IEEE P802.11
Wireless LANs

|  |
| --- |
| TGax Teleconference Minutes from June to July, 2016 |
| Date: 2016-07-19 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Yasuhiko Inoue | NTT | 1-1 Hikaro-no-oka, Yokosuka, Kanagawa 238-0847 Japan | ++81-46-859-5097 | inoue.yasuhiko@lab.ntt.co.jp |
|  |  |  |  |  |

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 Rev 1 and inclusion of Minutes from TGax teleconference on June 23rd, 2016.

Rev 3: Bug fix to the Rev 2 and inclusion of minutes from TGax teleconference on June 30th, 2016.

Rev.4: Minutes from TGax teleconference on July 7th, 2016 included.

Rev.5: Munites from TGax teleconference on July 14th, 2016, included.

#  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) and/or Osama (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

|  |  |  |
| --- | --- | --- |
|  | **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 | ??? |
| 16 |  |  |
| 17 |  |  |
| 18 |  |  |
| 19 |  |  |
| 20 |  |  |

# 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) and/or Osama (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 |
| 40 |  |  |
| 41 |  |  |
| 42 |  |  |
| 43 |  |  |
| 44 |  |  |
| 45 |  |  |
| 46 |  |  |
| 47 |  |  |
| 48 |  |  |
| 49 |  |  |
| 50 |  |  |
|  |  |  |

# 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) and/or Osama (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 Huang | Panasonic |
| 8 | Junichi Iwatani | NTT |
| 9 | Yasu Inoue | NTT |
| 10 | Jeongki Kim | LG Electronics |
| 11 | Geonjung Ko | WILUS |
| 12 | Dongguk Lim | LG Electronics |
| 13 | Jing Ma | NICT |
| 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 |
|  |  |  |

# Teleconference on Thursday, June 30th, 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 Setting
	1. Proposed Agenda
		1. Call the meeting to order
		2. IEEE 802 and 802.11 IPR Policy and Procedure
		3. Agenda Setting
		4. Annoucement
		5. Attendance (Please send an e.mail to Yasuhiko Inoue (inoue.yasuhiko@lab.ntt.co.jp) and/or Osama Aboul-Magd (osama.aboulmagd@huawei.com))
		6. Presentations
			1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0807-00-00ax-comment-resolution-on-mu-rts-cts-procedure.docx> - Po-Kai Huang
			2. <https://mentor.ieee.org/802.11/dcn/16/11-16-0808-00-00ax-comment-resolution-on-trigger-frame-format-mu-rts-variant.docx> - Po-Kai Huang
		7. AOB
		8. Adjourn
	2. Chair asked if any objection to proceed with this agenda. 🡪 No objection. The meeting will be conducted following this agenda.
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) and/or Osama (osama.aboulmagd@huawei.com) to record attendance.
6. Presentations
	1. **Po-Kai Huang (Intel) presented “Comment Resolution on Trigger frame format – MU RTS variant,” based on the submission 11-16-0808-00.**
		1. Summary
			1. Relevant CIDs: 1311, 2223, 110, 2587, 8, 2222, 1068, 1310, 1312, 2588, 2601, 2894, 1204 and 2907.
		2. Discussion
			1. CID 2222 will be the most important topic in this document.
			2. Members discussed about the RU Allocation field of the MU RTS variant of Trigger frame.
		3. Next step
			1. Po-Kai to check the baseline document working offline with interested members.
	2. **Po-Kai Huang (Intel) presented “11ax D0.1 Comment Resolution for MU RTS/CTS procedure,” based on the submission 11-16-0807-00.**
		1. Summary
			1. Relevant CIDs: 963, 128, 214, 2171, 2428, 692, 124, 2906, 2840, 2603, 2599, 1209, 2264, 15, 13, 126, 1071, 693, 1768, 401, 1727, 403, 1644, 2281, 2282, 2279 and 160.
		2. Discussion
			1. CID 2840: Chair mentioned the comment is asking why this restriction is needed. 🡪 Po-Kai to modify the resolution.
			2. CID 15: Applicability of dynamic channel bandwidth operation to 802.11ax. Basically, we need more discussion. Current resolution for this comment is “REJECT”, but it might be changed.
			3. A member discussed about the TA field of MU RTS variant of the Trigger frame.
		3. Next step
			1. Po-kai to modify the document after discussion with interested members.
7. AOB
	1. The next call will be on July 7th, 2016, 20:00 – 22:00 (ET).
8. Adjournment
	1. TGax teleconference adjourned @ 11:32 (ET)
9. Attendees

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Affiliation** |
| 1 | Osama Aboul-Magd | Huawei Technologies |
| 2 | Tomoko Adachi | Toshiba |
| 3 | Woojin Ahn | Yonsei Univ. |
| 4 | Alfred Asterjadhi | Qualcomm |
| 5 | David Bagby | Calypso Ventures |
| 6 | Stephane Baron | Canon |
| 7 | Liwen Chu | Marvell |
| 8 | Po-Kai Huang | Intel |
| 9 | Yasu Inoue | NTT |
| 10 | Joseph Levy | InterDigital |
| 11 | Jae Seung Lee | ETRI |
| 12 | Dongguk Lim | LG Electronics |
| 13 | Eunsung Park | LG Electronics |
| 14 | Mark Rison | Samsung |
| 15 | Sigurd Schelstraete | Quantenna |
| 16 | John Son | WILUS |
| 17 | Yusuke Tanaka | SONY |
| 18 | Lochan Verma | Qualcomm |
| 19 | Pascal Vigar | Canon |
| 20 | Lei Wang | Marvell |
| 21 | Xiaofei Wang | InterDigital |
| 22 | SunWoong Yun | LG Electronics |
| 23 |  |  |
| 24 |  |  |
| 25 |  |  |
| 26 |  |  |
|  |  |  |

# Teleconference on Thursday, July 7th, 2016, 20:00 – 22:00 (ET)

1. Meeting called to order by Osama Aboul-Magd (Huawei Technologies) @ 20:03 (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 Setting
	1. Proposed Agenda
		1. Call the meeting to order
		2. IEEE 802 and 802.11 IPR Policy and Procedure
		3. Agenda Setting
		4. Annoucement
		5. Attendance (Please send an e.mail to Yasuhiko Inoue (inoue.yasuhiko@lab.ntt.co.jp) and/or Osama Aboul-Magd (osama.aboulmagd@huawei.com))
		6. Presentations
			1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0815-00-00ax-comment-resolution-mu-rts-scrambler-seed.docx> - Young Hoon Kwon
			2. <https://mentor.ieee.org/802.11/dcn/16/11-16-0819-00-00ax-cids-for-section-9-3-1-9-blockack-frame-format.docx> - Tomoko Adachi
			3. <https://mentor.ieee.org/802.11/dcn/16/11-16-0806-00-00ax-he-variant-ht-control-buffer-status-report.docx> - Alfred Asterjadhi
		7. AOB
		8. Adjourn
	2. Chair asked if any objection to proceed with this agenda. 🡪 No objection. The meeting will be conducted following this agenda.
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) and/or Osama (osama.aboulmagd@huawei.com) to record attendance.
6. Presentations
	1. **Young Hoon Kwon (Newracom) presented “11ax D0.1 Comment Resolution for MU-RTS Scrambling Seed,” based on the submission 11-16-0815-01.**
		1. Summary
			1. Comments with CIDs 14, 127, 370, 371, 2602 have been considered.
			2. Young Hoon goes through the document.
		2. Discussion
			1. There is no big discussion on this contribution.
		3. Next Step
			1. Young Hoon continues to revise the document.
	2. **Tomoko Adachi (Toshiba) presented “CIDs for: Section 9.3.1.9 BlockAck frame format,” based on the submission 11-16-0819-00.**
		1. Summary
			1. Nine comments with CIDs 961, 1137, 804, 212, 2212, 2412, 2413, 1136 and 1493 are considered in this document.
		2. Discussion
			1. There was a discussion on the instruction to the TGax editor on the last page.
			2. CID#1493: Need to make sure who is the owner.
		3. Next Step
			1. Tomo to revise the document.
	3. **Alfred Asterjadhi (Qualcomm) presented “HE Variant HT Control – Buffer Status Report,” based on the submission 11-16-0806-00.**
		1. Summary
			1. 24 comments are considered in this contribution:
				1. CIDs #824, 93, 1067 and 2388 (4 CIDs),
				2. CIDs #45, 178, 254, 438, 680, 769, 770, 771, 817, 818, 1062, 1065, 1066, 1550, 2189, 2190, 2191, 2272, 2711 and 147 (20 CIDs).
		2. Due to time constraint, Alfred’s presentation was interrupted and to be continued in the next teeconferemce.
7. AOB
	1. The next call will be on July 14th, 2016, 10:00 – 12:00 (ET).
8. Adjournment
	1. TGax teleconference adjourned @ 11:32 (ET)
9. Attendees

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Affiliation** |
| 1 | Osama Aboul-Magd | Huawei Technologies |
| 2 | Tomoko Adachi | Toshiba |
| 3 | Jinsoo Ahn | Yonsei Univ. |
| 4  | Woojin Ahn | Yonsei Univ. |
| 5 | Alfred Asterjadhi | Qualcomm |
| 6 | Rojan Chitrakar | Panasonic |
| 7 | Reza Hedayat | Newracom |
| 8 | Hanseul Hong |  |
| 9 | Yasuhiko Inoue | NTT |
| 10 | Junichi Iwatani | NTT |
| 11 | Geonjung Ko | Wilus |
| 12 | Young Hoon Kwon | Newracom |
| 13 | Jae Seung Lee | ETRI |
| 14 | Jing Ma | NICT |
| 15 | Narendar Madhavan | Toshiba |
| 16 | Eunsung Park | LG Electronics |
| 17 | Jayh Park | LG Electronics |
| 18 | Dengyu Qiao | Huawei Technologies |
| 19 | Kiseon Ryu | LG Electronics |
| 20 | Sigurd Schelestraete | Quantenna |
| 21 | Shoko Shinohara | NTT |
| 22 | John Son | Wilus |
| 23 | Yusuke Tanaka | Sony |
| 24 | Lochan Verma | Qualcomm |
| 25 | Lei Wang | Marvell |
| 26 |  |  |
| 27 |  |  |
| 28 |  |  |
| 29 |  |  |
| 30 |  |  |

# Teleconference on Thursday, July 14th, 2016, 10:00 – 12:00 (ET)

1. Meeting called to order by Osama Aboul-Magd (Huawei Technologies) @ 10:03 (ET).
2. Agenda Setting
	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/16/11-16-0806-00-00ax-he-variant-ht-control-buffer-status-report.docx> (remaining CIDs) - Alfred Asterjadhi (Qualcomm)
			2. <https://mentor.ieee.org/802.11/dcn/16/11-16-0813-00-00ax-cr-on-secition-26-2-2-txrxvector-parameters.doc> - Ke Yao (ZTE)
			3. <https://mentor.ieee.org/802.11/dcn/16/11-16-0836-00-00ax-comment-resolution-on-section-9-4-1-phy-mu-mimo-compressed-beamforming-report.docx> - Lochan Verma (Qualcomm)
		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. 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.
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) and/or Osama (osama.aboulmagd@huawei.com) to record attendance.
6. Presentations
	1. **Alfred Asterjadhi (Qualcomm) presented “HE Variant HT Control – Buffer Status Report,” based on the submission 11-16-0806-00.**
		1. Summary – Resolutions for following CIDs proposed.
			1. 824, 93, 1067, 2388 (4 CIDs)
			2. 45, 178, 254, 438, 680, 769, 770, 771, 817, 818, 1062, 1065, 1066, 1550, 2189, 2190, 2191, 2272, 2711, 147 (20 CIDs)
		2. Discussion
			1. CID #2191: (Q) There will be two mechanisms to notify the queue size information by this proposed change. 🡪 Correct.
			2. CID #2272: This comment is wrongly placed. Alfred prepared resolution based on the suggested changes (the resolution is “REJECT”).
		3. Next Step
			1. Alfred to have offline discussion with interested members.
	2. **Ke Yao (ZTE) presented “Proposed resolutions to comments on clause 26.2.2,” based on the submission 11-16-0813-01.**
		1. Summary: Four CIDs #370, 1780, 1923 and 2517 are considered in this document.
			1. CID #2517 is about the first PPDU in a TXOP while other CIDs are about the TXVECTOR.
		2. Discussion
			1. EXPANSION\_MAT: need suggestions by other members.
			2. RSSI: asked to pay attention here. Need to be revised.
			3. DOPPLER: need to resolve TBDs.
			4. C: two possibilities of LTF for UL MU-MIMO 🡪 should be resolved.
		3. Next Step
			1. Ke to work with other members to revise the document.
	3. **Lochan Vernma (Qualcomm) presented “Comment Resolutions on Clause 9.4.1 Part 1,” based on the submission 11-16-0836-00.**
		1. Summary: Resolutions for the following CIDs are proposed:
			1. 112, 380, 381, 456, 539, 689, 690, 1154, 1316, and 1862.
		2. Discussion
			1. There are significant changes. The participants in the teleconference are limited. Need more review by other members.
		3. Next Step
			1. Lochan to update the document based on the disucussions and upload the revised document.
7. AOB
	1. The next meeting will be the face-to-face during the IEEE 802.11 meeting in San Diego.
8. Adjournment
	1. TGax teleconference adjourned @ 11:54 (ET)
9. Attendees

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Affiliation** |
| 1 | Osama Aboul-Magd | Huawei Technologies |
| 2 | Woojin Ahn | Yonsei Univ. |
| 3 | Alfred Asterjadhi | Qualcomm |
| 4 | David Bagby | Calypso Vebtures |
| 5 | Rui Cao | Marvell |
| 6 | Rojan Chitrakar | Panasonic |
| 7 | Sean Coffey | RealTek |
| 8 | Mark Hamilton | Ruckus Wirelss |
| 9 | Hanseul Hong | Yonsei Univ. |
| 10 | Yasuhiko Inoue | NTT |
| 11 | Junichi Iwatani | NTT |
| 12 | Kaushik josiam | Samsung |
| 13 | Jeongki Kim | LG Electronics |
| 14 | Geonjung Ko | Wilus |
| 15 | Jae Seung Lee | ETRI |
| 16 | Joseph Levy | InterDigital |
| 17 | Kome Oteri | InterDigital |
| 18 | Mark Rison | Samsung |
| 19 | Jon Rosdahl | Qualcomm |
| 20 | Kiseon Ryu | LG Electronics |
| 21 | Sigurd Schelestraete | Quantenna |
| 22 | John Son | Wilus |
| 23 | Jung Hoon Suh | Huawei Technologies |
| 24 | Yusuke Tanaka | Sony |
| 25 | Lochan Verma | Qualcomm |
| 26 | Huizao Wang | Quantenna |
| 27 | Lei Wang | Marvell |
| 28 | Lisa Ward | Rode & Schwarts |
| 29 | Chris Williams | Ericsson |
| 30 | Ke Yao | ZTE |
| 31 |  |  |
| 32 |  |  |
| 33 |  |  |
| 34 |  |  |
| 35 |  |  |