Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
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Source(s)	Sungcheol Chang Jaesun Cha Itzik Kitroser ETRI 161, Gajeong-dong,Yuseong-Gu, Daejeon, 305-350, Korea RuncomTechnologies Ltd.2 Hachoma St. 75655 Rishon Lezion, Israel	Voice: +82-42-860-5587 Fax: +82-42-861-1966 scchang@etri.re.kr jscha@etri.re.kr itzikk@runcom.co.il
Re:	This is a response to a Call for comments IEEE 802.16e-03/18 on IEEE 802.16e-03/07r3
Abstract	The document contains suggestions on changes in IEEE 802.16e-03/07r3 that would help HO process in a drop situation.
Purpose	The document is submitted for review by Handoff/Sleep-mode Ad Hoc Group and/or by 802.16 Working Group members
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HO Process in a drop situation
Sungcheol Chang, Jaesun Cha,* Itzik Kitroser
*ETRI and *Runcom*

Introduction

There is no exact description of the HO process when the MSS detects a drop before the normal HO process with the serving BS has been complete or after it awakes from sleep-mode. When the MSS has detected a drop, it shall attempt network re-entry with its preferred target BS. In the worst case, the MSS shall re-establish connections as shown in the initial network-entry because the target BS does not know the fact that the MSS attempts network re-entry after a drop situation.

Therefore, we propose that the unique identifier of the former serving BS be included in RNG-REQ message as a TLV when the MSS attempts network re-entry after a drop situation. If the target BS recognizes that the MSS attempts network re-entry because of a drop, it does not only response to RNG-REQ but also request the old BS the security context via backbone network. Then, it performs the normal HO process of air interface. After the MSS re-authorization is completed successfully, the target BS notifies the former serving BS of the success of re-authorization. Upon reception of the message, the former serving BS transmits connection information of the MSS to the target BS and closes all connections and discards MAC state machines and MPDUs associated with the MSS.

Proposed changes to IEEE 802.16e-03/07r3

1.3.1.2.3.1 Re-entry with the target BS

[Insert at the end of 1.3.1.2.3.1 of IEEE 802.16e-03/07r3]

In a drop situation, the unique identifier of the former serving BS shall be included in RNG-REQ message to inform the target BS that the MSS has detected a drop from it.

6.2.2.3.5 Ranging Request (RNG-REQ) message

[Insert at the end of 6.2.2.3.5 of IEEE 802.16a-2003]

The following parameters shall be included in the RNG-REQ message:

BS ID

11.1.3 RNG-REQ message encodings

[Add the following rows to table 126 of IEEE 802.16a-2003]

Table 126a – RNG-REQ Message Encodings

Name	Type (1 byte)	Length	Value (variable-length)
BS ID	4	6	The unique identifier of the former serving BS