IEEE P802.11
Wireless LANs

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| Comment resolution on CIDs for 28.3.11.9 Constellation mapping |
| Date: 2017-03-06 |
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Abstract:

This document contains comment resolution on the following CIDs for Clause 3 Definitions, acronyms, and abbreviations:

3293, 3343, 3579, 3660, 4009, 4096, 5112, 5113, 5114, 5115, 5306, 5539, 6921, 7694, 7695, 8306, 8307, 8498, 9217, 9220, 9222, 9227, 9228, 9229, 9230, 9231, 9498, and 9499.

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| **CID** | **Clause** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 3293 | 3 | 3 | 1 | "RU" not defined | Add definition for "RU" in clause 3.4 Definitions, acronyms, and abbreviations | Revised.11ax editor, please see the discussion for instructions.  |
| 3343 | 3 | 3 | 1 | "RU" not defined | Add definition for "RU" in clause 3.4 Definitions, acronyms, and abbreviations |  See resolution for CID 3293  |
| 3579 | 3 | 3 | 1 | "RU" not defined | Add definition for "RU" in clause 3.4 Definitions, acronyms, and abbreviations | See resolution for CID 3293  |
| 3660 | 3 | 3 | 1 | "RU" not defined | Add definition for "RU" in clause 3.4 Definitions, acronyms, and abbreviations | See resolution for CID 3293  |
| 4009 | 3 | 3 | 1 | "RU" not defined | Add definition for "RU" in clause 3.4 Definitions, acronyms, and abbreviations | See resolution for CID 3293  |
| 4096 | 3 | 3 | 1 | "RU" not defined | Add definition for "RU" in clause 3.4 Definitions, acronyms, and abbreviations | See resolution for CID 3293  |
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| 5112  |

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| Resource Unit and RU is a major new concept and terminology for 802.11. Need to and a definition in 3.2 and add RU to acronym list in 3.4. (For example, does RU apply to MU in general for both MU-MIMO and OFDMA, or just OFDMA?) |

 | as in comment |  See resolution for CID 3293  |
| 5113 | 3 | 3 | 1 | Define DL HE MU PPDU | as in comment | Revised.11ax editor, please see the discussion for instructions.  |
| 5114 | 3 | 3 | 1 | Define DL HE MU PPDU | as in comment | See resolution for CID 5113  |
| 5115 | 3 | 3 | 1 | Define DL MU PPDU | as in comment | See resolution for CID 5113  |
| 5306 | 3.3 | 6 | 59 | Define Broadcast RU | as in comment | See resolution for CID 3293  |
| 5539 | 3.4 | 7 | 7 | I think "RU" should be added here. It is not defined until almost at the end of the draft but is referred to in many places prior to that. Also maybe consider including it in 3.2. | Add RU in 3.4 and possibly in 3.2 | See resolution for CID 3293  |
| 6921 | 3.2 | 6 | 55 | OFDMA - currently not defined in this amendment. It is not defined in base line amendment 802.11mcD8.0. It would be best to define OFDMA prior to defining non-OFDMA. | Define OFDMA | Revised.Note OFDM and OFDMA are well-known terminology in communication field. But I still sdded the definition of OFDMA.11ax editor, please see the discussion for instructions.  |
| 7694 | 3.2 | 6 | 58 | Define OFDMA (we only have "non-OFDMA") | Add a defintion for OFDMA: Orthogonal Frequency Division Multiple Access (OFDMA): An OFDM-based multiple access scheme where different subsets of subcarriers are allocated to different users of the channel, allowing simultaneous data transmission to or from several users of the channel. | See resolution for CID 6921  |
| 7695 | 3.2 | 6 | 58 | Add a definition of RU | Add a defintition of RU: Resource Unit (RU): A group of subcarriers used within OFDMA to allocate subchannels to users of the channel. | See resolution for CID 3293  |
| 8306 | 3.4 |  |  | Resource Unit is missing from Definitions and Acronyms | add RU to acronyms and define Resource Unit | See resolution for CID 3293  |
| 8307 | 3.4 |  |  | The term 'DC subcarrier' is missing from Defintions and Acronyms | add DC to acronyms and define DC subcarrier | Rejected. DC subcarrier is a well known termilogy has been used in communications. In 11mc, DC subcarrier is not defined either.  |
| 8498 | 3.2 | 3 | 4 | The term RU is not defined and is inconsistently used. In some places it refers to a frequency segment (e.g., a 26-tone RU) and in other places it refers to something that carries the PSDU intneded for a STA (e.g., P195L50: "...that RU is set to the AID of the STA receiving the PSDU..."). In the single stream case this may not matter, but in the SU-MIMO (multi-stream) case and especially in the MU-MIMO case it does matter. | Add a definition for resource unit (RU) to 3.2. "resource unit (RU): A set of 26, 52, 106, 242, 484, 996 or 2x996 subcarriers." | See resolution for CID 3293  |
| 9217 | 3.1 | 3 | 5 | Definition of OFDMA should be added in 3.1. | Insert clause 3.1 to the draft and add definition of OFDMA there. | See resolution for CID 6921  |
| 9220 | 3.2 | 3 | 5 | The current definition of MU PPDU in the baseline is limited to DL and MU-MIMO. UL and OFDMA should be also included. | Insert the definition of MU PPDU to clause 3.2 of the draft and change the definition of MU PPDU to also cover UL and OFDMA. | Revised.11ax editor, please see the discussion for instructions.  |
| 9222 | 3.2 | 3 | 5 | The definition of UL-MU-MIMO should be included. | Add a definition of UL-MU-MIMO in clause 3.2. |  See comment resolution ID 9220 |
| 9227 | 3.2 | 3 | 5 | The definition of HE MU PPDU should be included. | Add a definition of HE MU PPDU in clause 3.2. | See resolution for CID 5113  |
| 9228 | 3.2 | 3 | 5 | The definition of HE PPDU should be included. | Add a definition of HE PPDU in clause 3.2. | Revised. 11ax editor, please see the discussion for instructions.  |
| 9229 | 3.2 | 3 | 5 | The definition of HE SU PPDU should be included. | Add a definition of HE SU PPDU in clause 3.2. | Revised.11ax editor, please see the discussion for instructions.  |
| 9230 | 3.2 | 3 | 5 | The definition of DL-OFDMA should be included. | Add a definition of DL-OFDMA in clause 3.2. | Revised. OFDMA has been defined and DL-OFDMA just means downlink OFDMA. Just add the acronym for DL OFDMA. |
| 9231 | 3.2 | 3 | 5 | The definition of UL-OFDMA should be included. | Add a definition of UL-OFDMA in clause 3.2. | Revised. OFDMA has been defined and UL-OFDMA just means downlink OFDMA. Just add the acronym for UL OFDMA. |
| 9498 | 3.2 | 3 |  | RU should be defined in clause 3.2 | As in the comment. | See resolution for CID 3293  |
| 9499 | 3.2 | 6 |  | "non-orthogonal frequency division multiple access (non-OFDMA): A full bandwidth HE transmissionwith 242-tone RU, 484-tone RU, 996-tone RU, 2┤Θª996-tone RU, or 2┤Θª996-tone RU allocated for 20 MHz,40 MHz, 80 MHz, 160 MHz, or 80+80 MHz transmission, respectively."RU should be defined in this subclause. | As in the comment. | See resolution for CID 3293  |

**Discussions for CID 3293:**

***TGax Editor: Please insert the following text (changed texts are in red) in the line 58, page 6* *of D1.0***:

resource unit (RU): a group of 26, 52, 106, 242, 484, 996 or 2x996 subcarriers that is allocated to users. The subcarrier frequency spacing in each RU is 78.125 kHz.

***TGax Editor: Please insert the following text (changed texts are in red) in the line 19, page 7 of D1.0***:

RU Resource unit

**Discussions for CID 5113:**

***TGax Editor: Please insert the following text (changed texts are in red) in the line 58, page 6* *of D1.0***:

High efficiency (HE) multi-user (SU) physical layer protocol data unit (PPDU): A HE PPDU transmitted with HE MU PPDU format that is capable of carrying one or more PHY service data units (PSDUs) for one or more users.

Downlink (DL) high efficiency (HE) multi-user (MU) physical layer protocol data unit (PPDU): a downlink OFDMA or MU-MIMO PPDU that using HE MU PPDU format.

**Discussions for CID 6921:**

***TGax Editor: Please insert the following text (changed texts are in red) in the line 59, page 6* *of D1.0***:

orthogonal frequency division multiple access (OFDMA): An OFDM-based multiple access scheme that different group of subcarriers are allocated to different users of the channel, allowing simultaneous data transmission to or from several users of the channel.

**Discussions for CID 9220:**

***TGax Editor: Please insert the following text (changed texts are in red) in the line 1, page 7* *of D1.0***:

Uplink (UL) multi-user (MU) physical layer protocol data unit (PPDU): an uplink MU-MIMO PPDU that using HE trigger-based PPDU format.

**Discussions for CID 9228:**

***TGax Editor: Please insert the following text (changed texts are in red) in the line 49, page 6* *of D1.0***:

High efficiency (HE) physical layer protocol data unit (PPDU): A PPDU transmitted with the TXVECTOR parameter FORMAT equal to HE. There are four kinds of HE PPDUs and they are HE SU PPDU, HE MU PPDU, HE extended range SU PPDU and HE trigger-based PPDU respectively.

**Discussions for CID 9229:**

***TGax Editor: Please insert the following text (changed texts are in red) in the line 49, page 6* *of D1.0***:

High efficiency (HE) single-user (SU) physical layer protocol data unit (PPDU): A HE PPDU transmitted with HE SU PPDU format that carries one PHY service data units (PSDU) for one user.

High efficiency (HE) extended range single-user (SU) physical layer protocol data unit (PPDU): A HE PPDU transmitted with HE extend range SU PPDU format that carries one PHY service data units (PSDU) for one user.

High efficiency (HE) trigger-based physical layer protocol data unit (PPDU): A HE PPDU transmitted with HE trigger-based PPDU format that is capable of carrying one or more PHY service data units (PSDU) for one or more users.

**Discussions for CID 9230 and 9231:**

***TGax Editor: Please insert the following text (changed texts are in red) in the “*3.4 Abbreviations and acronyms”*, page 7 of D1.0*:**

DL OFDMA Downlink Orthogonal frequency division multiple access

UL OFDMA Uplink Orthogonal frequency division multiple access