IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IEEE 802.11 TGax, MAC Ad hoc  March 2017 TGax MAC Ad hoc Meeting Minutes | | | | |
| Date: 2017-03-12 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Chao-Chun Wang | MediaTek, Inc |  |  | Chaochun.wang@mediatek.com |
|  |  |  |  |  |

Abstract

TGax, MAC Ad Hoc meeting minutes from the IEEE 802.11, March 13h – 17th, 2017.

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

**March 2017 Meeting, Vancouver, BC**

**March 13th – 16th, 2017**

**Monday, March 13th, 2017, PM2 TGax Session (16:00-18:30PM)**

1. **The meeting called to order at 16:00pm by Eric Wong (Apple), the co-chair of the TGax MAC Ad hoc**
   1. About 40 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-17/0128 on the server. Rev. 0 is the working document.
   2. Meeting Protocol: The Chair asked for 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. Alfred asked to include 131 and 132
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. **11-17/0073r1 (txt) 0072r4 (PPT), “Explanations for CR on 27.5.2.7 NDP feedback report”**
      1. Presented by Laurent Cariou (Intel)

CID 7387, 6144, 7386, 8304, 9101, 9573

C: trigger type should be extended to support other cases.

A: There is a placeholder for the extension defined.

C: The structure is allowed for the extension.

A: Either uses scheduling type of feedback type to support the extension.

C: Still need to wait for PHY group to finalize the PHY design and wait till later to run the poll.

A: The section has a dependency on PHY design is highlighted in green and we only vote in the MAC section.

C: Move on to the SP and motion it later.

C: For each feedback type, the feedback is a single bit and no more than one type of response?

A: Yes

C: No individual MAC frame padding?

A: There is no per STA parameterization since this is to address a group of STAs.

C: Do you plan to add more feedback types?

C: We only have one, and are welcoming member to introduce new types.

C: What is AP’s TX power? In the table.

C: Can an STA separate different feedback type?

**SP 1:**

* Which option do you prefer?
  + STAs scheduled by an NDP feedback report trigger frame variant with a feedback type set to “resource request” are identified by:
    - Option 1: a single mode: a range of AIDs
    - Option 2: 2 modes: a mode with a range of AIDs and a mode with groupID

Option 1: 21 Y

Option 2: 12 Y

**SP 2**

* Do you agree to define a new NDP feedback report trigger frame variant

Y 28 N 1 ABS 16

**SP 3**

* Do you agree to define that the STAs scheduled by an NDP feedback report trigger frame variant with a feedback type set to “resource request” are identified by
  + Option 1: one range of AIDs
  + Option 2: one or more of AIDs

Note:This range of AIDs is defined to be between AID start and AID start +NAID – 1. The trigger frame includes the AID starts parameter and the needed parameters to calculate NAIDs

Option 1: 14 Y 2 N 17 ABS

Option 2: 13 Y 5 N 14 ABS

C: Can we solicit feedback with an itemized AID?

A: Same as using group ID.

* 1. **11-17/239R1“**Comment resolutions for HT Control field (9.2.4.6.X and 10.1) – Block 2**”**

CID 5054, 5055, 5056, 5126, 5442, 7302, 7303, 7305, 7719, 7865, 7867, 8133, 8179, 8180, 8181, 8249, 9620, 9621, 9806 (19 CIDs)

* + 1. Presented by Alfred Asterjadhi (Qualcomm)

[4733, 9804]

C: Make sure the change is beneficial to the PHY operation.

C: The TX/ RX bandwidth should be kept the same for ease of operation.

C: The intention to inform AP about the preferred TX channel bandwidth.

C: The UL transmission could be different from DL. The text is still needed more clarification.

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0239r2 for CIDs:**

* **Results: Straw poll accepted with no objection**

**Tuesday, March 14th, 2017, AM2 TGax Session (10:30-12:30AM)**

1. **The meeting called to order at 16:00pm by Eric Wong (Apple), the co-chair of the TGax MAC Ad hoc**
   1. About 60 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-17/0128 on the server. Rev. 0 is the working document.
   2. Meeting Protocol: The Chair asked for 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 additional contributions were requested to be added to the list of contributions.
   2. There are three submissions added.
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. **11-17/0240r1, “**Comment resolutions for HT Control field (9.2.4.6.X and 10.1) – Block 3**”**
      1. Presented by Alfred Asterjadhi (Qualcomm)

C: Request to defer CID “3160”. Agree.

**Straw Poll:**

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0240r2 for CIDs:**

* **3156, 3384, 3491, 3822, 3907, 4371, 4439, 4740, 5445, 7020, 7473, 8185, 8375, 9809, 9810, 9811, 9812 (17 CIDs)**
* **6965 (1 CIDs)**

Passed with unanimous consents

* 1. **11-17/0082r0, “**Comment resolution for section 9.3.1.23**”**
     1. Presented by Raja Banerjea (Qualcomm)

CID 3018, 8190

C: AC\_BE baseline is 0

A: Will check and verify the correction in afternoon session.

* 1. **11-17/0346r0, “**LB225 CR on TXOP truncation (10.22.2.9)**”**

CID 6237, 9282

* + 1. Presented by Jeongki Kim (LG)

C: [6537] Suggest to change the resolution to ‘MAY”.

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0346r1 for CIDs:**

* **6537, 9282 (2 CIDs)**

**Results: Straw poll passed with no objection**

* 1. **11-17/0344r0, “**CR on EIFS and TXOP\_DURATION (10.3.2.3.7 and 27.11.5)**”**

**CID 3089**

* + 1. Presented by Jeongki Kim (LG)

C: When BSS color is disabled, AP should set to HE PPDU but not shall.

C: Remove two paragraphs with contain no new information.

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0344r1 for CIDs:**  **3089, 6057, 7527, 9599, 9385 (5 CIDs)**

**Results: Straw poll passed with no objection**

* 1. **11-17/0347r0, “**LB225 CR on Intra-PPDU Power saving (27.14.1)**”**
     1. Presented by Jeongki Kim (LG)

C: CID 6782-6785 change the resolution to rejected, suggested by Abhi and Robert.

Sean Coffey comments, BSS color in non-capitalised font seems not close to nature language.

Alfred:

C: CID 3091 should be rejected

C: CID 6052 should be rejected

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0347r1 for CIDs:**  **3091, 5216, 5506, 5938, 6052, 6055, 6782, 6783, 6784, 6785, 7602, 8241, 8242, 9602 (14 CIDs)**

**Results: Straw poll passed with no objection**

* 1. **11-17/0384r0, “**B225, Comment resolution for 10.24.10**”**
     1. Presented by Reza Hedayat (LG)

C: CIDs 3051, 3052, 3053, 3207, 3208, 3209, 3210, 3211, 3212, 7538, 7786, 7787, 9695, 9864

Alfed: 12 LSB(already defined) in AID12 definition

Abhi: CID 3051: Extended Capabilities element bit correction (51 instead of 52, change the bit number to the field name)

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0384r2 for CIDs: 3051, 3052, 3053, 3207, 3208, 3209, 3210, 3211, 3212, 7786, 7787, 9695, 9864 (13 CIDs)**

**Results: Straw poll passed with no objection**

**Wednesday, March 15th, 2017, PM1 TGax Session (1:30-3:30PM)**

1. **The meeting called to order at 16:00pm by Eric Wong (Apple), the co-chair of the TGax MAC Ad hoc**
   1. About 60 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-17/0128 on the server. Rev. 0 is the working document.
   2. Meeting Protocol: The Chair asked for 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 additional contributions were requested to be added to the list of contributions.
   2. There are three submission added.
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. **11-17/0283r5, “**Comment resolution for section 9.3.1.23**”**
      1. Presented by Raja Banerjea (Qualcomm)

**C:** CID9494, option 1 reject, option 2 revise,

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0283r5 for CIDs:**   **3018, 8190 (2 CIDs)**

**Results: Straw poll passed with no objection**

* **Which resolution do you prefer for CID 9494 presented in doc 17/0283r5?** 
  + Option 1: Rejected
  + Option 2: Revised
* **Option 1: 16 Yes**
* **Option 2: 0 Yes**

**Do you agree to add to the 11ax specification D1.1 the comment resolutions (for rejected option) in document 17/0283r5 for CIDs:**

* **9494 (1 CIDs)**

**Results: Straw poll passed with no objections**

* 1. **11-17/0448r4, “**Proposed resolution for comments related to CIDs in 27.5.2**”**
     1. Presented by Jing Ma (NICT)

C: CIDs:5397, 5712(the other four are removed), no discussion on SP

C: Please clarify the text about primary AC

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0448r4 for CIDs: 5397, 5712 (2 CIDs)**

**Results: Straw poll passed with no objections**

* 1. **11-17/0088r2, “**CR on 10.22.2.8 TXOP limits.**”**
     1. Presented by Woojin Ahn (WILUS)

C: add static/dynamic term of fragmentation in the text to clarify

Q: why 16th dynamic fragment is allowed, A: level 1 can allow 16 fragments(level 3 only 4)

Q: purpose of using dynamic fragments? Liwen asks for deferring and CIDs are deferred.

* 1. **11-17/0306r3, “**CIDs: Section 9.3.1.8 & 9.3.1.9.7**”**
     1. Presented by George Cherian (Qualcomm)

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0306r3 for CIDs:**

* **5403, 6184, 7044 (3 CIDs)**

**Results: Straw poll accepted with no objections**

* 1. **11-17/0389r2, “**Proposed resolution for CIDs for 27-2-1**”**
     1. Presented by Kaiying Lv (ZTE)

CIDs: 3056, 3189, 3190, 5167, 5168, 5394, 5454, 5456,

5686, 5779, 5799, 6058, 6051, 6152, 6176, 6574,

6575, 6576, 6579, 6580, 6581, 6582, 6583, 7022,

7071, 7232, 7659, 8358, 8693, 9380, 9585, 9727,

9747, 9872, 10007, 10171, 10241, 10242, 10243, 10244, 10319

C: Chair suggests to skip/reject the BSS Color comments, 6579, 6580, 6581, (to sync the other similar CRs)

C: CID5167: Was asked for wording change and defer

C: CID6574: Was asked for defer

C: CID6176: For the last two paragraph, original sentence seems more clear

C: CID9747: Is BSSID field is available?

C: CID6176: The last two paragraphs should not be deleted. More sentences should be to add to address MAC address

C: CID9747: Added bullet for the case for device such as mobile AP

* 1. **11-17/0341r0, “**LB225 11ax D1.0 Comment Resolution 10.13**”**
     1. Presented by Liwen Chu (Marvell)

CIDs: 3241, 3350, 3454, 3762, 3848, 4284, 4753, 5050,

5404, 5571, 6967, 6968, 6969, 6970, 6971, 6972, 6973

C: CID5050 is deleted

C: CID5404, George wants to provide replacement text

**Wednesday, March 15th, 2017, PM2 TGax Session (4:00-6:00PM)**

1. **The meeting called to order at 16:00pm by Eric Wong (Apple), the co-chair of the TGax MAC Ad hoc**
   1. About 60 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-17/0128 on the server. Rev. 0 is the working document.
   2. Meeting Protocol: The Chair asked for 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 additional contributions were requested to be added to the list of contributions.
   2. There are three submission added.
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. **11-17/0396r2, “**Association Exchange using Contention based UL OFDMA**”**
      1. Presented by Ming Gan (Huawei)

C: This is the first time reviewing the doc.

C: Will the pre-AID become AID?

C: It is up to AP to decide what to do.

C: AP needs to make STA known whether AP is capable of supporting the pre-AID assignment. More text is needed.

C: If multiple BSS all respond with Pre-AID, it will be a problem.

C: It needs to be a unicast probe request to identify a specific AP for the requesting STA to recognize the assigning AP.

C: The benefit of the feature is not clear.

C: Please provide a figure for the sequence of operation.

C: The use cases are not persuasive enough to justify the proposal.

**Do you agree to provide a resolution to CID 5036, 7254, 7546, 8140, 8520, 8527 8157, 9332 based on the concept proposed in this contribution?**

* **Acknowledgment through M-BA**

**Reults: Y/N/A: 16Y / 6N / 25A**

**Do you agree to provide a resolution to CID 5036, 7254, 7546, 8140, 8520, 8527 8157, 9332 based on the concept proposed in this contribution?**

* **only for Acknowledgement through M-BA, excluding Pre-AID assignment**

**Results: Y/N/A: 26Y / 0N / 20A**

**Do you agree to have Pre-AID assignment in 11ax?**

**Results: Y/N/A: 28Y / 14N / ?? A**

* 1. **11-17/0443r2, “**OFDMA based Random Access (27.5.2.6)**”**
     1. Presented by Suhwook Kim (LG)

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/443r2 for CIDs:**

* **7103, 7106, 7412, 8152, 8221, 9103, 9533 (7 CIDs)**

**Results: Straw poll passed with no objections**

* 1. **11-17/0421r1, “**cr-for-11-49-he-bss-operation.**”**
     1. Presented by Chao-Chun Wang (MediaTek)

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/421r1 for CIDs:**

**4782, 5975, 5976, 7161, 7789, 8267, 9698, 7661, 6567 (9 CIDs)**

**Results: Straw poll passed with no objections**

* 1. **11-17/0088r2, “**CR on 10.22.2.8 TXOP limits**”**
     1. Presented by Woojin Ahn (WILUS)

**Do you agree to add to the 11ax specification D1.1 the comment resolutions in document 17/0088r2 for CIDs:**

**6189, 7040, 9412 (3 CIDs)**

**Results: Straw poll passed with no objections**