IEEE P802.11
Wireless LANs

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| Comment Resolution LB253 Parameters – Parameters Part 3 |
| Date: 2021-01-08 |
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Abstract

This submission proposes the comment resolution of CIDs 5189, 5190, 5191, 5192 related to the initial FTM frame in the negotiation; as part of LB253, changes are relative to Draft 3.0.

Revisions:

1. Started on spec text based on discussion, added CIDs 5189, 5190, 5191, 5192

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** |
| **5189** | 128.09 | 11.21.6.3.3 | "The ISTA shall set the Max R2I Rep and Max I2R Rep subfields to a value greater than 0 if the Secure LTF Required subfield of the Ranging Parameters field is equal to 1." - this requirement is receiver implementation specific | Remove this statement, a receiver which requires/finds useful repeated LTF, will request it. | **Revised**TGaz editor, make changes depicted inhttps://mentor.ieee.org/802.11/dcn/21/11-21-0761-01-00az-comment-resolution-lb253-parameters-part-4.docx |
| **5190** | 129.01 | 11.21.6.3.3 | "If the ISTA indicated support to announce the tx power of its I2R NDPs by setting the I2R Tx Power field in the Non-TB specific subelement ..." - there is no text for the R2I Tx Power field | Add another paragraph as follows: "If the ISTA requested the RSTA to announce the tx power of its R2I NDPs by settting the R2I Tx Power field in the Non-TB specific subelement to 1, the RSTA may set the corresponding field in the Initial Fine Timing Measurement frame to 1. Otherwise, the RSTA shall set the R2I Tx Power field to 0." | **Revised**TGaz editor, make changes depicted inhttps://mentor.ieee.org/802.11/dcn/21/11-21-0761-01-00az-comment-resolution-lb253-parameters-part-4.docx |
| **5191** | 128.42 | 11.21.6.3.3 | "If the ISTA set the I2R AOA Requested subfield to 1in the IFTMR frame, .... " add a paragraph fo rthe R2I AOA Requested subfield | Add another paragraph as follows: "If the ISTA requested the RSTA to feedback AOA values in the R2I LMR by settting the R2I AOA Requested subfield in the IFTMR to 1, the RSTA may set the corresponding field in the Initial Fine Timing Measurement frame to 1. Otherwise, the RSTA shall set the R2I AOA Requested subfield to 0." | **Revised**TGaz editor, make changes depicted inhttps://mentor.ieee.org/802.11/dcn/21/11-21-0761-01-00az-comment-resolution-lb253-parameters-part-4.docx |
| **5192** | 130.09 | 11.21.6.3.3 | "If the Secure LTF Required subfield of the Ranging Parameters field is equal to 1, the RSTA shall set the Max R2I Rep subfield to a value equal to the corresponding value in the IFTMR frame, and the RSTA shall set the Max I2R Rep subfield to a value greater than 0 and less than or equal to the corresponding value in IFTMR frame." - no reason for >0 repetitions in secure case | Change to : "If the Secure LTF Required subfield of the Ranging Parameters field is equal to 1, the RSTA shall set the Max R2I Rep subfield equal to the corresponding value in the IFTMR frame and the Max I2R Rep subfield to a value less than or equal to the corresponding the value in IFTMR frame." | **Revised**TGaz editor, make changes depicted inhttps://mentor.ieee.org/802.11/dcn/21/11-21-0761-01-00az-comment-resolution-lb253-parameters-part-4.docx |
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Discussion:

When an RSTA rejects an FTMR with status code 2/3, which elements/subelements are required in an IFTM frame

* Ranging parameters
* Specific subelement
* TB Ranging case, RSTA Availability window, how many Availability Window Information fields?

Changes:

* ~~Remove the requirement for Ranging parameters to have a subelement (Section 9)~~
* Require in the FTMR to have at least the Non-TB or TB subelement (Section 11)
* Require the for accept IFTM to only have Non-TB or TB if also in FTMR
* clarify that TB Specific subelement may or may not include an availability window element
* Clarify that an FTM Sync Info element is requires in IFTM

P76/L20-23

The Ranging subelements field contains one or more subelements. The subelement format and ordering of the subelements are defined in 9.4.3 (Subelements). The Subelement ID field values for the defined subelements are shown in Table 9-322h23fd (Ranging subelement IDs for Ranging Parameters).

P.78/L.14-18:

The definition of Availability Window field is either an ISTA Availability Window element, see Figure 9-788eda (ISTA Availability Window element format), when the containing Ranging Parameters element is in an IFTMR frame; or an RSTA Availability Window element, see Figure 9-788edc (RSTA Availability Window element format), when the containing Ranging Parameters element is in an FTM frame.

P80/L5-10

The Ranging Parameters element in the IFTMR frame includes a Non-TB specific subelement and/or a TB specific subelement; and the Ranging Parameters element in the corresponding initial Fine Timing Measurement frame includes either a Non-TB specific subelement or a TB specific subelement, if the Status Indication subfield in the Ranging Parameters field is set to Success to indicate the range measurement protocol selected by the responder for the negotiated FTM session.

P127/L1-3

For TB and Non-TB Ranging measurement exchange the initial Fine Timing Measurement frame shall include a Ranging Parameters element containing either the Non-TB Specific subelement or the TB Specific subelement.

**9.4.2.298 Ranging Parameters element**

TGaz Editor: Modify the following paragraph on page 78 (line 14-18) as follows

The Availability Window field may contain either an ISTA Availability Window element, see Figure 9-788eda (ISTA Availability Window element format), when the containing Ranging Parameters element is in an IFTMR frame; or an RSTA Availability Window element, see Figure 9-788edc (RSTA Availability Window element format), when the containing Ranging Parameters element is in an FTM frame.

**11.21.6.3.3 Negotiation for TB and Non-TB Ranging measurement exchange**

TGaz Editor: Add the following paragraph to page 127 (line 11) as follows

If the RSTA sets the Status Indication field in an IFTM frame to 1 (Successful), it shall not include a Non-TB Specific subelement or TB-specific subelement, if the same subelement was not also included in the IFTMR frame by the ISTA.

If the RSTA includes a TB-specific subelement in an IFTM frame and the Status Indication field in the IFTM frame is set to 1, then the RSTA shall include an RSTA Availability Window element in the IFTM frame. The RSTA Availability Information field in the RSTA Availability Window element shall contain exactly one Availability Window Information field.

TGaz Editor: Remove the following paragraph to page 128 (line 9-10) as follows(#5189)

TGaz Editor: Add the following paragraph starting on page 128 (line 46) as follows

If the ISTA requested the RSTA to feedback AOA values in the R2I LMR by settting the R2I AOA Requested subfield in the IFTMR to 1, the RSTA may set the corresponding field in the Initial Fine Timing Measurement frame to 1. Otherwise, the RSTA shall set the R2I AOA Requested subfield to 0. (#5191)

TGaz Editor: Add the following paragraph starting on page 129 (line 5) as follows

If the ISTA requested the RSTA to announce the tx power of its R2I NDPs by settting the R2I Tx Power field in the Non-TB specific subelement to 1, the RSTA may set the corresponding field in the Initial Fine Timing Measurement frame to 1. Otherwise, the RSTA shall set the R2I Tx Power field to 0. (#5190)

TGaz Editor: Modify the following paragraph starting on page 130 (line 9-12) as follows

If the Secure LTF Required subfield of the Ranging Parameters field is equal to 1, the RSTA shall set the Max R2I Rep subfield to a value equal to the corresponding value in the IFTMR frame, and the RSTA shall set the Max I2R Rep subfield to a value less than or equal to the corresponding value in IFTMR frame. (#5192)

TGaz Editor: Add and modify the following paragraphs starting on page 130 (line 41) as follows

When an RSTA sets the Status Indication field in an IFTM frame to 1 (Successful), it shall include an FTM Synchronization Information element in this IFTM frame.

If the RSTA includes a TB-specific subelement in an IFTM frame and the Status Indication field in the IFTM frame is set to 2 (Request incapable) or 3 (Request failed), then the RSTA may include an RSTA Availability Window element in the IFTM frame. The RSTA Availability Information field in the RSTA Availability Window element shall contain one or more Availability Window Information fields. Each Availability Window Information field represents an availability window that the RSTA can assign to that ISTA if requested by the ISTA in future. The Passive TB Ranging Availability Window bit in this Availability Window Information subfield is set to 0.