IEEE P802.11  
Wireless LANs

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| LB253 Passive TB Ranging CR | | | | |
| Date: 2021-06-06 | | | | |
| Author(s): | | | | |
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Abstract

This document proposes resolutions to TGaz LB253 comments, for the most related to Passive TB Ranging. The changed described here are in relation to [1].

The TGaz LB253 CID addressed in this document are the 34 CIDs:

5235, 5252, 5253, 5020, 5021, 5025, 5024,

5026, 5032, 5033, 5367, 5391, 5034, 5035,

5043,

5073, 5074,

5076, 5077, 5243, 5078, 5075, 5242, 5244, 5245, 5246, 5279, 5080,

5083, 5081, 5082, 5084,

5143,

and 5022

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5235 | 48.01 | 9.3.1.22.10 | The name of the Ranging Trigger frame subvariant for Ranging Trigger Subtype field value of 4 should be "Passive TB Sounding" and not "Passive TB Measurement Exchange". Looks like this got changed basically by mistake when we did a wholesale replacement of the term "Passive TB Sounding" to "Passive TB Measurement Exchange" in the whole draft document. | Change the name of the Ranging Trigger frame subvariant for Ranging Trigger Subtype field value of 4 from "Passive TB Measurement Exchange" to "Passive TB Sounding". Also change in all other places in the draft where we refer to the name of this subvariant. | Revised.    Agree in principal but use the term Passive Sounding for the subvariant.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |

***TGaz Editor: Change the numbering of Subclause 9.3.1.22.10 (Ranging Trigger variant) as follows:***

**9.3.1.22.10 Ranging Trigger variant (#1707)**

<Scroll to P48L01>

**Table 9-30ka — Ranging Trigger Subtype field encoding**

|  |  |
| --- | --- |
| Ranging Trigger Subtype field value | Ranging Trigger frame subvariant |
| 0 | Poll |
| 1 | Sounding |
| 2 | Secure Sounding |
| 3 | Report |
| 4 | Passive Sounding (#**2284**, #**5235**) |
| 5-15 | Reserved |

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5252 | 86.09 | 9.4.2.304 | Change the name of the 'Dialog Token' in the 'ISTA Passive TB Ranging Measurement Report element' to 'Sounding Dialog Token' to better reflect what this Dialog Token field contains. | As per comment. | Revised.    Is better to use the more precise name Sounding Dialog Token Number. Also, the description of the ‘Dialog Token’ field here needs to be corrected.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5253 | 89.06 | 9.4.2.305 | Change the name of the 'Dialog Token' in the 'RSTA Passive TB Ranging Measurement Report element' to 'Sounding Dialog Token' to better reflect what this Dialog Token field contains. | As per comment. | Revised.    Is better to use the more precise name Sounding Dialog Token Number.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5020 | 86.14 | 9.4.2.304 | Modify the text 'The Dialog Token field is the Sounding Dialog Token field in the Ranging....' to | The Dialog Token field is the same value of the Sounding Dialog Token field in the Ranging... | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5021 | 86.27 | 9.4.2.304 | Add 'given by the RSTA' to the end of the sentence | As per comment | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5025 | 88.00 | 9.4.2.304 | Modify text 'The Invalid Measurement field is set to 1 to indicate that the timestamp invalid, or set 0 to indicate that the timestamp valid.' to | The Invalid Measurement field is set to 1 to indicate that the timestamp is invalid, or set 0 to indicate that the timestamp is valid | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5024 | 89.03 | 9.4.2.304 | delete 'via' from the sentence | As per comment | Rejected.  It seems accurate to use the term ‘via’ here. |

***TGaz Editor: Change the text in Subclause 9.4.2.304 (ISTA Passive TB Ranging Measurement Report element) as follows:***

**9.4.2.304 ISTA Passive TB Ranging Measurement Report element (#2340)**

The ISTA Passive TB Ranging Measurement Report element, defined in Figure 9-788edx (ISTA Passive TB Ranging Measurement Report Element), is used to convey measurement results and associated parameters from an ISTA to the RSTA in a Passive TB Ranging exchange.

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

**Figure 9-788edx—** **ISTA Passive TB Ranging Measurement Report element (#1510, #5252)**

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

The value of the Sounding Dialog Token Number field is the value of the Sounding Dialog Token Number subfield in the Ranging NDP Announcement frame of the corresponding to the measurement sounding phase in which the reported ISTA’s timestamps were measured; see 11.21.6.4.3 (TB Ranging measurement exchange) and 11.21.6.4.8 (Measurement exchange in Passive TB Ranging mode). (#**5252, #5020**)

The CFO field indicates the reporting ISTA's carrier frequency offset with respect to the RSTA, as a signed integer in two's-complements format in units of 0.01 ppm. (#**3830**)

The More & N Timestamp Measurement Reports field is defined as depicted in Figure 9-788edy (More & N Timestamp Measurement Reports field). (#**1510**)

<Scroll to P86L26>

The More subfield is used to indicate that the ISTA has more time stamps ready to report but is 26 not able to fit them in its allocated resources as given by the RSTA. (#**1510, #5021**)

<Scroll to P88L11>

The Invalid Measurement field is set to 1 to indicate that the timestamp is invalid, or set 0 to indicate that the timestamp is valid. (#**5025**)

***TGaz Editor: Change the text in Subclause 9.4.2.305 (RSTA Passive TB Ranging Measurement Report element) as follows:***

**9.4.2.305 RSTA Passive TB Ranging Measurement Report element (#2340)**

<Scroll to P89L03>

The RSTA Passive TB Ranging Measurement Report element, defined in Figure 9-788ed2 (RSTA Passive TB Ranging Measurement Report element), is used to broadcast measurement results and associated parameters from an RSTA to STAs that want to use this information.

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| --- | --- | --- | --- | --- | --- | --- |
|  | Element  Id | Element  Length | Element  ID  Extension | Sounding Dialog Token Number | More & N Timestamp Measurement Reports | Timestamp Measurement Reports |
| Octets: | 1 | 1 | 1 | 1 | 1 | variable |

**Figure 9-788ed2—** **RSTA Passive TB Ranging Measurement Report element (#5253)**

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

The value of the Sounding Dialog Token Number field is the value of the Sounding Dialog Token Number subfield in the Ranging NDP Announcement frame corresponding to the measurement sounding phase in which the reported RSTA timestamps were measured (see 11.21.6.4.3 (TB Ranging measurement exchange) and 11.21.6.4.8 (Measurement exchange in Passive TB Ranging mode)). (#**1103**, #**3143, #5252, #5253)**)

**11.21.6.4.8.4 Passive TB Ranging measurement reporting phase**

<Scroll to P183L1>

The ISTA Passive TB Ranging Measurement Report frame contains an ISTA Passive TB Ranging 1 Measurement Report element, see 9.4.2.304 (ISTA Passive TB Ranging Measurement Report element), containing: (#**3804**)

* a Sounding Dialog Token Number identifying the measurement sounding phase in which the reported ISTA’s timestamps were measured;

* the CFO of the ISTA with respect to the RSTA;
* the TOD time stamp for the I2R NDP that the ISTA transmitted – labeled with the AID12/RSID12 of the ISTA;
* the TOA, timestamp for the R2I NDP that the ISTA received from the RSTA;
* optionally, the TOA timestamps for the I2R NDPs received from other ISTAs participating in the Passive TB Ranging Polling-Sounding-Reporting triplet identified by the Sounding Dialog Token Number – labeled with their respecive AID12/RSID12s. (#**3804**)

If phase shift TOA reporting has been negotiated, the ISTA Passive TB Ranging Measurement Report element also includes: (#**3804**)

* the PS-TOA timestamp of the R2I NDP that the ISTA received from the RSTA; and
* optionally, the PS-TOAs for the I2R NDPs received from other ISTAs participating in the Passive TB Ranging Polling-Sounding-Reporting triplet identified by the Sounding Dialog Token Number – labeled with their respecive AID12/RSID12s. (#**3804**)

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5026 | 90.00 | 9.4.2.306 | Section 9 cannot have normative text so modify the text '....which either indicates the LCI of the RSTA and may include the Z subelement Usage Rules/Policy subelement...' to | ....which either indicates the LCI of the RSTA and can include 11 the Z subelement Usage Rules/Policy subelement....  ....which either indicates the LCI of the ISTA and can include 11 the Z subelement Usage Rules/Policy subelement.... | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |

***TGaz Editor: Change the text in Subclause 9.4.2.306 (Passive TB Ranging LCI Table element) as follows:***

**9.4.2.306 Passive TB Ranging LCI Table element**

<Scroll to P90L8>

The RSTA LCI Report field is present if the RSTA has never transmitted it before or its content has changed, and it is periodically present otherwise. If present, it contains a Measurement Report element with Measurement Type field equal to LCI, see Table 9-118 (Measurement Type field definitions for measurement reports), which either indicates the LCI of the RSTA and can include the Z subelement Usage Rules/Policy subelement, Antenna Placement and Calibration subelement, or indicates an unknown LCI; see 11.21.6.7 (LCI and Location Civic retrieval using FTM procedure). (#**2302, #5026**)

<Scroll to P90L25>

The ISTA LCI Report subfield is present if the RSTA has never transmitted it before or its content has changed and it is periodically present otherwise. If present, it contains a Measurement Report element with Measurement Type field equal to LCI (see Table 9-118 (Measurement Type field definitions for measurement reports)), which either indicates the LCI of the ISTA and can include the Z subelement Usage Rules/Policy subelement, Antenna Placement and Calibration subelement, or indicates an unknown LCI; see 11.21.6.7 (LCI and Location Civic retrieval using FTM procedure). (#**2302, #5026**)

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5032 | 118.30 | 11.21.6.1.3 | Delete 'for this purpose, with its associated different measurements' from end of the sentence as it doesn't seem necessary | As per comment | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5033 | 118.00 | 11.21.6.1.3 | Modify text 'The RSTA send the Primary and Secondary RSTA Broadcast Passive TB Ranging Measurement Report frames at the end of the measurementexchange' to | The RSTA sends the Primary and Secondary RSTA Broadcast Passive TB Ranging Measurement Report frames at the end of the measurement exchange' | Revised.  This is a duplicate CID to CID 5367.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5367 | 118.34 | 11.21.6.1.3 | Missing space | Change "measurementexchange" to "measurement exchange" | Revised.  This is a duplicate CID to CID 5033.  Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5391 | 118.11 | 11.21.6.1.3 | What applies and does not apply here needs to be explicit. Examples might be used to illustrate how a device behaves in the wild but they are not appropriate when defining what needs to be implemented. | Explicitly define the rules for passive TB ranging. | Rejected.  The rules for Passive TB Ranging is explicitly defined in the specifications text. This is just a note with some aiding information for the reader. |
| 5034 | 119.20 | 11.21.6.1.3 | Add ' during the availability windows' at the end of sentence '....the Passive TB Ranging exchanges that are occurring. | As per comment | Revised.  Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5035 | 119.22 | 11.21.6.1.3 | Move text starting line 22 of page 119 to line 22 of page 120 into a appendix as it provides informative text and not a spec text! | As per comment | Rejected.  What is described in the referred text is an example operation of Passive TB Ranging and its use for enabling a PSTA to estimate its location without transmitting. In the overview subclauses for the EDCA and TB Ranging and non-TB Ranging, we also have examples of their operation so it is consistent to also have an example of the operation for the Passibe TB Ranging in its overview subclause. |

***TGaz Editor: Change the text in Subclause 11.21.6.1.3 (Passive TB Ranging overview) as follows:***

**11.21.6.1.3 Passive TB Ranging overview**

<Scroll to P118L30>

* The ISTAs does not use the Location Measurement Report frame for reporting of I2R LMR but instead uses the ISTA Passive TB Ranging Measurement Report frame. (#**5032**)
* The RSTA send the Primary and Secondary RSTA Broadcast Passive TB Ranging 33 Measurement Report frames at the end of the measurement exchange. (#**3544, #5033, #5367**)

<Scroll to P119L20>

The purpose of the announcement of the availability window for the Passive TB Ranging is to enable PSTAs to listen to the Passive TB Ranging exchanges that are occurring during the availability windows'. (#**1577**, #**5034**)

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5043 | 136.11 | 11.21.6.3.9 | Change IFTMR to IFTM | As per comment | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |

***TGaz Editor: Change the text in Subclause 11.21.6.3.9 (Passive TB Ranging measurement negotiation) as follows:***

**11.21.6.3.9 Passive TB Ranging measurement negotiation**

<Scroll to P136L11>

To grant an ISTA Passive TB Ranging, the RSTA shall respond with the Passive TB Ranging subfield in the Ranging Parameters field to set 1 in the corresponding IFTM frame. (#**5043**)

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5073 | 178.11 | 11.21.6.4.8.1 | Change 'sends' to 'shall transmit' |  | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5074 | 178.20 | 11.21.6.4.3.4 | Modify the text 'The Passive TB Ranging exchanges occur in an availability window used for passive location' to | The Passive TB Ranging exchanges shall only occur in an availability window assigned for passive location | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |

***TGaz Editor: Change the text in Subclause 11.21.6.4.8.1 (General) as follows:***

**11.21.6.4.8.1 General**

<Scroll to P178L11>

In Passive TB Ranging, the RSTA shall transmit the Passive TB Ranging subvariant Ranging Trigger frame instead of the TB Sounding Subvariant Ranging Trigger frame. Upon receiving of the Passive TB Ranging Subvariant Ranging Trigger frame, the ISTA shall respond with an HE Ranging NDP instead of an HE TB Ranging NDP; see 11.21.6.4.8.3 (Passive TB Ranging measurement sounding phase) for further details. (#**3789**, #**3790**, #**5073**)

<Scroll to P178L20>

The Passive TB Ranging exchanges shall only occur in an availability window assigned for Passive TB Ranging. (#**5074**)

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5076 | 179.13 | 11.21.6.4.8.1 | Modify the text 'In Passive TB Ranging, the Trigger frame that the RSTA send is of variant Ranging and subvariant Passive TB Measurement Exchange. The Trigger frame here only allocates uplink resources to a single STA' to | In Passive TB Ranging, RSTA shall transmit Passive TB Ranging Subvariant Ranging Trigger frame to allocate uplink resources to a single STA | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5077 | 179.21 |  | Modify the text 'An RSTA transmitting a Passive TB Measurement Exchange subvariant Ranging Trigger frame' to | An RSTA transmitting a Passive TB Ranging Subvariant Ranging Trigger frame | Revised.  This is a duplicate CID to CID 5243.  Agree in principal but use the term Passive Sounding subvariant Trigger frame.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5243 | 179.21 | 11.21.6.4.8.3 | "Passive TB Measurement Exchange subvariant" to should be "Passive Sounding subvariant". | As per comment | Revised.  This is a duplicate CID to CID 5077.  Agree in principal but use the term Passive Sounding subvariant Trigger frame.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5078 | 179.31 | 11.21.6.4.8.1 | Modify the text 'An ISTA transmitting an HE Ranging NDP as a response of to a Passive TB Measurement Exchange subvariant Ranging Trigger frame' to | An ISTA transmitting an HE Ranging NDP as a response to a Passive TB Ranging Subvariant Ranging Trigger frame | Revised.    Agree in principal but use the term Passive Sounding subvariant Trigger frame.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5075 | 179.03 | 11.21.6.4.8.1 | Change ' is composed of to 'may include' | As per comment | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5242 | 179.13 | 11.21.6.4.8.3 | "subvariant Passive TB Measurement Exchange" to should be "subvariant Passive Sounding". | As per comment | Revised.  Agree in principal but use the term Passive Sounding subvariant Trigger frame.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5244 | 179.27 | 11.21.6.4.8.3 | "Passive TB Measurement Exchange subvariant" to should be "Passive Sounding subvariant". | As per comment | Revised.  Agree in principal but use the term Passive Sounding subvariant Trigger frame.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5245 | 179.29 | 11.21.6.4.8.3 | "Passive TB Measurement Exchange subvariant" to should be "Passive Sounding subvariant". | As per comment | Revised.  Agree in principal but use the term Passive Sounding subvariant Trigger frame.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5246 | 180.02 | 11.21.6.4.8.3 | "Passive TB Measurement Exchange subvariant" to should be "Passive Sounding subvariant". | As per comment | Revised.  Agree in principal but use the term Passive Sounding subvariant Trigger frame.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5079 | 180.06 | 11.21.6.4.8.1 | Modify the text 'the ISTA also measures and reports either' to | the ISTA shall also measure and report either | Revised.  Agree in principal but use ‘may’ instead if ‘shall’.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5080 | 180.11 | 11.21.6.4.8.1 | Modify the text' is limited to 4' to 'shall be limited to 4' | As per comment | Revised.  Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |

***TGaz Editor: Change the text in Subclause 11.21.6.4.8.3 (Passive TB Ranging measurement sounding phase) as follows:***

**11.21.6.4.8.3 Passive TB Ranging measurement sounding phase**

<Scroll to P179L1>

The second phase of the Passive TB Ranging measurement sequence, after the Passive TB Ranging Polling phase, is called the Passive TB Ranging measurement sounding phase. The Passive TB Ranging measurement sounding phase may include of one or more Passive Sounding subvariant Ranging Trigger frame and HE Ranging NDP exchanges, a Ranging NDP Announcement frame, and an HE Ranging NDP transmission; see Figure 11-37v (Passive TB Ranging Polling, Measurement Sounding, and Measurement Reporting phases). (#**5075**)

<Scroll to P179L13>

In Passive TB Ranging, RSTA shall transmit a Passive Sounding subvariant Ranging Trigger frame to allocate uplink resources to a single STA. (#**5076, #5242**)

<Scroll to P179L21>

An RSTA transmitting a Passive Sounding subvariant Ranging Trigger frame shall not use a bandwidth wider than that indicated in the initial Fine Timing Measurement frame sent to the ISTA and the RSTA shall set the TXVECTOR parameter CH\_BANDWIDTH to be the same value as the BW subfield of the Common Info field in the Passive Sounding subvariant Ranging Trigger frame. (#**5077, #5243**)

<Scroll to P179L26>

An RSTA transmitting a Ranging NDP Announcement frame and an HE Ranging NDP after receiving an HE Ranging NDP as a response to a Passive Sounding subvariant Ranging Trigger frame shall set the TXVECTOR parameter CH\_BANDWIDTH to be the same value as the BW subfield of the Common Info field in the Passive Sounding subvariant Ranging Trigger frame. (**#5244, #5245)**

<Scroll to P179L31>

An ISTA transmitting an HE Ranging NDP as a response of to a Passive Sounding subvariant Ranging Trigger frame shall set the TXVECTOR parameter CH\_BANDWIDTH to be the same value as the BW subfield of the Common Info field in the Passive Sounding subvariant Ranging Trigger frame. (#**5078, #5246**)

<Scroll to P180L06>

As in TB Ranging, an ISTA participating in a Passive TB Ranging exchange shall measure the TOD of its own HE Ranging NDP and either the TOAs, or both the TOAs and the phase shift feedback TOAs (PSTOAs), when it receives the RSTA’s HE Ranging NDP. In addition, optionally the ISTA may also measures and report either the TOAs, or both the TOAs and the PSTOAs, when it receives the HE Ranging NDPs transmitted by the other ISTAs participating in the Passive TB Ranging exchange. By reporting the timestamps for when it received the other ISTAs NDP transmissions, the quality of the location estimate for a PSTA listening in to the Passive TB Ranging exchanges can be improved. (#**5079**)

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The max number of NSTS used in the Passive TB Ranging exchanges shall be limited to 4. (#**5080**)

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5083 | 183.35 | 11.21.6.4.8.4 | Modify the text 'containing the following is transmitted first' to 'shall contain the following and shall alsobe transmitted first' | As per comment | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5081 | 183.03 | 11.21.6.4.8.4 | Modify the word ',containing' to 'and shall include' | As per comment | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5082 | 183.16 |  | Modify the word 'also includes' to 'also shall include' | As per comment | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |
| 5084 | 184.34 | 11.21.6.4.8.4 | Modify the text 'The Secondary RSTA Broadcast Passive TB Ranging Measurement Report frame containing the following is subsequently transmitted after a SIFS time.  -- ISTA Passive TB Ranging Measurement Reports' to | The Secondary RSTA Broadcast Passive TB Ranging Measurement Report frame shall contain ISTA Passive TB Ranging Measurement Reports and shall be subsequently transmitted after a SIFS time. | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |

***TGaz Editor: Change the text in Subclause 11.21.6.4.8.4 (Passive TB Ranging measurement reporting phase) as follows:***

**11.21.6.4.8.4 Passive TB Ranging measurement reporting phase**

<Scroll to P183L03>

The ISTA Passive TB Ranging Measurement Report frame shall contain an ISTA Passive TB Ranging Measurement Report element, see 9.4.2.304 (ISTA Passive TB Ranging Measurement Report element) that shall contain: (#**3804, #5081**)

<Scroll to P183L15>

If phase shift TOA reporting has been negotiated, the ISTA Passive TB Ranging Measurement 15 Report element shall also include: **(#3804, #5082)**

<Scroll to P183L35>

The Primary RSTA Broadcast Passive TB Ranging Measurement Report frame shall containing the following and shall be transmitted first: (#**5083**)

<Scroll to P184L34>

The Secondary RSTA Broadcast Passive TB Ranging Measurement Report frame shall containing the following and shall be subsequently transmitted after a SIFS time: (#5084)

— ISTA Passive TB Ranging Measurement Reports

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5143 | 185.36 | 11.21.6.4.8.5 | subclause 11.21.6.4.8.5 is not a subclause 11.21.6.4.8 - why (check the navigation pane) | check the heading type of 11.21.6.4.8.5 and match to 11.21.6.4.8.4 | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |

***TGaz Editor: Change the numbering of Subclause 11.21.6.4.8.5 (Passive TB Ranging differential time-of-flight calculations using phase shift TOA time stamps) as follows:***

**11.21.6.4.9 Passive TB Ranging differential time-of-flight calculations using phase shift TOA time stamps (#1563, #5143)**

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed change** | **Proposed resolution** |
| 5022 | 87.16 | 9.4.2.304 | Delete ' in question' from the sentence | As per comment | Revised.    Agree in principal.  TGaz editor, make the changes as shown below in document 11/21-nnnn. |

***TGaz Editor: Change the numbering of Subclause 9.4.2.304 (ISTA Passive TB Ranging Measurement Report element) as follows:***

**9.4.2.304 ISTA Passive TB Ranging Measurement Report element (#2340)**

<Scroll to P87L15>

The AID12/RSID12 subfield contains the 12 LSBs of the AID, for an associated ISTA, or the 12 LSBs of the RSID, for an unassociated ISTA, of the STA that transmitted the NDP. When the STA that transmitted the NDP is the RSTA the value zero is reported in the AID12/RSID12 subfield. (#**1518**, #**3045, #5022**)

**References:**

**[1] Draft P802.11az\_D3.0**