IEEE P802.11  
Wireless LANs

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| Comment Resolution SA1 – Various Part 2 | | | | |
| Date: 2022-01-06 | | | | |
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Abstract

This submission proposes the comment resolution of CIDs 7087, 7075; as part of SA1, changes are relative to Draft 4.0.

Revisions:

1. Update resolution boxes with link
2. Incorporate Feedback

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** |
| **7087**  **-**  **287772** | 250.42 | 27.4.3 | 27.3.18a does not have "N\_{LTF-REP}". | "Change  ""L\_{LTF-REP} is defined in 27.3.18a""  to  ""L\_{LTF-REP} is indicated by the TXVECTOR parameter LTF\_REP." | **Revised**  TGaz editor, make changes depicted in  <https://mentor.ieee.org/802.11/dcn/22/11-22-0148-02-00az-comment-resolution-sa1-various-part-2.docx> |
| **7075**  **-**  **287760** | 250.37 | 27.4.3 | "T\_{HE\_PREAMBLE} is defined in REVme D0.2 Equation (27-121), and includes ""N\_{HE-LTF} T\_{HE-LTF-SYM}"".  Hence, the equations for TXTIME at 11az D4.0 P250 L37 and L40 are double counting the HE-LTF duration for the first repetition of the first user twice.  This leads to incorrect L-SIG Length field value." | Fix the TXTIME equations to not double count the HE-LTF duration for the first repetition of the first user. | **Revised**  TGaz editor, make changes depicted in  <https://mentor.ieee.org/802.11/dcn/22/11-22-0148-02-00az-comment-resolution-sa1-various-part-2.docx> |
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9.3.1.22.10.2 Sounding subvariant

TGaz Editor: Change text on page 50 starting at line 32 as follows

The format of the User Info field in the Sounding Ranging Trigger frame is defined in Figure [9-64ld](#F09o64ld) (User Info field format for Sounding subvariant).

The Trigger Dependent User Info subfield is not present in the Sounding Ranging Trigger frame.

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 B11 | B12 B20 | B21 B23 | B24 B25 | B26 B31 | B32 B38 | B39 |
|  | AID12/RSID12 | Reserved | I2R Rep | Reserved | SS Allocation /  RA-RU Information | UL Target Receive Power | Reserved |
| Bits | 12 | 9 | 3 | 2 | 6 | 7 | 1 |

1. Figure 9-64ld—User Info field format for Sounding subvariant

The AID12/RSID12 subfield is identical to the corresponding subfield in the Poll Ranging Trigger frame.

The I2R Rep subfield indicates the number of HE-LTF repetitions in the corresponding HE TB Ranging NDP from the STA indicated in the AID12/RSID12 subfield; the I2R Rep subfield is set to the number of HE-LTF repetitions minus 1. The value of the I2R Rep subfield is the same in all User Info fields in the Trigger frame.

The SS Allocation/RA-RU Information and UL Target Receive Power subfields are identical to the corresponding subfields in the Basic Trigger frame; see [9.3.1.22](#H09o3o1o22) (Trigger Frame format).

In the Common Info field, the UL STBC, LDPC Extra Symbol Segment, Pre-FEC Padding Factor, and PE Disambiguity subfields are reserved.

The GI And HE-LTF Type subfield in the Common Info field is set to 1.

The Doppler subfield in the Common Info field is set to 0.

NOTE – The UL Length subfield of a Trigger frame is computed using Equation (27-11) (see 26.5.2.2.4), which is based on the TXTIME computed in 27.4.3. In case of Sounding Ranging Trigger frame, the resulting UL Length value is equivalent to 13+6‧*NLTF\_REPNHE-LTF*, where *NLTF-REP* is the number of HE-LTF repetitions (given by the I2R Rep subfield value plus 1) and *NHE-LTF* is the number of HE-LTF sumbols (given by the Number Of HE-LTF Symbols And Midamble Periodicity subfield).

9.3.1.22.10.3 Secured Sounding subvariant

TGaz Editor: Change text on page 51 starting at line 15 as follows

The format of the User Info field in the Secure Sounding Ranging Trigger is defined in Figure [9-64le](#F09o64le) (User Info field for Secured Sounding subvariant).

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 B11 | B12 B20 | B21 B23 | B24 B25 | B26 B31 | B32 B38 | B39 | B40 B55 |
|  | AID12/RSID12 | Reserved | I2R Rep | Reserved | SS Allocation /  RA-RU Information | UL Target Receive Power | Reserved | Trigger Dependent User Info (SAC) |
| Bits: | 12 | 9 | 3 | 2 | 6 | 7 | 1 | 16 |

1. Figure 9-64le—User Info field for Secured Sounding subvariant (#1391, #1947, #5377)

The AID12/RSID12 subfield is identical to the corresponding subfield in the Poll Ranging Trigger frame.

The I2R Rep subfield is identical to the corresponding subfield in the Sounding Ranging Trigger frame.

The SS Allocation/RA-RU Information and UL Target Receive Power subfields are identical to the corresponding subfields in the Basic Trigger frame; see [9.3.1.22](#H09o3o1o22) (Trigger Frame format).

The Trigger Dependent User Info subfield is present in the Secure Sounding Ranging Trigger frame. The Trigger Dependent User Info subfield carries the Security Authentication Code (SAC) field. The SAC field provides the authentication information for the LTF Sequence Generation information used for the I2R sounding associated with the measurement instance; see [11.21.6.4.6](#H11o21o6o4o5) (Transmission of a ranging NDP). The length of this subfield is 16 bits.

NOTE—For secure ranging, the I2R Rep is set to the RSTA Assigned I2R Rep; see [11.21.6.3](#H11o21o6o3) (Fine timing measurement procedure negotiation).

In the Common Info field, the UL STBC, LDPC Extra Symbol Segment, Pre-FEC Padding Factor, and PE Disambiguity subfields are reserved. The GI And HE-LTF Type and Doppler subfields in the Common Info field are set as in the Sounding Ranging Trigger frame.

27.4.3 TXTIME and PSDU\_LENGTH calculation

***Change the first paragraph after equaiton (27-136) as follows: (#5472, 35375)***

TGaz Editor: Change text on page 250 starting at line 32 as follows

For an HE sounding NDP and HE TB feedback NDP, there is no Data field and *NSYM* = 0.

For an HE TB Ranging NDP, the TXTIME is defined by the following equation:

TXTIME = 40 + 8‧*NLTF-REP NHE-LTF + TPE + SignalExtension* (27-X1)

where

*NLTF-REP* is given by the TXVECTOR parameter LTF\_REP

*NHE-LTF* is given in Table 27-15

NOTE – The value 40 corresponds to the duration of L-STF, L-LTF, L-SIG, RL-SIG, HE-SIG-A and HE-STF in µs. *TPE* is 4 µs in an HE TB Ranging NDP (see 27.3.18a.2).

For an HE Ranging NDP with the TXVECTOR parameter SECURE\_LTF\_FLAG is equal to 0 or SECURE\_LTF\_FLAG is equal to 1 and the NUM\_USERS PARAMETERS is equal to 1:

TXTIME = 36 + 8‧*NLTF-REP NHE-LTF + TPE + SignalExtension* (27-X2)

NOTE – The value 36 corresponds to the duration of L-STF, L-LTF, L-SIG, RL-SIG, HE-SIG-A and HE-STF in µs. *TPE* is 4 µs in an HE Ranging NDP (see 27.3.18a.1).

For an HE Ranging NDP with the TXVECTOR parameter SECURE\_LTF\_FLAG is equal to 1 and the NUM\_USERS PARAMETERS is greater than 1:

(27-X3)

NOTE—The value 36 corresponds to the duration of L-STF, L-LTF, L-SIG, RL-SIG, HE-SIG-A and HE-STF in µs. *TPE* is 4 µs in an HE Ranging NDP (see 27.3.18a.1).