Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**	
Title	**Channel Request messages for Multicast and Broadcast Service in IEEE 802.16e.**	
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Re:	IEEE P802.16e/D3 Letter Ballot	
Abstract	This document contains a suggestion of new Channel Request message for Multicast and Broadcast Service in IEEE 802.16e.	
Purpose	The document is contributed to support certain comment on IEEE P802.16e/D3 Letter Ballot.	
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Channel Request messages for Multicast and Broadcast Service in IEEE 802.16e

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1. Problem Statements

If sub carriers are reserved for the MBS channels respectively, it is easy to provide seamless Multicast and Broadcast Service (MBS) during handoff. But this technique may waste the frequency resource if there is no MSS which receive the broadcast channel.
It is possible to increase the frequency utilization if broadcast channels which do not have recipients are diverted to the traffic channels.

2. Proposal

To improve frequency utilization, sub carriers are reserved for the MBS channels respectively and diverted to the traffic channel when there is no MBS user. The diverted sub carriers must use less power in order to minimize the interference to the MBS channels in neighboring cells. UDP services should be assigned to the diverted sub carriers for quick returning to the MBS.
DL_MAP message is defined for broadcast service and 'UL_MAP appended' field is inserted for interactive service in the message.
Also, SNRs in the edge of cells can be increased by assigning the same frequency channels per CID throughout the network. It increases data rate, provides seamless MBS and gives the receiver diversity too.

3. Proposed Text Changes

[Insert this Section after the section 6.3.2.3.60**]**

6.3.2.3.61 MSS MBS request (MSS-MBS-REQ) message

An MSS-MBS-REQ message shall be transmitted by the MSS at initialization or on air to select broadcast channel.

Table MSS MBS request Message Format

Syntax	Size	Notes
MSS-MBS-REQ_Message_Format() {		
Ch.No	4 bits	Select broadcast service channel
Bit_map	16 bits	bit map for additional services
}		

6.3.2.3.61.1 MSS MBS DL-MAP IE Format

Table 343 - MSS MBS DL-MAP IE Format

Syntax	Size(bits)	Notes
MSS-MBS_DL_MAP_IE() {		
Ch.No Bit MAP	16	Broadcast channel status bit map
For (i = 0 ; i < No.CH ; i++) {		
if (i == ON) {		
Region		Band /subchannel per program
}		
}		
No.CID	4	Number of CIDs for additional service
For (I = 0 ; i < No_CID ; i++) {		
CID	Variable	Depends on RCID Type
Region	Variable	
}		
UL_MAP appended	1	UL MAP for bidirectional service
If (UL_MAP appended == 1) {		
No_CID	4	Number of CIDs for UL
For (I = 0 ; i < No_CID ; i++) {		
Ch.No	4	
CID	Variable	RCID
Region	Variable	Response region of broadcast user
}		
}		
}		