt.co.kr] [Seoul, 137-792, Korea]

#### Venue:

[IEEE 802.16 Session #47, London, UK]

### Base Document:

[IEEE C802.16j-07/133) and URL < http://ieee802.org/16/... C80216j-07/133.doc>.]

#### Purpose:

[This document provides an overview of NEMO Basic Support Capability for Mobile RS] Notice:

This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.

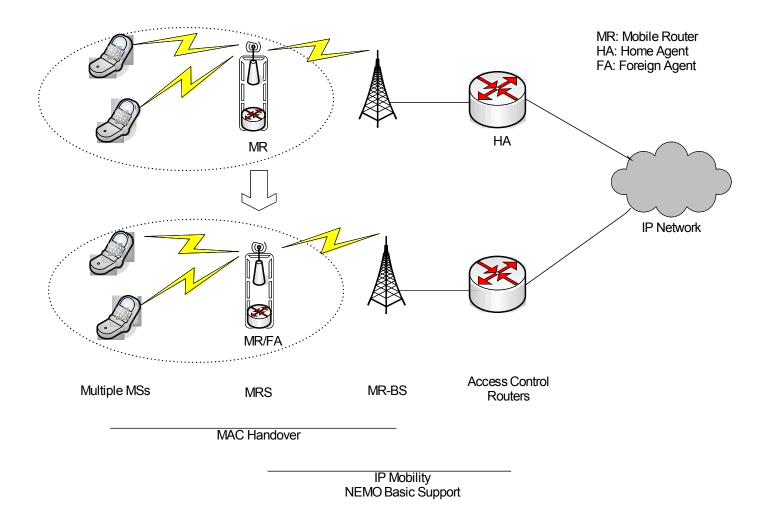
#### Release:

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.

#### IEEE 802.16 Patent Policy:

The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures <a href="http://ieee802.org/16/ipr/patents/policy.html">http://ieee802.org/16/ipr/patents/policy.html</a>, 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 <a href="mailto:chair@wirelessman.org">mailto:chair@wirelessman.org</a>> 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 <a href="http://ieee802.org/16/ipr/patents/notices">http://ieee802.org/16/ipr/patents/notices</a>>.

# NEMO Basic Support Capability



Highlights for Mobile RS

- Mobile RS attached with
  - MSs and/or,
  - Mobile network (subnet) consisting of IP hosts that do not support mobility
- Mobile RS Applications
  - Trains, light trains (no locomotive engineers), subway, ambulances, ferryboats, etc.
  - Mission critical communications to home network
  - Returns home eventually with mobile network

Handover and IP Mobility for Mobile RS

- MAC handover for Mobile RS
  - Proposals (C802.16j-06/227r1, etc.) for only MSs
  - Mobile RS for IP hosts with no mobility support
- How to maintain the session of each IP (MSs and IP hosts)
  - Moving into/out of different subnets
  - NEMO Basic Support Capability for Mobile RS

# NEMO Basic Support for Mobile RS

- The Mobile RS has the mobile router function maintaining bi-directional tunnel to a Home Agent advertising to the infrastructure.
- The Mobile RS is the default gateway for the Mobile Network so that the Mobile Network can be only accessed via the Mobile RS.
- The Mobile RS has a unique Home Address reachable to the registered Home Agent.
- The Mobile RS acquires a Care-of-Address (COA) from the visited link.