IEEE P802.11  
Wireless LANs

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| LB240 – ISTA Passive Location Measurement Report Element | | | | |
| Date: 2019-07-18 | | | | |
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|  |  |  |  |  |

Abstract

This document proposes resolutions to TGaz LB240 comments related to the Passive Location Measurement Report Element. The changed described here are in relation to [1].

TGaz LB240 CIDs addressed: 1510, 1377, 1378, 1518, and 1374.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 1510 | 61.04 | 9.4.2.286 | In Passive Location Ranging the RSTA does not necessarily know how many time-stamps an ISTA has to report. However, over time the RSTA can learn how many time stamps each ISTA has to transmit, assuming the ISTA have a way to tell the RSTA that it was not able to send all its time-stamps. To solve this problem one could add a field in the ISTA Passive Location Measurement Report element to indicate the number of time stamps the ISTA was not able to send. | Add a field in the ISTA Passive Location Measurement Report element to indicate the number of time stamps the ISTA was not able to send. | Revised.  See proposed change in this submission. |
| 1377 | 62.01 | 9.4.2.286 | Since 2 octets are already being allocated to the CFO element, it's better to have units of .001ppm instead of 0.01 ppm so that the max value is 65.535ppm instead of 655.35 ppm. | Change the units from 0.01ppm to 0.001 ppm | Reject. Point taken but it is also the case that we don’t need such high accuary as 0.001 ppm in the CFO. |
| 1378 | 62.05 | 9.4.2.286 | What happens if the value of N Time Stamp Measurement Reports field equals 0? We should assign that value to be Reserved | As in comment. | Revised (Accepted in principal.) See changes in 11-19/1191. |
| 1518 | 60.10 | 9.4.2.286 | Should the RID in the Time Stamp Measurement Report field in the ISTA Passive Location Measurement Report element have 12 or 16 bits? In other places we seem to use 12 bits and call it AID12/RID12. Resolve this. | Review as per the comment and change to 12 bits if needed and possibly also change the name to AID12/RID12. | Revised. Changed name of the subfield to AID12/RID12 and changing it to use 12 bits. |
| 1374 | 62.29 | 9.4.2.286 | Figure 9-1023 is not consistent. Time-Stamp Error field is allocated 16 bits but the bit allocated above the field is listed as 8 bits. Please choose one and change the Figure accordingly. | As in comment. | Revised. See editorial fix in D1.1. Bit allocations fixed there. |

***TGaz Editor: Change the text in Subclause 9.4.2.286 (ISTA Passive Location Measurement Report element) as follows:***

**9.4.2.286 ISTA Passive Location Measurement Report element**

The ISTA Passive Location Measurement Report element, defined in Figure 9-1023 (ISTA Passive Location Measurement Report Element), is used to convey measurement results and associated parameters from an ISTA to the RSTA in a Passive Location Ranging exchange.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Element Id | Element Length | Element ID Extension | Dialog Token | CFO | More & N Timestamp Measurement Reports | Timestamp Measurement Reports |
| **Octets:** | **1** | **1** | **1** | **1** | **2** | **1** | **variable** |

**Figure 9-1023 – ISTA Passive Location Measurement Report Element (#**1510)

The Element ID, Length and Element ID Extension fields are defined in 9.4.2.1.

The Dialog Token field identifies the measurement exchange corresponding to which the reported timestamps were measured (see 11.22.6.4.3 Measurement Exchange in TB Mode)

The CFO element indicates the reporting ISTAs carrier frequency offset with respect to the RSTA. The CFO element is a 2 octets long signed integer in two’s-complements format indicating the CFO in units of 0.01 ppm.

The More & N Timestamp Measurement Reports field is defined as depicted in Figure 9-1023b. **(#1510)**

|  |  |  |
| --- | --- | --- |
|  | B0 | B1 B7 |
|  | More | N Timestamp Measurement Reports |
| bits: | 1 | 7 |

**Figure 9-1023b – More & N Timestamp Measurement Reports field (#**1510)

The More subfield is used to indicate that the ISTA has more time stamps ready to report but where not able to fit them in its allocated resources. **(#1510)**

The N Timestamp Measurement Reports field is an unsigned integer indicating the number of Timestamp Measurement Reports. The value 0 of the N Timestamp Measurement Reports field is reserved. **(#1378)**

Timestamp Measurement Reports field contains one or more Timestamp Measurement Report subfields defined as in Figure 9-1024.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 B49 | B50 B65 | B66 B77 | B78 B79 |
|  | Type | Valid | Timestamp | Timestamp Error | AID12/RID12 | Reserved |
| bits: | 1 | 1 | 48 | 16 | 12 | 2 |

**Figure 9-1024 – Timestamp Measurement Report subfield (#**1518)

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The AID12/RID12 subfield contains the ranging ID of the STA that transmitted the NDP in question. When the STA that transmitted the NDP is the RSTA the value zero is reported in the AID12/RID12 subfield. **(#1518)**

**…**

The ToD timestamp represents the time, with respect to the STA’s time base, at which the start of the preamble of the NDP in question appeared at the transmit antenna connector.

The ToA timestamp represents the time, with respect to the STA’s time base, at which the start of preamble of the NDP in question arrived at the receive antenna connector.

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**References:**

**[1] Draft P802.11az\_D1.2**