Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Addition of SAID_update in harmony with CID_update**
Date Submitted	**2004-07-07**
Source(s)	Dongkie Lee, DongIl Moon, DongRyul Lee, JongKuk Ahn, Sungho Ha SK Telecom 15F, Seoul Finance Center, 84, Taepyungpro 1 ga, Chung-gu, Seoul, 100-768, Korea Voice: +82-2-6323-3147 Fax: +82-2-6323-4493 [mailto: {galahad,dimoon,drlee,jgahn,ss23}@sktelecom.com]
Re:	Recirculation Ballot #14b Announcement
Abstract	To be in line with CID_update in REG-RSP in current IEEE 802.16e/D3, SAID_update is defined and appended to the RE~~N~~G-RSP.
Purpose	Discuss and Adopt
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.
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>.

Addition of SAID_update

Dongkie Lee, DongRyul Lee, DongIl Moon, JongKuk Ahn
SK Telecom

1. Problem Statements

IEEE 802.16e/D3 defined CID_update attribute which is used as shorthand method for replacing the active connections used by the MSS in its previous Serving BS. But with same analogy, it's possible that SA be reused therefore SAID should be updated according to the Target BS security policy configuration.

2. Overview of Proposed Solutions

Per the handoff ad-hoc's consensus, when bit 1 of Handoff Process Optimization is set to 1, which means PKM procedure maybe skipped, it's probable that SAID be updated according to the target BS security configuration. In this case, SAID_update attribute shall be appended to RENG-RSP as CID_update is appended to REG-RSP.

3. Proposed Changes to IEEE 802.16e/

6.3.2.3.8 Registration Rosponse(REG-RSP) message

Unless otherwise indicated in this section, MSS mobile network entry/re-entry is processed according to 6.4.9. For purposes of this process, MSS network re-entry and hand-over are synonymous.

For mobile networks, Target BS may include CID_update TLVs and SAID_update TLVs in the REG-RSP for MSS recognized by the Target BS as performing HO or network re-entry by the presence of a Serving BS ID in the RNG-REQ.

CID_update - The CID_update is a compound TLV value that provides a shorthand method for renewing active connections used by the MSS in its previous Serving BS. The TLVs specify CID in the Target BS that shall replace active CID used in the previous Serving BS. Multiple iterations of these TLVs may occur in the REG-RSP suitable to re-creating and re-assigning all active Service Flows for the MSS from its previous Serving BS including Basic, Primary and Secondary CIDs. If any of the Service Flow parameters change, then those Service Flow parameters and CS parameter encoding TLVs that have changed will be added. Only active Service Flows are transferred in this manner.

These TLVs enable the Target BS to renew connections used in the previous Serving BS, but with different QoS settings.

SAID_update - The SAID_update is a compound TLV value that provides a shorthand method for renewing active SAs used by the MSS in its previous Serving BS. The TLVs specify SAID in the Target BS that shall replace active SAID used in the previous Serving BS. Multiple iterations of these TLVs may occur in the RENG-RSP suitable to re-creating and re-assigning all active Security Associations for the MSS from its previous Serving BS including Primary, Dynamic and Static SAIDs. If any of the Security Associations parameters change, then those Security Associations parameters encoding TLVs that have changed will be

added.

11.7 REG-REQ/RSP management message encodings

[Add the following before section after 11.7.8 CID_update encodings and change section number hereafter]

11.7.9 SAID update encodings

This field provides a translation table that allows an MSS to update its security associations so that it may continue security service after a hand-over to a new serving BS.

Name	Type (1 byte)	Length (1 byte)	Value (Variable length)
SAID_update	20	variable	Compound

The following TLV values shall appear in each SAID_update TLV.

Name	Type (1 byte)	Length (1 byte)	Value (Variable length)
New_SAID	20.1	2	New SAID after hand-over to new BS
Old_SAID	20.2	2	Old SAID before hand-over from Old BS