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Abstract	Operational margins for DL link adaptation	
Purpose	Adopt changes.	
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Operational margins for DL link adaptation

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1. Introduction

Each SS has its own implementation, resulting in different performance. Therefore, it is not suitable for the BS to impose the same CINR entry and exit thresholds for all subscriber stations. We suggest a mechanism for the BS to define operational margins, and therefore control the desired level of robustness of the link (some operators might want less robustness but a better total throughput, some others guaranteed rates but less overall capacity). This would be to define the entry and exit thresholds not as absolute CINR levels, but relative to the performance of the SS. We take as reference the SNR required to attain a BER after FEC of 10^{-6} (defined as the Receiver SNR in section 8.3.11.1) in the different coding schemes. Each SS determines its own Implemented Receiver SNR, and determines exit and entry thresholds accordingly.

This contribution amends changes made in C802.16maint-04/74.

2. Text changes

2.1. Definitions

Add to definitions p4, line 44:

3.27 Implemented receiver SNR: the minimum level of SNR required to reach a BER of 10^{-6} after FEC, as enabled by actual implementation, for a given modulation and coding scheme.

2.2. Figure 81

In section 6.3.10.1 p27

Delete lines 8-13 (i.e. re-instate previous text and re-instate Figure 81)

2.3. DCD encoding

In section 11.4.2, P130, modify table 362 from 802.16-2004 p663:

Table 362 - DCD burst profile encodings—WirelessMAN-OFDM

Name	Type	Length	Value

FEC code type	150	1	0 = BPSK (CC) 1/2 11 = 64-QAM (BTC) 2/3 1 = QPSK (RS+CC/CC) 1/2 12 = 64-QAM (BTC) 5/6 2 = QPSK (RS+CC/CC) 3/4 13 = QPSK (CTC) 1/2 3 = 16-QAM (RS+CC/CC) 1/2 14 = QPSK (CTC) 2/3 4 = 16-QAM (RS+CC/CC) 3/4 15 = QPSK (CTC) 3/4 5 = 64-QAM (RS+CC/CC) 2/3 16 = 16-QAM (CTC) 1/2 6 = 64-QAM (RS+CC/CC) 3/4 17 = 16-QAM (CTC) 3/4 7 = QPSK (BTC) 1/2 18 = 64-QAM (CTC) 2/3 8 = QPSK (BTC) 3/4 or 2/3 19 = 64-QAM (CTC) 3/4 9 = 16-QAM (BTC) 3/5 20–255 = Reserved 10 = 16-QAM (BTC) 4/5
DIUC mandatory exit ~~threshold~~margin	151	1	~~0-63.75 dB~~ -32 to 31.75 dB ~~CINR~~Margin compared to the SS' implemented receiver SNR 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~~margin	152	1	~~0-63.75 dB~~ -32 to 31.75 dB The minimum ~~CINR~~margin compared to the SS' implemented receiver SNR 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 disabled 1 = TCS enabled 2–255 = Reserved