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| IEEE P802.11IEEE 802.11 TGaxMarch 2017 Ad Hoc Meeting (non-PHY) Minutes |
| Date: 2017-03-12 |
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Abstract

This document contains the minutes from non-PHY session of the TGax March 2017 ad hoc meeting in San Diego, CA, from March 8th to 10th, 2017.

Minutes from the PHY session will be available in a separate document.

Rev. 0: Initial document.

**IEEE 802.11 Task Group AX Ad Hoc Meeting**

**March 2017 in San Diego, CA**

**March 8th – 10th, 2017**

**TGax Chair Osama Aboul-Magd (Huawei Technologies)**

**Vice Chair Simone Merlin (Qualcomm)**

**Vice Chair Ron Porat (Broadcom)**

**TGax Secretary Yasuhiko Inoue (NTT)**

**TGax Technical Editor Robert Stacy (Intel)**

**Wednesday, March 8th, 2017, AM non-PHY Session**

1. The meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chair of the TGax, @10:16
2. **Announcement**
	1. PHY ad hoc will be run by Hongyuan Zhang (Marvell)
	2. Non-PHY ad hoc will be run by Simone Merlin (Qualcomm)
	3. This is an ad hoc meeting – no motions will be conducted.
	4. Comment resolution was the main focus. Complex comments requiring discussion from a broader group of TGax participants are to be discussed in the 802.11 interim and plenary sessions.
3. **Agenda Setting.**
	1. General flow of the ad hoc meeting
		1. Wednesday
			1. Comment resolutions (10:00 – 18:00)
			2. Recess for the day
		2. Thursday
			1. Comment resolutions (9:00 – 18:00)
			2. Recess for the day
		3. Friday
			1. Comment resolutions (9:00 – 16:00)
			2. Adjourn
	2. Proposed agenda for the non-PHY session (11-17-356-00)
		1. Call meeting to order
		2. Patent policy, etc.
		3. Announcement
		4. Call for submissions
		5. Set agenda
		6. Presentations and comment resolutions
		7. Recess for the day
	3. Chair asked if there are any other items – No items proposed. Meeting will be conducted based on this order.
4. **The chair reviewed the mandatory 6 slides of P&P.**
	1. Instructions for the WG Chair.
	2. Participants, Patents, and Duty to Inform.
	3. Patent Related Links.
	4. Call for potentially essential patents.
		1. Chair asked if anyone is aware of potentially essential patents.
		2. No potentially essential patents reported.
	5. Other Guidelines for IEEE WG Meetings.
	6. Participation in IEEE 802 Meetings (new slide)
5. **Agenda items for the week**
	1. Approve TG and Teleconference minutes since November 2016 meeting.
	2. Comment resolution on draft D1.0
	3. Schedule TG ad hoc meeting(s)
	4. Schedule Teleconference times.
6. **Call for submissions**
	1. Submissions are contained in the excel file attached to the agenda document.
7. Order of presentations
	1. Laurent
	2. Yongho
	3. Po-Kai
	4. Raja (4)
	5. Alfred
	6. Abhi (7)
	7. George
8. **Presentation**
	1. **Laurent Cariou (Intel) presented “CR for 27.9.2.2 spatial reuse,” based on the submission 11-17-0267-02.**
		1. Summary
			1. Proposed resolutions for comments on clause 7.9.2.2 OBSS\_PD
			2. Relevant CIDs:
				1. 3198, 3199, 3200, 5204, 5205, 5207, 5484, 5489, 5494, 5496, 5497, 5499, 5500, 5501, 5502, 5503, 5690, 5691, 5870, 7122, 7123, 7129, 7406, 7612, 8073, 8104, 8232, 8239, 9315,9540, 9944, 9946, 9947, 10031, 10032, 7125, 3197, 5689, 9541, 3196, 6025, 7823, 8233
			3. This is clarification of the text in the draft. No new things are proposed.
		2. Discussion
			1. A member expressed concern to provide default values related to the OBSS\_PD based spatial reuse. 🡪 It was agreed in the previous session. This is the only clarification of the text in the draft. No new things are proposed.
			2. It becomes clear that the member has generic concern on this mechanism.
			3. People discussed the definition of OBSS\_PD.
			4. There was a comment that it is still not clear how the OBSS\_PD mechanism works.
			5. CID#5489: A member asked for a different resolution.
		3. Next Step
			1. Discussion to be continued in the next week.
	2. **Yongho Seok (Newracom) presented “LB225 CR Sub-clause 10.22.2.2 and 10.22.2.4,” based on the submission 11-17-0208-01.**
		1. Summary
			1. The document 11-17-0208-01 contains resolutions for CIDs #9612 and #4832.
		2. Discussion
			1. CID #9612: There was a question – Is CW[AC] can be less than CWmin[AC]? 🡪 For the case of HE, it can.
			2. CID #9612: People discussed the resolution and proposed changes to the text for this comment. After discussion, the resolution and proposed change to the text have been modified.
			3. CID #4832: After long discussion, the resolution for this comment was changed from Revised to Rejected.
		3. Straw Poll: Do you agree with the resolutions to CIDs 9612, 4832 in doc 11-17/0208r2?
			1. Result: No objection.
	3. **Yongho Seok (Newracom) presented “LB225 CR Sub-clause 10.22.2.5,” based on the submission 11-17-0209-01.**
		1. Summary
			1. Resolutions for the following CIDs and proposed changes to the text are contained in the 11-17-0209-01.
			2. Relevant CIDs:
				1. 7667, 9693, 6529 (3 CID)
		2. Discussion
			1. People discussed CCA based on 20 MHz channel in any 20, 40, 80 and 160 MHz transmissions for the preamble puncturing case.
			2. Discussed definition of trigger-based PPDU.
			3. Definition of HE CCA suggested.
		3. Next Step
			1. Yongho would like to give people some tine for review.
9. **Recess @ 11:58 until 13:00 local time.**
	1. Yongho still has one document to present.
	2. Po-Kai will present his document after that.

**Wednesday, March 8th, 2017, PM Non-PHY session (13:00-18:00)**

1. **Meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chairperson of the TGax @ 13:06.**

**.**

1. **Presentations**
	1. **Yongho Seok (Newracom) presented “LB225 CR Sub-clause 10.22.2.7 and 10.22.2.8,” based on the submission 11-17-0210-01.**
		1. Summary
			1. Resolutions for comments on sub-clauses 10.22.2.7 and 10.22.2.8 and proposed text changes proposed.
			2. Relevant CIDs: 7668, 7669, 7906, 9694, 4833, 5775, 9600, 5969, 9861, 5968, 7670, 7881, 9346, 3188 (14 CID)
		2. Discussion
			1. CID #9600: A member asked for the rationale for the resolution for this comment.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 7668, 7669, 7906, 9694, 4833, 5775, 9600, 5969, 9861, 5968, 7670, 7881, 9346, and 3188 in doc 11-17/0210r2?**
			1. **Result: No objection.**
	2. **Yongho Seok (Newracom) presented “**LB225 CR Sub-clause 9.7 Part 1**,” based on the submission 11-17-0226-01.**
		1. Summary
			1. Resolutions for the comments on sub-clause 9.7 and proposed changes to the text explained.
			2. Relevant CIDs: 4754, 6094, 7564, 8404, 8689, 9677, 6480, 7565, 5848, 6481, 8406, 6484, 9611 (13 CIDs)
		2. Discussion
			1. CID #6484: Discussed setting of Duration/ID field value. People also discussed related text in clause 9 (frame format) that the text in clause 9 should be removed.
			2. CID #9611: People discussed definition of the TXTIME in the context of 802.11ax. -🡪 Chair suggested offline work to resolve this CID.
		3. **Straw Poll: Do you agree with the resolutions for CIDs 4754, 6094, 7564, 8404, 8689, 9677, 6480, 7565, 5848, 6481, 8406~~, 6484, 9611~~ in document 11-17/226r1?**
			1. **Result: No objection**
		4. Next Step
			1. Yongho to come back with another submission for CIDs 6484 and 9611.
	3. **Po-Kai Huang (Intel) presented “11ax D1.0 MAC Comment Resolutions for 27.11.5,” based on the submission 11-17-0263-02.**
		1. Summary
			1. Proposed resolutions for comments of TGax Draft 1.0 with the following CIDs:
				1. 8394, 5215, 7142, and 10292 (4 CIDs)
		2. Discussion
			1. CID #8394: A member asked how to respond for the HE extended-range SU with TXOP\_DURATION set to UNSPCIFIED. The answer is responder responds with TXOP\_DURATION value equal to “UNSPCIFIED”. Some people are still confused with this spec.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 8394, 5215, 7142, 10292 in doc 11-17/0263r3?**
			1. **Result: No objection.**

* + 1. Next Step
			1. Po-Kai to update the document.
	1. **Po-Kai Huang (Intel) presented “11ax D1.0 MAC Comment Resolution for 10.3.2.8a,” based on the submission 11-17-0264-02.**
		1. Summary
			1. Proposed resolutions for comments of TGax Draft 1.0 with the following CIDs:
				1. 5075, 5076, 5561, 9481, 5562, 5563, 9274, 7140, 9423, 5044, 9425, 8095, 8096, 5045, 9427, 7975, 5932, 7976, 9424, 9426, 9557, 9681, 9850, 5933, 8411, 9515, 7569, 8410, 5795, 7137, 5761, 9682, 8256, 8257, 9428, 4835, 5934, 9851, and 7663.
		2. Discussion
			1. CID #9428: The relationship between puncturing and MU-RTS/CTS discussed. The resolution for this CID was modified.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 5075, 5076, 5561, 9481, 5562, 5563, 9274, 7140, 9423, 5044, 9425, 8095, 8096, 5045, 9427, 7975, 5932, 7976, 9424, 9426, 9557, 9681, 9850, 5933, 8411, 9515, 7569, 8410, 5795, 7137, 5761, 9682, 8256, 8257, ~~9428,~~ 4835, 5934, 9851, and 7663 in document 17/264r2?**
			1. **Result: No objection.**
		4. Next Step
			1. Po-Kai to come back with a resolution for CID #9428.
1. Recess for 15 minutes.
2. Meeting called to order by Osama Aboul-Magd (Huawei Technologies) @ 15:30.
3. **Presentation**
	1. **Po-Kai Huang (Intel) presented “11ax D1.0 MAC Comment Resolution for 10.3.2.4 and 27.2.2 Part I,” based on the submission 11-17-0324-00.**
		1. Summary
			1. Resolutions for comments of TGax Draft 1.0 with the following CIDs proposed:
				1. 10250, 10320, 10321, 10322, 10323, 10247, 10005, 10006, 10246, 9584, 9386, 9285, 8592, 8354, 8211, 7233, 6068, 6056, 5930, 5559, 5468, 5466, 5463, 5358, 5169, 3057, 8268, 8269, 7844, and 9442.
		2. Discussion
			1. A member commented it is unusual to prepare the resolution based on the editor’s suggestion. 🡪 The resolution and related text in the document to be changed.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 10250, 10320, 10321, 10322, 10323, 10247, 10005, 10006, 10246, 9584, 9386, 9285, 8592, 8354, 8211, 7233, 6068, 6056, 5930, 5559, 5468, 5466, 5463, 5358, 5169, 3057, 8268, 8269, 7844, and 9442 in document 17/324r0?**
			1. **Result: No objection.**
		4. Next Step
			1. Po-Kai to update the document.
	2. **George Cherian (Qulacomm) presented “CIDs: Section 9.3.1.8 & 9.3.1.9.7,” based on the submission 11-17-0306-01.**
		1. Summary
			1. The comments are basically on the Block Ack related spec.
			2. Resolutions for comments of TGax Draft 1.0 with the following CIDs proposed:
				1. 3006, 3010, 3112, 3162, 5047, 5058, 5067, 5403, 5926, 6075, 6076, 6184, 6272, 6273, 7044, 7134, 7311, 7312, 7314, 7475, 7733, 7734, 7735, 7736, 7737, 7934, 8113, 8157, 8186, 8187, 8474, 8475, 8477, 8478, 9362, 9363, 9364, 9625, 9626, 9642, 9814, 9815, 9816, 9817, and 9818.
		2. Discussion
			1. CID #5065: People discussed the use of M-BA as the response for PS-Poll Since current spec allows the AP to respond to PS-Poll with an ACK, George proposes to keep this sequence. Some people oppose to this idea.
			2. CID #5403: There will be related submission on this CID. George to revisit this CID after hearing another presentation.
			3. CID #6184 and 7044: to be discussed later.
			4. CID #8157: excluded from this document.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 3006, 3010, 3112, 3162, 5047, 5058, 5067, ~~5403,~~ 5926, 6075, 6076, ~~6184,~~ 6272, 6273, ~~7044,~~ 7134, 7311, 7312, 7314, 7475, 7733, 7734, 7735, 7736, 7737, 7934, 8113, ~~8157,~~ 8186, 8187, 8474, 8475, 8477, 8478, 9362, 9363, 9364, 9625, 9626, 9642, 9814, 9815, 9816, 9817, and 9818 in 17/306r2?**
			1. **Result: No objection.**
		4. Next Step
			1. There will be related submissions for the excluded CIDs. George to work offline with the authors of the related submissions.
	3. **George Cherian (Qulacomm) presented “CIDs: Section 27.4,” based on the submission 11-17-0319-00.**
		1. Summary
			1. Resolutions for the following CIDs proposed.
				1. 3060, 3061, 3062, 3063, 3064, 3065, 3070, 3201, 3202, 3203, 3204, 3205, 3206, 3213, 5174, 5175, 5178, 5650, 5651, 5652, 5653, 5654, 5655, 5668, 5685, 5803, 5804, 5805, 5806, 6060, 6135, 6608, 6611, 6621, 6623, 6637, 6639, 6640, 6641, 7082, 7393, 7534, 7653, 7654, 7655, 7656, 7802, 7967, 8122, 8391, 8392, 8459, 8490, 8491, 9214, 9286, 9718, 9736, 9737, 9882, 10009, 10329, 10330, 10333
			2. Discussion
				1. CID #5175: A member has something to discuss with regards to this comment.
				2. CID #5178 (S-MPDU): The comment was rejected since it has already defined in the IEEE 802.11ah-2016. There are some other comments for which the resolutions were changed for the same reason.
			3. Next Step
				1. Time is up. George to continue his presentation tomorrow.
4. Recess @ 18:00 until tomorrow morning 9:00 AM.

**Thursday, March 9th, 2017, TGax Ad Hoc Meeting Non-PHY Sessions (9:00-12:00)**

1. The meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chair of the TGax, @9:03 AM.
2. **Agenda Setting.**
	1. Proposed agenda for the non-PHY session (11-17-356-01)
		1. Call meeting to order
		2. Reminder – IEEE 802 and 802.11 P&P, etc.
		3. Announcement
		4. Agenda Setting
			1. Call the meeting to order
			2. IPR Policy and Procedure
			3. 9:00 – 12:00 Comment Resolutions
			4. 12:00 – 13:00 Lunch
			5. 13:00 – 18:00 Comment Resolutions (including break)
		5. Presentations and comment resolutions
		6. Recess for the day
	2. Chair asked if there are any other items – No items proposed. Meeting will be conducted based on this order.
3. **Presentations**
	1. **Zhou Lan (Broadcom) presented “,” based on the submission 11-17-0363-02.**
		1. Summary
			1. As for the resolution to the CID #5050, proposed that the Trigger frame, ACK/BlockAck/Multi-STABlockAck and Management frame transmitted by HE STAs in an A-MPDU are not subject to the minum MPDU start spacing.
		2. Discussion
			1. BlockAck has some variations and the proposal may not be applied to some of the variants such as basic Block Ack.
		3. Straw Polls:
* Straw Poll #1: Do you agree to exclude control frame from the MPDU spacing constraint?
	+ - 1. Result: Y/N/A = 11/1/22.
* Option 2: Do you agree to exclude ACK and BlockAck frames from the MPDU spacing constraint?
	+ - 1. Result: Y/N/A = 9/0/24
* Option 3: Do you agree to change the baseline of this section saying

“A STA shall not start the transmission of more than one QoS Data frame or Management frame within the time limit described in the Minimum MPDU Start Spacing field declared by the intended receiver”?

* + - 1. Result: Y/N/A = 16/4/17
		1. Next Step
			1. No SP on the resolution. More discussion is needed.
			2. Zhou to come back with detailed text after offline discussion.
	1. **Raja Banerjea (Qualcomm) presented “Comment resolution for SS Allocation subfield,” based on the submission 11-17-0282-02.**
		1. Summary
			1. Resolutions for the comments on Spatial Stream Allocation and changes to the current text proposed.
			2. Relevant comments:
				1. 3015,3016, 3165, 7487, 8660, 8661, 9262, 9263 and 9633 (9 comments)
		2. Discussion
			1. A member commented the meaning of Starting Spatial Stream subfield.
			2. Q: Random access – it is not covered.
			3. People discussed the case for UL OFDMA.
			4. There was a question for the case of UL MU-MIMO. Need to check with PHY experts.
		3. **Straw Poll: Do you agree to resolutions to CID; 3015,3016, 3165, 7487, 8660, 8661, 9262, 9263, 9633 in doc 11-12/0282r2?**
			1. **Result:** No SP on resolutions.
		4. Next Step
			1. Raja to check with PHY experts and come back with revised document.
	2. **Raja Banerjea (Qualcomm) presented “Comment resolution for** CS Required subfield**,” based on the submission 11-17-0359-01.**
		1. Summary
			1. Resolutions for the comments on CS Required and changes to the current text proposed.
			2. Relevant comments:
				1. 3012, 3019, 9648, 9837, 10162, 5189 (6 comments)
		2. Discussion
			1. A member asked for clarification of CS Required field setting for transmissions solicited by a Trigger frame to be consistent with other part of the draft.
		3. Next Step
			1. CID #3012 removed from the document. 🡪 Come back with separate submission.
			2. CID #5189 – offline discussion suggested.
		4. **Straw Poll: Is there any objection to the resolutions for ~~3012,~~ 3019, 9648, 9837, 10162~~, and 5189~~ in document 17/359r2?**
			1. **Result: No objection.**
	3. **Raja Banerjea (Qualcomm) presented “Comment resolution for section 9.3.1.23,” based on the submission 11-17-0283-02.**
		1. Summary
			1. Resolutions for the comments on section 9.3.1.23 and changes to the current text proposed.
			2. Relevant comments (19 comments):
				1. 3018, 8190,
				2. 3167, 3216, 5130, 8114, 8166, 8335, 8336, 8380, 8415, 8539, 8540, 9494, 9645, 9647, 6082,
				3. 7484, and 9831
		2. Discussion
			1. People discussed the effectiveness of the Preferred AC.
			2. CID #8114: There will be related submission on this comment. 🡪 CID #8114 excluded from this document.
			3. CID #9647: It is resolved in another submission (by Po-Kai Huang). The resolution in another document is also rejected. 🡪 CID #9647 to be removed from this document.
			4. CID #9831: Resolution was changed from “accepted, modified” to “Revised”. A member asked to move the revised text to the normative part, not in the NOTE.
			5. CID #5130: A member suggested discussion in the PHY subgroup. 🡪 The comment relates to MAC subclause and it should be discussed in MAC subgroup.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 3018, 8190, 3167, 3216, 5130, ~~8114,~~ 8166, 8335, 8336, 8380, 8415, 8539, 8540, 9494, 9645, ~~9647~~, 6082, and 7484~~, 9831~~ in doc 11-17-0283-03?**
			1. **Result: No objection.**
	4. **Raja Banerjea (Qualcomm) presented “Comment resolution for HE Sounding Section 27.6.2,” based on the submission 11-17-0309-01.**
		1. Summary
			1. Resolutions for the comments on HE Sounding Section 27.6.2 and changes to the current text proposed.
			2. Relevant comments (6 comments):
				1. 7840, 7959, 8502, 9771, 8715, 10071
		2. Discussion
			1. CID #7840: A member suggested discussion with PHY experts for the MU case. 🡪 The comment discusses the SU case and the comment is rejected based on the discussion in resolution column.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 7840, 7959, 8502, 9771, 8715, 10071?**
			1. **Result: Straw Poll deferred.**
	5. **George Cherian (Qualcomm) presented “CIDs: Section 27.4,” based on the submission 11-17-0319-00.**
		1. Summary
			1. This is continuation of the yesterday’s presentation for the comments on Multi-STA BlockAck.
		2. Discussion
			1. CID #10330: There will be a contribution related to this comment. Matt has related contribution based on the CID #8099. The resolution for CID #10330 is unchanged (“rejected”).
			2. CID #10333:
		3. **Straw Poll**
			1. **Do you agree with the resolutions of CIDs 3060, ~~3061, 3062,~~ 3063, 3064, 3065, ~~3070,~~ 3201, 3202, 3203, 3204, 3205, 3206, 3213, 5174, ~~5175,~~ 5178, 5650, 5651, 5652, 5653, 5654, 5655, 5668, 5685, 5803, 5804, 5805, 5806, 6060, 6135, 6608, 6611, 6621, 6623, 6637, 6639, 6640, 6641, 7082, 7393, 7534, 7653, 7654, 7655, 7656, 7802, 7967, 8122, 8391, 8392, 8459, 8490, 8491, 9214, 9286, 9718, 9736, 9737, 9882, 10009, 10329, 10330, 10333 in 17/319r1?**
			2. **Discussion**
				1. **CID #3070: Need more time to think about this comment. 🡪 Resolution for CID #3070 deferred and excluded for now.**
				2. **Result: No objection.**
	6. **Laurent Cariou (Intel) presented “,” based on the submission 11-17-0204-05.**
		1. Summary
			1. This is an update from the one (rev.2) presented in a teleconference.
			2. Laurent explained the changes made after the teleconference (in r3, r4 and r5).
		2. Discussion
			1. A member asked for clarification of the modified sentence related to AIFSN value set to 0 in MU EDCA parameter set element.
			2. CID #5853 is still open.
			3. Clause 27.2.3: A member discussed frame sequence of Trigger – PS-Poll – MU ACK.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 5854, 6160, 8519, 7660, 9403, 8262, 8297, ~~5853,~~ 8290 in doc 11-17/0204r5?**
			1. **No objection.**
		4. Next Step
			1. Laurent to upload the rev 6 after this session.
1. **Recess**
	1. Recess @ 12:02 for lunch until 13:00.

**Thursday, March 9th, 2017, TGax Ad Hoc Meeting Non-PHY Sessions (13:00-18:00)**

1. **Meeting called to order by Simone Merlin (Qualcomm) @ 13:06.**
2. **Presentations**
	1. **Alfred Asterjadhi (Qualcomm) presented “LB225 CR Sub-clause 9.7 Part 1,” based on submission 11-17-0226r2 on behalf of Yongho Seok.**
		1. Summary
			1. Resolutions for two deferred CIDs from yesterday’s session discussed.
			2. Relevant CIDs: 6484 & 9611.
		2. Discussion
			1. Proposed change to the text was modified after further discussion on CID #9611.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 6484 and 9611 in document 17/226r3?**
			1. **Result: No objection.**
	2. **Po-Kai Huang presented “11ax D1.0 MAC Comment Resolution for 10.3.2.8a,” based on the submission 11-17-0264-03.**
		1. Summary
			1. Revisit CID 9428 in 11-17-0264-03.
		2. Discussion – No discussion.
		3. **Straw Poll: Do you agree with the resolution of CID 9428 in document 17/0264r3?**
			1. **Result: No objection.**
	3. **Abhishek Patil (Qualcomm) presented “Proposed resolution for comments related to Multiple BSSID set,” based on submission 11-17-0230-01.**
		1. Summary
			1. Resolutions for multiple comments related to TGax D1.0 with the following 31 CIDs and changes to the text proposed.
			2. Relevant CIDs: 3060, 3061, 9444, 5175, 3062, 3071, 5708, 5709, 5710, 9709, 5711, 7177, 3072, 4817, 3136, 9821, 3075, 7552, 7972, 8533, 5455, 7163, 7164, 9378, 7165, 7841, 7169, 9379, 7146, 8280, and 8292.
		2. Discussion
			1. No discussion.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 3060, 3061, 9444, 5175, 3062, 3071, 5708, 5709, 5710, 9709, 5711, 7177, 3072, 4817, 3136, 9821, 3075, 7552, 7972, 8533, 5455, 7163, 7164, 9378, 7165, 7841, 7169, 9379, 7146, 8280, and 8292 in document 17/230r1?**
			1. **Result: No objection.**
	4. **Abhishek Patil (Qualcomm) presented “Proposed resolution for comments related to Various CIDs in 27.5.2,” based on submission 11-17-0250-01.**
		1. Summary
			1. Resolutions for multiple comments received for TGax LB225 (78 CIDs) and changes to the current text proposed.
			2. Relevant CIDs: 7968, 8271, 4809, 4810, 4811, 5702, 5183, 5184, 9451, 5185, 5703, 7574, 9894, 4812, 5186, 5704, 9452, 8272, 9707, 5706, 5187, 6168, 5983, 8273, 8338, 9588, 6166, 10167, 4815, 4816, 7644, 7041, 7141, 9897, 7812, 9896, 6065, 7175, 9759, 9456, 9589, 7176, 10260, 9898, 8552, 3228, 9710, 4818, 8151, 8701, 8702, 4821, 9529, 4820, 8703, 4822, 4823, 4824, 4825, 6685, 7649, 5717, 3232, 7816, 5988, 9713, 4828, 6196, 3325\*, 6695, 8705, 6696, 7817, 6697, 9917, 5997, 5998, and 6701.
		2. Discussion
			1. A member discussed RU allocation for OFDMA random access and 16 us of MinTrigProcTime. OFDMA random access for unassociated STA was also discussed.
* After discussion, CIDs 7041, and 7141 and 9897 will be excluded from this document. These CIDs will be moved to other submission related to random access.
* The document was updated. Revision 2 is current document.
	+ 1. **Straw Poll: Do you agree with the resolutions of CIDs 7968, 8271, 4809, 4810, 4811, 5702, 5183, 5184, 9451, 5185, 5703, 7574, 9894, 4812, 5186, 5704, 9452, 8272, 9707, 5706, 5187, 6168, 5983, 8273, 8338, 9588, 6166, 10167, 4815, 4816, 7644, ~~7041~~, ~~7141~~, ~~9897~~, 7812, 9896, 6065, 7175, 9759, 9456, 9589, 7176, 10260, 9898, 8552, 3228, 9710, 4818, 8151, 8701, 8702, 4821, 9529, 4820, 8703, 4822, 4823, 4824, 4825, 6685, 7649, 5717, 3232, 7816, 5988, 9713, 4828, 6196, 3325\*, 6695, 8705, 6696, 7817, 6697, 9917, 5997, 5998, and 6701 in document 17/0250r2?**
			1. **Result: No objection.**
	1. **Abhishek Patil (Qualcomm) presented “Proposed resolution for comments related to Section 27.11.4 (BSS Color),” based on submission 11-17-0134-08.**
		1. Summary
			1. Previous version of this document was presented in January 2017 session and the resolutions for remaining comments were proposed.
			2. Resolutions for CIDs 3088, 9458 and 10299 proposed.
			3. Subclause 27.16.2.2 was rewritten.
		2. Discussion
			1. A member commented that this change introduces related action for STAs and asked how often the action will be required for a STA. It is up to suggestion but the assumption is not so frequent.
			2. A member commented the decision at the AP should be implementation dependent.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 3084, 3085, 3086, 5387, 7166, 6786, 6779, 6777, 6781, 3088, 9458, 10299, 3087, 5476 in document 17/0134r8**
			1. **Straw Poll deferred.**
1. **Recess @ 15:15 until 15:30..**
2. **Meeting called to order by Simone Merlin (Qualcomm) @ 15:35.**
3. **Planning**
	1. **Number of submissions and CIDs:**
		1. **Abhi – 229 (60 CIDs)**
		2. **Raja –**
		3. **Alfred – 235 (CIDs), 236 (6 CIDs), 234 (52 CIDs), 238 (41 CIDs), 239 (41 CIDs), 240 (60 CIDs)**
		4. **Jarkko**
		5. **Zhou – (1 CID)**
		6. **Kiseon – 349 (5 CIDs)**
		7. **Liwen – 351 (16 CIDs)**
		8. **…**
4. **Presentations.**
	1. **Abhishek Patil (Qualcomm) presented “Proposed resolution for comments related to Section 27.16.2,” based on submission 11-17-0138-00.**
		1. Summary
			1. Resolutions for multiple comments on clause 27.16.2 proposed.
			2. Relevant comments (11 CIDs):
				1. 6787, 7131, 10300, 10301, 4910, 4911, 6789, 8356, 4909, 9703, and 4908.
		2. Discussion
			1. People discussed BSS color in a mesh network.
			2. A member asked for the BSS color change for the Dual Beacon case. 🡪 There are some related comments which is not considered in this document.
			3. CID #9703 (BSS color in mesh network): excluded for now.
			4. CID #8356 (BSS color change for unassociated STA): A member commented the resolution is not enough.
		3. **Straw Poll: Do you agree with the resolutions of CIDs 6787, 7131, 10300, 10301, 4910, 4911, 6789, 8356, 4909, ~~9703,~~ and 4908 in document 17/138r1?**
			1. **Result: Y/N/A = 12/1/2, straw poll passes.**
	2. **Raja Banejea (Qualcomm) presented “Comment resolution for SS Allocation subfield,” based on submission 11-17-0283-03.**
		1. Summary
			1. A member requested exclusion of CID 3216 from the 11-17-0283 that will be resolved in another document.
		2. Discussion
		3. **Straw Poll #1: Do you agree to remove CID 3216 from the 17/283r3?**
* **Resolution will be provided in another document.**
	+ - 1. **Result: No objection.**
		1. **Straw Poll #2: Do you agree with the revised resolution of CID 9831 from document 17/283r3?**
			1. **Result: No objection.**
	1. **Raja Banejea (Qualcomm) presented “Comment resolution for CS Required subfield,” based on submission 11-17-0359-02.**
		1. **Summary**
			1. **CID 5189 in 11-17-0359 revisited.**
			2. **The resolution is “rejected.”**
		2. **Discussion**
		3. **Straw Poll: Do you agree with the resolution of CID 5189 in document 17/359r2?**
			1. **Result: No objection.**
	2. **Raja Banejea (Qualcomm) presented “Comment resolution for SS Allocation subfield,” based on submission 11-17-0282-03.**
		1. Summary
			1. Raja revised the text for 27.5.2.3 based on the discussion with PHY experts.
		2. Discussion
			1. Text in 27.5.2.3 modified after clarification.
		3. **Straw Poll: Do you agree to accept the resolutions for CIDs 3015, 3016, 3165, 7487, 8660, 8661, 9262, 9263, and 9633 in document 17/282r4?**
			1. **Result: No objection.**
	3. **Alfred Asterjadhi (Qualcomm) presented “Comment resolution in part of HE Capabilities IE (9.4.2.218),” based on submission 11-17-0235-00.**
		1. Summary
			1. Resolutions for multiple comments related to TGax D1.0 with the following CIDs proposed.
				1. CIDs: 4564, 4571, 4614, 7369, 8083, 8511, 8512, 9666, 9667 (9 CIDs)
		2. Discussion
			1. CID #8083:
		3. **Straw Poll: Is there any objection to accept the resolutions for CIDs 4564, 4571, 4614, 7369, 8083, 8511, 8512, 9666, 9667in 17/235r0?**
			1. **Result: No objection**
	4. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for miscellaneous CIDs – Part 1,” based on submission 11-17-0236-00.**
		1. Summary
			1. Resolutions for CIDs 3132, 3175, 4720, 6919, 7228, 8308 (6 CIDs) proposed.
		2. Discussion
			1. CID #3132: After discussion, the resolution for this CID is still revised but the explanation is updated.
		3. **Straw Poll: Do you agree to accept the resolutions of CIDs 3132, 3175, 4720, 6919, 7228, 8308 in document 17/236r1?**
			1. **Result: No objection.**
	5. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for Selection rules (27.15),” based on submission 11-17-0237-01.**
		1. Summary
			1. Resolutions for following CIDs proposed:
				1. 4789, 4808, 5217, 5218, 5219, 5220, 5221, 5511, 5518, 7034, 7035, 7154, 7581, 7582, 7583, 8525, 8526, 8616, 8617, 8729, 8730, 9732, 9961, 9962, 9963, 9964 (26 CIDs)
				2. 5222, 5223, 5224, 5225, 5226, 7584, 7585, 7586, 9751, 9965, 9966 11 CIDs)
				3. 3256, 3354, 3461, 3775, 3858, 4301, 4925, 5227, 5228, 7587, 7588, 7589, 7590, 7591, 7592 (15 CIDs)
		2. Discussion
			1. CID #5218: Need for UL MU PPDU support is discussed. It is in current spec and it provides transmission in narrow channel bandwidth.
			2. CID #7583: The resolution for this comment from “rejected” to “revised”. The commenter thinks FTM feature should also be discussed with TGaz participants. HE PPDUs has longer GI and may not provide good accuracy. 🡪 Need to talk with 11az participants. CID #7583 is removed from this document.
		3. **Straw Poll on the first part of the document: Do you agree to accept the resolutions for CIDs 4789, 4808, 5217, 5218, 5219, 5220, 5221, 5511, 5518, 7034, 7035, 7154, 7581, 7582, ~~7583,~~ 8525, 8526, 8616, 8617, 8729, 8730, 9732, 9961, 9962, 9963, 9964 (25 CIDs) in document 17/237r2.**
			1. **Result: No objection.**
	6. **Straw Poll by Abhishek Patil (Qualcomm) on submission 11-17-0138-01 “Proposed resolution for comments related to Section 27.16.2,”.**
		1. Summary
			1. Resolution for CID #9703 is still rejected, but the reason is updated.
		2. Discussion
		3. **Straw Poll: Do you agree with the resolution of CID 9703 in document 138r1?**
			1. **Result: No objection.**
	7. **Straw Poll by Abhishek Patil (Qualcomm) on submission 11-17-0134-09 “Proposed resolution for comments related to Section 27.11.2 (BSS Color)”.**
		1. Summary
			1. Based on the feedback, proposed changes to the text is updated..
		2. Discussion
		3. **Straw Poll: Do you agree with the resolutions of CIDs 3084, 3085, 3086, 5387, 7166, 6786, 6779, 6777, 6781, 3088, 9458, 10299, 3087, 5476 in document 17/134r10.**
			1. **Result: No objection.**
1. **Plans for tomorrow**
	1. Start time is 9:00 AM.
2. **Recess for the day @ 18:01.**

**Friday, March 10th, 2017, TGax Ad Hoc Meeting Non-PHY Sessions (9:00-12:00)**

1. The meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chair of the TGax, @9:03 AM.
2. **Agenda Setting.**
	1. Proposed agenda for the non-PHY session (11-17-356-02)
		1. Call meeting to order
		2. Reminder – IEEE 802 and 802.11 P&P, etc.
		3. Announcement
		4. Agenda Setting
			1. Call the meeting to order
			2. IPR Policy and Procedure
			3. 9:00 – 12:00 Comment Resolutions
			4. 12:00 – 13:00 Lunch
			5. 13:00 – 16:00 Comment Resolutions (including break)
		5. Presentations and comment resolutions
		6. Recess for the day
	2. Chair asked if there are any other items – No items proposed. Meeting will be conducted based on this order.
3. **Reminder**
	1. **IEEE 802 and 802.11 Policy & Procedure**
	2. **Chair called for the potentially essential patent**
		1. **No response.**
4. **Presentations**
	1. **Zhou Lan (Broadcom) presented “Comment resolutions for MPDU start spacing (A-MPDU content section 10.13)” based on the submission 11-17-0363-04.**
		1. Summary
			1. Zhou presented the changes made to the previous version of the document.
			2. The requirement of minimum MPDU start spacing in this document is only for the 802.11ax devices.
		2. Discussion
			1. Resolution for the related comment (CID #5050) was changed to “revised” from “Accepted”.
		3. Straw Poll: Is there any objection to accept the resolution for CID #5050 as in document 11-17-0363-05?
			1. Result: No objection.
	2. **Guoqing Li (Apple) presented “CIDs Related to 20MHz-only STAs operating on non-primary 20 MHz channels ” based on the submission 11-17-0369-01.**
		1. Summary
			1. This is a joint contribution of six companies.
				1. Related CIDs: 9153, 8811 and 8810.
			2. The spec is not clear on whether and how these STAs can operate on non-primary 20MHz channel.
			3. This contribution proposes the protocol components and some considerations that will allow these STAs to operate on non-primary 20MHz channel
		2. Discussion
			1. Slide 11 (Channel Access and Protection): A member asked for the meaning of the first bullet saying “STAs staying on non-primary 20MHz channel can only use MU transmission in uplink …” 🡪 Those STAs can of course receive DL data from the AP.
			2. Slide 14 (Beacon Reception and Synchronization): A member commented that the third option for STAs on non-primary channel to receive Beacon and multicast frames seems to be ambiguous. 🡪 Guoqing to revise the text.
			3. Slide 20 (Co-existence with OBSS): A member commented that it is not clear whether the proposed mechanism mitigates the OBSS issue or makes OBSS issue even worse. 🡪 Guoqing mentioned it is not changed. OBSS issue is something that the WLAN has today.
		3. **Straw Poll: Do you agree to allow 11ax 20MHz-only STAs to operate optionally on non-primary channel?**
			1. Discussion
				1. A member expressed a concern that this mechanism could make 802.11ax spec further complicated.
				2. It is not clear whether STA is allowed to operate non-primary channel, primary channel and another non-primary channel from time to time.
				3. A member commented that we need to talk to PHY experts.
				4. The main point will be MU-RTS/CTS procedure.
			2. **Result: Y/N/A = 16/10/13**
	3. **Jarkko Kneckt (Apple) presented “Comment resolution for Opportunistic Power Save (OPS),” based on the submission 11-17-0397-00.**
		1. Summary
			1. The submission is part of the opportunistic power save (OPS) comment resolutions, discussing on CID9660 and CID9841.
			2. Two alternatives for Opportunistic power save signalling are introduced and discussed.
				1. OPS element allows OPS information in Beacon, TIM, FILS Discovery and OPS TIM frames
				2. New TIM element encoding and OPS SP End Time element allow the OPS information delivery in FILS Discovery frames and OPS frames
		2. Discussion
			1. Slide 13 (Alternative 1, OPS Element): A member commented that we need to be careful to creating a new mode for broadcast TWT. The commenter does not think it worth to do that.
		3. **Straw Polls: Are you in favor of:**
			1. **Alternative 1: Define new OPS element to provide OPS information for HE STAs as introduced in slide 13**



* + - 1. Result: Y/N/A =
			2. **Alternative 2: Use TIM element with new encoding for OPS STAs as introduced in slides 14, 15 and 16**





* + - 1. Result: Y/N/A =
			2. Discussion
				1. Alternative 1 proposes to include this element in FILS Discovery frame. 🡪 It is defined in D1.0.
				2. A member is concerned by TIM frame to be transmitted outside the TWT service period.
			3. Straw Poll was postponed.
	1. **Rojan Chitrakar (Panasonic) presented “Virtual CS during UL MU,” based on the submission 11-17-0337-00.**
		1. Summary
			1. Clarification CID #8555.
			2. Proposals:
				1. Non-AP STAs maintain a record of the OBSS transmission bandwidth
				2. Virtual CS is considered per 20 MHz channel when the basic NAV is non-zero
				3. Under certain circumstances, STA is allowed to transmit HE trigger-based PPDU even when basic NAV is set.
		2. Discussion
			1. ?
		3. **Straw Polls**
			1. **Straw Poll #1: Do you agree that the UL MU CS mechanism should be enhanced to overcome the loss of uplink transmission opportunity described in slides 4 and 5?**
				1. **Discussion**

**A member objects to this proposal. This proposal introduces additional complexity but does not resolve the issue. 🡪 Rojan agrees current issue in RTS/CTS procedure.**

**Another member mentioned we should talk to PHY experts.**

**A member is concerned that BW information is not enough for this purpose.**

* + - * 1. **Result: Y/N/A = 6/4/20**
	1. **Abhishek Patil (Qualcomm) presented “Proposed resolution for comments related to Random Access AIDs for Associated and Unassociated STAs,” based on the submission 11-17-0229-01.**
		1. Summary
			1. Resolutions for multiple comments received for TGax LB225 (69 CIDs) re: random access AIDs for Associated and Unassociated STAs.
			2. Relevant CIDs: 7809, 3074, 5999, 9121, 9122, 9123, 5018, 5019, 5020, 5021, 5022, 5023, 5066, 5714, 5986, 6167, 7648, 8156, 8279, 8554, 9100, 9591, 9904, 9975, 9708, 10168, 5364, 7814, 3097, 3229, 3230, 3301\*, 4819, 5035, 5094, 5190, 5370, 5713, 6195, 6677, 6999, 7097, 7845, 8276, 8299, 9528, 9711, 10169, 10010, 5810, 10012, 5365, 9916, 3073, 5411, 6188, 9405, 9919, 9258, 7745, 9827, 9630, 7329, 9997, 9998, 9826, 7041, 7141, and 9897.
		2. Discussion
			1. Re: CID #10168: People talked about the service waiting time of two M/M/1 queues and one M/M/2 queue. With regards to the AID 0, the traffic pattern is different between an associated STA and unassociated STA.
				1. A member mentioned that the random access for unassociated STA is beneficial for some applications.
				2. After long discussion, it eventually turned out that the commenter is okay with the resolution.
			2. CID #5364: Removed from the document.
			3. CID #7041: Discussed new text related to this CID.
		3. Recess Abhi’s presentation to be continued after lunch.
1. Recess @ 12:00 for lunch.

**Friday, March 10th, 2017, TGax Ad Hoc Meeting Non-PHY Sessions (13:00-16:00)**

1. Meeting called to order @ 13:01.
	1. Hard stop @ 16:00.
2. Presentation.
	1. **Abhishek Patil (Qualcomm) continues his presentation of 11-17-229-01.**
		1. Discussion
			1. CID #3073: People discuss the way to prohibit STAs with empty buffer to participate random access. 🡪 CIDs 3073, 5411, 6188, 9405 and 9919 were excluded.
		2. **Straw Poll: Is there any objection to accept resolutions for CIDs 7809, 3074, 5999, 9121, 9122, 9123, 5018, 5019, 5020, 5021, 5022, 5023, 5066, 5714, 5986, 6167, 7648, 8156, 8279, 8554, 9100, 9591, 9904, 9975, 9708, 10168, ~~5364,~~ 7814, 3097, 3229, 3230, 3301\*, 4819, 5035, 5094, 5190, 5370, 5713, 6195, 6677, 6999, 7097, 7845, 8276, 8299, 9528, 9711, 10169, 10010, 5810, 10012, 5365, 9916, ~~3073, 5411, 6188, 9405, 9919,~~ 9258, 7745, 9827, 9630, 7329, 9997, 9998, 9826, 7041, 7141, and 9897 in document 17/229r1?**
			1. **Result: No objection.**
	2. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for Selection rules (27.15),” based on the submission 11-17-0237-03.**
		1. Summary
			1. The first part of this document was discussed yesterday.
			2. Rest of the document is discussed.
				1. Part 2: CIDs - 5222, 5223, 5224, 5225, 5226, 7584, 7585, 7586, 9751, 9965, 9966 11 CIDs)
				2. Part 3: CIDs - 3256, 3354, 3461, 3775, 3858, 4301, 4925, 5227, 5228, 7587, 7588, 7589, 7590, 7591, 7592 (15 CIDs)
		2. Discussion
		3. **Straw Poll: Do you agree with the resolutions of CIDs 5222, 5223, 5224, 5225, 5226, 7584, 7585, 7586, 9751, 9965,9966, 3256, 3354, 3461, 3775, 3858, 4301, 4925, 5227, 5228, 7587, 7588, 7589, 7590, 7591, 7592 in document 11-17-0237-03?**
			1. **Result: No objection**
	3. **Straw Poll by Abhishek Patil (Qualcomm) on CID 5364.**
		1. **Straw Poll: Do you agree with the resolution of CID 5364 in document 11-17-0229-02?**
			1. **Result: No objection.**
	4. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for HT Control field (9.2.4.6.X and 10.1) – Block 1,” based on the submission 11-17-0238-01.**
		1. Summary
			1. Resolutions for multiple comments related to TGax D1.0 with the following CIDs proposed (41 CIDs):
				1. Part 1: 3004, 4725, 5436, 7715, 8175 (5 CIDs)
				2. Part 2: 3378, 3483, 3812, 3896, 4358, 4425, 4727, 5025, 5438, 7471, 7713, 7714, 8176, 8643, 8644, 9801, 9984 (17 CIDs)
				3. Part 3: 3153, 3381, 3487, 3817, 3902, 4365, 4433, 4734, 5051, 5122, 5123, 5439, 8177, 8645, 8646, 10334, 10335, 10336, 10337 (19 CIDs)
		2. Discussion
			1. CID #7715: A member asked clarification on the resolution of this CID.
			2. CID #3004: Discussed the length of A-Control field. 🡪 Proposed text modified.
			3. CID #:
		3. **Straw Poll: Do you agree with the resolutions of CIDs 3004, 4725, 5436, 7715, 8175, 3378, 3483, 3812, 3896, 4358, 4425, 4727, 5025, 5438, 7471, 7713, 7714, 8176, 8643, 8644, 9801, 9984, Part 3: 3153, 3381, 3487, 3817, 3902, 4365, 4433, 4734, 5051, 5122, 5123, 5439, 8177, 8645, 8646, 10334, 10335, 10336, 10337 in document 11-17-0238-02?**
			1. **Result: No objection.**
3. **Recess@14:15**
4. **Meeting reconvene @ 14:45**
5. **Presentations**
	1. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for HT Control field (9.2.4.6.X and 10.1) – Block 2,” based on the submission 11-17-0239-00.**
		1. Summary
			1. Resolutions for multiple comments related to TGax D1.0 with the following CIDs (41 CIDs) regarding HT Control field (clause 9.2.4.6 and 10.1):
				1. Part 4: 4732, 4733, 5052, 5053, 5124, 5125, 5440, 5851, 7249, 7379, 7716, 7717, 8178, 8248, 9495, 9803, 9804 (17 CIDs)
				2. Part 5: ~~3154,~~ 5335, 5441, 7888~~, 8369, 9094, 9619, 9805, 10140~~ (3 CIDs)
				3. Part 6: 5054, 5055, 5056, 5126, 5442, 7302, 7303, 7305, 7719, 7865, 7867, 8133, 8179, 8180, 8181, 8249, 8426, 8427, 9620, 9621, 9806 (21 CIDs)
			2. Discussion – Part 4
				1. CID #5851: A member commented relationship between transmit channel width and receive channel width – the member does not agree with the resolution. CIDs 5851, 7249 and 9803 are excluded for further discussion.
				2. CID #9495: CID excluded for further discussion.
			3. **Straw Poll: Is there any objection to accept the resolutions for CIDs 4732, 4733, 5052, 5053, 5124, 5125, 5440, ~~5851, 7249,~~ 7379, 7716, 7717, 8178, 8248, ~~9495, 9803,~~ 9804 (17 CIDs) in document 11-17-0239-01?**
				1. **No objection.**
			4. Discussion – Part 5
				1. No discussion.
			5. **Straw Poll: Is there any objection to accept the resolutions for CIDs 5335, 5441, 7888 (3 CIDs) in document 11-17-0239-01?**
				1. **No objection.**
			6. Discussion – Part 6 (BSR)
				1. All CIDs in this part was removed for further discussion.
	2. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for HT Control field (9.2.4.6.X and 10.1) – Block 3,” based on the submission 11-17-0240-00.**
		1. Summary
			1. Resolutions for multiple comments related to TGax D1.0 with the following CIDs (60 CIDs) proposed:
				1. Part 7: 3155, 3382, 3489, 3819, 3905, 4368, 4436, 5443, 7887, 8162, 8647 (11 CIDs)

Part 8: 3005, 3147, 3157, 3158, 3159, 4738, 5013, 5014, 5127, 5444, 6191, 7015, 7016, 7017, 7018, 7019, 7380, 7472, 7570, 7720, 8182, 8183, 8184, 8250, 8334, 8374, 9397, 9807, 9808, 10339 (30 CIDs)

* + - * 1. Part 9: 3156, 3160, 3384, 3491, 3822, 3907, 4371, 4439, 4740, 5445, 7020, 7473, 8185, 8375, 9809, 9810, 9811, 9812 (18 CIDs)
				2. Part 10: 6965 (1 CID)
		1. Discussion (on Part 7 CIDs)
			1. CID #3005: A member asked to defer for more time to think about.
			2. Text in 9.2.4.6.4.7 (Bandwidth Query Report) was modified based on the discussion.
			3. CID #3157:
		2. **Straw Poll: Is there any objection to accept the resolutions for CIDs 3155, 3382, 3489, 3819, 3905, 4368, 4436, 5443, 7887, 8162, 8647, 3005, 3147, 3157, 3158, 3159, 4738, 5013, 5014, 5127, 5444, 6191, 7015, 7016, 7017, 7018, 7019, 7380, 7472, 7570, 7720, 8182, 8183, 8184, 8250, 8334, 8374, 9397, 9807, 9808, 10339 in document 11-17-0240-01?**
			1. **Result: No objection.**
1. **AoB**
	1. **Chair asked people planning to submit contribution to send an email to him.**
2. **Adjournment**
	1. **TGax ad hoc meeting adjourned@16:00.**
3. **List of attendees**

Following individuals are present in the TGax ad hoc meeting.

|  |  |  |
| --- | --- | --- |
|  | Name | Affiliation |
| 1 | Osama Aboul-Magd | Huawei Technologies |
| 2 | Woojin Ahn | Wilus |
| 3 | Yaron Alpert | Intel |
| 4 | Yusuke Asai  | NTT |
| 5 | Alfred Asterjadhi | Qualcomm |
| 6 | Edward Au | Huawei Technologies |
| 7 | Laurent Cariou | Intel |
| 8 | Xiaogang Chen | Intel |
| 9 | George Cherian | Qualcomm |
| 10 | Rojan Chitrakar | Panasonic |
| 11 | Jinsoo Choi | LG Electronics |
| 12 | Liwen Chu | Marvell |
| 13 | Sean Coffey | RealTek |
| 14 | Thomas Derham  | Broadcom |
| 15 | yonggang Fang | ZTE |
| 16 | Matthew Fischer | Broadcom |
| 17 | Ganming (Ming) | Huawei Technolgies |
| 18 | Chittabrata Ghosh | Intel |
| 19 | Qiang Guo | Huawei Technologies |
| 20 | Reza Hedayat | Newracom |
| 21 | Frank Hsu | MediaTek |
| 22 | Chunyu Hu | Broadcom |
| 23 | Po-Kai Huang | Intel |
| 24 | Russel Huang | MediaTek |
| 25 | Yasuhiko Inoue | NTT |
| 26 | Jeongki Kim | LG Electronics |
| 27 | Suhwook Kim  | LG Electronics |
| 28 | Youhan Kim | Qualcomm |
| 29 | Jarkko Kneckt | Apple |
| 30 | Geonjung Ko | Wilus |
| 31 | Young Hoon Kwon | Newracom |
| 32 | Zhou Lan | Broadcom |
| 33 | Guoqing Li | Apple |
| 34 | Yunbo Li | Huawei Technologies |
| 35 | Dongguk Lim  | LG Electronics |
| 36 | Jianhan Liu | MediaTek |
| 37 | Peter Loc | Huawei Technologies |
| 38 | Kaiying Lv | ZTE |
| 39 | Jing Ma | NICT |
| 40 | Narendar Madhavan | Toshiba |
| 41 | Simone Merlin | Qualcomm |
| 42 | Saishankar Nandagopalan | Cypress |
| 43 | Patrice Nezou  | Canon |
| 44 | Yujin Noh | Newracom |
| 45 | Robert Olesen  | InterDigital |
| 46 | Oghenekome Oteri | InterDigital |
| 47 | Eunsung Park | LG Electronics |
| 48 | Viger Pascal | Canon |
| 49 | Abhishek Patil | Qualcomm |
| 50 | Al Petrick | InterDigital |
| 51 | Ron Porat | Broadcom |
| 52 | Zhigang Rong | Huawei Technologies |
| 53 | Kiseon Ryu | LG Electronics |
| 54 | Sigurd Schelstaete | Quantenna |
| 55 | Yongho Seok | Newracom |
| 56 | John Son | Wilus |
| 57 | Junghoon Suh | Huawei Technologies |
| 58 | Bo Sun | ZTE |
| 59 | Robert Stacey | Intel |
| 60 | Yusuke Tanaka | Sony |
| 61 | Bin Tian | Qualcomm |
| 62 | Tao Tian | Spreadtrum |
| 63 | Lochan Verma | Qualcomm |
| 64 | Huizhao Wang | Quantenna |
| 65 | James Wang | MediaTek |
| 66 | Xiaofei Wang  | InterDigital |
| 67 | Lisa Ward | Rhode & Schwartz |
| 68 | Xun Yang (David) | Huawei Technologies |
| 69 | Jian Yu (Ross) | Huawei Technologies |
| 70 | Hongyuan Zhang | Marvell |
| 71 | Yan Zhang | Marvell |
| 72 | Yuval Har Zion | Celeno |
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