IEEE P802.11
Wireless LANs

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| CID 4630  |
| Date: 2021-09-16 |
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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

R2: Evolved to limits on alpha rather than the max/min ratio of alphas

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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) and be clear about the meaning of 0 in the capabiilites element. Furthermore ( and it can be deduced that this is not a technical change), it is desirable to align the PHY and MAC language more closely with the MIB language, which reads:

***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 EHT MU PPDUs with RUs having a power boost factor in the range [0.5, 2].

This capability is disabled otherwise, in which case the non-AP STA is capable of receiving EHT MU PPDUs with RUs having a power boost factor in the range [1/sqrt(2), sqrt(2)]."

DEFVAL { false }

::= { dot11PhyEHTEntry 9 }

***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 range of power boost factors that a non-AP STA supports for the RUs in a received EHT MU PPDU. | Set to 0 to indicate a range of [ ].Set to 1 to indicate a range of [0.5, 2]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 [ ] if 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; and otherwise shall be in the range [0.5, 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 updated 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 [ ] if 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; and otherwise αr is in the range []. For an EHT MU PPDU transmitted to a single user(#1334), αr equals 1.