IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TDD access CIDs | | | | |
| Date: 2019-04-14 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Assaf Kasher | Qualcomm |  |  | akasher@qti.qualcomm.com |
| Alecsander Eitan | Qualcomm |  |  | eitana@qti.qualcomm.com |
| Solomon Trainin | Qualcomm |  |  | strainin@qti.qualcomm.com |

Abstract

This docukment presents resolutions to several TDD access CIDs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 4071 | 244.03 | 3 | 10.40.6.2.2 | The statement "TDD slots shall not overlap in time." is not fully corect since they shall be spaced according to other parameters as well. Such a line is misleading since it gives a rule with is partial. | Add the right and FULL rule. | Reject |

Proposed Resolution: **Reject**

Discussion:

The slot structure is intentionaly kept unrestricted accept to the mentioned limitation. The AP decision on which slots are TX and RX for the STA is more frequent than the sending of the slot structure element. The AP has all the information as to how to create the element and what are the other limitations on the spacing beween slots.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 4146 | 243.20 | 20 | 10.40.6.2.2 | "A STA shall not transmit outside the boundaries of a TDD slot": I believe this is limitted to transmission within a TDD slot | Add "Within a TDD SP" at the beginning of the sentence. | Accept |
| 4403 | 243.20 | 20 | 10.40.6.2.2 | "A STA shall not transmit outside the boundaries of a TDD slot it is assigned to with Bitmap and Access Type Schedule field equal to TX." conflicts with P244L20, where it says "Provided the STA behaviors are the same, transmissions and receptions in adjacent TDD slots that are assigned to the same pair of STAs may continue in between the adjacent TDD slots." | Reconcile these sentences. | **Revise** |

Proposed Resolution: **Accept**

***TGay Editor: modify P243L20 as follows:***

for the STA equal to TX. Within a TDD SP, a STA shall not transmit outside the boundaries of a TDD slot it is assigned to with Bitmap and Access Type Schedule field equal to TX, except between two adjacent slots of the same category and with same destination STA.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 4404 | 244.20 | 20 | 10.40.6.2.2 | "Provided the STA behaviors are the same, transmissions and receptions in adjacent TDD slots that are assigned to the same pair of STAs may continue in between the adjacent TDD slots."  Is the provided part trying to say these adjacent slides are of the same category? If yes, just indicate that. | If that is the intention, reword along he lines of "Transmissions and receptions in adjacent TDD slots that are assigned to the same pair of STAs and are of the same category may continue in between the adjacent TDD slots based on the behavior defined for the slot category." | **Reject** |

Proposed Resolution: **Reject**

**Discussion**

The issue of continuing the transmission beween the slots was dealt in the resolution to 4403. The rest of the behavior is described above (L5-L15) clearly.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 4266 | 10.40.6.2.2 | 244.27 | There should be a mechanism to let rx know whether it should use SISO or MIMO antenna config in a simplex RX slot, e.g. Rx always use SISO ant config until receiving a CTS2self frame with CT for antenna configuration. In this case DMG CTS2self should be allowed in data slot | change to "In a Data-only TDD slot, only Data frames, BlockAckReq frames and CTS to self frames shall be allowed" | **Revise** |

Discussion:

It should also be noted however, for how long the MIMO configuration is maintained.

***TGay Editor: Modify the text in P244L27 as follows***

frame types. In a Data-only TDD slot, only Data frames, BlockAckReq and CTS-to-self frames shall be allowed. In a BF TDD slot, only the transmission of TDD SSW and TDD SSW Ack frames shall be allowed.

***TGay Editor: Add the following after P250L12 (10.40.11.4.3)***

If an SU-MIMO initiator uses a DMG CTS-to-self frame to switch to SU-MIMO transmission in a TDD slot, the initiator and responder shall communicate using SU-MIMO transmissions until one of the following occurs:

1. The initiator transmits to the responder a DMG CTS-to-self frame with TXVECTOR parameters CT\_TYPE set to GRANT\_RTS\_CTS-2self and NEXT\_TX\_SISO set to NextTxSingleAntenna; or
2. Beamforming training between the initiator and responder.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 4400 | 127.26 | 126 | 9.4.2.250.4 | It seems devices that do not support 1344 LDPC codewords may still receive such a frame at the beginning. | - Review all network entry scenarios to enforce the first transmission to not use 1344 (MCS 0 , MCS > 0 with 672 etc.) - Review scenarios with frames out of association to use 672 (ex. Probe Request, Probe Response, Information Request, Information Response, ... any frame that can be received without knowing capability)  - Edits to PICS to indicate 1344 being optional  - Does PICS also need to capture "Long CW Punctured Supported" and "Long CW Superimposed Supported" options?  - If the answer is yes, same issue for options for 672 codeword size (and all PHY capabilities) Also, for elegance, consider putting these bits together and in this order,  - Long CW (rename to Long CW Supported) - Long CW Punctured Supported - Long CW Superimposed Supported | **Reject** |

**Discussion:**

In the baseline, there is no requirements to use mandatory MCSs or other mandatory features (different size GIs, etc.) before the capability exchange.

For the PICS, the LPCS capabilities are covered under EMDG-P7 and subcapabilities.

**References:**