IEEE P802.11
Wireless LANs

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| IEEE 802.11 Task Group AYMarch, April, and May 2020 Teleconference Minutes |
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Abstract

Task Group AY comment resolution committee meeting minutes from the IEEE 802.11 conference calls session on March 25, April 1, April 15, April 22, and April 29, 2020.

**IEEE 802.11 Task Group AY Comment Resolution Committee**

**March, April, and May 2020 Teleconference Minutes**

**Wednesday, March 25, 2020, Conference Call Session (10:00-11:30 ET)**

1. The IEEE 802.11ay task group meeting was called to order at 10:00am ET by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-20/0515r0 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-00-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>).
3. TGay is operating as the Comment Resolution Committee (CRC) for P802.11ay.
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-12)
	1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
	2. Chair asked if anybody has any disclosures related to the patent policy. None.
	3. Chair asked if there were any questions on any of the above items. None.
	4. Chair reminded all to record their attendance.
	5. Chair reminded all to upload their presentations
5. Chair reviewed the meeting agenda for the conference call (slide 18). No comment noted.
6. Chair reviewed the current status of comment resolution as of March 22, 2020 (39 CIDs with approved comment resolution, 32 CIDs are ready for motion, and 64 CIDs are pending for resolution), and encouraged members to resolve all the comments by early May, 2020.
7. Comment Resolution
	1. Presentation by Kazuyuki Sakoda (Sony), Suggested resolution to CID 6121, 6122, and 6123, Doc. IEEE 11/20/0209r1 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0209-01-00ay-suggested-resolution-to-cid-6121-6122-and-6123.docx>)
		1. Comment #6123 stated that we should have a list of new MAC features for EDMG STAs because new PHT features for EDMG STAs are listed. Kazuyuki Sakoda (SONY) listed MAC features and noted that features related to beamforming is also missing.
		2. Opened the floor for discussion.
		3. Hiroyuki Motozuka (Panasonic) stated that support of BRP transmit sector sweep and Short SSW packets are mandatory for EDMG STA. Alecsander Eitan (Qualcomm) mentioned that for EDMG STA in TDD DMG mode, these 2 features are optional. Solomon Trainin (Qualcomm) pointed out that this list is not for TDD mode and these 2 features should be listed as mandatory ones. Yan Xin (Huawei) suggested that feature list is split into 2: one for mandatory and the other for optional.
		4. Kazuyuki revised the document as 20/209r2 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0209-02-00ay-suggested-resolution-to-cid-6121-6122-and-6123.docx>) in which mandatory and optional features are specified.
		5. Chair stated that #6123 is ready for motion subject to a PICS (Protocol Implementation Conformance Statement) by Solomon. #6121 and #6122 are ready for motion.
	2. Presentation by Solomon Trainin (Qualcomm), Clarification of DMG, EDMG, and CDMG relationship, Doc. IEEE 11/20/0533r0 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0533-00-00ay-clarification-of-dmg-edmg-and-cdmg-relationship.docx>)
		1. This contribution is to clarify the relationship among DMG, EDMG, and CDMG.
		2. Solomon noted that the definition for EDMG STA in 3.2 Definitions specific to IEEE Std 802.11 contradicts with 4.3.30 and suggested to remove it.
		3. He rewrote the definition of non-enhanced directional multi-gigabit (non-EDMG) in 3.2 Definitions as “A modifier meaning directional multi-gigabit (DMG) and include neither EDMG enhancement nor CDMG enhancement.”
		4. He also noted on associated issue regarding EDMG A-PPDU and suggested to modify the description on P429L6 as “… included depending on whether the PPDU is an SU PPDU, an MU PPDU” by deleting A-PPDU.
		5. Solomon will craft the resolution with pending input from Motozuka.
8. Motions
	1. Motion #650. Meeting Minutes. Move to approve Task Group AY minutes of meetings from the January 2020 interim meeting (<https://mentor.ieee.org/802.11/dcn/20/11-20-0160-00-00ay-tg-ay-january-2020-irvine-meeting-minutes.docx>):

Move: Claudio da Silva

Second: Alecsander Eitan

Result: The motion is passed with unanimous consent.

* 1. Motion # 651. Conference Call Meeting Minutes. Move to approve Task Group AY minutes of the teleconference calls on January 29, February 5, February 12, February 26, and March 11, 2020 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0243-05-00ay-task-group-ay-january-february-and-march-2020-teleconference-minutes.docx>):

Move: Claudio da Silva

Second: Alecsander Eitan

Result: The motion is passed with unanimous consent.

* 1. Motion #652. Comment Resolution. Move to accept the comment resolution for the following CIDs as proposed in 20/0112r2: 6127, 6128, 6130, 6131, 6132, 6133, 6134, 6135, 6136, 6137, 6138, 6139, 6140, 6141, 6143, 6144, 6148, 6149, 6155, 6156, 6157, 6158, 6165, 6166, 6167, 6177, 6178, 6180, 6200, 6203.

Move: Solomon Trainin

Second: Claudio da Silva

Result: The motion is passed (12 Yes; 0 No; 0 Abstain).

1. The next teleconference call is scheduled at 10:00am ET on April 1 (Wednesday).
2. Meeting adjourned at 11:12 am ET.

**Appendix A: March 25, 2020, 10:00am ET Conference Call Attendance Log**

**Name and Affiliation:**

* Edward Au (Huawei)
* Claudio da Silva (Intel)
* Alecsander Eitan (Qualcomm)
* Chris Hansen (Peraso)
* Assaf Kasher (Qualcomm)
* Sang Kim (LGE)
* Hiroyuki Motozuka (Panasonic)
* Al Petrick (InterDigital)
* Li-Hsiang Sun (InterDigital)
* Solomon Trainin (Qualcomm)
* Yan Xin (Huawei)
* Rui Yang (InterDigital)
* Jonathan Goldberg (IEEE)
* Kazuyuki Sakoda (SONY)
* Jon Rosdahl (Qualcomm)

**Wednesday, April 1, 2020, Conference Call Session (10:00-11:30 ET)**

1. The IEEE 802.11ay task group meeting was called to order at 10:00am ET by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-20/0515r3 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-03-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>).
3. TGay is operating as the Comment Resolution Committee (CRC) for P802.11ay.
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-12)
	1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
	2. Chair asked if anybody has any disclosures related to the patent policy. None.
	3. Chair asked if there were any questions on any of the above items. None.
	4. Chair reminded all to record their attendance.
	5. Chair reminded all to upload their presentations
5. Chair reviewed the meeting agenda for the conference call (slide 24). No comment noted. Agenda revised to reflect the latest revision of a few contributions. No objection to approve the agenda shown in 0515r4 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-04-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>) was raised.
6. Comment Resolution
	1. Presentation by Cheng Chen (Intel), Suggested resolution to CID 6193, 6194, 6211, 6213, 6214, 6215 and 6131, Doc. IEEE 11/20/0544r2 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0544-02-00ay-resolutions-to-sa-ballot-cids.docx>)
		1. Opened the floor for discussion.
		2. Comment #6211 stated that we should specify TA for the CTS-to-self to broadcast MAC address. Solomon asked group ID can be used instead. Cheng relied that group ID is not defined for MU-MIMO.
		3. Chair commented that these 7 CIDs are ready for motion and he asked Li-Hsiang to check the commenters whether the resolution can be acceptable or not. Later Li-Hsiang said that Xiaofei Wang (InterDigital) is fine and will check with Joseph Levy (InterDigital).
	2. Presentation by Li-Hsiang Sun (InterDigital), Suggested resolution to CID 6206 and 6207, Doc. IEEE 11/20/0554r1 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0554-01-00ay-proposed-comment-resolutions-for-cid-6206-6207.docx>)
		1. Comment #6206 stated that if the Feedback Type subfield is 1 and the Grouping subfield is 3, the number of subcarriers (Nsc) present in the Digital Beamforming Feedback Information field of the Digital BF Feedback element should be Nsc - 1.
		2. Comment #6207 stated that The Differential Subcarrier Index Field should have Nsc-1 rows, not Nsc rows. The proposed remedy is that in the last row of Differential Subcarrier Index Field "Size" and "Meaning" columns, replace "Nsc-1" with "Nsc-2", replace "Nsc" with "Nsc-1"
		3. No comment was noted and these 2 CIDs are ready for motion.
	3. Presentation by Solomon Trainin (Qualcomm), SB000 comment resolution CID 6216, Doc. IEEE 11/20/0542r0 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0542-00-00ay-sb000-comment-resolution-cid-6216.docx>).
		1. No comment was noted and CID 6216 ready for motion.
	4. Presentation by Solomon Trainin (Qualcomm), Resolution of CID 6115 and 6234, Doc. IEEE 11/20/0242r3 (https://mentor.ieee.org/802.11/dcn/20/11-20-0242-03-00ay-msdu-size-extension-cid-6115-6234.docx).
		1. Solomon provided an update to the resolution that was presented a few weeks ago and are ready for motion. There is a minor technical fix in the MIB.
	5. Presentation by Solomon Trainin (Qualcomm), Suggested resolution to CID 6121, 6122, and 6123, Doc. IEEE 11/20/0209r5 (https://mentor.ieee.org/802.11/dcn/20/11-20-0209-05-00ay-suggested-resolution-to-cid-6121-6122-and-6123.docx).
		1. Solomon represented Kazuyuki Sakoda (SONY).
		2. It stated the update on the lists of mandatory and optional support of MAC features based on Solomon's review on PICS.
7. Motions
	1. Motion #653: Comment Resolution. Move to accept the comment resolution for the CIDs 6115 and 6234 as proposed in 20/0242r3.

Move: Solomon Trainin

Second: Claudio da Silva

Result: The motion is passed (12 Yes; 0 No; 2 Abstain).

* 1. Motion #654. Comment Resolution. Move to accept the comment resolution for the CIDs 6121, 6122, and 6123 as proposed in 20/0209r5.

Move: Assaf Kasher

Second: Cheng Chen

Result: The motion is approved with unanimous consent.

1. The next teleconference call is scheduled at 10:00am ET on April 8 (Wednesday).
2. Meeting adjourned at 10:55 am ET.

**Appendix A: April 1, 2020, 10:00am ET Conference Call Attendance Log**

**Name and Affiliation:**

* Edward Au (Huawei)
* Claudio da Silva (Intel)
* Alecsander Eitan (Qualcomm)
* Assaf Kasher (Qualcomm)
* Sang Kim (LGE)
* Hiroyuki Motozuka (Panasonic)
* Al Petrick (InterDigital)
* Li-Hsiang Sun (InterDigital)
* Solomon Trainin (Qualcomm)
* Rui Yang (InterDigital)
* Jon Rosdahl (Qualcomm)
* Takenori Sakamoto (Panasonic)
* Nelson Costa (Peraso)
* Cheng Chen (Intel)
* Mao Yu (NXP)

**Wednesday, April 15, 2020, Conference Call Session (10:00-11:30 ET)**

1. The IEEE 802.11ay task group meeting was called to order at 10:00am ET by the Chair, Edward Au (Huawei).
2. Chair said that participants can record their attendance through IMAT (<https://imat.ieee.org/my-site/home>).
3. Agenda Doc. IEEE 802.11-20/0515r5 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-05-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>).
4. TGay is operating as the Comment Resolution Committee (CRC) for P802.11ay.
5. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-12)
	1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
	2. Chair asked if anybody has any disclosures related to the patent policy. None.
	3. Chair asked if there were any questions on any of the above items. None.
	4. Chair reminded all to record their attendance.
	5. Chair reminded all to upload their presentations
6. Chair reviewed the meeting agenda for the conference call (slide 27). No comment noted. No objection to approve the agenda shown in 0515r5 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-04-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>) was raised.
7. Comment Resolution
	1. Presentation by Solomon Trainin (Qualcomm), Suggested resolution to CID 6102, 6103, 6104, 6105, 6106, 6107, 6108, 6109, Doc. IEEE 11/20/0611r0 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0611-00-00ay-sb000-annex-ab-cids.docx>)
		1. Opened the floor for discussion.
		2. Kazuyuki Sakoda (SONY) believes we need an annex to explain how one can make use of DMG to form a distribution network. When suggested annex is ready, Chair said we will consider it.
		3. These CIDs are ready for motion.
8. Motions
	1. Motion #655: Move to accept the comment resolution for CIDs 6193, 6194, 6211, 6213, 6214, 6215, and 6231 as proposed in 20/0544r2.

Move: Cheng Chen

Second: Solomon Trainin

Result: The motion is passed (11 Yes; 0 No; 3 Abstain).

* 1. Motion #656. Move to accept the comment resolution for CIDs 6206 and 6207 as proposed in 20/0554r2.

Move: Li-Hsiang Sun

Second: Assaf Kasher

Result: The motion is approved with unanimous consent.

* 1. Motion #657. Move to accept the comment resolution for CID 6216 as proposed in 20/0542r0.

Move: Solomon Trainin

Second: Cheng Chen

Result: The motion is approved with unanimous consent.

1. The next teleconference call is scheduled at 10:00am ET on April 22 (Wednesday).
2. Meeting adjourned at 10:41 am ET.

**Appendix A: April 15, 2020, 10:00am ET Conference Call Attendance Log**

**Name and Affiliation:**

* Edward Au (Huawei)
* Claudio da Silva (Intel)
* Assaf Kasher (Qualcomm)
* Sang Kim (LGE)
* Hiroyuki Motozuka (Panasonic)
* Al Petrick (InterDigital)
* Li-Hsiang Sun (InterDigital)
* Solomon Trainin (Qualcomm)
* Rui Yang (InterDigital)
* Takenori Sakamoto (Panasonic)
* Nelson Costa (Peraso)
* Cheng Chen (Intel)
* Mao Yu (NXP)
* Kazuyuki Sakoda (SONY)
* Yan Xin (Huawei)

**Wednesday, April 22, 2020, Conference Call Session (10:00-11:30 ET)**

1. The IEEE 802.11ay task group meeting was called to order at 10:01am ET by the Chair, Edward Au (Huawei).
2. Chair said that participants can record their attendance through IMAT (<https://imat.ieee.org/my-site/home>).
3. Agenda Doc. IEEE 802.11-20/0515r8 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-08-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>).
4. TGay is operating as the Comment Resolution Committee (CRC) for P802.11ay.
5. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-12)
	1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
	2. Chair asked if anybody has any disclosures related to the patent policy. None.
	3. Chair asked if there were any questions on any of the above items. None.
	4. Chair reminded all to record their attendance.
	5. Chair reminded all to upload their presentations
6. Chair reviewed the meeting agenda for the conference call (slide 31). Revision 1 of the contribution IEEE 802.11-20/0620 is noted. No objection to approve the agenda shown in IEEE 802.11-20/0515r8 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-08-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>) was raised.
7. Comment Resolution
	1. Presentation by Cheng Chen (Intel), Suggested resolution to CID 6228,6229, 6230, Doc IEEE 11/20/0620r1(<https://mentor.ieee.org/802.11/dcn/20/11-20-0620-01-00ay-resolutions-to-cid-6228-6229-6230.docx>)
		1. Changes in definitions for source directional multi-gigabit (DMG) station (STA) and destination directional multi-gigabit (DMG) station (STA) was suggested to address CIDs 6229 and 6230.
		2. Opened the floor for discussion.
		3. Editorial suggestion was made by Edward to change IEEE Revmd to IEEE 802.11 Revmd in proposed resolution for CID 6228.
		4. No further comment was noted.
		5. They are ready for motion.
	2. Motions
		1. Move to accept the comment resolution for CIDs 6102, 6103, 6104, 6105, 6106, 6107, 6108, and 6109 as proposed in 20/0611r0.
		2. Move: Solomon Trainin (Qualcomm)
		3. Second: Cheng Chen (Intel)
		4. Result: The motion is passed (9 Yes; 1 No; 4 Abstain)
	3. Presentation by Solomon Trainin (Qualcomm), Proposal of SAR clarification Doc. IEEE 11/20/0637r0 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0637-00-00ay-proposal-of-sar-clarification.docx>)
		1. Two issues on the SAR definition were identified and proposal was made to replace with a clear reference to the MPDU size in this definition and keep the definition in one place.
		2. Opened the floor for discussion.
		3. Li-Hsiang commented that the use of TSPEC element is related to MSDU and suggested to the first paragraph. Solomon replied that the second paragraph is the right place.
		4. Solomon will wait more comment. When it is ready to go, then the motion will be made.
8. Chair scheduled additional teleconferences on May 13, 20, and 27, 2020, from 10:00 am to 11:30 am ET for comment resolutions.
9. The next teleconference call is scheduled at 10:00am ET on May 6 (Wednesday).
10. Meeting adjourned at 10:53 am ET.

**Appendix A: April 22, 2020, 10:00am ET Conference Call Attendance Log**

**Name and Affiliation:**

* Edward Au (Huawei)
* Claudio da Silva (Intel)
* Assaf Kasher (Qualcomm)
* Alecsander Eitan (Qualcomm)
* Sang Kim (LGE)
* Hiroyuki Motozuka (Panasonic)
* Al Petrick (InterDigital)
* Li-Hsiang Sun (InterDigital)
* Solomon Trainin (Qualcomm)
* Rui Yang (InterDigital)
* Nelson Costa (Peraso)
* Cheng Chen (Intel)
* Kazuyuki Sakoda (SONY)
* Yan Xin (Huawei)
* Jon Rosdahl (Qualcomm)
* Jonathan Goldberg (IEEE)
* Jordan A. Borgner (Self)

**Wednesday, April 29, 2020, Conference Call Session (10:00-11:30 ET)**

1. The IEEE 802.11ay task group meeting was called to order at 10:01am ET by the Chair, Edward Au (Huawei).
2. Chair said that participants can record their attendance through IMAT (<https://imat.ieee.org/my-site/home>).
3. Agenda Doc. IEEE 802.11-20/0515r11 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-11-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>).
4. TGay is operating as the Comment Resolution Committee (CRC) for P802.11ay.
5. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-12)
	1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
	2. Chair asked if anybody has any disclosures related to the patent policy. None.
	3. Chair asked if there were any questions on any of the above items. None.
	4. Chair reminded all to record their attendance.
	5. Chair reminded all to upload their presentations
6. Chair reviewed the meeting agenda for the conference call (slide 33). Revision 1 of the contribution IEEE 802.11-20/0620 is noted. No objection to approve the agenda shown in IEEE 802.11-20/0515r11 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0515-11-00ay-task-group-ay-march-april-and-may-2020-teleconference-call-agendas.ppt>) was raised.
7. Comment Resolution
	1. Presentation by Alecsander Eitan (Qualcomm), Resolution to CID 6184-9, Doc IEEE 11/20/034r0 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0343-00-00ay-resolution-to-cid-6184-9.docx>)
		1. This submission proposes resolution to CID 6184, 6185, 6186, 6187, 6188 & 6189.
		2. Opened the floor for discussion.
		3. CIDs 6187 and 6188 are pending for editorial fix from Al Petrick's suggestion.
	2. Presentation by Alecsander Eitan (Qualcomm), Resolution to CID 6183 and 6208, Doc IEEE 1120/0344r0 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0344-00-00ay-resolution-to-cid-6183-and-6208.docx>)
		1. This submission proposes resolution to CID 6183 and 6208.
		2. Opened the floor for discussion. No comment noted.
		3. These CIDs (6183 and 6208) are ready for motion.
	3. Motions (#659)
		1. Move to accept the following resolution for CID 6147: Rejected, the commenter withdraws his comment.
		2. Move: Nelson Costa (Peraso)
		3. Second: Solomon Trainin (Qualcomm)
		4. Result: The motion is passed (10 Yes; 0 No; 0 Abstain)
	4. Motions (#660)
		1. Move to accept the comment resolution for CIDs 6228, 6229, and 6230 as proposed in 20/0620r2.
		2. Move: Cheng Chen (Intel)
		3. Second: Solomon Trainin (Qualcomm)
		4. Result: The motion is passed with unanimous consent.
8. The next teleconference call is scheduled at 10:00am ET on May 6 (Wednesday).
9. Meeting adjourned at 11:05 am ET.

**Appendix A: April 29, 2020, 10:00am ET Conference Call Attendance Log**

**Name and Affiliation:**

* Edward Au, Huawei
* Sang Kim, LGE
* Al Petrick, InterDigital
* Li-Hsiang Sun, InterDigital
* Jon Rosdahl, Qualcomm
* Rui Yang, InterDigital
* Alecsander Eitan, Qualcomm,
* Claudio da Silva, Intel
* Cheng Chen, Intel
* Solomon Trainin, Qualcomm
* Nelson Costa, Peraso
* Assaf Kasher, Qualcomm
* Jeongki Kim, LGE