IEEE P802.11
Wireless LANs

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| 11ad related fixes (CID2110) |
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Abstract

This submission proposes resolutions to issues found in the 11ad text and to CID2110.

The discussion is in reference to Draft P802.11REVmc\_D2.0.

**RXSS length issue**

An RXSS length field is defined as part of the SSW field (8.5.1), as part of the capability information field **(8.4.2.127.2)** and as part of the beamforming control field (8.5.5). In all these cases its length is 6 bits. However, the interpretation of the value in the field is different when it is a part of the SSW field from the other two cases.

When used in the SSW field, the value represents the number of sectors to be used in the RXSS. When used as part of the beamforming control field, the number of sectors is given by value(RXSS Length)\*2+1.

Besides creating confusion, this limits the sector sweep length to 64, which may be limiting when the device has more than one RX antenna. We propose to change the definition of the RXSS length field at the SSW field to match that of the RXSS length in the beamforming control field.

*Change P1012L24-28 as follows:*

The RXSS Length field is valid only when transmitted in a CBAP and is reserved otherwise. The RXSS Length field specifies the length of a receive sector sweep as required by the transmitting STA, and is defined in units of a SSW frame. The length of the sector sweep, including any LBIFS if necessary for DMG antenna switching, is given by (RXSS Length+1)\*2.

**RXSS transmitting antennas in ISS vs RSS issue.**

The current text has different behaviour in a receive sector sweep (RXSS) when it happens in the Initial Sector Sweep (ISS) and the Responder Sector Sweep (RSS). In the ISS the initiator is required to transmit only from the best antenna and the best sector it selected during a preceding TXSS. In the RSS the responder is required to transmit from all of its antennas. This doesn’t make sense, and it is probably an oversight from a previous comment resolution round. We propose to change the behaviour in RSS to match that in ISS.

*Change P1416L47-51 as follows:*

During the responder RXSS, the responder shall transmit the number of SSW frames indicated by the

initiator in the initiator’s most recently transmitted RXSS Length field (non-A-BFT) or FSS field (A-BFT)

from the DMG antenna and sector that were selected during the preceding TXSS with the initiator. The responder shall set the Sector ID

**Resolution to CID 2110**

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| 2110 | 1341.40 | 9.38.3 | "5.27 ++s" - magic numbers considered harmful. Where does this come from? | Either add a note so that future generations know how to maintain this when DMG++ arrives, or relate it to PHY attributes. |

***Discussion:*** Assignee tried to dig up the source of this number in the many past 11ad submissions, but was not able to find one. Therefore, the best conclusion that can be reached is that this number is somewhat arbitrary. The value reflects the minimum duration of a packet that would allow measurement of parameters that are needed for the link measurement report, which is implementation dependent.

**Proposed resolution**: Revise

*Insert the following new parameter in Table 10-24 in subclause 10.39*

aMinPPDUDurationForDMGMeasurement; 5.27 µs

*Replace all instances of “*5.27 µs*” in section 9.38.3 by “*aMinPPDUDurationForDMGMeasurement*”*