IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LB239 Comment Resolution II | | | | |
| Date: 2019-04-06 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Tony Xiao Han | Huawei |  |  | [Tony.hanxiao@huawei.com](mailto:Tony.hanxiao@huawei.com) |
| Li Hsiang Sun | Interdigital |  |  |  |
| Rui Yang | Interdigital |  |  |  |
| Xiaofei Wang | Interdigital |  |  |  |
| Oren Kedem | Intel |  |  |  |
| Carlos Cordeiro | Intel |  |  |  |
| Payam Torab | Facebook |  |  |  |

Abstract

This submission proposes resolutions to comments submitted in LB239. The text used as reference is D3.0.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Comment** | **Proposed change** | **Resolution** |
| 4256 | 9.3.1.24.4 | There is no Ack Count Index in TDD SSW ack frame. If Responder only receives TDD SSW ack but does not receive TDD SSW frame in the same slot, it will not be able to calculate initiator/responder transmit offset based on (9),(10) in p332, 333 | add ack count Index in TDD SSW ack frame for TDD group BF |  |

**Proposed resolution**: Revised

**Discussion:**

1.      For the equation (7) and (8), the context is after sending/receiving TDD SSW frame, so the “+1” should be for “*CountIndex*”

2.      For the equation (9) and (10), the context is after sending/receiving TDD SSW Ack frame, so the “+1” should be for “*AckCountIndex*”

**Modifications**: *Please modify lines 1-3 of page 91 as follows:*

The Count Index subfield indicates the index of the TDD Beamforming frames transmitted by the initiator within a TDD slot, with the subfield set to 0 for the first transmission and increased by one for each successive transmission within a TDD slot.

**Modifications**: *Please modify lines 3-5 of page 93 as follows:*

The Count Index subfield indicates the index of the TDD Beamforming frame transmitted by the initiator within a TDD slot, with the subfield set to 0 for the first frame transmission and increased by one for each successive frame transmission within a TDD slot.

**Modifications**: *Please modify lines 26-28 of page 92 as follows:*

**9.3.1.24.4 TDD SSW Ack**  
The TDD Beamforming Information field of a TDD SSW Ack frame when TDD individual BF is used is shown in Figure 17a.

The TDD Beamforming Information field of a TDD SSW Ack frame when TDD group BF is used is shown in Figure 17b.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Decoded TX Sector ID | Decoded TX Antenna ID | Count Index | Transmit Period | SNR Report | Initiator Transmit  Offset | Responder Transmit  Offset | Reserved |
| Bits : | 10 | 2 | 3 | 8 | 8 | 8 | 8 | 1 |

**Figure 17a—TDD Beamforming Information field format (TDD individual BF)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Decoded TX Sector ID | Decoded TX Antenna ID | Count Index | Transmit Period | SNR Report | Initiator Transmit  Offset | Responder Transmit  Offset | Ack Count Index | Reserved |
| Bits : | 10 | 2 | 3 | 8 | 8 | 8 | 8 | 3 | 6 |

**Figure 17b—TDD Beamforming Information field format (TDD group BF)**

**Modifications**: *Please add a paragragh after line 19 of page 93 as follows:*

The Ack Count Index subfield indicates the number of the TDD SSW Ack frames that have been sent before the current TDD SSW Ack frame within the same TDD slot. The Ack Count Index subfield is set to 0 if no TDD SSW Ack frame is transmitted before the current TDD SSW Ack frame in the same TDD slot, and increases by one for each transmission of a TDD SSW Ack frame within the same TDD slot.

**Modifications**: *Please modify line 1-2 of page 331 as follows:*

*ResponderFeedbackOffsetn* – [*AckCountIndex* × TXTIME(TDD SSW Ack) + (*CountIndex* + 1 –*AckCountIndex*) × TXTIME(TDD SSW) + (*CountIndex* × SBIFS)] (7)

**Modifications**: *Please change “TDD Ack” to “TDD SSW Ack” in line 15 of page 331 (i.e., Figure 156).*

**Modifications**: *Please modify line 22-23 of page 331 as follows:*

*InitiatorAckOffsetn* – [*AckCountIndex* × TXTIME(TDD SSW Ack) + (*CountIndex* + 1 – *AckCountIndex*) × TXTIME(TDD SSW) + (*Count Index* × SBIFS)] (8)

**Modifications**: *Please modify line 44 of page 332 as follows:*

AckCountIndex is the Ack Count Index subfield value from the transmitted TDD SSW Ack frame

**Modifications**: *Please modify line 14 of page 333 as follows:*

AckCountIndex is the Ack Count Index subfield value from the transmitted TDD SSW Ack frame

**Modifications**: Please modify line 35 of page 332 as follows:

*InitiatorTransmitOffset – [(AckCountIndex+1) × TXTIME(TDD SSW Ack) + (CountIndex – AckCountIndex) × TXTIME(TDD SSW) + (CountIndex × SBIFS)] (9)*

**Modifications**: Please modify line 1~6 of page 333 as follows:

Once the initiator sends a TDD SSW Ack frame with the End of Training subfield equal to 1 to a target responder, after the time offset indicated by the following equation, the initiator shall set its receive and transmit DMG antenna and sector as was indicated in, respectively, the TX Antenna ID and TX Sector ID subfields of the respective TDD SSW Ack frame with the End Of Training subfield set to 1, in order to receive the Announce frame transmitted by the responder:

*ResponderTransmitOffset – [(AckCountIndex+1) × TXTIME(TDD SSW Ack) + (CountIndex – AckCountIndex) × TXTIME(TDD SSW) + (CountIndex × SBIFS)] (10)*