

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Fast Feedback allocation IE clarification	
Date Submitted	2005-01-13	
Source(s)	Panyuh Joo, Seungjoo Maeng, Jaeho Jeon, panyuh@samsung.com Soonyoung Yoon, Jeong-Heon Kim, Jaehyok Lee, Myungkwang Byun, Inseok Hwang, Jaehee Cho, Jiho Jang, Sanghoon Sung, Hoon Huh Samsung Electronics Yigal Leiba, Zion Hadad, Yossi Segal, Itzik Kitroser, yigall@runcom.co.il RunCom Technologies	
Re:	Re-circulation comments	
Abstract	Corrections	
Purpose	Adoption of the editorial in IEEE802.16-2004	
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 material 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	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.". 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>.	

1. Introduction

Fast feedback allocation was designed for 2D allocation as in H-ARQ MAP. For the consistency, it is necessary to make it 2-dimensional allocation. Further, the subcarrier mapping for the current Fast feedback channel is not clear.

2. Suggested text change

[Change the text as follows in 8.4.5.4]

8.4.5.4 UL-MAP IE format

Table 285—OFDMA UL-MAP IE format

Syntax	Size	Notes
UL-MAP_IE() {		
CID	16 bits	
UIUC	4 bits	
<u>if (UIUC == 0) {</u>		
<u>FEEDBACK_Allocation_IE()</u>	<u>32 bits</u>	
<u>}</u>		
if (UIUC == 12) {		
OFDMA Symbol offset	8 bits	
Subchannel offset	7 bits	
No. OFDMA Symbols	7 bits	
No. Subchannels	7 bits	
Ranging Method	2 bits	0b00 - Initial Ranging over two symbols 0b01 - Initial Ranging over four symbols 0b10 - BW Request/Periodic Ranging over one symbol 0b11 - BW Request/Periodic Ranging over three symbols
<i>reserved</i>	1 bit	Shall be set to zero
} else if (UIUC == 13) {		
PAPR_Reduction_and_Safety_Zone_Allocation_IE	32 bits	
} else if (UIUC == 14) {		
CDMA_Allocation_IE()	32 bits	
else if (UIUC == 15) {		
Extended UIUC dependent IE	<i>variable</i>	See clauses following 8.4.5.4.3
} else {		
Duration	10 bits	In OFDMA slots (see 8.4.3.1)
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
if (AAS UL Zone){		AAS Allocations include absolute slot offset.
Slot offset	12 bits	Offset from start of the AAS zone for this allocation, specified in slots.
}		
}		
}		

[Change the text as follows in 8.4.5.4.9]

8.4.5.4.9 FAST-FEEDBACK message mapping

Table XXX defines the FEEDBACK Allocation IE that allocates 2D region of FAST-FEEDBACK channel. This IE is identified by UIUC=0.

Table XXX - FEEDBACK Allocation IE format

<u>Syntax</u>	<u>size</u>	<u>Notes</u>
<u>FEEDBACK Allocation IE() {</u>		
<u>OFDMA symbol offset</u>	<u>8 bits</u>	
<u>Subchannel offset</u>	<u>7 bits</u>	
<u>No. OFDMA symbols</u>	<u>7 bits</u>	
<u>No subchannels</u>	<u>7 bits</u>	
<u>Reserved</u>	<u>3 bits</u>	
<u>}</u>		

Each FAST-FEEDBACK message occupies one UL slot. FAST-FEEDBACK messages are mapped in to the region marked by UIUC=0 in the UL-MAP, in a ~~time~~ frequency-first order, as shown in Figure 230.

[Modify the figure 230 as follows in 8.4.5.4.9]

Substitute the number #2 with the number #3 in the dashed thick box. Substitute the number #3 with the number #2 in the dashed thick box.

[Modify the text as follows in 8.4.5.4.10]

The fast-feedback code words used in table 263 belong to a set of orthogonal vectors and are mapped directly to the data subcarriers of a tile in time first manner ~~(see 8.4.9.4.2), where subcarriers(0) is the lowest-numbered data subcarrier in the tile;~~ and the tile indices are defined in eq (109) for PUSC and eq (111) for optional PUSC ~~by the permutation (see 8.4.6.2).~~ The vectors are defined in Table 295.