IEEE P802.11  
Wireless LANs

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| Miscellaneous LB249 CRs | | | | |
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Abstract

This document contains discussion and proposed resolutions for the following LB249 comments: 3011, 3019, 3020, 3132, 3267, 3304, 3319, 3388, 3399, 3404, 3453, 3460, 3461, 3520, 3650, 3839, 3974, 3975, 3986, 3987, 3988

For convenience, the page and line numbers for the comments refer to those in 11az Draft 2.2 and not the corresponding location in Draft 2.0 on which the comment was based.

**References**

[1] IEEE P802.11-REVmdTM/D3.4, July 2020

[2] IEEE P802.11az™/D2.2 April 2020

[3] IEEE P802.11ax™/D6.1 May 2020

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| **CID** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| **3011** | 9.3.1.19  P43.11 | Use of "AID11/RSID11" is NEW!. In the spec, as far as I know, we don't use names with number of bits embedded in the name. Any real reason to start having such? | Remove the number of bits (11) from the name or use a different name. This might appear in more places | **Reject.**  The number of bits is used in base spec [1] in describing VHT NDPA – e.g. AID12 – see Figure 9-60 and 11ax [3] Figure 9-61b e.g. AID11. The current description seems sufficiently descriptive and consistent with amendments on which 11az is based on. |
| **3019** | 9.4.2.21.10 LCI report…  P54.4 | The use of "Z" (just one letter Z) in table 9-134 is incorrect. Should use more descriptive names. | Replace with a more descriptive name. Example "Z coordinate", "Hight coordinate",... | **Reject.**  This is not a change in 11az draft but is present in the based amendment [1] – see Table 9-136. It is part of standard terminology now and a change is not warranted and not required in 11az spec. |
| **3020** | 9.4.2.1.21.10  P54.4 | Text describes that the values are relative to "specified reference location", but there is no reference where this "specified reference location" is defined. Please add the reference. | Add the reference | **Revise.**  The reference has been added in 11az D2.2, and clicking the link shows the URL to IETF RFC 6225 to access the reference p 218.9  TGaz Editor: No additional changes are needed. |
| **3132** | 11.3.1  P103.8 | Looks unfinished? | Finish it | **Reject.**  The … indicates additional text present in the base draft [1] p2215.63. with no change to 11az indicated. No change is required to be made to the 11az draft. |
| **3267** | 26.17.2.1  P196.12 | Reference to "Table 9-282 (Format and Bandwidth field)", which does not contain HE and EDCA-based HE anymore (also is now Table 9-281). I guess the meaning is that in 6 GHz to either use TB/non-TB Ranging or in EDCA FTM to use HE modes given in said Table. | Change to the following: "When an HE STA negotiates an \*EDCA\* FTM session ... the STA shall set the Format And Bandwidth field to a value that corresponds to an EDCA-based HE format (see Table 9-281 ..." | **Accept.**  The reference seems not updated.  **TGaz Editor: change the reference to Table 9-282 to Table 9-281** |
| **3304** | 9.6.7.32  P91.6 | Both the LCI Report and the Location Civic Report fields are optionally present. | Change the text to reflect that both the LCI Report and the Location Civic Report fields are optionally present. | **Revise.**  In general, there is no need to repeat the information that is already present in the figure as Optional (within parenthesis). However, it appears the instructions to editor seem wrong for adding the new ranging parameters column.  **TGaz Editor: change as specified in 11-20-1225** |
| **3319** | 6.3.56.2.3  P32.15 | The terms MinProcessingTime and MaxToAAvailable are replaced respectively by 'Min time between measurements' and 'Max time between measurements' but the change is not reflected here. | render the referenced thresholds consistent with the definitions in Cl. 9.4.2.296 (Ranging Parameters element) | **Revise.**  The change is already made in 11az d2.2 – no change to 11az indicated. No change is required to be made to the 11az draft. |
| **3388** | Annex AE  P240.1 | Missing annex to define secured LTF test vectors | Define test vectors for secured LTF | **Reject.**  These are defined Annex J.14 |
| **3399** | 4.5.4.2  P23.21 | Can an RSNA support all three authentication types, if so it should say so? | add: "... or any combination of these authentication methods." | **Accept.**  **TGaz Editor : change as specified in 11-20-1225** |
| **3404** | 9.4.2.1  P52.9 | Table 9-94 does not have a title for the 5th column | Add text to the define the 5th column. "Fragmentable" | **Accept.**  **TGaz Editor : please add the title at the top of 5th column as suggested.** |
| **3453** | C.3  P229.28 | Sequence fields are missing data types. Presume these are TruthValue. | Add "TruthValue" data type for "dot11PASNActivated" and "dot11NoAuthPASNActivated" sequence fields. | **Revise.**  There seem to be duplicate entries for PASN in the sequence. The change is to remove the duplicate entries.  **TGaz Editor : change as specified in 11-20-1225** |
| **3460** | 11.3.2  P103.12 | If we're adding a new state in the 11.3.2 state machine flow, then let's add it properly. The only real difference between State 1 and State 1A appears to the ability to transmit unicast Protected Dual Public Action frames in State 1A. So, don't add these to the Class 2 frame list, and then require qualification on their use, but create a new class of frames to match this new state. | Change "State 1A" to "State 2". Update existing states (2, 3 and 4) to be (3, 4 and 5) throughout, including in the baseline. Create a new "Class 2 frames", which includes "Unicast Protected Dual of Public Action frames (9.6.10)", and update existing Class 2 and Class 3 frames definition and references to be Class 3 and Class 4, throughout, including in the baseline. Change State 1A's description of frames allowed to just say (the new) "Class 1 & Class 2 frames", and add (the new) "Class 2" frames to States 2, 3 and 4. | **Reject.**  Renumbering the states is going to cause more confusion for readers and implementors. It is also not clear what is not proper about the scheme – currently classification is based on other properties e.g. of IBSS, etc. This also needs a more concrete proposal and can be revisited when such a proposal is available. |
| **3461** | 4.5.4.2  P23.16 | Are mesh STAs allowed to use the new PASN, and TB/nTB/Passive Location Ranging? If so, the relationship of PASN establishment to mesh peering (including AMPE) needs to be clarified. | Add "or mesh peering", as in "prior to association or mesh peering". Similarly, in the new paragraph at the end of 4.5.4.2. Make changes in clause 14, similar to those in clause 11.3. Make changes in subclause 12.6.1.3.4 similar to those in clause 12.6.1.1.6 and reference to 12.13. | **Revise**  Agree with the commenter. It is not clear how mesh STAs would use PASN. I suppose 11az ranging can take place between mesh peers using whatever authentication they currently support. The proposal is to clarify that PASN is not allowed  **TGaz Editor : change as specified in 11-20-1225** |
| **3520** | 11.3.2  P103.5 | There doesn't seem to be any benefit to State 1a, since in any case a non-PASN auth is needed to go to State 2, per Figure 11-16 | At the end of the bullet describing state 1a at 103.5 add "Used by STAs that wish to perform secure ranging but do not wish to exchange MSDUs." | **Revise.**  Agree with the commenter. Some clarification might help, but secure ranging is a first example of PASN use.  **TGaz Editor : change as specified in 11-20-1225** |
| **3650** |  | Running the ballot over the end-of-year holiday period leaves insufficient time for proper review | Extend the ballot duration | **Reject.**  I guess it is too late to address this, but perhaps next ballot can take it into account. In any case there is no change to the draft proposed. |
| **3839** | 6.3.56.2.3  P32.14 | "Note that the sounding exchange initiation will be according to the 14  MinProcessingTime and MaxToaAvailable thresholds that are defined when the 15  corresponding FTM session was established. " -- neither MinProcessingTime nor MaxToaAvailable are defined | Delete the cited text | **Revise.**  Agree with the commenter. This is resolved in 11az D2.2 – references to **MinProcessingTime** and **MaxToaAvailable** are replaced with  **Min Time Between Measurements** and **Max Time Between Measurements** .  No further changes are needed to the 11az draft. |
| **3974** | 9.4.2.301  P84.11 | From line 7 to the end of the paragraph a "Cookie" is specified, but no size of the cookie elements is provided. | Create a figure defining the cookie subfields to specify all details | **Revise.**  Agree with the commenter, but cookie is described in 12.3.9 comeback cookies as opaque sequence of octets. The reference needs to be corrected as well as bulleting indentation that follows the cookie field.  **TGaz Editor : change as specified in 11-20-1225** |
| **3975** | 9.4.2.301  P84.12 | Is the "finite cyclic group field" the same as the "Finite Cyclic Group ID"? | If the same then replace with "Finite Cyclic Group ID".  Otherwise provide additional details so it is clear what this field is. | **Revise.**  It is the same.  **TGaz Editor : change as specified in 11-20-1225** |
| **3986** | 26.17.2.1  P196.12 | "(see Table 9-282 (Format and Bandwidth field))" This should be referring to Table 9-281 in p.63. Furthermore, in P802.11REVmd D3.0, it is Table 9-280 and the table title is "Format And Bandwidth \*subfield\*". | Correct the table numbers and table titles in pp.ll 197.12, 63.2, and 63.3. | **Revise.**  TGaz draft 2.2 already addresses this by providing the correct reference.  No further change is needed to the draft. |
| **3987** | 26.17.2.1  P196.10 | "..., the STA shall set the Format And Bandwidth field to a value that corresponds to either HE or EDCA-based HE format ... ." I only see EDCA-based HE format in Table 9-281 in p.63. It seems that there is no HE format. | Change the sentence to read "..., the STA shall set the Format And Bandwidth field to a value that corresponds to EDCA-based HE format and bandwidth ... ." | **Revise.**  The text is confusing as the Format and Bandwidth field for HE is in the Ranging Parameters element used for NTB and TB ranging. Changed to add a reference to that element.  **TGaz Editor : change as specified in 11-20-1225** |
| **3988** | 4.5.4.2  P23.19  P23.32 | Redundant expressions in lines 17 and 30. | Change the sentence starting from line 16 to read "PASN authentication allows Management Frame Protection prior to association." Change the two sentences starting from line 29 to read "PASN authentication that allows management frames to be protected is preformed prior to association by establishing a security association (PTKSA) using authentication frames." | **Revise.**  The sentences seem to say the same thing. The change is to remove one of them. The latter to be removed since the first has additional information about use of authentication frames.  **TGaz Editor : change as specified in 11-20-1225** |

**CID 3304 - Discussion**

The instructions to editor seem to indicate new elements to added as columns to the right of Figure 9-876 – reproduced below for convenience.

**![A screenshot of a cell phone

Description automatically generated]()**

However, LCI and Location Civic reports are already present in the original figure (in [1]) and are not new (should not be underlined). In any case they should not be moved because existing implementations may assume certain ordering of elements present in the action field.

**CID 3304 - Proposed Changes**

**Tgaz Editor: Replace the instructions and the figure that modify Figure 9-876 p91.6 with the following**

***Insert the new Ranging Parameters column to the right of Figure 9-876 (Fine Timing Measurement Request Action field format)***

**![A picture containing table

Description automatically generated]()**

**CID 3339 – Discussion**

See table

**CID 3339 – Proposed Changes**

**Tgaz Editor: Replace the first sentence of the paragraph in 4.5.4.2 p23.21 with the following**

An RSNA might support SAE authentication, FILS authentication, or PASN authentication ~~both~~(11ai) or any combination of these authentication methods.

**CID 3453 – Discussion**

The members for PASN seem duplicated and some of those do not have the TruthValue attribute. The change is to remove duplicate entries and keep the ones with TruthValue with (11az) annotation

**CID 3453 – Proposed Changes**

**Tgaz Editor: Replace the corresponding change in the draft - C.3, p229.28 with the following - primarily deleting the duplicate entries.**

***Insert the following entry at the end the following object as shown below:***

Dot11StationConfigEntry ::=

SEQUENCE{

…….

dot11S1GOptionImplemented(802.11 REVmd 3.0) TruthValue ,

(802.11 REVmd 3.0)

dot11PASNActivated TruthValue (11az),

dot11NoAuthPASNActivated TruthValue (11az)

}

**CID 3461 – Proposed Changes**

**TGaz Editor: add the following at the end of clause 12.6.7**

**12.6.7 RSNA policy selection in an MBSS**

**…**

When establishing an RSNA in an MBSS, PASN authentication shall not be used.

**CID 3520 – Proposed Changes**

**TGaz Editor: Replace the State 1a bullet in clause 11.3.2 p103.5 with the following**

…

— State 1a: Authenticated via PASN Authentication (12.13). Association is not possible from this state without non-PASN IEEE 802.11 Authentication. This state is used by STAs that wish to perform secure ranging but do not wish to exchange MSDUs.

…

**CID 3974 – Discussion**

**CID 3974 – Proposed Changes**

**TGaz Editor: Change 9.4.2.301 PASN Parameters Element p84.11 as follows**

Cookie is an opaque sequence of octets generated by an AP STA in an implementation dependent manner; see 12.13.9 (~~Pre-Association Security Negotiation~~ Comeback Cookies)

**TGaz Editor: Change 9.4.2.301 PASN Parameters Element p84.12-14-16-17 by moving the 4 bullets related to Finite Cyclic Group to the top level (i.e. remove . and indentation) as they are not related to Cookie description.**

**CID 3975 – Proposed Changes**

**TGaz Editor: Change the description related finite cyclic group field 9.4.2.301 p84.14 as follows**

…

The ~~finite cyclic group~~ Finite Cyclic Group ID field is used to indicate the group used in PASN authentication.

**CID 3987 – Discussion**

**CID 3987 – Proposed Changes**

**TGaz Editor: Replace paragraph 26.17.2.1 p196.10 with the following. Only the gray text is new**

When an HE STA negotiates an FTM session, as defined in 11.22.6 (Fine timing measurement (FTM) procedure), the STA shall set the Format And Bandwidth field to a value that corresponds to either HE (See 9.4.2.296 (Ranging Parameters element) Table 9-1001—Format and Bandwidth subfield) or EDCA-based HE format, see Table 9-282 (Format and Bandwidth field), in the IFTMR frame for the ISTA, and in the initial Fine Timing Measurement frame for the RSTA, that it transmits in the 6 GHz band. An HE STA that negotiates an EDCA FTM session shall transmit Fine Timing Measurement frame in an HE SU PPDU and Fine Timing Measurement Request frame in a non-HT PPDU, or an HE SU PPDU.

**CID 3988 – Discussion**

**CID 3988 – Proposed Changes**

**TGaz Editor: delete the first two sentences from the paragraph 4.5.4.2 p23.32**

~~PASN authentication is performed prior to association. It results in establishing a security association (PTKSA) that allows management frames to be protected prior to association.~~ PASN authentication is used in an RSN for an infrastructure BSS when it is based on a PMKSA established by another RSN authentication protocol. Otherwise, it does not guarantee mutual authentication, and can be used as a non-RSN protocol in an infrastructure BSS.