IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TDD slot assignment clarification | | | | |
| Date: 2018-01-16 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Solomon Trainin | Qualcomm |  |  | strainin@qti.qualcomm.com |
| Lochan Verma | Qualcomm |  |  | lverma@qti.qualcomm.com |
| Carlos Cordeiro | Intel |  |  | carlos.cordeiro@intel.com |

Abstract

Clarification of the TDD slot in relation to assignments for transmission and receiving rights CID1940

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 1940 | 86.01 | 9.4.2.268 | Actual transmission or receiving in a TDD slot the STA is assigned to depends on the STA role. Existing language is that AP STA transmits in TX Slot and non AP STA transmits in RX Slot. The existing definition requires separate TX/RX rules for AP and non-AP STA that misleads implementation of the lower MAC. Propose to clarify definition of the TDD slot to unify the behavioral rule. | Modify definition of TDD slots that instead of TX TDD and RX TDD make it clear that each slot is TX for one STA and RX slot for another STA thus unify definition in 10.36.6.2.2 to avoid double rules covered AP STA and non-AP STA. Submission is ready to present |

**9.4.2.268 TDD Slot Schedule element**

*At P87L3 remove “A value of 00 (binary) indicates that the TDD slot is unassigned. A value of 01 (binary) indicates the STA is assigned to a simplex TX TDD slot. A value of 10 (binary) indicates the STA is assigned to a simplex RX TDD slot. Value 11 (binary) is reserved” and replace by:*

Each pair of consecutive 2 bits indicates the type and access permission of the TDD slot as presented in Table xyz1

**Table xyz1-Bitmap and Access Type Schedule field encoding**

|  |  |  |
| --- | --- | --- |
| Binary encoding | Operation between AP or PCP DMG STA and non-AP and PCP DMG STA during TDD slot | |
| Behavior of AP and PCP STA | Behavior of Non-AP and non-PCP STA |
| 00 | N/A; TDD slot unassigned | |
| 01 | TX | RX |
| 10 | RX | TX |
| 11 | reserved | |

**10.36.6.2.2 SP with TDD channel access**

Change at P136L11-L23

The type of a TDD slot can be of simplex TDD slot or unassigned. No transmissions shall occur in an unassigned TDD slot. The DMG AP or DMG PCP that transmitted the TDD Slot Schedule element and the non-AP and non-PCP STA become the source and destination STA for the TDD slot the STAs are assigned to. RX and TX operations during a simplex TDD slot depending on STA behavior indicated in the Bitmap and Access Type Schedule field as defined in Table xyz1 as follows:

- In a simplex TDD slot a DMG STA is assigned to, the STA shall not transmit if the Bitmap and Access Type Schedule field (Table xyz1) indicates value different than TX for the STA.

- In the simplex TDD slot a DMG STA is assigned to and the Bitmap and Access Type Schedule field (Table xyz1) indicates value equal to TX, the STA should initiate transmissions at the start of a simplex TX TDD slot addressed to another STA assigned to the TDD slot (Table xyz1).

- In the simplex TDD slot a DMG STA is assigned to and the Bitmap and Access Type Schedule field (Table xyz1) indicates value equal to RX, the STA shall be beamformed towards the peer STA the simplex TDD slot is assigned to and remain in the receive state for the duration of the TDD slot in order to receive transmissions from peer STA.

**References:**

IEEE P802.11ay/D1.0, November 2017