IEEE P802.11  
Wireless LANs

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| **CC50 Comment Resolutions for**  **38.3.15.10.1 UHR-STF for RRUs and 38.3.15.10.5 UHR-STF for ELR PPDU** |
| **Date:** 2025-04-03 |
| **Author(s):** |

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Abstract

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

336 340 591 596 1171 1173 2299 2305 2307 2777 2778 3524 3525 3559

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Revision based on discussion during presentation.

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 336*

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| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 336 | 38.3.15.10.1 | 188.55 | "38.3.15.10.1 UHR-STF for RRUs" may be largely identical to 36.3.12.9. Avoid duplictaion where possible. | See comment | Rejected.  Equations in 36.3.12.9 have already been used as references in order to avoid duplication. Other texts are still necessary in order to explain the UHR-STF for ELR PPDU as well as MU PPDU and TB PPDU. |

#### *CIDs 596, 1173, 2035, 2778, 3559*

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| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 596 | 38.3.15.10.5 | 194.16 | UHR-STF for ELR PPDU is described in 38.3.15.10.1. Delete 38.3.15.10.5. | See the comment. | Accepted. |
| 1173 | 38.3.15.10.5 | 194.26 | The text from line 26 to line 29 is not needed because it is already described in the previous clause. It is redundant. Delete it. | As the comment. | Revised.  Agree in principle with the commenter. Since 38.3.15.10.1 already describes the UHR-STF for ELR PPDU, suggest to remove 38.3.15.10.5.  TGbn editor: Resolution is the same as CID 596 in 25/0525r1. |
| 2035 | 38.3.15.10.5 | 194.16 | Why we need the separate subclause for UHR-STF for UHR ELR PPDU, 38.3.15.10.1 already includes the descriptions for UHR ELR PPDU on page 179 one 5. All the other texts are just repeat of the texts in 38.3.15.10.1. Please remove this subclause. | As in comment | Accepted.  TGbn editor: Resolution is the same as CID 596 in 25/0525r1. |
| 2778 | 38.3.15.10.5 | 194.15 | Section 38.3.15.10.5 may be merged with 38.3.15.10.1 | see comments | Revised.  Agree in principle with the commenter. Since 38.3.15.10.1 already describes the UHR-STF for ELR PPDU, suggest to remove 38.3.15.10.5.  TGbn editor: Resolution is the same as CID 596 in 25/0525r1. |
| 3559 | 38.3.15.10.5 | 194.18 | Missing Info | 3 dB boost spec for ELR UHR-STF is missing (mentioned in equation 38-24, but should also be mentioned here, same as it is done for ELR UHR-LTF) | Revised.  Agree in principle with the commenter. Since 38.3.15.10.1 already describes the UHR-STF for ELR PPDU including power boost, suggest to remove 38.3.15.10.5.  TGbn editor: Resolution is the same as CID 596 in 25/0525r1. |

#### *CIDs 3524, 340, 2307*

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| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 3524 | 38.3.15.10.5 | 194.33 | ELR packet is non\_OFDMA without puncture. STF tones -16 and 16 (Null subcarriers) and 0 (DC subcarrier) remain unmodulated | not modulated in the Data field, such as Null or DC subcarriers. | Revised.  Agree in principle with the commenter. Since 38.3.15.10.1 already describes the UHR-STF for ELR PPDU, suggest to modify the relevant text in 38.3.15.10.1 considering ELR-PPDU.  TGbn editor: Please make the changes shown in 11-25/0525r1. |
| 340 | 38.3.15.10.5 | 194.31 | This paragraph applies in general, not just for ELR. Why does this have to be stated in this section? | Clarify | Revised.  Agree in principle with the commenter. Since 38.3.15.10.1 already describes the UHR-STF for ELR PPDU, suggest to modify the relevant text in 38.3.15.10.1 considering ELR-PPDU.  TGbn editor: Resolution is the same as CID 3524 in 11-25/0525r1. |
| 2307 | 38.3.15.10.5 | 194.33 | "such as subcarriers falling within RUs that have no users assigned to them in OFDMA or subcarriers that are punctured." This sentence does not apply to UHR ELR PPDU, please remove it. | As in comment | Revised.  Agree in principle with the commenter. Since 38.3.15.10.1 already describes the UHR-STF for ELR PPDU, suggest to modify the relevant text in 38.3.15.10.1 considering ELR-PPDU.  TGbn editor: Resolution is the same as CID 3524 in 11-25/0525r1. |

*TGbn Editor: Please make the following changes in Section 38.3.15.10.1 of D0.2:*

**38.3.15.10.1 UHR-STF for RRUs**

…..

The coefficients in Equation (38-14) to Equation (38-23) are set to zero if those values are corresponding to subcarrier indices that are not modulated in the Data field, such as subcarriers falling within RUs that have no users assigned to them in OFDMA, subcarriers that are punctured, or null, or DC subcarriers.(#340)(#2307)(#3524)

#### *CIDs 3525, 1171, 2299, 2777, 591*

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| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 3525 | 38.3.15.10.5 | 194.41 | Add equation specific for single-user, single-stream ELR instead of reference to equation (38-24). 3 sigmas can be eliminated when applying this equation for ELR. |  | Revised.  Agree in principle with the commenter. Suggest to include a separate equation for ELR PPDU.  TGbn editor: Please make the changes shown in 11-25/0525r1. |
| 1171 | 38.3.15.10.1 | 190.49 | Equations 38-24 can be adapted to UHR ELR PPDU. So, UHR ELR PPDU should be added to the sentence of L49. | Change "UHR MU PPDU " with " UHR MU PPDU and ULR ELR PPDU " | Revised.  Agree in principle with the commenter. Suggest to include a separate equation for ELR PPDU.  TGbn editor: Resolution is the same as CID 3525 in 11-25/0525r1. |
| 2299 | 38.3.15.10.1 | 190.50 | UHR-STF time domain representation is missing for UHR ELR PPDU, please add it. If Equation (38-24) applies to both UHR MU PPDU and UHR ELR PPDU, please add that in the sentence on page 180, and in the sentence after windowing function for ... on page 181 | As in comment | Revised.  Agree in principle with the commenter. Suggest to include a separate equation for ELR PPDU.  TGbn editor: Resolution is the same as CID 3525 in 11-25/0525r1. |
| 2777 | 38.3.15.10.1 | 190.62 | Define symbol eta\_UHR-STF | see comments | Revised.  Agree in principle with the commenter. Suggest to replace the current text with a definition for eta\_UHR-STF.  TGbn editor: Please make the changes shown in 11-25/0525r1. |
| 591 | 38.3.15.10.1 | 191.13 | Add "," after "sqrt(2)" and "1" and delete "," after "for UHR ELR PPDU" and "for UHR MU PPDU" | See the comment. | Revised.  Agree in principle with the commenter. Suggest to replace the current text with a definition for eta\_UHR-STF.  TGbn editor: Resolution is the same as CID 2777 in 11-25/0525r1. |

*TGbn Editor: Please make the following changes in Section 38.3.15.10.1 of D0.2:*

**38.3.15.10.1 UHR-STF for RRUs**

…..

The time domain representation of the signal for a UHR MU PPDU on transmit chain *iTX* shall be as specified in Equation (38-24).

where

is defined in 38.3.14.4 (Transmitted signal)

is the per-RU power normalization factor and defined by

is a power scaling factor of a UHR-STF and equals 1 for a UHR MU PPDU.(#591)(#2777)

is the cardinality of the set of subcarriers , as defined in 38.3.14 (Mathematical description of signals)

is the set of subcarriers that have nonzero values within in the UHR-STF field

represents the cyclic shift for space-time stream as defined in 38.3.15.2.2 (Cyclic shift for UHR modulated field)

is defined in 38.3.14.4 (Transmitted signal)

is the windowing function for UHR-STF field in the UHR MU PPDU

is the cardinality of the set of subcarriers

and are defined in Table 38-18 (Frequently used parameters).

(#1171)(#2299)(#3525)The time domain representation of the signal for a UHR ELR PPDU on transmit chain *iTX* shall be as specified in Equation (38-25).

where

is a power scaling factor of a UHR-STF and equals for a UHR ELR PPDU.(#591)(#2777)

is the set of subcarriers that have nonzero values within in the UHR-STF field.

is the cardinality of the set of subcarriers .

is the set of subcarriers indices for the tones in four 52 RRUs used for a UHR ELR PPDU.