IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGax, MAC Ad hoc  July 2015 Hawaii TGax MAC Ad hoc Meeting Minutes | | | | |
| Date: 2015-07-14 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Eric Wong | Apple |  |  | ericwong@apple.com |
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Abstract

TGax, MAC Ad Hoc meeting minutes from the IEEE 802.11 Hawaii session, July 13th – 17th, 2015.

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

**July 2015 Hawaii Meeting**

**Hilton Waikoloa Village**

**July 13th – 17th, 2015**

**Tuesday, July 14th, 2015, AM2 TGax Session (10:30-12:30)**

1. **The meeting called to order at 10:30am by Brian Hart (Cisco Systems), the co-chair of the TGax MAC Ad hoc**
   1. About 73 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-15/0888 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 called for presentations**
   1. No change to the agenda.
   2. Split MAC topics into two miscellaneous and trigger-related. Start with miscellaneous topics first.
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. **11-15/615r3, “UL OFDMA Bandwidth”**
      1. Presented by Liwen Chu (Marvell)
      2. Strawpoll 1: “Do you agree to add the following to the SFD: UL OFDMA MPDU/A-MPDU is the acknowledgement of the trigger frame. When the AP receives MPDU correctly from at least one STA indicated by trigger frame, the frame exchange initiated by the trigger frame is successful”
         1. Results: Y/N/A: 43/6/22
         2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion
   2. **11-15/841r0, “Cascading Structure”**
      1. Presented by David Yang (Huawei)
      2. Strawpoll 1: “Do you support to add the following to the SFD: A TXOP can include both DL MU and UL MU transmissions.”
         1. Results: Y/N/A: 38/0/22
         2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion
      3. Strawpoll 2: “Do you support to add the following to the SFD: The spec shall include the definition of a cascading TXOP structure, allowing alternating DL and UL MU PPDUs starting with a DL MU PPDU in the same TXOP

- The TXOP sequence has only one DL transmitter

- The TXOP sequence may have different UL transmitters within each UL MU PPDU

- The TXOP sequence may have a different set of transmitters in an UL MU PPDU as compared to the DL MU PPDU that follows the UL MU PPDU within the same TXOP”

* + - 1. Results: Y/N/A: 28/4/23
      2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion
    1. Strawpoll 3: “Do you support to add the following to the SFD: DL/UL OFDMA can multiplex different type of unicast frames in frequency domain

- Type of frame can be data frame/control frame/management frame”

* + - 1. Results: Y/N/A: 36/1/24
      2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion
    1. Strawpoll 4: “Do you support to add the following to the SFD: DL/UL MU-MIMO can multiplex different type of unicast frames in spatial domain

- Type of frame can be data frame/control frame/management frame”

* + - 1. Results: Y/N/A: 34/4/21
      2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion
  1. **11-15/871r0, “Efficiency enhancement for 802.11ax”**
     1. Presented by Guido R. Hiertz (Ericsson)
     2. Strawpoll 1: “Do you agree to add the following to the IEEE 802.11 TGax Specification Framework?

- Add to the end of Clause 6 (MAC): “The amendment shall define a HE STA to be a QMF STA.”

* + - 1. Results: Y/N/A: 23/0/37
      2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion
    1. Strawpoll 2: “Do you believe that it would be helpful to add the following to the IEEE 802.11 TGax Specification Framework (not a “pre-motion”)?

- The amendment shall define a HE AP to implement Proxy ARP capability.”

* + - 1. Results: Y/N/A: 22/0/37
    1. Strawpoll 3: “Do you believe that adding the following to the IEEE 802.11 TGax Specification Framework would be helpful?

- The amendment shall consider a HE STA to implement intra-access category prioritization.

* + - 1. Results: Y/N/A: 16/4/40
      2. Not a pre-motion
    1. Strawpoll 4: “Do you believe that adding the following to the IEEE 802.11 TGax Specification Framework would be helpful?

- Add to the end of Clause 6 (MAC): “The amendment shall define an 802.1Q-2014 compliant UP to AC mapping.”

* + - 1. Results: Y/N/A: 9/8/37

1. The Chair recessed the MAC ad-hoc session.

**Wednesday, July 15th, 2015, PM1 TGax Session (1:30-3:30)**

1. **The meeting called to order at 1:30pm by Brian Hart (Cisco Systems), the co-chair of the TGax MAC Ad hoc**
   1. About 72 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-15/0888 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 called for presentations**
   1. Focus on all trigger-related contributions. Reordering of presentations.
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. **11-15/851r0, “HE Trigger Frame Format”**
      1. Presented by John Son (WILUS Institute)
      2. Strawpoll 1: “Do you agree to add the following text into 11ax SFD ?

3.2.z HE Trigger frame shall be defined as a new MAC control frame.”

* + - 1. Results: Y/N/A: 44/0/21
      2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion

* 1. **11-15/877r0, “Trigger Frame Format”**
     1. Presented by Simone Merlin (Qualcomm)
     2. Strawpoll 1: “Do you agree to add to the SFD:

The spec shall define a new control frame format that carries sufficient information to identify the STAs transmitting the UL MU PPDUs and allocating resources for the UL MU PPDUs.

- The format is as in figure



- Presence of A1 is TBD”

* + - 1. Results: Y/N/A: 60/0/11
      2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion
  1. **11-15/831r2, “Broadcast and Unicast (Trigger) in DL MU”**
     1. Presented by Liwen Chu (Marvell)
     2. Strawpoll 1: “Do you agree to add the following to the SFD? Unicast trigger frame for a single user may be included within an AMPDU for that user within the DL MU PPDU that precedes the UL MU transmission by TBD IFS
        1. Results: Y/N/A: 49/1/20
        2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion
     3. Strawpoll 2: “Do you agree to add the following to the SFD: Broadcast trigger transmitted in a subchannel of DL OFDMA shall not include the resource allocation information of the STAs which are recipients of frames in the other subchannels of the DL OFDMA:

- the subchannel of the broadcast trigger frame is identified by TBD signaling.

- the DL OFDMA precedes the UL OFDMA transmission by TBD IFS.”

* + - 1. Results: Y/N/A: 42/0/25
      2. Strawpoll achieves >=75% support, and will be sent to TGax-Full for motion

* 1. **11-15/856r2, “Compressed Uplink Trigger Frame”**
     1. Presented by Vida Ferdowsi (NEWRACOM)
     2. Strawpoll 1: “Do you agree to add the following sentence SFD:

Per-user information in the Trigger Frame may be omitted for scheduled STA(s).

* + - 1. Results: Y/N/A: 8/13/42
  1. **11-15/878r0, “Issues on Trigger Frame Retransmission”**
     1. Presented by Jinsoo Ahn (Yonsei University)
     2. Strawpoll 1: “Do you agree with trigger frame is not allowed to follow conventional retransmission procedure?”
        1. Results: Y/N/A: 4/12/Not counted

* 1. **11-15/803r2, “Frame Collision Information Management”**
     1. Presented by Peng Shao (NEC Communications Systems Ltd)
     2. No strawpolls.

1. The Chair recessed the MAC ad-hoc session.