IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LB279 Comment Resolution to various sections | | | | |
| Date: 2024-03-08 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Jonathan Segev | Intel |  |  | [jonathan.segev@intel.com](mailto:jonathan.segev@intel.com) |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This submission proposes to address the following CIDs 1191, 1253, 1257, 1393, 1356, 1188, 1189, 1095, 1096, 1097 and 1146 and (total of 11 CIDs) based in Draft P802.11REVme\_D4.2, and Draft P802.11bk D1.0.

Revisions:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1191 |  |  | Terminology like "Passive Sounding Ranging Trigger frame" is confusing because there is no such frame. There is a Ranging Trigger frame whose subtype indicates Passive Sounding | Either have some wording to say this, or reword the exising instances to be of the form "a Ranging Trigger frame whose subtype indicates <blah>" | **Reject**.  The term "Passive Sounding Ranging" was introduced into the defention section by 11az. "Passive Sounding Ranging Trigger frame: A Ranging Trigger frame of Passive Sounding subvariant" |
| 1253 |  |  | It should be possible to perform FTM (11mc)-based ranging with 320M width | In Table 9-321--Format And Bandwidth subfield of the baseline (11me/D4.0) add a row immediately after the row for 16, saying 17 / EHT (single RF LO) / 320 and then change the 17-30 row to say 18-30 | **Reject.**  The group considered the use of the EDCA based ranging with 320MHz transmission and decided against it.  Some of the arguments were: lack of security of the legacy operation, lack of value due to no PHY protection making it less attractive to proximity detection usages, and regid scheduling and higher overhead than its TB and NTB successors for 802.11 positioning. |
| 1257 |  |  | Sometimes ""timestamp"" is qualified as ""TOD"" and/or ""TOA"", but sometimes not. In the latter case it is not clear what kind of timestamp is being considered. E.g. at 30.23 ""The timestamps reported within each measurement sounding phase shall be derived from a clock 24 that runs continuously during the measurement sounding phase.  25 If there is a discontinuity in the clock for the FTM timestamping between two reported TOD 26 timestamps," | Add "TOD", "TOA" or "TOD/TOA" before "timestamp" when none of these is present | **Reject.**  P.33L.23 refers to "timestamps" in a nonspecific (both TOA and TOD) manner as it pertains to both TOA and TOD reported in the same LMR (as specified in the L.23), wereas for the L.25-27 it refers to two adjacent TOD reported in separate LMR messages so being more specific is required for the reader to understand the context. |
| 1393 | 77.42 | 11.21.6.4.9 | Clause 11.21.6.4.9 has already been in REVme D4.1. | Remove lines P77L42 - P79L22 | **Accept.**  **Discussion**: the inclusion of pages pertaining to the unchanged behavior was provided in D1.0 for the benefit of the standard developers. As the draft moves forward only pages with changed text should be included. |
| 1356 | 97 |  | What has changed on this page? | Clarify | **Revise.**  TGbk editor delete Annex A from the P802.11bk amendment as no change was identified in the Bibliography clause. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1188 | 15.14 | 3.2 | "A\_n HE-LTF present in an initiating STA (ISTA) to a responding STA 15 (RSTA) null data PPDU (NDP), or RSTA to ISTA NDP in the Ranging frame exchange, 16 resulting from a mismatch of sequence authentication code (SAC) subfield in the STA Info field 17 of a Ranging NDP Announcement frame, or the SAC subfield in the Trigger Dependent User Info 18 field in the Ranging Secure Sounding Trigger frame, with either the value of the Validation SAC 19 subfield in the Secure HE-LTF Parameters element in the last transmitted FTM frame, or the last 20 transmitted Location Measurement Report frame to the ISTA, or is equal to 0 ." is incomprehensible | Reword to make sense | **Reject.**  **Discussion:**  The use of word track changes seems to confuse the reader between A\_LTF and A LTF as the insertion of the space understood by the reader as underscore. |
| 1189 | 15.20 | 3.2 | "The TXVECTOR 21 LTF\_KEY and LTF\_IV parameter corresponding to this LTF are set to generate any secure HE-22 LTF or null." is not clear: what does "any" mean here? | Change "any" to "a" | **Reject**  This is legacy 11az operation, the definition of any secure LTF is provided in the 11.21.6.4.5. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1095 | 16.01 | 3.4 | The "LTFVECTOR" in Table 8-3 in REVme D4.1 only considers HE Ranging NDP and HE TB Ranging NDP, but not EHT Ranging NDP and EHT TB Ranging NDP. | "Add the following change in 11bk D1.0 in Subclause 8.3.4.3 to Table 8-3 Parameter LTFVECTOR in the Value column:  A set of parameters needed to receive and process the HE Ranging NDP and HE TB Ranging NDP (see Table 27-3 (LTFVECTOR  parameters)) or the EHT Ranging NDP and EHT TB Ranging NDP (see Table 36-2a (LTFVECTOR  parameters))." | **Revise.**  Agree with commenter.  Refer to discussion and resolution in r0 of:  TGbk editor make changes identified below in r0 of:  <https://mentor.ieee.org/802.11/documents?is_dcn=506&is_year=2024> |
| 1096 | 16.01 | 3.4 | Subclause 8.3.5.18 in REVme D4.1 only addresses HE Ranging NDP and HE TB Ranging NDP, but neither EHT Raning NDP nor EHT TB Ranging NDP. | "1. Change the paragraph in Sublcause 8.3.5.18.1 as follows:  This primitive is a request by the MAC sublayer to the local PHY entity to provide the parameters shown in 27-3 (LTFVECTOR parameters) for the receipt of an HE Ranging NDP or HE TB Ranging NDP or the parameters shown in 36-2a (LTFVECTOR parameters) for the receipt of an EHT Ranging NDP or EHT TB Ranging NDP.  2. Change the paragraph in Sublcause 8.3.5.18.2 as follows:  The LTFVECTOR represents a list of parameters needed to receive an HE Ranging NDP or HE TB Ranging NDP, including the HE-LTF configuration and information on how to generate the secure HE-LTF symbols as described in 27.3.20.6 (Construction of secure HE-LTF symbols) or an EHT Ranging NDP or EHT TB Ranging NDP, including the EHT-LTF configuration and information on how to generate the secure EHT-LTF symbols as described in 36.3.12.10a.4 (Construction of secure EHT-LTF symbols).  3. Change the paragraph in Sublcause 8.3.5.18.3 as follows:  This primitive is issued by the MAC sublayer to the PHY entity before receiving HE Ranging NDP and HE TB Ranging NDP or EHT Ranging NDP and EHT TB Ranging NDP." | **Revise.**  Agree with commenter.  Refer to discussion and resolution in r0 of 11-24-506 shown below.  TGbk editor make changes identified below in r0 of:  <https://mentor.ieee.org/802.11/documents?is_dcn=506&is_year=2024> |
| 1097 | 16.01 | 3.4 | Subclause 8.3.5.18 in REVme D4.1 only addresses HE Ranging NDP and HE TB Ranging NDP, but neither EHT Raning NDP nor EHT TB Ranging NDP. | "4. Change the paragraph in Sublcause 8.3.5.18.4 as follows:  The effect of receipt of this primitive by the PHY entity is to be aware of the number of spatial streams and LTF repetitions that are not signaled in the HE SIG-A of the HE Ranging NDP and HE TB Ranging NDP or in the EHT-SIG of the EHT Ranging NDP and EHT TB Ranging NDP , as well as to be able to generate the secure LTF symbols based on the parameters in the LTFVECTOR as described in 27.3.20.6 (Construction of secure HE-LTF symbols), if secure HE-LTF is used, or in 36.3.12.10a.4 (Construction of secure EHTF-LTF symbols), if secure EHT-LTF is used." | **Revise.**  Agree with commenter.  Refer to discussion and resolution in r0 of:  TGbk editor make changes identified below in r0 of:  <https://mentor.ieee.org/802.11/documents?is_dcn=506&is_year=2024> |
| 1146 | 16.02 |  | I think some text changes are needed for clause 8 in the baseline. | Add amendment text for clause 8 regarding the description where "HE ranging" is mentioned in REVme D4.1 (P562L40, P589L22, P581L18, L29, L36, L43 of REVme D4.1) | **Revise.**  Agree with commenter.  Refer to discussion and resolution in r0 of:  TGbk editor make changes identified below in r0 of:  <https://mentor.ieee.org/802.11/documents?is_dcn=506&is_year=2024> |

***Discussion CID 1095, 1096, 1097 and 1146:***

Cluase 8 in the standard includes the definition of PHY services provided to the MAC. Clause 8.3.4 provides the Basic Service the structures and their applicability to the various PHY services, while 8.3.5 defines the parameters within the structures.

***TGbk editor change clause 8.3.4 as depicted below:***

**8.3.4.3 PHY SAP service primitives parameters**

**Table 8-3—PHY SAP service primitive parameters**

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Associated primitive** | **Value** |
| LTFVECTOR | PHY-RXLTFSEQUENCE.request | A set of parameters needed to receive and process the HE Ranging NDP, EHT Ranging NDP, HE TB Ranging NDP and EHT TB Ranging NDP (see Table 27-3 and Table 36-2a). (#1095, 1096, 1097 and 1146) |

***TGbk editor change clause 8.3.5 as depicted below:***

**8.3.5 PHY SAP detailed service specification**

**8.3.5.14 PHY-RXEND.indication**

**8.3.5.14.2 Semantics of the service primitive**

***Insert a new item at the end of the dashed list in 8.3.5.14.2 as follows:***

— *IntegrityCheckError.* This value is used to indicate that during the reception of the HE Ranging NDP HE TB Ranging NDP, EHT Ranging NDP or EHT TB Ranging NDP an integrity check was performed and failed. (#1095, 1096, 1097 and 1146)

***Insert 8.3.5.18 and 8.3.5.19 (and their subclauses) after 8.3.5.17.4 inserted by IEEE Std 802.11ay-2021, as follows:***

**8.3.5.18 PHY-RXLTFSEQUENCE.request**

**8.3.5.18.1 Function**

This primitive is a request by the MAC sublayer to the local PHY entity to provide the parameters shown in Table 27-3 (LTFVECTOR parameters) for the receipt of an HE Ranging NDP, EHT Ranging NDP, HE TB Ranging NDP or EHT TB Ranging NDP. (#1095, 1096, 1097 and 1146)

**8.3.5.18.2 Semantics of the service primitive**

The primitive provides the following parameter:

PHY-RXLTFSEQUENCE.request(

LTFVECTOR

)

The LTFVECTOR represents a list of parameters needed to receive an HE Ranging NDP, EHT Ranging NDP, HE TB Ranging NDP or EHT TB Ranging NDP, including the HE-LTF or EHT-LTF configuration and information on how to generate the secure LTF symbols as described in 27.3.20.6. (#1095, 1096, 1097 and 1146)

**8.3.5.18.3 When generated**

This primitive is issued by the MAC sublayer to the PHY entity before receiving HE Ranging NDP, HE TB Ranging NDP and EHT TB Ranging NDP. (#1095, 1096, 1097 and 1146)

**8.3.5.18.4 Effect of receipt**

The effect of receipt of this primitive is to configure the PHY entity with:

* The number of HE-LTF or EHT-LTF repetitions,
* If secure LTF is used the information needed to generate the secure LTF symbols based on the parameters in the LTFVECTOR as described in 27.3.20.6 (Construction of secure HE-LTF symbols) and 36.3.12.10a.4 (Construction of secure EHT-LTF symbols).
* The number of spatial streams in an HE TB Ranging NDP and HE Ranging NDP as those are not signaled in the PPDU header.