IEEE P802.11
Wireless LANs

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| Comment Resolution SA1 – 8000s part2 |
| Date: 2022-08-10 |
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Abstract

This submission proposes the comment resolution of CIDs 8054, 8055, 8056; as part of SA1, changes are relative to Draft 5.0.

Revisions:

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGax Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGaz Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGaz Editor: Editing instructions preceded by “TGaz Editor” are instructions to the TGaz editor to modify existing material in the TGaz draft. As a result of adopting the changes, the TGaz editor will execute the instructions rather than copy them to the TGaz Draft.***

**The text preceded by “Discussion” is not part of the adopted changes.**

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| **8054** | 249.7 | 27.3.18a.4 | Add a figure for generation of secure HE-LTF symbol similar to generation of non-secure HE-LTF defined in 11ax standard | as in comment | **Revised**TGaz editor make changes depicted in[https://mentor.ieee.org/802.11/dcn/22/](https://mentor.ieee.org/802.11/dcn/22/11-22-0643-02-00az-comment-resolution-sa1-cid-7296-and-7336.docx)11-22-1022-00-00az-comment-resolution-sa1-8000s-part1.docx |
| **8055** | 250.14 | 27.3.18a.4 | This paragraph talks about construction of secure HE-LTF symbols and by saying "There is no CSD per space-time stream" makes no sense | Remove this bullet point ( e ) | **Revised**For secure LTF, CSD is replaced with pseudo random phase rotation so it makes sense to merge bullet point ( e ) with pseudo random phase rotation bullet point ( b ) TGaz editor make changes depicted in[https://mentor.ieee.org/802.11/dcn/22/](https://mentor.ieee.org/802.11/dcn/22/11-22-0643-02-00az-comment-resolution-sa1-cid-7296-and-7336.docx)11-22-1022-00-00az-comment-resolution-sa1-8000s-part1.docx |
| **8056** | 249.11 | 27.3.18a.4 | the order of construction of secure HE-LTF sequence seems arbitrary. 11ax style of HE-LTF sequence generation can be followed | Reorder the bullet points ( a ) followed by ( d ) followed by ( c ) followed by ( b ) similar to 11ax | **Revised**TGaz editor make changes depicted in[https://mentor.ieee.org/802.11/dcn/22/](https://mentor.ieee.org/802.11/dcn/22/11-22-0643-02-00az-comment-resolution-sa1-cid-7296-and-7336.docx)11-22-1022-00-00az-comment-resolution-sa1-8000s-part1.docx |

**Resolution:**

* + - * 1. 27.3.18b.6 Construction of a secure HE-LTF
1. TGaz Editor: Change the following paragraphs on page 249 as follows

The construction of the n-th Secure HE-LTF symbol is as follows:

1. Sequence generation: Construct the n-th randomized HE-LTF sequence in frequency domain over the bandwidth indicated by CH\_BANDWIDTH as described in 27.3.18b.2 (Generation of Randomized LTF Sequence).
2. Apply per spatial stream phase rotation: Generate the pseudorandom phase rotation for each spatial stream. Apply the pseudorandom phase rotation along with the deterministic phase rotation to the spatial streams as described in 27.3.18b.3 (Pseudorandom and deterministic per spatial stream phase rotations).
3. Apply a zero CSD value on each space-time stream, which is equivalent to no CSD per space-time stream.
4. There is no spatial mapping, the Q matrix is a square identity matrix.
5. IDFT: Compute the inverse discrete Fourier transform.
6. Insert zero power GI: Prepend values of zero of length indicated by the TXVECTOR parameter GI\_TYPE.
7. Analog and RF: Upconvert the resulting complex baseband waveform associated with each transmit chain to an RF signal according to the center frequency of the desired channel and transmit. Refer to 27.3.10 (Mathematical description of signals).

TGaz Editor: Insert the following paragraph and figure on page 251 as follows

The generation of the time domain secure HELTF symbol per repetition for repetition r, symbol n and tone index k is shown in Figure 27-46h (Generation of secure HE-LTF symbols per repetition in a HE Ranging NDP PPDU)



Figure 27-46h – Generation of secure HE-LTF symbols per repetition in a HE Ranging NDP PPDU (#8054)

TGaz Editor: Change the following paragraphs in section 27.3.18b.2 on page 243 as follows

27.3.18b.2 Generation of a randomized secure HE-LTF sequence

27.3.18b.2.1 Randomized LTF sequence for 20 MHz secure NDP

27.3.18b.2.2 Randomized LTF sequence for 40 MHz secure NDP

27.3.18b.2.3 Randomized LTF sequence for 80 MHz secure NDP

27.3.18b.2.4 Randomized LTF sequence for the 160 MHz secure NDP and for the 80+80 MHz secure NDP

Change all the ‘k’ to ‘n’