IEEE P802.11
Wireless LANs

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| **Comment Resolutions for UHR-LTF** |
| **Date:** 2025-05-10 |
| **Author(s):** |

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Abstract

This submission proposes resolutions for comments of TGbn D0.2 with the following 14 CIDs:

341, 342, 597, 2310, 598, 2311, 1176, 1177, 1749, 1750, 3556, 2185, 3245, 3534,

Revisions:

* Rev 0: Initial version of the document.
* Rev 1:

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 TGbn D0.2 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbn D0.2 Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbn Editor: Editing instructions preceded by “TGbn Editor” are instructions to the TGbn editor to modify existing material in the TGbn draft. As a result of adopting the changes, the TGbn editor will execute the instructions rather than copy them to the TGbn Draft.***

#### *CIDs 1123 1124 2260 2264*

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| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 341 | 38.3.15.11 | 184.45 | "38.3.15.11 UHR-LTF". Try to avoid duplication where possible by referencing EHT-LTF. | See comment | RejectedThe comment lacks sufficient detail. Please specify the exact location to enable proper evaluation. |
| 342 | 38.3.15.11.1 | 187.57 | "are replaced by zero, for all ... ". Delete comma | See comment | RejectedThe comma helps break the long sentence into shorter segments, improving clarity and readability. |
| 597 | 38.3.15.11.2 | 188.60 | Several DBW modes are defined in 80 MHz segment so it is not true that each 80 MHz segment uses the same UHR-LTF for DRUs. Delete the sentence "For BW of 160 MHz or 320 MHz each 80 MHz segment uses the same UHR-LTF for DRUs defined for 80 MHz.". | See the comment. | RejectedThe sentence refers to the final UHR-LTF used for DRUs within each 80 MHz segment, regardless of the specific DBW modes supported. While multiple DBW modes may be defined within an 80 MHz segment, the statement emphasizes that each segment ultimately uses the same UHR-LTF for DRUs defined for that segment as a whole. |
| 2310 | 38.3.15.11.2 | 188.60 | "For BW of 160MHz or 320MHz each 80MHz segment uses the same UHR-LTF for DRUs defined for 80MHz." This is conditioned on that DBW is 80 Mhz for all 80 MHz frequency subblocks. Please add the condition. | As in comment |
| 598 | 38.3.15.11.2 | 188.64 | In 160 or 320 MHz, 20+20+40 or 40+20+20 mode is only allowed in the primary channel so it is not ture that DBW of 20 or 40 MHz is allowed within each 80 MHz frequency subblock where the 80 MHz is non-punctured. Also, DBW modes related text should be included in 38.3.4. Delete the text "DRUs with DBW of 20 or 40 MHz ~." | See the comment. | Modified Agree in principle with the commenter.TGbn editor: Please make the changes shown in 11-25/0963r1. |
| 2311 | 38.3.15.11.2 | 188.65 | "DRUs with DBW of 20 or 40MHz are allowed within each 80 MHz frequency subblock in cases where the 80MHz is either punctured or non-punctured but split as 20+20+40 or 40+20+20.". This is not entirely correct. Non-punctured 20+20+40 or 40+20+20 is only allowed in P80 of 160 MHz or 320 MHz PPDU. Please add that restriction. | As in comment |
| 1176 | 38.3.15.11.2 | 188.56 | Change " the RRU LTF" with " UHR LTF for RRU" | As the comment. | AcceptedAgreed. The “same rule” refers to the UHR-LTF rules described in 38.3.15.11.1.TGbn editor: Please make the changes shown in 11-25/0963r1. |
| 1177 | 38.3.15.11.2 | 188.56 | What is the "same rule" in this sentence? It is not clear. Revise this text with reference to 38.3.15.11.1. | As the comment. |
| 1749 | 38.3.15.11.2 | 189.44 | The UHR LTF for 60DBW is missing | add the UHR-LTF for 60DBW | Revised Agreed. UHR-LTF for 60DBW is addedTGbn editor: Please make the changes shown in 11-25/0963r1. |
| 1750 | 38.3.15.11.2 | 189.05 | The tone index in equation 38-33 shall be -122,122 | fix the tone index error | Revised Agreed. The typo is fixedTGbn editor: Please make the changes shown in 11-25/0963r1. |
| 3556 | 38.3.15.11.2 | 189.05 | typo | Change UHR-DLTF-{-122,112} to UHR-DLTF-{-122,122} |
| 2185 | 38.3.15.11.2 | 187.60 | the terms '80MHz frequency subblock' and '80MHz segment' are both used within 2 consecutive sentences. | Use either '80MHz segment' or '80MHz frequency subblock' for consistency. | Revised Will both use the ‘80MHz frequency subblock’ for consistency TGbn editor: Please make the changes shown in 11-25/0963r1. |
| 3245 | 38.3.15.11.1 | 188.05 | For consistency with the structure of the draft, the Figures 38-22 and 38-23 and related text should be on the subclause 38.3.9 (Transmit Block Diagram). | As in comment. | RejectedTo maintain consistency with the existing standard draft structure, it is preferable to keep Figures 38-22 and 38-23 and the related text in their current location. |
| 3534 | 38.3.15.11 | 186.47 | missing definition | The 3 variables (T\_URH-LTF-1x, T\_URH-LTF-2x and T\_URH-LTF-4x) are not defined in Table 38.15 | Revised Will addd them to table 38.15TGbn editor: Please make the changes shown in 11-25/0963r1. |

*TGbn Editor: Please make the following changes in Page 198 Line 64 of D0.2:*

 (#598)(#2311) DRUs with DBW of 20 or 40 MHz are allowed within the primary 80 MHz frequency subblock in cases where the 80 MHz is either punctured or non-punctured but split as 20+20+40 or 40+20+20.

*TGbn Editor: Please make the following changes in Page 198 Line 56 of D0.2:*

In hybrid RRU and DRU transmission, (#1176) (#1177)the UHR-LTF for RRU is generated according to the rules specified in 38.3.15.11.1, as if DRU is not present.

*TGbn Editor: Please insert the following in Page 199 Line 44 of D0.2:*

(#1749)In a 80 MHz UHR TB PPDU transmission with the highest 20MHz been punctured, the frequency domain sequence for UHR-LTF for DRUs located on subcarriers [-500:253] is given by Equation (38-xx).

$UHR-DLTF\_{-500, 253}$=[0 1 1 -1 -1 -1 1 0 1 1 -1 -1 1 -1 0 -1 1 -1 -1 1 -1 0 1 -1 1 -1 -1 1 0 1 -1 -1 -1 -1 1 0 -1 -1 1 -1 1 1 1 1 1 -1 -1 1 -1 1 1 -1 -1 1 -1 -1 1 1 -1 1 1 1 1 1 -1 -1 -1 -1 1 -1 1 -1 -1 -1 1 1 -1 1 -1 1 1 1 1 1 -1 1 1 1 1 -1 1 -1 1 -1 1 -1 1 1 1 -1 -1 -1 1 -1 1 -1 1 1 -1 -1 -1 -1 -1 -1 1 1 -1 -1 1 1 1 -1 1 1 -1 -1 1 1 1 -1 1 1 -1 1 1 -1 1 1 -1 1 -1 1 -1 -1 1 -1 -1 -1 -1 1 1 1 1 1 1 -1 -1 -1 -1 1 -1 1 1 1 -1 1 -1 1 -1 -1 1 1 -1 -1 1 -1 -1 1 -1 1 -1 -1 1 -1 1 1 1 1 -1 1 1 -1 -1 -1 -1 1 -1 -1 1 1 -1 1 1 1 -1 -1 1 1 -1 -1 1 1 1 -1 1 1 -1 1 1 -1 -1 1 -1 1 -1 1 -1 1 1 1 -1 1 1 -1 -1 -1 1 1 1 -1 -1 1 -1 -1 1 1 1 -1 1 -1 1 -1 1 -1 -1 1 -1 -1 -1 -1 -1 1 1 -1 -1 1 -1 1 -1 -1 1 -1 1 1 -1 -1 1 1 1 1 -1 -1 1 1 -1 -1 -1 -1 -1 -1 -1 1 -1 -1 -1 -1 -1 -1 1 1 -1 -1 -1 -1 1 1 1 1 1 1 -1 -1 1 1 1 1 1 -1 -1 -1 -1 -1 1 1 -1 1 -1 -1 1 1 -1 -1 1 1 -1 1 1 1 1 1 1 1 1 -1 -1 1 1 1 -1 1 -1 1 1 1 -1 -1 1 -1 1 -1 1 -1 -1 1 -1 -1 -1 -1 1 -1 -1 -1 1 1 1 -1 1 1 1 -1 -1 1 -1 1 -1 1 1 1 -1 -1 -1 1 -1 -1 -1 -1 1 -1 1 1 -1 1 1 -1 1 -1 1 -1 -1 -1 -1 -1 -1 1 -1 -1 1 -1 1 1 -1 1 1 -1 1 1 1 1 -1 1 1 1 -1 1 -1 -1 -1 -1 1 -1 1 1 -1 1 1 -1 -1 -1 1 -1 1 -1 1 -1 1 1 -1 1 -1 -1 -1 1 1 1 -1 -1 -1 1 1 1 -1 -1 1 1 1 -1 1 1 1 1 1 -1 1 0 -1 1 1 1 -1 -1 0 1 1 1 1 -1 1 0 0 0 0 0 0 0 0 1 1 -1 -1 1 1 0 1 1 1 -1 1 1 0 1 -1 -1 -1 1 1 1 -1 -1 -1 -1 1 -1 -1 1 1 1 1 1 -1 1 1 -1 -1 1 -1 1 1 1 1 1 1 1 -1 -1 1 1 1 -1 -1 -1 -1 -1 1 1 -1 1 -1 -1 1 1 1 1 -1 -1 -1 1 1 1 -1 -1 -1 -1 -1 1 1 -1 1 -1 1 1 1 -1 1 1 -1 -1 1 -1 1 1 1 1 -1 -1 1 -1 -1 1 1 1 1 1 1 1 -1 1 1 1 -1 1 -1 1 1 -1 -1 -1 1 -1 1 1 1 -1 1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 1 1 1 -1 -1 -1 -1 1 1 -1 1 -1 1 -1 1 1 1 -1 1 -1 1 1 -1 1 -1 1 -1 1 1 -1 -1 -1 -1 -1 -1 -1 1 -1 -1 -1 1 -1 1 1 1 1 1 -1 -1 -1 1 -1 1 1 -1 -1 -1 1 -1 1 -1 -1 -1 1 1 1 1 -1 1 1 -1 0 1 -1 -1 -1 1 1 0 -1 -1 -1 1 1 -1 0 -1 1 1 1 1 -1 0 -1 -1 -1 -1 -1 -1 0 1 1 1 -1 -1 1 0 0 0 0 0]

*TGbn Editor: Please insert the following in Page 199 Line 5 of D0.2:*

(#1750)(#3556)$UHR-DLTF\_{-122, 122}$=

*TGbn Editor: Please make the following changes in Page 198 Line 60 of D0.2:*

 (#2185) For BW of 160 MHz or 320 MHz each 80 MHz frequency subblock uses the same UHR-LTF for DRUs defined for 80 MHz.

*TGbn Editor: Please add the following changes to Table 38-16 in Page 144 Line 7 of D0.2:*

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| Table 38-16 Timing-related constants  |
| Parameter | Value | Description |
| $$T\_{UHR-LTF-1x}$$ | 3.2 µs | Duration of each 1× UHR-LTF OFDM symbol without GI |
| $$T\_{UHR-LTF-2x}$$ | 6.4 µs | Duration of each 2× UHR-LTF OFDM symbol without GI |
| $$T\_{UHR-LTF-4x}$$ | 12.8 µs | Duration of each 4× UHR-LTF OFDM symbol without GI |