IEEE P802.11  
Wireless LANs

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| TGax Teleconference Minutes from June to July, 2016 | | | | |
| Date: 2016-06-20 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
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Abstract

This document contains minutes of TGax teleconference from June to July, 2016.

Rev 0: Minutes from TGax teleconference on June 2nd, 2016.

Rev 1: Munites from TGax teleconference on June 16th, 2016 included.

Rev 2: Bug fix to the Rev1 and inclusion of Munites from TGax teleconference on June 23rd, 2016.

# Teleconference on Thursday, June 2nd , 2016, 10:00 – 12:00 (ET)

1. Meeting called to order by Osama Aboul-Magd (Huawei Technologies) @ 10:03 (ET).
2. IEEE 802 and 802.11 IPR Policy and Procedure
   1. Chair mentioned that we are operating under the IEEE 802 and 802.11 Policy and Procedure.
   2. Relevant documents
      1. IEEE Patent Policy - <http://standards.ieee.org/board/pat/pat-slideset.ppt>
      2. Patent FAQ - <http://standards.ieee.org/board/pat/faq.pdf>
      3. LoA Form - <http://standards.ieee.org/board/pat/loa.pdf>
      4. Affiliation FAQ - <http://standards.ieee.org/faqs/affiliationFAQ.html>
      5. Anti-Trust FAQ - <http://standards.ieee.org/resources/antitrust-guidelines.pdf>
      6. Ethics - <http://www.ieee.org/portal/cms_docs/about/CoE_poster.pdf>
      7. IEEE 802.11 Working Group Operartions Manual - <https://mentor.ieee.org/802.11/dcn/14/11-14-0629-14-0000-802-11-operations-manual.docx>
   3. Chair asked if there is any potentially essential patent that people are aware of.
      1. No potentially essential patent reported.
3. Agenda
   1. Proposed Agenda
      1. Call the meeting to order
      2. IEEE 802 and 802.11 IPR Policy and Procedure
      3. Annoucement
      4. Attendance (Please send an e.mail to Yasuhiko Inoue (inoue.yasuhiko@lab.ntt.co.jp) and/or Osama Aboul-Magd (osama.aboulmagd@huawei.com))
      5. Presentation
         1. [11-16-0762-00](https://mentor.ieee.org/802.11/dcn/16/11-16-0762-00-00ax-edca-rules-for-sending-trigger-frames.pptx), “EDCA rules for sending trigger frames,” Jing Ma (NICT)
      6. AOB
      7. Adjourn
   2. Approval of the agenda
      1. Chair asked if there is any discussion on the agenda.
      2. The agenda was approved.
4. Announcement
   1. Chair asked the attendees to state name and affiliation when speaking for the first tme.
5. Attendance
   1. Chair asked the attendees to send an email to Yasu ([inoue.yasuhiko@lab.ntt.co.jp](mailto:inoue.yasuhiko@lab.ntt.co.jp)) and/or Osama ([osama.aboulmagd@huawei.com](mailto:osama.aboulmagd@huawei.com)) to record attendance.
6. Presentations
   1. Jing Ma (NICT) is not on the call. Chair reviewed the submission 11-16-0762-00 “EDCA rules for sending trigger frames.”
      1. Summary:
         1. Proposal is to add a subclause to the section 25.5.2.2.3 in 11ax TG draft 0.1 based on the approved motion – “An AP is allowed to choose any access category (AC) for contending the channel to send a trigger frame. The chosen AC may give to the AP higher priority in accessing the channel compared to its associated STAs.”
      2. Discussion:
         1. A member commented that the text does not specify anything.
         2. Another member commented that TGax has similar discussion during the May 2016 Waikoloa session and coordination will be needed.
         3. To choose AC for a trigger frame and to use different set of EDCA parameter could be separate discussions.
      3. Next Step:
      4. The conclusion was we need more discussion on this topic.
7. AOB
   1. No other business to conduct.
8. Adjourn
   1. Meeting adjourned at 20:28 (ET).
9. List of Attendees

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| --- | --- | --- |
|  | **Name** | **Affiliation** |
| 1 | Osama Aboul-Magd | Huawei Technologies |
| 2 | Jinsoo Ahn | Yonsei Univ. |
| 3 | David Bagby | Calypso Ventures |
| 4 | Stephane Baron | Canon |
| 5 | Rui Cao | Marvell |
| 6 | Minho Cheong | Newracom |
| 7 | Mark Hamilton | Ruckus Wireless |
| 8 | Hanseul Hong | Yonsei Univ. |
| 9 | Junichi Iwatani | NTT |
| 10 | Yasu Inoue | NTT |
| 11 | Suhwook Kim | LG Electronics |
| 12 | Kome Oteri | InterDigital |
| 13 | Eunsung Park | LG Electronics |
| 14 | Yusuke Tanaka | SONY |
| 15 | SunWoong Yun | ??? |
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# Teleconference on Thursday, June 16th, 2016, 10:00 – 12:00 (ET)

1. Meeting called to order by Osama Aboul-Magd (Huawei Technologies) @ 10:03 (ET).
2. IEEE 802 and 802.11 IPR Policy and Procedure
   1. Chair mentioned that we are operating under the IEEE 802 and 802.11 Policy and Procedure.
   2. Relevant documents
      1. IEEE Patent Policy - <http://standards.ieee.org/board/pat/pat-slideset.ppt>
      2. Patent FAQ - <http://standards.ieee.org/board/pat/faq.pdf>
      3. LoA Form - <http://standards.ieee.org/board/pat/loa.pdf>
      4. Affiliation FAQ - <http://standards.ieee.org/faqs/affiliationFAQ.html>
      5. Anti-Trust FAQ - <http://standards.ieee.org/resources/antitrust-guidelines.pdf>
      6. Ethics - <http://www.ieee.org/portal/cms_docs/about/CoE_poster.pdf>
      7. IEEE 802.11 Working Group Operartions Manual - <https://mentor.ieee.org/802.11/dcn/14/11-14-0629-14-0000-802-11-operations-manual.docx>
   3. Chair asked if there is any potentially essential patent that people are aware of.
      1. No potentially essential patent reported.
3. Agenda
   1. Proposed Agenda
      1. Call the meeting to order
      2. IEEE 802 and 802.11 IPR Policy and Procedure
      3. Annoucement
      4. Attendance (Please send an e.mail to Yasuhiko Inoue (inoue.yasuhiko@lab.ntt.co.jp) and/or Osama Aboul-Magd (osama.aboulmagd@huawei.com))
      5. Presentation
         1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0773-00-00ax-comment-resolution-section-25-6-he-sounding.docx> - Raja Banerjea
         2. <https://mentor.ieee.org/802.11/dcn/16/11-16-0774-00-00ax-comment-resolution-on-9-3-1-23-ruallocation.docx> -Raja Banerjea
         3. <https://mentor.ieee.org/802.11/dcn/16/11-16-0725-01-00ax-comment-resolution-on-9-3-1-23.docx> -Raja Banerjea
         4. <https://mentor.ieee.org/802.11/dcn/16/11-16-0766-00-00ax-he-variant-ht-control-ul-mu-response.docx> - Alfred Asterjadhi
         5. <https://mentor.ieee.org/802.11/dcn/16/11-16-0775-00-00ax-comment-resolution-on-section-26-3-12-4-phy-mu-mimo-power-pre-correction.docx> - Lochan Verma
      6. AOB
      7. Adjourn
   2. Approval of the agenda
      1. Chair asked if there is any discussion on the agenda.
      2. The agenda was approved.
4. Announcement
   1. Chair asked the attendees to state name and affiliation when speaking for the first tme.
5. Attendance
   1. Chair asked the attendees to send an email to Yasu ([inoue.yasuhiko@lab.ntt.co.jp](mailto:inoue.yasuhiko@lab.ntt.co.jp)) and/or Osama ([osama.aboulmagd@huawei.com](mailto:osama.aboulmagd@huawei.com)) to record attendance.
6. Presentations
   1. **Raja Banerjea (Qualcomm) presented “CIDs for: Section 25.6 HE Sounding Comment Resolution,” based on the submission 11-16-0773-01.**
      1. CIDs 55, 1000, 1221, 1915, 2234, 802, and 1695
         1. Summary
            1. These comments ask for the HE Sounding Sequence.
            2. Resulutions are basically REVISED.
            3. Proposed text contained in page 4 to 6 of 16/773r1.
         2. Discussion
            1. A member asked what “REVISED” exactly means. Raja responded that those comments are agreed but the commenters do not provide text.

Chair mentioned there will be a tutorial for comment resolution by the WG chair or the WG 1st vice chair during the July TGax session.

* + - * 1. Another member commented we need to consider mixed BF (UL MU capable and not UL MU capable cases). Raja responded that two types of sounding protocols are provided.
    1. CID 1222
       1. Summary
          1. This asks for a clarification of the rules for segmented feedback in HE sounding protocol sequences. The resolution is REVISED.
          2. Proposed text contained in the page 7 of the 16/773r1.
       2. Discussion
          1. A member ased for the 802.11ac case. Raja responded that segmented feedback is allowed for 802.11ac and he tried to harmonize the procedure for the HE case.
          2. Another member commented that unit of “Byte” should not be used in the spec.
    2. CIDs 182, 971, and 2713:
       1. Summary
          1. Comments 182 and 971 ask for resolving the TBDs in HE sounding protocol. The resolution is revised.
          2. Comment 2713 asks for a new sounding protocol and was rejected.
          3. Proposed text contained in page 9 to 11 of the 16/773r1.
       2. Discussion
          1. There was a discussion about VHT/HE NDP Announcement frame format.

The first figure in 9.3.1.20 needs to be updated.

* + 1. CID 223
       1. Summary
          1. This comment asks for the definition of HE beamforming feedback. The resolution is revised.
          2. Proposed text contained in pages 13 and 14 of the 16/773r1.
       2. Discussion
          1. No discussion.
    2. Next Step
       1. It is good to give the memberships the time to review the document.
       2. Raja to update the document based on the feedback received.
  1. **Raja Banerjea (Qualcomm) presented “CIDs for: Section 9.3.1.23 Trigger Frame Format,” based on the submission 11-16-0780-00.**
     1. CIDs: 101, 103, 104, 374, 375, 377, 558, 561, 661, 662, 663, 664, 688, 1296, 1299, 1301, 1303, 1305, 1306, 1717, 1718, 1882, 2113, 2114, 2174, 2217, 2302, 2421, 227, and 720.
     2. Summary
        1. These comments ask for improving the spec of the Trigger Frame format by resolving TBDs and clarifying current definisions.
        2. Eleven comments are rejected while others are revised or accepted.
        3. Proposed text contained in pages 8, 9 and 10 of 16/780r0.
     3. Discussion
        1. Chair mentioned that people need more time to review the document.
        2. Raja to update the document based on the feedback to be received.
  2. **Raja Banerjea (Qualcomm) presented “Trigger Frame Format Comment Resolution – Type Dependent Per user information section 9.3.1.23,” based on the submission 11-16-0725-02.**
     1. CIDs: 9 and 228
        1. Summary
           1. These comments ask for description of Beamforming Report Poll Trigger variant.
           2. The resolutions are REVISED. Proposed text is contained in pages 2 and 3.
     2. CIDs: 2219, 2422, 2691, 2692, and 2900
        1. Summary
           1. These comments basically ask for clarification of BRP Trigger variant and Basic Trigger variant.
           2. The resolutions are basically REVISED except one. Proposed text for Basic Trgger is provided.
        2. Discussion
           1. No discussion.
  3. **Raja Banerjea (Qualcomm) presented “CIDs for: Section 9.3.1.23 Trigger Frame RA Address comments and accepted Motion #74, #55,” based on the submission 11-16-0774-00.**
     1. CIDs: 102, 262, 372, 612, 660, 830, 864, 1083, 1716, 2215, 2301, 2376, 717, 1755, and 719.
        1. Summary
           1. These comments ask for clarification of RA setting of Trigger frame and IFS used for the following sequence.
           2. The resolutions are basically REVISED. Proposed text contained in pages 5, 6 and 7.
        2. Discussion
           1. A member discussed about the relationship of cascading indication and TXOPs for actual transmissions.
  4. **Lochan Verma (Qualcomm) presented “Comment Resolutions on Clause 26.3.12.4,” based on the submission 11-16-0775-00.**
     1. CIDs: 340, 341, 342, 343, 1023, 2734, and 2889.
        1. Summary
           1. These comments ask for clarification on power control and its accuracy, RSSI measurement accuracy.
           2. The resolutions are basically REVISED. Proposed text contained in pages 3, 4 and 5.
        2. Discussion
           1. No discussion.
        3. Next Step
           1. All CIDs are subject to motion during the F2F.

* 1. Alfred Asterjadhi (Qualcomm) presented “HE Variant HT Control – UL MU response,” based on the submission 11-16-0766-00.
     1. CIDs: 855, 1064, 1, 784, 90, 94, 654, 453, 1181, 2249, 2297, 2208, 2406, 2576, 2901, 2902, 2903, 2405, 2904, 1254, 1255, 1256, 1202, 1714, 1761, 1762, 1881, 1418.
        1. Summary
           1. Alfred explained the proposed text.
           2. Time is up. To be continued to the teleconference.

1. AOB
   1. Next teleconference: June 23rd, 2016, 20:00 – 22:00 (ET)
2. Adjournment
   1. TGax teleconference has adjourned at 12:00 PM (ET).
3. Attendees

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Affiliation** |
| 1 | Osama Aboul-Magd | Huawei Technologies |
| 2 | Tomo Adachi | Toshiba |
| 3 | Jinsoo Ahn | Yonsei Univ. |
| 4 | Carol Ansley | ARRIS |
| 5 | Alfred Asterjadhi | Qualcomm |
| 6 | Edward Au | Huawei Technologies |
| 7 | David Bagby | Calypso Ventures |
| 8 | Raja Banerjea | Qualcomm |
| 9 | Stephane Baron | Canon |
| 10 | Rui Cao | Marvell |
| 11 | HanGyu Cho | LG Electronics |
| 12 | Jinsoo Choi | LG Electronics |
| 13 | Liwen Chu | Marvell |
| 14 | David Halls | Toshiba |
| 15 | Mark Hamilton | Ruckus Wireless |
| 16 | Reza Hedayat | Newracom |
| 17 | Hanseul Hong | Yonsei Univ. |
| 18 | Junichi Iwatani | NTT |
| 19 | Yasu Inoue | NTT |
| 20 | Jeongki Kim | LG Electronics |
| 21 | Suhwook Kim | LG Electronics |
| 22 | Parag Kulkarni | Toshiba |
| 23 | Dongguk Lim | LG Electronics |
| 24 | Jing Ma | NICT |
| 25 | Narendar Madhavan | Toshiba |
| 26 | Patrice Nezou | Canon |
| 27 | Paul Nikolich | YAS |
| 28 | Eunsung Park | LG Electronics |
| 29 | Hakan Persson | Ericsson AB |
| 30 | Mark Rison | Samsung |
| 31 | Jon Rosdahl | Qualcomm |
| 32 | Sigurd Schelstraete | Quantenna |
| 33 | John Son | Wilus |
| 34 | Jung Hoon Suh | Huawei Technologies |
| 35 | Lochan Verma | Qualcomm |
| 36 | Pascal Viger | Canon |
| 37 | Lei Wang | Marvell |
| 38 | Xiaofei Wang | InterDigital |
| 39 | SunWoong Yun | LG Electronics |
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# Teleconference on Thursday, June 23rd, 2016, 20:00 – 22:00 (ET)

1. Meeting called to order by Osama Aboul-Magd (Huawei Technologies) @ 20:10 (ET).

The delay was due to the audio trouble of web conferencing system.

1. IEEE 802 and 802.11 IPR Policy and Procedure
   1. Chair mentioned that we are operating under the IEEE 802 and 802.11 Policy and Procedure.
   2. Relevant documents
      1. IEEE Patent Policy - <http://standards.ieee.org/board/pat/pat-slideset.ppt>
      2. Patent FAQ - <http://standards.ieee.org/board/pat/faq.pdf>
      3. LoA Form - <http://standards.ieee.org/board/pat/loa.pdf>
      4. Affiliation FAQ - <http://standards.ieee.org/faqs/affiliationFAQ.html>
      5. Anti-Trust FAQ - <http://standards.ieee.org/resources/antitrust-guidelines.pdf>
      6. Ethics - <http://www.ieee.org/portal/cms_docs/about/CoE_poster.pdf>
      7. IEEE 802.11 Working Group Operartions Manual - <https://mentor.ieee.org/802.11/dcn/14/11-14-0629-14-0000-802-11-operations-manual.docx>
   3. Chair asked if there is any potentially essential patent that people are aware of.
      1. No potentially essential patent reported.
2. Agenda
   1. Proposed Agenda
      1. Call the meeting to order
      2. IEEE 802 and 802.11 IPR Policy and Procedure
      3. Annoucement
      4. Attendance (Please send an e.mail to Yasuhiko Inoue (inoue.yasuhiko@lab.ntt.co.jp) and/or Osama Aboul-Magd (osama.aboulmagd@huawei.com))
      5. Presentations
         1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0766-00-00ax-he-variant-ht-control-ul-mu-response.docx> - Alfred Asterjadhi (continuation)
         2. <https://mentor.ieee.org/802.11/dcn/16/11-16-0762-00-00ax-edca-rules-for-sending-trigger-frames.docx> - Jing Ma
         3. <https://mentor.ieee.org/802.11/dcn/16/11-16-0798-00-00ax-he-variant-ht-control-general.docx> - Alfred Asterjadhi
      6. AOB
      7. Adjourn
   2. Chair asked if any objection to proceed with this agenda. 🡪 No objection. The meeting will be conducted following this agenda.
3. Announcement
   1. Chair asked the attendees to state name and affiliation when speaking for the first tme.
4. Attendance
   1. Chair asked the attendees to send an email to Yasu ([inoue.yasuhiko@lab.ntt.co.jp](mailto:inoue.yasuhiko@lab.ntt.co.jp)) and/or Osama ([osama.aboulmagd@huawei.com](mailto:osama.aboulmagd@huawei.com)) to record attendance.
5. Presentations
   1. Alferd Asterjadhi (Qualcomm) presented “HE Variant HT Control – UL MU response,” based on the submission 11-16-0766-00.
      1. Summary
         1. This is continuation of Alfred’s presentation from the previous conference call.
         2. The document contains the proposed resolution for each comment and proposed text.
      2. Discussion
         1. There was a discussion on the format of A-Control subfield of the HE variant of HT Control field. The changes are based on the motion we passed during the May 2016 session (doc. 11-16/0643r0).
         2. A member commented on the Buffer Status Report. Need more discussion.
      3. Next step
         1. Members are encouraged to review the document.
   2. Alfred Asterjadhi (Qualcomm) presented “HE Variant HT Control – General,” based on the submission 11-16-0798-00.
      1. Summary
         1. Comments on HE variant of HT Control field with CIDs 1126, 1127, 1179, 58, 89, 361, 2248, 1877, 1878, 792, 686, 687, 793, 1133, 91, 92, 362, 363, 2296, 1712, 1713, 1250, 1253, 1711, 2204, 2205, 2206, 211, 364, 1231, 134, 1750 and 1244 have been considered in this document.
         2. CID 989 is misplaced and not counted here.
      2. Discussion
         1. No discussion.
      3. Next step
         1. Members are encouraged to review this document, too.
   3. Jing Ma (NICT) was supposed to present her submission, howeve, she could not do it due to the audio problem.
6. AOB
   1. The next conference call will be on June 30th, 10:00 – 12:00 (ET).
7. Adjournment
   1. TGax conference call adjourned @ 21:27 (ET).
8. Attendees

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Affiliation** |
| 1 | Osama Aboul-Magd | Huawei Technologies |
| 2 | Tomoko Adachi | Toshiba |
| 3 | Woojin Ahn | Yonsei Univ. |
| 4 | Alfred Asterjadhi | Qualcomm |
| 5 | Rui Cao | Marvell |
| 6 | Rojan Chitrakar | Panasonic |
| 7 | Lei Hung | Panasonic |
| 8 | Junichi Iwatani | NTT |
| 9 | Yasu Inoue | NTT |
| 10 | Jeongki Kim | LG Electronics |
| 11 | Geonjung Ko | WILUS |
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| 14 | narendar Madhavan | Toshiba |
| 15 | Yuichi Morioka | SONY |
| 16 | Kome Oteri | InterDigital |
| 17 | Eunsung Park | LG Electronics |
| 18 | Jayh Park | LG Electronics |
| 19 | Kiseon Ryu | LG Electronics |
| 20 | Shoko Shinohara | NTT |
| 21 | John Son | WILUS |
| 22 | Yusuke Tanaka | SONY |
| 23 | Lochan Verma | Qualcomm |
| 24 | Huizhao Wang | Quantenna |
| 25 | Lei Wang | Marvell |
| 26 | David Xun Yang | Huawei Technologies |
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