IEEE P802.11
Wireless LANs

|  |
| --- |
| CR of CID 2273 |
| Date: 2022-03-07 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Xiaogang Chen | Intel | 2111 NE 25th Ave, Hillsboro, OR, 97124 |  | Xiaogang.c.chen@Intel.com |

Abstract

This document proposes resolutuion to CID 2273

Revisions:

 R0: The initial version of the draft.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **P.L.** | **Comment** | **Proposed Change** | **Resolution** |
| 2273 | 17.3.9.3 | 3500.52 | The proposed change M25 is very problematic for any 802 legacy device.This change will not only affect 802.11 legacy devices but also 802.15 legacy devices.The proposed change would increase the absolute TX power in a 20 MHz nonadjacent channel by 14 dB. For instance, if TX power is 23 dBm before the maximum TX power would have been -40 dBm but now is -26 dBm.It is unclear if the receiver performance requirements can be still met. Further, will a legacy devide more often experience a busy channel due to higher out of band radiation of new devices?The Motion 25 of REVme and the corresponding contribution 11-21/1448r3 do not provide any information how legacy devices will be affected by this change.This change requires some additional coexistance studies before it should be included in REVme. | Please revert all changes w.r.t. M25 to the previous values in 802.11-2020 and 802.11-2021ax or rephrase the change so that it is only applicable to devices transmitting in the 6 GHz band but not in the 2.4 or 5 GHz band. | Rejected.1. M25 doesn’t affect nonadjacent channel power leakage. Refer to the discussions.
2. M25 only applicable to 5/6GHz not 2.4GHz; no impacts to Bluetooth;
3. See more reasons in discussions.
 |

Discussions:

The transmit spectrum mask of 802.11 was defined as: The transmit spectrum shall not exceed the maximum of the interim transmit spectral mask and -39 dBm/MHz at any frequency offset. As shown in table below, for 20MHz PPDU with 23dBm EIRP, power leakage at nonadjacent channel shall be smaller than -30dBm/MHz (-40dBr). The -39dBm/MHz doesn’t change the legacy requirement for the concerned case at all.

In addition, figure 1 also compare the PSD reqruiements between different technologies. -39dBm/MHz is still much righter than peer technolog.

|  |  |  |
| --- | --- | --- |
| BW(MHz) | Abs PSD Floor (dBm/MHz) | Assuming 23dBm EIRP: -40dBr -> PSD(dBm/MHz) |
| 20 | -53 | -30 |
| 40 | -56 | -33 |
| 80 | -59 | -36 |
| 160 | -59 | -39 |
| 320 | -59 | -42 |

###

Figure 1.

-------------------------------------------------------------------------End of discussions--------------------------------------------------------------