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Title	**MAC Management Signaling for MS to notification**
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Re:	Contribution on comments to IEEE 802.16g-05/008r1
Abstract	This contribution defines MAC Management Signaling for low power, limited resources 16e devices to inform of BS message from MS.
Purpose	Adoption
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MAC Management Signaling for MS to Notification

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Motivation

To define general purpose, simple and light MAC Management Signaling for mobile, low power, 802.16e subscriber device with limited resources. Sometime, we need to provide MS the ability to communicate with BS as initiator with a link layer method. The method can also reduce the overhead compared with that used by other up layer protocols for MS to initiate the request message.

Details

The proposal is to define 2 new MAC management messages that will enable the MS to notify Information Elements(IEs) to BS. The IEs that can be notified are limited to those that are defined in the specified table 462.

NTF_IE_REQ - sent by the MS to the BS on its Primary Management connection to notify data over one or more information elements.

NTF_IE_RSP - sent by the BS in response to NTF_IE_REQ containing the results of the information elements sent in the corresponding NTF_IE_REQ.

Change summary

Replace the table 461 with the following table

Table 461 - Management Signalling Messages

Type	Message name	Message description	Connection
202	QRY_IE_REQ	Query IE request	primary management
203	QRY_IE_RSP	Query IE response	primary management
204	SET_IE_REQ	Set IE request	primary management
205	SET_IE_RSP	Set IE response	primary management
206	NTF_IE_REQ	Notify IE request	primary management
207	NTF_IE_RSP	Notify IE response	primary management

Insert the following section in 14.5.13.2.1

14.5.13.2.1.5 Notify IE Request message (NTF_IE_REQ)

MS uses the NTF_IE_REQ message to query information on the BS by describing by one or more IEs. The NTF_IE_REQ message is sent from the MS to the BS on the MS's primary management connection.

Table xxxx—Notify IE Request (NTF_IE_REQ) message format

Syntax	Size	Notes

NTF_IE_REQ_Message_Format() {		
Management message type = 206	8 bits	
Transaction id	8 bits	
Response timeout	8 bits	Number of frame x 5 by which the sender expects to receive a corresponding NTF_IE_RSP message with either a success or error RSP Status. If this value is set to 0, the sender does not require a response and the receiver will not issue one.
TLV Encoded Information	Variable	
}		

Parameters shall be as follows:

Transaction id

A unique sequential identifier of the transaction set by the initiator.

Response timeout

Number of frames x 5 by which the sender expects to receive a corresponding NTF_IE_RSP message with either a success or error RSP Status. If this value is set to 0, the sender does not require a response and the receiver will not issue one.

The NTF_IE_REQ shall include the following parameters encoded as TLV Tuples:

HMAC Tuple (see 11.1.2)

The HMAC Tuple shall be the last attribute in the message.

The MS will serialize all the NTF_IE-REQ messages sent to the base station, waiting until the base station has responded, or a timeout has occurred before querying the base station again, or with more information. The MS may replay a message to override previously sent messages before the timeout has occurred. In this case the base station will not respond to the previous request instead will process the newly received message.

14.5.13.2.1.6 Notify IE Response message (NTF_IE_RSP)

The NTF_IE_RSP message is sent by the SS in response to NTF_IE-REQ containing the results of the information elements sent in the corresponding NTF_IE-REQ. The NTF_IE_RSP message is sent from the SS to the BS on the SS's primary management CID.

Table xxxx—Notify IE Response (NTF_IE_RSP) message format

Syntax	Size	Notes
NTF_IE_RSP_Message_Format() {		
Management message type=207	8 bits	
Transaction id	8 bits	
RSP Status	8 bits	Allowed values are: 0 - success 1 - Error Response timeout too short 2 - Error TLV
TLV Encoded Information	variable	
}		

Parameters shall be as follows:

Transaction id

A unique sequential identifier of the transaction set by the initiator.

RSP Status

Error encoding of the response status. Allowed values are:

0 – success
1 – Error Response timeout too short
2 – Error TLV

The NTF_IE_RSP shall include the following parameters encoded as TLV Tuples:

HMAC Tuple (see 11.1.2)