IEEE P802.11
Wireless LANs

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| CFO Reporting Accuracy Requirements |
| Date: 2019-01-16 |
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**Abstract**

This submission proposes corrections to the IEEE 802.11\_D0.6 ammendment text for CFO Reporting Accuracy Requirements.

The proposed changes are relative to TGaz Draft 0.6 and TGmd Draft 2.0.

**Discussion**

In 802.11ax the modem need to be able to measure frequency offsets down to at least 350 Hz. This corresponds to a CFO measurement accuracy of 350/5e9=0.07 ppm. We would like be able to report the CFO error with a resolution that is in line with this.

**Conclusion**

Use two bytes with a resolution of 0.01 ppm, spanning qbout +- 328 ppm CFO.

Proposal: Use 2 bytes and a resolution of 0.01 ppm for the TB Ranging as well as the Passive Location Ranging case.

**Proposed amendment text change**

***TGaz Editor: Edit Section 9.4.2.286 (ISTA Passive Location Measurement Report element) as shown below:***

**9.4.2.286 ISTA Passive Location Measurement Report element**

The ISTA Passive Location Measurement Report element, defined in Figure 9-yyy (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.

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| --- | --- | --- | --- | --- | --- | --- |
|  | Element Id | Element Length | Element ID Extension | CFO | N Time Stamp Measurement Reports | Time Stamp Measurement Reports |
|  | Octets: | 1 | 1 | 2 | 1 | variable |

Figure 9-yyy – ISTA Passive Location Measurement Report Element

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 twos-complements format indicating the CFO in units of 0.01 ppm.

The N Time Stamp Measurement Reports field is an unsigned integer indicating the number of Time Stamp Measurement Reports.

***TGaz Editor: Edit Section 9.6.7.37 (Location Measurement Report frame format) as shown below:***

**9.6.7.37 Location Measurement Report frame format**

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The CFO parameter in ISTA-to-RSTA LMR indicates the clock rate difference between ISTA and RSTA. The CFO field is 2 octets long and it is a signed number in two’s complement format in units of 0.01 ppm.

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