

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Group DL Allocations in OFDMA	
Date Submitted	2004-08-25	
Source(s)	Vladimir Yanover et al. Alvarion Ltd. 21 A Habarzel St. Ramat - Hahayal Tel - Aviv 69710 P.O. Box 13139, Tel-Aviv 61131, Israel	Voice: +972-36457834 Fax: +972-36456222 mailto:vladimir.yanover@alvarion.com
Re:	The contribution contains material for comment submitted in response to Call for Comments on Maintenance Issues regarding IEEE Standard 802.16	
Abstract	The documents suggests changes in 802.16-2004 to support SSs with limited resources	
Purpose	The contribution contains material for comment submitted in response to Call for Comments on Maintenance Issues regarding IEEE Standard 802.16	
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.	
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate text contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.	
Patent Policy and Procedures	<p>The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard."</p> <p>Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <mailto:r.b.marks@ieee.org> as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site <http://ieee802.org/16/ipr/patents/notices>.</p>	

Group DL Allocations in OFDMA

Vladimir Yanover, Tal Kaitz, Naftali Chayat (Alvarion Ltd.)

1. Motive for Suggested Change

A new format option is suggested for DL-MAP IE, which allows for encoding range of CIDs instead of individual CIDs. Such format may be used to mark DL burst with MAC PDUs addressed to multiple SSs. Then SSs with Basic CIDs out of the specified range will be informed that there is no relevant data and therefore they may decide to skip processing of the burst thus preserving their resources.

2. Specific Changes in 802.16REVd/D5

[Add new section]

8.4.5.3.12 Group Allocation Information Element

Group Allocation Information Element (GRPALLOC_DL_IE) indicates that certain DL burst contains data addressed to a group of SSs identified by range of Basic CIDs or to a group of connections identified by range of their CIDs.

Syntax	Size	Notes
GRPALLOC_DL_IE() {		
Extended DIUC	4 bits	PHYMOD = 0x09
Length	4 bits	Length = 0x09
DIUC	4 bits	
Reserved	4 bits	
CID_min	16 bits	Minimum Basic CID / multicast CID value of those to which the data is addressed
CID_max	16 bits	Maximum Basic CID / multicast CID value of those to which the data is addressed
OFDMA Symbol offset	8 bits	
Subchannel offset	6 bits	
Boosting	3 bits	000: normal (not boosted); 001: +6dB; 010: -6dB; 011: +9dB; 100: +3dB; 101: -3dB; 110: -9dB; 111: -12dB;
No. OFDMA Symbols	7 bits	
No. Subchannels	6 bits	
Repetition Coding Indication	2 bits	0b00 - No repetition coding 0b01 - Repetition coding of 2 used

		0b10 - Repetition coding of 4 used 0b11 - Repetition coding of 6 used
}		