Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	Decrease DCD/UCD message overhead
Date Submitted	**2005-01-24**
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Re:	Contribution on comments to P80216-REVd_D5
Abstract	Decrease DCD/UCD message overhead
Purpose	Adoption
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Decrease DCD/UCD message overhead

Jianjun Wu, John Lee_Duke Dang_Lucy Chen
HUAWEI

1. Introduction

In the P80216-REVd_D5, the DCD/UCD message will broadcast periodicity to describe the Downlink and Uplink channel. And the DCD/UCD message have too much items, which will cause the high overhead in the frame transmit the DCD/UCD. On the other hand, he MAP relationship between DIUC/UIUC and FEC Code Type uses TLV code, and each FEC Code Type occupies 3 bytes.

This contribution corrects this problem with high overhead on DCD/UCD.

2. Proposed Solution

The contribution proposes that pre_fixing the relationship between FEC Code Type and the FEC Code Type Index as following:
For example, in OFDMA PHY, we can add Table xxx as the following in 8.4.x.x:

FEC Code Type Index	FEC Code Type
0	QPSK (CC) 1/2
1	QPSK (CC) 3/4
2	16-QAM (CC) 1/2
3	16-QAM (CC) 3/4
4	64-QAM (CC) 2/3
5	64-QAM (CC) 3/4
6	QPSK (BTC) 1/2
7	QPSK (BTC) 3/4 or 2/3
8	16-QAM (BTC) 3/5
9	16-QAM (BTC) 4/5
10	64-QAM (BTC) 2/3 or 5/8
11	64-QAM (BTC) 5/6 or 4/5
12	QPSK (CTC) 1/2
13	QPSK (CTC) 2/3
14	QPSK (CTC) 3/4
15	16-QAM (CTC) 1/2
16	16-QAM (CTC) 3/4
17	64-QAM (CTC) 2/3
18	64-QAM (CTC) 3/4
19	64-QAM (CTC) 5/6
20	QPSK (ZT CC) 1/2
21	QPSK (ZT CC) 3/4
22	16-QAM (ZT CC) 1/2
23	16-QAM (ZT CC) 3/4
24	64-QAM (ZT CC) 2/3
25	64-QAM (ZT CC) 3/4
26~255	reserved

And DCD/UCD message can use FEC Code Type Index directly, not using TLV code.
So we can modify Page46, Table 15 as the following:

Syntax	Size	Notes
DCD_Message_Format() {		
Management Message Type = 1	8 bits	
Downlink channel ID	8 bits	
Configuration Change Count	8 bits	
TLV Encoded information for the overall channel	variable	TLV specific
Begin PHY Specific Section {		See applicable PHY section
for (*i* = 1; *i* <= *n*; *i*++) {		For each downlink burst profile 1 to n
Downlink_Burst_Profile		PHY specific
FEC Code Type Index	8 bits	PHY specific
}		
}		
}		

And modify Page668, Table 361 as the following:

Table 361—DCD burst profile encodings—WirelessMAN-OFDMA

Name	Type (1 bytes)	Length	Value (variable length)
~~FEC Code type~~	~~150~~	~~1~~	~~0 = QPSK (CC) 1/2~~ ~~1 = QPSK (CC) 3/4~~ ~~2 = 16-QAM (CC) 1/2~~ ~~3 = 16-QAM (CC) 3/4~~ ~~4 = 64-QAM (CC) 2/3~~ ~~5 = 64-QAM (CC) 3/4~~ ~~6 = QPSK (BTC) 1/2~~ ~~7 = QPSK (BTC) 3/4 or 2/3~~ ~~8 = 16-QAM (BTC) 3/5~~ ~~9 = 16-QAM (BTC) 4/5~~ ~~10 = 64-QAM (BTC) 2/3 or 5/8~~ ~~11 = 64-QAM (BTC) 5/6 or 4/5~~ ~~12 = QPSK (CTC) 1/2~~ ~~13 = QPSK (CTC) 2/3~~ ~~14 = QPSK (CTC) 3/4~~ ~~15 = 16-QAM (CTC) 1/2~~ ~~16 = 16-QAM (CTC) 3/4~~ ~~17 = 64-QAM (CTC) 2/3~~ ~~18 = 64-QAM (CTC) 3/4~~ ~~19 = 64-QAM (CTC) 5/6~~ ~~20 = QPSK (ZT CC) 1/2~~ ~~21 = QPSK (ZT CC) 3/4~~ ~~22= 16-QAM (ZT CC) 1/2~~ ~~23= 16-QAM (ZT CC) 3/4~~ ~~24= 64-QAM (ZT CC) 2/3~~ ~~25= 64-QAM (ZT CC) 3/4~~ ~~26..255 = *Reserved*~~
~~DIUC Mandatory exit threshold~~	~~151~~	~~1~~	~~0–63.75 dB~~ ~~CINR at or below where this DIUC can no longer be used and where this change to a more robust DIUC is required, in 0.25 dB units. See Figure 81.~~
~~DIUC Minimum entry threshold~~	~~152~~	~~1~~	~~0–63.75 dB~~ ~~The minimum CINR required to start using this DIUC when changing from a more robust DIUC is required, in 0.25 dB units. See Figure 81.~~

3. Proposed Text Changes

[Insert the following text at page13, line24 of IEEE 80216maint-04_10]

6.3.2.3.1 Downlink Channel Descriptor (DCD) message

Modify Page46, Table 15 as the following:

Syntax	Size	Notes
DCD_Message_Format() {		
Management Message Type = 1	8 bits	

Downlink channel ID	8 bits	
Configuration Change Count	8 bits	
TLV Encoded information for the overall channel	variable	TLV specific
Begin PHY Specific Section {		See applicable PHY section
for (*i* = 1; *i* <= *n*; *i*++) {		For each downlink burst profile 1 to n
Downlink_Burst_Profile		PHY specific
FEC Code Type Index	8 bits	PHY specific
}		
}		
}		

Insert Page46, Line 6 as the following:

FEC Code Type Index contents are defined separately for each PHY specification in Clause 10.3.

[Insert the following text at page14, line18 of IEEE 80216maint-04_10]

6.3.2.3.3 Uplink Channel Descriptor (UCD) message

Modify Page48, Table 17 as the following:

Syntax	**Size**	**Notes**
UCD_Message_Format() {		
Management Message Type = 0	8 bits	
Configuration Change Count	8 bits	
Ranging Backoff Start	8 bits	
Ranging Backoff End	8 bits	
Request Backoff Start	8 bits	
Request Backoff End	8 bits	
TLV Encoded information for the overall channel	*variable*	TLV specific
Begin PHY Specific Section {		See applicable PHY section.
for (*i* = 1; *i* <= *n*; *i*++) {		For each uplink burst profile 1 to n
Uplink_Burst_Profile	*variable*	PHY specific
FEC Code Type Index	*8bits*	PHY specific
}		
}		
}		

Insert Page49, Line 29 as the following:

FEC Code Type Index contents are defined separately for each PHY specification in Clause 10.3.

[Insert the following text at page75, line32 of IEEE 80216maint-04_10]

10.3 PHY-specific values

10.3.1 WirelessMAN-SC parameter and constant definitions

Insert the following sentence to the definition of the 'FEC Code Type Iindex' paragraph in 10.3.1.8:

10.3.1.8 FEC Code Type Index definition

Table 343—FEC Code Type Index definition

FEC Code Type Index	FEC Code Type

1	Reed–Solomon only
2	Reed–Solomon + Inner Block Convolutional Code(BCC)
3	Reed–Solomon + Inner (9,8) Parity Check Code
4	BTC (Optional)
5~255	*Reserved*

10.3.2 WirelessMAN-SCa parameters and constant definitions

Insert the following sentence to the definition of the 'FEC Code Type Iindex' paragraph in 10.3.2.4:

10.3.2.4 FEC Code Type Index definition

Table 344—FEC Code Type Index definition

FEC Code Type Index	FEC Code Type
x	4 MSB: 1 =QPSK, 2 = 16-QAM, 3 = 64-QAM, 4 = 256-QAM, 5 = BPSK, ,6-9 = Spread BPSK with Fs=0-3, 10-15 = *Reserved* 4 LSB: 1 = CC+RS without block interleaving, 2 = CC+RS with block interleaving 3 = no FEC, 4 = BTC, 5 = CTC, 6–15 = *Reserved*

10.3.3 WirelessMAN-OFDM parameters and constant definitions

Insert the following sentence to the definition of the 'FEC Code Type Iindex' paragraph in 10.3.3.4:

10.3.3.4 FEC Code Type Index definition

Table 345—FEC Code Type Index definition

FEC Code Type Index	FEC Code Type
0	0 = BPSK (CC) 1/2
1	QPSK (RS+CC/CC) 1/2
2	QPSK (RS+CC/CC) 3/4
3	16-QAM (RS+CC/CC) 1/2
4	16-QAM (RS+CC/CC) 3/4
5	64-QAM (RS+CC/CC) 2/3
6	64-QAM (RS+CC/CC) 3/4
7	QPSK (BTC) 1/2
8	QPSK (BTC) 3/4 or 2/3
9	16-QAM (BTC) 3/5
10	16-QAM (BTC) 4/5
11	64-QAM (BTC) 2/3
12	64-QAM (BTC) 5/6
13	QPSK (CTC) 1/2
14	QPSK (CTC) 2/3
15	QPSK (CTC) 3/4
16	16-QAM (CTC) 1/2
17	16-QAM (CTC) 3/4
18	64-QAM (CTC) 2/3
19	64-QAM (CTC) 3/4

20~255	reserved

10.3.4 WirelessMAN-OFDMA parameters and constant definitions

Insert the following sentence to the definition of the 'FEC Code Type Iindex' paragraph in 10.3.3.4:

10.3.4.4 FEC Code Type Index definition

Table 345—FEC Code Type Index definition

FEC Code Type Index	FEC Code Type
0	0 = QPSK (CC) 1/2
1	QPSK (CC) 3/4
2	16-QAM (CC) 1/2
3	16-QAM (CC) 3/4
4	64-QAM (CC) 2/3
5	64-QAM (CC) 3/4
6	QPSK (BTC) 1/2
7	QPSK (BTC) 3/4 or 2/3
8	16-QAM (BTC) 3/5
9	16-QAM (BTC) 4/5
10	64-QAM (BTC) 2/3 or 5/8
11	64-QAM (BTC) 5/6 or 4/5
12	QPSK (CTC) 1/2
13	QPSK (CTC) 2/3
14	QPSK (CTC) 3/4
15	16-QAM (CTC) 1/2
16	16-QAM (CTC) 3/4
17	64-QAM (CTC) 2/3
18	64-QAM (CTC) 3/4
19	64-QAM (CTC) 5/6
20	QPSK (ZT CC) 1/2
21	QPSK (ZT CC) 3/4
22	16-QAM (ZT CC) 1/2
23	16-QAM (ZT CC) 3/4
24	64-QAM (ZT CC) 2/3
25	64-QAM (ZT CC) 3/4
26~255	reserved

[Insert the following text at page79, line6 of IEEE 80216maint-04_10]

11.3.1.1 Uplink burst profile encodings

Modify Page660, Table 352 as the following:

Table 352—UCD burst profile encodings—WirelessMAN-SC

Name	Type (1 bytes)	Length	Value (variable length)
Modulation type	150	1	1 = QPSK 2 = 16-QAM 3 = 64-QAM

Preamble length	151	1	The number of symbols in the preamble pattern. The preamble consumes the first *n* PS of the intervals allocated in the UL-MAP. That is, UL-MAP entries include the bandwidth for a burst's preamble.
~~FEC Code Type~~	~~152~~	~~1~~	~~1 = Reed–Solomon only~~ ~~2 = Reed–Solomon + Inner Block Convolutional Code (BCC)~~ ~~3 = Reed–Solomon + Inner (9,8) Parity Check Code~~ ~~4 = BTC (Optional)~~ ~~5–255 = *Reserved*~~
RS Information bytes (K)	153	1	K = 6 - 255
RS Parity bytes (R)	154	1	R = 0–32 bytes (error correction capability T= 0–16 bytes)
BCC code type	155	1	1 = (24,16) 2–255 = *Reserved*
BTC Row code type	156	1	1 = (64,57) Extended Hamming 2 = (32,26) Extended Hamming 3–255 = *Reserved*
BTC Column code type	157	1	1 = (64,57) Extended Hamming 2 = (32,26) Extended Hamming 3–255 = *Reserved*
BTC Interleaving type	158	1	1 = No interleaver, 2 = Block Interleaving, 3–255 = *Reserved*
Randomizer seed	159	2	The 15 bit seed value left-justified in the 2 byte field. Bit 15 is the MSB of the first byte, and the LSB of the second byte is not used.
Last codeword length	160	1	1=fixed; 2=shortened

Modify Page661, Table 353 as the following:

Table 353—UCD burst profile encodings—WirelessMAN-SCa

Name	**Type (1 bytes)**	**Length**	**Value (variable length)**
~~Modulation type~~	~~150~~	~~1~~	~~4 MSB:~~ ~~1 =QPSK, 2 = 16-QAM, 3 = 64-QAM, 4 = 256-QAM,~~ ~~5 = BPSK, ,6-9 = Spread BPSK with Fs=0-3, 10-15 = *Reserved*~~ ~~4 LSB:~~ ~~1 = CC+RS without block interleaving,~~ ~~2 = CC+RS with block interleaving~~ ~~3 = no FEC, 4 = BTC, 5 = CTC, 6–15 = *Reserved*~~
RS Information bytes (K)	151	1	K = 6 - 239
RS Parity bytes (R)	152	1	R = 0–16 bytes (error correction capability = 0–8 bytes) R = 17–255 *Reserved*
DIUC Mandatory exit threshold	153	1	0–63.75 Db CINR at or below where this DIUC can no longer be used and where this change to a more robust DIUC is required, in 0.25 Db units. See Figure 81.

DIUC Minimum entry threshold	154	1	0–63.75 Db The minimum CINR required to start using this DIUC when changing from a more robust DIUC is required, in 0.25 Db units. See Figure 81.
CC/CTC-Specific parameters	155	1	0 = rate 1/2 (for BPSK, QPSK, 16-QAM) 1 = rate 2/3 (for QPSK, 64-QAM) 2 = rate 3/4 (for BPSK, QPSK, 16-QAM, 256-QAM) 3 = rate 5/6 (for QPSK, 64-QAM) 4 = rate 7/8 (for QPSK, 256-QAM) 5–255 = *Reserved*
Unique word length	156	1	Number of rows (Reed–Solomon code words) used in block interleaver between Reed–Solomon and CC: 2–66 = rows 0, 1, 67–255 = *Reserved*
Pilot word parameters	157	1	Value used to choose set of BTC row/column codes. 1–3 = *Cbank* 0, 4–255 = *Reserved*
Burst set type	158	1	0 = Standard, 1 = STC, 2 = Subchannel, 3–255 = *Reserved*
STC Parameters	159	2	4 MSB: Block length (segments are paired), in symbols: 1= 64, 2 = 128, 3 = 256, 4 = 512,..., 7 = 4096, 8–15 *Reserved* 4 LSB: Block burst profile type: 0 = CP derived from data and no UWs embedded within block 1 = CP derived from data an additional UW as first payload data element in block 2 = CP derived from UWs at beginning and end of segment 3–15 = *Reserved*
BTC Code selector	160	1	Value used to choose set of BTC row/column codes. 1–3 = Cbank 0, 4–255 = *Reserved*
Spreading Parameters	161	1	0-15 = PN sequence generator seed labels 0-15, 16-255 = *Reserved*
Subchannel framing parameters	162	1	4 MSB: {k,d} specification 0 = {0,1}, 1 = {0,2} 2 = {1,0}, 3 = {1,1}, 4 = {1,2}, 5 = {2,2}, 6-15= *Reserved* 4 LSB: Repeat segment length, r, in symbols 0:7 = 2^(<value>+8) , 7-15= *Reserved*

Modify Page662, Table 354 as the following:

Table 354—UCD burst profile encodings—WirelessMAN-OFDM

Name	Type (1 bytes)	Length	Value (variable length)
~~FEC Code type~~	~~150~~	~~1~~	~~0 = BPSK (CC) 1/2 1 = QPSK (RS+CC/CC) 1/2 2 = QPSK (RS+CC/CC) 3/4 3 = 16-QAM (RS+CC/CC) 1/2 4 = 16-QAM (RS+CC/CC) 3/4 5 = 64-QAM (RS+CC/CC) 2/3 6 = 64-QAM (RS+CC/CC) 3/4 7 = QPSK (BTC) 1/2 8 = QPSK (BTC) 3/4 or 2/3 9 = 16-QAM (BTC) 3/5 10 = 16-QAM (BTC) 4/5 11 = 64-QAM (BTC) 2/3 12 = 64-QAM (BTC) 5/6 13 = QPSK (CTC) 1/2 14 = QPSK (CTC) 2/3 15 = QPSK (CTC) 3/4 16 = 16-QAM (CTC) 1/2 17 = 16-QAM (CTC) 3/4 18 = 64-QAM (CTC) 2/3 19 = 64-QAM (CTC) 3/4 20–255 = *Reserved*~~
Focused contention power boost	151	1	The power boost in dB of focused contention carriers, as described in 8.3.7.3.3

TCS_enable	152	1	0 = TCS diabled 1 = TCS enabled 2-255 = *Reserved*

Modify Page663, Table 355 as the following:

Table 355—UCD burst profile encodings—WirelessMAN-OFDMA

Name	Type (1 bytes)	Length	Value (variable length)
~~FEC Code type~~	~~150~~	~~1~~	~~0 = QPSK (CC) 1/2 1 = QPSK (CC) 3/4 2 = 16-QAM (CC) 1/2 3 = 16-QAM (CC) 3/4 4 = 64-QAM (CC) 2/3 5 = 64-QAM (CC) 3/4 6 = QPSK (BTC) 1/2 7 = QPSK (BTC) 3/4 or 2/3 8 = 16-QAM (BTC) 3/5 9 = 16-QAM (BTC) 4/5 10 = 64-QAM (BTC) 2/3 or 5/8 11 = 64-QAM (BTC) 5/6 or 4/5 12 = QPSK (CTC) 1/2 13 = QPSK (CTC) 2/3 14 = QPSK (CTC) 3/4 15 = 16-QAM (CTC) 1/2 16 = 16-QAM (CTC) 3/4 17 = 64-QAM (CTC) 2/3 18 = 64-QAM (CTC) 3/4 19 = 64-QAM (CTC) 5/6 20 = QPSK (ZT CC) 1/2 21 = QPSK (ZT CC) 3/4 22= 16-QAM (ZT CC) 1/2 23= 16-QAM (ZT CC) 3/4 24= 64-QAM (ZT CC) 2/3 25= 64-QAM (ZT CC) 3/4 26..255 = *Reserved*~~
Ranging data ratio	151	1	Reducing factor in units of 1 dB, between the power used for this burst and power should be used for CDMA Ranging.
Normalized C/N override	152	5	This is a list of numbers, where each number is encoded by one nibble, and interpeted as a signed integer. The nibbles corrsepond in order to the list define by Table 332, starting from the second line, such that the LS nibble of the first byte corresponds to the second line in the table. The number encoded by each nibble represents the difference in normalized C/N relative to the previous line in the table.

[Modify the text at page79, line45 of IEEE 80216maint-04_10 as following:]

11.4.2 Downlink burst profile encodings

~~Delete the fields 'DIUC mandatory exit threshold' and 'DIUC minimum entry threshold' from Table 360, Table 361, Table 362 and Table 363.~~

Modify Page665, Table 358 as the following:

Table 358—DCD burst profile encodings—WirelessMAN-SC

Name	Type (1 bytes)	Length	Value (variable length)
Modulation type	150	1	1 = QPSK 2 = 16-QAM 3 = 64-QAM
~~FEC Code Type~~	~~151~~	~~1~~	~~1 = Reed–Solomon only 2 = Reed–Solomon + Inner Block Convolutional Code (BCC) 3 = Reed–Solomon + Inner (9,8) Parity Check Code 4 = BTC (Optional) 5–255 = *Reserved*~~
RS Information bytes (K)	152	1	K = 6 - 255

RS Parity bytes (R)	153	1	R = 0–32 bytes (error correction capability T= 0–16 bytes)
BCC code type	154	1	1 = (24,16) 2–255 = *Reserved*
BTC Row code type	155	1	1 = (64,57) Extended Hamming 2 = (32,26) Extended Hamming 3–255 = *Reserved*
BTC Column code type	156	1	1 = (64,57) Extended Hamming 2 = (32,26) Extended Hamming 3–255 = *Reserved*
BTC Interleaving type	157	1	1 = No interleaver, 2 = Block Interleaving, 3–255 = *Reserved*
Last codeword length	158	1	1=fixed; 2=shortened allowed (optional) This allows for the transmitter to shorten the last codeword, based upon the allowable shortened codewords for the particular code type.
~~DIUC Mandatory exit threshold~~	~~159~~	~~1~~	~~0–63.75 Db~~ ~~CINR at or below where this DIUC can no longer be used and where this change to a more robust DIUC is required, in 0.25 Db units. See Figure 81.~~
~~DIUC Minimum entry threshold~~	~~160~~	~~1~~	~~0–63.75 Db~~ ~~The minimum CINR required to start using this DIUC when changing from a more robust DIUC is required, in 0.25 Db units. See Figure 81.~~
Preamble presence	161	1	0 = burst not preceded with preamble 1 = burst preceded with preamble. If the preamble is present, it consumes the first PSs of the interval.
CID_In_DL_IE	162	1	0 = CID does not appear DL-MAP IE (default) 1 = CID does appear in DL-MAP IE 2-255 = *Reserved*

Modify Page666, Table 359 as the following:

Table 359—DCD burst profile encodings—WirelessMAN-SCa

Name	**Type (1 bytes)**	**Length**	**Value (variable length)**
~~Modulation type~~	~~150~~	~~1~~	~~4 MSB:~~ ~~1 =QPSK, 2 = 16-QAM, 3 = 64-QAM, 4 = 256-QAM,~~ ~~5 = BPSK, ,6-9 = Spread BPSK with Fs=0-3, 10-15 = *Reserved*~~ ~~4 LSB:~~ ~~1 = CC+RS without block interleaving,~~ ~~2 = CC+RS with block interleaving~~ ~~3 = no FEC, 4 = BTC, 5 = CTC, 6–15 = *Reserved*~~
RS Information bytes (K)	151	1	K = 6 - 239
RS Parity bytes (R)	152	1	R = 0–16 bytes (error correction capability = 0–8 bytes) R = 17–255 *Reserved*
~~DIUC Mandatory exit threshold~~	~~153~~	~~1~~	~~0–63.75 Db~~ ~~CINR at or below where this DIUC can no longer be used and where this change to a more robust DIUC is required, in 0.25 Db units. See Figure 81.~~

~~DIUC Minimum entry threshold~~	~~154~~	~~1~~	~~0–63.75 Db~~ ~~The minimum CINR required to start using this DIUC when changing from a more robust DIUC is required, in 0.25 Db units. See Figure 81.~~
CC/CTC-Specific parameters	155	1	0 = rate 1/2 (for BPSK, QPSK, 16-QAM) 1 = rate 2/3 (for QPSK, 64-QAM) 2 = rate 3/4 (for BPSK, QPSK, 16-QAM, 256-QAM) 3 = rate 5/6 (for QPSK, 64-QAM) 4 = rate 7/8 (for QPSK, 256-QAM) 5–255 = *Reserved*
Block interleaver depth	156	1	Number of rows (Reed–Solomon code words) used in block interleaver between Reed–Solomon and CC: 2–66 = rows 0, 1, 67–255 = *Reserved*
BTC Code selector	157	1	Value used to choose set of BTC row/column codes. 1–3 = *Cbank* 0, 4–255 = *Reserved*
Spreading Parameters	159	1	
CID_In_DL_IE	160	1	0 = CID does not appear DL-MAP IE (default) 1 = CID does appear in DL-MAP IE 2-255 = *Reserved*

Modify Page668, Table 360 as the following:

Table 360—DCD burst profile encodings—WirelessMAN-OFDM

Name	Type (1 bytes)	Length	Value (variable length)
~~FEC Code type~~	~~150~~	~~1~~	~~0 = BPSK (CC) 1/2~~ ~~1 = QPSK (RS+CC/CC) 1/2~~ ~~2 = QPSK (RS+CC/CC) 3/4~~ ~~3 = 16-QAM (RS+CC/CC) 1/2~~ ~~4 = 16-QAM (RS+CC/CC) 3/4~~ ~~5 = 64-QAM (RS+CC/CC) 2/3~~ ~~6 = 64-QAM (RS+CC/CC) 3/4~~ ~~7 = QPSK (BTC) 1/2~~ ~~8 = QPSK (BTC) 3/4 or 2/3~~ ~~9 = 16-QAM (BTC) 3/5~~ ~~10 = 16-QAM (BTC) 4/5~~ ~~11 = 64-QAM (BTC) 2/3~~ ~~12 = 64-QAM (BTC) 5/6~~ ~~13 = QPSK (CTC) 1/2~~ ~~14 = QPSK (CTC) 2/3~~ ~~15 = QPSK (CTC) 3/4~~ ~~16 = 16-QAM (CTC) 1/2~~ ~~17 = 16-QAM (CTC) 3/4~~ ~~18 = 64-QAM (CTC) 2/3~~ ~~19 = 64-QAM (CTC) 3/4~~ ~~20–255 = *Reserved*~~
~~DIUC Mandatory exit threshold~~	~~151~~	~~1~~	~~0–63.75 Db~~ ~~CINR at or below where this DIUC can no longer be used and where this change to a more robust DIUC is required, in 0.25 Db units. See Figure 81.~~
~~DIUC Minimum entry threshold~~	~~152~~	~~1~~	~~0–63.75 Db~~ ~~The minimum CINR required to start using this DIUC when changing from a more robust DIUC is required, in 0.25 Db units. See Figure 81.~~
TCS_enable	153	1	0 = TCS diabled 1 = TCS enabled 2-255 = *Reserved*

Modify Page668, Table 361 as the following:

Table 361—DCD burst profile encodings—WirelessMAN-OFDMA

Name	Type (1 bytes)	Length	Value (variable length)
~~FEC Code type~~	~~150~~	~~1~~	~~0 = QPSK (CC) 1/2 1 = QPSK (CC) 3/4 2 = 16-QAM (CC) 1/2 3 = 16-QAM (CC) 3/4 4 = 64-QAM (CC) 2/3 5 = 64-QAM (CC) 3/4 6 = QPSK (BTC) 1/2 7 = QPSK (BTC) 3/4 or 2/3 8 = 16-QAM (BTC) 3/5 9 = 16-QAM (BTC) 4/5 10 = 64-QAM (BTC) 2/3 or 5/8 11 = 64-QAM (BTC) 5/6 or 4/5 12 = QPSK (CTC) 1/2 13 = QPSK (CTC) 2/3 14 = QPSK (CTC) 3/4 15 = 16-QAM (CTC) 1/2 16 = 16-QAM (CTC) 3/4 17 = 64-QAM (CTC) 2/3 18 = 64-QAM (CTC) 3/4 19 = 64-QAM (CTC) 5/6 20 = QPSK (ZT CC) 1/2 21 = QPSK (ZT CC) 3/4 22= 16-QAM (ZT CC) 1/2 23= 16-QAM (ZT CC) 3/4 24= 64-QAM (ZT CC) 2/3 25= 64-QAM (ZT CC) 3/4 26..255 = *Reserved*~~
~~DIUC Mandatory exit threshold~~	~~151~~	~~1~~	~~0–63.75 dB CINR at or below where this DIUC can no longer be used and where this change to a more robust DIUC is required, in 0.25 dB units. See Figure 81.~~
~~DIUC Minimum entry threshold~~	~~152~~	~~1~~	~~0–63.75 dB The minimum CINR required to start using this DIUC when changing from a more robust DIUC is required, in 0.25 dB units. See Figure 81.~~