

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Errata – Corrections and clarifications to the 802.16a PHY specification</b>	
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Re:	802.16d-03/02	
Abstract	Some of the parameters in the FEC and the transmitter constellation error test method need to be clarified	
Purpose	To aid the 802.16d work	
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## Errata and suggested corrections to the 802.16a specification

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### **Section 8.4.3.2.1 Concatenated Reed - Solomon / convolutional code**

The parameter K is used in two different contexts. First, it is used to define the number of "data bytes before encoding" or in other words the information bytes. Second, it is used in the same section to define the constraint length for the convolutional code.

Suggested correction: delete "K" in the second place by stating "a constraint length equal to 7". This can be done because there does not seem to be any other references to K in the context of constraint lengths.

### **Section 8.4.3.2.1 Concatenated Reed - Solomon / convolutional code**

Clarify the text regarding the shortening and puncturing of Reed-Solomon code. Currently it reads:

"When a block is shortened to K' data bytes, the first 239-K' bytes of the encoder block shall be zero. When a code is punctured to permit T' bytes to be corrected, only the first 2T' of the total 16 codeword bytes shall be employed."

The term "codeword bytes" is not clear and should be replaced with "parity bytes". The following text which perhaps more clearly describes the shortening and puncturing is suggested: "When a block is shortened to K' data bytes, add 239-K' zero bytes as a prefix. After encoding discard the 239-K' zero bytes. When a code is punctured to permit T' bytes to be corrected, only the first 2T' of the total 16 parity bytes shall be employed."

### **Section 8.4.8.1.2 Transmitter constellation error and test method**

The test method for the transmitter constellation error uses formula (65) for defining the computation of the  $Error_{RMS}$ . Formula (65) lets you understand that the error shall be averaged over all  $N_{FFT}$  tones in the FFT, including the guard carriers. The constellation error is an interoperability parameter which shall be restricted to the inband carriers. Out-of-band emission is a co-existence parameter which is defined by the spectrum mask and must not therefore be included here.

Suggested correction: Change the  $N_{FFT}$  to  $N_{USED}$  in both places in formula (65). Values for  $N_f$  as well as  $L_p$  shall also be defined.

### **Section 8.4.4.3.5 UL-MAP subchannelization IE format**

Renumber to 8.4.5.3.5. Update also the reference on page 150 row 55.