IEEE P802.11  
Wireless LANs

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| Minutes of the IEEE P802.11 Full Working Group | | | | |
| Date: 2022-09-16 | | | | |
| Author(s): | | | | |
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Abstract

This document constitutes the minutes of the IEEE 802.11 full working group for the September 2022 session.

Please note that all affiliations at this session are shown in Annex A.

**Abbreviations:**

A: Answer

C: Comment

Q: Question

**IEEE 802.11 Interim Session #195**

**September 12th – 16th, 2022**

**IEEE 802.11 Opening Plenary, Monday September 12th 2022**

Presiding chair: Dorothy Stanley (Hewlett Packard Enterprise) opened the meeting at 09:02 Hawaii Standard Time (HST) and declared quorum for the session.

1st Vice-chair (VC1): Jon Rosdahl Qualcomm

2nd Vice-chair (VC2): Robert Stacey Intel

Secretary: Stephen McCann Huawei Technologies Co., Ltd

There are 453 Voters and 11 Ex Officio voters of IEEE 802.11\*

There were 211 people in the meeting (Webex), with 150 attending in person (in the room) and 301 on the IMAT attendance server.

\*who ask to be recognized as such in the 802.11 voters list.

1. **Notices** (11-22-1258r2 slide #3)
   1. Chair: Please note the information about the meeting decorum.
   2. Are there any members of the press present?
      1. None.
   3. IEEE Staff present
      1. Jodi Haasz is the IEEE-SA Staff representative for IEEE 802.11
   4. Please note that this session requires a registration fee to be paid.
2. **Approve/modify working group agenda** (11-22-1257r2)
   1. This is a summary of the meeting today. Please note the schedule for this session on the separate tab “Schedule”.
   2. Chair: I suggest we approve this agenda.
   3. **Move to approve the agenda 11-22-1257r2 for the Monday opening plenary**
      1. Moved: Marc Emmelmann, 2nd: Lei Wang
      2. No objection to approving by unanimous consent
3. **July 2022 WG Minutes**
   1. **Move to approve the July 2022 WG minutes document 11-22-0967r2**
   2. Moved: Stephen McCann, 2nd: Tuncer Baykas
   3. Following neither discussion nor dissent the minutes were approved by unanimous consent.
4. **New Attendees** (11-22-1297r0 slide #4)
   1. Straw Poll:
   2. **Are you a new attendee to IEEE 802.11?**
      1. Yes: 9
      2. No: 71
      3. Abstain (and no answer): 75
   3. There is a new members’ meeting on Tuesday September 12th at 10:30 HST. This is a tutorial for those new members to learn about IEEE 802.11.
5. **Call for essential Patents** (11-22-1284r0)
   1. The current PatCom rules were read out, including the call for essential patents information, as shown by:
   2. <https://development.standards.ieee.org/myproject/Public/mytools/mob/patut.pdf>
      1. There were no issues raised regarding the call for essential patents.
      2. There was no response to the call for essential patents.
6. **Participation and Attendance** (11-22-1284r0)
   1. The slides about IEEE 802 meeting participation and IEEE SA copyright were also read.
   2. Expected participant behavior was also announced.
   3. Chair: Regarding slide #20, you may have noticed that you have lost your voting rights on your voting badge. There were about 60 people who did not respond to either the 802.11 Cor-1 or the 802.11be letter ballots and have therefore lost their rights. If you have an issue, please contact me.
   4. Chair: There is also still some confusion about the form of abstain that can be currently used. This will be sorted out during the week.
   5. Chair: This session does count towards your voting rights. 9 meeting slots are required to achieve the 75% threshold.
7. **Announcements** (11-22-1258r2)
   1. **Liaisons** (slide #4)
      1. Chair: There are no new incoming liaisons this time, but this a reminder about an incoming liaison from ETSI TC ITS requesting a copy of P802.11bd D4.0. I have responded to this liaison.
   2. **EC and IEEE-SA standard board decisions** (slides #5 and #6)
      1. Chair: These are some items for the EC and IEEE-SA upcoming meetings.
   3. **Joint meetings & reciprocal credit with IEEE 802 groups** (slide #8)
      1. Reminder that there are topics relevant to IEEE 802.11 to be covered in IEEE 802.18, IEEE 802.19, IEEE 802.24, IEEE 802.1 NENDICA Industry Connections Activity and IEEE 802 JTC1 SC.
8. **Logistics and Key events/activities** (ec-22-0184r1)
   1. **Logistics**
      1. This document provides information about this week’s session.
      2. If you any audio-visual issues this week, please contact the registration desk.
      3. Regarding the network access, the access points have been upgraded to support WPA3.
      4. This week there are several celebrations in honor of Bob Heile as shown on the slides.
      5. Please note that the shave ice truck will be in front of the lobby on Tuesday afternoon. The social itself will be on Wednesday evening in the Waters Edge Ballroom. At the end of the social, there will be some luau dancers, who will perform at the base of the grand staircase.
      6. On Wednesday, it is Hawaiian shirt day and there will also be a group photo at the base of the grand staircase.
9. **Group Summaries** (11-22-1285r0)
   1. Special notes were mentioned for the following groups:
   2. **Editors’ meeting and ANA** (slides #3 & #4)
      1. There is an editors’ meeting at 07:00 HST on Tuesday morning. Other topics include the ANA status (11-11-0270r63).
      2. No questions
   3. **ARC SC** (slide #5)
      1. There have been no teleconferences since the July 2022 meeting.
      2. No questions
   4. **Coex** **SC** (slide #7)
      1. This standing committee will meet once this week.
      2. No questions
   5. **PAR** **SC** (slide #8)
      1. There is no meeting this week.
      2. No questions
   6. **WNG** (slide #9)
      1. There are 3 presentations planned for this week.
      2. No questions
   7. **JTC1** **SC** (slide #10)
      1. There is 1 meeting during this session.
      2. No questions
   8. **REVme** (slide #13)
      1. Two main items this week:
         1. Clause 6 rewrite
         2. Complete comment resolution
      2. No questions
   9. **TGaz** (slide #14)
      1. The group has completed the 2nd SA ballot and the approval rate was 98.9%. There are 21 comments to work on this week and it is hoped to request either conditional or unconditional approval from the EC, to complete the project in the next couple of months.
      2. There will also be a discussion about future support for 320 MHz ranging.
      3. No questions
   10. **TGbb** (slide #17)
       1. The group hopes to resolve comments from the recently completed D3.0 recirculation letter ballot.
       2. No questions.
   11. **TGbc** (slide #18)
       1. The work this session is to complete comment resolution from the D4.0 re-circulation letter ballot. The approval rate was 98% and the group would now like to move forward to start SA ballot.
       2. No questions
   12. **TGbd** (slide #21)
       1. The group will work on comments from the recent SA re-circulation ballot on 11bd D6.0. There were 4 comments received and is hoped to request either conditional or unconditional approval from the EC, to complete the project in the next couple of months
       2. No questions
   13. **TGbe** (slide #24)
       1. The D2.1 has been produced and about 40% of the comments from the D2.0 letter ballot have been resolved.
       2. The work this week will be to keep working on these comments.
       3. No questions
   14. **TGbf** (slide #26)
       1. The group will be working on comments received from the comment collection that completed at the end of May 2022. About 45% of the comments have been resolved.
       2. No questions
   15. **TGbh** (slide #29)
       1. The group will address comments received from the D0.2 comment collection.
       2. No questions
   16. **TGbi** (slide #30)
       1. There are 4 meetings during this session. The group will continue to address the requirements definitions.
       2. No questions.
   17. **UHR SG** (slide #31)
       1. This will be the first session of this new Ultra High Reliability (UHR) Study Group (SG) with 3 meetings during the week.
       2. No questions.
   18. **AIML TIG** (slide #32)
       1. No questions.
   19. **AMP TIG** (slide #33)
       1. No questions.
   20. **ITU ad-hoc** (slide #35)
       1. There will be one meeting this week.
       2. No questions.
10. **SG chair confirmation motion** (11-22-1297r1)
    1. **Motion 1: UHR SG chair**
       1. **Confirm Laurent Cariou as the IEEE 802.11 Ultra High Reliability (UHR) SG chair.**
       2. Moved: Marc Emmelmann, Seconded: Mark Hamilton
       3. No objection to approving by unanimous consent (Motion passes)
11. **AoB**
    1. None
12. **Recess**
    1. Meeting recessed at 10:11 HST.

**Wednesday, September 14th 2022**

**IEEE 802.11 Mid-week Plenary**

Call to order at 13:36 HST by Dorothy Stanley (HPE).

There were 179 people in the meeting (Webex), with 109 attending in person (in the room) and 269 on the IMAT attendance server.

1. **Approve/modify working group agenda** (11-22-1257r4)
   1. Chair: There have been some minor changes to the agenda since the opening plenary.
   2. TGaz has completed its business for the week and TGbe PHY have cancelled the PM2 slot for today.
   3. **Approve the agenda for the today’s meeting as shown in 11-22-1257r4**
      1. Moved: Stuart Kerry, 2nd: Assaf Kasher
      2. No objection to approving by unanimous consent.
2. **Announcements** (11-22-1259r1)
   1. **Participation** (slides #4 - #6)
      1. Please can you all remember to read these slides and understand that everyone is here as an individual subject matter expert.
      2. Christy Bahn is attending as the IEEE staff representative.
   2. **Call for essential patents** (slide #7)
      1. This is the Call for Essential Patents
      2. No statements
      3. No questions.
   3. **Meeting decorum** (slide #8)
      1. No questions.
   4. **Session specific individual experts** (slide #9)
      1. There is a policy whereby the WG chair can designate individual experts for each meeting. The individuals shown on the slide are regarded as such experts.
      2. Jeff Bailey – Carleton University is attending this meeting for WNG.
      3. Also see section 31.5 in this document for an additional designated expert.
   5. **ISO/IEC IEEE 8802.11-2022**
      1. This ISO/IEC document has now been published. Thank you for everyone who participated.
   6. **IEEE-SA Elections**
      1. These are currently underway.
   7. **Social**
      1. Please remember to collect a guest badge for this evening’s social before 4pm HST.
3. **IEEE 802.11 overview** (11-22-1258r1)
   1. Active Groups (slide #11)
   2. PAR renewals (slide #12)
   3. Appointed positions (slide #13)
   4. Officers (slide #14). Please note the changes in yellow.
   5. Revisions (slides #15 - #16)
   6. Ballots (slides #17). There have been 4 since the July 2022 meeting
   7. Membership status (slides #18). There are currently 453 voters.
   8. Participation statistics (slide #20 - #23)
   9. No questions
4. **Timelines**
   1. Please can all sub-group chairs remember to send the working group secretary any updates to their timeline for this week.
5. **Social**
   1. This is a reminder about the social this evening that will be held in the Waters Edge Ballroom, starting at 6.30pm.
   2. Q: Where do I go to guest badge.
   3. A: Please go to the Waikoloa 1 room.
6. **Wi-Fi Alliance Liaison** (11-22-1529r0)
   1. The next meeting will be in October 2022 in Lisbon.
   2. No questions
7. **IETF Liaison** (11-22-1094r0)
   1. The next meeting will be in November 2022 in London.
   2. No questions.
8. **IEEE 1609** (11-22-1286r1 slide #143)
   1. The next meeting will be in October 2022 by teleconference.
   2. No questions.
9. **IEEE 802.18 Liaison** (11-22-1268r1)
   1. There are now two ad-hoc groups within IEEE 802.18.
   2. No questions.
10. **IEEE 802.19 Liaison** (11-22-1616r0)
    1. This document summarizes the discussions within the IEEE 802.19 meetings this session.
    2. No questions.
11. **IEEE 802 Nendica - Technical Plenary**
    1. These reports are deferred until Friday
12. **IEEE 802.11 Operations Manual** (11-14-0629r24)
    1. VC-2: Here are some changes that have been made to the operations manual. Many of them are changing outdated links.
    2. C: There are a couple of typos in the header.
    3. A: A revision will be posted with the marked changes and then a further clean revision (11-22-1638r0).
    4. C: During the Covid-19 pandemic, the number of teleconferences per week was increased. I would like to see that we now return to 2 teleconferences per week per sub-group.
    5. C: I support that position. Does that also consider an ad-hoc meeting call and a teleconference?
    6. Chair: If it’s online, then it should be considered as a teleconference. My opinion is that most sub-groups have 1 teleconference per week. Therefore, I would not like to mandate 2 teleconferences per week, but I would like people to consider it as a guideline. If sub-groups do have more than 2 teleconferences per week, perhaps this can just be for a limited time (e.g. a few weeks).
    7. Q: Where is this document, please?
    8. A: This is a 2014 document on the mentor server.
    9. No questions
13. **320 MHz Ranging PAR and CSD** (11-22-1070r1)
    1. This is an introduction to a 320 MHz ranging PAR and CSD that has been produced by members who are also active in TGaz. It is regarded as natural extension of the 160 MHz ranging work within TGaz**.**
    2. The PAR document is 11-22-1325r5 and the CSD is 11-22-1353r1.
    3. There was also a presentation about this project in WNG this week.
    4. Q: Can I see the timeline of the PAR please?
    5. A: The expected completion date is June 2025, which does not seem to be a fast project.
    6. Chair: This project has a dependency on 11be.
    7. **Motion 2: 320 MHz Positioning PAR**
       1. **Believing that the PAR contained in the document referenced below meets IEEE-SA guidelines,**
       2. **Request that the PAR contained in 11-22-1325r5 be posted to the IEEE 802 Executive Committee (EC) agenda for WG 802 preview and EC approval to submit to NesCom,**
       3. **And grant the WG chair editorial license.**
       4. Moved: Jonathan Segev, Second: Ali Raissinia
       5. Result: Yes: 97, No: 2, Abstain: 28 (Motion passes)
    8. **Motion 3: 320 MHz Positioning CSD**
       1. **Believing that the CSD contained in the document referenced below meets IEEE 802 guidelines,**
       2. **Request that the CSD contained in 11-22-1353r1 be posted to the IEEE 802 Executive Committee (EC) agenda for WG 802 preview and EC approval,**
       3. **And grant the WG chair editorial license.**
       4. Moved: Jonathan Segev, Second: Ali Raissinia
       5. Result: Yes: 91, No: 2, Abstain: 33 (Motion passes)
14. **Clause 6.3 re-write** (11-22-1507r1)
    1. This is an introduction to how clause 6.3 of the IEEE 802.11 specification will be re-written to simplify it. Over the years it has grown and has become very unwieldly.
    2. A presentation was made in the ARC SC about 1 year ago and that group suggested that this work was worthwhile. This week TGme approved the re-writing of clause 6.3, so this presentation explains the changes going forward.
    3. Document 11-22-0916r9 describes the changes and the new format of clause 6.3 in more detail.
    4. If are there any issues, please come along to TGme.
    5. C: I would like to thank Graham Smith and the ARC SC for all their excellent work with this issue. The new format will appear in the next 802.11REVme draft re-circulation ballot.
    6. C: If your amendment is post 802.11REVme completing then this change will have to be adopted. However, for current amendments, it is not necessary.
    7. C: This is great work. In existing amendments, current MLME primitives can be deleted and then just added to the new table.
    8. Q: Do this assume that the 7 types will always appear going forward?
    9. A: I think these 7 types cover all options and indeed some of these 7 may disappear.
    10. Chair: Please review these changes in the next 802.11REVme ballot.
15. **Coexistence issues** (11-22-1613r0)
    1. There are still some coexistence issues that need to be considered by IEEE 802.11. This presentation introduces some of them that could be considered in more detail, starting at the November 2022 meeting.
    2. Please can everyone think about these issues before the November 2022.
    3. The Coex SC meeting will now meet in PM2 following the break.
16. **Any other Business (AoB)**
    1. None
17. **Recess**
    1. Meeting recessed at 15:31 HST.

**Friday, September 16th 2022**

**IEEE 802.11 Closing Plenary**

Call to order at 08:00 HST by Dorothy Stanley (HPE).

There were 142 people in the meeting (Webex), with 68 attending in person (in the room) and 176 on the IMAT attendance server.

1. **Approve/modify working group agenda** (11-22-1257r5)
   1. Chair: There have been some minor changes to the agenda since the opening plenary.
   2. **Approve the agenda for the today’s meeting as shown in 11-22-1257r5**
      1. Moved: Assaf Kasher, 2nd: Stuart Kerry
      2. No objection to approving by unanimous consent.
2. **Announcements** (11-22-1259r2)
   1. **Participation** (slides #12 - #14)
      1. Please can you all remember to read this slide and understand that everyone is here as an individual subject matter expert.
   2. **Call for Essential Patents** (slide #15)
      1. This is the Call for Essential Patents
      2. No statements
      3. No questions.
   3. **Meeting Decorum** (slide #16)
      1. No questions.
   4. **Next session and CAC meetings** (slide #17)
      1. The next session of the IEEE 802.11 working group is from November 13-18th 2022. It will be a mixed mode meeting in Bangkok, Thailand.
      2. Please be aware of future chair’s committee meetings (CAC), the first one of which will be on October 10th at 09:00 ET. Please note the deadline for the sub-group agendas.
   5. **Designation of individual experts** (slide #18)
      1. Please note that Prof. Alphan Sahin (University of South Carolina) has been added as an individual expert for this session.
   6. **Sub-group minutes**
      1. Please note that sub-group minutes should be completed within 30 days from the close of this plenary.
   7. **Letters of Assurance (LoA)** (slide #19)
      1. Chair: please remember about the LoA requirements.
      2. There is one LoA request open at the moment.
   8. **IEEE Store and ISO SC6** (slides #20 - #21)
      1. This is summary of drafts that have been liaised to ISO/UEC
      2. No questions
   9. **Press Releases** (slide #22)
      1. There are several media items that are been generated for the AIML TIG, AMP TIG and UHR SG.
   10. **IEEE 802 Public Visibility Standing Committee** (slides #23 - #24)
       1. This IEEE 802 group is designed to increase the external visibility of IEEE 802.
       2. There was a Tech Talk about IEEE 802 coexistence in June 2022 and a link is shown in the slide.
       3. No questions
3. **Treasury Report** (ec-22-0173r0)
   1. VC1: This shows the treasurers’ report and is correct as of September 11th 2022.
   2. There are now 13 outstanding deadbeats across IEEE 802.
   3. Q: regarding slide #5, why are there 2 values of 488 and 495?
   4. A: Oh, the 495 is the correct value.
4. **Future 2022 Venues Straw Polls** (11-22-1297r5)
   1. Only people present in the room were asked to participate in the following straw polls:
   2. **1. How many people would like to come back to this venue?** 
      1. Yes: 41
      2. No: 21
      3. Abstain: 51
   3. **2. Did you go to the social?**
      1. Yes: 44
      2. No: 22
      3. Abstain: 57
   4. **3. If you attended the social, did you like it?**
      1. Yes: 32
      2. No: 4
5. **Future Venues Manager Report** (ec-22-0001r9)
   1. VC1: These slides shows the current status of future venues.
   2. Please note the items to consider for future sessions on slide #28.
   3. The January 2023 meeting will still be in Baltimore, but will now be at the Hilton hotel and not at the Marriott.
   4. The shirts for the 40th anniversary of IEEE 802 will be brought to the March 2023 meeting. There will be a celebration at the Atlanta aquarium.
   5. No questions
6. **Timelines**
   1. There are several changes various timelines this week. Changes will be made to the timeline shortly.
   2. No questions.
7. **Attendance statistics** (11-22-1286r1 slide #4)
   1. VC2: These slides are a summary of the attendance statistics and sub-group activities during this session. The numbers have been increasing slowly over the last couple of years, although there has been a dip at the end due to members not responding to recent letter ballots.
8. **WG Committee Reports** (11-22-1286r1)
   1. **Editors** (slide #11)
      1. There were various activities within the Editors’ meeting this week as shown in the slides.
      2. No questions.
   2. **ARC SC** (slide #23)
      1. The group was a little quiet this week following the re-structuring of clause 6 earlier in the year.
      2. No questions.
   3. **Coex SC** (slide #29)
      1. There have been various issues discussed during the week.
      2. No questions.
   4. **WNG** **SC** (slide #31)
      1. There were 3 presentations this session:
         1. “Thoughts on High Reliability Communications”, 11-22/1413r1
         2. “320 MHz Ranging”, 11-22/1070r1
         3. “Coexistence of Narrowband Frequency Hopping (NB FH) systems and Wi-Fi”, 11-22/1578r1
         4. Chair: Regarding the last presentation about NB frequency hopping, please look at this as it an interesting topic.
         5. C: It is also a good example of our outreach to academia.
         6. Q: Is there any way that WNG can be moved to avoid the IEEE 802.18 meeting.
         7. Chair: Yes, WNG will be moved to Tuesday AM1 to avoid IEEE 802.18 for the November meeting.
   5. **JTC1 SC** (slide #34)
      1. Some time was spent discussing the PSDO process and also the IPR issues regarding the IEEE 802.11ax/ay/ba ISO ballots.
      2. No questions.
   6. **TGme** (slide #37)
      1. This session completed the comment resolution for LB 258.
      2. There is an ad-hoc planned for December 5-7th in either New Jersey or New York, USA.
   7. **TGaz** (slide #45)
      1. The group has been working on comments from the 2nd SA re-circulation ballot. They will now request approval from the EC to move to RevCom.
      2. No questions.
   8. **TGbb** (slide #51)
      1. The group has finished resolving comments from the D3.0 letter ballot and will now move forward to request conditional approval to start a SA ballot from the EC.
      2. No questions.
   9. **TGbc** (slide #55)
      1. The comment resolutions to comments from the LB268 re-circulation ballot were completed this week. The group will move forward to request unconditional approval to start a SA ballot from the EC.
      2. No questions.
   10. **TGbd** (slide #63)
       1. Comments from the SA re-circulation ballot were completed this week and now the group will request approval from the EC to move to RevCom.
       2. No questions.
   11. **TGbe** (slide #67)
       1. Good progress was made this week and about 650 comments were resolved this week. The editor will create D2.2, incorporating these resolutions by the end of September.
       2. There will be an MAC ad-hoc meeting in Bangkok from November 11-12th 2022.
       3. No questions.
   12. **TGbf** (slide #71)
       1. Comments from the comment collection regarding D0.1 are being resolved.
       2. No questions.
   13. **TGbh** (slide #76)
       1. Comments from the recent comment collection were worked on during the session.
       2. No questions.
   14. **TGbi** (slide #82)
       1. The requirements document has now been approved.
       2. No questions.
   15. **UHR SG** (slide #86)
       1. This was the first meeting of this SG. There were 13 presentations this week on various topics.
       2. No questions
   16. **AIML TIG** (slide #89)
       1. Discussions continued this week and work started on a TIG report that will be continued on teleconferences.
       2. No questions.
   17. **AMP TIG** (slide #92)
       1. 4 submissions were discussed during this session outlining some use cases and potential technologies.
       2. No questions.
   18. **ITU ad-hoc** (slide #94)
       1. One meeting was held this week to review the status of various documents as shown in the slide.
       2. No questions.
9. **Liaison Reports** (11-22-1286r1)
   1. **IEEE 802 Maintenance Progress**
      1. This is report about the P802-REV and P802-REVc projects. There has been no update from the Montreal July 2022 meeting, although the maintenance activity is still ongoing.
      2. No questions
   2. **IEEE 802.15** (slide #98)
      1. This is the summary of the activities within IEEE 802.15.
      2. No questions
10. **Working Group Motions (Old Business)** (11-22-1297r5)
    1. **Motion 4: Operations Manual**
       1. **Approve 11-22-1638r0 as the current 802.11 operations manual.**
       2. Moved: Robert Stacey, Seconded: Assaf Kasher
       3. C: Please note that this is new document number, replacing the old 11-14-0629r26
       4. No objection to approving by unanimous consent (Motion passes)
    2. **Motion 5: IEEE 802.15 Liaison**
       1. **Confirm Jonathan Segev as the WG11 liaison to 802.15.**
       2. Moved: Ian Sherlock, Seconded: Rich Kennedy
       3. No objection to approving by unanimous consent (Motion passes)
    3. **Motion 6: TGme re-circulation letter ballot**
       1. **Having approved comment resolutions for all of the comments received from LB 258 on REVme D1.0 as contained in documents**
       2. [**https://mentor.ieee.org/802.11/dcn/22/11-22-0065-11-000m-revme-wg-ballot-comments.xls**](https://mentor.ieee.org/802.11/dcn/22/11-22-0065-11-000m-revme-wg-ballot-comments.xls) **,**
       3. [**https://mentor.ieee.org/802.11/dcn/22/11-22-0073-15-000m-revme-wg-lb258-editor1-ad-hoc-comments.xlsx**](https://mentor.ieee.org/802.11/dcn/22/11-22-0073-15-000m-revme-wg-lb258-editor1-ad-hoc-comments.xlsx) **,**
       4. [**https://mentor.ieee.org/802.11/dcn/22/11-22-0064-16-000m-revme-editor2-ad-hoc-comments-on-working-group-letter-ballots.xlsx**](https://mentor.ieee.org/802.11/dcn/22/11-22-0064-16-000m-revme-editor2-ad-hoc-comments-on-working-group-letter-ballots.xlsx) **,#**
       5. [**https://mentor.ieee.org/802.11/dcn/22/11-22-0067-23-000m-gen-adhoc-revme-wg-lb258-comments.xlsx**](https://mentor.ieee.org/802.11/dcn/22/11-22-0067-23-000m-gen-adhoc-revme-wg-lb258-comments.xlsx) **,**
       6. [**https://mentor.ieee.org/802.11/dcn/21/11-21-0793-29-000m-revme-mac-comments.xls**](https://mentor.ieee.org/802.11/dcn/21/11-21-0793-29-000m-revme-mac-comments.xls) **,**
       7. [**https://mentor.ieee.org/802.11/dcn/21/11-21-0727-17-000m-revme-phy-comments.xls**](https://mentor.ieee.org/802.11/dcn/21/11-21-0727-17-000m-revme-phy-comments.xls) **,**
       8. [**https://mentor.ieee.org/802.11/dcn/21/11-21-0105-18-000m-revme-cc35-sec-comments.xlsx**](https://mentor.ieee.org/802.11/dcn/21/11-21-0105-18-000m-revme-cc35-sec-comments.xlsx) **,**
       9. [**https://mentor.ieee.org/802.11/dcn/22/11-22-0056-23-000m-revme-motions.pptx**](https://mentor.ieee.org/802.11/dcn/22/11-22-0056-23-000m-revme-motions.pptx) **,**
       10. **Instruct the editor to prepare Draft 2.0 incorporating these resolutions and, Approve a 25 day Working Group Recirculation Ballot asking the question “Should P802.11REVme D2.0 be forwarded to SA Ballot?**
       11. Moved: Mike Montemurro on behalf of TGme, Second: Mark Hamilton
       12. No objection to approving by unanimous consent (Motion passes)
       13. [TGme: Moved: Jon Rosdahl, 2nd: Stephen McCann, Result: 10/0/0]
    4. **Motion 7: TGme December 2022 Ad-hoc**
       1. **Approve a TGme ad-hoc meeting on December 5-7 2022, in Piscataway, NJ or New York area for the purpose of REVme comment resolution and consideration of document submissions.**
       2. Moved by Mike Montemurro on behalf of TGme
       3. No objection to approving by unanimous consent (Motion passes)
       4. [TGbe: Moved: Stephen McCann, 2nd: Emily Qi, Result: Unanimous consent]
       5. C: I’d like to thank Christy Bahn for her help arranging the venue.
    5. **Motion 8: TGaz CSD**
       1. **Re-affirm the CSD in** [**https://mentor.ieee.org/802-ec/dcn/19/ec-19-0064-00-ACSD-p802-11az.docx**](https://mentor.ieee.org/802-ec/dcn/19/ec-19-0064-00-ACSD-p802-11az.docx)**.**
       2. Moved by Jonathan Segev on behalf of TGaz, Seconded: Assaf Kasher
       3. Result: Yes: 81, No: 0, Abstain: 8 (Motion passes)
       4. [TGaz: Moved: Jonathan Segev, 2nd: Assaf Kasher, Result 7/0/0]
    6. **Motion 9: TGaz conditional approval**
       1. **Approve document 11-22-1511r2 as the report to the IEEE 802 Executive Committee (EC) on the requirements for conditional approval to forward P802.11az to RevCom, and request the IEEE 802 EC to conditionally approve forwarding P802.11az to RevCom.**
       2. Moved by Jonathan Segev on behalf of TGaz, Seconded: Assaf Kasher
       3. Result: Yes: 76, No: 1, Abstain: 9 (Motion passes)
       4. [TGaz: Moved: Jonathan Segev, 2nd: Assaf Kasher, Result 7/0/0]
    7. **Motion 10: TGbb CSD Re-affirmation**
       1. **Re-affirm the P802.11bb CSD in https://mentor.ieee.org/802-ec/dcn/18/ec-18-0080-00-ACSD-802-11bb.docx**
       2. Moved by Nikola Serafimovski on behalf of TGbb, Seconded: Tuncer Baykas
       3. Result: Yes: 54, No: 0, Abstain: 14 (Motion passes)
       4. [Similar motion in TGbb: Moved: Volker Jungnickel, 2nd: Matthias Wendt, Result: 5/0/0]
    8. **Motion 11: TGbb Conditional SA Ballot**
       1. **Approve document 11-22-1593r2 as the report to the IEEE 802 Executive Committee (EC) on the requirements for conditional approval to forward P802.11bb to SA Ballot, and**
       2. **Request the IEEE 802 EC to conditionally approve forwarding P802.11bb to SA ballot.**
       3. Moved by Nikola Serafimovski on behalf of TGbb, Seconded: Harry Bims
       4. Result: Yes: 55, No: 1, Abstain: 18 (Motion passes)
       5. [Similar motion in TGbb: Moved: Volker Jungnickel, 2nd: Matthias Wendt, Result: 5/0/0]
    9. **Motion 12: TGbc CSD Re-affirmation**
       1. **Re-affirm the P802.11bc CSD in https://mentor.ieee.org/802-ec/dcn/18/ec-18-0250-00-ACSD-p802-11bc.pdf**
       2. Moved by Marc Emmelmann on behalf of TGbc, Seconded: Hitoshi Morioka
       3. Result: Yes: 54, No: 0, Abstain: 6 (Motion passes)
       4. [TGbc: Moved: Stephen McCann, 2nd: Abhi Patil, Result: 6/0/0]
    10. **Motion 13: TGbc Unconditional SA Ballot**
        1. **Approve document 11-22/1405r2 as the report to the IEEE 802 Executive Committee (EC) on the requirements for unconditional approval to forward P802.11bc D4.0 to SA Ballot, and**
        2. **Request the IEEE 802 EC to unconditionally approve forwarding P802.11bc D4.0 to SA ballot.**
        3. Moved by Marc Emmelmann on behalf of TGbc, Seconded: Rich Kennedy
        4. Result: Yes: 57, No: 0, Abstain: 9 (Motion passes)
        5. [TGbc: Moved: Stephen McCann, 2nd: Abhi Patil, Result: 6/0/0]
    11. **Motion 14: TGbd CSD Re-affirmation**
        1. **Re-affirm the P802.11bd CSD in https://mentor.ieee.org/802-ec/dcn/18/ec-18-0251-00-ACSD-p802-11bd.pdf**
        2. Moved by Bo Sun on behalf of TGbd, Seconded: Xiaofei Wang
        3. Result: Yes: 56, No: 1, Abstain: 5 (Motion passes)
    12. **Motion 15: TGbd conditional approval**
        1. **Approve document 11-22-1521r2 as the report to the IEEE 802 Executive Committee on the requirements for conditional approval to forward P802.11bd to RevCom, and request the IEEE 802 Executive Committee to conditionally approve forwarding P802.11bd to RevCom.**
        2. Moved by Bo Sun on behalf of TGbd, Seconded: Marc Emmelmann
        3. Result: Yes: 56, No: 0, Abstain: 10 (Motion passes)
        4. Chair: Please note that both the 11az and 11bd amendments should be approved by the December 2022 SB meeting. Therefore they should both be -2022 amendments.
        5. [TGbd: Moved: Bo Sun, 2nd: Manish Kumar, Result 17/0/0]
    13. **Motion 16: TGbe November 2022 Ad-hoc**
        1. **Approve a TGbe MAC ad-hoc meeting on November 11-12, 2022, in Bangkok, Thailand, for the purpose of TGbe comment resolution and consideration of document submissions.**
        2. Moved by Alfred Asterjadhi on behalf of TGbe
        3. No objection to approving by unanimous consent (Motion passes)
        4. Q: Will there be dial-in facilities for this ad-hoc?
        5. A: Yes, as it will be a hybrid meeting.
        6. [TGbe: Moved: Ming Gan, seconded: George Cherian, result: 58Y, 8N, 23A]
11. **Wireless Chairs Meeting** (11-22-1259r2 slide #25)
    1. The next meeting is on October 5th, 2022 at 15:00 ET. Please contact the IEEE 802.11 chair or vice-chairs with a request for more information.
12. **Next Meeting** (11-22-1259r2 slide #26)
    1. The proposed date of the next IEEE 802.11 meeting is November 13-18, 2022 in Bangkok, Thailand as a mixed mode meeting.
13. **Any other Business (AoB)**
    1. There is a report about the network (ec-22-0194r0)
    2. Chair: Thanks to Linespeed for providing the internet service for this meeting.
14. **Adjournment**
    1. Having completed the agenda, the chair announced that the meeting was adjourned at 09:53 HST.

**Annex A: Attendance & Affiliation**

| **Name** | **Affiliation** | **Attended >= 75%?** | **Status** |
| --- | --- | --- | --- |
| Abdelaal, Rana | Broadcom Corporation | Yes | Voter |
| Abouelseoud, Mohamed | Apple Inc. | Yes | Potential Voter |
| Aboulmagd, Osama | Huawei Technologies Co., Ltd | Yes | Voter |
| Adachi, Tomoko | TOSHIBA Corporation | Yes | Voter |
| Adhikari, Shubhodeep | Broadcom Corporation | Yes | Voter |
| Agarwal, Peyush | Broadcom Corporation | Yes | Potential Voter |
| Aio, Kosuke | Sony Corporation | Yes | Voter |
| Ajami, Abdel Karim | Qualcomm Incorporated | Yes | Voter |
| Akhmetov, Dmitry | Intel | Yes | Voter |
| Alagarsamy, Srividhya | Broadcom Corporation | No | Non-Voter |
| Aldana, Carlos | Facebook | No | Voter |
| Andersdotter, Amelia | Sky Group/Comcast | Yes | Voter |
| Ansley, Carol | Cox Communications Inc. | Yes | Voter |
| Anwyl, Gary | MediaTek Inc. | Yes | Aspirant |
| Asai, Yusuke | NTT | Yes | Voter |
| Asterjadhi, Alfred | Qualcomm Incorporated | Yes | Voter |
| Au, Kwok Shum | Huawei Technologies Co., Ltd | Yes | ExOfficio |
| Au, Oscar | Origin Wireless | Yes | Voter |
| Aygul, Mehmet | Vestel | Yes | Voter |
| Baek, SunHee | LG ELECTRONICS | Yes | Voter |
| Bahn, Christy | IEEE STAFF | Yes | Voter |
| Bajko, Gabor | MediaTek Inc. | Yes | Voter |
| Balakrishnan, Hari Ram | NXP Semiconductors | Yes | Voter |
| Baron, stephane | Canon Research Centre France | Yes | Voter |
| Barr, David | MaxLinear | Yes | Voter |
| Batra, Anuj | Apple, Inc. | Yes | Voter |
| Baykas, Tuncer | Ofinno | Yes | Voter |
| Beg, Chris | Cognitive Systems Corp. | No | Voter |
| Behnamfar, Firouz | Apple Inc. | Yes | Potential Voter |
| Ben Arie, Yaron | Toga Networks (A Huawei Company) | Yes | Voter |
| Berger, Christian | NXP Semiconductors | Yes | Voter |
| Bims, Harry | Bims Laboratories, Inc. | Yes | Voter |
| Blandino, Steve | National Institute of Standards and Technology | Yes | Aspirant |
| Boldy, David | Broadcom Corporation | Yes | Voter |
| Borges, Daniel | Apple Inc. | Yes | Voter |
| Bredewoud, Albert | Broadcom Corporation | Yes | Voter |
| Burkhardt, Frank | Fraunhofer IIS | Yes | Voter |
| Cao, Rui | NXP Semiconductors | Yes | Voter |
| Cariou, Laurent | Intel | Yes | Voter |
| Carney, William | Sony Group Corporation | Yes | Voter |
| Cavalcanti, Dave | Intel | Yes | Voter |
| Cepni, Gurkan | Apple, Inc. | Yes | Potential Voter |
| Chang, Chen-Yi | Mediatek | Yes | Voter |
| Chaplin, Clint | Self | No | ExOfficio |
| Chappell, Matthew | Cox Communications Inc. | Yes | Voter |
| Chen, Cheng | Intel | Yes | Voter |
| Chen, Cheng-Ming | Qualcomm Incorporated | Yes | Aspirant |
| Chen, Evelyn | Ericsson AB | Yes | Potential Voter |
| Chen, Xiaogang | Intel | Yes | Voter |
| Chen, You-Wei | MediaTek Inc. | Yes | Potential Voter |
| Cheng, Paul | MediaTek Inc. | Yes | Voter |
| Cheng, Xilin | NXP Semiconductors | Yes | Voter |
| CHENG, yajun | Xiaomi Communications Co., Ltd. | Yes | Aspirant |
| CHERIAN, GEORGE | Qualcomm Incorporated | Yes | Voter |
| Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. | Yes | Voter |
| Chiu, Lin-Kai | MediaTek Inc. | Yes | Voter |
| Cho, Hangyu | LG ELECTRONICS | Yes | Potential Voter |
| Choi, Jinsoo | LG ELECTRONICS | Yes | Voter |
| Chu, Liwen | NXP Semiconductors | Yes | Voter |
| CHUN, JINYOUNG | LG ELECTRONICS | Yes | Voter |
| Coffey, John | Realtek Semiconductor Corp. | Yes | Voter |
| Cordeiro, Carlos | Intel | Yes | Voter |
| da Silva, Claudio | Meta Platforms; PWC, LLC | Yes | Voter |
| Das, Dibakar | Intel | Yes | Voter |
| Das, Subir | Peraton Labs | Yes | ExOfficio |
| Dash, Debashis | Apple, Inc. | Yes | Voter |
| Dauphinee, Leonard | MAXLINEAR INC | Yes | Voter |
| Dave, Brajesh | Apple, Inc. | Yes | Aspirant |
| de Vegt, Rolf | Qualcomm Incorporated | Yes | Voter |
| DeLaOlivaDelgado, Antonio | InterDigital, Inc. | Yes | Voter |
| Derham, Thomas | Broadcom Corporation | Yes | Voter |
| Ding, Yanyi | Panasonic Corporation | Yes | Voter |
| Dong, mingjie | Huawei Technologies Co., Ltd | Yes | Voter |
| Dong, Xiandong | Xiaomi Inc. | Yes | Voter |
| Du, Rui | Huawei Technologies Co., Ltd | Yes | Voter |
| Du, Zhenguo | Huawei Technologies Co., Ltd | Yes | Voter |
| Duan, Ruchen | SAMSUNG | Yes | Potential Voter |
| Ecclesine, Peter | Cisco Systems, Inc. | Yes | Voter |
| Eitan, Alecsander | Qualcomm Technologies, Inc. | Yes | Voter |
| ElSherif, Ahmed | Qualcomm Incorporated | Yes | Potential Voter |
| Emmelmann, Marc | SELF / Koden-TI / Fraunhofer FOKUS | Yes | Voter |
| Erceg, Vinko | Broadcom Corporation | Yes | Voter |
| Erkucuk, Serhat | Ofinno | Yes | Voter |
| Fang, Juan | Intel | Yes | Voter |
| Fang, Yonggang | MediaTek Inc. | Yes | Voter |
| feng, Shuling | MediaTek Inc. | Yes | Voter |
| Fischer, Matthew | Broadcom Corporation | Yes | Voter |
| Fujimori, Yuki | Canon Research Centre France | Yes | Aspirant |
| Gan, Ming | Huawei Technologies Co., Ltd | Yes | Voter |
| Gangur, Trivikram | Infineon Technologies | Yes | Voter |
| Gao, Ning | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Voter |
| Garg, Lalit | Broadcom Corporation | Yes | Potential Voter |
| Gee, Thomas | Qorvo | Yes | Voter |
| Ghaderipoor, Alireza | MediaTek Inc. | Yes | Potential Voter |
| Ghosh, Chittabrata | Meta | Yes | Voter |
| Gidvani, Ravi | SAMSUNG ELECTRONICS | Yes | Aspirant |
| Gilb, James | General Atomics Aeronautical Systems, Inc. and University of San Diego | No | ExOfficio |
| Godfrey, Tim | Electric Power Research Institute, Inc. (EPRI) | No | ExOfficio |
| Gong, Bo | Huawei Technologies Co., Ltd | Yes | Voter |
| Gorthi, Hemamali | Infineon Technologies | Yes | Voter |
| GOTO, Fumihide | DENSO | Yes | Voter |
| Grandhe, Niranjan | NXP Semiconductors | Yes | Voter |
| Gu, Xiangxin | Unisoc (Shanghai) Technologies Co., Ltd. | Yes | Voter |
| Guo, Jing | NXP Semiconductors | Yes | Voter |
| Guo, Yuchen | Huawei Technologies Co., Ltd | Yes | Voter |
| Guo, Ziyang | Huawei Technologies Co., Ltd | No | Non-Voter |
| Gupta, Binita | Meta Platforms, Inc. | Yes | Voter |
| Gupta, Raghvendra | Broadcom Corporation | Yes | Voter |
| gutierrez, luis | Broadcom Corporation | Yes | Voter |
| Haasz, Jodi | IEEE SA | No | Non-Voter |
| Haider, Muhammad Kumail | Facebook | Yes | Voter |
| Halasz, David | Morse Micro | Yes | Voter |
| hamidouche, kenza | Apple Inc. | No | Aspirant |
| Hamilton, Mark | Ruckus/CommScope | Yes | Voter |
| Han, Jonghun | SAMSUNG | Yes | Potential Voter |
| HAN, Xiao | Huawei Technologies Co., Ltd | Yes | Voter |
| Handte, Thomas | Sony Corporation | Yes | Voter |
| Hart, Brian | Cisco Systems, Inc. | Yes | Voter |
| He, Chuanfeng | Beijing OPPO telecommunications corp., ltd | Yes | Potential Voter |
| Hedayat, Ahmadreza | Apple Inc. | Yes | Aspirant |
| Henry, Jerome | Cisco Systems, Inc. | Yes | Voter |
| Hernandez, Marco | National Institute of Information and Communications Technology (NICT) | No | Voter |
| hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) | Yes | Voter |
| Hiertz, Guido | Ericsson GmbH | Yes | Voter |
| Hirata, Ryuichi | Sony Group Corporation | Yes | Voter |
| Ho, Duncan | Qualcomm Incorporated | Yes | Voter |
| Hotchkiss, Ron | IEEE STAFF | Yes | Aspirant |
| Hsiao, Ching-Wen | MediaTek Inc. | Yes | Potential Voter |
| Hsieh, Hung-Tao | MediaTek Inc. | Yes | Voter |
| Hsu, Chien-Fang | MediaTek Inc. | Yes | Voter |
| Hsu, Ostrovsky | Xiaomi Inc. | Yes | Voter |
| Hu, Chunyu | Facebook | Yes | Voter |
| Hu, Mengshi | Huawei Technologies Co., Ltd | Yes | Voter |
| Hu, Shengquan | MediaTek Inc. | Yes | Voter |
| Huang, Guogang | Huawei Technologies Co., Ltd | Yes | Voter |
| Huang, Lei | Huawei International Pte Ltd | Yes | Voter |
| Huang, Po-Kai | Intel | Yes | Voter |
| Huang, Qisheng | ZTE Corporation | Yes | Voter |
| Huq, Kazi Mohammed Saidul | Ofinno | Yes | Voter |
| Hwang, Sung Hyun | Electronics and Telecommunications Research Institute (ETRI) | Yes | Voter |
| Jang, Insun | LG ELECTRONICS | Yes | Potential Voter |
| Jeffries, Timothy | Futurewei Technologies | Yes | Potential Voter |
| Jen, Elliot YuChih | Samsung Research America | Yes | Aspirant |
| Jeon, Eunsung | SAMSUNG ELECTRONICS | Yes | Potential Voter |
| Ji, Chenhe | Huawei Technologies Co., Ltd | Yes | Voter |
| jiang, feng | Apple Inc. | Yes | Voter |
| Jiang, Jinjing | Apple Inc. | Yes | Voter |
| JO, WONWOO | CNBIS | Yes | Aspirant |
| John, Toby | Verizon | Yes | Aspirant |
| Jones, Vincent Knowles IV | Qualcomm Incorporated | Yes | Voter |
| Juarez, Jorge | Fraunhofer IIS | Yes | Voter |
| Jung, Insik | LG ELECTRONICS | No | Aspirant |
| Jungnickel, Volker | Fraunhofer Heinrich Hertz Institute | Yes | Voter |
| Juntunen, Juha | Meteor Communications Corp. | No | Non-Voter |
| Kain, Carl | USDOT; Noblis, Inc. | Yes | Voter |
| Kakani, Naveen | Qualcomm Incorporated | Yes | Voter |
| kamath, Manoj | Broadcom Corporation | Yes | Potential Voter |
| Kamel, Mahmoud | InterDigital, Inc. | Yes | Voter |
| Kancherla, Sundeep | Infineon Technologies | Yes | Voter |
| Kandala, Srinivas | SAMSUNG | Yes | Voter |
| KANG, Kyu-Min | Electronics and Telecommunications Research Institute (ETRI) | Yes | Potential Voter |
| KANG, TEAG JIN | Broadcom Corporation | Yes | Aspirant |
| Karmuchi, Shailender | SAMSUNG ELECTRONICS | Yes | Aspirant |
| Kasargod, Sudhir | Infineon Technologies | Yes | Voter |
| Kasher, Assaf | Qualcomm Incorporated | Yes | Voter |
| Kennedy, Richard | Unlicensed Spectrum Advocates | Yes | Voter |
| Kenney, John | Toyota Motor North America | Yes | Voter |
| Kerry, Stuart | OK-Brit; Self | Yes | Voter |
| Khan, Naseem | Leidos Engineering. LLC | Yes | Voter |
| KIM, DONGWAN | Broadcom Corporation | Yes | Aspirant |
| Kim, Hyungjin | Broadcom Corporation | Yes | Aspirant |
| Kim, Jeongki | Ofinno | Yes | Voter |
| Kim, Myeong-Jin | SAMSUNG | Yes | Voter |
| Kim, Sang Gook | LG ELECTRONICS | Yes | Voter |
| Kim, Sanghyun | WILUS Inc. | Yes | Voter |
| Kim, Yongho | Korea National University of Transportation | Yes | Voter |
| Kim, Youhan | Qualcomm Incorporated | Yes | Voter |
| Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) | Yes | Voter |
| Kitazawa, Shoichi | Muroran IT | Yes | Voter |
| Klein, Arik | Huawei Technologies Co., Ltd | Yes | Voter |
| KNECKT, JARKKO | Apple, Inc. | Yes | Voter |
| Ko, Geonjung | WILUS Inc. | Yes | Voter |
| Kota, Prashant | Infineon Technologies | Yes | Voter |
| Koundourakis, Michail | Samsung Cambridge Solution Centre | Yes | Voter |
| Krebs, Alexander | Apple Inc. | No | Non-Voter |
| Krieger, Ann | US Department of Defense | No | Non-Voter |
| Ku, Chung-Ta | MediaTek Inc. | Yes | Potential Voter |
| Kumar, Manish | NXP Semiconductors | Yes | Voter |
| Lalam, Massinissa | SAGEMCOM SAS | Yes | Voter |
| Lan, Zhou | Apple Inc. | Yes | Potential Voter |
| Lanante, Leonardo | Ofinno | Yes | Voter |
| Lansford, James | Qualcomm Incorporated; University of Colorado at Boulder | Yes | Voter |
| Lee, Hyeong Ho | Netvision Telecom Inc. | Yes | Voter |
| Lee, Wookbong | SAMSUNG | Yes | Voter |
| Levesque, Chris | Qorvo | Yes | Potential Voter |
| Levy, Joseph | InterDigital, Inc. | Yes | Voter |
| Li, Bo | Northwestern Polytechnical University | Yes | Voter |
| Li, Jialing | Qualcomm Technologies, Inc. | Yes | Voter |
| Li, Qinghua | Intel | Yes | Voter |
| Li, Yan | ZTE Corporation | No | Voter |
| Li, Yapu | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Voter |
| Li, Yunbo | Huawei Technologies Co., Ltd | Yes | Voter |
| Lim, Dong Guk | LG ELECTRONICS | Yes | Voter |
| Lin, Hsin-De | MediaTek Inc. | Yes | Voter |
| Lin, Wei | Huawei Technologies Co., Ltd | Yes | Voter |
| Lin, Yousi | Huawei Technologies Co., Ltd | Yes | Voter |
| Lin, Zinan | InterDigital, Inc. | Yes | Voter |
| Lindskog, Erik | SAMSUNG | Yes | Voter |
| LIU, CHENCHEN | Huawei Technologies Co., Ltd | Yes | Voter |
| Liu, Der-Zheng | Realtek Semiconductor Corp. | Yes | Voter |
| Liu, Jianhan | MediaTek Inc. | Yes | Voter |
| Liu, Yong | Apple, Inc. | No | Voter |
| Liu, Zhiqun | Qualcomm Incorporated | Yes | Voter |
| Lopez, Miguel | Ericsson AB | Yes | Voter |
| Lorgeoux, Mikael | Canon Research Centre France | Yes | Voter |
| Lou, Hanqing | InterDigital, Inc. | Yes | Voter |
| Lu, Kaiying | MediaTek Inc. | Yes | Voter |
| Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Voter |
| Lumbatis, Kurt | CommScope, Inc. | Yes | Voter |
| Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. | Yes | Voter |
| Ma, Li | MediaTek Inc. | Yes | Potential Voter |
| Ma, Yunsi | HiSilicon (Shanghai) Technologies Co., LTD. | Yes | Aspirant |
| Mak, Siukai | Broadcom Corporation | Yes | Aspirant |
| Malinen, Jouni | Qualcomm Incorporated | Yes | Voter |
| Mano, Hiroshi | Koden Techno Info K.K. | Yes | Potential Voter |
| MAO, ZHI | Huawei Technologies Co., Ltd | Yes | Aspirant |
| Max, Sebastian | Ericsson AB | Yes | Voter |
| Mccann, Stephen | Huawei Technologies Co., Ltd | Yes | Voter |
| Mehrnoush, Morteza | Facebook | Yes | Voter |
| MELZER, Ezer | Toga Networks, a Huawei company | Yes | Voter |
| Memisoglu, Ebubekir | Istanbul Medipol University; Vestel | Yes | Voter |
| Minotani, Jun | Panasonic Corporation | Yes | Potential Voter |
| Monajemi, Pooya | Cisco Systems, Inc. | Yes | Voter |
| Montemurro, Michael | Huawei Technologies Co., Ltd | Yes | Voter |
| Moon, Juseong | Korea National University of Transportation | Yes | Voter |
| Morioka, Hitoshi | SRC Software | Yes | Voter |
| Motozuka, Hiroyuki | Panasonic Holdings Corporation | Yes | Voter |
| Mueller, Robert | Ilmenau University of Technology - TU Ilmenau | Yes | Voter |
| Mukkapati, Lakshmi Narayana | Wi-Fi Alliance | Yes | Voter |
| Mutgan, Okan | Nokia | Yes | Voter |
| Myles, Andrew | Cisco Systems, Inc. | Yes | Voter |
| Nagai, Yukimasa | Mitsubishi Electric Corporation | No | Non-Voter |
| nagata, kengo | Nippon Telegraph and Telephone Corporation (NTT) | Yes | Voter |
| Naik, Gaurang | Qualcomm Incorporated | Yes | Voter |
| Nam, Junyoung | Qualcomm Incorporated | Yes | Potential Voter |
| Namboodiri, Vamadevan | SAMSUNG ELECTRONICS | Yes | Voter |
| Namvar, Nima | Charter Communications | Yes | Potential Voter |
| Nandagopalan, SAI SHANKAR | Synaptics | Yes | Voter |
| Narengerile, Narengerile | Huawei Technologies Co., Ltd | Yes | Voter |
| Nezou, Patrice | Canon Research Centre France | Yes | Voter |
| Ng, Boon Loong | Samsung Research America | Yes | Voter |
| Nguyen, An | DHS/CISA | Yes | Potential Voter |
| Noh, Yujin | LG ELECTRONICS | Yes | Voter |
| Ohmoto, Ryutaro | Nihon Dengyo Kosaku Co. Ltd. | Yes | Aspirant |
| Olip, John | Broadcom Corporation | Yes | Aspirant |
| Orr, Stephen | Cisco Systems, Inc. | Yes | Potential Voter |
| Palayur, Saju | Maxlinear Inc. | Yes | Voter |
| Palm, Stephen | Broadcom Corporation | Yes | Voter |
| Palmer, Clark | Meteorcomm | No | Non-Voter |
| Pandey, Sheetal | ON Semiconductor | Yes | Potential Voter |
| Pare, Thomas | MediaTek Inc. | Yes | Voter |
| Park, Eunsung | LG ELECTRONICS | Yes | Voter |
| Park, Minyoung | Intel | Yes | Voter |
| Park, Sungjin | Senscomm | Yes | Voter |
| Patil, Abhishek | Qualcomm Incorporated | Yes | Voter |
| Patkar, Raghavendra | NI (National Instruments Corporation) | Yes | Aspirant |
| Patwardhan, Gaurav | Hewlett Packard Enterprise | Yes | Voter |
| Peng, Lan | Huawei Technologies Co., Ltd | Yes | Voter |
| Perahia, Eldad | Hewlett Packard Enterprise | Yes | Voter |
| Petranovich, James | ViaSat, Inc. | Yes | Voter |
| Petrick, Albert | InterDigital, Inc. | Yes | Voter |
| Petry, Brian | Broadcom Corporation | Yes | Voter |
| Pettersson, Charlie | Ericsson AB | Yes | Voter |
| Porat, Ron | Broadcom Corporation | Yes | Voter |
| Powell, Clinton | Facebook | No | ExOfficio |
| Prabhakaran, Dinakar | Broadcom Corporation | Yes | Voter |
| Pulikkoonattu, Rethnakaran | Broadcom Corporation | Yes | Voter |
| Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. | Yes | Voter |
| Qi, Emily | Intel | Yes | Voter |
| Qi, Yinan | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Aspirant |
| Quan, Yingqiao | Unisoc | Yes | Aspirant |
| Rai, Kapil | Qualcomm Incorporated | Yes | Voter |
| Raissinia, Alireza | Qualcomm Incorporated | Yes | Voter |
| Rajashekar, Rakshith | Broadcom Corporation | Yes | Aspirant |
| Ratnam, Vishnu | Samsung Research America | Yes | Voter |
| Redlich, Oded | Huawei Technologies Co., Ltd | No | Voter |
| Regev, Dror | Toga Networks (A Huawei Company) | Yes | Voter |
| REICH, MOR | Togan Networks, a Huawei Company | Yes | Voter |
| Rezk, Meriam | Qualcomm Incorporated | Yes | Voter |
| Rison, Mark | Samsung Cambridge Solution Centre | Yes | Voter |
| Rodine, Craig | Sandia National Laboratories | Yes | Voter |
| Rolfe, Benjamin | Blind Creek Associates | No | Voter |
| ROPITAULT, Tanguy | NIST, Prometheus Computing LLC | Yes | Aspirant |
| Rosdahl, Jon | Qualcomm Technologies, Inc. | Yes | Voter |
| Roy, Sayak | NXP Semiconductors | Yes | Potential Voter |
| Ryu, Kiseon | NXP Semiconductors | Yes | Potential Voter |
| Sahoo, Anirudha | National Institute of Standards and Technology | Yes | Voter |
| Salem, Mohamed | Huawei Technologies Co., Ltd | Yes | Voter |
| Sambasivan, Sam | AT&T | Yes | Potential Voter |
| Sand, Stephan | German Aerospace Center (DLR) | Yes | Voter |
| sanderovich, Amichai | Wiliot Ltd | No | Non-Voter |
| Sandhu, Shivraj | Qualcomm Incorporated | Yes | Aspirant |
| Sato, Takuhiro | SHARP CORPORATION | Yes | Voter |
| Schelstraete, Sigurd | MaxLinear | Yes | Voter |
| Schweizer, Benedikt | Apple Inc. | Yes | Potential Voter |
| Segev, Jonathan | Intel | Yes | Voter |
| Seo, Sangho | Broadcom Corporation | Yes | Voter |
| Seok, Yongho | MediaTek Inc. | Yes | Voter |
| Serafimovski, Nikola | pureLiFi | Yes | Potential Voter |
| Sethi, Ankit | NXP Semiconductors | Yes | Voter |
| Shafin, Rubayet | Samsung Research America | Yes | Voter |
| Shaw, Amit | Infineon Technologies | Yes | Voter |
| Shearer, Steve | Spirent | Yes | Aspirant |
| Shellhammer, Stephen | Qualcomm Incorporated | Yes | ExOfficio |
| Shen, Andy | Futurewei Technologies | Yes | Potential Voter |
| Shen, Xiaoman | Huawei Technologies Co., Ltd | No | Voter |
| Sherlock, Ian | Texas Instruments Inc. | Yes | Voter |
| Shilo, Shimi | Huawei Technologies Co., Ltd | No | Voter |
| Shirakawa, Atsushi | SHARP CORPORATION | Yes | Voter |
| Shu, Tongxin | Huawei Technologies Co., Ltd | Yes | Voter |
| Sill, Steven | U.S. Department of Transportation | Yes | Aspirant |
| Smith, Graham | SR Technologies | Yes | Voter |
| Son, Ju-Hyung | WILUS Inc. | Yes | Voter |
| Song, Hao | Intel | Yes | Voter |
| Sood, Ayush | Infineon Technologies | Yes | Voter |
| Sosack, Robert | Molex Incorporated | Yes | Voter |
| Stacey, Robert | Intel | Yes | Voter |
| Stanley, Dorothy | Hewlett Packard Enterprise | Yes | Voter |
| Stavridis, Athanasios | Ericsson AB | Yes | Potential Voter |
| Stott, Noel | Keysight Technologies | Yes | Voter |
| Strauch, Paul | Qualcomm Incorporated | Yes | Voter |
| Su, Hang | Broadcom Corporation | Yes | Potential Voter |
| SU, HONGJIA | Huawei Technologies Co., Ltd | Yes | Voter |
| Suh, JUNG HOON | Huawei Technologies Co., Ltd | Yes | Voter |
| Sun, Bo | ZTE Corporation | Yes | Voter |
| Sun, Li-Hsiang | MediaTek Inc. | Yes | Voter |
| Sun, Yanbin | Huawei Technologies Co., Ltd | No | Aspirant |
| Sun, Yanjun | Qualcomm Incorporated | Yes | Voter |
| SURACI, FRANK | U.S. Department of Homeland Security | Yes | Voter |
| Tadahal, Shivkumar | Broadcom Corporation | Yes | Voter |
| Takai, Lisa | University of California - San Diego | Yes | Aspirant |
| Takai, Mineo | Space-Time Engineering | Yes | Voter |
| Tanaka, Yusuke | Sony Group Corporation | Yes | Voter |
| Taori, Rakesh | Infineon Technologies | Yes | Voter |
| Thakore, Darshak | Cable Television Laboratories Inc. (CableLabs) | Yes | Voter |
| Thakur, Sidharth | Apple, Inc. | Yes | Potential Voter |
| Thota, Sri Ramya | Infineon Technologies | Yes | Voter |
| Tian, Bin | Qualcomm Incorporated | Yes | Voter |
| Trainin, Solomon | Qualcomm Incorporated | Yes | Voter |
| Tsai, Tsung-Han | MediaTek Inc. | Yes | Voter |
| Tsodik, Genadiy | Huawei Technologies Co., Ltd | Yes | Voter |
| TU, Chunjiang | Bestechnic INC. | Yes | Voter |
| Urabe, Yoshio | Panasonic Holdings Corporation | Yes | Voter |
| Varshney, Prabodh | Nokia | Yes | Voter |
| Verenzuela, Daniel | Sony Corporation | Yes | Voter |
| Verma, Lochan | Apple Inc. | No | Voter |
| Verma, Sindhu | Broadcom Corporation | Yes | Voter |
| Vermani, Sameer | Qualcomm Incorporated | Yes | Voter |
| VIGER, Pascal | Canon Research Centre France | Yes | Voter |
| Wang, Hejun | Haier Group Corporation | Yes | Potential Voter |
| Wang, Huizhao | Quantenna Communications, Inc. | Yes | Voter |
| Wang, Lei | Futurewei Technologies | Yes | Voter |
| Wang, Qi | Apple, Inc. | Yes | Voter |
| Wang, Shukun | Beijing OPPO telecommunications corp., ltd. | Yes | Potential Voter |
| Wang, Steven Qi | Huawei Technologies Co., Ltd | Yes | Voter |
| Wang, Xiaofei | InterDigital, Inc. | Yes | Voter |
| Wang, Zisheng | ZTE Corporation | Yes | Voter |
| Want, Roy | Google | Yes | Voter |
| Ward, Lisa | Rohde & Schwarz | Yes | Voter |
| Wei, Dong | NXP Semiconductors | Yes | Voter |
| Wendt, Matthias | Signify | No | Voter |
| Wentink, Menzo | Qualcomm Incorporated | Yes | Voter |
| Wilhelmsson, Leif | Ericsson AB | Yes | Voter |
| Wu, Kanke | Qualcomm Incorporated | Yes | Voter |
| Wu, Tianyu | Apple, Inc. | Yes | Voter |
| Wullert, John | Peraton Labs | Yes | Voter |
| Xia, Qing | Sony Corporation | Yes | Potential Voter |
| Xiao, Bo | ZTE Corporation | Yes | Potential Voter |
| Xin, Liangxiao | Sony Corporation | Yes | Voter |
| Xin, Yan | Huawei Technologies Co., Ltd | Yes | Voter |
| Xu, Fangxin | Longsailing Semiconductor | Yes | Potential Voter |
| Xu, Weijie | Beijing OPPO telecommunications corp., ltd. | Yes | Potential Voter |
| Xu, Yanchao | Zeku | Yes | Voter |
| YAGHOOBI, HASSAN | Intel | Yes | Voter |
| Yamada, Ryota | SHARP CORPORATION | Yes | Voter |
| Yan, Aiguo | Zeku | Yes | Potential Voter |
| Yan, Zhongjiang | Northwestern Polytechnical University | Yes | Voter |
| Yanamandra, Subrahmanyam | Broadcom Corporation | No | Non-Voter |
| Yang, Bo | Huawei Technologies Co., Ltd | Yes | Voter |
| Yang, Jay | Nokia | Yes | Voter |
| Yang, Lin | Qualcomm Incorporated | Yes | Voter |
| Yang, Mao | Northwestern Polytechnical University | Yes | Voter |
| YANG, RUI | InterDigital, Inc. | Yes | Voter |
| Yang, Steve TS | MediaTek Inc. | Yes | Voter |
| Yang, Xun | Huawei Technologies Co., Ltd | No | Voter |
| Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) | Yes | Voter |
| Yee, James | MediaTek Inc. | Yes | Voter |
| Yee, Peter | NSA-CSD | Yes | Voter |
| Yi, Yongjiang | Spreadtrum Communication USA, Inc | Yes | Potential Voter |
| Yokoyama, Takahiro | Association of Radio Industries and Businesses (ARIB) | Yes | Voter |
| Yong, Su Khiong | Apple, Inc. | Yes | Voter |
| Yoon, Kangjin | Meta | No | Non-Voter |
| Young, Christopher | Broadcom Corporation | Yes | Potential Voter |
| Yu, Jian | Huawei Technologies Co., Ltd | Yes | Voter |
| Yuan, Fangchao | Huawei Technologies Co., Ltd | No | Voter |
| Zeng, Ruochen | Apple, Inc. | Yes | Voter |
| Zhang, Hongyuan | NXP Semiconductors | Yes | Voter |
| Zhang, Jiayi | Ofinno | Yes | Voter |
| ZHANG, JIAYIN | Huawei Technologies Co., Ltd | Yes | Voter |
| Zhang, Yan | NXP Semiconductors | Yes | Voter |
| Zhou, Lei | H3C Technologies Co., Limited | Yes | Voter |
| Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Voter |
| Zhou, Richard (Yujia) | Google | Yes | Potential Voter |
| Zuniga, Juan Carlos | Cisco Systems, Inc. | Yes | Voter |
| Zuo, Zhisong | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Potential Voter |

**Annex B : Working Group Officers**

**Working Group**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
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| Robert Stacey (Intel Corporation) | 2nd Vice Chair (Rules and reflectors) IEEE 802 (LMSC) EC delegate | +1 (503) 712 4447 [robert.stacey@intel.com](mailto:robert.stacey@intel.com) |
| Stephen McCann (Huawei Technologies Co., Ltd) | Secretary | [stephen.mccann@ieee.org](mailto:stephen.mccann@ieee.org) |
| Peter Ecclesine (Cisco Systems, Inc.) | Co-Technical Editor | +1 (408) 710-3403 [petere@ieee.org](mailto:petere@ieee.org) |
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| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
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| Mark Hamilton (Ruckus Wireless) | Architecture (ARC) Chair | +1 (303) 818-8472 [mark.hamilton2152@gmail.com](mailto:mark.hamilton2152@gmail.com) |
| Jon Rosdahl (Qualcomm) | Project Authorization Request (PAR) review Chair | +1 (801) 492-4023 [jrosdahl@ieee.org](mailto:jrosdahl@ieee.org) |
| Andrew Myles (Cisco) | Coexistence Standing Committee Chair | +61 418 656587 [amyles@cisco.com](mailto:amyles@cisco.com) |

**Task Groups**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Jonathan Segev (Intel Corporation) | TGaz Chair Next Generation Positioning (NGP) | +972-54-2403587 [jonathan.segev@intel.com](mailto:jonathan.segev@intel.com) |
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| Mark Hamilton  (Ruckus/CommScope Wireless) | TGbh Chair  Random and Changing MAC address (RCM) | +1 (303) 818-8472 [mark.hamilton2152@gmail.com](mailto:mark.hamilton2152@gmail.com) |
| Carol Ansley  (Cox Communications) | TGbi Chair  Enhanced Data Privacy (EDP) | [carol@ansley.com](mailto:carol@ansley.com) |
| Michael Montemurro (Huawei Technologies Co., Ltd) | TGme Chair 802.11 revision project - P802.11REVme | [montemurro.michael@gmail.com](mailto:montemurro.michael@gmail.com) |

|  |
| --- |
|  |

**Study Groups (SG) & Topic Interest Groups (TIG)**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Xiaofei Wang  (InterDigital) | Artificial Intelligence/Machine Learning (AIML) TIG | [Xiaofei.Wang@interdigital.com](mailto:Xiaofei.Wang@interdigital.com) |
| Bo Sun  (ZTE) | Ambient Power IoT (AMP) TIG | [sun.bo1@zte.com.cn](mailto:sun.bo1@zte.com.cn) |

**Ad-Hoc Groups (AHG)**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Hassan YAGHOOBI  (Intel) | ITU Ad-Hoc | [hassan.yaghoobi@intel.com](mailto:hassan.yaghoobi@intel.com) |

**Liaison Officials to non-IEEE 802 organizations**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Peter Yee (Akayla) | Liaison to IETF (Internet Engineering Task Force) | [peter@akayla.com](mailto:peter@akayla.com) |
| Carlos Cordeiro  (Intel) | Liaison to WFA (Wi-Fi Alliance) | [carlos.cordeiro@intel.com](mailto:carlos.cordeiro@intel.com) |

**Liaison Officials to IEEE organizations**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Jonathan Segev (Intel Corporation) | Liaison to IEEE 802.15 | [jonathan.segev@intel.com](mailto:jonathan.segev@intel.com) |
| Edward Au  (Huawei Technologies Co., Ltd) | Liaison to IEEE 802.18 | [edward.ks.au@gmail.com](mailto:edward.ks.au@gmail.com) |
| Tuncer Baykas (Ofinno) | Liaison to IEEE 802.19 | [tbaykas@ieee.org](mailto:tbaykas@ieee.org) |
| John Kenney  (Toyota) | Liaison to IEEE 1609 | [jkenney@us.toyota-itc.com](mailto:jkenney@us.toyota-itc.com) |

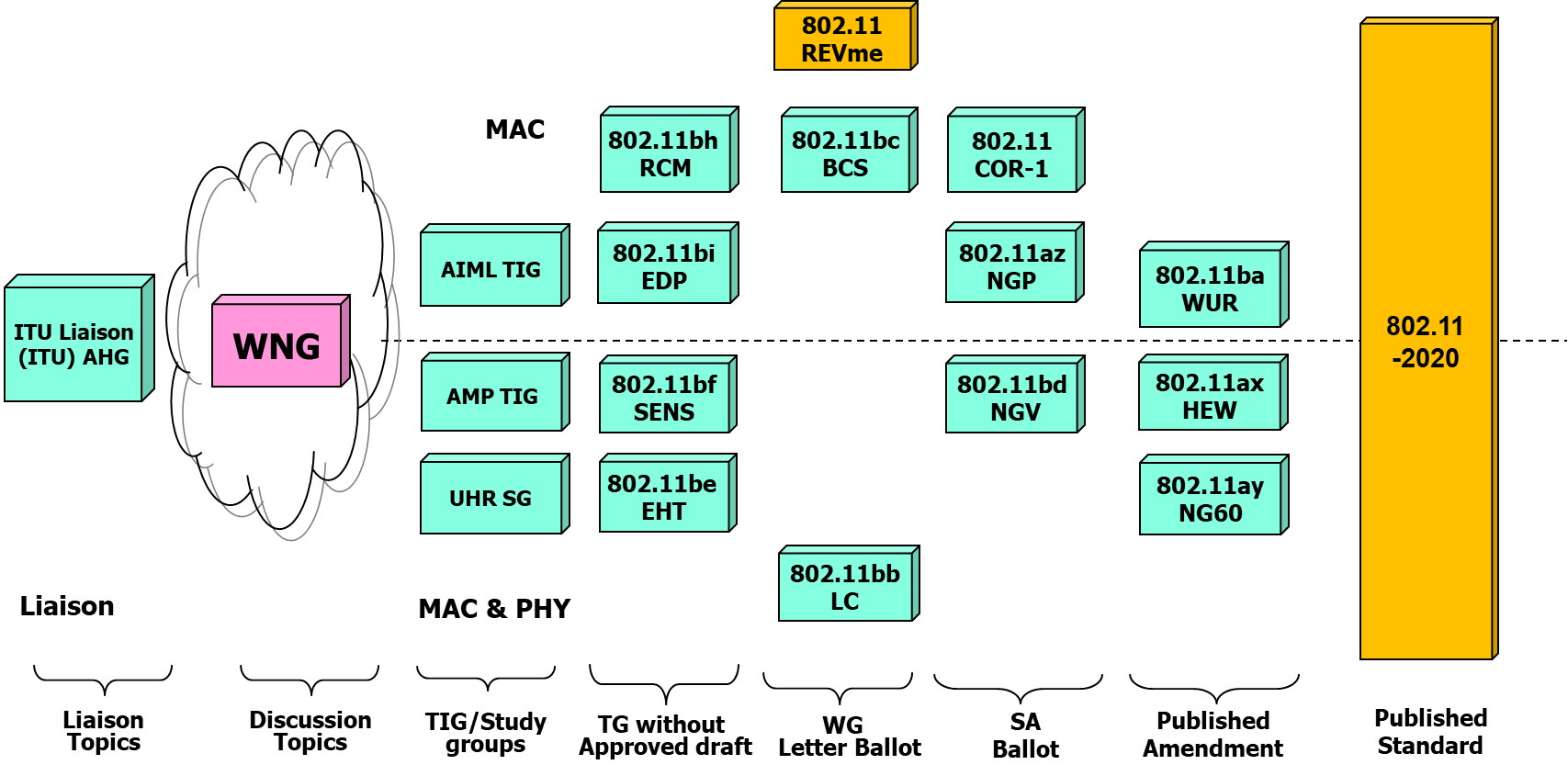
**Annex C : Minutes**

This Annex contains references to all IEEE 802.11 SC/TG/SG & Ad Hoc Committee (AHC) minutes from this meeting. Please note that they are NOT subject to the approval of these minutes, but are confirmed and approved by their individual group in the opening meeting at their next session.

|  |  |  |
| --- | --- | --- |
| WG | TE | 22-1350r0 |
| TGme | TG | 22-1277r0 |
| TGaz | TG | 22-1603r0 |
| TGbb | TG | 22-1629r1 |
| TGbc | TG | 22-1406r0 |
| TGbd | TG | 22-1640r0 |
| TGbe | TG | 22-1591r3 |
| TGbf | TG | 22-1643r1 |
| TGbh | TG | 22-1737r0 |
| TGbi | TG | 22-1648r0 |
| COEX | SC | 22-1688r0 |
| WNG | SC | 22-1607r0 |
| JTC 802 | SC | 22-1740r0 |
| ARC | SC | 22-1602r0 |
| PAR | SC | Did not meet |
| AIML | TIG | 22-1328r0 |
| AMP | TIG | 22-1623r1 |
| UHR | SG | 22-1612r2 |
| ITU | AHC | 22-1542r0 |

**Annex D : Revisions and Standards Pipeline**

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**IEEE 802.11 Standards Pipeline**

End.