IEEE P802.11
Wireless LANs

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| CID73 – LOS likelihood subelement |
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Abstract

This document proposes resolution to CID 73

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| --- | --- | --- | --- | --- |
| 73 | 1.00 | 1 | The SFD specifies that "(1) The 11az protocol shall define at least one mode in which LOS/NLOS estimation (an estimation likelihood that the measurement is performed on a LOS path) is provided as part of the measurement." There is no support for that in draft | ADD LOS-Likelihood field to the FTM measurements results or at least to the Direction Measurements Results Element |

Proposed Resolution: **Revised**

***TGaz Editor: Add the following subclause before 9.6.7.32***

**9.4.2.245 LOS Likelihood element**

The LOS Likelihood element contains the estimated log likelihood that measurements contained in direction measurement element or in the TOD field of the same Fine Timing Measurement frame, are line of sight (LOS) measurements. The method to estimate the likelihood is implementation dependent. The format of the LOS likelihood element is shown in table 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Element Id | Elemetn Length | Element ID Extnesion | LOS Log Likelihood Ratio |
| octets: | 1 | 1 | 1 | 1 |

Table 1- LOS Likelihood element

The LOS Log Likelihood Ratio field is a signed two’s complement 8-bit number containing the estimated ratio between the probablity that measurement is on a LOS path and the probability is on a non-LOS path in dB/4 resolution. A value of 0xFF in this field indicates that the STA cannot estimate the log likelihood ratio.

***TGaz Editor:***  ***Modify figure 9-810 as follows:***

*Add new columns to Figure 9-810 as shown below:*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fine Timing Measurement Synchronization Information (optional | Ranging Parameters (optional) | Secure LTF Parameters (optional)  | Channel Measurement Feedback (optional) | Direction Measurement Results(optional) | Multiple Best AWV ID (optional) | Multiple AOD Feedback (optional) | LOS Likelihood (optional) |
| Octets | variable | variable | <TBD> |  variable | 9 |  variable  |  variable |  4 |  |

***TGaz Editor: Modify the last pargraph in 9.6.7.33 as follows:***

The Channel Measurement Feedback field is present in the Fine Timing Measurement frame if the frame is sent after an LOS Assessment ACK PPDU and optionally in response to an ISTA to RSTA angle of departure TRN field on an ACK frame. This field contains the channel measurement feedback (see 20).

The Multiple Best AWV ID element is present in the Fine Timing Measurement frame when the frame is sent from an ISTA to an RSTA as part of an AOD feedback exchange after an FTM exchange (see 11.24.6.4.7.3).

The Multiple AOD Feedback element is present in the Fine Timing Measurement frame when the frame is sent from an RSTA to an ISTA as part of an AOD feedback exchange after an FTM exchange (see 11.24.6.4.7.3).

The LOS likelihood element may be present in any Fine Timing Measurement frame than contain TOA and TOD or Direction Measurement Results on measurement performed over DMG or EDMG PPDUs.

**References:**