IEEE P802.11Wireless LANs

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| Proposed Resolutions to 11az LB255 CIDs on LTF Repetition |
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Abstract

This submission proposes the resolutions to 11az LB 255 CIDs on LTF Repetition.

The page and line numbers refer to those in 11az Draft 4.0 [1].

**Introduction**

This submission proposes the resolutions to 11az LB 255 CIDs on LTF Repetition.

The page and line numbers refer to those in 11az Draft 4.0 [1].

**Comments:**

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| CID | Page/Line | Clause | Comment | Proposed change | Resolution |
| 6033 | 51/22 | 9.3.1.22.10.3 | "The I2R Rep subfield signals the number of repetitions N\_REP of the HE LTF symbols in the corresponding HE TB Ranging NDP". First N\_REP should be replaced by N\_LTF\_REP, e.g. see paragraph before this subclause. Second, the number of repetitions is "N\_LTF\_REP-1" see paragraph on P132L14. | as in comment | Revised. This is an editorial comment, where N\_REP needs to be replaced with N\_LTF\_REP. This comment has been passed to the TG technical editor for consideration during preparation of a subsequent draft.  |
| 6034 | 46/1 | 9.3.1.19 | According to the paragraph on P132L14, N\_LTF\_REP=1 means no repetition and N\_LTF\_REP>1 means one or more repetitions. Hence, N\_LTF\_REP-1 is the number of repetitions. Therefore, correct all occurences, where N\_LTF\_REP is used as the number of HE-LTF repetitions with "(N\_LTF\_REP-1)". The following occurences were found: P46L1, P51L8, P51L22, P52L10, P77L33, P77L36, P78L1, P236L32, P237L12, P237L19, P237L23, P239L26 | as in comment | Reject. It is clearly stated on page 46/ line 3-4, page 132/line 14-21, page 236/line 33-35, page 239/line 26-28 in 11az\_D4.0 , that when N\_LTF\_REP is equal to 1, then there is no repetition and when N\_LTF\_REP is greater than 1, repetition is used. So the text here is consistent with the rest of the 11az draft spec. |
| 6035 | 232 | 27.2.2 | Based on the last bullet on P236 the LTF\_REP value equals N\_LTF\_REP, which indicate no repetition for 1 and 1 ore more repetitions for greater than 1. Hence the second sentence in the Value column should be changed to "Set to the number of repetitions plus one." | as in comment | Reject. It is clearly stated on page 46/ line 3-4, page 132/line 14-21, page 236/line 33-35, page 239/line 26-28 in 11az\_D4.0 , that when N\_LTF\_REP is equal to 1, then there is no repetition, and when N\_LTF\_REP is greater than 1, repetition is used. So the text here is consistent with the rest of the 11az draft spec. |
| 6036 | 237/14 | 27.3.18a.1 | "Figure 27-46b --Example of HE-LTFs in an HE Ranging NDP with N\_STS=2 and N\_LTF\_REP=2" shows four HE-LTF symbols numbered A1, A2, B1, B2. The first two HE-LTF symbols (A1, A2) are due to N\_STS=2 and the third and fourth HE-LTF symbols (B1, B2) are the first repetition, (N\_LTF\_REP-1)=1, of the first two HE-LTF symbols. Hence make the following changes in Fig. 27-46b:1. "First repetition" with "N\_STS" and the arrow with a bracket spanning the two first symbols;2. "Second repetition" with "First repetition, N\_LTF\_REP-1=1";3. Add a bracket spanning over all four symbols and add the text "N\_STS┬╖N\_LTF\_REP H-LTF symbols";4. Please explain the numbering A1, A2, B1, B2 in a paragraph near Figure 27-46b. | as in comment | Reject. It is clearly stated on page 46/ line 3-4, page 132/line 14-21, page 236/line 33-35, page 239/Line 26-28 in 11az\_D4.0 , that when N\_LTF\_REP is equal to 1, then there is no repetition, and when N\_LTF\_REP is greater than 1, repetition is used. So the text here is consistent with the rest of the 11az draft spec. |
| 6037 | 237/31 | 27.3.18a.1 | "The total number of HE-LTF symbols is the product of the number of HE-LTF repetitions N\_LTF\_REP and NHE-LTF, the number of HE-LTF based on the number of space-time streams N\_STS". Since "N\_LTF\_REP-1" is the number of HE-LTF repetitions, remove "the number of HE-LTF repetitions" to avoid confusion. | as in comment | Reject.It is clearly stated on page 46/ line 3-4, page 132/line 14-21, page 236/line 33-35, page 239/line 26-28 in 11az\_D4.0 , that when N\_LTF\_REP is equal to 1, then there is no repetition, and when N\_LTF\_REP is greater than 1, repetition is used. So the text here is consistent with the rest of the 11az draft spec. |
| 6038 | 237/35 | 27.3.18a.1 | "the number of LTF repetitions LTF\_REP" is confusing, since LTF\_REP = N\_LTF\_REP and is one for no repetitions and greater than one for one or more repetitions. Hence replace "LTF\_REP" with "N\_LTF\_REP-1". The same correction should be applied to P238L9. | as in comment | Reject. LTF\_REP is a TXVECTOR parameter which is referred to in this sentence, not to be confused with the general parameter N\_LTF\_REP refer to table 21-13 in the relevant PHY clause.As to N\_LTF\_REP needs to be N\_LTF\_REP-1, page 46/ line 3-4, page 132/line 14-21, page 236/line 33-35, page 239/line 26-28 in 11az\_D4.0 states that when N\_LTF\_REP is equal to 1, then there is no repetition, and when N\_LTF\_REP is greater than 1, repetition is used. So the text here is consistent with the rest of the 11az draft spec. |
| 6039 | 238/26 | 27.3.18a.1 | "Figure 27-46d--Example of secure LTFs with NUM\_USERS=2, N\_STS=[2,1] and 28 N\_LTF\_REP =[2,2]": Both users have "one" repetition as N\_LTF\_REP-1 is the number of repetitions see last bullet on P236. Hence, replace "2 Repetitions" with "1 Repetition". | as in comment | Reject. It is clearly stated on page 46/ line 3-4, page 132/kine 14-21, page 236/line 33-35, page 239/line 26-28 in 11az\_D4.0, that when N\_LTF\_REP is equal to 1, then there is no repetition, and when N\_LTF\_REP is greater than 1, repetition is used. So the text here is consistent with the rest of the 11az draft spec. |
| 6040 | 238/26 | 27.3.18a.1 | "Figure 27-46d--Example of secure LTFs with NUM\_USERS=2, N\_STS=[2,1] and 28 N\_LTF\_REP =[2,2]": The numbering of the HE-LTF symbols seems to be inconsistent as for user 1 the first and the repeaated set of HE-LTF symbols is denoted by A and B and for user 2 by numbers 1 and 2. Please make the numbering consisent, for example numbering the HE-LTF symbols for user 2 U2-A and U2-B. | as in comment | Reject.It is clearly stated on page 46/ line 3-4, page 132/line 14-21, page 236/line 33-35, page 239/line 26-28 in 11az\_D4.0, that when N\_LTF\_REP is equal to 1, then there is no repetition, and when N\_LTF\_REP is greater than 1, repetition is used. So the text here is consistent with the rest of the 11az draft spec. |

**References**

[1] IEEE P802.11az™/D4.0, Draft Standard for information technology – Telecommunications and information exchange between systems Local and metropolitan area networks – Specific requirements, Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications, Amendment 4: Enhancements for positioning