IEEE P802.11
Wireless LANs

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| Comment Resolution LB249 Various |
| Date: 2020-08-12 |
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Abstract

This submission proposes the comment resolution of various CIDs in LB249

CIDs:

* 9.3.1.19: 3008, 3884, 3895, 3011
* 9.4.2.21.10: 3019, 3020
* 9.4.2.296: 3105
* 11.22.6.4.3.1: 3242, 3671
* 11.22.6.4.3.3: 3119, 3245
* 11.22.6.4.3.4: 3718
* 26.5.2.5: 4019
* 26.17.2.1: 3267, 3268, 3986, 3987

Revisions:

1. Small change to CID 3987 and CID 3242

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** |
| **3008** | 43.3 | 9.3.1.19 | Table in figure 9-61b has split Reserved bits without any reason. Pack the used bits and have ALL reserved bits at the end. | Pack the used bits and have ALL reserved bits at the end. | **Reject**The reason the reserved bits are split is that the Disambiguation subfield needs to be in that exact spot so that legacy (pre-11ax) STAs don’t decode the STA Info based on VHT NDP Announcement frame format that uses AID12. |
| **3884** | 43.14 | 9.3.1.19 | I2R Nsts and I2R Nrep fields in NDPA are not valid in TB ranging | add a note saying these fields are reserved in TB ranging | **Reject**The existing text clearly states which parameters are used in TB and non-TB Ranging, conversely the non-TB Ranging case does not state that the Offset subfield is reserved either. |
| **3895** | 32.20 | 9.3.1.19 | "The Offset subfield can take values between 0 and 63 and indicates the number of HE-LTF to skip when processing the following NDP and is set 0 in all cases except in 9-1006 the secure variant of the TB Ranging measurement exchange." "The secure variant" is not clearly define in the 11az spec. For example, using PMF for the ranging negotiation frames without using secure LTF also provides some level of security, but is it considered secure variant? | Replace "...the secure variant..." with "..with the use of secure LTF" Make the same changes throughout the 11az spec, wherever appropriate. | **Revised**See changes in document DCN 11-20/1219 |
| **3011** | 44.15 | 9.3.1.19 | 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**Compare the same/similar field in Draft P802.11ax D6.0 Figure 9-61b—STA Info subfield |
|  |  |  |  |  |  |
| **3019** | 54.4 | 9.4.2.21.10 | 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",... | **Revised**This subelement name is not introduced in this amendment, but was there prior. I agree though that a name change to “Z coordinate” would be helpful |
| **3020** | 55.3 | 9.4.2.21.10 | 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. | **Revised**Add a reference to the LCI subelement |
| **3105** | 76.4 | 9.4.2.296 | Remove "Immediate LMR Feedback" subfield from Non-TB specific subelement format as it is in the IFTMR and IFTM frames already. Also remove it from the normative text in section 11.22.6.4.4.3. | As per comment | **Revised**Addressed as part of CID 3231 in DCN 11-20/0126 |
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| **3242** | 136.29 | 11.22.6.4.3.1 | "and set the Rx Control Frame to MultiBSS subfield in HE MAC Capabilities Information field to 1" - how does this apply to un-associated STAs? | Clarify if this applies to un-associated STAs, which do not exchange an HE MAC Capabilities Information field | **Revised**See changes in document DCN 11-20/1219 |
| **3671** | 136.20 | 11.22.6.4.3.1 | "An ISTA shall only transmit any Fine Timing Measurement Request frame outside an Availability Window allocated to itself. (#1170, #1566) " is extremely unclear. Seems to be saying that FTMR frames must be transmitted outside AWs, but I think it's trying to say that the only kind of FTM-related frame that may be sent outside an AW is an FTMR frame | Change to "An ISTA shall may transmit a Fine Timing Measurement Request frame outside an Availability Window allocated to it. Other frames involved in TB ranging shall not be transmitted outside this window."" | **Revised**Agree in principle. See changes made in response to CID 3672 and changes in document DCN 11-20/1219 |
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| **3119** | 142.11 | 11.22.6.4.3.3 | Add text "of the PSDU belong to the Trigger Ranging subvariant Poll transmitted before NDPA transmission" after "RSTA's TSF[21:6]" | As per comment | **Revised**See changes already made in DCN 11-20/0368r2 |
| **3245** | 142.3 | 11.22.6.4.3.3 | The RSTA has no way of knowing if the ISTA can accommodate its requested UL Target RSSI for unassociated STAs, since it does not transmit frames to them regularly nor can request a headroom udpate | Add a mechanism for the RSTA to request information on the choice of UL Target RSSI, for example by having the ISTAs feed back measured RSSI, so the RSTA can estimate and track pathloss to each ISTA |  |
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| **3718** | 143.30 | 11.22.6.4.3.4 | "Figure 11-36h--TB Ranging measurement reporting phase with Bidirectional LMR" implies only OFDMA can be used, but presumably MU-MIMO can be too | In the figure change Frequency to Frequency and/or spatial stream. Ditto in Figure 11-36u--Passive TB Ranging measurement reporting phase (#1578) | **Reject**Figures are not normative, but only illustrative. In this case the example shows the most common use case, although use of MU-MIMO is also possible. |
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| **4019** | 196.24 | 26.5.2.5 | The I2R Length subfield does not exist in the Common Info field of the Trigger frame. | Change from "I2R Length" to "Length". | **Revised**This is a typo, it should be “UL Length”. See changes in document DCN 11-20/1219 |
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| **3267** | 197.12 | 26.17.2.1 | 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 ..." | **Revised**See changes in document DCN 11-20/1219 |
| **3268** | 197.16 | 26.17.2.1 | "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." - Why are we allowing frames in non-HT duplicate format? | Mandate that all frames in 6 GHz be sent in an HE format. - Remove exception for FTMRs. | **Rejected**Non-HT duplicate PPDUs are allowed in 6 GHz. |
| **3986** | 197.12 | 26.17.2.1 | "(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. | **Revised**See changes in document DCN 11-20/1219 |
| **3987** | 197.11 | 26.17.2.1 | "..., 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 ... ." | **Revised**See changes in document DCN 11-20/1219 |
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**9.3.1.19 VHT/HE/Ranging NDP Announcement frame format**

TGaz Editor: Modify the paragraphs starting on page 43 (line 22) as follows

The Offset subfield can take values between 0 and 63 and indicates the number of HE-LTF to skip when processing the following NDP and is set 0 in all cases except when using secure LTF in TB Ranging, see 11.22.6.4.6.2 (Secure TB ranging mode). (#3895)

TGaz Editor: Replace all mention of “Secure Mode” or “Secure Variant” with “use of secure LTF” throughout the draft

**9.4.2.21.10 LCI report (Location configuration information report)**

TGaz Editor: Modify the following paragraphs on page 55 (starting on line 2)

The Relative Latitude subfield contains a signed integer in two’s complement format indicating the latitude offset of the reported location in relation to the specified reference location in the LCI subelement (#3020), in units of 1.8e-07 deg. (Corresponds to approximately two cm at the equator.) (#1789)

The Relative Longitude subfield contains a signed integer in two’s complement format indicating the longitude offset of the reported location in relation to the specified reference location in the LCI subelement (#3020), in units of 1.8e-07 deg. (Corresponds to approximately two cm at the equator.) (#1790)

11.22.6.4.3.1 General

TGaz Editor: Modify the paragraph starting on page 136 (line 10) as follows

An RSTA, in which dot11MultiBSSIDImplemented is true, and that transmits a Ranging Trigger frame or a Ranging NDP Announcement frame to a set of ISTAs, in which at least two ISTAs have a TB Ranging Measurement exchange with different BSSIDs in the Multiple BSSID set of the RSTA, shall set the TA field of these frames to the transmitted BSSID. An ISTA that is associated to its RSTA shall set the Rx Control Frame to MultiBSS subfield in HE MAC Capabilities Information field to 1. (#1115, #3675) An RSTA shall treat an ISTA that is not associated with the RSTA the same as an associated STA with MultiBSS subfield in HE MAC Capabilities Information field equal to 1 when doing TB Ranging with the ISTA. Any ISTA that supports TB Ranging Measurement exchange shall support the reception of a Control frame with TA equal to the transmitted BSSID . (#1115, #3675, # 3242)

TGaz Editor: Modify the paragraph starting on page 136 (line 20) as follows

An ISTA shall transmit any Fine Timing Measurement Request frames outside of Availability Windows allocated to itself. (#1170, #1566, #3672) Other frames involved in TB Ranging shall not be transmitted outside the corresponding Availability Windows. (#3671)

26.5.2.5 UL MU CS mechanism

TGaz Editor: Modify the paragraph starting on page 195 (line 20) as follows

An RSTA that transmits a Ranging Trigger frame shall set the CS Required subfield to 1 unless one of the following conditions is met:

– The Ranging Trigger frame is of subvariant Poll, Sounding, Secure Sounding or Passive TB Sounding.

– The Ranging Trigger frame is of subvariant Report and the UL Length subfield in the Common Info field of the Trigger frame is less than or equal to 418 (#1366, #4019).

26.17.2.1 General

TGaz Editor: Modify the paragraph starting on page 196 (line 10) as follows

When an HE STA negotiates an EDCA based FTM session, as defined in 11.22.6 (Fine timing measurement (FTM) procedure), the STA shall set the Format And Bandwidth subfield, in the Fine Timing Measurement Parameters field, to a value that corresponds to an EDCA-based HE format, see Table 9-282 (Format and Bandwidth subfield), 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. Also, an HE STA that negotiates an EDCA FTM session shall transmit all Fine Timing Measurement frames in an HE SU PPDU and Fine Timing Measurement Request frames in either a non-HT PPDU or an HE SU PPDU. (#3267, #3986, #3987)

Discussion:

* HE-LTF size: 1x/2x/4x?
* Allowed MCS and coding?
* Packet padding?

TGaz Editor: Change the numbering of the “Format and Bandwidth” subfield on page 36, also seems it should be a subfield (mistake fixed in REVmd 3.4)

**Table 9-282—Format And Bandwidth subfield**