IEEE P802.11
Wireless LANs

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| CID Resolution – Part IV, Clause 30.4 |
| Date: 2018-01-25 |
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Abstract

This document proposes resolution for CIDs 1310, 1506, 2008, 1507, 1508, 1509, 1632, (7) [1].

**CID 1310, 1506**

*Comment:*

"""In the non-EDMG control mode PPDU waveform, the TRN field may be present in a 2.16 GHz non-

EDMG PPDU transmission and shall not be present in a 4.32 GHz, 6.48 GHz, or 8.64 GHz non-EDMG PPDU transmission."" - Doesn't this preclude the use of control trailer in duplicate non-EDMG transmission?"

The signal r\_TRN for the non-EDMG duplicate PPDU is not defined

*Proposed change:*

Remove this requirement or allow for a special case of CT

Add the following text after P274L12. "r\_TRN(nTc) is the waveform of the AGC and TRN fields for the control mode defined in 20.10.2.2."

*Resolution:*

Revised.

*Editor: change the text as below, page 274, line 10, [2]*

The non-EDMG control mode PPDU waveform shall be defined at the SC chip rate equal to 1.76 GHz and include the following modulated fields:



where:

 is the duration of the L-STF field of the PPDU

 is the total duration of the L-STF and L-CEF fields of the PPDU

 is the total duration of the L-STF, L-CEF, and L-Header fields of the PPDU

 is the total duration of the L-STF, L-CEF, L-Header, and Data fields of the PPDU

In the non-EDMG control mode PPDU waveform, the AGC and TRN fields may be present in a 2.16 GHz non-EDMG PPDU transmission and shall not be present in a 4.32 GHz, 6.48 GHz, or 8.64 GHz non-EDMG PPDU transmission.

For a special case of control trailer transmission defined in 30.3.7 and the value of the Training Length field is equal to 2, the control trailer takes the place of the AGC and TRN fields following the Data field. In that particular case the AGC and TRN fields may be present in a 2.16 GHz, 4.32 GHz, 6.48 GHz, or 8.64 GHz non-EDMG PPDU transmission.

Unless specified, the chip index *n* is defined in the range [0, NField - 1], where NField defines the total number of samples for a given signal field. The definition of the L-STF, L-CEF, and L-Header fields is provided in 30.3.3.2.2, 30.3.3.2.3, and 30.3.3.2.4, respectively. The definition of the AGC and TRN fields is provided in 20.10.2.2.5 and 20.10.2.2.6 respectively. The L-Header and Data fields encoding and modulation is provided in 20.4.3.2.3 and 20.4.3.3 respectively.

*Editor: change the text as below, page 314, line 11, [2]*

The non-EDMG duplicate PPDU waveform shall be defined at the SC chip rate equal to 1.76 GHz and include the following modulated fields:



where:

 is the duration of the L-STF field of the PPDU

 is the total duration of the L-STF and L-CEF fields of the PPDU

 is the total duration of the L-STF, L-CEF, and L-Header fields of the PPDU

 is the total duration of the L-STF, L-CEF, L-Header, and Data fields of the PPDU

In the non-EDMG duplicate PPDU waveform, the AGC and TRN fields may be present in a 2.16 GHz non-EDMG PPDU transmission and shall not be present in a 4.32 GHz, 6.48 GHz, or 8.64 GHz non-EDMG PPDU transmission.

Unless specified, the chip index *n* is defined in the range [0, NField - 1], where NField defines the total number of samples for a given signal field. The definition of the L-STF, L-CEF, and L-Header fields is provided in 30.3.3.2.2, 30.3.3.2.3, and 20.6.3.1, respectively. The definition of the AGC and TRN fields is provided in 20.10.2.2.5 and 20.10.2.2.6 respectively. The L-Header and Data fields encoding and modulation is provided in 20.6.3.1.4 and 20.6.3.2 respectively.

**CID 2008**

*Comment:*

Typo in Cyclic shift (CSD).

*Proposed change:*

Change to "Cyclic shift diversity (CSD)".

*Resolution:*

Accepted.

*Editor: change the text as below, page 269, line 25, [2]*

* Cyclic shift diversity (CSD) prevents the signal from unintentional beamforming. A CSD is specified per transmitter chain for EDMG and non-EDMG duplicate PPDU transmissions.

*Editor: change the text as below, page 282, line 1, [2]*

* Cyclic shift diversity (CSD) prevents the signal transmission from unintentional beamforming. A cyclic shift is specified per transmitter chain for non-EDMG duplicate PPDU transmission; see 30.5.3.3.1.

*Editor: change the text as below, page 337, line 13, [2]*

1. Cyclic shift diversity (CSD) prevents the transmission from unintentional beamforming. A cyclic shift is specified per transmitter chain for pre-EDMG portion of PPDU transmission; see 30.5.3.3.1.

**CID 1507**

*Comment:*

There are duplicated plus (+) functions on the end of the first line and the beginning of the second line. The notation may not be common.

*Proposed change:*

Remove the plus (+) on the end of the first line. Apply similar changes on P275L17, P276L1,L10,L22, and so on...

*Resolution:*

Accepted.

*Editor: change the text as below, page 274, line 1, [2]*



*Editor: change the text as below, page 275, line 17, [2]*



*Editor: change the text as below, page 276, line 1, [2]*



*Editor: change the text as below, page 276, line 10, [2]*



*Editor: change the text as below, page 276, line 22, [2]*



*Editor: change the text as below, page 278, line 12, [2]*



*Editor: change the text as below, page 278, line 22, [2]*



*Editor: change the text as below, page 279, line 6, [2]*



**CID 1508**

*Comment:*

The function "length(x)" is not defined.

*Proposed change:*

"change P274L23-24 as follows

""where N is the number of symbols in the non-EDMG PPDU, and defined as N=TXTIME / Tc"""

*Resolution:*

Revised.

*Editor: change the text as below, page 274, line 24, [2]*

where:

 is the total number of chips in the non-EDMG PPDU waveform

*Editor: change the text as below, page 275, line 5, [2]*

where:

 is the length of  in samples



 is the total number of chips in the non-EDMG PPDU waveform

*Editor: change the text as below, page 277, line 19, [2]*

where:

 is the total number of chips in the EDMG preamble and Data fields of the EDMG PPDU waveform

*Editor: change the text as below, page 278, line 1, [2]*



 is the total number of chips in the EDMG preamble and Data fields of the EDMG PPDU waveform

*Discussion:*

TBD

**CID 1509**

*Comment:*

"If delta.t1 and delta.t2 intend delay, -delta.t1 and -delta.t2 instead of +delta.t1 and +delta.t2 should be used in the equation.

The similar comments for P276L1 (case of 6.48 GHz), P276L10 (case of 8.48 GHz.)"

*Proposed change:*

As per comment

*Resolution:*

Revised.

*Editor: change the text as below, page 275, line 20-22, [2]*



where:

∆F defines the channel spacing and is equal to 2.16 GHz

∆t1 and ∆t2 are in the range [0, *Tc*]

∆t equal to 0 corresponds to the primary channel

*Editor: change the text as below, page 276, line 4-5, [2]*

∆t1, ∆t2, and ∆t3 are in the range [0, *Tc*]

∆t equal to 0 corresponds to the primary channel

*Editor: change the text as below, page 276, line 13-14, [2]*

∆t1, ∆t2, ∆t3, and ∆t4 are in the range [0, *Tc*]

∆t equal to 0 corresponds to the primary channel

*Editor: change the text as below, page 278, line 15-17, [2]*

∆F defines the channel spacing and is equal to 2.16 GHz

∆t1 and ∆t2 are in the range [0, *Tc*]

∆t equal to 0 corresponds to the primary channel

*Editor: change the text as below, page 278, line 24, [2]*

∆t1, ∆t2, and ∆t3 are in the range [0, *Tc*]

∆t equal to 0 corresponds to the primary channel

*Editor: change the text as below, page 279, line 8-9, [2]*

∆t1, ∆t2, ∆t3, and ∆t4 are in the range [0, *Tc*]

∆t equal to 0 corresponds to the primary channel

**CID 1632**

*Comment:*

EDMG control mode transmission over the multiple channels should use non-EDMG duplicate format. However, non-EDMG duplicate format does not have EDMG Header-A.

*Proposed change:*

EDMG duplicate format having EDMG Header-A should be defined for EDMG control mode transmission over the multiple channels.

*Resolution:*

Rejected.

*Discussion:*

The EDMG PPDU transmission is defined in 30.4.6.3. The EDMG PPDU waveform contains the EDMG-Header-A (p 276, line 22). The duplicate transmission description starts from p 278 line 9.

So, this format exists and it is defined as EDMG PPDU format.

**SP:**

Do you agree to accept the proposed resolutions for CIDs 1310, 1506, 2008, 1507, 1508, 1509, 1632 in (11-18-0307-01-00ay CID Resolution - Part IV)?

**References:**

1. 11-18-0067-01-00ay-11ay-d1-0-comment-database
2. Draft P802.11ay\_D1.0