Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**	
Title	**MIH C-SAP Primitives**	
Date Submitted	**2006-03-07**	
Source(s)	David Johnston Intel Corporation 2111 NE 25th Ave Hillsboro, OR, 97006 USA	Voice: +1 503 264 3855 Fax: +1 503 264 3483 dj.johnston@intel.com
Re:	Doc IEEE 802.16g-D1	
Abstract	Provides the missing C-SAP primitives to carry the MIH 802.21 Frames.	
Purpose	To enable the carriage of 802.21 MIHF frames over the C-SAP to be mapped onto the 802.21 MIH-SAP.	
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>.	

MIH C-SAP Primitives

David Johnston
Intel Corporation

802.16g defines MIH messages. These carry 802.21 MIHF frames. 802.16g also specifies that these messages are managed through the C-SAP management interface.

There are no MIH primitives specified on the C-SAP interface. They are missing.

This document proposed text for the missing MIH C-SAP messages:

In addition this proposal reduces the MIH on-air messages down to one MOB-MIH-MSG primitive, since it is incorrect for the 802.16 entity to be tracking the req/rsp state of the 802.21 MIH protocol. The 802.21 protocol packages up the MIHF Frame so that undlaying media can simply transport the frame without needing to interpret it or sychronise to its protocol state.

The proposed changes to 802.16g are as follows:

Change Message Name cell of type entries 67 in Table 14a of Clause 6.3.2.3. as follows:

~~MOB_MSMIH-REQ~~ MOB_MIH-REQ

Delete type entries 68, 69 and 70 from Table 14a of Clause 6.3.2.3.

Change Text of 802.16g Clause 6.3.2.3.67 as follows

6.3.2.3.67 ~~MOB-MSMIH-REQ~~ MOB-MIH_MSG

The 802.16 entity ~~MS~~ may ~~transmit~~ send or receive the ~~MOB_MSMIH-REQ~~ MOB-MIH_MSG message to or from the ~~BS~~ peer 802.16 entity in order to ~~send~~ convey MIHF Frames carrying the 802.21 MIH protocol messages ~~handover imminent messages, or control and management message related to MIH. Parameters encoded to TLV tuple shall be differentiated according to data which MIH delivers as primitive~~. The message shall be transmitted on basic CID.

Change title of table 108aa as follows:

Table 108aa -- ~~MOB_MSMIH-REQ~~ MOB_MIH_MSG message format

Change Cell (1,2) of table 108aa as follows:

~~MOB_MSMIH-REQ_Message_Format( ) {~~ MOB_MSMIH-REQ_Message_Format( ) {

Delete from 802.16g Clause 6.3.2.3.68

Delete from 802.16g Clause 6.3.2.3.69

Delete from 802.16g Clause 6.3.2.3.70

Insert new text into 802.16g, 14.2.9.8:

14.2.9.8 MIH Control Protocol Procedures

The MIH Control Primtives provide carriage of 802.21 MIHF Frames between the 802.16 entity and the NMCS. This enables the NMCS to map between MIHF frames and primitives on the 802.21 MIH-SAP, consistent with Clause 5.5.3 of IEEE Std 802.21.

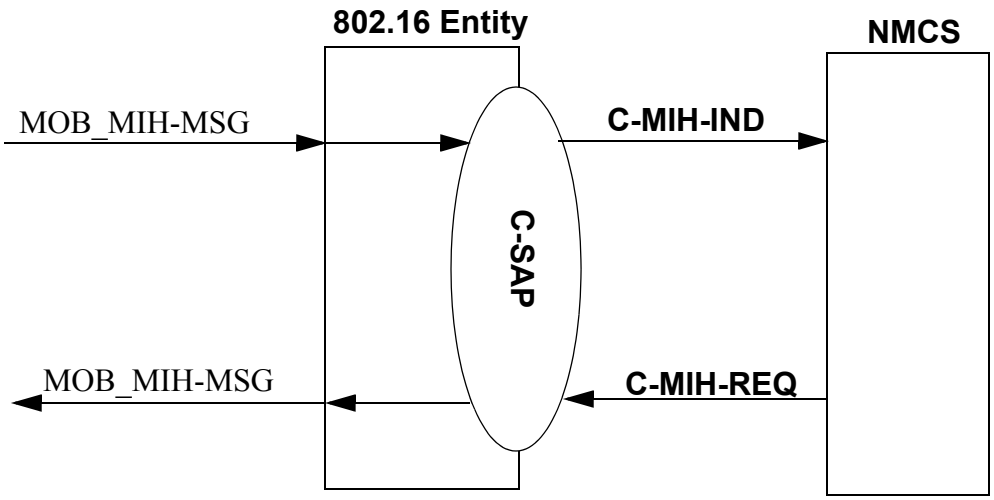

Figure 504—MIH Primitive Flow between 802.16 Entity and NMCS for 802.21 Support

14.2.9.8.1 C-MIH-IND

14.2.9.8.1.1 Function

This primitive generated by the 802.16 entity on the C-SAP to indicate the reception of a MOB_MIH-MSG on the air interface and to convey 802.21 MIHF frame carried in the message to the NMCS.

14.2.9.8.1.2 Semantics of the Service Primitive

C-MIH-IND
(
MIHF Frame,
)

MIHF Frame
MIHF Frame as described in clause 8.2 of Std 802.21

14.2.9.8.1.3 When Generated

This primitive is generated when the 802.16 entity receives a MOB-MIH-MSG from the peer 802.1 entity.

14.2.9.8.1.4 Effect of Recipt

On recipt, the NMCS should map the 802.21 MIH Message embedded in the 802.21 MIHF Frame in the primitive onto the equivalent primitive on the MIH_SAP consistent with Std 802.21, Clause 5.5.3.

14.2.9.8.2 C-MIH-REQ

14.2.9.8.2.1 Function

This primitive is used by the NMCS to request that the 802.16 entity transmits a MOB_MIH-MSG message containing the 802.21 MIHF frame carried in the primitive.

14.2.9.8.2.2 Semantics of the Service Primitive

C-MIH-REQ
(
MIHF Frame,
)

MIHF Frame
MIHF Frame as described in clause 8.2 of Std 802.21

14.2.9.8.2.3 When Generated

This primitive is generated when an the NMCS has an 802.21 MIHF frame to convey through the 802.16 entity to the peer 802.16 entity.

14.2.9.8.2.4 Effect of Recipt

On recipt of this primitive, the 802.16 entity shall transmit a MOB_MIH-MSG message containing the 802.21 MIHF frame conveyed in the MIHF Frame field of the primitive