- **IEEE 802.21 MEDIA INDEPENDENT HANDOVER**
- DCN:
- Title: **Link Layer Events in IEEE 802.16e (Section 6.1.6)**
- Date Submitted: July,2005
- Presented at IEEE 802.21 session #NN in San Francisco
- Authors or Source(s):

Junghoon Jee, Eunah Kim

jhjee@etri.re.kr, eakim@etri.re.kr

ETRI

- Abstract: This document specifies how MAC management frames of IEEE 802.16e can be mapped to the link layer events that are described in P802-21-D00-01.pdf.

IEEE 802.21 presentation release statements

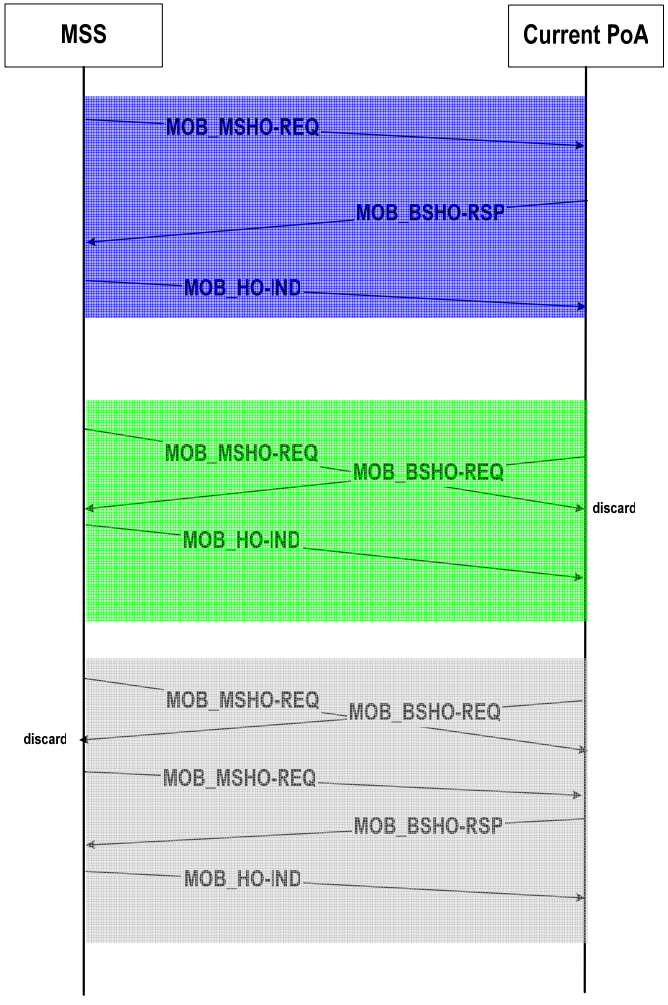
- This document has been prepared to assist the IEEE 802.21 Working Group. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.
- 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 802.21.
- The contributor is familiar with IEEE patent policy, as outlined in Section 6.3 of the IEEE-SA Standards Board Operations Manual <http://standards.ieee.org/guides/opman/sect6.html#6.3> and in *Understanding Patent Issues During IEEE Standards Development* http://standards.ieee.org/board/pat/guide.html>

IEEE 802.16e MAC Management Frames

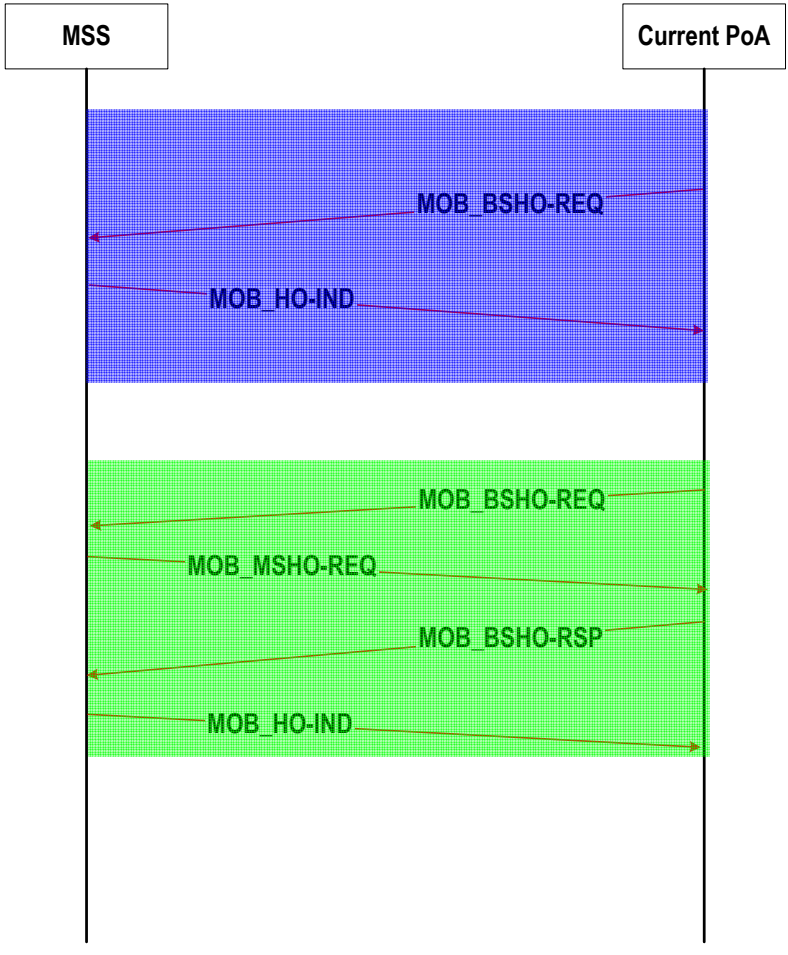
- MOB_MSHO-REQ
  - The MS may transmit an MOB-_MSHO-REQ message when it wants to initiate an HO.
- MOB_BSHO-REQ
  - The BS may transmit a MOB_BSHO-REQ message when it wants to initiate an HO.
- MOB_BSHO-RSP
  - The BS shall transmit an MOB_BSHO-RSP message upon reception of MOB_MSHO-REQ message.
- MOB_HO-IND
  - An MS shall transmit a MOB_HO-IND message for final indication that it is about to perform a HO.
  - 0b00 : serving BS release
- REG-RSP
  - For mobile subscribers in normal operation, when the information is available to create CID update TLV, the target BS shall include the CID_update and SAID_update TLVs in the REG-RSP for an MS recognized by the target BS as performing HO or Network Re-entry from Idle Mode.

L2 Handover in IEEE 802.16e

MSS initiated



Network initiated



Link Layer Events Mapping

- Link UP
  - REG-RSP
- Link Down
  - MOB_HO-IND
- Link Going Down
  - MSS initiated handover
    - MOB_BSHO-RES or MOB_BS-HO-REQ
  - Network initiated handover
    - MOB_BS-REQ or MOB_BSHO-RES

Enhancement of Section 6.1.6

Event Identifier	Event Type	Event Name	Description
1	State Change	Link Up	In IEEE 802.16e networks, this event occurs when MN receives REG-RSP from the current PoA.
2	State Change	Link Down	In IEEE 802.16e networks, this event occurs when MN sends MOB_HO-IND to the current PoA.
3	Predictive	Link Going Down	In IEEE 802.16e networks, this event occurs when MN receives MOB_BSHO-RES from the current PoA. In certain situations, it may occur when MN receives MOB_BSHO-REQ from the current PoA.
…..	……	……	
11+	*Reserved*	*Reserved*	