

IEEE P802.11
Wireless Access Methods and Physical Layer Specifications

**TITLE: Proposal For The Modification Of the FH PHY
 Specification Of:
 Remove References and Text Referring To Eb/No.**

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ABSTRACT

This paper is a proposal to remove any reference to E_b/N_o . A compromise to this, it is proposed that the co-channel like interferer measurement is performed.

INTRODUCTION

I propose that we strike all reference to E_b/N_o for the 1Mb/sec PHY. This is a difficult measurement to perform. Basically a noise tube, amplifiers, filters, couplers and attenuators are required, which have to be plumbed together then checked frequently during measurement to make sure they do not vary. This number is logically specified within the sensitivity quoted.

A much simpler solution, which measures the receiver performance in interference is proposed. This gives a figure of merit regarding the receiver performance and can be performed with the same equipment as the desensitization/adjacent channel filtering tests. This is proposed as a compromise to placate members who would wish to have some measure of this number.

PROPOSAL 1

Delete (from 068r5) section 9.6.24 'The conformant PMD signal must maintain an E_b/N_o of 16dB in the presence of Gaussian white noise of greater than or equal to 10^{-5} '.

Replace above text with: 'A conformant PMD shall maintain a BER in the presence of Gaussian white noise of less than or equal to 1×10^{-5} '.

PROPOSAL 2

Delete (from 068r5) section 9.7.25 which specifies the 4GFSK E_b/N_o .

PROPOSAL 2

Modify Section 9.6.34 to include C_o and $N_{+/-1}$ desensitisation.

Adjacent Channel Rejection (Desensitization) Desensitization (Dp) is defined as the ratio to measured sensitivity of the minimum amplitude of an interfering signal that causes the BER of the receiver to be *increased* to 10^{-5} when the desired signal is -77 dBm (3 dB above sensitivity specified in section 9.5.9.11). The interfering signal shall be modulated with the FHSS PMD modulation uncorrelated in time to the desired signal. Dp should be greater than or equal to the figures given below:

Interferer Frequency	Dp minimum
$M=N$	$-12dB$
$M=N+/-1$	$-12dB$
$M=N+/-2$	30dB
$M=N>+/-2$	40dB

[The only modifications are the addition of the $M=N$ and $M=N+/- 1$ numbers. This is very Ed(itorial) efficient and concise.]