Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Re-definition of M-ACM-IND Primitive**
Date Submitted	**2007-02-11**
Source(s)	Jaesun Cha and Chulsik Yoon jscha@etri.re.kr ETRI 161 Gajeong-dong, Yuseong-gu Daejeon 305-700 Korea
Re:	Contribution on comments to IEEE 802.16g/D7
Abstract	Re-definition of accounting primitives
Purpose	Adoption
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 text 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 (Version 1.0) <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing 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:r.b.marks@ieee.org> as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site <http://ieee802.org/16/ipr/patents/notices>.

Re-definition of M-ACM-IND Primitive

Jaesun Cha and Chulsik Yoon

ETRI

1. Motivation

While we discussed the resolution of comment #32 in the last meeting, we agreed that we needed to improve the mechanics of the M-ACM-IND function. In the current draft, whenever accounting events (registration, service flow creation, de-registration, etc) are occurred, the BS gathers accounting information and reports it using M-ACM-IND primitive that does not require an acknowledgment. By definition, any indication primitive is used to just notify an event. Therefore, it doesn't need to include any information.

In this contribution, we propose to modify the role of M-ACM-IND primitive. According to the new definition of the M-ACM-IND primitive proposed here, the M-ACM-IND primitive just indicates the NCMS that an event related with accounting has occurred. After the NCMS receives M-ACM-IND primitive, it generates M-ACM-REQ primitive to request the MS to gather accounting information, and the BS responds to it with M-ACM-RSP primitive.

2. Proposed Text Changes
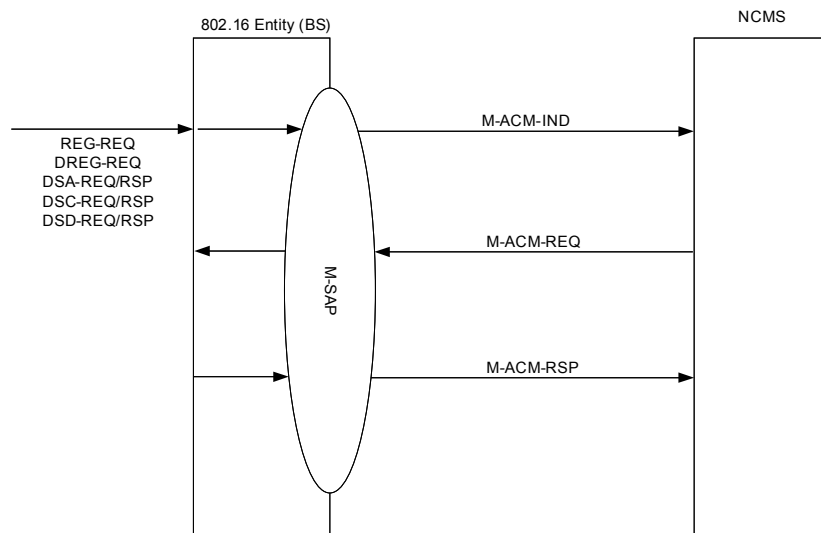
[***Replace Figure 471 with the following figure***]

Figure 471 – Accounting primitive initiated by a BS

[***Modify Subclause 14.2.1.2.3 as follows***]

14.2.1.2.3 M-ACM-IND

Function:

This primitive is issued by a BS to inform the NCMS of an accounting event for MS Network Entry after Registration request/response (REG-REQ/RSP), or Deregistration command (DREG-CMD) of an MS, or DSA/DSC/DSD-REQ/RSP events. ~~This primitive is issued by a BS to indicate to the NCMS the accounting event or to report the accounting record autonomously.~~

Semantics of the service primitive:

The parameters of the primitives are as follows:

M-ACM-IND
(
      Event_Type: Accounting,
      Destination: NCMS,
      Attribute_List :
           SS MAC Address
           Service Flow Identifier
           Accounting type
           ~~Accounting Record Number~~
           ~~Accounting Octets~~
           ~~Accounting Packets~~
           ~~Service Flow Information~~
           ~~Accounting Correlation Index~~
)

Table xxx – Accounting Indication attributes

Name	Type	Valid Range	Description
Accounting Type	Enumeration	Registration, Service Flow Creation, Service Flow Change, Service Flow Deletion, De-registration	This identifies the type of accounting events.

SS MAC Address
   48-bit MAC address which identifies SS
Service Flow identifier
   32-bit service flow identifier which will identify service flows of an SS, which the accounting information is provided for. This is valid only when accounting type is 'service flow creation' or 'service flow deletion'.
~~**Accounting Record Number**~~
   ~~Identifies accounting record within one session~~
~~**Accounting Octets**~~
   ~~The number of octets recorded at the SS for the given service flow(s) during the accounting session.~~
~~**Accounting Packets**~~
   ~~The number of packets recorded at the SS for the given service flow(s) during the accounting session.~~
~~**Service Flow Information**~~
   ~~Required QoS information of the service flow, which the accounting information is provided for. It includes traffic characteristics and a scheduling type such as service class name, QoS parameter set type, maximum sustained traffic rate, maximum traffic burst, minimum reserved traffic rate, minimum tolerable traffic rate, service flow scheduling type, tolerate jitter, and maximum latency.~~
~~**Accounting Correlation Index**~~
   ~~Provides a unique correlation index for generated records. This field can contain the Account Session ID or the Account-Multi-Session ID that is typically used by the AAA server to consolidate the session records.~~

When generated:

This primitive is generated at a BS when ~~an accounting session is created, deleted, or changed~~<u>any accounting events are occurred</u>.

Effect of receipt:

NCMS will <u>generate M-ACM-REQ primitive to retrieve the accounting records from BS.</u>~~update the accounting record accordingly.~~