

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Modification to MOB_SCN-RSP and MOB_SCN-REPORT messages	
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Re:	Response to Sponsor Ballot on IEEE802.16e/D7 document	
Abstract	Modify MOB-SCN_RSP and MOB-SCN_Report message to allow for autonomous neighbor scanning added in IEEE802.16e/D7	
Purpose	To incorporate the text changes proposed in this contribution into the 802.16e/D8 draft.	
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Modification to MOB-SCN_RSP and MOB-SCN_REPORT Messages

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1. Problem Statement

In IEEE802.16e/D7, MS autonomous neighbor cell scanning is defined (section 8.4.13.1.3). The scan report mechanism defined in D7 only support MS using SCN-REQ and SCN-RSP. MOB-SCN_RSP and MOB-SCN_REPORT message need to be modified to support measurement report when MS using autonomous neighbor cell scanning. In addition, MOB-SCN_REPORT should include the current serving BS measurement or active BS measurement.

2. Proposed Solutions

Modify MOB-SCN_RSP and MOB-SCN-REPORT messages.

3. Specific Text Changes

[Modify the following section:]

6.3.2.3.49 Scanning Interval Allocation Response (MOB_SCN-RSP) message

A MOB_SCN-RSP message shall be transmitted by the BS either unsolicited or in response to an MOB_SCN-REQ message sent by an MS. A BS may MOB_SCN-RSP to start MS scan reporting with or without scanning allocation. A BS may allocate the scanning allocation for MS scanning with Scan type = 0, or MS non-contention Association ranging with Scan type = 1. The message shall be transmitted on the Basic CID

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Table 108i—MOB_SCN-RSP message format

Syntax	Size	Notes
MOB_SCN-RSP_Message_Format () {		
Management Message Type = 55	8	
<u>Report mode</u>	<u>2</u>	<u>0b00 : no report</u> <u>0b01 : periodic report</u> <u>0b10 : event triggered report</u> <u>0b11 : reserved</u>
<u>Scan report period</u>	<u>8</u>	<u>Available when the value of Scan Report is set to 0b01. Scan report period in frames.</u>
<u>reserved</u>	<u>6</u>	<u>Shall be set to zero.</u>
Scan duration	8	<u>In unit of frame. When Scan Duration is set to zero, no scanning parameters are specified in the message. When MOB_SCN-RSP is sent in response to MOB_SCN-REQ, setting Scan Duration to zero denies MOB_SCN-REQ.</u>
if (Scan Duration ==0) {	—	—
HMAC Tuple (21 bytes)	—	

} else {	—	—
Start frame	4	—
Scan_type	1	0: Scanning 1: Association
Reserved	7	Shall be set to zero.
Interleaving interval	8	Duration in frames
Scan iteration	8	—
Report mode	2	0b00: no report 0b01: periodic report 0b10: event triggered report 0b11: reserved
Scan report period	8	Available when the value of Scan Report is set to 0b01. Scan report period in frames.
reserved	23	Shall be set to zero.
N_Recommended_BS_Scanning	4	—
For (j=0; j<N_Recommended_BS_Scanning; j++) {	—	N_Recommended_BS can be derived from the length field in the MAC header of the message
Recommended BS ID Scanning	48	BS IDs of Available BS for Association
}		
.....		
}		

[Modify the following section:]

6.3.2.3.50 Scanning Result Report (MOB_SCAN-REPORT) message

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Table 108j—MOB_SCAN-REPORT message format

Syntax	Size	Notes
MOB_SCAN-REPORT_Message_Format () {		
Management Message Type = 60	8	—
Report Mode	1	00: Event-triggering 1: reserved
Comp_NBR_BSID_IND	1	—
if (Comp_NBR_BSID_IND == 1){	—	
Configuration Change Count for MOB_NBR_ADV	8	Configuration Change Count value of referring MOB_NBR_ADV message
}		
<u>N current BSs</u>	<u>3</u>	<u>When FBSS/SHO is supported, N_current_BSs is the number of BSs currently in the active set; When FBSS/SHO is supported or the MS has an empty active set, N_current_BSs is set to 1.</u>
<u>Reserved</u>	<u>3</u>	<u>Shall be set to zero</u>
For (j=0;j<N_current_BSs;j++) {		
<u>Temp BSID</u>	<u>4</u>	<u>Active set member ID assigned to this BS. When the MS has an empty active set or FBSS/SHO is not supported, Temp BSID shall be set to 0.</u>

BS CINR mean	8	=
BS RSSI mean	8	=
Reserved	4	Shall be set to zero
}		
N_NEIGHBORS	8	—
for (i=0; i<N_NEIGHBORS; i++) {	—	—
.....		
}		
}		

4. References

- [1] IEEE 802.16- 2004 IEEE Standards for local and metropolitan area networks part 16: Air interface for fixed broadband wireless access systems
- [2] IEEE P802.16e-D7-2005