IEEE P802.11
Wireless LANs

|  |
| --- |
| CID 3580 Resolution |
| Date: 2018-September-13 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Alecsander Eitan | Qualcomm |  |  | eitana@qti.qualcomm.com |
| Assaf Kasher | Qualcomm |  |  | akasher@qti.qualcomm.com |
| Solomon Trainin | Qualcomm |  |  | strainin@qti.qualcomm.com |
| Payam Torab | Facebook |  |  | ptorab@fb.com |
| Nikolas Olaziregi | Nokia |  |  | nikolas.olaziregi@nokia.com |

Abstract

This submission proposes resolutions of comment 3580 received from TGay LB234.

The resolutions are in reference to Draft IEEE P802.11ay/D2.0 and IEEE 802.11-2016.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3580 |  |  | DMG devices operating in TDD mode are particularly sensitive to co-channel interrence (CCI) from same or other DMG devices. | define CCI tolerance requirements for DMG devices, and discus applicaility to DMG in TDD mode only, DMG or EDMG. |

**Discussion:**

Details are presented in 11-18-1647-02-00ay

* TDD systems operate in schedule mode, over a common channel and are required to operate with low FER/PER and low latency. TDD systems operate multiple links reusing the frequency and time slots, hence it can be expected that receivers will sense interference from other nodes in the TDD network. The above's sum to a requirement to the receiver to be able to operate in the presence of CCI. The receiver is expected to include methods to be resilient to CCI (unwanted frame received before the wanted frame)
* Unwanted frame may precede the wanted frame at TDD slot start by up-to “Guard Time”, with a power up-to XdB below the wanted frame power.
(XdB value depends on the TDD system deployment and configuration; reasonable value can be as low as 6dB)
* CCI during the slot, mainly cause SINR degradation

**Proposed resolution**: Revised:

***TGay Editor: Add the following sub-section in D2.0 P404L35, at the end of section 29.3.9, as follows:***

**29.3.9.3 Receiver co-channel interference (CCI) resilience**

Co-channel ~~resiliencre~~ resilience is defined as the ability of an STA to correctly recei~~ve~~ ~~and decode~~ an intended PPDU ~~transmission~~ in the presence of an interfering transmission on same channel and overlapping in time.

In the presence of DMG CCI, a DMG STA operating in a TDD SP should decode an intended PPDU ~~that contains at least one MPDU with RA field set to the MAC address of the STA~~ as long as all ~~at least under~~ the following conditions~~:~~ hold,

* The RCPI of the PPDU is at least 3dB above actual receiver sensitivity; and
* The RCPI of the CCI is 6dB or less than the RCPI of the PPDU; and
* The PPDU has sufficient SINR to be decodable.

NOTE- An intended PPDU is a PPDU that contains at least one MPDU with RA field set to the MAC address of the receiving STA. DMG CCI is interference caused by a DMG PPDU.

***TGay Editor: Add the following to section 3.4 in D2.0 P23L1, at the alphabetical location, as follows:***

|  |  |
| --- | --- |
| SINR  | signal to, noise plus interference, ratio  |