IEEE P802.11  
Wireless LANs

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | CID 4630 | | | | | | Date: 2021-09-16 | | | | | | Author(s): | | | | | | Name | Affiliation | Address | Phone | email | | Brian Hart | Cisco Systems |  |  | [brianh@cisco.com](mailto:brianh@cisco.com) | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |

Abstract

This submission proposes resolutions for the following comments from comment collection on P802.11be D1.0:

4630

The baseline used in this document is D1.1.

NOTE – Set the Track Changes Viewing Option in the MS Word to “All Markup” to clearly see the proposed text edits.

**Revision History:**

R0: Initial version.

R1: Added MIB and MAC changes; and clarified boost is per RU after offline discussion

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 4630 | 36.3.11.4 | 400.39 | P400L41-45 is probably correct but useless to the PHY since the PHY is not privy to the semantics of what is transmited in its PSDUs. If the PHY needs to know what is transmitted by the MAC, MAC needs to tell the PHY via an explicit parameter in PHYCONFIG\_VECTOR and/or a MIB variable | Define a (new) suitable PHYCONFIG\_VECTOR parameter and have the MAC configure it as information from recipient STAs change. Have the PHY use the new parameter. Keep this existing (layer-violating) language as an informative note. | Revised.  See changes in 21/1538<motionedRevision> which substantially align with the commenter’s goal except that the TXVECTOR is used to convey the alpha\_r parameter. |

**Discussion** (continues from Yan Zhang’s 21/1265r1)

It is agreed that α\_r values need to be passed to PHY from MAC, using a corresponding TXVECTOR parameter to pass from MAC to PHY. This should be added to HE, but until then, add it here. Also, move normative language to a suitable section (i.e., 35.8). Furthermore, align PHY, MAC and MIB language.

***TGbe editor: change (following Word track changes):***

Table 9-322ar—Subfield of the EHT PHY Capabilities Information field

|  |  |  |
| --- | --- | --- |
| Power Boost Factor Support | Indicates that the maximum value supported in a non-AP STA of the ratio of the maximum power boost factor over RUs in an EHT MU PPDU and the minimum power boost factor over RUs in the PPDU. | Set to 0 to indicate 2.  Set to 1 to indicate 4  Reserved for an AP. |

35.8 Rules for setting some TXVECTOR parameters for PPDUs transmitted by an

EHT STA

35.8.1 Setting TXVECTOR parameters for an EHT PPDU

35.8.1.1 STA\_ID

35.8.1.1a ALPHA

The power boost factor ALPHA for the r-th occupied RU or MRU in an EHT MU PPDU in the TXVECTOR shall be in the range [0.5, 2].

For an EHT MU PPDU, the ratio between the maximum value of ALPHA over all RUs and the minimum value of ALPHA over all RUs shall not exceed 4 unless the Power Boost Factor Support subfield of the EHT PHY Capabilities Information field in the EHT Capabilities element from any recipient STA of the PPDU equals 0, in which case the ratio shall not exceed 2. For an EHT MU PPDU transmitted to a single user(#1334), ALPHA shall be set to 1.

Subject to these constraints, the value of ALPHA is otherwise implementation specific.

***At P368-379 (e.g., last row in table 36-1):***

Table 36-1—TXVECTOR and RXVECTOR parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Condition | Value | TXVECTOR | RXVECTOR |
| … |  |  |  |  |
| ALPHA | Format is EHT\_MU | For an RU or MRU, set to the power boost factor of the RU or MRU respectively in the range of 0.5 to 2 (see 35.8.1.1a (ALPHA)). | MU | N |
| Otherwise | Not present | N | N |

***Insert immediately after table***

***Editor’s note: the ALPHA row should be deleted when and if ALPHA is added to the TXVECTOR and RXVECTOR parameters table in Clause 27 (HE PHY specification) in the 802.11REVme draft.***

***At D1.1P450L39:***

αr is the power boost factor of the r-th occupied RU or MRU in an EHT MU PPDU and it is determined by the ALPHA parameter in the TXVECTOR.

NOTE – αr is constrained as defined in 35.8.1.1a: i.e., for an EHT MU PPDU, αr is in the range [0.5, 2] and the ratio between the maximum value of αr over r and the minimum value of αr over r is limited to 4 unless the Power Boost Factor Support subfield of the EHT PHY Capabilities Information field in the EHT Capabilities element from any recipient STA of the PPDU is 0, in which case the ratio is limited to 2. For an EHT MU PPDU transmitted to a single user(#1334), αr equals 1.

***At D1.1P649L22:***

dot11EHTPowerBoostFactorImplemented OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a capability variable.

Its value is determined by device capabilities.

This attribute, when true, indicates that the non-AP STA is capable of receiving an EHT MU PPDU with a ratio of the maximum value of the power boost factor over all RUs and the minimum value of the power boost factor over all RUs not exceeding 4.

This capability is disabled otherwise, in which case the non-AP STA is capable of receiving an EHT MU PPDU with a ratio of the maximum value of the power boost factor over all RUs and the minimum value of the power boost factor over all RUs not exceeding 2."

DEFVAL { false }

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