IEEE P802.11
Wireless LANs

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| Comment Resolution SA1 – LTF Vector Edit |
| Date: 2022-05-12 |
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Abstract

This submission proposes and edit to the comment resolution of CIDs 7095; as part of SA1, changes are relative to Draft 4.2.

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** |
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11.21.6.4.5.3 Non-TB ranging measurement exchange with secure LTF

TGaz Editor: Change the following paragraphs on page 174 at line 13 as follows

An ISTA that sends an I2R NDP a SIFS after transmission of the Ranging NDP Announcement frame shall set the TXVECTOR parameters LTF\_KEY and LTF\_IV these are set as follows:

* Either (#**3754**) to the value of Null-SAC-HE-LTF, (#**1828**, #**1831**) if the SAC subfield in the STA Info field with AID equal to 2043 in the Ranging NDP Announcement frame, is equal to 0 (#**3124**);
* Or the *ista-ltf-key* and *ltf-iv* for generating secure HE-LTF based on (#**1830**, #**1832**) the values of the Secure LTF Counter (#**2289**) and the corresponding Validation SAC subfields in the Secure LTF Parameters element in the last protected IFTM frame or last protected LMR frame, received from the RSTA; see [11.21.6.4.5.4](#H11o21o6o4o5o4) (Secure LTF octet stream generation). (#**3123**)

After transmission of the Ranging NDP Announcement frame to the RSTA, the ISTA’s MAC sublayer shall issue a PHY-RXLTFSEQUENCE.request primitive with an LTFVECTOR containing the following parameters (#**2289**):

* the SECURE\_LTF\_FLAG parameter set to 1,
* the LTF\_N\_STS and LTF\_REP parameters set to the same values as indicated, respectively, by the R2I N\_STS and R2I Rep subfields in the STA Info field with the AID11 subfield equal to zero,
* the LTF\_KEY and LTF\_IV parameters that are set to either (#**3754**) the values based on the Null-SAC-HE-LTF, (#**1828**, #**1831**) if the SAC subfield in the STA Info field with AID equal to 2043 in the Ranging NDP Announcement frame is equal to 0; or the *rsta-ltf-key* and *ltf-iv* for generating the secure HE-LTF based on (#**1830**, #**1832**) the values of the Secure LTF Counter subfield in the Secure LTF Parameters element in the last protected IFTM frame, or last protected LMR frame received, from the RSTA; see [11.21.6.4.5.4](#H11o21o6o4o5o4) (Secure LTF octet stream generation). (#**3123**)
* the TX\_WINDOW\_FLAG set to 1 if the ISTA and RSTA have negotiated to use the optional frequency domain Tx window for R2I NDP; it is set to 0 otherwise, and
* the LTF\_OFFSET set to 0.

When an RSTA receives a Ranging NDP Announcement frame from an ISTA in which the SAC subfield in the STA Info field with AID equal to 2043 is not equal to the value of the Validation SAC subfield in the Secure LTF Parameters element in the last transmitted protected IFTM frame or last transmitted protected LMR frame to the ISTA, the RSTA shall:

* Send an HE Ranging NDP to the ISTA with the TXVECTOR parameters r*sta-ltf-key* and *ltf-iv* for generating any secure HE-LTF (#**1828**, #**1831**) to the ISTA, only if the RSTA receives an HE Ranging NDP from the ISTA a SIFS after the ranging NDP Announcement frame;
* Send a protected LMR frame with a Secure LTF Parameters element containing the SEC\_LTF\_CTR and the corresponding LTF\_VALID\_SAC parameters to the ISTA, only if the RSTA receives an HE Ranging NDP from the ISTA a SIFS after the ranging NDP Announcement frame.

When an RSTA receives a Ranging NDP Announcement frame from an ISTA in which the value of the SAC subfield in the STA Info field with AID equal to 2043 is equal to the value of the Validation SAC subfield in the Secure LTF Parameters element in the last transmitted protected IFTM frame or last transmitted protected LMR frame to the ISTA, the RSTA shall:

* Send an HE Ranging NDP with the TXVECTOR parameters *rsta-ltf-key* and *ltf-iv* for generating a secure HE-LTF based on the values of the (#**1830,** #**1832**) Secure LTF Counter (#**2289**) in the Secure LTF Parameters element in the last transmitted protected IFTM frame, or last transmitted protected LMR frame to the ISTA, only if the RSTA receives an HE Ranging NDP from the ISTA a SIFS after the ranging NDP Announcement frame; see [11.21.6.4.5.4](#H11o21o6o4o5o4) (Secure LTF octet stream generation);
* Send a protected LMR frame that includes the Secure LTF Parameters element to the ISTA, only if the RSTA receives an HE Ranging NDP from the ISTA a SIFS after the ranging NDP Announcement frame.

When an RSTA receives a Ranging NDP Announcement frame from an ISTA, the RSTA shall also issue a PHY-RXLTFSEQUENCE.request primitive with an LTFVECTOR with the following parameters :

* the SECURE\_LTF\_FLAG parameter set to 1,
* the LTF\_N\_STS and LTF\_REP parameters set to the same values as indicated, respectively, by the R2I N\_STS and R2I Rep subfields in the STA Info field with the AID11 subfield equal to zero,
* the LTF\_KEY and LTF\_IV parameters that are set to the i*sta-ltf-key* and *ltf-iv* for receiving a secure HE-LTF based on (#**1830**, #**1832**) the values of the Secure LTF Counter and corresponding Validation SAC subfields (#**2289**) in the Secure LTF Parameters element in the last transmitted protected IFTM frame, or last transmitted protected LMR frame to the ISTA; see [11.21.6.4.5.4](#H11o21o6o4o5o4) (Secure LTF octet stream generation);
* the TX\_WINDOW\_FLAG set to 1 if the ISTA and RSTA have negotiated to use the optional frequency domain Tx window for I2R NDP; it is set to 0 otherwise, and
* the LTF\_OFFSET set to 0.