IEEE P802.11  
Wireless LANs

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| Minutes of the IEEE P802.11 Full Working Group | | | | |
| Date: 2023-02-22 | | | | |
| Author(s): | | | | |
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Abstract

This document constitutes the minutes of the IEEE 802.11 full working group for the January 2023 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 #197**

**January 16th – 20th, 2023**

**IEEE 802.11 Opening Plenary, Monday January 16th, 2023**

Presiding chair: Dorothy Stanley (Hewlett Packard Enterprise) opened the meeting at 09:01 Eastern Time (ET) 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 491 Voters, 45 Potential Voters and 11 Ex Officio voters of IEEE 802.11\*

There were 255 people in the meeting (Webex), with 129 attending in person (in the room).

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

1. **Notices** (11-22-2113r0 slide #3)
   1. Chair: Please note the information about the meeting decorum.
   2. Are there any members of the press present?
      1. None.
   3. Chair: Please note that if you wish to write an article or a blog about this session you need to announce your intention.
   4. IEEE Staff present
      1. Christy Bahn is the staff representative for 802.11.
   5. Please note that this session requires a registration fee to be paid.
2. **Approve/modify working group agenda** (11-22-2112r3)
   1. This is a summary of the meeting today. Please note the schedule for this session on the separate tab “Schedule”. A new joint TGbh/TGbi meeting has been added.
   2. Chair: I suggest we approve this agenda.
   3. **Move to approve the agenda 11-22-2112r3 for the Monday opening plenary**
      1. Moved: Marc Emmelmann, 2nd: Jonathan Segev
      2. No objection to approving by unanimous consent
3. **November 2022 WG Minutes**
   1. **Move to approve the November 2022 WG minutes document 11-22-1761r0**
   2. Moved: Stephen McCann, 2nd: Ian Sherlock
   3. Following neither discussion nor dissent the minutes were approved by unanimous consent.
4. **New Attendees** (11-22-2117r0 slide #4)
   1. Straw Poll:
   2. **Are you a new attendee to IEEE 802.11?**
      1. Yes: 12
5. **Call for essential Patents** (11-22-2139r0)
   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** (11-22-2139r0)
   1. The slides about IEEE 802 meeting participation and IEEE SA copyright were also read.
   2. Expected participant behavior was also announced.
   3. Remember to do your attendance for this meeting. To achieve 75%, which counts towards an attendance credit for the session, you must attend 9 meeting slots.
   4. Regarding slide #21, this is a reminder about the abstain vote.
7. **Announcements** (11-22-2113r0)
   1. **New Members**
      1. Chair: There is a new members session at 10:30 ET on Tuesday. This is for all new attendees.
   2. **Liaisons** (slide #4)
      1. Chair: There have been 3 liaison activities since November 2022.
   3. **EC and IEEE-SA standard board decisions** (slides #5 and #6)
      1. Chair: These are some items from recent EC and IEEE-SA meetings.
   4. **Acknowledgement of TGaz and TGbd projects completion** (slide #6)
      1. Chair: I would also like to acknowledge and thank everyone who worked on TGaz.
      2. TGaz Chair: I would also like to thank everyone for their hard work.
      3. I would also like to acknowledge and thank everyone who worked on TGbd.
      4. TGbd Chair: I would also like to thank everyone who were involved in this project.
   5. **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.
8. **Logistics and Key events/activities** (11-23-103r0 [previously 11-22-2122r1])
   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. Please remember to register your attendance using IMAT.
      4. This session requires registration, so please follow the link to pay the registration fee.
      5. On Wednesday there is a social here in the hotel (slide #14). If you have a guest, they are welcome to come along, but please can you obtain a guest badge for them.
      6. There is a attendee’s lounge where you can work and access the IEEE 802 network.
      7. No questions
9. **Group Summaries** (11-22-2140r0)
   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 Eastern on Tuesday morning. Other topics include the ANA status (11-11-0270r65).
      2. No questions
   3. **ARC SC** (slide #5)
      1. There have been no teleconferences since the November 2022 meeting. There is one meeting this week.
      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 group is not 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. The main goal this week is to continue working on comments from the recent letter ballot (LB) 270.
      2. No questions
   9. **TGbb** (slide #14)
      1. The group is starting to resolve comments from the recent SA ballot where there were 58 comments.
      2. No questions.
   10. **TGbc** (slide #15)
       1. This group has also completed its recent re-circulation SA Ballot with 11 comments. The work this week will concentrate on finishing these comments and polishing the 11bc draft.
       2. No questions
   11. **TGbe** (slide #17)
       1. A draft D2.3 has been produced and the group is still working on comments from the previous letter ballot. There have been lots of teleconferences since November 2022 and a 3-day ad-hoc meeting was held in San Diego last week. There are about 500 comments left to resolve, so it is hoped to complete comment resolution this week and then request a WG letter ballot.
       2. No questions
   12. **TGbf** (slide #19)
       1. The group has also been working on comments and has had a lot of teleconferences and a 2 day ad-hoc in this location. There are 6 technical comments to resolve, so the group hopes to complete these this week and request an initial WG letter ballot. Slide #23 contains a link to a recent Wi-Fi Sensing workshop.
       2. No questions
   13. **TGbh** (slide #24)
       1. The group will consider submissions and try to move forward with the creation of 11bh D1.0. There will be a joint meeting with TGbi on Thursday.
       2. No questions
   14. **TGbi** (slide #25)
       1. The group is still addressing feature definitions this week and is requesting more technical submissions.
       2. No questions.
   15. **TGbk** (slide #26)
       1. There will be an initial formation meeting of this project this week.
       2. No questions.
   16. **UHR SG** (slide #28)
       1. There have been 2 teleconferences since the November 2022 meeting. There will be discussions on a future PAR and CSD this week, with 3 meetings planned.
       2. No questions.
   17. **AIML TIG** (slide #30)
       1. The activity this week is to discuss use cases and technical feasibilities for possible technologies. There will be an AIML TIG report during the mid-week plenary.
       2. No questions.
   18. **AMP TIG** (slide #32)
       1. There will be 2 meetings this week.
       2. No questions.
   19. **ITU ad-hoc** (slide #34)
       1. There will be 1 meeting this week.
       2. No questions.
10. **Questions**
    1. C: The document header 11-22-2122r1 appears to be incorrect.
    2. A: Oh ok, it will be corrected later. [Post Meeting: Vice chair report is now 11-23-0103r0]
11. **Working Group Motions (Old Business)** (11-22-2117r0)
    1. **Motion 1: TGbk Chair** 
       1. **Confirm Jonathan Segev as the IEEE 802.11 Task Group bk chair.**
       2. Moved: Roy Want, Seconded: Mark Hamilton
       3. Result: unanimous consent
12. **Announcements** (11-22-2113r0)
    1. Please note the following information:
       1. Designation of individual experts (slide #20)
       2. IEEE 802 Chair request (slide #21)
       3. IEEE 802.1 is also meeting this week as part of this interim session.
13. **AoB**
    1. Chair: Please remember to record your attendance this week.
14. **Recess**
    1. Meeting recessed at 10:11 ET.

**Wednesday, January 18th 2023**

**IEEE 802.11 Mid-week Plenary**

Call to order at 13:30 ET by Dorothy Stanley (HPE).

There were 167 people in the meeting (Webex), with 90 attending in person (in the room) and 194 on the IMAT attendance server.

1. **Approve/modify working group agenda** (11-22-2112r5)
   1. Chair: There have been some minor changes to the agenda since the opening plenary. Several groups have completed their work for the week and their slots have been released.
   2. Please note that we will have an awards ceremony after this meeting has recessed.
   3. TGbk has been has been added to Wednesday PM2.
   4. **Approve the agenda for the today’s meeting as shown in 11-22-2112r5.**
      1. Moved: Jonathan Segev, 2nd: Marc Emmelmann
      2. No objection to approving by unanimous consent.
2. **Announcements** (11-22-2114r0)
   1. **Participation** (slides #5 - #6)
      1. Please can you all remember to read these slides and understand that everyone is here as an individual subject matter expert.
   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.
      2. No members of the press are present.
3. **Social**
   1. This is a reminder about the social this evening that will be held in the hotel starting at 6.30pm and will be held in the South Foyer (outside of the current meeting room).
4. **Announcements** (11-22-2113r0)
   1. Slide #12 shows that TGbk has recently been added as a new IEEE 802.11 task group.
   2. Slide #13 shows the dates of PAR expirations for various groups.
   3. Slide #14 shows the current appointed positions.
   4. Slide #15 shows the current list of sub-group officers
   5. TGbk had an election for vice-chair, editor and secretary.
      1. vice chair: Assaf Kasher
      2. technical editor: Roy Want
      3. secretary: Assaf Kasher
   6. TGbk chair: I would like to thank these people for volunteering.
   7. Slide #16 shows the history of the IEEE 802.11 drafts and slide #17 shows the current groups.
   8. Slide #18 shows the results of recent ballots
   9. 491 voters on slide #19
   10. No questions
5. **Timeline**
   1. The most recent change to the chart was to show that the corrigendum (Cor-1) has been published.
   2. No questions
6. **Wi-Fi Alliance Liaison** (11-23-0033r0)
   1. The next Wi-Fi Alliance meeting will be in March 2023 in Seoul.
   2. Chair: Thank you to all the members of the Wi-Fi Alliance.
   3. No questions
7. **IETF Liaison** (11-23-0128r0)
   1. The next meeting will be in Yokohama, Japan, March 25-31, 2023.
   2. No questions.
8. **IEEE 802.15 Liaison** (11-23-0101r1)
   1. This is information about various groups within IEEE 802.15 that are of interest to IEEE 802.11.
   2. IEEE 802.15.4ab (slide #3) is currently one of the most popular groups within IEEE 802.15.
   3. No questions
9. **IEEE 802.18 Liaison** (11-22-2143r2)
   1. There are now several topics being studied within IEEE 802.18.
   2. No questions.
10. **IEEE 802.19 Liaison** (11-23-0121r0)
    1. This document summarizes the discussion topics within IEEE 802.19 meetings.
    2. No questions.
11. **AIML (Artifical Intelligence and Machine Learning) TIG (Topic Interest Group) Overview** (11-23-0013r0)
    1. This presentation provides an overview of the AIML TIG and its status.
    2. It covers the goals and activities of the TIG.
    3. Note that the main goal of the TIG is not to define or standardize AIML models.
    4. Chair: Thank you for investigating this interesting area for possible 802.11 use.
    5. No questions
12. **Awards ceremony**
    1. Chair: I would like to invite everyone to stay for an awards ceremony. We will recess first, then start the ceremony.
    2. Andrew Myles: This is my last meeting after many years and I would like to thank everyone for developing this amazing Wi-Fi technology. I also appreciate the social aspect of meeting up with you all during our meetings.
    3. Chair: I would like to thank Andrew for all this work. He has been a tireless advocate of Wi-Fi technology. I would like to present Andrew with a commentative shirt celebrating 40 years of IEEE 802, as he is retiring after this meeting and will not be able to attend the main 40th year celebration at the March 2023 plenary.
13. **Any other Business (AoB)**
    1. None
14. **Recess**
    1. Meeting recessed at 14.34 ET.
15. **Award ceremony**
    1. Awards were then distributed for the following groups that have completed their work during the last 3 years:
    2. 802.11-2020: <https://mentor.ieee.org/802.11/dcn/21/11-21-0447-00-000m-revmd-awards.pptx>
    3. 802.11ba-2021: <https://mentor.ieee.org/802.11/dcn/21/11-21-1525-00-00ba-tgba-awards.pptx>
    4. 802.11ax-2021: <https://mentor.ieee.org/802.11/dcn/21/11-21-0855-02-00ax-802-11ax-awards.pptx>
    5. 802.11ay-2021: <https://mentor.ieee.org/802.11/dcn/21/11-21-1024-02-00ay-802-11ay-awards.pptx>
    6. Photographs (taken after the recess) are available at <https://grouper.ieee.org/groups/802/11/Photographs/photographs.htm>

**Friday, January 20th 2023**

**IEEE 802.11 Closing Plenary**

Call to order at 08:05 ET by Dorothy Stanley (HPE).

There were 162 people in the meeting (Webex), with 61 attending in person (in the room).

1. **Approve/modify working group agenda** (11-22-2112r6)
   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 11-22-2112r6**
      1. Moved: Xiaofei Wang, 2nd: Jim Lansford
      2. No objection to approving by unanimous consent.
2. **Announcements** (11-22-2114r0)
   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 March 12-17th 2023. It will be a mixed mode session in Atlanta, Georgia, USA.
      2. Please be aware of future chair’s committee meetings (CAC), the first one of which will be on February 6th 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/IEC
      2. No questions.
   8. **Social Media** (slide #21)
      1. There are several social media items that have 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 will be some further 802.11 related webinars in 2023.
      3. No questions.
3. **Treasury Report** (ec-23-0003r0)
   1. VC1: This shows the treasurers’ report and is correct as of December 31st, 2022.
   2. There were about 600 people who have attended this meeting.
   3. The expected registration fees for the mixed-mode May and September 2023 sessions are $600/$800/$100.
   4. Please be aware of the deadbeat consequences on slide #15. There are currently 11 deadbeats.
4. **January 2023 Venue Straw Polls** (11-23-0103r0)
   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: 2
      2. No: 48
   3. **2. Did you go to the social?**
      1. Yes: 51
      2. No: 7
   4. **3. If you attended the social, did you enjoy it?**
      1. Yes: 1
      2. No: 34
5. **Future Venue Straw Polls** (11-22-2117r1)
   1. March 2023
   2. **1. If the 2023 March Plenary Session were held at the Hilton Atlanta, GA as an in-person only session, would you attend?**
   3. Yes: 69
   4. No: 37
   5. **2. If the 2023 March Plenary Session is held in as a mixed-mode session, will you attend:**
   6. Attend In-person: 66
   7. Attend Virtually (remotely): 52
   8. Will not attend: 4
   9. May 2023
   10. **1. If the 2023 May 802 Wireless Interim Session were held at the Hilton Orlando Buena Vista , Orlando, FL as an in-person only session, would you attend?**
   11. Yes: 60
   12. No: 45
   13. Abstain: 6
   14. **2. If the 2023 May 802 Wireless Interim Session were held at the Hilton Orlando Buena Vista , Orlando, FL as mixed-mode session, will you attend:**
   15. Attend In-person: 63
   16. Attend Virtually (remotely): 62
   17. Will not attend interim: 2
6. **Future Venues Manager Report** (11-23-0103r0)
   1. Slide #21 shows the upcoming interim sessions for the next couple of years.
   2. RFPs (Request For Proposal) will start to be sent out again this summer for future sessions in 2025/2026 onwards.
   3. No questions
7. **Timeline update**
   1. The main change is for the TGbf timeline. There will also be a new line for TGbk.
   2. No questions
8. **Attendance statistics** (11-22-2141r2 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.
9. **WG Committee Reports** (11-22-2141r2)
   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. Slide #14 mentioned the re-write of clause 6 and other general text styles.
      4. C: There’s an update to slide 16 -- TGbc has completed the MDR but the slides shows "MDR = no".
   2. **ARC SC** (slide #17)
      1. The slides show the work covered within the ARC meeting this week.
      2. No questions
   3. **Coex SC** (slide #24)
      1. There have been various issues discussed during the week.
      2. Some issues with regards to 3GPP SL-U technology were discussed.
      3. Coex SC chair: This is my last meeting as chair, and I hope a new chair can be found to continue this work.
      4. Chair: Thank you for all your work over the years chairing this group.
      5. No questions.
   4. **WNG** **SC** (slide #28)
      1. There were 3 presentations this session:
         1. “802.11 applications in/to Alternative Fuel Vehicle infrastructure,” Craig Rodine (Sandia National Laboratory) 11-23/0097r0
         2. “New features for Light Communication,” Volker Jungnickel (Fraunhofer) 11-23/0091r0
         3. “Faster S1G+ follow up,” Dave Halasz (Morse Micro) 11-23/0038r1
      2. No questions
   5. **JTC1 SC** (slide #31)
      1. The meeting covered the status of various IEEE 802 amendments going through the PSDO process.
      2. JTC1 SC chair: I would like to thank Peter Yee, the new chair of this group going forward.
      3. No questions.
   6. **TGme** (slide #34)
      1. This session, the group continued to consider comments from LB270.
      2. No questions.
   7. **TGbb** (slide #37)
      1. The group completed it work on the comments from the initial SA Ballot. A SA re-circulation ballot should start shortly.
      2. No questions.
   8. **TGbc** (slide #41)
      1. This group has completed comment resolutions from the initial SA ballot and will move forward with a SA re-circulation ballot in the next few weeks.
      2. No questions.
   9. **TGbe** (slide #47)
      1. The group completed comment resolutions from LB266 and plans to start an initial letter ballot in mid-February.
      2. No questions
   10. **TGbf** (slide #51)
       1. The group completed comment resolutions from CC40 and plans to start an initial letter ballot shortly.
       2. No questions.
   11. **TGbh** (slide #56)
       1. Good progress has been made during meetings this week and many technical submissions have been considered.
       2. There was a joint meeting with TGbi as shown on slide #60.
       3. No questions.
   12. **TGbi** (slide #63)
       1. The group met several times this week and discussed several technical contributions. The plan is to have an initial draft in March 2023.
       2. No questions.
   13. **TGbk 320 MHz Positioning** (slide #67)
       1. This was the first time that the group met. Various technical submissions were considered.
       2. No questions.
   14. **UHR SG** (slide #73)
       1. The draft PAR was extensively discussed and there were 8 technical presentations in the meetings throughout the week.
       2. Chair: Regarding the UHR timeline, the approval of a PAR should be done at an interim. A PAR requires a 30-day review period in advance of an EC meeting. Therefore, if the PAR is approved during the March 2023 plenary, the EC can only possibly approve it during the July plenary. PARs are not typically approved at the intermediate EC teleconference. Therefore the 1st meeting of a possible UHR task group would be November 2023. Note that the progress and start of TGbk was almost as fast as can be possibly done. Unfortunately, it looks as though the progress of UHR SG to task group is almost as slow as possible.
       3. Chair: However, if the UHR SG could agree a PAR on a teleconference in the next few weeks, it could then hold an 15 day electronic working group letter ballot and then post it to the EC agenda with 30 days’ notice, before the EC closing plenary at the March 2023 session.
       4. C: I think it’s difficult to come to a consensus agreement on a PAR in the short term. Even if the future task group does not start until November 2023, it can still meet as a study group in the meantime.
       5. C: The working group should also consider the workload of current work. TGbe does not have an approved draft yet, so it needs to be thought through when the start date of a future UHR task group is being considered.
       6. Q: Hearing this, we could extend the SG and approve the PAR in May without loosing any time, right?
       7. A: No, unfortunately it does not work that way. The PAR is approved by the 802 LMSC at plenary sessions only.
       8. C: Lots of people left the meeting yesterday, so perhaps it’s not fair to change the UHR SG plan at this stage.
       9. Chair: Yes, but I think the members should be aware of the current schedule, given the proposed plan.
       10. C: Could other EC teleconferences be used to help the process?
       11. Chair: Yes, they can help. However, a new PAR must be approved at an EC plenary session and it must be placed on the EC agenda 30 days before. There is no shortcut through the use of EC teleconferences. A PAR must be reviewed by the other IEEE 802 working groups.
   15. **AIML TIG** (slide #76)
       1. There were 7 technical presentations this week. Options to continue the work are presented on slide #80.
       2. No questions.
   16. **AMP TIG** (slide #82)
       1. 9 submissions were discussed during this session outlining some use cases and potential technologies.
       2. No questions.
   17. **ITU Ad-Hoc** (slide #84)
       1. There was 1 meeting this week and the main item of discussion was output documents from Working Party 5A.
       2. No questions.
10. **IEEE 802c status** (11-23-0139r0)
    1. This is report about various standard and amendment revision activities at the IEEE 802 level.
    2. C: I would like to note that there is a difference between the 802c and 802-REVc activities. They are not the same thing.
11. **Working Group Motions (Old Business)** (11-22-2117r2)
    1. **Motion 2: P802.11bk Vice-Chair**
       1. **Confirm Assaf Kasher as the IEEE 802.11 Task Group bk vice-chair.**
       2. [TGbk: Moved: Chao Chun Wang, 2nd: Roy Want, Result: Unanimous consent]
       3. Moved by Jonathan Segev on behalf of TGbk
       4. Result: Unanimous consent (Motion passes)
    2. **Motion 3: TGaz minutes** 
       1. **Move to approve the TGaz minutes in document:** [**https://mentor.ieee.org/802.11/dcn/22/11-22-1989-00-00az-november-2022-plenary-minutes.docx**](https://mentor.ieee.org/802.11/dcn/22/11-22-1989-00-00az-november-2022-plenary-minutes.docx)
       2. Moved: Jonathan Segev, Seconded: Mike Montemurro
       3. Result: Unanimous consent (Motion passes)
    3. **Motion 4: TGbd minutes** 
       1. **Move to approve the TGbd minutes in document:** [**https://mentor.ieee.org/802.11/dcn/22/11-22-2004-00-00bd-ieee-802-11bd-november-2022-plenary-meeting-minutes.docx**](https://mentor.ieee.org/802.11/dcn/22/11-22-2004-00-00bd-ieee-802-11bd-november-2022-plenary-meeting-minutes.docx)
       2. Moved: Bo Sun, Seconded: Joseph Levy
       3. Result: Unanimous consent (Motion passes)
    4. **Motion 5: P802.11be initial WG letter ballot**
       1. **Having approved changes to P802.11be Draft 2.0, as defined in 11-22/971r52, in addition to motions passed during the TGbe joint meetings of January 19th, 2023,**
       2. **Instruct the editor to prepare P802.11be Draft 3.0**
       3. **Approve a 30-day Initial Working Group Technical Letter Ballot asking the question “Should P802.11be Draft 3.0 be forwarded to SA Ballot?**
       4. [TGbe: Moved: Stephen McCann, 2nd: Ian Sherlock, Result: 104/2/13]
       5. Moved by Alfred Asterjadhi on behalf of TGbe, Second: Subir Das
       6. Result: Yes: 74, No: 0, Abstain: 7 (Motion passes)
    5. **Motion 6: P802.11be CAD Re-affirmation**
       1. Re-affirm the P802.11be Coexistence Assessment Document in 11-21/0706r7
       2. Moved: Alfred Asterjadhi on behalf of TGbe, Seconded: Mike Montemurro
       3. Result: Yes: 74, No: 0, Abstain: 11 (Motion passes)
       4. [TGbe: Moved: Stephen McCann, 2nd: Stephen Palm, Result: 103/1/10]
    6. **Motion 7: P802.11bf Initial WG Letter Ballot**
       1. Having approved changes to P802.11bf D0.1, as defined in doc 11-22/0820r21: https://mentor.ieee.org/802.11/dcn/22/11-22-0820-21-00bf-ieee-802-11bf-cc40-comments.xlsx,
       2. Instruct the editor to prepare P802.11bf D1.0, and
       3. Approve a 30 day Initial Working Group Technical Letter Ballot asking the question “Should P802.11bf D1.0 be forwarded to Standards Association Ballot?”
       4. Moved by Tony Xiao Han on behalf of TGbf, Second: Ian Sherlock
       5. Result: Yes: 68, No: 0, Abstain: 16 (Motion passes)
       6. [TGbf: Moved: Dongguk Lim, Seconded: Assaf Kasher, Result: 24/0/0]
    7. **Motion 8: P802.11bf CAD approval**
       1. Approve the P802.11bf Coexistence Assessment Document in 11-22-1795r2
       2. Moved by Tony Han Xiao on behalf of TGbf, Second: Assaf Kasher
       3. Result: Yes: 58, No: 0, Abstain: 15 / Unanimous consent (Motion passes)
       4. [TGbf: Moved: Claudio da Silva, 2nd: Solomon Trainin, Result: 26/0/8]
12. **Any other Business (AoB)**
    1. **Letter Ballots**
    2. Q: Do we know when the TGbe and TGbf letter ballots will start?
    3. A: For TGbe, it should be early February. It should finish around the start of the March plenary.
    4. A: For TGbf, it should also be the beginning of February.
    5. **Break**
    6. There will be coffee in room Key 9 once this meeting finishes.
    7. **Awards**
    8. Chair: There are still several awards left. If you can take any of the following awards, please collect them from the front of the meeting room. IEEE staff will collect the remaining awards and bring them to the March 2023 session.
    9. **UHR SG**
    10. Q: If UHR SG does try the short option outlined earlier, can you mention what needs to be done for the electronic letter ballot?
    11. Chair: The electronic letter ballot is the same as requesting a motion as if the working group were meeting.
    12. **IEEE 802 Chair**
    13. A reminder that the IEEE 802 chair is standing down in March 2024. If you are interested in helping with a new IEEE 802 chair or one of the appointed positions, please can you talk to them.
13. **Wireless Chairs Meeting** (11-22-2114r0 slide #24)
    1. The next meeting is on February 15th, 2023 at 15:00 ET. Please contact the IEEE 802.11 WG chair or vice-chairs with a request for more information.
14. **Next Session** (11-22-2114r0 slide #25)
    1. The proposed date of the next IEEE 802.11 WG session is March 12-17th, 2023 in Atlanta, Georgia, USA as a mixed mode session.
15. **Adjournment**
    1. Having completed the agenda, the chair announced that the meeting was adjourned at 10:14 ET.

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

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| Jonathan Segev (Intel Corporation) | TGbk Chair 320 MHz Positioning | +972-54-2403587 [jonathan.segev@intel.com](mailto:jonathan.segev@intel.com) |

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|  |

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

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| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
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**Ad-Hoc Groups (AHG)**

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| Name (Affiliation) | Position | Contact Details |
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| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
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**Liaison Officials to IEEE organizations**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
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| 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) |

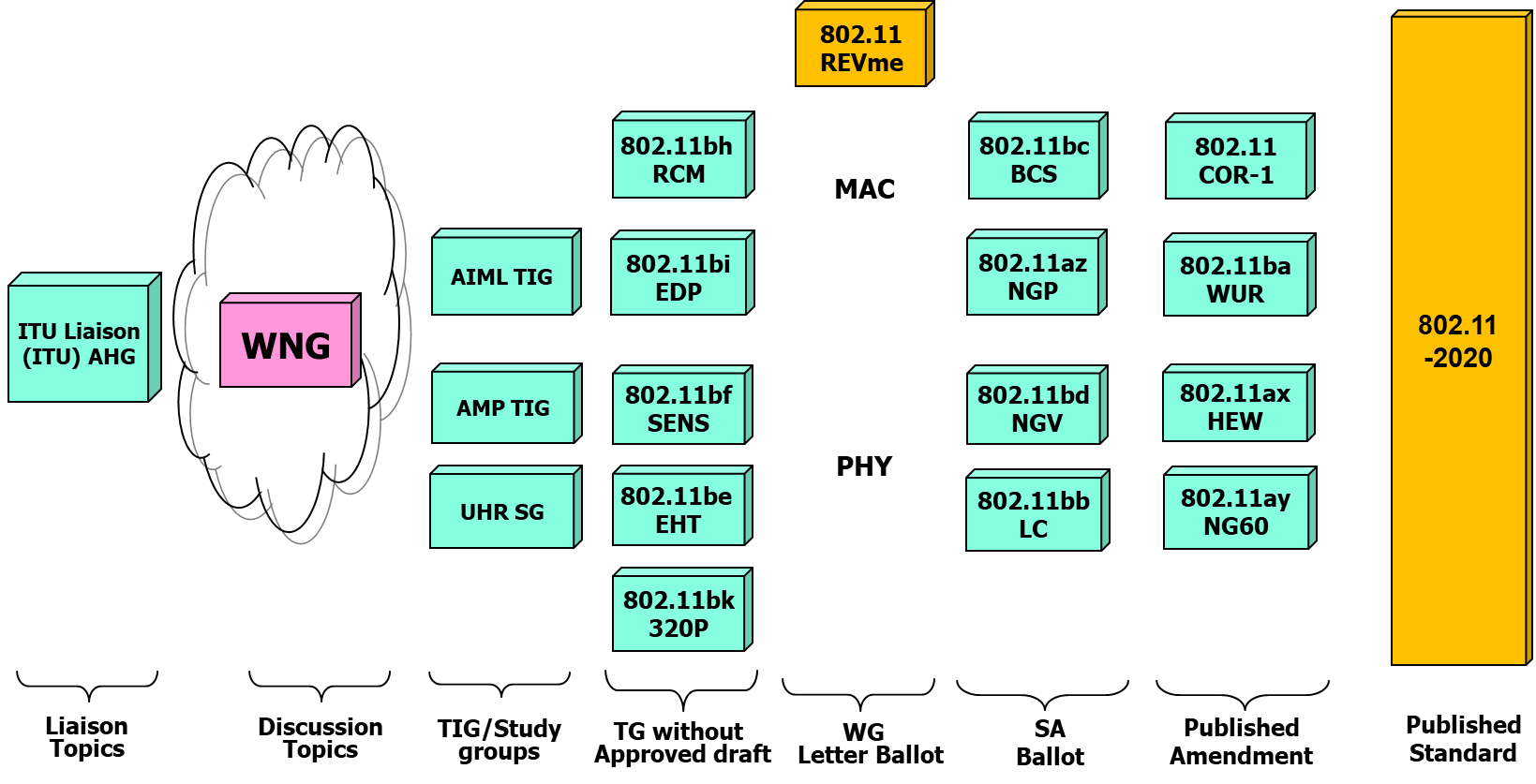
**Annex C : Minutes**

This Annex contains references to all IEEE 802.11 SC/TG/SG & Ad Hoc Committee (AHC) minutes from this session. 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 | 23-0004r0 |
| TGme | TG | 23-0116r0 |
| TGbb | TG | 23-0118r0 |
| TGbc | TG | 23-0014r0 |
| TGbe | TG | 23-0096r0 |
| TGbf | TG | 23-0152r0 |
| TGbh | TG | 23-0199r0 |
| TGbi | TG | 23-0206r0 |
| TGbk | TG | 23-0107r0 |
| COEX | SC | 23-0214r0 |
| WNG | SC | 23-0098r0 |
| JTC 802 | SC | 23-0219r0 |
| ARC | SC | 23-0051r0 |
| PAR | SC | Did not meet |
| AIML | TIG | 23-0163r0 |
| AMP | TIG | 23-0114r1 |
| UHR | SG | 23-0094r0 |
| ITU | AHC | 22-2190r0 |

**Annex D : Revisions and Standards Pipeline**

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**IEEE 802.11 Standards Pipeline**

End.