IEEE P802.11
Wireless LANs

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| **CC50 Comment Resolutions for 38.3.21 Coordinated Beamforming** |
| **Date:** 2025-05-13 |
| **Author(s):** |

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Abstract

This submission proposes resolutions for comments of TGbn D0.2 with the following 4 CIDs:

355, 1948, 1949, 1950

Revisions:

* Rev 0: Initial version of the document.

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 2176 306 2706 2258*

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| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 355 | 38.3.21.1 | 207.54 | Change "the channel knowledge available" to "the available channel knowledge " | See comment | Revised.Agree in principle with the commenter. For consistency, “the number of antennas available” was also changed to “the available number of antennas” Also, the term ‘antenna’ was changed to ‘transmit chain’ or ‘receive chain in overall. TGbn editor: Please make the changes shown in 11-25/0703r2 |
| 1948 | 38.3.21.1 | 208.29 | In line 29-33, font size is a bit larger than other texts. | Adjust the font size. | Accepted. |
| 1949 | 38.3.21.1 | 208.29 | It's not a strong opinion but N\_user is a total number of users across the participating two APs. It would be better to be clarified. | How about this way? "N\_user is the number of Co-BF PPDU recipients across the two APs" | RejectedN\_user denotes the number of Co-BF recipients of the one AP. Current text is fine.  |
| 1950 | 38.3.21.1 | 208.46 | "all" should be replaced to "All". | As the comment | Accepted. |

*TGbn Editor: Please make the following changes in Section 38.3.21.1 of D0.2:*

Coordinated beamforming (Co-BF) is a technique used by multiple APs, each with multiple (#355) transmit chains (acting as a beamformer), to steer signals using knowledge of the channel in order to improve throughput, reliability and to reduce latency. With SU-MIMO beamforming all spatial streams in the transmitted signal are intended for reception at a single STA. With DL MU-MIMO beamforming, disjoint subsets of the spatial streams are transmitted from a single AP and are intended for reception at different non-AP STAs. With Co-BF, disjoint subsets of spatial streams are transmitted from different APs, where each AP’s subset of streams may be further divided into the streams intended for reception at one or more non-AP STAs associated with that AP.

Depending on (#355) the available channel knowledge and the available number of transmit chains at the APs, the steering matrices used by all the APs may ensure a minimal signal strength of an AP’s spatial streams at either all the (#355) receive chains of all the OBSS AP’s recipients or, if those recipients have more than a single (#355) receive chain, over a subspace of the eigen-modes of the channels to the OBSS AP’s recipients.

*TGbn Editor: Please replace the highlighted term ‘antennas’ to ‘transmit chains’ in line 30 in page 218 of D0.2*

