

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 request~~ing~~ 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

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) {	-	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++) {	-	-
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	variable	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-REQ 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++) {	-	-
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	variable	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° <u>whereby the positive values signify the North latitudes.</u>
Longitude	24 bits	Specifies the longitude of a position in units of 0.125 seconds, a value between

		-5184000 to 5184000 corresponding to a range of -180° to +180° <u>whereby the positive values signify the East longitudes.</u>
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, <u>MR_LOC-REQ, MR_LOC-RSP</u>

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, <u>MR_LOC-REQ, MR_LOC-RSP</u>