IEEE P802.11
Wireless LANs

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| Resolution to CID related to DMG Link Measurement |
| Date: 2019-March-3 |
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Abstract

This submission proposes resolution to CID 4035

The resolutions are in reference to Draft IEEE P802.11ay Draft3.0

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| --- | --- | --- | --- |
| CID | Clause | Comment | Proposed change |
| 4035 | 9.4.2.127.7 | Make Link Measurement available not only to TDD but general for EDMG devices.The Link Measurement can be very usefull for any link adaptation like MCS and TPC. Although it w3as designed for TDD mode and essential for TDD mode it should be generaly available. | Move the TDD Synchronization Mode capability outside from the TDD Capability Information field to allow general use, and rename it.See submission: 11-19-0284-00-00ay CID-on-Link-Measurement. |

**Discussion:**

The commenter is correct “TDD Link Maintenance Statistics” is now limited to TDD Channel Access. There is no reason to keep the feature TDD specific.”

**The TDD Link Maintenance Statistics, including the “Parameters Across Rx Chains”, “Parameters Across PPDUs”, “Parameters Across LDPC Codewords” and “Parameters Across SC Blocks/OFDM Symbols”, which are now available only in TDD mode are general (not specific to TDD mode) and they are the ONLY method for providing feedback for any MIMO case where NSTS>1.**

Due to the above, it is essential to make the Link Maintenance Statistics be available also for non-TDD operation mode.

The changes include:

* Rename “TDD link maintenance” with “DMG Link maintenance”
* Split the capability bits for “DMG Link maintenance” to a separate octet and not part of the “TDD Capability Information field”

**Proposed resolution:** Revise.

***TGay Editor: Modify Figure 9-542 with the as follows: (P106L11)***



***TGay Editor: Replace Figure 30 with the following(P107L9)***



***TGay Editor: Delete the following text P107L13 and on:***

***TGay Editor: Insert the following as a new section before 9.4.2.127.7***

**9.4.2.127.X DMG Link Maintenance Statistics Information field**

The DMG Link Maintenance Statistics Information field indicates the capabilities of reporting DMG Link statistics and is shown in Figure 31.



**Figure 31 —DMG Link Maintenance Statistics Information field format**

The Parameters Across Rx Chains Supported subfield is set to 1 to indicate the STA supports reporting the parameters across RX chains in the DMG Link Margin element (see 9.4.2.142). Otherwise, this field is set to 0.

The Parameters Across PPDUs Supported subfield is set to 1 to indicate the STA supports reporting the parameters across PPDUs in the DMG Link Margin element (see 9.4.2.142). Otherwise, this field is set to 0.

The Parameters Across LDPC Codewords Supported subfield is set to 1 to indicate the STA supports reporting the parameters across LDPC codewords in the DMG Link Margin element (see 9.4.2.142). Otherwise, this field is set to 0.

The Parameters Across SC Blocks/OFDM Symbols Supported subfield is set to 1 to indicate the STA supports reporting the parameters across SC blocks or OFDM symbols in the DMG Link Margin element (see 9.4.2.142). Otherwise, this field is set to 0.

***TGay Editor: Section 10.44.5 (P338L13..)***

**10.44.5 DMG Link maintenance**

A STA indicates support for DMG link maintenance by setting the DMG Link Maintenance Statistics field within the STA’s DMG Capabilities element to a nonzero value. A STA that supports DMG link maintenance shall not initiate DMG link maintenance, as specified below, with a peer STA that does not support DMG link maintenance.

The SME of the STA that supports DMG link maintenance shall use the PLME-MINPAYLOADSTAT.request primitive to request the PHY to initiate measurement of signal power of received PPDUs and to compute the receiver statistics as described below. Upon receiving a PLME-MINPAYLOADSTAT.request primitive, the PHY shall use the parameter PSDU\_MIN\_LENGTH of the primitive to start the measurements and shall respond to the MAC with a PLME-MINPAYLOADSTAT.confirm primitive.

A STA that supports DMG link maintenance and that receives a Link Measurement Request frame shall include a DMG Link Margin element in a transmitted Link Measurement Report frame. The STA shall perform the link statistics measurements and set the DMG Link Margin element according to the following rules: