IEEE P802.11  
Wireless LANs

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| PDT MAC Coordinated Beamforming | | | | |
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Abstract

This document contains Proposed Draft Text (PDT) for the MAC portion of the coordinated beamforming feature of the TGbn (UHR, Ultra High Reliability) amendment to the 802.11 standard.

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: add more co-authors; text change on the definition. Change subclause number
* Rev 2: text change on the definition
* **Introduction**

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 Draft. The abstract, revision information, introduction, explanation of the proposed changes and references sections are not part of the adopted material.

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

**Explanation of the proposed changes:**

The proposed changes to the 802.11 TGbn draft within this document are based on the following motions adopted by the TGbn task group:

**Relevant passed motions:**

[Motion #29]

**TGbn defines multi-AP Coordinated Beamforming (Co-BF).**

[Motion #99]

**The Coordinated beamforming (Co-BF) transmission phase in 802.11bn shall be limited to 2 APs.**

[Motion #114]

**In a Co-BF transmission, the maximum number of spatial streams given to one user will be 2.**

[Motion #116]

**The Co-BF sequential sounding support to be conditional mandatory if the device supports Co-BF.**

# Text to be adopted begins here:

**3.2 Definitions specific to IEEE Std 802.11**

**coordinated beamforming:** [Co-BF] A procedure that enables two APs to perform concurrent transmissions using the CSI of the channels between each AP and all the recipient STAs to form nulls to unintended recipient STAs.

**37.7.2 Coordinated beamforming**

**37.7.2.1 General**

The objective of coordinated beamforming (Co-BF) is to allow more efficient medium usage by concurrent transmissions of two APs with multiple antennas using the CSI of the channels between each AP and all the recipient STAs of the Co-BF transmission. The number of participating APs in a Co-BF transmission shall be 2. The maximum number of spatial streams for each recipient STA of the Co-BF transmission is 2. The sounding procedure needed for obtaining the CSI for performing the Co-BF transmission is described in 37.6 (UHR sounding operation).