IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CID1559, 207 | | | | |
| Date: 2011-03-14 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | Email |
| Sun Bo | ZTE Corporation | #10, ZTE Building, Sth Tangyan Rd., Hi-Tech Industries Part, Xi’an, China | 86 29 88354130 | [sun.bo1@zte.com.cn](mailto:sun.bo1@zte.com.cn) |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This document provides resolution for the comments listed below.

Notes on this document:

* Comments are from: 11-11-0276-00-00ac-tgac-d0-1-comments.xls.
* Comments refer to: Draft P802.11ac\_D0.1.pdf.
* In providing instruction for spec editing, the following conventions are used.
  + Red text indicates changes to be applied to existing text in Draft P802.11ac\_D0.1.pdf.
  + Text in blue is text copied from the 802.11n-2009 baseline that was not shown in the 11ac draft and that need be added to the draft, with the modifications shown in green.
  + Text in black is unmodified text from Draft P802.11ac\_D0.1.pdf.
  + Italic light gray text indicates instruction to the editor.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1559 | Sun, Bo | 22.3.11.4.2 | 117 | 51 | TR | "Using equation 22-47 instead of Equation 20-35" is not appropriate. If we use Equation 22-47 following 22-48 to calculate Npld, we will find Nsym,init is divided by Mstbc once more which changes the meaning of Npld.  And this sentence implies that we calculate Navbits using Equation 20-36 as 11n. Actually, as we have achieved Nsym,init ,the calculation of the Navbits could be simplified to Navbits=Nsym,init\*NCBPS, instead of using Npld to calculate as 20-36 | 1). modify equation 22-47 as "Npld=Nsym,init\*NDBPS" and move the text in pg117/ln59 to pg118/ln10.  2). Insert following sentence in pg118/ln11 after the equation 22-48: "Following the Npld calculation, Navbits for VHT packets shall be computed using Equation (22-xx) instead of Equation (20-35).  Navbits=Nsym,init\*NCBPS (22-xx)" | See discussion | PHY |
| 207 | Erceg, Vinko | 22.3.11.4.2 | 117 | 53 | TR | Please verify if m\_stbc is needed in EQ (22-47). m\_stbc in EQ (22-47) cancels | As in comment | See discussion | PHY |

Discussion

**Discussion on TR 1559, 207:**

The sentence “using equation 22-47 instead of Equation 20-35” is not appropriate. If we use Equation 22-47 following 22-48 to calculate *Npld*, we will find *NSYM,init* is devided by *mSTBC* once more which changes the definition of *Npld*.

And the same sentence implies that we calculate *Navbits* using Equation 20-36 as same as that is done in11n. Actually, giving Euation 22-47 and 22-48, as we have achieved *NSYM,init*, the calculation of the *Navbits* could be simplified as *Navbits* = *NSYM,init* \**NCBPS*, instead of using *Npld* as in Equation 20-36

Based on above discussion, the suggestion is to clarify Equation 22-47 and the calculation of *Navbits* .

**Proposed Resolution:**

Agree in principle and propose the following spec text changes.

Proposed spec text changes

*Instructions for the Editor:*

*Red text indicates changes to be applied to existing text in Draft P802.11ac\_D0.1.pdf.*

*Text in blue is text copied from the 802.11n-2009 baseline that was not shown in the 11ac draft and that need be added to the draft, with the modifications shown in green.*

***Text in black is unmodified text from Draft P802.11ac\_D0.1.pdf***

***Italic light gray text indicates instruction to the editor***

## 22.3.11.4.2 LDPC Coding

For SU packets using LDPC code to encode the Data field, the LDPC code and encoding process described in Section 19.3.11.6 shall be used with the following modifications. First, all bits in the Data field including the scrambled SERVICE, PSDU and pad bits are encoded. Thus, *Npld* for VHT packets shall be computed using Equation (22-47) instead of Equation (19-35).

***Npld = Nsym,init\*NDBPS***  (22-47)

where

*~~m~~~~STBC~~* ~~is equal to 2 when STBC is used, and 1 otherwise~~

*NDBPS* is defined in Table 22-5

*NSYM,init* is given by Equation (22-48)

(22-48)

where

*mSTBC* is equal to 2 when STBC is used, and 1 otherwise

LENGTH is parameter in the TXVECTOR

Following the *Npld* calculation, *Navbits* for VHT packets shall be computed using Equation (22-xx) instead of using Equation (19-36).

*Navbits=NSYM,init\*NCBPS* (22-xx)

In addition, if *NSYM* computed in Equation (19-41) in step (d) of Section 19.3.11.6.5 is greater than *NSYM,init*, then B3 of VHT-SIG-A2 should be set to 1. Otherwise, B3 of VHT-SIG-A2 shall be set to 0.

LDPC codes used in MU packets shall also follow the definitions in Section 19.3.11.6. Refer to Section 22.3.11.8 for LDPC encoding process in case of MU packets.