

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Improving HARQ Map Decoding Efficiency	
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Re:	IEEE P802.16e/D10	
Abstract	This contribution proposes a method for improving HARQ map decoding efficiency by inserting some fields in HARQ DL/UL MAP IE that enable omission of decoding some parts of the IE that belong to the HARQ modes the MS does not support.	
Purpose	Review and Adopt the suggested changes into P802.16e/D10	
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1 Introduction

The contribution (IEEE C80.16e-05/371/r2) helps MS improve the Map decoding efficiency by enabling the omission of decoding sub-burst IEs that MS does not support. However, to find MS has to know the number of ACK enabled sub-bursts in the sub-burst IE before omitting it. To solve this problem without further additional Map overhead (except MIMO related), we propose to insert the Number of ACK channels in sub-burst IEs.

2 Proposed text changes

[In 8.4.5.3.21 DL HARQ Chase sub-burst IE, Page 315, Table 286m, modify as:]

Table 286m—DL HARQ Chase sub-burst IE format

Syntax	Size (bits)	Notes
DL HARQ Chase sub-burst IE() {	—	—
N sub burst [ISI]	4 5	Number of sub-bursts in the 2D region
Reserved	3	Shall be set to zero.
N ACK channel	4	Number of HARQ ACK enabled sub-bursts in the 2D region
For (j=0; j< N sub burst; j++){	—	—
RCID_IE()	<i>variable</i>	—
Duration	10	Duration in slots
.....
}		

[In 8.4.5.3.21 DL HARQ IR CTC sub-burst IE, Page 317, Table 286n, modify as:]

Table 286n—DL HARQ IR CTC sub-burst IE format

Syntax	Size (bits)	Notes
DL HARQ IR CTC sub-burst IE() {	—	—
N sub burst	4 5	—
Reserved	3	—
N ACK channel	4	Number of HARQ ACK enabled sub-bursts in the 2D region
For (j=0; j< N sub burst; j++){	—	—
RCID_IE()	<i>variable</i>	—
.....
}		

[In 8.4.5.3.21 DL HARQ IR CC sub-burst IE, Page 318, Table 286o, modify as:]

Table 286o—DL HARQ IR CC sub-burst IE format

Syntax	Size (bits)	Notes
DL HARQ IR CC sub-burst IE() {	—	—
N sub burst	45	—
Reserved	3	—
NACK channel	4	Number of HARQ ACK enabled sub-bursts in the 2D region
For (j=0; j< N sub burst; j++) {	—	—
RCID_IE()	variable	—
.....
}		

[In 8.4.5.3.21 MIMO DL Chase HARQ Sub-Burst IE, Page 321, Table 286p, modify as:]

Table 286p—MIMO DL Chase HARQ sub-burst IE format

Syntax	Size (bits)	Notes
MIMO_DL_Chase_HARQ_Sub-Burst_IE() {	—	—
N sub burst	45	Number of sub-bursts in the 2D region
NACK channel	6	Number of HARQ ACK enabled sub-bursts in the 2D region
For (j=0; j< N sub burst; j++) {	—	—
MU Indicator	1	Indicates whether this DL burst is intended for multiple SS
Dedicated MIMO DL Control Indicator	1	—
.....
}		

[In 8.4.5.3.21 MIMO DL IR HARQ Sub-Burst IE, Page 323, Table 286q, modify as:]

Table 286q—MIMO DL IR HARQ Sub-Burst IE format

Syntax	Size (bits)	Notes
MIMO DL IR HARQ Sub-Burst IE {	—	—
N sub burst	45	Number of sub-bursts in the 2D region
NACK channel	6	Number of HARQ ACK enabled sub-bursts in the 2D region

For (j=0; j< N sub burst; j++){	—	—
MU Indicator	1	Indicates whether this DL burst is intended for multiple SS
Dedicated MIMO DL Control Indicator	1	—
.....
}		

[In 8.4.5.3.21 MIMO DL IR HARQ for CC Sub-Burst IE, Page 325, Table 286r, modify as:]

Table 286r—MIMO DL IR HARQ for CC Sub-Burst IE format

Syntax	Size (bits)	Notes
MIMO DL IR HARQ for CC Sub-Burst IE {	—	—
N sub burst	45	Number of sub-bursts in the 2D region
<i>NACK channel</i>	6	Number of HARQ ACK enabled sub-bursts in the 2D region
For (j=0; j< N sub burst; j++){	—	—
MU Indicator	1	Indicates whether this DL burst is intended for multiple SS
Dedicated MIMO DL Control Indicator	1	—
.....
}		

[In 8.4.5.3.21 MIMO DL STC HARQ Sub-Burst IE, Page 327, Table 286s, modify as:]

Table 286s—MIMO DL STC HARQ Sub-Burst IE format

Syntax	Size (bits)	Notes
MIMO DL STC HARQ Sub-Burst IE {	—	—
N sub burst	45	Number of sub-bursts in the 2D region
<i>NACK channel</i>	6	Number of HARQ ACK enabled sub-bursts in the 2D region
For (j=0; j< N sub burst; j++){	—	—
Tx count	2	0b00: initial transmission 0b01: odd retransmission 0b10: even retransmission 0b11: reserved

Duration	10	—
.....
}		