IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGax, MU Ad hoc  May 2016 Hawaii TGax MU Ad hoc Meeting Minutes | | | | |
| Date: 2016-05-16 | | | | |
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Abstract

The meeting minutes from the MU Ad Hoc group meeting of TGax in the IEEE 802.11 Hawaii session May 16th – 20th, 2016.

**IEEE 802.11 Task Group ax, MU Ad hoc**

**May 2016 Hawaii Meeting**

**May 16th – 20th, 2016**

**MU Adhoc Session #1**

**Monday, May 16th, 2016, PM3 TGax Session (7:30 – 9:30PM)**

1. **The meeting called to order by Kaushik Josiam (Samsung), the co-chair of the TGax MU Ad hoc**
   1. At 8:14 pm, 44 people are present.
2. **Announcement**
   1. Agenda Doc.11-16/0697 on the server. Rev. 0 is the working document.
   2. Meeting Protocol: The Chair asked to state name and affiliation when speaking for the first time.
   3. Attendance reminder.
      1. The attendance server: https://imat.ieee.org/
3. **The chair reviewed the mandatory 5 slides of P&P.**
   1. Instructions from the WG Chair. [reviewed~~, did not review~~]
   2. Participants, Patents, and Duty to Inform. [reviewed~~, did not review~~]
   3. Patent Related Links. [reviewed, ~~did not review~~]
   4. Call for potentially essential patents.
      1. Chair asked if anyone is aware of potentially essential patents

[Asked. ~~Did not ask~~]

* + 1. Potentially essential patents

[None reported. ~~Reported as follows~~]

* 1. Other Guidelines for IEEE WG Meetings.

1. **The Chair identified 9 presentations assigned by the TGax chair to be treated in MU Ad hoc**
   1. No new presentations, other than those listed in the agenda, were requested.
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. 0582r2 Random Access RU Allocation in the Trigger Frame
      1. Strawpoll #1 (pre-motion): ***Do you agree to add to the TG Specification Framework:***

x.y.z The spec shall define Random Access User ID (the value is TBD). When User Identifier subfield of the Per User Info field of the Trigger Frame equals Random Access User ID, the Per User Info field describes Random Access RU(s).

A Trigger Frame which defines at least one RU for RA is referred to as Trigger Frame for random access (TF-R)

Y/N/A: 5/3/many

SP fails

* + 1. Strawpoll #2 (pre-motion): ***Do you agree to add to the TG Specification Framework:***

x.y.z The spec shall provide a way to allocate multiple RUs for random access with the same RU size and other transmission parameters (Coding Type, MCS, DCM, SS Allocation) without creating an individual entry for each RU.

Y/N/A: 14/7/11

SP fails

* 1. 0591r0 Issues related to OCW management
     1. Strawpoll #1 (pre-motion): ***Do you agree to add to the TG Specification Framework:***

x.y.z. An AP indicates the value of OCWmin used by all STAs for the random RU allocation process for the next UL MU OFDMA transmission. The value of OCWmin is transmitted through a dedicated field in the beacon frame.

Y/N/A: 11/0/13

SP passes

* + 1. Strawpoll #2 (pre-motion): ***Do you agree to amend the following sentence in 11ax SFD:***
  + **The HE AP indicates an ~~TBD~~ Contention Policy parameter in the Trigger frame for HE STAs to initiate random access following the Trigger frame transmission.**

Y/N/A: 2/7/many

SP fails

* 1. 0592r0 Follow up Issue related to unused UL OFDMA RUs
     1. Strawpoll #1 (pre-motion): ***Do you agree to add to the TG Specification Framework:***

x.y.z. When an AP allocates random RUs in a trigger frame, the AP should interleave random RUs with scheduled RUs over the overall reserved channel, to avoid having only Random RUs in a 20MHz channel.

Y/N/A: 5/4/many

SP fails

* 1. 0648r0 MU-RTS/CTS PHY Format
     1. Strawpoll#1(pre-motion): ***Do you agree to add the following in the SFD?***
  + x.y.z. MU-RTS shall not be carried in an HE MU PPDU

Y/N/A: 18/0/4

SP passes

* + 1. Strawpoll#2(pre-motion): ***Do you agree to add the following in the SFD?***
  + x.y.z. The CTS response to an MU-RTS shall be carried in a non-HT or a non-HT duplicate PPDU

Y/N/A: 17/0/1

SP passes

* 1. 0661r1 Adaptive Random Access UL OFDMA
     1. Strawpoll #2 (pre-motion): ***Do you agree to add to the TG Specification Framework:***

4.5.x The AP shall broadcast the OCWmax parameter in a beacon information element.

Y/N/A: 2/4/many

SP fails

1. The Chair announced the recess of the MU ad hoc session at 9:16 pm.

**MU Adhoc Session #1**

**Tuesday, May 17th, 2016, PM2 TGax Session (4:00 – 6:00PM)**

1. **The meeting called to order by Sigurd Schelstraete (Quantenna), the co-chair of the TGax MU Ad hoc**
   1. At 5 pm, 54 people are present.
2. **Announcement**
   1. Agenda Doc.11-16/0697 on the server. Rev. 1 is the working document.
   2. Meeting Protocol: The Chair asked to state name and affiliation when speaking for the first time.
   3. Attendance reminder.
      1. The attendance server: https://imat.ieee.org/
3. **The chair reviewed the mandatory 5 slides of P&P.**
   1. Instructions from the WG Chair. [reviewed~~, did not review~~]
   2. Participants, Patents, and Duty to Inform. [reviewed~~, did not review~~]
   3. Patent Related Links. [reviewed, ~~did not review~~]
   4. Call for potentially essential patents.
      1. Chair asked if anyone is aware of potentially essential patents

[Asked. ~~Did not ask~~]

* + 1. Potentially essential patents

[None reported. ~~Reported as follows~~]

* 1. Other Guidelines for IEEE WG Meetings.

1. **The Chair identified 9 presentations assigned by the TGax chair to be treated in MU Ad hoc**
   1. No new presentations, other than those listed in the agenda, were requested.
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. 662r2 Further consideration on channel access rule to facilitate MU transmission opportunity
      1. Strawpoll #1 (pre-motion): **Do you agree to add to the following to 11ax TG SFD:**

Do you agree to allow the AP choose any access category for contending to send the trigger frame?

The chosen AC may give to the AP higher priority in accessing the channel compared to its associated STAs

Y/N/A: 8/0/many

Strawpoll passes

* 1. 664r2 Consideration on backoff procedure for UL MU transmission
     1. Strawpoll #1 Do you support?

The non-AP STA resets its backoff counter after successfully transmitting an UL PPDU as the response to trigger frame.

Y/N/A: 8/13/16

* + 1. Strawpoll #2 Do you support?

The non-AP STA keeps the backoff counter unchanged after successfully transmitting an UL PPDU as the response to trigger frame.

Y/N/A: 19/1/21

* 1. 665r0 Some Notes on Interference Alignment for Downlink Multi-User MIMO
     1. The strawpolls were moved to the TGax joint session because the topic requires the presence of PHY experts.
  2. 667r0 Signaling of Multi-TID Aggregation Limit
     1. Strawpoll #1: **Do you agree to add to the TGax SFD**

**The basic variant Trigger frame shall contain the TID Aggregation Limit subfield in the Trigger Dependent Per User Info field that indicates the limit of the number of TIDs that can be aggregated by a STA in a multi-TID A-MPDU carried in the responding Trigger-based PPDU?**

The responding STA shall not aggregate QoS Data frames in the multi-TID A-MPDU with a number of TIDs that exceeds the value indicated in the TID Aggregation Limit sub-field intended to it

Y/N/A: 32/0/7

Strawpoll passes

* 1. 0582r3 Random Access RU Allocation in the Trigger Frame
     1. Strawpoll #1 (pre-motion): ***Do you agree to add to the TGax SFD:***

x.y.z The spec shall define that AID=0 in the user identifier subfield of the Per User Info field in a Trigger Frame indicates that the resource allocation can be used for random access by an STA

Y/N/A: 24/0/4

Strawpoll passes

The chair recessed the session at 5:13PM