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Title	**Transmission Information of Customized MOB_NBR-ADV**
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Re:	IEEE 802.16j-07/019; Call for technical comments regarding IEEE project 802.16j
Abstract	This contribution proposes a method to provide the instruction to transmit MOB_NBR-ADV that is composed by RS.
Purpose	Discussion and adoption in IEEE 802.16j
Notice	
Release	
Patent Policy	

Transmission Information of Customized MOB_NBR-ADV

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Introduction

According to the baseline document (802.16j-06/026r4), RS can compose MOB_NBR-ADV message for its service area. Under centralized scheduling when a MR-BS generates DL-MAP for the MSs in the RS's service area, the MR-BS has to know the bandwidth required for the customized MOB_NBR-ADV so that the MR-BS can compose an appropriate DL-MAP IE for the MOB_NBR-ADV message. This DL-MAP IE contains the information on the burst allocation region for the MOB_NBR-ADV message so that the RS transmits the MOB_NBR-ADV message at the designated time and the location.

Suggested Remedy

In case of centralized scheduling, when RS composes a MOB_NBR-ADV message for MSs in its service area the RS provides the MR-BS with the information on how much bandwidth is required to transmit the MOB_NBR-ADV message. To specify the required bandwidth for MOB_NBR-ADV message, a RS BR ~~a new BM BR~~ header can be used~~defined using one reserved type of extended MAC signaling header type II~~. When the MR-BS receives the RS BR~~BM BR~~ header, it composes the DL-MAP including the DL-MAP IE that indicates the region information for the MOB_NBR-ADV and provides the region information to the RS by transmitting RS BW~~BM~~_Allocation IE in relay zone. The RS BW~~BM~~_Allocation IE specifies the frame number and the region information for the RS to broadcast the MOB_NBR-ADV at the designated time and the location.

Proposed Text Change

[Replace line 30 through 31 with the followings at section 6.3.22.1.1 in page 112]
Under centralized scheduling, the RS may inform the MR-BS about the required bandwidth to broadcast the customized MOB_NBR-ADV by transmitting a RS BR header. The RS shall transmit the MOB_NBR-ADV at

the frame number and the region specified in RS BW_ALLOC IE which is sent by the MR-BS to indicate the region of the MOB_NBR-ADV in the DL-MAP message for RS's service area.

[Replace line 43 through 44 with the followings at section 6.3.2.1.2.2.2.1 in page 9]

RS BR header may be sent by the RS to the MR-BS to request bandwidth for its access link for the purpose of transmitting a ~~RNG_RSP~~ message composed by the RS (such as RNG-RSP, MOB_NBR-ADV). The RS BR header is illustrated in Figure xxx.

[Replace Table 19b with the following table at section 6.3.2.1.2.2.2.1 in page 10]

Table 19b – Description of fields in RS BR header

Name	Length	Description
TID	4	Transaction Identifier. MR-BS when allocating resources ~~for RNG_RSP message~~ in response to an RS BR header shall include the same TID in the corresponding IE ~~RS_RNG-RSP_ALLOC_IE~~ as in the RS BR header.
DIUC	4	Indicates the DIUC used by RS to transmit the message~~RNG_RSP~~. ~~MR_BS allocates sufficient resources to send RNG_RSP from RS using RS_RNG_RSP_ALLOC_IE.~~
BR	10	Requested amount of bandwidth
CID	16	Basic CID (or tunnel CID) of the RS for which the RS bandwidth request header is sent
HCS	8	Header Check Sequence (same usage as HCS entry in Table 5).

~~[Insert the followings at the end of table 19a in page 9]~~

~~4~~	~~BM BR header~~		

54 7	Reserved		

[Insert new subclause 6.3.2.1.2.2.2.5 at line 21 in page 14]

6.3.2.1.2.2.2.5 Broadcast Message bandwidth request header (BM BR)

BM BR header shall be sent by a RS to its MR-BS to specify the required bandwidth for the purpose of transmitting broadcast messages over access link that are composed by the RS. The format of this header is illustrated in Figure A and described in Table B.
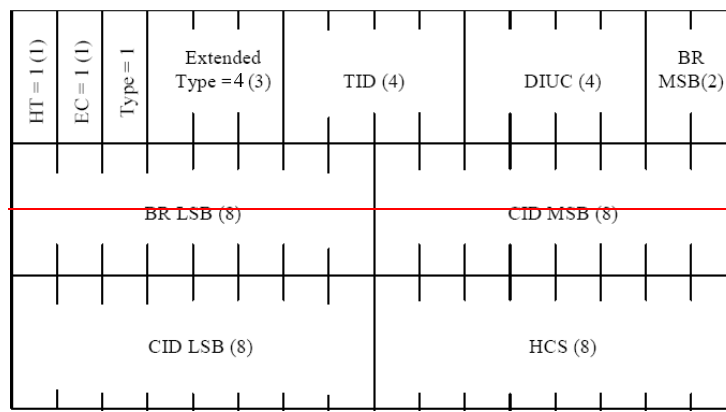

Figure A   BM BR header format

Table B   BM BR header

Syntax	Size	Notes
BM BR Header(){		
HT	1bit	Shall be set to 1
EC	1bit	Shall be set to 1
Type	1bit	Shall be set to 1
Extended TYPE	3bits	Shall be set to 004 for BM BR header
TID	4bits	Transaction ID. When indicating the region information in response to a BM BR header, MR-BS shall include the same TID in the BM Allocation IE.
DIUC	4bits	Indicates the DIUC used by RS to transmit the broadcast message.
BR	10bits	Requested amount of bandwidth in units of slot
CID	16bits	Basic CID (or tunnel CID) of the RS
HCS	8bits	Header check sequence

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}		

[Change the last 3 rows of table 383 in page 152 as follows]

0D	BM Allocation IE
0CD 0E	Reserved
0F	UL_interference_and_noise_level_IE

[Change the case 'Extended-2 DIUC=0B' of table 385 in page 153 as follows]

0B	RS_BW RS-RNG_RSP ALLOC_IE

[Change subclause 8.4.5.4.29 in page 159 as follows:]

8.4.5.4.29 RS-RNG_RSP_ALLOC IE RS Bandwidth Allocation IE (RS_BW-ALLOC IE)

This IE is transmitted to a non-transparent RS from MR-BS. This IE provides the allocation to RS for transmission of a message composed by the RSRNG_RSP over access link to SS.

Table 486a – RS_BW-ALLOC_IERS-RNG_RSP_ALLOC_IE format

Syntax	Size	Notes
RS_BW-ALLOC_IERS-RNG_RSP_ALLOC_IE{		
Extended 2 DIUC	4bits	0x0B
Length	8bits	
CID	16bits	RS connection identifier
TID	4bits	Transaction ID
DIUC	4bits	

Frame number	4bits	LSB of frame number to transmit the message
OFDMA Symbol Offset	8bits	
Subchannel offset	6bits	
Boosting	3bits	000: normal (not boosted); 001: +6dB, 010:-6dB; 011:+9dB; 100:+3dB; 101:-3dB; 110: -9dB; 111: -12dB
No. OFDMA Symbols	7bits	
No. Subchannels	6bits	
Repetition Coding Indication	2bits	0b00 – No repetition coding 0b01 – Repetition coding of 2 used 0b10 – Repetition coding of 4 used 0b11 – Repetition coding of 6 used
}		