IEEE P802.11
Wireless LANs

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| Proposed resolution to BF PHY related CIDs |
| Date: 2017-09-27 |
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Abstract

This submission proposes a resolution to several CIDs submitted on the 11ay draft text related to BF PHY. The discussion is in reference to Draft IEEE P802.11ay/D0.5.

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 98 | 30.9.2.2.7 | 158.07 | We may want to find the LOS tap in addition to the tap with the largest amplitude | Add text that allows for LOS tap reporting and have a bit that indicates whether it is LOS or "largest amplitude" |

**Proposed resolution**: Rejected

*Discussion:* A motion approved in the September 2017 interim session (#294, based on the draft text proposed in 17/1436r1) defined a mode of BF training in which training looks for the first path rather than the best path. To support this feature, the following changes can be found in the text proposed in 17/1436r1:

* Add a field to the EDMG BRP request element indicating that the procedure is a First Path training procedure.
* Add a bit to the EDMG-Header-A indicating that the TRN field is for First Path training – this is needed because the processing may done at the PHY level.
* Add text to support this procedure.
* Add a capability bit for this feature.

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 293 | 30.9.1.1 | 153.09 | please clarify the concepts about DMG antenna(11ad), RF chain ID(Table 41), and TX/RX Antenna ID(Table 4).The range of DMG antenna and RF chain ID is 1~4 . And it is inconistent with 9.4.2.253 Table 4 where the range of TX/RX Antenna ID is 1~8. | please clarify and fix the same problem in the spec. |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 400 | 30.9.1.1 | 153.10 | what is the purpose of RF chain ID in short SSW packet and why receiver needs to know this? If max SS is 8, why there are 4 ids | Described how this field would be used by the receiver of the short SSW packet |

**Proposed resolution**: Accepted

*Discussion:* In order to make the length of the “RF chain ID” field of Short SSW packets consistent with that of other fields/elements (EDMG-Header-A, for example), the following changes are proposed which extend the RF Chain ID to 3 bits by removing one bit from the Packet Type.

*Modify 30.9.1 (Short SSW packet) as follows*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Packet Type | Direction | Addressing Mode | Source AID | Destination AID | CDOWN | RF Chain ID | Short Scrambled BSSID | Unassociated | FCS |
| Bits | ~~2~~ 1 | 1 | 1 | 8 | 8 | 11 | ~~2~~ 3 | 10 | 1 | 4 |

Figure 98 — Short SSW packet format when the Direction field is 0 (I-TXSS) and Addressing Mode field is 0

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Packet Type | Direction | Addressing Mode | Source AID | Destination AID | CDOWN | RF Chain ID | Setup Duration | Reserved | FCS |
| Bits | ~~2~~ 1 | 1 | 1 | 8 | 8 | 11 | ~~2~~ 3 | 10 | 1 | 4 |

Figure 99 — Short SSW packet format when the Direction field is 0 (I-TXSS) and Addressing Mode field is 1

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Packet Type | Direction | Reserved | Source AID | Destination AID | CDOWN | RF Chain ID | Short SSW Feedback | FCS |
| Bits | ~~2~~ 1 | 1 | 1 | 8 | 8 | 11 | ~~2~~ 3 | 11 | 4 |

Figure 100 — Short SSW packet format when the Direction field is 1 (R-TXSS)

Table 68 — Short SSW field definition

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| --- | --- |
| Field | Definition |
| Packet Type | Indicates the type of the packet. Possible values: 0: Short SSW1~~-3~~: Reserved |

Do you accept the resolutions given in 17/1530r0 to the following CIDs: 98, 293, and 400?