IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Some SAB1 Passive TB Ranging CR | | | | |
| Date: 2022-03-09 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | Email |
| Erik Lindskog | Samsung | 3655 N 1st St, San Jose, CA 95134 |  | e.lindskog@samsung.com |

Abstract

This document proposes resolutions to TGaz SAB1 comments, for the most related to Passive TB Ranging. The changed described here are in relation to [1].

The TGaz SAB1 CID addressed in this document are the CIDs:

7031, 7035, 7042, 7257, 7261, and 7262.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 7031 | 48.25 | 9.3.1.22.10 | "The format of the Trigger Dependent Common Info subfield for the Poll, Sounding, Secure Sounding, Report and Passive Sounding Ranging Trigger frame, is shown in Figure 9-64la" - The next paragraph defines Passive Sounding again | Change to "The format of the Trigger Dependent Common Info subfield for the Poll, Sounding, Secure Sounding, and Report subvariants of the Ranging Trigger frame, is shown in Figure 9-64la" | Revised.  TGaz editor, make changes as shown in document https://mentor.ieee.org/802.11/dcn/22/11-22-0437-02-00az-some-sab1-passive-tb-ranging-cr.docx |

***TGaz Editor: Change the text on page 49, line 24 as follows:***

The format of the Trigger Dependent Common Info subfield for the Poll, Sounding, Secure Sounding, and Report subvariants of the Ranging Trigger frame, is shown in Figure 9-64la (Trigger Dependent Common Info subfield format for the Ranging Trigger variant). (#3892) The Token field in the Trigger Dependent Comon Info field is used in a Poll Ranging Trigger frame to match it with the partial TSF time in a following Ranging NDP Announcement frame. It is reserved in all other Ranging Trigger subvariants (#**5165**, #**7031**).

***TGaz Editor: Change the text on page 50, line 2 as follows:***

**Figure 9-64la—Trigger Dependent Common Info subfield format for the Ranging Trigger subvariants Poll, Sounding, Secure Sounding, and Report. (#1888)**

***TGaz Editor: Replace all occurances of Trigger variant subtype to Trigger subvariant.***

***Note: There are a few occurances of ‘subtype’ in contexts other than for the Trigger frame. For example see page 45 line 7 in D4.1: ‘frame control subtype’. These should not be changed.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 7035 | 52.08 | 9.3.1.22.10.5 | "The Passive Sounding Ranging Trigger frame follows the definition of the Sounding Ranging Trigger frame except that the RA field is always (#2285) set to the broadcast address and the I2R Rep subfield signals the N\_LTF\_REP minus 1, where N\_LTF\_REP is the number of HE-LTF repetitions in the corresponding HE Ranging NDP from the STA indicated in the AID12/RSID12 11 subfield." | Change to "The Passive Sounding Ranging Trigger frame follows the definition of the Sounding Ranging Trigger frame except that the RA field is always (#2285) set to the broadcast address, and the I2R Rep subfield indicates the number of HE- LTF repetitions of the corresponding HE Ranging NDP from the STA indicated in the AID12/RSID12 subfield." | Revised. See the resolution for CID 7033 [287663] <https://mentor.ieee.org/802.11/dcn/21/11-21-1841-05-00az-comment-resolution-sa1-he-ltf-repetitions.docx>, which removed the referenced text. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 7042 | 75.06 | 9.4.2.297 | "Figure 9-788ede1" - strike through in a newly added figure | Remove strike through text | Revised.  TGaz editor, make changes as shown in document https://mentor.ieee.org/802.11/dcn/22/11-22-0437-02-00az-some-sab1-passive-tb-ranging-cr.docx |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 7257 | 75.06 | 9.4.2.297 | In the last subfield depicted in Figure 9-788ede1 the Passive TB Ranging Parameters subfield is denoted as (Optional) stricken though. Probably we should remove this optional specification as when the Availability Window Information field is broadcasted, which I belive it only is in support of Passive TB Ranging, the Passive TB Ranging Parameters field has to be included. | Remove the optional specification for the Passive TB Ranging Parameters field in Figure 9-788ede1. | Revised.  This CID is a duplicate to CID 7042. See resolution for CID 7042. |

***TGaz Editor: In Figure 9-788ede1—Availability Window Information field format when the Availability Window Broadcast Format subfield is set to one, remove the striked through text ‘~~(Optional)~~’.***

***TGaz Editor: Change the text on page 75, line 14 as follows:***

The format of the Partial TSF Timer, Duration and Periodicity subfields when the Availability Window Broadcast Format subfield is set to 1 are the same as the formats of the subfields when the Availability Window Broadcast Format subfield is set to 0. **(#1646,#7042**, **#7257)**

The Passive TB Ranging Parameters subfield format is shown in Figure 9-788edf (Passive TB Ranging Parameters subfield format). **(#1646)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 7261 | 92.21 | 9.4.2.304 | "The Timestamp subfield contains a TOD, TOA, or a PSTOA timestamp. The TOD timestamps are represented with 48 bits in units of 1 ps. The TOA and PSTOA timestamps are represented with 32 bits in units of 16 ps." - Why would the ToD be in resolution of 1 ps and the ToA in 16 ps? Typically the ToD are in integer amounts of some internal clock and do not need this extra precision, while the ToA need to be estimated with high accuracy. | Change the format for ToD to 40 bits with 16 ps resolution. Consider changing the ToA to 40 bits also, for simplicity. Also make a clear statement that the subfield size depends on the value in the type subfield. | Reject.  The use of a smaller number of bits in the TOAs and PSTOAs here are there to reduce the size of the LMR reporting for the Passive Ranging case as we here can have a very large number of TOAs and PSTOAs. The group arrived at this TOA and PSTOA representation after some lengthy discussions. The representation of the TOD is the same as for our other types of ranging. We are already stating that the subfield uses 48 bits for TOD time stamps and 32 bits or TOA time stamps. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 7262 | 93.08 | 9.4.2.305 | "Figure 9-788ed2—RSTA Passive TB Ranging Measurement Report element format" why is that different from the ISTA version? The CFO is not needed here? Could be set to reserved. In general, we don't want to waste element ID space, if this element is only ever used in one frame, consider using a subelement format instead. | As in comment | Reject.  The RSTA Passive TB Ranging Measurement Report element format is different from the ISTA version because the two elements report different information. The ISTA version reports also the CFO and the More & N Timestamp Measurement Reports fields. True, we could create a new element that could serve both purposes, and thereby save one element ID number, but in the interest of converging the draft we elect not to do that. |

**References:**

**[1] Draft P802.11az\_D4.1**