IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGax, MU Ad hoc  July 2015 Hawaii TGax MU Ad hoc Meeting Minutes | | | | |
| Date: 2015-07-16 | | | | |
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Abstract

The meeting minutes from the MU Ad Hoc group meeting of TGax in the IEEE 802.11 Hawaii session, July 13th – 16th, 2015.

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

**July 2015 Hawaii Meeting**

**Hilton Waikoloa, Kona, Hawaii, USA**

**July 13th – 15th, 2015**

**MU Adhoc Session #1**

**Tuesday, July 14th, 2015, PM1 TGax Session (1:30-3:30PM)**

1. **The meeting called to order by Sigurd Schelstraete (Quantenna), the co-chair of the TGax MU Ad hoc**
   1. About 90 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-15/899 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 13 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.

1. **The Chair asked for approval of the agenda**
   1. No objection raised
2. **Presentation of contributions**
   1. “**Regarding buffer status of UL-STAs in UL-OFDMA**”
      1. 15/881r0, Woojin Ahn (Yonsei)
      2. Strawpoll #1
         1. **Do you agree with the necessity of buffer status report of UL-STAs as part of a UL-OFDMA procedure?**
         2. Vote: Y/N/A: 7/0/Many
      3. Strawpoll #2
         1. **Do you agree with random access based UL-OFDMA for UL-STAs’ buffer status report?**
         2. Vote: Y/N/A: 7/7/Many
   2. “Protection for MU Transmission”
      1. 15/806r0 Young Hoon Kwon (Newracom)
      2. Presenter harmonized with another contribution talking to the topic. So this strawpoll was deferred
   3. “MU-RTS/CTS for DL MU”
      1. 15/867r1 Po-Kai Huang (Intel)
      2. Strawpoll #1
         1. Do you agree to add to the TG Specification Frame work document?

x.y.z. *The spec shall define a frame that solicits simultaneous CTS responses from multiple STAs to protect DL MU transmission*

* + - 1. Vote: Y/N/A: 86/0/5
    1. Strawpoll #2
       1. Do you agree to add to the TG Specification Frame work document?
          - x.y.z. *The scramble seed of simultaneous CTS is same as the scramble seed of the frame which triggers simultaneous CTS. The transmission rate of simultaneous CTS shall use the primary rate based on the rate or MCS of the frame that triggers simultaneous CTS.*
       2. Vote: Y/N/A: 89/0/5
  1. “Multiplexing of Acknowledgements for Multicast Transmission”
     1. 15/800r0 Yusuke Tanaka (Sony)
     2. Strawpoll
        1. Do you agree that multiplexing of acknowledgements can work effectively for Multicast PPDU in a similar manner as DL-MU(OFDMA/MU-MIMO) PPDU?
        2. Vote: Y/N/A: 35/0/28
  2. “Transmission Interval of Trigger Frame”
     1. 15/852r0 Leonardo Lanante (Kyushu Institute of technology)
        1. The presenter postponed the strawpoll for a later meeting
  3. “Random Access with Trigger Frames using OFDMA”
     1. 15/875r1 Chittabrata Ghosh (Intel)
     2. Strawpoll
        1. **Do you agree to add to the spec framework?**
           + *The spec shall define a Trigger frame that allocates resources for random access.*
        2. Vote: Y/N/A: 100/0/7
  4. “Further Analysis of Feedback and Frequency Selective Scheduling (FSS) for TGax OFDMA”
     1. 15/818r1 Kome Oteri(Interdigital)
     2. Strawpoll
        1. **Do you agree to add to the TG Specification Framework?**
           + 4.x.y The amendment shall include a mechanism for Resource Unit (RU) based feedback
        2. Vote: Y/N/A: 26Y/7N/34A

1. The Chair announced the end of the MU ad hoc session.

**MU Adhoc Session #2**

**Wednesday, July 15th, 2015, PM2 TGax Session (4:00-6:00PM)**

1. **The meeting called to order by Kaushik Josiam (Samsung), the co-chair of the TGax MU Ad hoc**
   1. About 50 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-15/899 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. No new presentations, other than those listed in the agenda, were requested. Documents to be discussed are 829, 843, 854, 855, 858, and 859.

1. **The Chair asked for approval of the agenda**
   1. No objection raised
2. **Presentation of contributions**
   1. **“UL MU OFDMA analysis”**
      1. 15/843r0, Yonggang Fang (ZTE)
      2. No strawpoll run
   2. **“MU BFee Interference channel feedback”**
      1. 15/858r1, Sigurd Schelstraete (Quantenna)
      2. Strawpoll
         1. Do you agree to add to the SFD?
            * 11ax shall define a mechanism to feed back information on the channel measured at the receiver for users other than the intended recipient from the BFee to the transmitter?
         2. Vote: Y/N/A: 12/0/many
   3. **“A mechanism for incremental updates to MU precoding”**
      1. 15/859r0, Sigurd Schelstraete (Quantenna)
      2. No strawpoll run
   4. **“Uplink ACK and BA Multiplexing”**
      1. 15/829r2, Reza Hedayat (Newracom)
      2. Strawpolls were deferred to the TGax main session.
   5. Presentation of the submissions “15/854”, “15/855” was deferred to the TGax main session.
3. The Chair announced the end of the MU ad hoc session.