IEEE P802.11
Wireless LANs

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| 11ax Comment Resolutions for Clause 26.3.2 |
| Date: 2016-05-02 |
| Author(s): |
| Name | Affiliation | Address | Phone | Email |
| Yan Zhang | Marvell  | 5488 Marvell Ln, Santa Clara, CA 95054 | 408-222-0975 | yzhang@marvell.com |
| Rui Cao | Marvell |  |  | ruicao@marvell.com |
| Hongyuan Zhang | Marvell |  |  | hongyuan@marvell.com |

Abstract: This document contains proposed resolutions for comments in *Clause 26.3.2* from 11ax D0.1 with the CIDs below.

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| ***Clauses 26.3.2*** |  |  |
| * 542
* 837
* 881
* 1186
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| * 1032
* 1612
* 1613
* 1614
* 1615
* 1844
* 1929
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***CIDs for Clause 26.3.2***

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| CID | Commenter | Section | Page | Comment | Proposed Change | Resolution |
| 1186 | Lei Huang | 26.3.2 | 75.05 | There is duplicated description on the Data field in Table 26-2 | Delete the second last row of Table 26-2 | **Accepted.** |

ax editor: please make the following change in *Clause 26.3.2*:

* On P75L05 (CID #1186): Delete the second last row of Table 26-2.

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| CID | Commenter | Section | Page | Comment | Proposed Change | Resolution |
| 881 | JUNG HOON SUH | 26.3.2 | 74.25 | Wrong description of the Figure 26-4 | Change to: “The format of the HE trigger-based PPDU is defined as in Figure 26-04. This format is used for a transmission that is a response to a Trigger frame. The HE trigger-based PPDU format is identical to the HE SU PPDU format for the L-STF, L-LTF, L-SIG, RL-SIG, HE-SIG-A fields. Only the contents of HE-SIG-A will be different. The duration of the HE-STF field is 8 μs.” | **Revised.**Change to as in the resolution of CID881 in doc IEEE802.11-16/0634r1. |

**Discussion:**

The commenter is right that the description for Figure 26-4 is wrong. But part of the proposed change “Only the contents of HE-SIG-A will be different.” is irrelevant since we only talk about PPDU format, not contents here.

ax editor: please make the following changes in *Clause 26.3.2*:

* On P74L25 (CID #881): Change to “The format of the HE trigger-based PPDU is defined as in Figure 26-04. This format is used for a transmission that is a response to a Trigger frame. The HE trigger-based PPDU format is identical to the HE SU PPDU format for the L-STF, L-LTF, L-SIG, RL-SIG, HE-SIG-A fields. The duration of the HE-STF field is 8 µs.”

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| CID | Commenter | Section | Page | Comment | Proposed Change | Resolution |
| 1612 | Mark RISON | 26.3.2 | 75.12 | "In the HE NDP PPDU the Data field is not present." -- this is true of all NPDs, since this stands for Null Data Packet | Delete the cited sentence | **Accepted.** |
| 1032 | Ke Yao | 26.3.2 | 75.19 | "DL HE NDP is one DL HE sounding format." means only one? Or one of some choices? It's not clear. And what does DL HE sounding format refer to? | make it clear | **Revised.**Change to as in the resolution of CID1032 in doc IEEE802.11-16/0634r1. |
| 1613 | Mark RISON | 26.3.2 | 75.19 | "DL HE NDP is one DL HE sounding format." -- what does this mean? | Delete the cited sentence | **Accepted** |
| 1929 | Sigurd Schelstraete | 26.3.2 | 75.20 | Make separate subclause for sounding PPDU | See comment | **Revised.**Change to as in the resolution of CID 1929 in doc IEEE802.11-16/0634r1. |
| 1614 | Mark RISON | 26.3.2 | 75.21 | "The format of a HE NDP PPDU is shown in Figure 26-5 (HE NDP PPDU format)." -- as the end of this subclause says, an HE NDP PPDU is just a vanilla HE SU PPDU without a Data field | Delete lines 21 to 43 inclusive | **Rejected.**Although HE NDP PPDU transmission uses HE SU PPDU format without Data field, it has some specific properties such as HELTF-2x symbol format, 4μs PE duration. It is worth to put it in a separate subclause.  |
| 542 | Eunsung Park | 26.3.2 | 75.37 | We agreed the PE for NDP is 4us. | Define the PE extension for NDP as 4us. | **Revised.**Change to as in the resolution of CID542 in doc IEEE802.11-16/0634r1. |
| 837 | Jinsoo Choi | 26.3.2 | 75.37 | The duration of PE in the NDP PPDU was decided as being always 4us. | Change to: "The PE is always present and the duration of PE is 4us." | **Revised.**Change to as in the resolution of CID837 in doc IEEE802.11-16/0634r1. |
| 1844 | Sameer Vermani | 26.3.2 | 75.42 | The text "The HE NDP PPDU has the following properties: --It uses the HE SU PPDU format but without the Data field--is an HE SU PPDU as implied by the value of L-Length field in L-SIG field" seems redundant and unclear. The first bullet says it is an HE-SU PPDU format already and then second bullet again talks about it being an HE SU PPDU | Make this more succinct and technically precise. | **Revised.**Change to as in the resolution of CID 1844 in doc IEEE802.11-16/0634r1. |
| 1615 | Mark RISON | 26.3.2 | 75.42 | It says "L-Length field" but there is no such field | Refer to a field that exists | **Revised.**Change to as in the resolution of CID 1615 in doc IEEE802.11-16/0634r1. |

**Discussion:**

The commenter does have a point that “sounding PPDU needs a separate subclause” for clarity. The commenters are right that PE duration for HE NDP PPDU are explicitly specified in ax spec framework.

* On P75L12 (CID #1612): Add a separate subclause 26.3.2.1 **HE sounding PPDU format** with HE NDP PPDU related text. Move Notes 1-3 to clause 26.3.2 and delete Note 4. Delete HE NDP PPDU related text in clause 26.3.2.
* On P75L20 (CID #1929): See resolution of CID #1612.
* On P75L37 (CID #542): See resolution of CID #1612.
* On P75L37 (CID #837): See resolution of CID #1612.
* On P75L19 (CID #1032): ~~DL HE NDP is one DL HE sounding format.~~
* On P75L19 (CID #1613): See resolution of CID #1032.
* On P75L42 (CID #1844): ~~--is an HE SU PPDU as implied by the value of L-Length field in L-SIG field.~~
* On P75L42 (CID #1615): See resolution of CID #1615.

ax editor: please make the following changes in *Clause 26.3.2*:

The RL-SIG, HE-SIG-A, HE-SIG-B, HE-STF, HE-LTF, and PE fields exist only in HE PPDUs. ~~In the HE NDP PPDU the Data field is not present. The number of OFDM symbols in the HE-LTF field, N~~*~~HE-LTF~~*~~, is 1, 2, 4, 6, or 8 and the duration of each symbol in the HE-LTF field is 3.2 μs, 6.4 μs, or 12.8 μs plus the GI duration.~~ The HE-SIG-B field is present only in the HE MU PPDU. The duration of the PE field is determined by the TXVECTOR parameter PE\_DURATION.

~~DL HE NDP is one DL HE sounding format.~~

NOTE 1—The number of HE-LTF OFDM symbols, *N*HE-LTF ~~in the NDP~~ is a function of the total number of space-time streams *N*STS as shown in Table 26-6 (Frequently used parameters).

NOTE 2—The duration of each HE-LTF OFDM symbol, *T*HE-LTF, is defined in Table 26-3 (Timing-related constants).

NOTE 3—The combination of HE-LTF modes and GI duration is indicated in HE-SIG-A field.

ax editor: please add the following subclause in *Clause 26.3.2*:

**26.3.2.1 HE sounding PPDU format**

NDP is the only HE sounding PPDU format.

The format of a HE NDP PPDU is shown in Figure 26-5 (HE NDP PPDU format).



**Figure 26-5—HE NDP PPDU format**

The HE NDP PPDU has the following properties:

—It uses the HE SU PPDU format but without the Data field

—PE is always present in a NDP PPDU, with a duration of 4uS.