IEEE P802.11  
Wireless LANs

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| Minutes of the IEEE P802.11 Full Working Group | | | | |
| Date: 2022-11-18 | | | | |
| Author(s): | | | | |
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Abstract

This document constitutes the minutes of the IEEE 802.11 full working group for the November 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 Plenary Session #196**

**November 14th – 18th, 2022**

**IEEE 802.11 Opening Plenary, Monday November 14th 2022**

Presiding chair: Dorothy Stanley (Hewlett Packard Enterprise) opened the meeting at 10:30 Indo China Time (ICT) 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, 58 Potential Voters and 11 Ex Officio voters of IEEE 802.11\*

There were 271 people in the meeting (Webex), with 135 attending in person (in the room) and 372 on the IMAT attendance server.

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

1. **Notices** (11-22-1699r1 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. None present, although Jodi Haasz is the on-site IEEE-SA staff representative for IEEE 802 and Christy Bahn is the staff representative for 802.11.
   4. Please note that this session requires a registration fee to be paid.
2. **Approve/modify working group agenda** (11-22-1698r1)
   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 11-22-1698r1 for the Monday opening plenary**
      1. Moved: Marc Emmelmann, 2nd: Ian Sherlock
      2. No objection to approving by unanimous consent
3. **September 2022 WG Minutes**
   1. **Move to approve the September 2022 WG minutes document 11-22-1350r1**
   2. Moved: Stephen McCann, 2nd: Jonathan Segev
   3. Following neither discussion nor dissent the minutes were approved by unanimous consent.
4. **New Attendees** (11-22-1678r0 slide #4)
   1. Straw Poll:
   2. **Are you a new attendee to IEEE 802.11?**
      1. Yes: 16
      2. No: 111
      3. Abstain (and no answer): 1
   3. There is a new members’ meeting on Tuesday November 15th at 10:30 ICT. This is a tutorial for those new members to learn about IEEE 802.11.
5. **Call for essential Patents** (11-22-1727r0)
   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** (11-22-1727r0)
   1. The slides about IEEE 802 meeting participation and IEEE SA copyright were also read.
   2. Expected participant behavior was also announced.
   3. Regarding slide #21, this is a reminder about the abstain vote.
7. **Announcements** (11-22-1699r1)
   1. **Liaisons** (slide #4)
      1. Chair: There was one liaison that was sent out regarding IEEE 802.11bd D8.0
   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 and IEEE 802 JTC1 SC.
      2. Note that IEEE 802.18 is updating its reciprocal credit rules.
8. **Logistics and Key events/activities** (11-22-1710r1)
   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, as shown on slide #5.
      3. Breakfast and lunch will be served in the Goji Kitchen on the lobby level of the hotel.
      4. Please remember to register your attendance using IMAT.
      5. This meeting requires registration, so please follow the link to pay the registration fee.
      6. On Wednesday there is a social here in the hotel. If you have a guest, they are welcome to come along, but please can you obtain a guest badge for them.
      7. The hotel can provide cars/taxis to take you back to the airport.
      8. Vice-chair: I would like to thank the support of the Thailand Convention and Exhibition Bureau (TCEB).
      9. Please be aware of the security restrictions about the Asia Pacific Economic Cooperation (APEC) Summit that is meeting in a convention center a few blocks away from the hotel (slide #14)
      10. Q: How can I check if I have registered for the social or not?
      11. A: Please talk to the IEEE 802 registration desk and they will be able to tell you.
      12. The next IEEE 802 plenary session will be in March 12-17, 2023, in Atlanta, Georgia, USA.
      13. **If you will be at one of the three meetings on Friday ( 802 EC Closing Plenary, the 802.11 Closing Plenary or the 802.1 " IEC/IEEE 60802" meeting ) will you participate (eat/drink):** (slide #17)
      14. With breakfast: 78
      15. With the AM break: 56
      16. With the lunch: 58
      17. With the PM break: 17
      18. Vice-chair: Please remember to record your attendance this week.
9. **IEEE 802.11 overview** (11-22-1699r1)
   1. Active Groups (slide #12)
   2. PAR renewals (slide #13)
   3. Appointed positions (slide #14)
   4. Officers (slide #15)
   5. Revisions (slides #16)
   6. Ballots (slides #18). There have been 4 since the July 2022 meeting
   7. Membership status (slides #18). There were 453 voters and at the start of this plenary.
   8. Participation statistics (slide #24 - #27)
   9. No questions
10. **Timelines**
    1. Please can all sub-group chairs remember to send the working group secretary any updates to their timeline for this week.
11. **Group Summaries** (11-22-1728r0)
    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 ICT on Tuesday morning. Other topics include the ANA status (11-11-0270r64).
       2. No questions
    3. **ARC SC** (slide #5)
       1. There have been no teleconferences since the September 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. This week, there are 3 PARs under review from 802.3 and then there is the 802.11bk PAR.
       2. No questions
    6. **WNG** (slide #9)
       1. There are 4 presentations planned for this week.
       2. Q: It should be S1G+, not SIG+
       3. A: ok, noted.
    7. **JTC1** **SC** (slide #10)
       1. There is 1 meeting during this session.
       2. No questions
    8. **REVme** (slide #13)
       1. There were 822 comments from the recent recirculation ballot. Therefore the main goal this week is to consider these comments and also to have a discussion about removing WEP from the specification.
       2. No questions
    9. **TGaz** (slide #14)
       1. The group has completed its last SA re-circulation ballot and the specification is now on the Standards Board and Review Committee (RevCom) agendas for approval and subsequent publication.
       2. Therefore, thank you to everyone who has participated in TGaz.
       3. TGaz will continue to discuss the potential TGbk 320 MHz Positioning topic.
       4. Q: I think there is also a meeting on Wednesday AM2.
       5. A: Yes, there is.
       6. No questions
    10. **TGbb** (slide #17)
        1. The group has completed its initial SA Ballot. It received 41 comments and now moves into a Comment Resolution Committee (CRC) mode of working.
        2. No questions.
    11. **TGbc** (slide #18)
        1. This group has also completed its initial SA Ballot now moves into a Comment Resolution Committee (CRC) mode of working. It received 173 comments.
        2. No questions
    12. **TGbd** (slide #21)
        1. The group has completed its last SA re-circulation ballot and the specification is now on the Standards Board and RevCom agendas for approval and subsequent publication.
        2. There is 1 slot for a meeting this week, to provide a summary of progress.
        3. No questions
    13. **TGbe** (slide #23)
        1. A draft D2.2 has been produced and there are about 1200 comments left to resolve.
        2. The work this week will be to keep working on these comments.
        3. No questions
    14. **TGbf** (slide #25)
        1. The group will be working on comments received from the comment collection that completed at the end of May 2022. About 70% 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 2 meetings during this session. The group will continue to address feature definitions.
        2. No questions.
    17. **UHR SG** (slide #31)
        1. There have been 2 teleconferences since the September interim. There will be 3 meetings during the week.
        2. No questions.
    18. **AIML TIG** (slide #33)
        1. Please note that there will be an AIML tutorial this evening.
        2. Q: Is there a link to the AIML tutorial for this evening?
        3. A: The link is: <https://grouper.ieee.org/groups/802/Tutorials.shtml> .
        4. Chair: The link is for all 3 of this evening’s tutorials, which are IEEE 802 tutorials.
        5. No questions.
    19. **AMP TIG** (slide #35)
        1. There will be 2 meetings this week.
        2. There is also an AMP tutorial this evening.
        3. No questions.
    20. **ITU ad-hoc** (slide #37)
        1. There will be no meetings this week.
        2. No questions.
12. **Announcements** (11-22-1699r1)
    1. Designation of individual experts (slide #20)
    2. IEEE 802 Chair request (slide #21)
    3. 1st Workshop on Wi-Fi Sensing – WiSe #1 (slide #22)
13. **AoB**
    1. Chair: Please remember to record your attendance this week. To achieve 75% you must attend 9 meeting slots.
14. **Recess**
    1. Meeting recessed at 12:08 ICT.

**Wednesday, November 16th 2022**

**IEEE 802.11 Mid-week Plenary**

Call to order at 13:31 ICT by Dorothy Stanley (HPE).

There were 99 people in the meeting (Webex), with 87 attending in person (in the room) and 302 on the IMAT attendance server.

1. **Approve/modify working group agenda** (11-22-1698r2)
   1. Chair: There have been some minor changes to the agenda since the opening plenary.
   2. The TGbe PHY ad-hocs have completed their business for the week and so their meetings can be released.
   3. **Approve the agenda for the today’s meeting as shown in 11-22-1698r2.**
      1. Moved: Ian Sherlock, 2nd: Allan Jones
      2. No objection to approving by unanimous consent.
2. **Announcements** (11-22-1700r0)
   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.
3. **Social**
   1. This is a reminder about the social this evening that will be held in the hotel and will start at 6.30pm. It’s on floor 5 in the ballroom.
4. **Wi-Fi Alliance Liaison** (11-22-1927r0)
   1. The last meeting was in October 2022 in Lisbon.
   2. No questions
5. **IETF Liaison** (11-22-2008r0)
   1. The last meeting was last week (November 2022) in London.
   2. No questions.
6. **IEEE 1609** (11-22-2014r0)
   1. The next meeting will be in December 2022 by teleconference.
   2. Chair: As TGbd has just about finished its work, this is likely to be the last liaison from IEEE 1609. I would like to thank the liaison officer for all their work.
   3. No questions.
7. **IEEE 802.15 Liaison** (11-22-1986r0)
   1. This is information about various groups within IEEE 802.15 that are of interest to IEEE 802.11.
   2. IEEE 802.15.4ab is currently one of the most popular groups within IEEE 802.15.
   3. C: The IEEE 802.15.4ab will be discussed during the 2nd hour of the 802.11 Coex meeting.
8. **IEEE 802.18 Liaison** (11-22-1713r2)
   1. There are now several topics being studied within IEEE 802.18.
   2. No questions.
9. **IEEE 802.19 Liaison** (11-22-1972r0)
   1. This document summarizes the discussion topics within IEEE 802.19 meetings.
   2. No questions.
10. **IEEE 802 Overview Activities** (11-22-2010r0)
    1. This document describes various projects and amendments for the IEEE 802 standards.
    2. Chair: IEEE 802.11 did perform a comment collection for the IEEE 802 architecture document that contributed some comments.
11. **AMP IoT Prototype Presentations** (11-22-2012r0)
    1. This presentation includes prototypes (use cases) showing ambient power applications.
    2. Q: Regarding the 2nd use case from radio waves. How much conversation efficiency can you achieve?
    3. A: The efficiency is about 32 – 40 %. This is of the received power.
    4. Chair: The next AMP TIG is on Thursday AM2.
12. **Any other Business (AoB)**
    1. Chair: I would like to thank everyone who spoke during the AIML and AMP tutorials on Monday evening. Please do look at the tutorial material if you have not seen them already.
13. **Recess**
    1. Meeting recessed at 14.43 ICT.

**Friday, November 16th 2022**

**IEEE 802.11 Closing Plenary**

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

There were 165 people in the meeting (Webex), with 72 attending in person (in the room) and 217 on the IMAT attendance server.

1. **Approve/modify working group agenda** (11-22-1698r3)
   1. Chair: There have been some minor changes to the agenda since the mid-week plenary.
   2. **Approve the agenda for the today’s meeting as shown in 11-22-1698r3**
      1. Moved: Harry Bims, 2nd: Tuncer Baykas
      2. No objection to approving by unanimous consent.
2. **Announcements** (11-22-1700r0)
   1. **Participation** (slides #11 - #13)
      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 #14)
      1. This is the Call for Essential Patents
      2. No statements
      3. No questions.
   3. **Meeting Decorum** (slide #15)
      1. No questions.
   4. **Next session and CAC meetings** (slide #16)
      1. The next session of the IEEE 802.11 working group is from January 14-20th 2023. It will be a mixed mode meeting in Baltimore, Maryland, USA.
      2. Please be aware of future chair’s committee meetings (CAC), the first one of which will be on December 12th at 09:00 ET. Please note the deadline for the sub-group agendas.
   5. **Sub-group minutes**
      1. Please note that sub-group minutes should be completed within 30 days from the close of this plenary.
   6. **Letters of Assurance (LoA)** (slide #18)
      1. Chair: please remember about the LoA requirements.
      2. There is one LoA request open at the moment.
   7. **IEEE Store and ISO SC6** (slides #19 - #20)
      1. This is summary of drafts that have been liaised to ISO/UEC
      2. No questions
   8. **Social Media** (slide #21)
      1. There are several social media items that are been generated for the AIML TIG, AMP TIG and UHR SG.
   9. **IEEE 802 Public Visibility Standing Committee** (slides #22 - #23)
      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-22-0205r1)
   1. VC1: This shows the treasurers’ report and is correct as of October 31st, 2022.
   2. There are a couple of minor errors on slide #6 that will be corrected in a revision.
   3. Please be aware of the deadbeat consequences on slide #14. There are currently 13 deadbeats.
   4. For the January 2023 meeting, the budget assumes 500 people. This should be ok, as IEEE 802.1 are going to join us.
4. **November 2022 Venue Straw Polls** (11-22-1710r0)
   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: 43
      2. No: 2
   3. **2. Did you go to the social?**
      1. Yes: 40
      2. No: 5
   4. **3. If you attended the social, did you enjoy it?**
      1. Yes: 33
      2. No: 0
5. **Future Venue Straw Polls** (11-22-1710r0)
   1. January 2023
   2. **1. If the 2023 January Interim Session were held at the Hilton, Baltimore, Maryland as an in-person only session, would you attend?**
   3. Yes: 59
   4. No: 48
   5. Abstain: 10
   6. **2. If the 2023 January Interim Session is held in as a mixed-mode session, will you attend:**
   7. Attend In-person: 49
   8. Attend Virtually (remotely): 57
   9. Will not attend: 4
   10. March 2023
   11. **1. If the 2023 March Plenary Session were held at the Hilton Atlanta, GA as an in-person only session, would you attend?**
   12. Yes: 68
   13. No: 43
   14. **2. If the 2023 March Plenary Session is held in as a mixed-mode session, will you attend:**
   15. Attend In-person: 64
   16. Attend Virtually (remotely): 59
   17. Will not attend plenary: 0
6. **Future Venues Manager Report** (11-22-1710r0)
   1. The January 2023 meeting will still be in Baltimore, but will now be at the Hilton hotel and not at the Marriott. There has been a delay in opening the registration page, but this should be open early next week.
   2. 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.
   3. The May 2023 meeting is in the Hilton Orlando, Lake Buena Vista, Orlando, Florida, USA. There is now a plan to visit Japan in either Kobe (January 2025) or Kyoto (May 2025).
   4. There is also a new venue plan that is being compiled by an IEEE 802 EC venue ad-hoc group.
   5. IEEE EC venue ad-hoc chair: There should be a survey that will be sent out shortly. Please can everyone respond to these?
   6. Q: Which year would the venues in Japan be?
   7. A: 2025.
   8. Q: Why is there no Asia meeting in 2023 and 2024?
   9. A: Originally there was a Japan meeting in 2023, but this has to be re-arranged as the Hilton Orlando required a penalty payment, when we did not go there during the pandemic. To minimize this penalty, the IEEE 802 EC decided to switch the Japan meeting with Orlando to avoid this penalty.
   10. C: For Japan, I think the estimate will be $350k for an in-person meeting.
   11. C: May in Thailand is very hot and humid.
   12. On slide #25, the blue lines are all the contracts that were re-negotiated.
   13. Chair: I’d like to acknowledge all the work that Jon does for us all.
   14. Chair: Regarding all the USA venues in 2023, yes I appreciate this. Hopefully we can schedule more Asia and Europe meeting in future years.
7. **Attendance statistics** (11-22-1729r1 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** (11-22-1729r1)
   1. **Editors** (slide #11)
      1. There were various activities within the Editors’ meeting this week as shown in the slides.
      2. Slide #13 provides a summary of the editorial status of each task group.
      3. No questions
   2. **ARC SC** (slide #20)
      1. The group was a little quiet this week. Please remember that the IEEE 802 standard is also being updated and this impacts what we are doing in IEEE 802.11.
      2. No questions.
   3. **Coex SC** (slide #25)
      1. There have been various issues discussed during the week.
      2. Chair: There was a suggestion of making a new liaison officer to the Bluetooth SIG and so I shall ask for volunteers for this new position.
      3. No questions.
   4. **PAR SC** (slide #28)
      1. There have been various PARs <list> and comments discussed during the week.
      2. No questions.
   5. **WNG** **SC** (slide #31)
      1. There were 4 presentations this session:
      2. “S1G+,” Dave Halasz (Morse Micro) 11-22/1831r0
      3. “Roaming handoff time reduction to improve user experience,” Xiaokun Hu (Ruijie Networks Inc) 11-22/1874r2
      4. “Support for high-bandwidth and multi-Tx CFR capture,” Lihua Zhu (Ruijie Networks Inc) 11-22/1852r2
      5. “User offloading problem between multiple APs,” Gang Xie (BUPT) 11-22/1905r1No questions
      6. No questions
   6. **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/az/bd ISO ballots.
      2. No questions.
   7. **TGme** (slide #37)
      1. This session started to consider comments from LB270.
      2. The group has decided to move forward with removing WEP from the 802.11 standard.
      3. No questions.
   8. **TGaz** (slide #40)
      1. The group has completed its work this week. The draft is now awaiting approval from RevCom.
      2. Work has continued on the new IEEE 802.11bk proposal.
      3. Chair: I would like to thank Jonanthan Segev for his leadership with TGaz and congratulations with this milestone.
      4. No questions.
   9. **Motion 1: P802.11az to ISO for adoption under the PSDO** (11-22-1768r5 slide #6)
      1. **Request that IEEE 802 Executive Committee approve submission of P802.11az to ISO/IEC JTC1/SC6 for adoption under the PSDO agreement.**
      2. **[conditional on publication of the approved standard]**
      3. Moved: Jonathan Segev, Seconded: Andrew Myles
      4. Result: Yes: 86, No: 1, Abstain: 14 (Motion passes)
   10. **Motion 2: P802.11bk CSD approval** (11-22-1768r5 slide #7)
       1. Believing that the CSD contained in the document referenced below meets IEEE 802 guidelines, Request that the CSD contained in 11-22-1353r3 be posted to the IEEE 802 Executive Committee (EC) agenda for EC preview and approval.
       2. Moved by Jonathan Segev, Second: Amelia Andersdotter
       3. **Result: Yes: 84, No: 1, Abstain: 17 (Motion passes)**
   11. **TGbb** (slide #46)
       1. The group started working on the comments from the initial SA Ballot. Most of these comments have now been resolved, so a SA re-circulation Ballot should start shortly.
       2. No questions.
   12. **TGbc** (slide #55)
       1. A little bit behind TGbb, as there are more comments. However, the plan is to have a SA recirculation ballot prior to the January 2023 meeting.
       2. Q: Will you have a SA re-cir ballot before the January 20223 meeting?
       3. A: Yes, I hope so.
       4. No questions.
   13. **TGbd** (slide #56)
       1. The group has finished all it work and is awaiting approval of the final draft from RevCom.
       2. Chair: I would like to thank Bo Sun for his leadership with TGbd and congratulations on this milestone.
       3. No questions.
   14. **TGbe** (slide #59)
       1. Good progress was made this week and many more comments have been resolved. It is hoped that there will be an initial WG letter ballot coming out of the January 2023.
       2. There will be a TGbe ad-hoc in San Diego, California, USA from 11th-13th January 2023, prior to the January 2023 interim meeting in Baltimore, Maryland, USA.
   15. **TGbf** (slide #63)
       1. Comments from the comment collection regarding D0.1 are continuing to be resolved. About 79% of the comments have been marked as “ready for motion”.
       2. No questions.
   16. **TGbh** (slide #68)
       1. Good progress has been made during meetings this week and some new technical submissions have been considered.
       2. The timeline has been updated for the initial letter ballot.
       3. No questions.
   17. **TGbi** (slide #73)
       1. The requirements document has now been approved and an initial technical submission was discussed this week.
       2. Regarding the teleconferences on slide #76, these may change depending on the TGbe teleconference schedule.
       3. No questions.
   18. **UHR SG** (slide #77)
       1. There were 15 technical presentations this week and there will be some more during future teleconferences.
       2. No questions
   19. **AIML TIG** (slide #81)
       1. Discussions continued this week and an initial TIG report has been produced.
       2. There were 4 technical presentations this week.
       3. No questions.
   20. **AMP TIG** (slide #84)
       1. 4 submissions were discussed during this session outlining some use cases and potential technologies.
       2. No questions.
9. **Working Group Motions (Old Business)** (11-22-1678r5)
   1. **Motion 3: P802.11bb D4.1 to ISO for information** 
      1. Request that IEEE 802 Executive Committee liaise Draft IEEE 802.11bb D4.1 to ISO/IEC JTC1 SC6 for information under the PSDO agreement.
      2. Moved: Nikola Serafimovski, Seconded: Tuncer Baykas
      3. Result: Yes: 63, No: 1, Abstain: 13 (Motion passes)
      4. C: Since the ISO motions keep having 1 no vote, please can that person comment to the JTC1 chair, what the issue is?
   2. **Motion 4: P802.11bc D4.0 to ISO for information** 
      1. Request that IEEE 802 Executive Committee liaise Draft IEEE 802.11bc D4.0 to ISO/IEC JTC1 SC6 for information under the PSDO agreement.
      2. Moved: Stephen McCann, Seconded: Xiaofei Wang
      3. Q: What is the version of the draft that is sent to ISO?
      4. A: For information, the current SA balloted draft is sent. For adoption, the published version of the final draft is sent.
      5. Result: Yes: 66, No: 1, Abstain: 10 (Motion passes)
   3. **Motion 5: P802.11bd to ISO for adoption under the PSDO**
      1. Request that IEEE 802 Executive Committee approve submission of P802.11bd to ISO/IEC JTC1/SC6 for adoption under the PSDO agreement.
      2. [conditional on publication of the approved standard]
      3. Moved: Bo Sun, Seconded: Ian Sherlock
      4. Result: Yes: 69, No: 0, Abstain: 12 (Motion passes)
   4. **Motion 6: P802.11be liaison to 802.1**
      1. Approve document 11-22-1792r1 as a liaison to 802.1 WG, granting the WG chair editorial license.
      2. Moved: Alfred Asterjadhi on behalf of TGbe, Seconded: Laurent Cariou
      3. Result: Yes: 68, No: 2, Abstain: 11 (Motion passes)
      4. [TGbe: Moved: Marc Emmelmann, 2nd: Abhishek Patil, Result 82/2/23]
   5. **Motion 7: P802.11be Ad-Hoc**
      1. Approve a TGbe MAC ad-hoc meeting on January 11-13, 2023, in San Diego, CA, for the purpose of TGbe comment resolution and consideration of document submissions.
      2. Moved: Laurent Cariou, Seconded: James Yee
      3. Result: unanimous consent
      4. [TGbe: Moved: Abhishek Patil, 2nd: Chunyu Hu, Result: unanimous consent]
   6. **Motion 8: P802.11bf Ad-Hoc**
      1. Approve a TGbf ad-hoc meeting on January 13-14, 2023, in the Baltimore Hilton, Baltimore, Maryland for the purpose of TGbf comment resolution and consideration of document submissions.
      2. Moved by Tony Han Xiao on behalf of TGbf
      3. Result: unanimous consent
      4. [TGbf: Moved: Yan Xin, 2nd: Rajat Pushkarna, Result: unanimous consent]
   7. **Motion 9: UHR Study Group recharter.**
      1. Request EC approval of the first rechartering of the 802.11 UHR Study Group.
      2. Moved by Laurent Cariou, Second: Allan Jones
      3. Result: Yes: 76, No: 1, Abstain: 7 (Motion passes)
10. **Wireless Chairs Meeting** (11-22-1700r0 slide #24)
    1. The next meeting is on December 14th, 2022 at 15:00 ET. Please contact the IEEE 802.11 WG chair or vice-chairs with a request for more information.
11. **Next Meeting** (11-22-1700r0 slide #25)
    1. The proposed date of the next IEEE 802.11 WG meeting is January 14th-20th, 2023 in Baltimore, Maryland, USA as a mixed mode meeting.
12. **Any other Business (AoB)**
    1. None
13. **Adjournment**
    1. Having completed the agenda, the chair announced that the meeting was adjourned at 09:47 ICT.

**Annex A: Attendance & Affiliation**

| **Name** | **Affiliation** | **Attended >= 75%?** | **Status** |
| --- | --- | --- | --- |
| Abdelaal, Rana | Broadcom Corporation | No | Voter |
| Abouelseoud, Mohamed | Apple Inc. | Yes | Voter |
| Aboulmagd, Osama | Huawei Technologies Co., Ltd | Yes | Voter |
| Adachi, Tomoko | TOSHIBA Corporation | Yes | Voter |
| Adakeja, olubukola | Teradyne, Inc. | Yes | Voter |
| Adhikari, Shubhodeep | Broadcom Corporation | Yes | Voter |
| Agarwal, Peyush | Broadcom Corporation | Yes | Voter |
| Aio, Kosuke | Sony Corporation | Yes | Voter |
| Ajami, Abdel Karim | Qualcomm Incorporated | Yes | Voter |
| Akhmetov, Dmitry | Intel | Yes | Voter |
| Alagarsamy, Srividhya | Broadcom Corporation | Yes | Aspirant |
| Al-Baidhani, Amer | NXP Semiconductors | Yes | Aspirant |
| Aldana, Carlos | Facebook | Yes | Voter |
| Amalladinne, Vamsi | Qualcomm Incorporated | Yes | Voter |
| Andersdotter, Amelia | Sky Group/Comcast | Yes | Voter |
| Ansley, Carol | Cox Communications Inc. | Yes | Voter |
| Anwyl, Gary | MediaTek Inc. | Yes | Potential Voter |
| Asai, Yusuke | NTT | Yes | Voter |
| Asterjadhi, Alfred | Qualcomm Incorporated | Yes | Voter |
| Atefi, Ali | Self Employed | Yes | Aspirant |
| Au, Kwok Shum | Huawei Technologies Co., Ltd | Yes | ExOfficio |
| Au, Oscar | Origin Wireless | Yes | Voter |
| Avital, Ziv | MaxLinear | Yes | Voter |
| Awater, Geert | Qualcomm Incorporated | Yes | Voter |
| Aygul, Mehmet | Vestel | Yes | Voter |
| Badenes, Agustin | MaxLinear Corp | 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 |
| Batra, Anuj | Apple, Inc. | Yes | Voter |
| Baykas, Tuncer | Ofinno | Yes | Voter |
| Beg, Chris | Cognitive Systems Corp. | Yes | Voter |
| Behnamfar, Firouz | Apple Inc. | Yes | Voter |
| Bei, Jianwei | NXP Semiconductors | Yes | Voter |
| Ben Arie, Yaron | Toga Networks (A Huawei Company) | Yes | Voter |
| Berens, Friedbert | FBConsulting Sarl | Yes | Voter |
| Berger, Christian | NXP Semiconductors | Yes | Voter |
| Bims, Harry | Bims Laboratories, Inc. | Yes | Voter |
| Bluschke, Andreas | Representing myself | Yes | Voter |
| Bober, Lennert | Fraunhofer Heinrich Hertz Institute | Yes | Voter |
| Boldy, David | Broadcom Corporation | Yes | Voter |
| Borges, Daniel | Apple, Inc. | Yes | Voter |
| Bredewoud, Albert | Broadcom Corporation | Yes | Voter |
| bujacz, jean-claude | Bouygues Telecom | Yes | Aspirant |
| Burkhardt, Frank | Fraunhofer IIS | Yes | Voter |
| Canchi, Radhakrishna | Kyocera International Inc | Yes | Voter |
| Cao, Rui | NXP Semiconductors | Yes | Voter |
| Cariou, Laurent | Intel | Yes | Voter |
| Carney, William | Sony Group Corporation | Yes | Voter |
| Carter, Edward | Infineon Technologies | Yes | Voter |
| Cavalcanti, Dave | Intel | Yes | Voter |
| Cepni, Gurkan | Apple, Inc. | Yes | Voter |
| Chang, Chen-Yi | Mediatek | Yes | Voter |
| Chaplin, Clint | Self | No | ExOfficio |
| Chen, Cheng | Intel | Yes | Voter |
| Chen, Cheng-Ming | Qualcomm Incorporated | Yes | Potential Voter |
| Chen, Evelyn | Ericsson AB | Yes | Voter |
| Chen, Xiaogang | ZEKU | Yes | Voter |
| Chen, You-Wei | MediaTek Inc. | Yes | Voter |
| Cheng, Paul | MediaTek Inc. | Yes | Voter |
| cheng, phoebe | MediaTek Inc. | Yes | Voter |
| Cheng, Xilin | NXP Semiconductors | Yes | Voter |
| CHENG, yajun | Xiaomi Communications Co., Ltd. | Yes | Potential Voter |
| CHERIAN, GEORGE | Qualcomm Incorporated | Yes | Voter |
| Chiang, James | MediaTek Inc. | Yes | Voter |
| Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. | Yes | Voter |
| Chiu, Lin-Kai | MediaTek Inc. | Yes | Voter |
| Chiu, WenHsien | MediaTek Inc. | Yes | Potential Voter |
| Chng, Shi Baw | BAWMAN LLC | Yes | Voter |
| Cho, Hangyu | LG ELECTRONICS | Yes | Voter |
| Choi, Jin Seek | Hanyang Univerisity | Yes | Aspirant |
| Choi, Jinsoo | LG ELECTRONICS | Yes | Voter |
| Choo, Seungho | Senscomm Semiconductor Co., Ltd. | Yes | Voter |
| Chu, Liwen | NXP Semiconductors | Yes | Voter |
| CHUN, JINYOUNG | LG ELECTRONICS | Yes | Voter |
| Chung, Bruce | Realtek Semiconductor Corp. | Yes | Voter |
| Chung, Chulho | SAMSUNG | Yes | Voter |
| Ciochina, Dana | Sony Corporation | Yes | Voter |
| Coffey, John | Realtek Semiconductor Corp. | Yes | Voter |
| Cortes, Diana | Google | No | Voter |
| da Silva, Claudio | Meta Platforms Inc. | Yes | Voter |
| Das, Dibakar | Intel | Yes | Voter |
| Das, Subir | Peraton Labs | Yes | ExOfficio |
| Dash, Debashis | Apple, Inc. | Yes | Voter |
| de Vegt, Rolf | Qualcomm Incorporated | Yes | Voter |
| DeLaOlivaDelgado, Antonio | InterDigital, Inc. | Yes | Voter |
| Derham, Thomas | Broadcom Corporation | Yes | Voter |
| DESMOULIN, Patrice | Orange | Yes | Voter |
| Ding, Yanyi | Panasonic Corporation | Yes | Voter |
| Dong, mingjie | Huawei Technologies Co., Ltd | Yes | Voter |
| Dong, Xiandong | Xiaomi Communications Co., Ltd. | Yes | Voter |
| Du, Rui | Huawei Technologies Co., Ltd | Yes | Voter |
| Du, Zhenguo | Huawei Technologies Co., Ltd | Yes | Voter |
| Eitan, Alecsander | Qualcomm Technologies, Inc. | Yes | Voter |
| ElSherif, Ahmed | Qualcomm Incorporated | Yes | Voter |
| Emmelmann, Marc | SELF / Koden-TI / Fraunhofer FOKUS | 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 |
| Fletcher, Paul | Samsung Cambridge Solution Center | Yes | Aspirant |
| Fujimori, Yuki | Canon Research Centre France | Yes | Potential Voter |
| 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 | Voter |
| Gee, Thomas | Qorvo | Yes | Voter |
| Ghaderipoor, Alireza | MediaTek Inc. | Yes | Voter |
| Gidvani, Ravi | SAMSUNG ELECTRONICS | Yes | Potential Voter |
| Gilb, James | General Atomics Aeronautical Systems, Inc. | No | ExOfficio |
| Godbole, sachin | Broadcom Corporation | Yes | Voter |
| 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 |
| Grigat, Michael | Deutsche Telekom AG | Yes | Voter |
| Gu, Xiangxin | Unisoc (Shanghai) Technologies Co., Ltd. | Yes | Voter |
| GUIGNARD, Romain | Canon Research Centre France | Yes | Voter |
| Guo, Jing | NXP Semiconductors | Yes | Voter |
| Guo, Yuchen | Huawei Technologies Co., Ltd | Yes | Voter |
| Guo, Zheng | NXP Semiconductors | Yes | Aspirant |
| 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 | Meta Platforms Inc. | Yes | Voter |
| Halasz, David | Morse Micro | Yes | Voter |
| hamidouche, kenza | Apple Inc. | No | Aspirant |
| Hamilton, Mark | Ruckus/CommScope | Yes | Voter |
| HAN, CHONG | pureLiFi | Yes | Potential Voter |
| HAN, Xiao | Huawei Technologies Co., Ltd | Yes | Voter |
| Handte, Thomas | Sony Group Corporation | Yes | Voter |
| Hangbin, Zhao | China Mobile (Hangzhou) Information Technology Co., Ltd | Yes | Aspirant |
| Hansen, Jeff |  | No | Non-Voter |
| Harkins, Daniel | Aruba Networks, Inc. | Yes | Voter |
| Hart, Brian | Cisco Systems, Inc. | Yes | Voter |
| Hawkes, Philip | Qualcomm Incorporated | Yes | Aspirant |
| He, Chuanfeng | Beijing OPPO telecommunications corp., ltd | Yes | Voter |
| He, Ziming | Samsung Cambridge Solution Center | Yes | Aspirant |
| Hedayat, Ahmadreza | Apple Inc. | Yes | Potential Voter |
| Henry, Jerome | Cisco Systems, Inc. | Yes | Voter |
| Hernandez, Marco | National Institute of Information and Communications Technology (NICT) | Yes | 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 | No | Aspirant |
| Hsiao, Ching-Wen | MediaTek Inc. | Yes | Voter |
| Hsieh, Hung-Tao | MediaTek Inc. | Yes | Voter |
| Hsu, Chien-Fang | MediaTek Inc. | Yes | Voter |
| Hsu, Ostrovsky | Xiaomi Communications Co., Ltd. | No | Voter |
| Hu, Chunyu | Facebook | Yes | Voter |
| Hu, Mengshi | Huawei Technologies Co., Ltd | Yes | Voter |
| Hu, Shengquan | MediaTek Inc. | Yes | Voter |
| HUANG, CHIHAN | 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 |
| Ik, Jang | Gachon University | Yes | Aspirant |
| Ikegami, Tetsushi | Meiji University | No | Voter |
| Inohiza, Hirohiko | Canon | Yes | Voter |
| Jang, Insun | LG ELECTRONICS | Yes | Voter |
| Jeffries, Timothy | Futurewei Technologies | Yes | Voter |
| Jen, Elliot YuChih | Samsung Research America | Yes | Potential Voter |
| Jenkins, Michael | NSA-CCSS | Yes | Aspirant |
| Jeon, Eunsung | SAMSUNG ELECTRONICS | Yes | Voter |
| Ji, Chenhe | Huawei Technologies Co., Ltd | Yes | Voter |
| jiang, feng | Apple Inc. | Yes | Voter |
| Jiang, Jinjing | Apple, Inc. | No | Voter |
| John, Toby | Verizon | Yes | Potential Voter |
| Jones, Allan | Activision | Yes | Voter |
| Jones, Vincent Knowles IV | Qualcomm Incorporated | Yes | Voter |
| JOO, SEONG-SOON | Electronics and Telecommunications Research Institute (ETRI) | No | Non-Voter |
| Juarez, Jorge | Fraunhofer IIS | Yes | Voter |
| Jung, Insik | LG ELECTRONICS | Yes | Potential Voter |
| Jungnickel, Volker | Fraunhofer Heinrich Hertz Institute | Yes | Voter |
| Kakani, Naveen | Qualcomm Incorporated | Yes | Voter |
| kamath, Manoj | Broadcom Corporation | Yes | Voter |
| Kamel, Mahmoud | InterDigital, Inc. | Yes | Voter |
| Kancherla, Sundeep | Infineon Technologies | Yes | Voter |
| Kandala, Srinivas | SAMSUNG | Yes | Voter |
| Kang, HaoHua | MediaTek Inc. | Yes | Voter |
| KANG, TEAG JIN | Broadcom Corporation | Yes | Potential Voter |
| Karmuchi, Shailender | SAMSUNG ELECTRONICS | No | Aspirant |
| Kasargod, Sudhir | Infineon Technologies | Yes | Voter |
| Kasher, Assaf | Qualcomm Incorporated | Yes | Voter |
| Kennedy, Richard | Bluetooth SIG | Yes | Voter |
| Kenney, John | Toyota Motor North America | Yes | Voter |
| Kerry, Stuart | OK-Brit; Self | Yes | Voter |
| Kezys, Vytas | CONSULTANT | Yes | Aspirant |
| Khan, Naseem | Leidos Engineering. LLC | Yes | Voter |
| Khericha, samir | Broadcom Corporation | Yes | Aspirant |
| KIM, DONGWAN | Broadcom Corporation | Yes | Potential Voter |
| Kim, Hyungjin | Broadcom Corporation | Yes | Potential Voter |
| 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 Technologies, Inc. | Yes | Voter |
| Kipness, Michael | IEEE Standards Association (IEEE SA) | No | Non-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 |
| Klimakov, Andrey | Huawei Technologies Co., Ltd | Yes | Voter |
| KNECKT, JARKKO | Apple, Inc. | Yes | Voter |
| Ko, Geonjung | WILUS Inc. | Yes | Voter |
| KO, GUNHO | TTA | Yes | Aspirant |
| Kota, Prashant | Infineon Technologies | Yes | Voter |
| Koundourakis, Michail | Samsung Cambridge Solution Center | Yes | Voter |
| Krebs, Alexander | Apple Inc. | Yes | Aspirant |
| Ku, Chung-Ta | MediaTek Inc. | Yes | Voter |
| Kumar, Manish | NXP Semiconductors | Yes | Voter |
| Kuo, Chih-Chun | MediaTek Inc. | Yes | Voter |
| Lalam, Massinissa | SAGEMCOM SAS | Yes | Voter |
| Lan, Zhou | Apple Inc. | Yes | Voter |
| Lanante, Leonardo | Ofinno | Yes | Voter |
| Lansford, James | Qualcomm Incorporated; University of Colorado at Boulder | No | Voter |
| Lee, Hyeong Ho | Netvision Telecom Inc. | Yes | Voter |
| Lee, Wookbong | SAMSUNG | Yes | Voter |
| Lei, E | Haier Group Corporation | Yes | Aspirant |
| Levesque, Chris | Qorvo | No | Voter |
| Levy, Joseph | InterDigital, Inc. | Yes | Voter |
| Li, Bo | Northwestern Polytechnical University | Yes | Voter |
| Li, Qinghua | Intel | Yes | Voter |
| Li, Yan | ZTE Corporation | Yes | Voter |
| Li, Yapu | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Voter |
| Li, Yunbo | Huawei Technologies Co., Ltd | Yes | Voter |
| liang, wenfei | Panasonic Corporation | Yes | Aspirant |
| Lim, Dong Guk | LG ELECTRONICS | Yes | Voter |
| Lim, Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) | No | Non-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, Jeff | Broadcom Corporation | Yes | Potential Voter |
| Liu, Jianhan | MediaTek Inc. | Yes | Voter |
| Liu, Peng | Huawei Technologies Co., Ltd | Yes | Aspirant |
| Liu, Ying | NXP Semiconductors | Yes | Voter |
| Liu, Yong | Apple, Inc. | Yes | 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 |
| Lou, Hui-Ling | NXP Semiconductors | 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 |
| Lv, Lily | Huawei Technologies Co., Ltd | Yes | Voter |
| Ma, Li | MediaTek Inc. | Yes | Voter |
| Ma, Yunsi | HiSilicon (Shanghai) Technologies Co., LTD. | Yes | Potential Voter |
| Madpuwar, Girish | Synaptics | Yes | Potential Voter |
| Mak, Siukai | Broadcom Corporation | Yes | Potential Voter |
| Males, Davor | Bouygues Telecom | Yes | Aspirant |
| Malinen, Jouni | Qualcomm Incorporated | Yes | Voter |
| Mano, Hiroshi | Koden Techno Info K.K. | Yes | Voter |
| Mantha, Abhishek | Broadcom Corporation | Yes | Aspirant |
| MAO, ZHI | Huawei Technologies Co., Ltd | Yes | Potential Voter |
| Marks, Roger | EthAirNet Associates | No | ExOfficio |
| Martinez Vazquez, Marcos | MaxLinear Corp | Yes | Voter |
| 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 |
| Moelker, Dignus-Jan | Broadcom Corporation | Yes | Voter |
| Monajemi, Pooya | Cisco Systems, Inc. | Yes | Voter |
| Montemurro, Michael | Huawei Technologies Co., Ltd | Yes | Voter |
| Montreuil, Leo | Broadcom Corporation | 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 |
| Nakano, Hiroki | CAHI Corporation; Kyoto University; National Institute of Information and Communications Technology | Yes | Voter |
| Nakano, Takayuki | Panasonic Corporation | Yes | Aspirant |
| Nam, Junyoung | Qualcomm Incorporated | Yes | Voter |
| Nam, Sol-eep | Intellectual Discovery | Yes | Aspirant |
| Namboodiri, Vamadevan | SAMSUNG ELECTRONICS | Yes | Voter |
| Namvar, Nima | Charter Communications | Yes | Voter |
| Nandagopalan, SAI SHANKAR | Synaptics | Yes | Voter |
| Narengerile, Narengerile | Huawei Technologies Co., Ltd | Yes | Voter |
| Nassiri Toussi, Karim | Broadcom Corporation | Yes | Voter |
| Nayak, Peshal | Samsung Research America | Yes | Voter |
| Nezou, Patrice | Canon Research Centre France | Yes | Voter |
| Ng, Boon Loong | Samsung Research America | Yes | Voter |
| Nguyen, An | U.S. Department of Homeland Security | Yes | Voter |
| Nikolich, Paul | self employed/various | No | ExOfficio |
| OH, HEUNG RYONG | TTA | Yes | Aspirant |
| Ohmoto, Ryutaro | Nihon Dengyo Kosaku Co. Ltd. | Yes | Potential Voter |
| Okada, Hiraku | Nagoya University | Yes | Voter |
| Olip, John | Broadcom Corporation | Yes | Potential Voter |
| Omar, Hassan | Huawei Technologies Co., Ltd | Yes | Voter |
| Orlando, Christian | IEEE STAFF | No | Non-Voter |
| Orr, Stephen | Cisco Systems, Inc. | Yes | Voter |
| Ouchi, Masatomo | Canon | Yes | Voter |
| Ozbakis, Basak | VESTEL Electronics Corp. | Yes | Voter |
| Palayur, Saju | Maxlinear Inc. | Yes | Voter |
| Palm, Stephen | Broadcom Corporation | Yes | Voter |
| Pandey, Sheetal | ON Semiconductor | No | Voter |
| Pare, Thomas | MediaTek Inc. | Yes | Voter |
| Parekh, Jatin | Arista Networks, Inc. | Yes | Potential Voter |
| Park, Eunsung | LG ELECTRONICS | Yes | Voter |
| Park, Minyoung | Intel | Yes | Voter |
| Park, Sungjin | Senscomm | Yes | Voter |
| Parsons, Glenn | Ericsson AB | Yes | ExOfficio |
| Patil, Abhishek | Qualcomm Incorporated | Yes | Voter |
| Patwardhan, Gaurav | Hewlett Packard Enterprise | Yes | Voter |
| Peng, Lan | Huawei Technologies Co., Ltd | Yes | Voter |
| Peng, Ronny | MediaTek Inc. | Yes | Voter |
| Petrick, Albert | InterDigital, Inc. | Yes | Voter |
| Petry, Brian | Broadcom Corporation | Yes | Voter |
| Pettersson, Charlie | Ericsson AB | Yes | Voter |
| Pirhonen, Riku | NXP Semiconductors | No | Non-Voter |
| Porat, Ron | Broadcom Corporation | Yes | Voter |
| Powell, Clinton | Facebook | No | ExOfficio |
| Prabhakaran, Dinakar | Broadcom Corporation | Yes | Voter |
| Puducheri, Srinath | 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 | Potential Voter |
| Qi, Yue | Samsung Research America | Yes | Aspirant |
| Quan, Yingqiao | Unisoc | Yes | Potential Voter |
| Rafique, Saira | Istanbul Medipol University, Vestel | Yes | Voter |
| Rai, Kapil | Qualcomm Incorporated | Yes | Voter |
| Raissinia, Alireza | Qualcomm Incorporated | Yes | Voter |
| Rajashekar, Rakshith | Broadcom Corporation | Yes | Potential Voter |
| Ratnam, Vishnu | Samsung Research America | Yes | Voter |
| Redlich, Oded | Huawei Technologies Co., Ltd; Huawei Technologies Co., Ltd | Yes | Voter |
| REICH, MOR | Togan Networks, a Huawei Company | Yes | Voter |
| Rezk, Meriam | Qualcomm Incorporated | Yes | Voter |
| Riegel, Maximilian | Nokia | Yes | Voter |
| Rison, Mark | Samsung Cambridge Solution Centre | Yes | Voter |
| Robert, Joerg | Fraunhofer IIS; Technische Universitaet Ilmenau | Yes | Voter |
| Rodine, Craig | Sandia National Laboratories | Yes | Voter |
| Rolfe, Benjamin | Blind Creek Associates | No | Voter |
| Rosdahl, Jon | Qualcomm Technologies, Inc. | Yes | Voter |
| Roy, Sayak | NXP Semiconductors | Yes | Voter |
| Ryu, Kiseon | NXP Semiconductors | Yes | Voter |
| Sahoo, Anirudha | National Institute of Standards and Technology | No | Voter |
| Salem, Mohamed | Huawei Technologies Co., Ltd | Yes | Voter |
| Sambasivan, Sam | AT&T | Yes | Voter |
| Sand, Stephan | German Aerospace Center (DLR) | Yes | Voter |
| Sasaki, Shigenobu | Niigata University | No | Non-Voter |
| Sato, Naotaka | Sony Group Corporation | Yes | Voter |
| Sato, Takuhiro | SHARP CORPORATION | Yes | Voter |
| Satrasala, Rajeshwari | NXP Semiconductors | Yes | Potential Voter |
| Schelstraete, Sigurd | MaxLinear | Yes | Voter |
| Schweizer, Benedikt | Apple Inc. | Yes | Voter |
| Segev, Jonathan | Intel | Yes | Voter |
| Seo, Sangho | Broadcom Corporation | Yes | Voter |
| Seok, Yongho | MediaTek Inc. | Yes | Voter |
| Serafimovski, Nikola | pureLiFi | Yes | Voter |
| Serizawa, Kazunobu | Advanced Telecommunications Research Institute International (ATR) | Yes | Aspirant |
| Sevin, Julien | Canon Research Centre France | Yes | Voter |
| Shafin, Rubayet | Samsung Research America | Yes | Voter |
| Shaw, Amit | Infineon Technologies | No | Voter |
| Shellhammer, Stephen | Qualcomm Incorporated | Yes | ExOfficio |
| Shen, Andy | Futurewei Technologies | Yes | Voter |
| Sherlock, Ian | Texas Instruments Inc. | Yes | Voter |
| Shilo, Shimi | Huawei Technologies Co., Ltd | Yes | Voter |
| Shirakawa, Atsushi | SHARP CORPORATION | Yes | Voter |
| Shu, Tongxin | Huawei Technologies Co., Ltd | Yes | Voter |
| siaud, isabelle | Orange | Yes | Aspirant |
| Smith, Graham | SR Technologies | Yes | Voter |
| Son, Ju-Hyung | WILUS Inc. | Yes | Voter |
| Song, Hao | Intel Corporation | Yes | Voter |
| Sood, Ayush | Infineon Technologies | Yes | Voter |
| Sosack, Robert | Molex Incorporated | Yes | Voter |
| Srinivasa, Sudhir | NXP Semiconductors | Yes | Voter |
| Stacey, Robert | Intel | Yes | Voter |
| Stanley, Dorothy | Hewlett Packard Enterprise | Yes | Voter |
| Stepanov, Max | Intel Corporation | Yes | Potential Voter |
| Strauch, Paul | Qualcomm Incorporated | Yes | Voter |
| Su, Hang | Broadcom Corporation | Yes | Voter |
| subramanian, srikanth | Nanocell | No | Non-Voter |
| Suh, JUNG HOON | Huawei Technologies Co., Ltd | Yes | Voter |
| Sumi, Takenori | Mitsubishi Electric Corporation | Yes | Voter |
| Sun, Bo | Sanechips | Yes | Voter |
| Sun, Jiaqi | China Mobile (Hangzhou) Information Technology Co., Ltd. | Yes | Aspirant |
| Sun, Li-Hsiang | MediaTek Inc. | Yes | Voter |
| Sun, Yanjun | Qualcomm Incorporated | Yes | Voter |
| SURACI, FRANK | U.S. Department of Homeland Security | Yes | Voter |
| Szott, Szymon | AGH University of Science and Technology | Yes | Voter |
| Tadahal, Shivkumar | Broadcom Corporation | Yes | Voter |
| Takatori, Yasushi | Nippon Telegraph and Telephone Corporation (NTT) | Yes | Aspirant |
| 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 | Voter |
| Thota, Sri Ramya | Infineon Technologies | Yes | Voter |
| Tian, Bin | Qualcomm Incorporated | Yes | Voter |
| Tomeba, Hiromichi | SHARP CORPORATION | Yes | Potential Voter |
| Trainin, Solomon | Qualcomm Incorporated | Yes | Voter |
| Tsai, Tsung-Han | MediaTek Inc. | Yes | Voter |
| Tsodik, Genadiy | Huawei Technologies Co., Ltd | Yes | Voter |
| Tsujimaru, Yuki | Canon Inc. | Yes | Voter |
| Turkmen, Halise | Istanbul Medipol University; Vestel | Yes | Voter |
| Urabe, Yoshio | Panasonic Holdings Corporation | Yes | Voter |
| Val, Inaki | MaxLinear, Inc. | Yes | Aspirant |
| Van Nee, Richard | Qualcomm Incorporated | Yes | Voter |
| Van Zelst, Allert | Qualcomm Incorporated | Yes | Voter |
| Varshney, Prabodh | Nokia | Yes | Voter |
| Verenzuela, Daniel | Sony Corporation | Yes | Voter |
| Verma, Lochan | Apple Inc. | Yes | Voter |
| Verma, Sindhu | Broadcom Corporation | Yes | Voter |
| Vermani, Sameer | Qualcomm Incorporated | Yes | Voter |
| VIGER, Pascal | Canon Research Centre France | Yes | Voter |
| Wang, Chao Chun | MediaTek Inc. | Yes | Voter |
| Wang, Hao | Tencent | Yes | Voter |
| Wang, Hejun | Haier Group Corporation | Yes | Voter |
| Wang, Lei | Futurewei Technologies | Yes | Voter |
| Wang, Qi | Apple, Inc. | Yes | Voter |
| Wang, Shukun | Beijing OPPO telecommunications corp., ltd. | Yes | Voter |
| Wang, Steven Qi | Huawei Technologies Co., Ltd | Yes | Voter |
| Wang, Xiaofei | InterDigital, Inc. | Yes | Voter |
| Wang, Yi-Hsiu | Zeku | Yes | Potential Voter |
| Wang, Zisheng | ZTE Corporation | Yes | Voter |
| Wei, Dong | NXP Semiconductors | Yes | Voter |
| Wei, Hung-Yu | National Taiwan University | Yes | Aspirant |
| Wendt, Matthias | Signify | Yes | 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 |
| Wu, Wayne | MediaTek Inc. | Yes | Voter |
| Wullert, John | Peraton Labs | Yes | Voter |
| Xia, Qing | Sony Corporation | Yes | Voter |
| Xiao, Bo | ZTE Corporation | Yes | Voter |
| Xin, Liangxiao | Sony Corporation | Yes | Voter |
| Xin, Yan | Huawei Technologies Co., Ltd | Yes | Voter |
| Xu, Fangxin | Longsailing Semiconductor | Yes | Voter |
| Xu, Weijie | Beijing OPPO telecommunications corp., ltd. | Yes | Voter |
| Xu, Yanchao | Zeku | Yes | Voter |
| Xue, Qi | Qualcomm Incorporated | Yes | Potential Voter |
| YAGHOOBI, HASSAN | Intel | Yes | Voter |
| Yamada, Ryota | SHARP CORPORATION | Yes | Voter |
| Yan, Aiguo | Zeku | Yes | Voter |
| Yan, Peng | Wi-Fi Alliance | Yes | Aspirant |
| Yan, Zhongjiang | Northwestern Polytechnical University | Yes | Voter |
| Yanamandra, Subrahmanyam | Broadcom Corporation | Yes | Aspirant |
| 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 | Yes | 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 | Voter |
| Yong, Su Khiong | Apple, Inc. | Yes | Voter |
| Yoon, Kangjin | Meta Platforms Inc. | No | Non-Voter |
| Yoon, Yelin | LG ELECTRONICS | Yes | Aspirant |
| Young, Christopher | Broadcom Corporation | Yes | Voter |
| Yu, Jian | Huawei Technologies Co., Ltd | Yes | Voter |
| Zhang, Hongyuan | NXP Semiconductors | Yes | Voter |
| Zhang, Jiayi | Ofinno | Yes | Voter |
| ZHANG, JIAYIN | Huawei Technologies Co., Ltd | Yes | Voter |
| Zhang, Rong | NXP Semiconductors | Yes | Aspirant |
| Zhang, Yan | NXP Semiconductors | Yes | Voter |
| Zhou, Lei | H3C Technologies Co., Limited | Yes | Voter |
| Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Voter |
| zhu, lihua | Ruijie Networks Co., Ltd | Yes | Potential Voter |
| Zhu, Peiying | Huawei Technologies Co., Ltd | Yes | Potential Voter |
| Zuniga, Juan Carlos | Cisco Systems, Inc. | Yes | Voter |
| Zuo, Zhisong | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | Yes | Voter |

**Annex B : Working Group Officers**

**Working Group**

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| Andrew Myles (Cisco) | Coexistence Standing Committee Chair | +61 418 656587 [amyles@cisco.com](mailto:amyles@cisco.com) |

**Task Groups**

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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) |

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|  |

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

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| --- | --- | --- |
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| 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) |

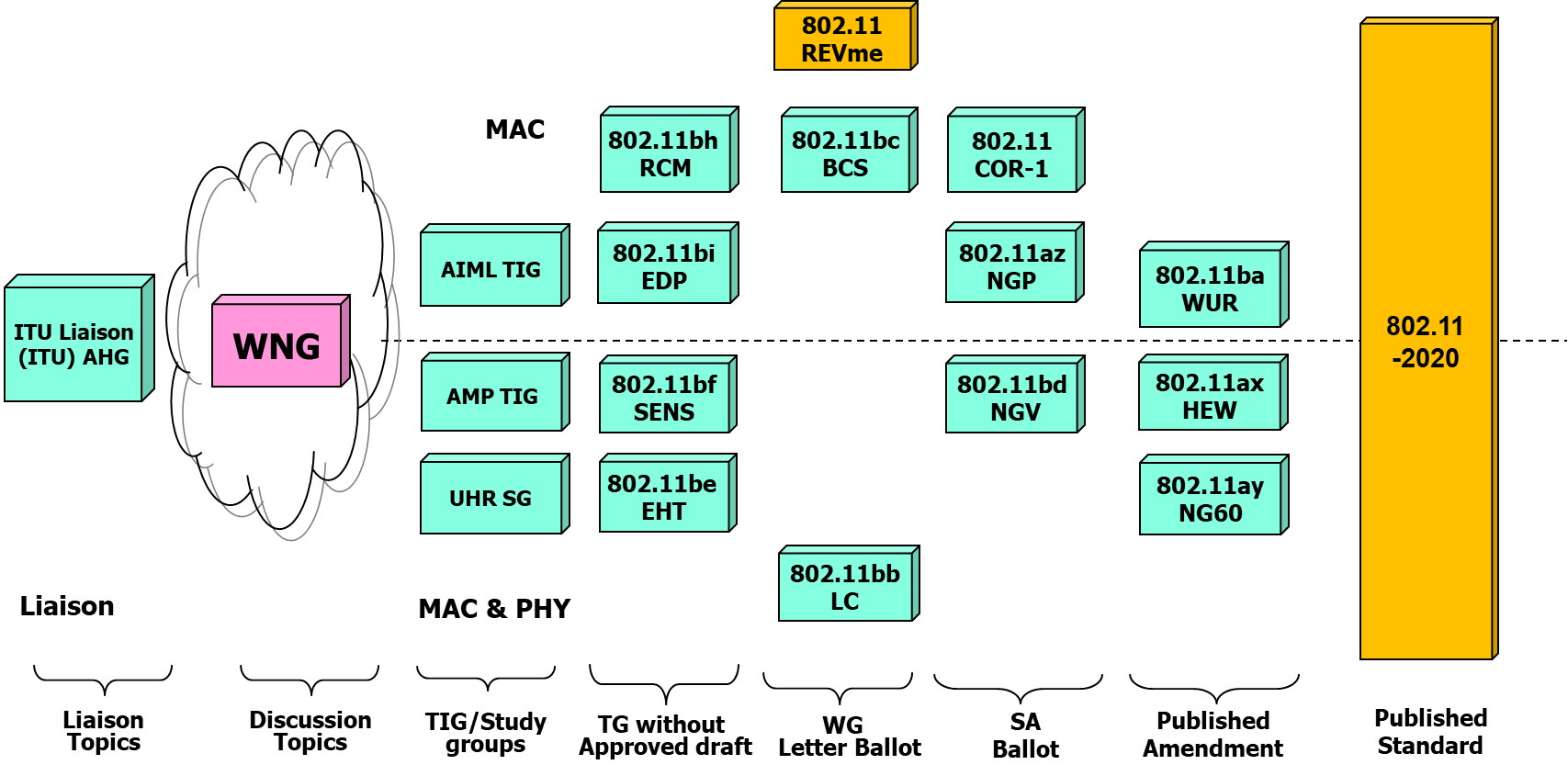
**Annex C : Minutes**

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 | 22-1761r0 |
| TGme | TG | 22-1712r0 |
| TGaz | TG | 22-1989r0 |
| TGbb | TG | 22-2019r0 |
| TGbc | TG | 22-1891r0 |
| TGbd | TG | 22-2004r0 |
| TGbe | TG | 22-1984r0 |
| TGbf | TG | 22-2046r0 |
| TGbh | TG | 22-2147r0 |
| TGbi | TG | 22-2054r0 |
| COEX | SC | 22-2048r0 |
| WNG | SC | 22-1607r0 |
| JTC 802 | SC | 22-2057r0 |
| ARC | SC | 22-1867r0 |
| PAR | SC | 22-1940r0 |
| AIML | TIG | 22-1982r0 |
| AMP | TIG | 22-2041r0 |
| UHR | SG | 22-1817r0 |
| ITU | AHC | Did not meet |

**Annex D : Revisions and Standards Pipeline**

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**IEEE 802.11 Standards Pipeline**

End.