IEEE P802.11
Wireless LANs

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| PHY comment resolution 2 |
| Date: 2010-11-10 |
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|  |  |  |  |  |

Abstract

This document proposes resoltions to a couple of commens on Draft 1.0 of TGad.

CID507

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| --- | --- | --- | --- | --- | --- | --- | --- |
| 507 | 343.08 | 8 | 21.5.3.2.5 |  |  | In the formula n should start from n or, when n is used in the formula, use (n-1) to avoid negative times. Also it is unclear what value of p\_n is used for the header symbol. | change n to (n-1)  |

Discussion

This was paritaly resolved in document 11-10-1291-01. However, it is held open because the modulation of the header remains unclear.

We propose to add a formula to describe the modulation of the OFDM PHY header.

***TGad Editor: modify the header encoding procedure in 215.3.1.3 as follows:***

1. The 64 header bits (b1, b2, …, bLH), where LH = 64, are scrambled as described in , starting from the eighth bit, to create **q**=(q1,q2,…,qLH).
2. The sequence **q** is padded with 440 zeros to obtain a total of 504 bits, (q1,q2,…,qLH,0LH+1,0LH+2,…0504), which are then encoded using the rate-3/4 LDPC code as described in 21.5.3.2.2.2. 168 parity bits, p1,p2,…,p168, are generated.
3. A sequence **c1** is generated as (q1,q2,…,qLH,p9,p10,…p168).
4. A sequence **c2** is generated as (q1,q2,…,qLH,p1,p2,…p84, p93,p94,…p168) XORed with a one-time pad sequence generated using the scrambler defined in 21.3.9, with the shift register is initialized to all ones.
5. A sequence **c3** is generated as (q1,q2,…,qLH,p1,p2,…p160) XORed with the continuation of the one-time pad sequence generated in step (4).
6. The sequences **c1**,**c2** and **c3** are concatenated to form the 672-bit sequence **c**=(c1,c2,c3,…,cd672)=(**c1**,**c2**,**c3**).
7. The 672-bit sequence, **c**, is then mapped as QPSK as described in , pilots are inserted as described in and the resulting sequence d0,d1,...,dSD-1 is modulated as an OFDM symbol as follows:



where  and are defined in 21.5.3.2.4 and  is defined in 21.5.3.2.5

CID1095

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| --- | --- | --- | --- | --- | --- | --- |
| 1095 | 359.19 | 21.8.2.2.1 |  |  | "The receiver should20 receive that data part of the packet using a quasi-omni antenna pattern."As I understand it, the training protocol is described in the MAC sections and controlled by the MAC.Also, I don't see any PHY SAP that provides the MAC | 1. Move this any any other statement that describe the protocol across multiple PPDUs into the MAC. (e.g. lines 18-29)2. Ensure that the MAC has a means of controlling the PHY antenna mode for Rx. |

Resolutio: Counter

***TGad Editor: Add the following at line 4 of page 314 of D1.0:***

*.11 Editor note: add the following element to table 12-4 Vector Description*

|  |  |  |
| --- | --- | --- |
| ANT-CONFIG | PHYCONFIG-VECTOR | The MAC uses this parameter to instruct the PHY what antenna configuration(s) to use when receving packets, and what configuration to use when switching configurations throug the reception of a packet.Values are implementation dependent. |

***TGad Editor: remove the following text from page 359 line 18-29***

***TGad Editor: add the following text as the last paragraph in 9.25.5.3.3***

In a BRP-RX packet, all TRN-R fields shall be transmitted using the same TX AWV configuration as the preamble and data fields of the frame.