IEEE P802.11  
Wireless LANs

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| Comment Resolution for CID 322 | | | | |
| Date: 2025-05-10 | | | | |
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Abstract

This submission contains proposed comment resolutions to comments on P802.11bn D0.1. The changes are based on P802.11bn D0.1.

The submission provides resolutions to the following CIDs

322

Revisions:

* Rev 0: Initial version of the document.

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 322 | 158.18 | 38.3.15.8.1 | "The value of BSS\_COLOR ranges from 0 to 63". More correct to say 1 to 63. | "The value of BSS\_COLOR ranges from 0 to 63". More correct to say 1 to 63. | Revised  Note: BSSCOLOR in U-SIG has 6 bits. Since color=0 matches all recepients, it is appropriate to assign 1 to 63 as distinct colors and leave 0 as special case. PAC PDT 37.11.5 now dis-allows BSSCOLOR=0 for ELR. The first row of the mark matrix thus to be treated as reserved and will not be used for mark field.  CR #322  Note to editor: The highlighted (in blue) sentence to be appended to the paragraph in section 38.3.14.8. The relevant reference links also to be cited. |

**Note to the editor:** The sentence marked in skyblue color to be inserted. The highlighted portion to be soft-hyperlinked.

**CR # 322**

## 38.3.14.8 ELR-MARK

The ELR-MARK field in the ELR preamble provides additional signaling to distinguish a UHR ELR PPDU from other PPDUs. It helps to improve the detection by utilizing predefined tone patterns for cross-correlation, enhancing performance in low-SNR environments, and enabling coherent combining across multiple receiving antennas.

Additionally, the ELR-MARK field includes a unique identifier BSS\_COLOR, indicating the station’s BSS color. The value of BSS\_COLOR ranges from 1 to 63 (see 35.11.1.4 BSS\_COLOR). A 64 × 96 matrix Ḧ, called ELR-MARK matrix, specifies 64 orthogonal sequences. Each row corresponds to a BSS Color, while each column corresponds to the data conveyed over each subcarrier of the two ELR-MARK symbols. These orthogonal sequences allow STAs to determine if the UHR ELR PPDU is from OBSS. The first row of the ELR-MARK matrix is reserved and shall not be used in the ELR-MARK field as BSS\_COLOR=0 is disallowed for ELR PPDUs [1] and [section 37.4.2, 37.4.2 Enhanced Long Range (ELR) operation].

# References

1. <https://mentor.ieee.org/802.11/dcn/25/11-25-0915-00-00bn-pdt-cr-for-elr-mac.docx>

# Appendix

**The relevant draft section discussing the BSS\_COLOR in [1] is highlighted below.**

A UHR STA that intends to transmit an ELR PPDU shall ensure that:

– The PPDU is transmitted in the primary 20 MHz of the BSS,

– The STA\_ID, UPLINK\_FLAG, and TXOP\_DURATION are set as defined in 26.11 for HE ER SU PPDUs,

– The BSS\_COLOR is set to the value of the BSS Color subfield of the most recently received HE Operation element exchanged within the BSS (i.e., BSS\_COLOR of 0 is disallowed for ELR PPDUs (i.e., only the active BSS color can be used))

– The frame(s) carried in the ELR PPDU shall be individually addressed to the peer STA and the frame may be a control frame if the control frame is not solicited by another frame or if the control frame is not a trigger frame.

A UHR STA that responds to an ELR PPDU shall use CBW20 for the PPDU that carries the response frame.