IEEE P802.11
Wireless LANs

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| Comment Resolution on CID 6216 |
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Abstract

This submission proposes resolutions to CID 6216

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 6216 | 3.2 | 22 | The definition of DMG A-PPDU and EDMG A-PPDU are very confusing. A DMG PPDU is defined as a clause 20 PPDU. Hence, a DMG A-PPDU is defined to cognatian only DMG PPDUs (which are non-EDMG PPDUs) and an EDMG A-PPDU to contain only EDMG PPDUs. But DMG is defined to include all operation in a frequency band with a channel greater than 45 GHz, hence both non-EDMG (clause 20) and EDMG (clause 28). To me this is inconsistant. | Fix the definitions to remove the inconsistancy and confusion. |

**Discussion:**

The definitions of DMG STA, CDMG STA and EDMG STA are described in Section 4.3.21, Section 4.3.26 and Section 4.3.30, respectively.

**4.3.21 DMG STA**

The IEEE 802.11 DMG STA provides PHY and MAC features that can support a throughput of 1 Gb/s and greater, as measured at the MAC data service access point (SAP). A DMG STA supports DMG features as identified in Clause 10, Clause 11, and Clause 20. A DMG STA operates in a DMG BSS and supports transmission and reception of frames that are compliant with PHY specifications as defined in Clause 20. A DMG STA is also a QoS STA. The basic channel access of a DMG STA (see 10.36) allows it to operate in an Infrastructure BSS, in an IBSS, and in a PBSS. Certain DMG features such as service period allocation are available only to DMG STAs that are associated with an AP or with a PCP, while other DMG features such as EDCA operation in a PBSS do not require association. A DMG STA supports beamforming (BF) as described in 10.38 and 20.10 and GCM encryption as described in 12.5.5.

**4.3.26 CDMG STA**

An IEEE 802.11 CDMG STA is a DMG STA that supports CDMG operation in the Chinese 60 GHz frequency band, and has dot11CDMGOptionImplemented equal to true. In addition to CDMG features, a CDMG STA supports DMG features as described in 4.3.22. A CDMG STA also supports CDMG features as identified in Clause 10, Clause 11, and Clause 24. A CDMG STA supports transmission and reception of frames that are compliant with PHY specifications as defined in Clause 24. A CDMG STA is also a QoS STA. The basic channel access of a CDMG STA (see 10.39 and 10.64) allows it to operate in an Infrastructure BSS or in an IBSS or in a PBSS.

**4.3.30 EDMG STA**

The IEEE 802.11 enhanced directional multi-gigabit (EDMG) STA is a DMG STA that provides PHY and MAC features that can support a throughput of at least 20 Gb/s, as measured at the MAC data service access point (SAP). An EDMG STA supports non-EDMG and EDMG features as identified in Clause 10, Clause 11, Clause 12, Clause 20 and Clause 28. An EDMG STA supports transmission and reception of frames that are compliant with PHY specifications as defined in Clause 20 and Clause 28.

According to these Section 4.3.21, Section 4.3.26 and Section 4.3.30, followings are true.

* CDMG STA is also DMG STA
* EDMG STA is also DMG STA.
* DMG STA is not CDMG STA and EDMG STA.
* DMG STA can deal with DMG PPDU defined in Clause 20.
* CDMG STA can deal with DMG PPDU defined in Clause 20 and CDMG PPDU defined in Clause 24.
* EDMG STA can deal with DMG PPDU defined in Clause 20 and EDMG PPDU defined in Clause 28.

Furthermore, DMG STA includes CDMG STA and EDMG STA.

In order to distinguish EDMG STA from other DMG STAs, that is DMG STA and CDMG STA, the term “non-EDMG” is used in Section 4.3.30.

I.e., non-EDMG STA includes DMG STA and CDMG STA.

non-EDMG PPDU is Claud 28 PPDU transmitted with TXVECTOR parameter FORMAT equal to NON-EDMG, where NON\_EDMG indicates Clause 20 or non-EDMG duplicate format.

Since non-EDMG PPDU includes Clause 20 PPDU and non-EDMG duplicate format, non-EDMG PPDU is not DMG PPDU defined in Clause 20.

Followings are definitions of DMG A-PPDU and EMDG A-PPDU.

**directional multi-gigabit (DMG) aggregate physical layer (PHY) protocol data unit (A-PPDU)**: An A-PPDU where all constituent PPDUs are DMG PPDUs.

**enhanced directional multi-gigabit (EDMG) aggregate physical layer (PHY) protocol data unit (A-PPDU)**: An A-PPDU where all constituent PPDUs are EDMG PPDUs.

It seems that there is no inconsistency in the definitions of DMG A-PPDU and EDMG A-PPDU.

**Proposed resolution**: TBD

**Straw Poll:**

* Do you agree to accept the comment resolution for CID 6216 in 20/0345r1?

**References:**

1. Draft P802.11ay\_D5.0
2. Draft P802.11REVmd\_D3.1