IEEE P802.11  
Wireless LANs

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| Minutes of TGax MAC ad hoc meeting November 2018 in Bangkok | | | | |
| Date: 2018-12-07 | | | | |
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Abstract

This document contains minutes of TGax ad hoc (MAC-MU-SR) during the IEEE 802 Plenary November 2018 session in Bangkok.

TGax MAC-MU-SR ad hoc minutes are taken by the following indivisuals:

Tuesday, November 13th, AM1: Yasuhiko Inoue (NTT)

Tuesday, November 13th, AM2: Kiseon Ryu (LG Electronics)

Tuesday, November 13th, PM2: David Xun Yang (Huawei Technologies)

Tuesday, November 13th, PM3: Yasuhiko Inoue (NTT)

Wednesday, November 13th, PM1: Yasuhiko Inoue (NTT)

Rev. 0: Initial version.

**Tuesday, November 13th, 2018, AM1 TGax MAC ad hoc session (8:00 AM - 10:00 AM)**

1. **The meeting called to order at 4:07pm by Osama Aboul-Magd (Huawei Technologies), the chair of the TGax task group**
   1. 50 people are in the room.
   2. Agenda Doc.11-18/2006r0 on the server. Rev. 0 is the working document.
2. **IEEE-SA Policy and Procedure**
   1. Chair went through the 5 slides of IEEE-SA IPR Policy and Procedure.
      1. Participants have a duty to inform the IEEE - done
         1. Call for potentially essential patent – No response.
      2. Ways to inform IEEE - done
      3. Other guidelines for IEEE WG meetings - done
      4. Patent-related information - done
      5. Participation in IEEE 802 Meetings - done
3. **Agenda Setting**
   1. Proposed Agenda
      1. Call Meeting to order
      2. IEEE-SA IPR Policy
      3. Comment Resolution
         1. Unfinished submissions from Monday
         2. New Submission – Whoever is ready
      4. Recess
   2. Chair asked if there are any items to add to the agenda. 🡪 No response.
   3. Chair asked if there is any objection to proceed with this agenda. 🡪 No objection.
   4. The agenda was approved.
4. **Announcement**
   1. Meeting Protocol: The Chair asked for state name and affiliation when speaking for the first time.
   2. Attendance reminder.
      1. The attendance server: <https://imat.ieee.org/>
5. **Comment Resolution**
   1. **Abhishek Patil (Qualcomm) presented “Resolution for CIDs related to Random Access,” based on the submission 11-18-1812-02.**
      1. Summary
         1. Abhishek continued presentation of the doc. 11-18/1812r2 which was interrupted yesterday due to the time constraint.
      2. Discussion
         1. No further discussion.
      3. **Straw Poll: Move to accept resolutions to CIDs 16870, 16498, 16506, 15686 in doc 11-18/1812r2?**
         1. **Result: Accepted with no objection.**
      4. Next Step
         1. The straw poll will be converted to a motion..
   2. **Yasuhiko Inoue (NTT) presented “Proposed Resolutions for CIDs related to HE MAC Capabilities,” based on the submission 11-18-1808-01.**
      1. Summary
         1. Resolutions for following comments on 802.11ax D3.0 HE MAC Capabilities are proposed.
            1. Relevant CIDs: 15033, 15034, 15885, 15887.
      2. Discussion
         1. (Re: CID 15885) A member would like time to check all necessary changes have been made.
      3. **Straw Poll: Do you accept resolutions to CIDs 15033, 15034, 15885, 15887 in doc 11-18/1808r1?**
         1. **Result: Accepted with no objection subject to any additional changes.**
      4. Next Step
         1. The straw poll will be converted to a motion..
   3. **George Cherian (Qualcomm) presented “Remaining Ack related CRs,” based on the submission 11-18-1777-00.**
      1. Summary
         1. Resolutions for following comments on 802.11ax D3.0 related to Ack procedure are proposed.
            1. Relevant CIDs: 15050, 15052, 15859, 15942, 16162, 16186, 16372, 16497, 16501, 16652, 16654, 16656, 16660, 16919, 16920, 16927, 16942, 16944.
      2. Discussion
         1. (Re: CID 15942) A member mentioned that the reason for the rejection should be provided.
         2. (Re: CID 16372) A member asked for a clarification to the proposed text in subclause 27.4.4.
         3. (Re: CID 16654) Group discussed the required level on the length of the BlockAckBitmap.
      3. Straw Poll – No straw poll for now.
      4. Next Step
         1. George to work with interested people and come back with updated version of the document.
   4. **Osama Aboul-Magd (Huawei Technologies) presented “Resolutions to CIDs 15935 and 16150,” based on the submission 11-18-1935-01.**
      1. Summary
         1. Document 18/1935r1 was revisited.
      2. Discussion
         1. (Re: CID 15935) Further changes to the definitions related to this CID are made.
         2. (Re: CID 16150) The expression of “A-MPDU or S-MPDU” was changed to “A-MPDU” based on the discussion on the relation of A-MPDU and S-MPDU.
         3. The document 18/1935 was updated to r2.
      3. **Straw Poll: Do you accept resolutions to CIDs 15935 and 16150 in doc 11-18/1935r2?**
         1. **Result: Accepted with no objection.**
      4. Next Step
         1. The straw poll will be converted to a motion..
   5. **Yongho Seok (MediaTek) presented “LB233 CR MAC Miscellaneous,” based on the submission 11-18-1780-01.**
      1. Summary
         1. Resolutions for the following comments on 802.11ax D3.0 MAC layer are proposed.
            1. Relevant CIDs: 16176, 16223, ~~15023,~~ 15628, 15024, 15225, 16395, 15940, 15062, 16465, 17046, 15939.
            2. NOTE – The resolution of CID 15225 is changed since the cited sentence of CID 15225 is removed from CID15024.
      2. Discussion
         1. (Re: CID 16176) People discussed the proposed text related to this CID should be in a NOTE or not. Some people are confortable to add it as a NOTE while some other people are not happy with that.
         2. After discussion, a straw poll was proposed.
            1. Straw Poll: Which option do you support?

Option 1: Reject CID 16176 and 16223.

Option 2: Change the resolution to “Accepted” and add a NOTE.

* + - * 1. Result: Option 1/Option 2/Abstain = 10/8/5.
      1. (Re: CID 15628) People discussed the definition of “Event Type” related the subclause 9.2.4.68.1 (Event Report Definition). 🡪 Proposed text was updated.

1. **Recess**
   1. **TGax MAC ad hoc is in recess @ 10:00 AM.**

**Tuesday, November 13th, 2018, AM2 TGax MAC Session (10:30AM-12:30PM)**

1. **The meeting called to order at 10:30am by Osama Aboul-Magd (Huawei Technologies), the TGax chair** 
   1. 43 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-18/2006 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 presentation
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. **11-18/1780r2, “lb233-cr-mac-miscellaneous”**

CID 16176, 16223, ~~15023~~, 15628, 15024, 15225, 16395, 15940, 15062, 16465, 17046, 15939

* + 1. Presented by Yongho Seok (MediaTek)

SP1: Do you agree to accept resolutions of all CIDs in 18/1780r2 (including the resolutions of CID 16176 and 16223 as revised)?

Y/N = 5/7 🡪 SP fails

SP2: Do you agree to accept resolutions of all CIDs in 18/1780r3 (including the resolutions of CID 16176 and 16223 as rejected)?

Y/N/A = 12/5/0 🡪 SP fails

SP3: Do you agree to accept resolutions of all CIDs in 18/1780r3 (except the resolutions of CID 16176 and 16223)?

SP passed with no objection. Resolutions of CID 16176 and 16223 deferred.

* 1. **11-18/1505r0, “lb233-cr-mac-txvector”**

CID 16131, 16766, 15106, 16767, 16768 (5 CIDs)

* + 1. Presented by Yongho Seok (MediaTek)

Comment: 16768 is more likely PHY related comment. Moved it to the PHY adhoc.

SP4: Do you agree to accept resolutions in doc 11-18/1505r0 to following CIDs?

* CID 16131, 16766, 15106, 16767, ~~16768~~ (4 CIDs)

Y/N/A = 7/1/3 🡪 SP passed

* 1. **11-18/1921r0, “Sounding comments”**

CID 15020, 15138, 15658, 15687, 15688, 15689, 15690, 15692, 15693, 15765,

15767, 15768, 15876, 15922, 15923, 15924, 15927, 15966, 15988, 15989,

16011, 16047, 16054, 16069, 16070, 16165, 16174, 16237, 16257, 16258,

16260, 16272, 16298, 16299, 16300, 16301, 16302, 16303, 16304, 16305,

16310, 16311, 16329, 16330, 16337, 16338, 16350, 16368, 16369, 16508,

16672, 16679, 16680, 16703, 16743, 16756, 16874, 16955, 16956, 16958,

16959, 16960, 16969, 16970, 16974, 16975, 17053, 17057, 17058, 17059,

17060, 17107, 17119 (73CIDs)

* + 1. Presented by Menzo Wentink (Qualcomm)

CID 15689 deferred for further offline discussion.

SP: Do you agree to accept the resolution of CID 15966 as revised in this document?

Y/N/A = 4/1/1 🡪 SP passed

CID 15768 deferred

The document reviewed up to CID 16054

To be continued in the PM2 session.

The meeting recessed at 12:30pm.

**Tuesday, November 13th, 2018, PM2 TGax MAC ad hoc Session (4:00 PM - 6:00 PM)**

1. **The meeting called to order at 4:07pm by Osama Aboul-Magd (Huawei), the chair of the TGax task group**
   1. 50 people are in the room.
2. **Announcement**
   1. Agenda Doc.11-18/0xxx 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 presentation
2. **The Chair asked for approval of the agenda**
   1. No objection raised
3. **Presentation of contributions**
   1. **11-18/1921r1, “Sounding comments”**

CID 15020, 15138, 15658, 15687, 15688, 15689, 15690, 15692, 15693, 15765, 15767, 15768, 15876, 15922, 15923, 15924, 15927, 15966, 15988, 15989, 16011, 16047, 16054, 16069, 16070, 16165, 16174, 16237, 16257, 16258, 16260, 16272, 16298, 16299, 16300, 16301, 16302, 16303, 16304, 16305, 16310, 16311, 16329, 16330, 16337, 16338, 16350, 16368, 16369, 16508, 16672, 16679, 16680, 16703, 16743, 16756, 16874, 16955, 16956, 16958, 16959, 16960, 16969, 16970, 16974, 16975, 17053, 17057, 17058, 17059, 17060, 17107 and 17119

* + 1. Presented by Menzo Wentik (Qualcomm)

CIDs 15687, 15689, 15690, 15692, 15693, 16165, 16174, 16310, 16330, 16350, 16369, 16756 and 17057 need more discussion and deferred.

CIDs 16969, 16970, 16974 and 16975 are moved to PHY.

The meeting recessed at 6:00pm.

**Tuesday, November 13th, 2018, PM3 (EVE) TGax MAC ad hoc Session (19:30 - 21:30)**

1. **The meeting called to order at 19:30 by Osama Aboul-Magd (Huawei), the chair of the TGax task group**
   1. 50 people are in the room.
   2. Agenda Doc.11-18/0xxx on the server. Rev. 0 is the working document.
2. **Reminder**
   1. Chair reminded that we are still operating under the IEEE-SA IPR Policy and Procedure.
3. **Announcement**
   1. Meeting Protocol: The Chair asked for state name and affiliation when speaking for the first time.
   2. Attendance reminder.
      1. The attendance server: https://imat.ieee.org/
4. **Comment Resolution**
   1. **Matthew Fischer (Broadcom Ltd.) presented “Maximum RX PPDU Duration Signaling,” based on the submission 11-18-1821-02.**
      1. Summary
         1. As the resolution to CID 15757, it is proposed to create a mechanism to signal Maximum RX MPDU Duration to be transmitted to a STA using the A-control field.
      2. Discussion
         1. A member asked for the motivation, benefit/value to create this mechanism. 🡪 It is basically for the optimization of the receiver operating in the TWT.
         2. Some members also asked the similar question.
         3. A participant asked a TDLS related question and consideration of TLDS Peer PS Service was suggested.
      3. **Straw Poll: Do you accept resolution to CID 15757 in doc 11-18/1821r3?**
         1. **Result: Y/N/A = 8/18/15. Need more discussion to build consensus.**
   2. **Po-Kai Hunag (Intel) presented “11ax D3.2 MAC Comment Resolution for MU-RTS/CTS Part II,” based on the submission 11-18-1803-00.**
      1. Summary
         1. Resolutions for the following comments on MU-RTS/CTS procedure is proposed.
            1. Relevant CIDs: 15993, 15994, 15998, 16087, 16088, 16089, 17145.
      2. Discussion
         1. (Re: CID 15998) A member mentioned that the comment is valid and the resolution of “Rejected” does not make sense. Another member mentioned that PHY tem is happy to discuss about this comment. The comment was taken over by a PHY expert (Youhan Kim).
         2. (Re: CID 17145) People discussed PIFS recovery with regard to this comment.
         3. Aftre long discussion, CIDs other than 17145 are transferred to Youhan.
      3. **Straw Poll: Do you accept resolutions to CID 17145 in doc 11-18/1803r1?**
         1. **Result: Accepted with no objection.**
   3. **Tomoko Adachi (Toshiba) presented “Resolution to CID 17150,” based on the submission 11-18-1703-01.**
      1. Summary
         1. Resolution to CID 17150 on subclause 27.4 (HE acknowledgment procedure) is proposed.
      2. Discussion
         1. A member commented that this is effectively rejecting the comment although the resolution is “Revised.”
         2. Another member suggested no technical change but the re-word the resolution for this comment. 🡪 The document was updated to r2.
      3. **Straw Poll: Do you accept resolution to CID 17150 in doc 11-18/1703r2?**
         1. **Result: Accepted with no objection.**
   4. **Tomoko Adachi (Toshiba) presented “Resolutions to comments to subclause 9.3.1.9,” based on the submission 11-18-1851-01.**
      1. Summary
         1. Resolutions for the comments with following CIDs related to 802.11ax D3.0 subclause 9.3.1.9 (BlockAck frame format) are propsed.
            1. Relevant CIDs: 16440, 15012, 15930, 15207, 15870, 15871, 16092, 16093, 16202, 16359, 16371, 16374, 16379, 16391, 17043.
      2. Discussion
         1. (Re: CID 15870) A member does not understand the rationale for this resolution.
         2. (Re: CID 15871) Proposed modification to the current text related to this CID was updated as suggested.
         3. (Re: CID 16092) Some members are not happy with the proposed changes related to this comment.
      3. Time is up!
         1. To be continued in Wednesday AM1.
5. **Recess**
   1. **TGax MAC ad hoc is in recess @ 21:30 until start of Wednesday PM1.**
   2. **The next TGax session is Wednesday AM1 (TGax full session).**

# Wednesday, November 14th, 2018, 13:30 – 15:30, TGax MAC ad hoc session

1. **Meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chairperson of TGax @ 13:30 (local time).**
   1. Introduction of the chairperson Osama Aboul-Magd (Huawei Technologies) and the secretary Yasuhiko Inoue (NTT).
2. **IEEE 802 and 802.11 IPR Policy and Procedure**
   1. Chair reminded that we are still operating under the IEEE-SA Policy and Procedure.
3. **Agenda Setting**
   1. Proposed Agenda for Wednesday PM1
      1. Call Meeting to order
      2. IEEE-SA IPR Policy
      3. Comment Resolution
      4. Adjourn
   2. Chair asked if there is any item to add to the agenda 🡪 No response. The agenda was approved.
4. **Announcement**
   1. Chair reminded the attendees to state name and affiliation when speaking for the first time during the session.
   2. Attendance!
   3. Chair asked if it is okay to take released time slots during the mid-week plenary. 🡪 There was a request to avoid conflict with the EHT SG session.
5. **Comment Resolution**
   1. **Tomoko Adachi (Toshiba) continued presentation of “Resolutions to comments to subclause 9.3.1.9,” based on the submission 11-18-1851-02.**
      1. Discussion
         1. (Re: CIDs 16440 and 16441) A member asked if those CID are included since he has alternative resolution. The answer was no. Only CID 16440 is included.
         2. A member suggested removal of CID 16440 from the SP.
      2. **Straw Poll: Do you accept resolutions to CIDs 15012, 15930, 15207, 15870, 15871, 16092, 16093, 16202, 16359, 16371, 16374, 16379, 16391, 17043 in doc 11-18/1851r2?** 
         1. **Result: Accepted with no objection.**
   2. **Liwen Chu (Marvell Semiconductor) presented “11ax D3.0 Comment Resolution 9.7.1,” based on the submission 11-18-1856-02.**
      1. Summary
         1. Resolutions to the comments with following CIDs on the IEEE 802.11ax D3.0 subclause 9.7.1 (A-MPDU format) are proposed.
            1. Relevant CIDs: 16264, 16266, 16267, 16294, 16647, 16908, 17040.
         2. Previous revision of this document was presented in the TGax ad hoc in Shenzhen.
      2. Discussion
         1. No further discussion.
      3. **Straw Poll: Do you accept resolutions to CIDs 16264, 16266, 16267, 16294, 16647, 16908, 17040 in doc 11-18/1856r2?** 
         1. **Result: Accepted with no objection**
   3. **Liwen Chu (Marvell Semiconductor) presented “11ax D3.0 Comment Resolution 9.7.3,” based on the submission 11-18-1858-05.**
      1. Summary
         1. Resolutions to the comments with following CIDs on the IEEE 802.11ax D3.0 subclause 9.7.3 () are proposed.
            1. Relevant CIDs: 15162, 15901, 15902, 16118, 16164, 16207, 16208, 16209, 16210, 16212, 16228, 16253, 16271, 16290, 16291, 16292, 16648, 16649, 16650, 16651, 17037, 17038.
         2. The previous revision of this document was presented in the TGax ad hoc in Shenzhen. This is a bug fix to the baseline text.
      2. Discussion
         1. No further discussion.
      3. **Straw Poll: Do you accept resolutions to CIDs 15162, 15901, 15902, 16118, 16164, 16207, 16208, 16209, 16210, 16212, 16228, 16253, 16271, 16290, 16291, 16292, 16648, 16649, 16650, 16651, 17037, 17038 in doc 11-18/1858r6?**
         1. **Result: Accepted with no objection.**
   4. **Liwen Chu (Marvell Semiconductor) presented “11ax D3.0 Comment Resolution 27.5.3.4,” based on the submission 11-18-1975-02.**
      1. Summary
         1. Resolutions to the following comments on 802.11ax D3.0 subclause 27.5.3.4 (A-MPDU contents in an HE TB PPDU) are proposed.
            1. Relevant CIDs: 15087, 15088, 16597, 16610, 16664, 16665, 16666, 16667, 16670, 16671.
      2. Discussion
         1. (Re: CID 16664) Proposed text was updated as the result of the discussion.
         2. (Re: CID 16666) The proposed text was updated based on the comment from a participant (Robert Stacey).
         3. Straw Poll: Do you support that QoS Null can be transmitted by an unassociated STA in HE TB PPDU using UORA procedure?
            1. Result: Y/N/A = 0/10/3
         4. (Re: CID 16671) The resolution was changed from “Revised” to “Rejected” and the related text was deleted.
      3. **Straw Poll: Do you accept resolutions to CIDs 15087, 15088, 16597, 16610, 16664, 16665, 16666, 16667, 16670, and 16671 in doc 11-18/1975r2?** 
         1. **Result: Accepted with no objection.**
         2. CID 16666 was revised by Robert Stacy and all resolutions are good.
   5. **Zhou Lan (Broadcom Ltd.) presented “11ax D3.2 MAC Comment Resolution for Section 27.7.7,” based on the submission 11-18-1900-03.**
      1. Summary
         1. A resolution to the comment with CID 15696 on the IEEE 802.11ax D3.0 subclause 27.7.7 (HE subchannel selective transmission operation) was proposed.
      2. Discussion
         1. A member asked why the only 80 MHz channel bandwidth is considered here.
         2. Another member discussed the 40 MHz channel bandwidth case referring to the preamble detection on the primary 20 MHz channel and energy detection on the secondary 20 MHz channel.
         3. There was a question which 20 MHz channel of the 80 MHz channel should be based on.
         4. As the result of discussion, the document was updated to r4.
      3. **Straw Poll: Do you agree to resolution to CID 15696 in doc 11-18/1900r4?**
         1. **Result: Accepted with no objection.**
   6. **Jarkko Kneckt (Apple) presented “Comment resolution to CIDs 15990, 17031 and 17033,” based on the submission 11-18-1831-01.**
      1. Summary
         1. Resolutions to the comments with following CIDs on the IEEE 802.11ax D3.0 Operating Mode are proposed.
            1. Relevant CIDs: 15990, 17031, 17033.
      2. Discussion
         1. (Re: CID 15990) A member commented that the proposed text is very confusing.
         2. (Re: CID 16487) Group discussed the table related to this comment.
         3. (Re: CID 17031) There was a comment that some combinations in the resolution is covered by the HE Capabilities.
         4. Chair suggested offline discussion.
      3. Straw Poll – No straw poll for now.
   7. **Nan Li (ZTE) presented “Proposed resolution for CIDs for 27-2-2-Part 2,” based on the submission 11-18-1969-02 (on behalf of Kaiying Lv).**
      1. Summary
         1. Resolutions to the comments with following CIDs on the IEEE 802.11ax D3.0 sublause 27.2.2 are proposed.
            1. Relevant CIDs: 15908 and 16932.
      2. Discussion
         1. (Re: CID 16932) A member suggested additional text to clarify for the case of non-HE AP to choose a BSS color.
         2. The document was updated to r2.
      3. **Straw Poll: Do you agree to resolutions to CIDs 15908, 16932 in doc 11-18/1969r2?**
         1. **Result: Accepted with no objection.**
   8. **Abhishek Patil (Qualcomm) proposed a straw poll related to the submission 11-18-1456-02 (Resolution for CIDs in 27.5.3.3).**
      1. **Straw Poll: Do you accept resolutions to CIDs 15013, 16194, 16273, 17072, 16380, 16317, 16022, 17104, 15950, 17105, 15873, 15848, 16983, 17106, 16318, 16541, 17035, 17036 in doc 11-18/1456r2?**
         1. **Result: Resolutions to all CIDs other than CID 16317 are accepted.**
6. **AoB**
   1. 4 minutes left.
7. **Adjournment**
   1. TGax MAC ad hoc adjourned at 15:27 (local time).