Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**MAP Format for Single Carrier Systems**
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Re:	IEEE P802.16ab-01/01r2, 2001-09-28
Abstract	This contribution defines a Downlink+Uplink MAP, and also supplies a table that is missing in the current draft.
Purpose	
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Clarification of MAP Format

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1.0 Downlink MAP Information Elements

Add the following table to Section 6.2.7.8.3.5

TABLE 1.

IE Name	Downlink Interval Usage Code (DIUC)	Connection ID	Mini-slot Offset
Reserved	0	NA	Reserved for future use
Data Grant Burst Type 1	1	unicast	Starting Offset of Data Grant Burst Type 1 assignment
Data Grant Burst Type 2	2	unicast	Starting Offset of Data Grant Burst Type 2 assignment
Data Grant Burst Type 3	3	unicast	Starting Offset of Data Grant Burst Type 3 assignment
Data Grant Burst Type 4	4	unicast	Starting Offset of Data Grant Burst Type 4 assignment
Data Grant Burst Type 5	5	unicast	Starting Offset of Data Grant Burst Type 5 assignment
Data Grant Burst Type 6	6	unicast	Starting Offset of Data Grant Burst Type 6 assignment
Gap	7	zero	Used to schedule gaps in transmission
Null	8	zero	Ending offset of the previous grant. USed to bound the length of the last actual interval allocation.
MAP	9	broadcast	Starting Offset of MAP IE
Reserved	10-14	any	
Expansion	15	expanded UIUC	# of additional 32-bit words in this IE

2.0 Uplink MAP

Replace Table 169 with the following table:

TABLE 2. Uplink MAP Information Elements

IE Name	Interval Usage Code (IUC)	Connection ID	Mini-slot Offset
Reserved	0	NA	Reserved for future use
Request	1	any	Starting Offset of REQ region
ACK	2	unicast	Starting Offset of ACK region
Initial Maintenance	3	broadcast	
Station Maintenance	4	unicast	
Data Grant Burst Type 1	5	unicast	Starting Offset of Data Grant Burst Type 1 assignment
Data Grant Burst Type 2	6	unicast	Starting Offset of Data Grant Burst Type 2 assignment
Data Grant Burst Type 3	7	unicast	Starting Offset of Data Grant Burst Type 3 assignment
Data Grant Burst Type 4	8	unicast	Starting Offset of Data Grant Burst Type 4 assignment
Data Grant Burst Type 5	9	unicast	Starting Offset of Data Grant Burst Type 5 assignment
Data Grant Burst Type 6	10	unicast	Starting Offset of Data Grant Burst Type 6 assignment
Gap	11	zero	Used to schedule gaps in transmission
Null	12	zero	Ending offset of the previous grant. USed to bound the length of the last actual interval allocation.
Reserved	13-14	any	
Expansion	15	expanded UIUC	# of additional 32-bit words in this IE

3.0 Downlink + Uplink MAP

Create a new section following Section 6.2.7.8.3.6 with the following content:

3.1 Downlink+Uplink (DL-UL-MAP) message

TABLE 3. DL-UL-MAP message format

Syntax	Size	Notes
DL-UL-MAP_Message_Format {		
Management Message Type = ?	8 bits	
Channel ID	8 bits	
CD Count	8 bits	
PHY Type	8 bits	
Frame Length	8 bits	
PHY Synchronization Field	32 bits	
Base Station ID	32 bits	
Number of Downstream IEs	16 bits	
Number of Upstream IEs	16 bits	
Allocation Start Time	32 bits	
Acknowledgement Time	32 bits	
Ranging Backoff Start	8 bits	
Ranging Backoff End	8 bits	
Request Backoff Start	8 bits	
Request Backoff End	8 bits	
for (i=0; i<No_Els, i++) {		
Connection ID	16 bits	
IUC	4 bits	
Offset	12 bits	
}		
}		

IE Name	Interval Usage Code (IUC)	Connection ID	Mini-slot Offset
Reserved	0	NA	Reserved for future use
Request	1	any	Starting Offset of REQ region
ACK	2	unicast	Starting Offset of ACK region
Initial Maintenance	3	broadcast	
Station Maintenance	4	unicast	
Data Grant Burst Type 1	5	unicast	Starting Offset of Data Grant Burst Type 1 assignment
Data Grant Burst Type 2	6	unicast	Starting Offset of Data Grant Burst Type 2 assignment
Data Grant Burst Type 3	7	unicast	Starting Offset of Data Grant Burst Type 3 assignment
Data Grant Burst Type 4	8	unicast	Starting Offset of Data Grant Burst Type 4 assignment
Data Grant Burst Type 5	9	unicast	Starting Offset of Data Grant Burst Type 5 assignment
Data Grant Burst Type 6	10	unicast	Starting Offset of Data Grant Burst Type 6 assignment
Gap	11	zero	Used to schedule gaps in transmission
Null	12	zero	Ending offset of the previous grant. USed to bound the length of the last actual interval allocation.
MAP	13	broadcast	Starting offset of MAP IE
Reserved	14	any	
Expansion	15	expanded UIUC	# of additional 32-bit words in this IE