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Title	Comments on location information request and response messages			
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Re:	IEEE 802.16j-07/013: "Call for Technical Comments Regarding IEEE Project 802.16j"			
Abstract	This contribution proposes the comments on location information request and response messages			
Purpose	Discussion and Adoption in IEEE 802.16j			
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## Comments on location information request and response messages

#### Introduction

The purpose of this document is to comment subclause 6.3.2.3.65 location information request and response messages. In order to facilitate the incorporation of this proposal into IEEE 802.16j standard, specific changes to the baseline working document IEEE 802.16j-06/026r3 are listed below.

## **Proposed Text Change**

6.3.2.3.71 Location information requesting and response messages

6.3.2.3.71.1 MR LOC-REQ message

[change the following Table in page 33 as **indicated**:]

Table X1.MR LOC-REQ message format

Table AT.MK_LOC-REQ message format			
Syntax	Size	Notes	
MR_LOC-REQ_ Message_Format() {	-	-	
Type = xx	8 bits	-	
Report Mode	2 bits	0b00: Once	
		0b01: Periodic report	
		0b10~11: reserved	
Neighbor Location Req Flag	1 bit	0b0: Location request of the receiving RS only	
		0b1: Request message contains location request for neighboring	
		access stations	
If(Report Mode = 0b01) {	-	Available when the value of Report Mode is set to 0b01.	
Report period	12 bits	Report period in units of frame, a value between 0 to 4095	
		corresponding to a range of 1 frame to 4096 frame.	
}	-	-	
If ( Neighbor Location Req Flag != 0) {	ı	If this message is transmitted by an RS to MR-BS	
N_RS	8 bits	Number of neighboring stations for which the RS wants to	
		know the location information.	
For (j=0;j <n_rs; j++)="" td="" {<=""><td>-</td><td>-</td></n_rs;>	-	-	
RSID	48 bits	The 48 bit MAC address of the neighboring station (BS or RS)	
		whose location is requested	
}	-	-	
}	-	-	
Padding-Reserved	variable	Padding bits to ensure byte aligned. Shall be zero	
TLV Encoded Message	<u>variable</u>	TLV Encoded Message	
}	_	-	

[Insert the following paragraph and figures at the end of subclause 6.3.2.3.65.1:]

The following TLV parameters can be included:

The following parameters may be included in MR LOC-REO message

**Short-HMAC/CMAC Tuple (see 11.1.2)** 

The Short-HMAC/CMAC Tuple shall be the last attribute in the message.

### [change the following Table in page 35 as indicated:]

Table X2:MR LOC-RSP message format.

Syntax	Size	Notes
MR LOC-RSP Message Format(){	-	-
Type = xx	8 bits	-
Report Mode	2 bits	0b00: Once
		0b01: Periodic report
		0b10~11: reserved
Neighbor Location Req Flag	1 bit	0b0: Location request of the receiving RS only
		0b1: Request message contains location request for
		neighboring access stations
If (Neighbor Location Req Flag == 0)) {	-	If this message is transmitted by an RS to MR-BS
LLA_IE()	64 bits	Specifies the location of relay station in LLA format defined in
		section 6.3.2.3.62.3.
} else {	-	If this message is transmitted by an MR-BS to RS
N_RS	8 bits	Number of stations whose location information is included in
		the current MR_LOC-RSP message.
For (j=0;j <n_rs;j++) td="" {<=""><td>-</td><td>-</td></n_rs;j++)>	-	-
RSID	48 bits	The 48 bit MAC address of the neighboring station (BS or RS)
LLA_IE()	64 bits	Specifies the location of neighbor access station in LLA
		deviation format defined in section 6.3.2.3.62.3.
}	-	-
}	-	-
Padding-Reserved	variable	Padding bits to ensure byte aligned. Shall be zero
TLV Encoded Message	<u>variable</u>	TLV Encoded Message
}	-	-

#### [Insert the following paragraph and figures at the end of subclause 6.3.2.3.65.2:]

The following TLV parameters can be included:

The following parameter shall be included in the MR\_LOC-RSP when the BS or RS wishes to acknowledge a valid

Short-HMAC/CMAC Tuple in the acknowledged MR LOC-REQ management message:

**Short-HMAC/CMAC Tuple (see 11.1.2)** 

The Short-HMAC/CMAC Tuple shall be the last attribute in the message.

## [change the subclause in page 36 as indicated:]

6.3.2.3.71.3 **LLA IE** Location information request and response IE format and sequence charts

[change the following Table in page 36 as indicated:]

Syntax	Size	Notes
LLA_IE(){		
Latitude	24 bits	Specifies the latitude of a position in units of 0.0625 seconds, a value between
		-5184000 to 5184000 corresponding to a range of -90° to +90° whereby the
		positive values signify the North latitudes.
Longitude	24 bits	Specifies the longitude of a position in units of 0.125 seconds, a value between

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			-5184000 to 5184000 corresponding to a range of -180° to +180° whereby the	
			positive values signify the East longitudes.	
	Altitude	16 bits	Specifies the altitude of a position in units of m, a value between -32768 and	
			32767 corresponding to a range of -32768m to 32767m.	
	}			

## 11.1.2 Authentication Tuples

# 11.1.2.2 CMAC Tuple

[Change Table 348a as indicated:]

Table 348a—CMAC Tuple definition

Type	Length	Value	Scope
150	13 or 19	See Table 348b	DSx-REQ, DSx-RSP, DSx-ACK, REG-REQ,
			REG-RSP, RES-CMD, DREG-CMD, TFTP-CPLT,
			PKM-REQ, PKM-RSP, MOB_SLP-REQ,
			MOB_SLP-RSP, MOB_SCN-REQ, MOB_SCN-RSP,
			MOB_BSHO-REQ, MOB_MSHO-REQ,
			MOB_BSHO-RSP, MOB_HO-IND, DREG-REQ.
			MR_LOC-REQ, MR_LOC-RSP

## 11.1.2.3 Short-HMAC Tuple

[Change Table 348c as indicated:]

**Table 348c—Short-HMAC Tuple definition** 

Type	Length	Value	Scope
151	variable	See Table 348d	MOB_SLP-REQ, MOB_SLP-RSP, MOB_SCN-REQ,
			MOB_SCN-RSP, MOB_MSHO-REQ, MOB_BSHO-
			RSP,
			MOB_HO-IND, RNG-REQ, RNG-RSP, PKM-REQ,
			PKM-RSP, MR LOC-REO, MR LOC-RSP