IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CID 1529 – on EDMG BRP packet duration | | | | |
| Date: 2018-2-27 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Hiroyuki Motozuka | Panasonic | 600 Saedo-cho, Tsuzuki-ku, Yokohama, Kanagawa, Japan |  | motozuka.hiroyuki@jp.panasonic.com |
| Gaius Wee |  |  | yaohuang.wee@sg.panasonic.com |
| Lei Huang |  |  | lei.huang@sg.panasonic.com |
| Takenori Sakamoto |  |  | sakamoto.takenori@jp.panasonic.com |
| Yutaka Murakami |  |  | murakami.ytk@jp.panasonic.com |
| Kazu Takahashi |  |  | takahashi.kazu@jp.panasonic.com |

Abstract

This submission proposes resolution of CID 1529 received from LB# 231 (TGay Draft 1.0).

CID: 1529

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Proposed Resolution** |
| 1529 | 30.6.8.2.3 | 352.12 | Typo. N\_SYMSmin is a typo of N\_BLKSmin | As per comment | **Revised**  TGay editor to make the changes shown in 11-18/0400r0 under all headings that include CID 1529. |

**Discussion**

**This subclause is for EDMG OFDM mode, so *NSYMS min* is correct, while *NBLKS min* should be the typo. Then, the text will be:**

NOTE—For a PPDU carrying a BRP frame, is defined on a per user basis as  = aBRPminOFDMblocks.

**But the text is still problematic or incomplete.**

1. **The value of *NSYMS min* shall be specified by a normative text. The normative text should be included in subclause 30.9.2.2.4 (EDMG BRP packet duration). The note should indicate the reference to the subclause.**
2. **The definition for aBRPminOFDMblocks is/will be removed from clause 20 in REVmd. We propose to specfy a formula to calculate the minimum number of OFDM symbols using the parameter aBRPminSCblocks and OFDM symbol (IDFT) and GI durations. This leads less overhead on the duration than defining single aBRPminOFDMblocks value for the different GI duration options (i.e. Normal/Short/Long GIs). (see proposed text change for 30.9.2.2.4)**
3. ***NSYMSmin* should be configurable similar to EDMG SC mode.**
4. **The text in 30.9.2.2.4 (EDMG BRP packet duration) in D1.0 specifies that “**The minimum duration of the Data field of an EDMG BRP packet when sent in an EDMG SC mode shall be equal to the value of the Requested BRP SC Blocks field within a responder’s EDMG Capabilities element.” We should not assume the PHY can refer any MAC fields. Since the value, the minimum number of SC blocks, shall be specified packet by packet by MAC, TXVECTOR should be the suitable interface.
5. **The NOTE in D1.0 mentions that *NBLKS min* is defined on a per user basis. Alternatively, we propose to specify that the MAC indicates the largest value among the users to the PHY so the PHY/MAC interface will be simplified.**

**Proposed changes to D1.0**

1. * 1. EDMG beamforming
        1. General

*Editor: insert the following paragraphs after the first paragraph in 10.38.9.1: (P163L1)(CID #1529)*

If an EDMG STA tramsmits a BRP frame and all the intended receivers’ EDMG Capabilities elements include the Beamforming Capability field, the TXVECTOR parameter EDMG\_BRP\_MIN\_SC\_BLOCKS shall be set to the largest value of the Requested BRP SC Blocks subfields of the receiver STAs.

If an EDMG STA transmits a BRP frame and at least one of the intended receivers’ EDMG Capabilities elements doesn’t include the Beamforming Capability field, the TXVECTOR parameter EDMG\_BRP\_MIN\_SC\_BLOCKS shall be set to aBRPminSCBlocks that is specified in 20.12.4.

1. * 1. TXVECTOR and RXVECTOR parameters

*Editor: add the following parameter to Table 27 – TXVECTOR and RXVECTOR parameter: (P219L1) (CID #1529)*

| Parameter | Condition | Value | TXVECTOR | RXVECTOR |
| --- | --- | --- | --- | --- |
| EDMG\_BRP\_MIN\_SC\_BLOCKS | FORMAT is EDMG | Indicates the minimum duration of the data field in units of SC IDFT/DFT period if EDMG\_TRN\_LEN is greater than 0.  This parameter is reserved if EDMG\_TRN\_LEN is 0. | Y | N |

* 1. + - 1. LDPC encoding

*Editor: modify the NOTE in the second last paragraph of 30.5.9.4.3 as follows: (P307L4) (CID #1529)*

NOTE—For a PPDU carrying a BRP frame, the value of  is specified in 30.9.2.2.4.

* 1. + - 1. LDPC encoding

***Editor: modify the NOTE in the second last paragraph of 30.6.8.2.3 as follows: (P352L12) (CID #1529)***

NOTE—For a PPDU carrying a BRP frame, the value of  is specified in 30.9.2.2.4.

* + - * 1. EDMG BRP packet duration

*Editor: change the subclause 30.9.9.2.4 as follows: (CID #1529)*

The minimum duration of the Data field of an EDMG BRP packet is specified by the TXVECTOR parameter EDMG\_BRP\_MIN\_SC\_BLOCKS in units of SC IDFT/DFT period.

If the BRP packet is sent in EDMG SC mode, the number of the minimum SC symbol blocks, *NBLKS min* (see 30.5.9.4.3), shall be equal to the value of the TXVECTOR parameter EDMG\_BRP\_MIN\_SC\_BLOCKS. If necessary, the data field of the EDMG BRP packet shall be extended by extra zero padding to generate the required number of EDMG SC blocks.

If the BRP packet is sent in EDMG OFDM mode, the number of the minimum OFDM symbol blocks, *NSYMS min* (see 30.6.8.2.3), is defined as follows.

where:

is the value of the TXVECTOR parameter EDMG\_BRP\_MIN\_SC\_BLOCKS

is the SC IDFT/DFT period defined in 30.5.2.2

is the OFDM IDFT/DFT period defined in 30.6.1.2

is the guard interval duration of the EDMG PPDU

If necessary, the data field of the EDMG BRP packet shall be extended by extra zero padding to generate the required number of EDMG OFDM symbols.

**Straw Poll:**

* **Do you agree to accept the comment resolution for CID 1529 in 18/0400r0?**

**References**

[1] Draft P802.11ay D1.0