

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Modification to MOB_SCN-RSP and MOB_SCN-REPORT messages</b>	
Date Submitted	<b>2005-04-27</b>	
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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

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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</u> <u>Scan Report is set to 0b01. Scan</u> <u>report period in frames.</u>
<u>reserved</u>	<u>6</u>	<u>Shall be set to zero.</u>
Scan duration	8	in frames
if (Scan Duration ==0) {	—	—
HMAC Tuple (21 bytes)	—	
} else {	—	—
Start frame	4	—
Scan_type	1	0: Scanning 1: Association
<del>Reserved</del>	<del>7</del>	<del>Shall be set to zero.</del>
Interleaving interval	8	Duration in frames
Scan iteration	8	—
<del>Report mode</del>	<del>2</del>	<del>0b00 : no report</del> <del>0b01 : periodic report</del> <del>0b10 : event triggered report</del> <del>0b11 : reserved</del>

<del>Scan report period</del>	<del>8</del>	<del>Available when the value of Scan Report is set to 0b01. Scan report period in frames.</del>
reserved	<del>23</del>	Shall be set to zero.
N_Recommended_BS_Scanning	4	—
For (j=0; j<N_Recommended_BS_Scanning; j++) {	—	<del>N_Recommended_BS can be derived from the length field in the MAC header of the message</del>
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	<del>8</del>	—
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>
<u>BS CINR mean</u>	<u>8</u>	<u>—</u>
<u>BS RSSI mean</u>	<u>8</u>	<u>—</u>
<u>Reserved</u>	<u>4</u>	<u>Shall be set to zero</u>
}		
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