IEEE P802.11
Wireless LANs

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| Minutes of the IEEE P802.11 Full Working Group |
| Date: 2024-08-16 |
| Author(s): |
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Abstract

This document contains the minutes of the IEEE 802.11 Working Group for the July 2024 session.

Please note that all attendees at this session and their affiliations are shown in Annex B.

**Abbreviations:**

A: Answer

C: Comment

Q: Question

TG: Task Group

TIG: Topic Interest Group

SG: PAR Study Group

**IEEE 802.11 Plenary Session #206**

**July 15th – 19th, 2024**

# IEEE 802.11 Opening Plenary, Monday July 15th, 2024

1. **Opening** (Chair Opening Slides: [11-24/0999r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0998-04-0000-2024-july-wg11-agenda.xlsx))

## Call to order

The meeting was called to order by the presiding Chair, Robert Stacey (Intel) at 10:30 Eastern Time (ET) and declared quorum for the session.

## Officer and IEEE SA staff introduction

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

2nd Vice-chair (VC2): Stephen McCann Huawei Technologies Co., Ltd

Secretary: Volker Jungnickel Fraunhofer Heinrich Hertz Institute

IEEE SA Staff present:

* Ian Barbour
	+ Catherine Berger

Are there any members of the press present?

* + None.

There were 174 people attending in person (in the room), 330 (online) and 504 recorded in the attendance tool (IMAT).

Please note that this session requires a registration fee to be paid.

## Decorum

Chair: Please note the information about the meeting decorum.

## Review and approve 802.11 session agenda

This is a summary of the meeting today. Please note the schedule for this session on the separate tab “Schedule Graphic”. There were a couple of updates from yesterday’s Chairs Advisory Committee (CAC) meeting. The chair highlighted the changes for the meeting slots.

a) Tuesday AM1

1. Remove TGbf.

b) Tuesday PM2

2. Change TGbn to TGbn (MAC)

3. Change TGbf to TGbn (PHY)

c) Change the end time for Monday PM2 to 16:00

**Move to approve the agenda** [**11-24-0998r4**](https://mentor.ieee.org/802.11/dcn/24/11-24-0998-04-0000-2024-july-wg11-agenda.xlsx) **for the Monday opening plenary.**

Moved: Marc Emmelmann, 2nd: Marc Hamilton

**No objection to approving by unanimous consent.**

## Review and approve May 2024 WG minutes

**Move to approve the May 2024 WG minutes document** [**11-24-0714r2**](https://mentor.ieee.org/802.11/dcn/24/11-24-0714-02-0000-minutes-working-group-may-2024.docx)**.**

Moved: Stephen McCann, 2nd: Mathew Fischer

**No objection to approving by unanimous consent.**

## New attendees

**Straw Poll: Are you a new attendee to IEEE 802.11?**

Yes: 2 (in the room) and 5 (online)

There will be a New Members meeting this session on Monday July 15th at 13:30 ET in room Salon 7 – Level 3. Everyone is welcome to join this meeting.

1. Announcements
	1. Policies and procedures

(2nd Vice Chair Report: [11-24-1002r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1002-00-0000-2nd-vice-chair-report-july-2024.pptx).)

### Review patent policy (slides 3-7)

The current PatCom rules were read out, including the call for essential patents information, as shown by <https://development.standards.ieee.org/myproject/Public/mytools/mob/patut.pdf>

* + There were no issues raised regarding the call for essential patents.
	+ There were no responses to the call for essential patents. No questions.

### Copyright (slide 8-10)

The current IEEE SA copyright policy slides were presented.

### IEEE SA Participation and Attendance (slides 11-13)

The current IEEE SA meeting participation slides were read.

### IEEE SA Policy Documents (slide 14)

The current IEEE SA policy documents were read.

### IEEE SA Rules Document (slide 15)

The current IEEE SA rules documents were read.

### IEEE 802 Ground Rules (slide 16)

The current IEEE 802 ground rules were read.

### IEEE 802 Rules Documents (slide 17)

The current IEEE 802 rules documents were read.

### IEEE 802.11 Operations Manual (slide 18)

There are proposed changes in the doc. [11-22/1638r4](https://mentor.ieee.org/802.11/dcn/22/11-22-1638-04-0000-802-11-operations-manual.docx) about the operations manual. The 2nd 2nd VC will explain the proposed changes in the Midweek plenary. There will be a Motion to approve those changes.

### Voting rules reminder (slides 19-20)

Remember to record your attendance for this meeting. To achieve 75%, which counts towards an attendance credit for the session, you must attend 12 meeting slots. Take care of loss of voting rights and do your ballots. There is also a reminder about the abstain vote (lack of expertise).

### Email reflectors (slides 21-22)

Email reflectors were explained.

### Posting documents (slides 23-24)

Erroneous documents can be corrected by the 802.11 working group officers. Please, send them an email. Close captioning during Telcos is available now.

### IEEE Event Conduct and Safety Statement (Slide 25-26)

* No questions concerning 2.1.2 to 2.1.12.

## Incoming Liaisons (Chair Opening Report: [11-24-0999r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0999-04-0000-2024-july-working-group-chair-opening-report.pptx))

### New and pending liaisons (slide 4)

Chair: There is 1 new liaison since the May 2024 session, fromETSI ISG F5G on F5G Advanced Use Cases Release 3([11-24/1087r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1087-00-0000-liaison-from-etsi-isg-f5g-on-advanced-use-cases-r3.docx))**.**

## IEEE 802 LMSC and IEEE-SA standard board decisions (slides 5-6)

Chair: These are some items TBD regarding upcoming LMSC meetings (see list on Slides 5+6). ELC study group to LMSC was added.

Logistics and key events/activities (Chair Opening Slides: [11-24-0999r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0999-04-0000-2024-july-working-group-chair-opening-report.pptx))

1. Working group session documents (slide 7)

## Joint meetings & reciprocal credit with IEEE 802 groups (slides 8-11)

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.

* + Please note that 802.18 meets on Tuesday AM2 and Thursday AM1 this week.
	+ Please note that 802.19 meets on MON PM2 and THUR EVE this week (slide 10).

## Session information (Montreal Logistics: [ec-24/0123r0](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0123-00-00EC-montreal-2024-july-802-plenary-things-to-know.pptx))

Meeting Planner, Network Access and Support Information (slides 2-3): There is only 1 SSID this week: “IEEE802”. AV support (slide 4): Please remember not to connect to audio when you are present in the room signed-in to the Webex tool, including those who are running the meetings.

## Meeting room locations ([slide 8](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0123-00-00EC-montreal-2024-july-802-plenary-things-to-know.pptx))

Floor plan is in the slide deck. Please check online room assignment. Breakfast and Lunch is included in your Registration for this meeting (see times on slide 9).

## Meeting registration (slide 5)

There are also QR codes on the back of your badges that provide more information that guides you to the program online.

## Recording of attendance (slides 6-7)

Newcomers orientation (slide 6). Reminder for Newcomers to join Orientation sessions. Schedule of meetings and attendance. Please remember to record your attendance in IMAT for each meeting you attend. Also remember to pay your registration fee for this session.

## Local file server access (slide 3)

## Breakfast, breaks, social logistics (slide 9 -10)

There is a Social on Wednesday evening (Slide 10) in the TimeOut Market Montreal. If you have a ticket and don’t use it, give it to someone else, there is no refund.

## Visa issues (1st Vice Chair)

IEEE has no influence on Canadian government. Meeting Planners and officers did what they could do. Please use a legitimate email address when registering. Please allow sharing your personal information, otherwise, it cannot be forwarded to Government authorities. Spell all names correctly. If these conditions are not met, then a Visa may not be issued. Please provide accurate and complete information when completing your registration.

## Local information (slides 11-13)

No questions.

1. Opening reports, activities and plans (Chair Opening Report: [11-24-0999r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0999-04-0000-2024-july-working-group-chair-opening-report.pptx))

## Working group reports

### 802.11 groups

 Chair introduces the IEEE 802.11 subgroups.

### PARs (slide 13)

Chair explains the TGbf PAR extension is on July LMSC agenda.

### 802.11 appointed officers (slide 14-15)

Reflects the changes due to elections in May.

C: Slide 15: Please change Peter Yee 🡪 Jay Yang (done in [11-24/0999r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0999-04-0000-2024-july-working-group-chair-opening-report.pptx)).

### Standards pipeline and 802.11 revisions (slides 16-17)

Chair mentioned 802.11 history. The next baseline standard IEEE 802.11-2024 should be finished this year, produced by the TGme group. Next slide shows where in the standards production process the different projects are. Chair points out the status of each project.

### Summary of ballots and comment collections (slide 18)

Chair went through them.

### Membership summary (slides 19-23)

Current status of voting members (slide 19). 802.11 has currently 572 Voters, 64 Potential voters, 111 aspirants, and 9 Ex Officio Voters. After this plenary meeting, there will be above 600 Voters. The Chair mentioned the designation of individual experts during this meeting

* Rosario Garroppo, University of Pisa, WNG Tue AM1
* Sumit Roy, sroy@uw.edu, WNG Tue AM1 or PM2
* Hao Yin, haoyin@uw.edu, WNG Tue AM1 or PM2
* Tom Henderson, tomh@tomh.org, WNG Tue AM1 or PM2

### WG timeline report / planning

The 2nd Vice Chair opened the official 802.11 timelines available: <https://www.ieee802.org/11/Reports/802.11_Timelines.htm> TGbh ballot results are already included. TG Chairs, please, review the charts and update if necessary.

(Following reports are contained in Snapshot Slides: [11-24/1147r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1147-01-0000-july-2024-snapshot-slides.pptx))

### WG Technical Editor (slide 3)

Editors’ meeting on TUES 7:00-8:00 a.m. Agenda in [11-24/1254](https://mentor.ieee.org/802.11/dcn/24/11-24-1254-02-0000-july-2024-editors-meeting.pptx).

The Amendment alignment will be continued. 11bk/D2.0 MDR/MEC was completed.

### WG ANA report (slide 4)

ANA number spaces, latest database is [11-11/0270r73](https://mentor.ieee.org/802.11/dcn/11/11-11-0270-73-0000-ana-database.xls), changes since May 2024 for TGme were noted (Slide 4).

## Standing committee reports

### AIML SC (slide 5)

Meeting TUES AM2, Agenda in [11-24/0955](https://mentor.ieee.org/802.11/dcn/24/11-24-0955-00-aiml-aiml-sc-july-2024-montreal-agenda.pptx).

Group to consider additional use cases as well as additional feasibility and technical studies on existing ones.

### ARC SC

Meetings TUES AM1, THUR AM1, Agenda in [11-24/0988](https://mentor.ieee.org/802.11/dcn/24/11-24-0988-02-0arc-arc-sc-agenda-july-2024.pptx).

 802 revision project updates. Annex G: Way forward. Liaisons from WBA on QoS, and L4S. List of other discussion items on slide 7.

### Coex SC

2 Meetings TUES PM1, WED AM2. Agenda in [11-24/0970](https://mentor.ieee.org/802.11/dcn/24/11-24-0970-03-coex-coex-sc-agenda-july-2024.xlsx).

In addition, there is a joint meeting with the 802.15.4ab TG on TUES EVE 19:30-21:30. Contributions are listed on slide 9.

### PAR SC

Meetings: MON PM1, TUES AM1. Agenda in [11-24/1056](https://mentor.ieee.org/802.11/dcn/24/11-24-1056-02-0PAR-par-review-sc-mtg-agenda-and-comment-slides-2024-july-montreal.pptx).

Feedback to 802LMSC reflector by TUES 18:30, Feedback to be reviewed in Meeting on THUR AM2. There are a large number of PARs considered this week, see slide 10. Order of handling these PARs per meeting is according to slide 10. Send comments to the SC Chair to make our PARs better.

### WNG SC

2 Meetings on TUES AM1 and TUES PM2, Agenda [11-24/0983r1](https://mentor.ieee.org/802.11/dcn/24/11-24-0983-01-0wng-agenda-for-wng-sc-2024-july.pptx).There are 6 presentations this week.

“ns-3  Rel-42/43  Wi-Fi Model Updates and Network Simulations,” H. Yin, S. Roy and T. R. Henderson (University of Washington) [11-24/1139r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1139-01-0wng-ns-3-rel-42-43-wi-fi-model-updates-and-network-simulations.pptx)

"Post-Quantum 802.11,“ Dan Harkins (HP Enterprise) [11-24/1103r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1103-00-0wng-post-quantum-802-11.pptx)

“Co-Existence of Wi-Fi with Narrowband Technology,” Stone Liu (Carleton University) [11-24/1059r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1059-02-0wng-co-existence-of-wi-fi-with-narrowband-technology.pptx)

“Automotive-TIG-Proposal,” Azin Neishaboori (General Motors) [11-24/1062r3](https://mentor.ieee.org/802.11/dcn/24/11-24-1062-03-0wng-automotive-tig-proposal.pptx)

“Enhancing Wi-Fi Privacy: A Focus on Frame Anonymization Techniques,” (University of Pisa) [11-24/1234r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1234-00-0wng-analysis-of-frame-anonymization-techniques.pptx)

“Proposal on data offload using WLAN in connected vehicle case,” Jing Ma (Toyota) [11-24/1134r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1134-01-0wng-proposal-on-data-offload-using-wlan-in-connected-vehicle-case.pptx)

### JTC SC1

One Meeting TUES PM1. Agenda in [ec-24/0148](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0148-00-00EC-ieee-802-lmsc-annual-review-of-subgroups-ieee-802-11-working-group.pdf).

There are still IPR issues with several 802.11 documents in ISO. Status table in slide 13. 155 standards are in the PSDO pipeline.

## Task Group reports

### TGme (slide 15)

6 Meetings MON PM2, TUES AM2, TUES PM2, WED AM2, WED PM2, THUR PM2, Agenda in [11-24/0985](https://mentor.ieee.org/802.11/dcn/24/11-24-0985-05-000m-revme-agenda-july-2024-session.pptx).

92% approval with 257 comments (155 T, 94 E, 8 G). Objectives: Complete comment resolution against D6.0. Approve SA ballot for D7.0, planned to be the last draft. Request conditional approval of D7.0 to REVCOM.

### 4.3.2. TGbe (slide 16-17)

 Meetings: MON EVE, TUES AM2, Agenda in [11-24/0974](https://mentor.ieee.org/802.11/dcn/24/11-24-0974-06-00be-tgbe-july-2024-meeting-agenda.pptx).

Delivered TGbeD6.0. Started and closed 1st recirc. SA ballot: 92% approval rate, 180 comments. Held 5 telcos for comment resolution on D6.0 between May and July, 90% are resolved, 20 comments are left. Target for July is to resolve all comments and initiate 2nd recirc. SA ballot on TGbe D7.0. Seek conditional approval to forward to RevCom.

### TGbf (slide 18-19)

5 Meetings: MON AM1, TUES AM1, WED AM1 & AM2, THURS AM2. Agenda in [11-24/1001](https://mentor.ieee.org/802.11/dcn/24/11-24-1001-08-00bf-tgbf-meeting-agenda-2024-07-plenary.pptx).

 Initial SA ballot: 90% approval, 209 comments. Two telcos between May and July. 45% of comments are resolved. Continue comment resolution and develop the draft.

### TGbh (slide 20)

5 Meetings: MON PM1, TUES PM1 & EVE, THUR AM2 & PM1, Agenda in [11-24/0987](https://mentor.ieee.org/802.11/dcn/24/11-24-0987-10-00bh-agenda-tgbh-2024-july-session.pptx).

Initial recirc SA ballot had 90% return, 91% approval rate, 209 comments. 1st recirc. Ballot passed: 88.2% return, 91,5% approval, 115 comments.

Objectives: Complete comment resolution on 1st recirc. ballot, Approve 2nd recirc. ballot. Prepare conditional approval to submit to RevCom. Plan telcos if needed.

### TGbi (slide 21)

5 Meetings: MON AM1, TUES AM2 & PM2, WED PM2, THUR AM1, Agenda in [11-24/1014](https://mentor.ieee.org/802.11/dcn/24/11-24-1014-05-00bi-july-tgbi-plenary-agenda.pptx).

 524 comments from comment collection. Begin comment resolution. Accept text submissions to issues not yet addressed.

### TGbk (slide 22-24)

Meetings: MON PM2, TUES AM1, TUES PM1, Agenda in [11-24/0945](https://mentor.ieee.org/802.11/dcn/24/11-24-0945-04-00bk-tgbk-july-meeting-agenda.pptx).

First re-circ LB286 completed with 123 comments. 77 ready for Motion, 6 await review. Include MDR review comments.

 Goal is 2nd recirc out of the meeting. Move to SA in September.

### TGbn (slide 25-26)

17 Meetings: MON AM1 (PHY/MAC), MON PM1 (ALL), MON PM2 (PHY/MAC), WED AM1 & AM2 (PHY/MAC), THUR AM1 & AM2 (PHY/MAC), THUR PM1 & PM2 (ALL), Agenda in [11-24/0976](https://mentor.ieee.org/802.11/dcn/24/11-24-0976-13-00bn-tgbn-july-2024-meeting-agenda.pptx).

There have been 10 teleconferences since May 2024 covering 40 technical submissions. Presentation of technical submissions is ongoing, there are about 180 are in the queue. Continue populating SFD with approved concepts.

### TGbp (slide 27)

6 Meetings: MO AM1 & PM1, TUES AM2, WED AM1, THUR AM1 & PM1, Agenda in [11-24/1066](https://mentor.ieee.org/802.11/dcn/24/11-24-1066-06-00bp-tg-bp-meeting-agenda-for-jul-plenary-2024.pptx). Goal is TGbp selection procedure. Have open technical discussion.

## Study Group, Technical Interest Group, Ad-hoc Group reports

### IMMW SG (slide 27)

2 Meetings: TUE PM2, WED PM2. Agenda in [11-24/0996r2](https://mentor.ieee.org/802.11/dcn/24/11-24-0996-02-immw-immw-sg-july-2024-meeting-agenda.pptx).

Goal is to approve PAR and CSD documents and present one submission.

### ITU ad-hoc

One Meeting: THUR PM2, Agenda in [11-24/1135r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1135-02-0itu-itu-ahg-agenda-for-july-2024-plenary.pptx).

Had no meeting since March. Slide 29 summarizes recent activity. Update on Coex. Liaison statement to ITU-R WP 5A. Discuss contribution for next WP5A Meeting in November. Next steps: WP5A next meeting November 18-29, 2024.

1. Announcements (Chair’s Opening Report : [11-24-0999r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0999-04-0000-2024-july-working-group-chair-opening-report.pptx))

The 9th Joint IEEE 802/ITU-T SG15 Workshop was held Saturday July 13, 2024 (slide 24)

Agenda

* + - Opening Remarks
		- Session 1: Exploration of Optical PHYs Addressing 800 Gb/s and Beyond
		- Session 2: Access and In-Premises Networks ​
		- Session 3: Synchronization and TSN
		- Session 4: YANG and Data Modelling
		- Wrap-up, Takeaways, Closing

Summary of the workshop is [here](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0160-00-INTL-joint-ieee-802-itu-t-sg15-workshop-summary.pptx). A recording of the session is available [here](https://itu.zoom.us/rec/play/B1Aw-5c9oHgqeE_n9iK9xy0B176xB22vCYqipQ7dtKe0-LLO_dIm8ZlLRJXQKvtTTb58AggZZmJSLZd5.aNxFtC1jxX2DROd8?canPlayFromShare=true&from=share_recording_detail&continueMode=true&componentName=rec-play&originRequestUrl=https%3A%2F%2Fitu.zoom.us%2Frec%2Fshare%2FZNaHPaDsOJrULnevGZWB_twt-72YpNYhp1hRjNHdlPoZ2PnUV99W9rQudTMBwPma.oRLlhASh5GcFeV9L).

1. Recess

Chair: We are now in recess.

The meeting recessed at 11:59 ET.

# IEEE 802.11 Mid-week Plenary, Wednesday, July 17th, 2024

1. Opening

##  Call to order

 Meeting was called to order at 13:32 ET by the Chair, Robert Stacey (Intel).

##  Officer and IEEE SA staff introduction

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

2nd Vice-chair (VC2): Stephen McCann Huawei Technologies Co., Ltd

Secretary: Volker Jungnickel Fraunhofer Heinrich Hertz Institute

IEEE SA Staff present:

* Ian Barbour
* Catherine Berger

There were 118 attending in person (in the room) and 490 recorded in the attendance tool (IMAT).

##  Review and approve/modify working group agenda ([11-24-0998r5](https://mentor.ieee.org/802.11/dcn/24/11-24-0998-06-0000-2024-july-wg11-agenda.xlsx))

Chair: There have been some schedule changes to the agenda since the opening plenary.

Released slots: IMMW to release WED PM2.

New slot assignments: TGbn MAC & PHY to WED PM2, TGbp WED PM2, TGme THUR PM1. TGbn (PHY/MAC) THUR AM1.

**Approve the agenda for today’s meeting as shown in (**[**11-24-0998r5**](https://mentor.ieee.org/802.11/dcn/24/11-24-0998-06-0000-2024-july-wg11-agenda.xlsx)**)**

Moved: Al Patrick, 2nd: Richard Kennedy

**No objection to approving by unanimous consent.**

1. **Announcements** ([11-24-1000r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1000-01-0000-2024-july-working-group-chair-supplementary-material.pptx))

## Policies and Procedures (slides 4-8)

The Chair reminded the group about the Code of ethics and conduct and the IEEE-SA Standards Board Bylaws.

## **Call for essential patents** (slide 9)

**The Chair read the Call for Essential Patents. No statements were made.** No questions.

## Meeting decorum (slide 10)

The Chair reminded the group about the Code of ethics and conduct and the IEEE-SA Standards Board Bylaws.

##  Session-specific additional designated experts (slide 11)

The Chair introduced the designated experts attending this meeting. These individual experts attend electronically for a specific purpose/presentation and can be designated as such by the WG Chair and receive a registration fee waiver and limited attendance rights. There are now 4 such experts as shown on the slide.

##  Announcements (slide 12)

The 1st Vice Chair reminded about the Social Event ([July-802-Plenary-Things-to-Know](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0123-00-00EC-montreal-2024-july-802-plenary-things-to-know.pptx)) this evening. All should picked up badges by now. Go to the desk if you do not have it. Just 800 meters walk to the TimeOut Market. Reminder that food is provided for you as attendee, not for extra guests. Please consume responsibly.

## WG11 Overview material

The Chair presented the WG11 overview material.

## Timeline reminder (slide 11)

The 2nd Vice Chair reminds the subgroup chairs to update the timelines after Thursday CAC.

1. Liaison reports

## External liaisons

### Wi-Fi Alliance ([11-24-1152r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1152-00-0000-wi-fi-alliance-wfa-liaison-july-2024-update.pptx))

WFA celebrated its 25th anniversary in Austin, TX on May 21-23. Link to meeting reports is on slide 3. Next meeting is October 15-17, 2024, in Malaga, Spain. Activities: Finished Wi-Fi 7, QoS Mgmt., Easy-Mesh, Activities that are expected to lead to certification: Wi-Fi 7 R2, 6 GHz standard power, Wi-Fi Direct, Wi-Fi proximity ranging (slide #4). Additional technical work areas: Security, Automated Frequency Coordination, Customer Experience, EasyConnect, EasyMesh, QoS Management, Wi-Fi HaLow, Wi-Fi Data Elements, Wi-Fi Aware, Automotive, Health, IoT, Operators, XR (slide 5), recent publications (slide 6), further information (slide 7).

### IETF ([11-24-1279r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1279-01-0000-july-2024-liaison-to-ietf-report.pptx))

Next meeting will be next week in Vancouver in 20-26 July 2024. November 2-8 Dublin. Joint meetings, agenda and presentation, RFC8110 was highlighted. RFC 9575 in “DRIP Entity Tag (DET) Authentication Formats and Protocols for Broadcast Remote Identification (RID)” (slide 5). Birds-of-a-feather (BOF) groups at IETF 120, 20-26 July, 2024. Several IETF groups being (re-) chartered that may have an impact on IEEE 802.11. Yet Another Next Generation (YANG) model catalog, references (slide 8). IoT-related work: 6LO, Updates, IPv6 over OWC (802.15.7), ROLL, CORE (slides 10-11). MAC Address Device Identification for Network and Application Services (MADINAS) WG is related to 802.11bh (slide 11). Extensible Authentication Protocol (EAP) Method Update (slide 12). Operations Area Working Group (slide 13). Internet Area WG (slide 14). Transport Layer Security (TLS) 1.3 revised (slide 15). Deterministic Networking (DETNET): 802.11be work fits into their context. Requirements for reliable wireless industrial services (slide 16). Automated Networking Integrated Model and Approach (ANIMA, slide 17).

Q: Clarification related to OWA (last point on slide 17).

C: (moved here from AoB): The MADINAS WG is reaching end of life, it will not be meeting at IETF 120 next week. 2 WG documents are currently going through the last steps of the process before publication. Since the work relates to 802.11bh and 802.11bi, I encourage 802.11 members to read and provide comments or support the documents on the IETF MADINAS mailing list, where anyone can participate.

### Wireless Broadband Alliance ([11-24/1268r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1268-01-0000-wba-liaison-update.pptx))

Seamless and interoperable services via Wi-Fi (slide 2). WBA Organization (slide #3). Went through Focus Areas (slide 4). Technical Activities Roadmap for 2024: 5G, IoT, NextGen, Roaming, OpenRoaming, Testing&Interoperability., Policy and regulatory affairs , Market, Certification, Innovation Forum, Connected Communities, Enterprise (slide 5). Further information (slide 6).

C: The WBA, Wi-Fi HaLow for IoT field trials report became publicly available last week. <https://wballiance.com/wi-fi-halow-for-iot-field-trials-report>.

## Internal (802) liaisons

### IEEE 802.15 Wireless Specialty Networks WG

See 802.15 report in Friday Closing.

### IEEE 802.18 Regulatory WG ([11-24/0993r0](https://mentor.ieee.org/802.11/dcn/24/11-24-0993-00-0000-802-18-liaison-report-july-2024.pptx))

This document summarizes the discussion topics within IEEE 802.18 meetings, especially those that are relevant to 802.11. 802.18 has 57V, 10NV, 12 ASP. Officer introduction (slide 2). Reviewed latest ongoing consultations, approved IEEE 802 LMSC submissions with 4 regions, discussed latest topics related to spectrum and regulation in Europe, North America and Asia Pacific (slide 3), Review 3 incoming documents from CEPT ECC, Canada RABC, EU RSPG (slide 4), One invited presentation from Steve Leach (OFCOM) on “Hybrid Sharing on the upper 6 GHz band”.

### IEEE 802.19 Coexistence WG ([11-24/1266r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1266-01-0000-802-19-wg-july-2024-liaison-report.pptx))

This document summarizes the discussion topics within IEEE 802.19 meetings, especially those that are relevant to 802.11. Group reviews coexistence assessment documents (CADs) for new wireless standards in unlicensed bands and develops standards for coexistence among these standards. Officers are introduced (slide 2). 802.15.4ab CAD ballot was not approved (11Y, 10N, 0A, 39 comments). 802.19.3a Task Group focusing on coexistence between 802.11 and 802.15.4 sub-1 GHz. Observed significant changes in the utilization of the 900 MHz spectrum in Japan between 2019 and 2024 (see 19-24/0024r0).

### Technical Plenary ([11-24/1311r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1311-00-0000-802revc-status-july-2024-update.pptx))

This document provides a summary of discussions and decision during the 802.11 ARC meetings and the 802.1 802REVc meetings related to comment resolution and technical discussions related to P802REVc. REVc PAR was approved in 2022 Status now is that WG ballot is completed, and SA ballot started D2.0 closed 15 July 2024. Target is RevCom in September and publish in December 2024 (slide 3). ARC SC met 16 July AM1, 802Revc met 15 July PM1 and 17 July AM1 comment document is now available and under discussion (slide 4). Comment status (slide 5). Next steps electronic meeting on July 20 10:00-11:30 EDT. No plans to meet for ARC. (02.11 will be informed when recirc starts. Comments are welcome (slide 6).

### What’s up with the RAC? ([ec-24/0174r0](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0174-00-00EC-what-s-up-with-the-rac.pdf))

Registration Authority Committee (RAC) shall oversight all RAC activities referenced in IEEE standards (slide 2). IEEE Standards Board Operations Manual, mandatory coordination if there is registration activity (slide 3). RAC considers standard user’s long-term interests. RAC membership list (slide 5), Marc Holmes will step down, IEEE needs to find follower. 12 registries currently existing, 6 directly applicable to IEEE 802: MAC address blocks, Group MAC address, CID, EtherType, LLC, 802.16 OP ID. IEEE is exclusive registration authority for ISO /IEC 8802 (slide 6). RAC Activities: Mandatory Coordination, Maintenance and update of registries. One in-person meeting per year, usually at IEEE 802 plenary, occasional ad-hoc meetings (slide 7). Thought on participation: Much work needs to be done.

C: 1st Vice Chair reminds the membership that there are positions that can be appointed. If you are interested, please, let the leaders know.

1. New Business ([11-24/0993r0](https://mentor.ieee.org/802.11/dcn/24/11-24-0993-00-0000-802-18-liaison-report-july-2024.pptx))

##  Review of IEEE 802.11 Operations Manual Update ([11-22/1638r3](https://mentor.ieee.org/802.11/dcn/22/11-22-1638-03-0000-802-11-operations-manual.docx))

2nd Vice Chair walks the group thorough changes suggested. Generally reviewed and updated after leadership change, last time 2022, due to Pandemic. Factual changes: Names, reference, links, errors. Not changed any operation rules in 802.11. Thanks to several people from WG for their contributions. Motion to approve these changes, will be in the Closing Plenary on Friday.

Changes in detail: Revision history (page 3), References, Abbreviations added, c.f. SG = PAR study group, Vote shall be taken using anonymous voting tool (page 16).

Q: (hard to understand)

C: Suggest using SI units.

A: Out of scope.

C: Change units on page 20.

A: Discussion on formatting.

C: The update improves several details. However, why don't we use IEEE style references which would be numbers, e. g. [1] instead of [rules1]?

A: Suggestion clear, taken.

C: Please review before Friday this week!

Chair explains the use of Direct Vote Live.

## Motion 1: P802.11bk Re-circulation Letter Ballot ([11-24/0995](https://mentor.ieee.org/802.11/dcn/24/11-24-0995-04-0000-july-2024-working-group-motions.pptx))

**Having approved comment resolutions for all of the comments received from LB286 on P802.11bk D2.0 as contained in documents** [**11-24-754r5**](https://mentor.ieee.org/802.11/dcn/24/11-24-0754-05-00bk-lb286-comments-on-d2-0.xlsx)**,** [**11-24-951r1**](https://mentor.ieee.org/802.11/dcn/24/11-24-0951-01-00bk-lb286-cr-part-1.docx)**,** [**11-24-958r2**](https://mentor.ieee.org/802.11/dcn/24/11-24-0958-02-00bk-lb286-cr-part-2.docx)**,** [**11-24-1073r1**](https://mentor.ieee.org/802.11/dcn/24/11-24-1073-01-00bk-lb286-editorial-comment-resolutions.xlsx)**,** [**11-24-966r4**](https://mentor.ieee.org/802.11/dcn/24/11-24-0966-04-00bk-lb286-comment-resolution-for-emlsr-related-cid-2056.docx)**,** [**11-24-954r4**](https://mentor.ieee.org/802.11/dcn/24/11-24-0954-04-00bk-proposed-resolutions-to-11bk-lb286-cids-on-passive-ranging.docx)**, and** [**11-24-1080r1**](https://mentor.ieee.org/802.11/dcn/24/11-24-1080-01-00bk-lb286-comment-resolution-cid-2003.docx)**, instruct the editor to prepare D3.0 incorporating these resolutions and, approve a 15 day Working Group Recirculation Ballot asking the question “Should P802.11bk D3.0 be forwarded to SA Ballot?”**

Moved by Jonathan Segev on behalf of TGbk

(TGbk result: Moved: Christian Berger, 2nd: Roy Want, Result: 9/0/0)

 Results: Yes: 180 No: 1 Abstain: 16

**Motions passes.**

## Motion 2: P802.11bq PAR approval ([11-24/0995](https://mentor.ieee.org/802.11/dcn/24/11-24-0995-04-0000-july-2024-working-group-motions.pptx))

**Believing that the PAR contained in the document referenced below meets IEEE-SA guidelines, request that the PAR contained in** [**https://mentor.ieee.org/802.11/dcn/24/11-24-1312-01-immw-draft-p802-11bq-par.pdf**](https://mentor.ieee.org/802.11/dcn/24/11-24-1312-01-immw-draft-p802-11bq-par.pdf) **be posted to the IEEE 802 LAN/MAN Standards Committee (LMSC) agenda for WG 802 preview and LMSC approval to submit to NesCom.**

Moved by Laurent Cariou, Seconded by Volker Jungnickel

(IMMW SG result: Moved: Abhishek Patil, 2nd: Ming Gan, Result: 137/33/28)

Results: Yes: 183 No: 15 Abstain: 23

**Motion passes.**

Q: How many comments the other working groups provided you got.

A: (Chair): Wrong question. Goes to the LMSC only.

C: Chair explains the editorial change in the pdf.

## Motion 3: P802.11bq CSD Approval Motion ([11-24/0995](https://mentor.ieee.org/802.11/dcn/24/11-24-0995-04-0000-july-2024-working-group-motions.pptx))

**Believing that the CSD contained in the document referenced below meets IEEE-SA guidelines, request that the CSD contained in** [**https://mentor.ieee.org/802.11/dcn/24/11-24-0549-05-immw-immw-draft-proposed-csd.docx**](https://mentor.ieee.org/802.11/dcn/24/11-24-0549-05-immw-immw-draft-proposed-csd.docx) **be posted to the IEEE 802 LAN/MAN Standards Committee (LMSC) agenda for WG 802 preview and LMSC approval to submit to NesCom.**

Moved by Laurent Cariou, Seconded by Volker Jungnickel

 (IMMW SG result: Moved: Abhishek Patil, 2nd: Tian Bin, Result: 141/29/18)

Results: Yes: 179 No: 11 Abstain: 27

**Motion passes.**

C: Date change in the document. Chair changed some editorial issues. R5 is correct.

Q: Can you check in the tool how I voted.

A: No way, it is anonymous. But you may be able to check it yourself.

## AoB

Comment related to IETF liaison report (moved to 3.1.3).

1. Recess

Chair: We are now in recess.

Meeting recessed at 15:17 ET.

# IEEE 802.11 Closing Plenary, Friday, July 17th, 2024

1. Opening

## Call to order

Meeting was called to order at 8:03 ET by the Chair, Robert Stacey (Intel).

## Officer and IEEE SA staff introduction

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

2nd Vice-chair (VC2): Stephen McCann Huawei Technologies Co., Ltd

Secretary: Volker Jungnickel Fraunhofer Heinrich Hertz Institute

IEEE SA Staff present

* Ian Barbour
* Catherine Berger

There were 98 people in the meeting (in the room) and 306 recorded in the attendance tool (IMAT).

## Review and approve working group agenda (July WG 11 agenda [11-24-0998r6](https://mentor.ieee.org/802.11/dcn/24/11-24-0998-06-0000-2024-july-wg11-agenda.xlsx))

Chair: There have been some minor changes to the agenda since the mid-week plenary.

**Approve the agenda for today’s meeting as shown in** [**11-24-0998r6**](https://mentor.ieee.org/802.11/dcn/24/11-24-0998-06-0000-2024-july-wg11-agenda.xlsx)**.**

Moved: Al Petrick, 2nd: Hiroshi Mano

**No objection to approving by unanimous consent.**

1. **Announcements** (WG Chair’s Supplementary Material [11-24-1000r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1000-01-0000-2024-july-working-group-chair-supplementary-material.pptx))

##  Policies and procedure reminder (slides 14-16)

The Chair went through participant behavior, code of ethics & conduct and IEEE standards bylaws. Please, can you all remember these slides and understand that everyone is here as an individual subject matter expert.

##  Call for Essential Patents (slide 17)

This is the Call for Essential Patents. No statements. No questions.

##  Meeting Decorum (slide 18)

No questions.

##  Next session and CAC meetings (slide 19)

The next session of the IEEE 802.11 working group is from September 8-13, 2024, in the Hilton Waikoloa Village, Waikoloa. It will be a mixed mode session in Waikoloa, HA, USA. Please be aware of the chair’s committee meetings (CAC), the first one of which will be on August 5, then on August 26, both at 09:00 ET. Please note the deadline for the sub-group agendas.

##  Designation of experts (slide 20)

Chair: There have been no changes to this slide since Wednesday. No questions.

##  Minutes reminder

Secretary: Please can all sub-group chairs remember that their minutes should be posted to the server within 30 days of the completion of this session. No questions.

##  Letters of Assurance (LoA) received (slide 21)

There is a link to the PatCom list of LoAs. The following 2 LoAs have been requested. No questions.

##  Drafts for sale in IEEE Shop (slide 22)

This is the current list of items available in the IEEE store, what drafts are in the members area and published by 802 and ISO.

##  Drafts to liaise with ISO/JTC/SC6 (slide 23)

Recently published: IEEE Std 802.11-2020 as ISO/IEC/IEEE 8802-11:2022.

Submitted under PSDO: 802.11ax-2021 (June 1, 2021), 802.11ay-2021 (July 30, 2021), 802.11ba-2021 (pending).

In ballot process: 802.11ax-2021.

Sent for information: IEEE P802.11bb D4.0, IEEE P802.11bc D4.0. No questions.

## Press release/social media (slide 24)

There was an IEEE livestream on 802.11ah in April 2024. No questions.

## IEEE 802 Public Visibility Standing Committee (slides 25-27)

This group is designed to increase the external visibility of IEEE 802. Here are the links to the main Twitter <https://twitter.com/ieee802>, LinkedIn <https://www.linkedin.com/company/ieee802> and IEEE-SA 802 <https://standards.ieee.org/featured/802/index.html> pages which are regularly updated.

Recent activities include: IEEE Computer Society webinar about IEEE 802.11be (Wi-Fi 7) on July 30, 2024, to register <https://lnkd.in/eR6Z2TiN>, IEEE SA IEEE 802.11ah HaLow webinar: 20 June 2024, to watch: <https://lnkd.in/ddpSWaQa>, Recording of the latest IEEE 802 – ITU Workshop: <https://lnkd.in/d3zK8mcQ>. There is also an open a call for papers for IEEE Conference on Standards for Communications and Networking (CSCN) from 25–27 November 2024 in Belgrade, Serbia. Submissions deadline is 15 September 2024. No questions.

1. Closing reports

## Working group reports

### Treasurers report ([ec-24-0007r5](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0007-05-WCSG-wireless-treasurer-report-2024.pptx))

802.11 Treasurer: This shows the treasurers’ report and is correct as of July 14th, 2024. All of the income from the Panama session (January 2024) has now been accounted for.

The Warsaw meeting income and expense are still pending. Slide 5 gives an overview of income and expenses for recent meetings. Again, please, remember to pay your registration fees for our sessions. Regarding deadbeats, there is 1 new name that was added to the list, as a result of the January 2024 session. The deadbeat document is in [ec-22-0247r9](https://mentor.ieee.org/802-ec/dcn/22/ec-22-0247-09-00EC-deadbeat-list.pptx). Registration and balance for January/May (slides 6-11): There was a deficit for the May 2024 meeting, but this is balanced by the gain from the January 2024 meeting. For September in Waikoloa (slides 12-13), we have got 424 registrations so far (249 in person). Based on expected registrations, a deficit is predicted. There is a host and sponsor for the January 2025 in Kobe/Japan and we would like to express our thanks to Hiroshi Mano for his help. The May 2025 meeting will now be in Warsaw, as opposed to Prague. The current budget predictions are available on slides 15-16. The account is operating well at the moment and the expenditure on sessions has averaged out over the last years. Over 4 years, there is a positive balance (slide 19). Projected 802W Interim session fees for 2025 remain the same as 2024 (802 WC SC Motion on Slide 21). There have been over 1000 people registered for this session in Montreal that was slightly higher than initially expected. No questions.

### July 2024 Venue Straw Polls ([11-24-0995r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0995-04-0000-july-2024-working-group-motions.pptx) - slide 8)

Only people present in the room were asked to participate in the following straw polls:

1. How many people would like to come back to this venue? 68Y/2N
2. Did you go to the social? 50Y/28N
3. If you attended the social, did you like the social? 39Y/4N

C: I think this was an excellent event for socialization. It was very good.

 Q: How many people had visa issues this week?

A: There have been several, but I’m unable to provide exact numbers at the moment, Fortunately, we have managed to avoid a fine from the hotel for not completely filling the room block. Following an audit with the hotel, we found that we had sufficient in-person attendance that stayed in the hotel. Remember that we need to make plans 3 years before a meeting, so we never know what the geo-political situation will be at the time of a particular session.

A: Regarding Canadian visas, there were issues with the documentation including miss-spelled names, email addresses and also not allowing the organizers to share your information. GDPR (issue) and IEEE rules are very strict about the privacy of information. Please enter valid information on all these forms and documentation.

Q: Can we choose a visa free venue, such as China?

A: We would like to visit China again, but geo-political issues are difficult.

C: It would be useful to choose venues which do not have visa issues for the international community.

A: We do try and take these issues into account.

### Future Venues Insight ([ec-24-0006r8](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0006-08-WCSG-ieee-802wcsc-meeting-venue-manager-report-2024.pptx))

Slide 3-4 shows the status of the future plenary venues. Slide 5-6 show the status of future interim venues. For the September 2024 meeting in Waikoloa, the room block is now 99% full with 244 people. Unfortunately, there are other room blocks, which have been sold by the hotel at the same time to other organizations. The Ocean Tower is now part of the Hilton Vacation Club, so they are available but at an independent room rate and are not subject to the IEEE 802 interim registration discount. Another possibility is to consider Airbnb or Condos in the immediate Waikoloa area. If you have an issue with a room for September, please, can you contact Lisa or Dawn at Face-to-Face. There is a waiting list for released rooms in case of changes (see slide 8 for more information).

C: On the registration website, the hint about obtaining a room first should be highlighted.

C: I would like to thank Jon for working on all this.

### Timeline update

2nd Vice Chair: There will be some small updates to a couple of task groups and a new row for TGbi and TGbk. These will be reflected in the timeline chart shortly <https://www.ieee802.org/11/Reports/802.11_Timelines.htm>. No questions.

### Attendance report ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx))

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 and the March 2024 was a historic high for IEEE 802.11. Regarding subgroup participation, there is a clear focus on mainstream projects TGbe and TGbn, besides WNG and IMMW SG. There is also substantial interest in the new TGbp. No questions.

### Editors report ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx), slides 7-25)

Held one meeting. Drafts progressed as follows (slide 10):

* 11bh – D5.0: Received 115 comments and work on comment resolution and plan to recirc D6.0 out of the July meeting.
* 11be – D6.0: Received 160 comments and work on comment resolution and plan to recirc D7.0 out of the July meeting, which will be based on REVme D6.0 and 11bh 5.0.
* 11bk –D2.0: Completed MDR/MEC and expect to complete and go to WG recirc on D3.0 out of the July meeting.
* 11bf – D4.0: received 207 comments on the initial SA ballot and plan to recirc SA ballot out of Sept meeting.
* 11bi – D0.4: is available, received 507 comments on CC and plan to have D0.5 by the end of the week.
* REVme – D6.0: 257 comments received on the second recirc SA Ballot on D6.0. Plan to go SA recirc D7.0 out of the July meeting.
* Amendment ordering is the same as in May.
* For an overview of ANA numbers, see slide 17.

## Standing committee reports

### AI/ML SC ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx), slides 26-28)

Held one meeting. Agenda in [11-24/955](https://mentor.ieee.org/802.11/dcn/24/11-24-0955-00-aiml-aiml-sc-july-2024-montreal-agenda.pptx). Straw poll and Motion booklet in [11-24/765r1](https://mentor.ieee.org/802.11/dcn/24/11-24-0765-01-aiml-aiml-sc-motion-booklet.pptx). Minutes in [11-24/1325r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1325-00-aiml-aiml-sc-july-2024-plenary-meeting-minutes.doc).

One technical presentation on “ML-aided CSI Quantization for smooth beamforming”.

Plans for September: No telcos. Call for technical presentations on additional results, exploration and feasibility for existing use cases, additional AIML use cases, technical report drafts.

### Architecture SC ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx), slides 29-33)

Held one meeting. Agenda in [11-24/0988r2](https://mentor.ieee.org/802.11/dcn/24/11-24-0988-02-0arc-arc-sc-agenda-july-2024.pptx). Minutes in [11-24/1021r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1021-00-0arc-arc-sc-mixed-mode-minutes-july-2024-plenary.docx).

Received report on the P802REV activities. Started to resolve SA ballot comments. Completed resolutions were to the satisfaction of the 802.11 representatives. SA recirc continues.

Future activities: EPD and LPD terms are going away –update 802.11 to align. 802.1AC mapping from ISS to 802.11 MAC SAP interface. Open questions list on slide 27.

Plans for September: Monitor results of IEEE P802REVc recirc. Start progress on EPD/LPD clean-up. Continue Annex G replacement phase 2. Continue WBA E2E QoS coordination, Hear new contributions. No Teleconferences. Two meeting slots in September.

### Coexistence SC ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx), slides 34-47)

Held two meetings (Coex only), one joint meeting with 802.15.4ab. Minutes in 11-24/1313r0.

ETSI BRAN update 6 GHz (slide 36): EU does not recognize IEEE as SDO. Requirements for operating Narrowband Frequency Hopping (NB FH) remains most important discussion item.

ETSI BRAN update 5 GHz (slide 37): Few noteworthy procedural items. ITU-R WP5B.AR (slide 38): Issues with solid-state weather radar.

Bluetooth SIG update (slide 39): Follow ETSI BRAN. Review EN 303 687. Plans: ETSI BRAN #125: Narrow Band Equipment (NBE) Clause 4 changes for EN 303 687 draft. Develop Clause 5 changes for the NBE test plans.

Submissions on NB Status Update ([11-24/1143r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1143-00-coex-nb-status-update.pptx)), Narrowband Frequency-Hopping blocking Wideband ([11-24/1138r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1138-00-coex-narrowband-frequency-hopping-blocking-wideband.pptx)), NB Hop Density ([11-24/1150r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1150-01-coex-nb-hop-density.pptx)), High Duty Cycle NB Transmission vs Wi-Fi ([11-24/1305r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1305-00-coex-high-duty-cycle-nb-transmission-vs-wi-fi.pptx)), Co-Existence of Wi-Fi with Narrowband Technology ([11-24/1059r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1059-02-0wng-co-existence-of-wi-fi-with-narrowband-technology.pptx)), Is 802.11 Compatible with SLB? ([11-24/1148r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1148-00-coex-is-802-11-compatible-with-slb.pptx)).

The joint session with 802.15.4ab had one contribution on Energy Detect Proposal for NB Technologies ([11-24/1182](https://mentor.ieee.org/802.11/dcn/24/11-24-1182-00-coex-energy-detect-proposal-for-nb-technologies.pdf)). Moreover, comments received on the 802.15.4ab CAD were reviewed.

Plans for September: No telcos. Two slots for Coex (only) TUES and THURS AM1: Udates on ETSI BRAN, BT SIG and submissions. Joint slot with 15ab on channel access TUES EVE

C: Regarding Coex SC (slide 42) it is Spark LINK not Smartlink.

A: Thanks, this will be corrected.

### PAR Review SC ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx), slide 48)

Held two meetings. Minutes are in [11-24/1289r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1280-00-0PAR-minutes-july-2024-session.docx).

After reviewing the proposed PARs/CSDs for the 2024 July IEEE 802 Plenary, 802.11 made comments on 5 of the 8 PARs/CSDs. Feedback was generally positive and most of our changes were implemented by the respective WG, except that 802.16t comments were ignored, and response was provided late.

### Wireless Next Generation SC ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx), slides 49-50)

Held two meetings. Final Agenda in [11-24/0983r1](https://mentor.ieee.org/802.11/dcn/24/11-24-0983-01-0wng-agenda-for-wng-sc-2024-july.pptx). Minutes in [11-24/1300r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1300-00-0wng-wng-meeting-minutes-2024-july-montreal-meeting.docx).

6 presentations

* “ns-3 Rel-42/43  Wi-Fi Model Updates and Network Simulations,” [11-24/1139r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1139-01-0wng-ns-3-rel-42-43-wi-fi-model-updates-and-network-simulations.pptx),
* "Post-Quantum 802.11,“ [11-24/1103r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1103-00-0wng-post-quantum-802-11.pptx),
* “Co-Existence of Wi-Fi with Narrowband Technology,” [11-24/1059r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1059-02-0wng-co-existence-of-wi-fi-with-narrowband-technology.pptx),
* “Automotive-TIG-Proposal,” [11-24/1062r3](https://mentor.ieee.org/802.11/dcn/24/11-24-1062-03-0wng-automotive-tig-proposal.pptx),
* “Enhancing Wi-Fi Privacy: A Focus on Frame Anonymization Techniques,” [11-24/1234r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1234-00-0wng-analysis-of-frame-anonymization-techniques.pptx),
* “Proposal on data offload using WLAN in connected vehicle case,” [11-24/1134r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1134-01-0wng-proposal-on-data-offload-using-wlan-in-connected-vehicle-case.pptx).

Straw Poll to Support for creation of an Automotive WLAN TIG: Y:85 / N:15 / A:17.

### JTC1 802 SC ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx), slides 51-53)

Held one meeting. Agenda in [ec-24/0149r02](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0149-02-JTC1-agenda-for-july-2024-mixed-mode.pptx), Minutes in [ec-24/0177](https://mentor.ieee.org/802-ec/dcn/23/ec-23-0177-00-00EC-ieee-sa-solutions-update.pptx).

ISO/IEC standardization is important in Europe. 802.11 has an IPR issue holding up PSDO process. Going forward, 802.11 will not be shown as in-process.

Next steps: Keep waiting. Resolution appears to be down to patent holders supplying LOAs under the ISO patent policy. Observe how IEEE 802.3 fares in the parallel ITU-T SG15 process.

Plans for September: Execute PSDO process, to the extent possible (slide 53). Monitor ISO/IEC JTC 1/SC 6 activities.

 C: for JTC1, given the 802.11 situation in the chart on slide #52, I don’t think it’s receiving any attention. Therefore, please, can you change your chart to show that 802.11 drafts are stalled and not progressing. Something needs to be done.

C: I agree with this statement.

## Task Group reports ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx))

### TGme (slides 54-58)

Held 7 meetings. Agenda in [11-24/0985r5](https://mentor.ieee.org/802.11/dcn/24/11-24-0985-05-000m-revme-agenda-july-2024-session.pptx). Minutes in [11-24/1302r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1302-00-000m-minutes-for-revme-2024-july-montreal.docx).

Completed comment resolution on SA Ballot recirculation comments received on D6.0. Initiated a 10-day recirculation ballot on D7.0. Approved a request to the 802 LMSC for conditional approval to submit REVme D7.0 to REVCOM (9Y/0N/0A). Approval expected in September 2024. One Telco August 12 at 10am ET for 2hrs. No meeting in September. Expect TGmf to begin in November.

### TGbe (slides 59-63)

Held two meetings. Agenda in [11-24/0974r6](https://mentor.ieee.org/802.11/dcn/24/11-24-0974-06-00be-tgbe-july-2024-meeting-agenda.pptx). Motions List in [11-23/442r60](https://mentor.ieee.org/802.11/dcn/23/11-23-0442-60-00be-tgbe-motions-list-part-4.pptx). Minutes in [11-24/1292r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1292-00-00be-tgbe-july-2024-meeting-minutes.docx).

The TGbe Editor generated IEEE802.11 TGbe D6.1 which will be available in the members area by end of this week. TGbe D7.0 is expected to be ready by the end of July. Created LMSC report to seek conditional approval to forward the draft to RevCom. Approved a 10-day recirculation SA ballot on P802.11be D7.0 (75Y, 0N, 4A).

Telco will be announced if needed.

### TGbf (slides 64-66)

Held 4 meetings. Agenda in [11-24/1001r8](https://mentor.ieee.org/802.11/dcn/24/11-24-1001-08-00bf-tgbf-meeting-agenda-2024-07-plenary.pptx). Minutes in [11-24/1336r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1336-00-00bf-ieee-802-11bf-july-2024-plenary-meeting-minutes.docx).

Comment resolution for Initial SA Ballot (D4.0) 65.2 % of all LB281 comments are resolved or marked as “ready for motion”. (135 /207). Goals until September: Continue to resolve comments for Initial SA ballot D4.0. Updated timeline (slide 65).

11 Telcos scheduled (slide 66).

### TGbh (slides 67-70)

Held 5 meetings. Agenda in [11-24/0987r10](https://mentor.ieee.org/802.11/dcn/24/11-24-0987-10-00bh-agenda-tgbh-2024-july-session.pptx). Motions in [11-22/0651r51](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-51-00bh-tgbh-motions-list.pptx). Comment resolution in [11-24/1262r](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-06-00bh-p802-11bh-sa-recirc1-comments.xlsx). Minutes in [11-24/1285r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1285-00-00bh-minutes-tgbh-plenary-meeting-july-2024.docx).

Completed comment resolution on first SA recirculation ballot comments. SA second recirc out of the July, intended to be final ballot. Requesting conditional approval for submission to RevCom (8Y/0N/1A).

Plans until September: Telco to be announced. One Meeting in September.

### TGbi (slides 71-74)

Held 5 meetings. Agenda in [11-24/1014r5](https://mentor.ieee.org/802.11/dcn/24/11-24-1014-05-00bi-july-tgbi-plenary-agenda.pptx). Minutes in 11-24/1275r0.

Reviewed CID resolution submissions and technical submissions on open topics. Found consensus on 91 CIDs. Ran out of time for additional submissions. Generate a new draft (D5.0) incorporating these resolutions to serve as a new reference for submissions. Continue to call for text submissions that address requirements as well as submissions to resolve comments. Updated timeline (slide 73).

Weekly teleconference WED 10am EDT on July 31, August 7, 14, 21, 28, September 4.

### TGbk (slides 75-79)

Held 2 meetings. Agenda in [11-24/0945r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0945-04-00bk-tgbk-july-meeting-agenda.pptx). Minutes in [11-24/1374r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1374-00-00bk-minutes-for-july-2024-plenary.docx).

Completed response to LB286. Approved WG recirculation ballot targeting an unchanged 802.11bk D3.0 in anticipation of SA ballot. Completed response to MDR report and approved changes incorporated to D3.0.

Plans for September: Conduct recirculation ballot on D3.0. Initiate and complete D3.0 CR, targeting an unchanged draft. Generate draft report to LMSC on requesting unconditional initiation of SA ballot. Updated timeline (slide 78).

3 Telcos for 2 hours each: Aug. 13, Aug. 20, and Aug. 27, all at 10 am PT/13 pm ET.

### TGbn (slides 80-83)

19 meetings for PHY, MAC and jointly. Agenda is in [11-24/0976r13](https://mentor.ieee.org/802.11/dcn/24/11-24-0976-13-00bn-tgbn-july-2024-meeting-agenda.pptx). Motions are in [11-24/171r13](https://mentor.ieee.org/802.11/dcn/24/11-24-0171-13-00bn-tgbn-motions-list-part-1.pptx). MAC ad-hoc Minutes in [11-24/1344r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1344-02-00bn-802-11bn-mac-ad-hoc-minutes-july-sept-2024.doc). PHY ad-hoc minutes in [11-24/1287r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1287-00-00bn-minutes-for-tgbn-phy-ad-hoc-sessions-in-july-2024-plenary.docx), TGbn all minutes in [11-24/1391](https://mentor.ieee.org/802.11/dcn/24/11-24-1391-00-00bn-tgbn-july-2024-meeting-minutes.docx).

TGbn discussed around 80 technical submissions, covering a variety of topics: UEQM, multi AP, statistics reporting, coexistence, coordinated spatial reuse (CSR), distributed RU (dRU), beamforming, PAPR, MIMO, power save (AP and STA), LDPC, range extension, control frame design, low latency, PPDU design, interference mitigation, preemption, non-primary channel access (NPCA), TWT, channel access, roaming, MIMO, coordinated beamforming (CBF), Cr-TWT, etc..

Consensus was reached on UEQM, enhanced long range (ELR), 2x LDPC, CSR, CBF, coexistence and included additional details on dRU, PPDU design, roaming, TWT, etc.

Goals for September: Discuss technical submissions. Teleconferences will be announced via email. Continue populating the TGbn SFD. Next milestone is D0.1 for January 2025.

### TGbp (slides 84-87)

7 meetings were held in July. Agenda is in [11-24/1066r6](https://mentor.ieee.org/802.11/dcn/24/11-24-1066-06-00bp-tg-bp-meeting-agenda-for-jul-plenary-2024.pptx). Minutes in [11-24/1339r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1339-00-00bp-2024-07-plenary-meeting-minutes.docx).

TGbp approved the selection procedure included in [11-34/0897r1](https://mentor.ieee.org/802.11/dcn/24/11-24-0897-01-00bp-tgbp-selection-procedure.pptx) and the functional requirement document (FRD) baseline document included in [11-24/1307r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1307-01-00bp-proposed-tgbp-functional-requirements.doc). 21 technical contributions were presented and discussed. The 11bp timeline was revisited without change.

Goal of future work: Develop FRD and Specification Framework Document (SFD) based on consensus. Open technical discussion.

Two telcos are planned: Aug 6 (Tuesday), 9:00am, ET, 2 hours, Sep 3 (Tuesday), 10:00am, ET, 2 hours both using Webex.

## PAR Study Group/TIG/AHC reports ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx))

### IMMW SG (slides 88-90)

1 Meeting in July. Agenda in [11-24/0996r2](https://mentor.ieee.org/802.11/dcn/24/11-24-0996-02-immw-immw-sg-july-2024-meeting-agenda.pptx). Minutes in [11-24/1273r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1273-01-immw-immw-meeting-minutes-for-july.docx).

IMMW SG ran motions and approved the PAR and CSD documents (PAR 137Y, 33N, 28A, CSD 141Y, 29N, 18A). PAR and CSD document were then approved in the WG during mid-week plenary. Group also went over one contribution.

Next step is operating as a task group in January. No conference calls. No agenda.

### ITU AHG report: (slides 91-92)

Held one meeting. Minutes in 11-24/1137r0.

No contribution. Updates from ITU-R WP5A May 13-23, 2024, meeting. Working drafts for revisions to both M.1450-5 and M.1801-2 are elevated and at “preliminary draft PDNR” status now. Expected to be elevated to final draft for approval during November session of WP5A. 5A/93 ITU-R WP5B LS to WP5A: Liaison statement to ITU-R WP5A” Solid-state transmitter radars and wireless access systems and radio local area networks in the 5 GHz frequency band.”

Next Steps: WP5A Next Meeting November 19-29, 2024. M.1450 and M.1801: No IEEE contribution is required/expected. Coex with SSTX Radar at 5 GHz: Monitor WP5A-WP5B joint discussion.

One meeting in September. No telcos.

## Liaisons reports ([11-24-1270r2](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx))

### 802.15 Liaison report (slides 93-104)

802.15 standards pipeline is shown in slide 94. 802.15 Access new interest group is highlighted. Two drafts (802.15.16t, 802.15.7a) are moving to SA ballot. The following projects were shortly reviewed:

* **P802.15.4RevE**: Revision to 802.15.4-2020. Major reorganization to make the standard easier to use and amend. Resolved comments from 3rd SA recirculation ballot. Applied resolutions to draft and initiated SA recirculation. Conditional approval to submit to RevCom (pending). Closing report: [15-24/0297r6](https://mentor.ieee.org/802.15/dcn/24/15-24-0297-06-04me-july-2024-ieee-802-15-4me-opening-agenda-and-closing.pptx)
* **P802.15.4ad**: Data rate and range extensions for the Smart Utility Network (SUN) Physical layer (PHY). Extension to SUN PHYs (commonly known as 802.15.4g). Expanding trade-offs for higher data rates and improved range. No new PHYs proposed. Developing Technical Guidance Document, evaluation criteria and methodologies informed by studies of spectrum usage in various scenarios and regions. Considering technical proposals. So far, extensions for SUN-FSK, SUN-OQPSK and SUN-OFDM presented. Closing report: [15-24/0365r1](https://mentor.ieee.org/802.15/dcn/24/15-24-0365-01-04ad-tg4ad-agenda-opening-and-closing-report-july-2024.pptx).
* **P802.15.4ab**: Next generation UWB building on 802.15.4z. Enhancements: Ranging performance, resiliency and improved adaptability. UWB PHY Optimizations and new features for sensing. Enhancements and new features for data communication. New UWB PHY features for extremely low energy consumption. Additional means for interference mitigation and enhanced co-existence. Narrow-band assisted UWB operation. First WG LB completed. 1470 comments (854T, 611E, 5G plus 47 in CAD). Next steps: Letter ballot comment resolution. Update CAD. Continued discussion of co-existence and related topics. Closing report in [15-24/0424r0](https://mentor.ieee.org/802.15/dcn/24/15-24-0424-00-04ab-july-closing-report.pptx).
* **P802.15ac**: Privacy. Improved privacy to protect from user tracking and profiling. Mechanisms include MAC address randomization and rolling MAC address. Modifications to the IEEE Std 802.15.4 medium access control (MAC) w.r.t. address usage. Corresponding changes to MAC primitives. Status: Characterization of privacy issues (Issues List) completed. Draft development, Next steps: Pre-ballot draft and comment collection: September 2024. First WG LB November 2024. Closing report in [15-24/0372r1](https://mentor.ieee.org/802.15/dcn/24/15-24-0372-01-04ac-july-opening-and-closing.pptx).
* **P802.15.16t**: Narrow Band Licensed Operation (NB-Lic). Licensed NB Operation in channels bandwidth between 5 – 100kHz in VHF/UHF bands such as 160MHz, 450MHz, 700MHz and 900MHz, taking advantage of the superior channel propagation properties. Targeted usages for mission critical operation. Status: WG LB completed. Initial SA ballot pending. Closing report: [15-24/0299r1](https://mentor.ieee.org/802.15/dcn/24/15-24-0418-00-016t-july-2024-tg16t-closing-report.pptx).
* **P802.15.6ma**: Enhanced Dependability Body Area Network (ED-BAN). Enhancements to the BAN with UWB PHY and MAC to support enhanced dependability to a human BAN and support for vehicle BAN. Status: Resolving pre-ballot comments (D0.2.3). Preparing for initial WG LB. Continuing refinement of technical content. Reviewed analysis and contributions for CAD. Closing report in [15-24/0404r1](https://mentor.ieee.org/802.15/dcn/24/15-24-0404-01-006a-tg15-6ma-closing-report-july-2024.pptx).
* **IG-NG-OWC**: Next Generation Optical Camera Communication (OCC). Interest Group to evaluate the value of a new OCC standard with focus on 190-10.000 nm. Applications include indoor/outdoor and submerged applications with data rates of 100Mbps and mobility of up to 350 km/h and 200 m range. Technology and techniques considered: Introduction of MIMO OFDM, relaying, heterogenous operation (RF networks). Plan: Invite contributors from research institute and companies. Closing report in [15-24/0416r0](https://mentor.ieee.org/802.15/dcn/24/15-24-0416-00-07ma-ieee-802-15-ig-ng-owc-closing-report-july-2024.pptx).
* **IG-Crypt**: Explore adoption of a light-weight cryptographic extension for 802.15.4. Recommendation: 2 projects needed, PARs generated in May. Ascon cipher algorithms for 802.15.4 (Project 802.15.4ae). EDHOC KMP for 802.15.9 (Project 802.15.9a). Resolved comments received on PARs. Closing report in [15-24/0373r2](https://mentor.ieee.org/802.15/dcn/24/15-24-0373-02-cryp-july-opening-and-closing.pptx).
* **WNG and IG Access**: Two presentations: Diversified Range Communication for Disaster Response Operations [15-24/0402r0](https://mentor.ieee.org/802.15/dcn/24/15-24-0402-00-wng0-diversified-range-communication-for-disaster-response-operations.pptx). Report on ETSI TR 103 970: Feasibility study on the use of UWB in ITS [15-24/0375r0](https://mentor.ieee.org/802.15/dcn/24/15-24-0375-00-wng0-etsi-tr-103-970-feasibility-study-on-the-use-of-uwb.pptx). IG Access has been formed to explore the larger picture of improving effective shared access to the RF channel through coexistence of multiple 802 wireless technologies. Discuss spectrum sharing concepts, traditional and future trends. Discussion on scope and possible outputs. Will meet again in September. Meeting slides in [15-24/0358r2](https://mentor.ieee.org/802.15/dcn/24/15-24-0358-02-wng0-july-meeting-slides.pptx).

### 802.24 Liaison report (verbally)

Continue to work on the whitepapers. After one more round, one of the whitepapers will hopefully be published. The work on alternative vehicle fuel technologies continues and is very interesting. The original 802.24 Smart Grid paper is also being updated, as it is now 10 years old.

1. Motions ([11-24-0995r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0995-04-0000-july-2024-working-group-motions.pptx))

## Working Group Motions

Chair: Again, the DirectVoteLive tool will be used for the motions.

### Telecon schedule

The teleconference schedule is on the 802.11 Working Group website <https://ieee802.org/11/>.

### Motion 4: Operations Manual approval (slide 9)

**Move to approve submission** [**https://mentor.ieee.org/802.11/dcn/22/11-22-1638-04-0000-**](https://mentor.ieee.org/802.11/dcn/22/11-22-1638-04-0000-)**802-11-operations-manual.docx as the WG 802.11 Operations Manual.**

Moved by Stephen McCann, Second: Joseph Levy

Result: Yes: 114, No: 0, Abstain: 10

**Motion passes.**

### Motion 5: Automotive (AUTO) TIG formation (slide 12)

Chair: See background information for the Automotive TIG on slides 10 and 11 and in [11-24/1290r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1290-01-0wng-strawpoll-joint-automotivetig.potx).

**Approve formation of an Automotive (AUTO) TIG to investigate: Use cases, current and planned mechanisms in 802.11 for vehicle connectivity to external APs, Gaps between requirements and standards for automotive connectivity to external APs, Recommendations to address gaps. The TIG is to complete a report on these topics at or before the July 2025 session.**

Moved: Azin Neishaboori, Seconded: Jing Ma

[WNG SC: Straw poll results: Y:85 / N:15 / A: 17]

Result: Unanimous consent.

 **Motion passes.**

Chair: I appoint Jim Lansford as chair of this TIG.

## Standing Committee Motions

None.

## Task Group Motions

### Motion 6: P802.11 conditional forward to RevCom (slide 13)

**Approve document** [**11-24/1141r1**](https://mentor.ieee.org/802.11/dcn/24/11-24-1141-01-000m-p802-11revme-report-to-ec-on-conditional-approval-to-forward-draft-to-revcom.pptx) **as the report to the IEEE 802 LAN/MAN Standards Committee on the requirements for conditional approval to forward P802.11REVme to RevCom, and request the IEEE 802 LAN/MAN Standards Committee to conditionally approve forwarding P802.11REVme to RevCom and grant the WG chair editorial license.**

Moved by Mike Montemurro on behalf of TGme, Second: Marc Emmelmann

[TGme: Moved: Mark Hamilton, 2nd: Stephen McCann, Result: 9/0/0]

Result: Yes: 109, No: 0, Abstain: 5

**Motion passes.**

### Motion 7: P802.11be EC report conditional forward to RevCom (slide 14)

**Approve document** [**11-24-1283r2**](https://mentor.ieee.org/802.11/dcn/24/11-24-1283-02-00be-p802-11be-report-to-ec-on-conditional-approval-to-forward-draft-to-revcom.pptx) **as the report to the IEEE 802 LAN/MAN Standards Committee (LMSC) on the requirements for conditional approval to forward P802.11be D7.0 to RevCom, and request the IEEE 802 LMSC to conditionally approve forwarding P802.11be D7.0 to RevCom and grant the WG chair editorial license.**

Moved by Alfred Asterjadhi on behalf of TGbe, Second: Rolf de Vegt

[TGbe: Moved: Abhishek Patil, 2nd: Binita Gupta, Result: 68/0/5]

Result: Yes: 107, No: 1, Abstain: 3

**Motion passes.**

### Motion 8: P802.11be Motion 8: CSD re-confirmation (slide 15)

**Confirm the CSD in** [**ec-19/0063r0**](https://mentor.ieee.org/802-ec/dcn/19/ec-19-0063-00-ACSD-p802-11be.docx.)**.**

Moved by Alfred Asterjadhi, Second: Chunyu Hu

Result: Yes: 120, No: 0, Abstain: 5

**Motion passes.**

### Motion 9: P802.11bh conditional forward to RevCom (slide 16)

**Approve document 11-24/1317r1 as the report to the IEEE 802 LMSC (LMSC) on the requirements for conditional approval to forward P802.11bh D6.0 to RevCom, and request the IEEE 802 LMSC to conditionally approve forwarding P802.11bh D6.0 to RevCom and grant the WG chair editorial license.**

Moved by Mark Hamilton on behalf of TGbh, Second: Alfred Asterjadhi

[TGbh: Moved: Jerome Henry, 2nd: Jouni Malinen, Result: 8/0/1]

Result: Yes: 102, No: 1, Abstain: 12

**Motion passes.**

### Motion 10: P802.11bh CSD re-confirmation (slide 17)

**Confirm the CSD in** [**ec-22/0088r0**](https://mentor.ieee.org/802-ec/dcn/22/ec-22-0088-00-ACSD-p802-11bh.pdf)**.**

Moved by Mark Hamilton, Second: Dorothy Stanley

Result: Yes: 102, No: 1, Abstain: 10

**Motion passes.**

### Motion 11: Liaise P802.11bh D5.0 to the WBA

**Liaise P802.11bh D5.0 to the Wireless Broadband Alliance (WBA).**

Moved by Mark Hamilton, Second: Joseph Levy

Result: Yes: 109, No: 2, Abstain: 12

**Motion passes.**

1. New Business

Chair: The Enhanced Light Communication (ELC) SG is for approval today at the 802 LMSC meeting. If approved, Nikola Serafimovski is appointed chair of this SG.

Please note that doc. [11-24-1337r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1337-00-0000-wg-15-liaison-report-july.pptx) is the liaison from 802.15 and will be placed in the 802.11 session report doc. [11-24-1270r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1270-01-0000-july-2024-session-report.pptx).

1. Closing

## Reminder about next wireless chairs meeting

The next wireless chairs’ teleconference meeting is on August 14th, 2024, 15:00 ET.

## Next WG Session reminder

The date of the next IEEE 802.11 WG session is September 8-13, 2024, in Waikoloa, HA, USA and is a mixed mode session.

## Announcements

None.

## Adjourn

Having completed the agenda, the chair announced that the meeting was adjourned at 10:21 ET.

# Annex A: Links to 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 | 24-1382r0 |
| TGme | TG | [24-1302r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1302-00-000m-minutes-for-revme-2024-july-montreal.docx) |
| TGbe | TG | [24-1292r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1292-00-00be-tgbe-july-2024-meeting-minutes.docx) |
| TGbf | TG | [24-1336r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1336-00-00bf-ieee-802-11bf-july-2024-plenary-meeting-minutes.docx) |
| TGbh | TG | [24-1285r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1285-00-00bh-minutes-tgbh-plenary-meeting-july-2024.docx) |
| TGbi | TG | 24-1275r0 |
| TGbk | TG | [24-1374r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1374-00-00bk-minutes-for-july-2024-plenary.docx) |
| TGbn | TG | [24-1391r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1391-00-00bn-tgbn-july-2024-meeting-minutes.docx) |
| TGbp | TG | [24-1339r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1339-00-00bp-2024-07-plenary-meeting-minutes.docx) |
| IMMW | SG | [24-1273r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1273-01-immw-immw-meeting-minutes-for-july.docx) |
| COEX | SC | 24-1313r0 |
| WNG | SC | [24-1300r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1300-00-0wng-wng-meeting-minutes-2024-july-montreal-meeting.docx) |
| JTC 802 | SC | ec-24-0177r0 |
| ARC | SC | [24-1021r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1021-00-0arc-arc-sc-mixed-mode-minutes-july-2024-plenary.docx) |
| AIML | SC | [24-1325r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1325-00-aiml-aiml-sc-july-2024-plenary-meeting-minutes.doc) |
| ITU | AH | 24-1137r0 |
| PAR | SC | [24-1280r0](https://mentor.ieee.org/802.11/dcn/24/11-24-1280-00-0PAR-minutes-july-2024-session.docx) |

# Annex B: Attendance & Affiliation

| **ame** | **Affiliation** | **Attended >= 75%?** | **Status** |
| --- | --- | --- | --- |
| Abela, Kenza | Vestel, IMU | TRUE | Aspirant |
| Abeywickrama, Tharindu | Huawei Technologies Duesseldorf GmbH | TRUE | Aspirant |
| AbidRabbu, Shaima' | Vestel, IMU | TRUE | Voter |
| Abouelseoud, Mohamed | Apple Inc. | TRUE | Voter |
| Aboulmagd, Osama | Huawei Technologies Co., Ltd | TRUE | Voter |
| Adachi, Tomoko | TOSHIBA Corporation | FALSE | Voter |
| Adakeja, olubukola | Teradyne, Inc. | TRUE | Voter |
| Adhikari, Shubhodeep | Broadcom Corporation | TRUE | Voter |
| Ahn, Woojin | KNUT | TRUE | Potential Voter |
| Aio, Kosuke | Sony Corporation | TRUE | Voter |
| Ajami, Abdel Karim | Apple Inc. | TRUE | Voter |
| Akhmetov, Dmitry | Intel | TRUE | Voter |
| Al-Baidhani, Amer | NXP Semiconductors | TRUE | Voter |
| Aldana, Carlos | Meta Platforms Inc. | TRUE | Voter |
| Ali, Sawaira | Istanbul Medipol University, Vestel | TRUE | Voter |
| AL OLAIMAT, AYAT | Vestel, IMU | TRUE | Aspirant |
| Amtmann, Franz | NXP Semiconductors | TRUE | Aspirant |
| Ansley, Carol | Cox Communications Inc. | TRUE | Voter |
| Anwyl, Gary | MediaTek Inc. | TRUE | Voter |
| Asai, Yusuke | NTT | TRUE | Voter |
| Asterjadhi, Alfred | Qualcomm Technologies, Inc | TRUE | Voter |
| Au, Kwok Shum | Huawei Technologies Co., Ltd | FALSE | ExOfficio |
| Aygul, Mehmet | Vestel | FALSE | Aspirant |
| Balakrishnan, Hari Ram | NXP Semiconductors | TRUE | Aspirant |
| Baek, SunHee | LG ELECTRONICS | TRUE | Voter |
| Bahn, Christy | IEEE STAFF | FALSE | Non-Voter |
| Baik, Eugene | Qualcomm Incorporated | TRUE | Voter |
| Bajaj, Ian | Huawei International Pte. Ltd. | TRUE | Aspirant |
| Bajko, Gabor | MediaTek Inc. | TRUE | Voter |
| Banerjee, Subharthi | NXP Semiconductors | TRUE | Potential Voter |
| Bankov, Dmitry | IITP RAS | TRUE | Voter |
| Bansal, Priyanka | NXP Semiconductors | TRUE | Voter |
| Bao, Zhanjing | TCL | TRUE | Voter |
| Barbour, Ian | IEEE STAFF | FALSE | Non-Voter |
| Baron, stephane | Canon Research Centre France | TRUE | Voter |
| Barr, David | MaxLinear | FALSE | Voter |
| Batra, Anuj | Apple, Inc. | TRUE | Voter |
| Baykas, Tuncer | Ofinno | TRUE | Voter |
| Beg, Chris | Cognitive Systems Corp. | TRUE | Voter |
| Ben Arie, Yaron | Toga Networks (A Huawei Company) | TRUE | Voter |
| Berens, Friedbert | FBConsulting Sarl | TRUE | Voter |
| Berger, Catherine | IEEE STAFF | FALSE | Non-Voter |
| Berger, Christian | NXP Semiconductors | TRUE | Voter |
| Bethapudi, Shirly | NXP Semiconductors | TRUE | Potential Voter |
| Bhandaru, Nehru | Broadcom Corporation | TRUE | Voter |
| Bhatia, Puneet | Synaptics Inc | TRUE | Aspirant |
| Bhattacharya, Abhijit | Qualcomm Incorporated | TRUE | Potential Voter |
| Bian, Tong | Panasonic | TRUE | Voter |
| Bo, Cao | ZTE Corporation | TRUE | Voter |
| Boldy, David | Broadcom Corporation | TRUE | Voter |
| Borges, Daniel | Apple, Inc. | TRUE | Voter |
| Bower, Patricia | HaiLa Technologies Inc | FALSE | Aspirant |
| Bredewoud, Albert | Broadcom Corporation | TRUE | Voter |
| Byeon, Seongho | SAMSUNG ELECTRONICS | TRUE | Potential Voter |
| Bykov, Denis | NXP Semiconductors | TRUE | Voter |
| Campiglio, Ugo | Cisco Systems, Inc. | TRUE | Voter |
| Canchi, Radhakrishna | Kyocera International Inc | TRUE | Voter |
| Canpolat, Necati | Intel | TRUE | Voter |
| Cao, Rui | NXP Semiconductors | TRUE | Voter |
| Cariou, Laurent | Intel | TRUE | Voter |
| Carney, William | Sony Group Corporation | TRUE | Voter |
| Carty, Clark | Juniper Networks, Inc. | TRUE | Non-Voter |
| Cavalcanti, Dave | Intel | TRUE | Voter |
| Cha, Dongju | LG ELECTRONICS | TRUE | Voter |
| Chang, Chen-Yi | MediaTek Inc. | TRUE | Voter |
| Chaturvedi, Abhishek | Samsung Electronics | TRUE | Potential Voter |
| Chay, Dor | Huawei Technologies Co., Ltd | TRUE | Aspirant |
| Che, Hui | Ruijie Networks Co., Ltd | TRUE | Potential Voter |
| Chen, Cheng | Intel | TRUE | Voter |
| CHEN, CHENG | pureLiFi Ltd. | TRUE | Aspirant |
| Chen, Cheng-Ming | Qualcomm Incorporated | TRUE | Voter |
| Chen, Evelyn | Ericsson AB | TRUE | Voter |
| Chen, Junbin | TP-Link Corporation Limited | TRUE | Voter |
| Chen, Shuqiao | Huawei Technologies Co., Ltd | TRUE | Voter |
| Chen, Xiaogang | Spreadtrum Communication USA, Inc | TRUE | Voter |
| Chen, You-Wei | MediaTek Inc. | TRUE | Voter |
| Cheng, Ching-Chia | MediaTek Inc. | TRUE | Voter |
| Cheng, Nan | Xidian University | TRUE | Voter |
| Cheng, Paul | MediaTek Inc. | TRUE | Voter |
| Cheng, Xilin | NXP Semiconductors | TRUE | Voter |
| CHENG, yajun | Xiaomi Communications Co., Ltd. | TRUE | Voter |
| CHERIAN, GEORGE | Qualcomm Incorporated | TRUE | Voter |
| Chisci, Giovanni | Qualcomm Technologies, Inc | TRUE | Voter |
| Chitrakar, Rojan | Huawei International Pte Ltd | FALSE | Voter |
| Chng, Baw | BAWMAN LLC | TRUE | Voter |
| Cho, Hangyu | LG ELECTRONICS | TRUE | Voter |
| Choi, JinHo | SAMSUNG ELECTRONICS | TRUE | Potential Voter |
| Choi, Jin Seek | Hanyang Univerisity | TRUE | Voter |
| Choi, Jinsoo | LG ELECTRONICS | TRUE | Voter |
| Choo, Seungho | Senscomm Semiconductor Co., Ltd. | TRUE | Potential Voter |
| Chou, Tzu-Hsuan | Qualcomm Incorporated | TRUE | Voter |
| Chu, Liwen | NXP Semiconductors | TRUE | Voter |
| Chung, Chulho | SAMSUNG | TRUE | Voter |
| Ciochina, Dana | Sony Corporation | TRUE | Voter |
| Coffey, John | Realtek Semiconductor Corp. | TRUE | Voter |
| Contreras Albesa, Javier | Cisco Systems, Inc. | TRUE | Voter |
| Cordeiro, Carlos | Intel | TRUE | Voter |
| Cortes, Diana | Google | TRUE | Voter |
| Costa, D.Nelson | HaiLa Technologies | TRUE | Voter |
| Cui, Yaoshen | TP-Link Global Inc | TRUE | Voter |
| Das, Dibakar | Intel Corporation | TRUE | Voter |
| Das, Subir | Peraton Labs | TRUE | ExOfficio |
| Dash, Debashis | Apple, Inc. | TRUE | Voter |
| da Silva, Claudio | Meta Platforms | TRUE | Voter |
| Davis, Mike | Nordic Semiconductor ASA | TRUE | Voter |
| DeLaOlivaDelgado, Antonio | InterDigital, Inc. | TRUE | Voter |
| Derham, Thomas | Broadcom Corporation | TRUE | Voter |
| De Ruijter, Hendricus | Silicon Laboratories | FALSE | Potential Voter |
| Deshmukh, Mrugen | InterDigital | TRUE | Aspirant |
| de Vegt, Rolf | Qualcomm Incorporated | TRUE | Voter |
| Dezfouli, Behnam | Nokia | TRUE | Aspirant |
| Dinan, Esmail | Ofinno | TRUE | Potential Voter |
| Dong, Xiandong | Xiaomi Communications Co., Ltd. | TRUE | Voter |
| Doppler, Klaus | Nokia | TRUE | Potential Voter |
| Du, Rui | Huawei Technologies Co., Ltd | TRUE | Voter |
| Du, Zhenguo | Huawei Technologies Co., Ltd | TRUE | Voter |
| Dunna, Manideep | Qualcomm | TRUE | Aspirant |
| Eiger, Martin | Peraton Labs | TRUE | Potential Voter |
| Ekkundi, Manasi | SAMSUNG ELECTRONICS | TRUE | Potential Voter |
| ElSherif, Ahmed | Qualcomm Incorporated | TRUE | Voter |
| EMMELMANN, MARC | Self | TRUE | Voter |
| Erceg, Vinko | Broadcom Corporation | TRUE | Voter |
| Erkucuk, Serhat | Ofinno | TRUE | Voter |
| Fan, Shuang | Sanechips Technology Co., Ltd. | TRUE | Potential Voter |
| Fang, Juan | Intel Corporation | TRUE | Voter |
| Fang, Yonggang | MediaTek Inc. | TRUE | Voter |
| feng, Shuling | MediaTek Inc. | TRUE | Voter |
| Ficara, Domenico | Cisco Systems, Inc. | TRUE | Voter |
| Fischer, Matthew | Broadcom Corporation | TRUE | Voter |
| Fletcher, Paul | Samsung Cambridge Solution Center | TRUE | Voter |
| Fu, Qingwei | TP-Link Corporation Limited | TRUE | Aspirant |
| Fujimori, Yuki | Canon Research Centre France | TRUE | Voter |
| Gan, Ming | Huawei Technologies Co., Ltd | TRUE | Voter |
| Gangur, Trivikram | Infineon Technologies | TRUE | Voter |
| Ganji, Mehdi | Charter Communications | TRUE | Voter |
| Ganotra, Shivesh | Cisco Systems, Inc. | TRUE | Aspirant |
| Gao, Ning | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Voter |
| Garg, Lalit | Broadcom Corporation | TRUE | Voter |
| Gee, Thomas | Qorvo | TRUE | Voter |
| Ghaderipoor, Alireza | MediaTek Inc. | TRUE | Voter |
| Ghosh, Chittabrata | Apple Inc. | TRUE | Voter |
| Gidvani, Ravi | SAMSUNG ELECTRONICS | TRUE | Voter |
| Gilb, James | General Atomics Aeronautical Systems, Inc. | FALSE | ExOfficio |
| Gong, Bo | Huawei Technologies Co., Ltd | TRUE | Voter |
| Goto, Fumihide | DENSO | TRUE | Voter |
| Grandhe, Niranjan | NXP Semiconductors | TRUE | Voter |
| Grigat, Michael | Deutsche Telekom AG | TRUE | Voter |
| Grover, Jatin | Cisco Systems, Inc. | TRUE | Voter |
| Gu, Jaheon | Samsung Electronics Co., Ltd. | TRUE | Potential Voter |
| Gu, Junrong | Clourney Semiconductor | TRUE | Voter |
| Gu, Xiangxin | Spreadtrum Communications (Shanghai) Co., Ltd. | TRUE | Voter |
| GUIGNARD, Romain | Canon Research Centre France | TRUE | Voter |
| Guo, Jing | NXP Semiconductors | TRUE | Voter |
| Guo, Yuchen | Huawei Technologies Co., Ltd | TRUE | Voter |
| Guo, Zheng | NXP Semiconductors | TRUE | Voter |
| Guo, Ziyang | Huawei Technologies Co., Ltd | TRUE | Voter |
| Gupta, Ankit | NXP Semiconductor | TRUE | Aspirant |
| Gupta, Binita | Cisco Systems, Inc. | TRUE | Voter |
| Gupta, Raghvendra | Broadcom Corporation | TRUE | Potential Voter |
| gutierrez, luis | Broadcom Corporation | TRUE | Voter |
| Ha, Taeyoung | Samsung Electronics Co., Ltd. | FALSE | Voter |
| Haasz, Jodi | IEEE Standards Association (IEEE-SA) | FALSE | Non-Voter |
| Haider, Muhammad Kumail | Meta Platforms, Inc. | TRUE | Voter |
| Halasz, David | Morse Micro | TRUE | Voter |
| Hamilton, Mark | Ruckus/CommScope | TRUE | Voter |
| HAN, DONG | Apple Inc. | TRUE | Aspirant |
| Han, Jin-Kyu | SAMSUNG ELECTRONICS | TRUE | Potential Voter |
| HAN, Xiao | Huawei Technologies Co., Ltd | TRUE | Voter |
| Handte, Thomas | Sony Group Corporation | TRUE | Voter |
| Hangbin, Zhao | China Mobile (Hangzhou) Information Technology Co., Ltd | FALSE | Voter |
| Hansen, Christopher | Covariant Corporation | TRUE | Voter |
| Harkins, Daniel | Hewlett Packard Enterprise (Aruba Networks) | TRUE | Voter |
| Hart, Brian | Cisco Systems, Inc. | TRUE | Voter |
| Har-Zion, Yuval | Renesas Electronics Corporation | TRUE | Potential Voter |
| Hasabelnaby, Mahmoud | Huawei Technologies Canada; Huawei Technologies Co., Ltd | TRUE | Potential Voter |
| Hawkes, Philip | Qualcomm Incorporated | FALSE | Voter |
| He, Chuanfeng | Beijing OPPO telecommunications corp., ltd; Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Aspirant |
| He, Linhai | Qualcomm Incorporated | TRUE | Non-Voter |
| Hedayat, Ahmadreza | Apple Inc. | TRUE | Voter |
| Helmy, Ahmed | Apple Inc. | TRUE | Voter |
| Helwa, Sherief | Qualcomm Technologies, Inc | TRUE | Voter |
| Henry, Jerome | Cisco Systems, Inc. | TRUE | Voter |
| Hernandez, Marco | National Institute of Information and Communications Technology (NICT) | FALSE | Voter |
| Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) | TRUE | Voter |
| Hiertz, Guido | Ericsson GmbH | TRUE | Voter |
| Hirata, Ryuichi | Sony Corporation | TRUE | Voter |
| Ho, Duncan | Qualcomm Technologies, Inc | TRUE | Voter |
| Hosseinianfar, Hamid | Ofinno | TRUE | Potential Voter |
| Hsiao, Ching-Wen | MediaTek Inc. | TRUE | Voter |
| Hsieh, Hung-Tao | MediaTek Inc. | TRUE | Voter |
| Hsu, Chien-Fang | MediaTek Inc. | TRUE | Voter |
| Hsu, Ostrovsky | Xiaomi Communications Co., Ltd. | TRUE | Voter |
| Hsu, Yung Lin | National Taiwan University | TRUE | Potential Voter |
| Hsu, Yungping | MediaTek Inc. | TRUE | Potential Voter |
| Hu, Chunyu | Spreadtrum Communications USA | TRUE | Voter |
| Hu, Mengshi | Huawei Technologies Co., Ltd | TRUE | Voter |
| Hu, Shengquan | MediaTek Inc. | TRUE | Aspirant |
| HUANG, CHIHAN | MediaTek Inc. | TRUE | Voter |
| Huang, Guogang | Huawei Technologies Co., Ltd | TRUE | Voter |
| huang, kaikai | Nokia | TRUE | Voter |
| Huang, Lei | Huawei International Pte Ltd | TRUE | Voter |
| Huang, Po-Kai | Intel | TRUE | Voter |
| Huang, Qisheng | ZTE Corporation | TRUE | Aspirant |
| Inohiza, Hirohiko | Canon | TRUE | Voter |
| Inoue, Kyosuke | SHARP CORPORATION | TRUE | Aspirant |
| Islim, Mohamed Sufyan | pureLiFi | TRUE | Aspirant |
| Jang, Insun | LG ELECTRONICS | TRUE | Voter |
| Jee, Anand | SAMSUNG ELECTRONICS | TRUE | Aspirant |
| Jeffries, Timothy | Futurewei Technologies | TRUE | Voter |
| Jeon, Eunsung | SAMSUNG ELECTRONICS | TRUE | Voter |
| Ji, Chenhe | Huawei Technologies Co., Ltd | TRUE | Voter |
| Jia, Boqi | Huawei Technologies Co., Ltd | TRUE | Aspirant |
| jiang, feng | Apple Inc. | TRUE | Voter |
| Jiang, Jinjing | Apple, Inc. | FALSE | Voter |
| Jiang, Wu | iTenest | TRUE | Potential Voter |
| Jiang, Zhiping | Xidian University | TRUE | Voter |
| Jones, Vincent Knowles IV | Qualcomm Incorporated | TRUE | Voter |
| Jung, Insik | LG ELECTRONICS | TRUE | Voter |
| Jungnickel, Volker | Fraunhofer Heinrich Hertz Institute | FALSE | Voter |
| Kabbinale, Aniruddh | SAMSUNG | FALSE | Voter |
| Kadampot, Ishaque Ashar | Qualcomm Technologies, Inc. | TRUE | Voter |
| Kain, Carl | USDOT; Noblis, Inc. | TRUE | Voter |
| Kakani, Naveen | Qualcomm Incorporated | TRUE | Voter |
| Kalamkar, Sanket | Qualcomm Technologies, Inc | TRUE | Voter |
| kamath, Manoj | Broadcom Corporation | TRUE | Voter |
| Kamel, Mahmoud | InterDigital, Inc. | TRUE | Voter |
| Kancherla, Sundeep | Infineon Technologies | TRUE | Voter |
| Kandala, Srinivas | SAMSUNG | TRUE | Voter |
| Kang, HaoHua | MediaTek Inc. | TRUE | Voter |
| KANG, TEAG JIN | Broadcom Corporation | TRUE | Voter |
| Karamyshev, Anton | IITP RAS | TRUE | Voter |
| Karmuchi, Shailender | SAMSUNG ELECTRONICS | TRUE | Voter |
| Karthik, S. G. | SAMSUNG ELECTRONICS | TRUE | Potential Voter |
| Kasargod, Sudhir | Infineon Technologies | TRUE | Voter |
| Kedem, Oren | MaxLinear | TRUE | Voter |
| Kennedy, Richard | Bluetooth SIG | FALSE | Voter |
| Kenney, John | Toyota Motor North America | TRUE | Voter |
| Keshmiri, Francis | Huawei Technologies Co., Ltd; Huawei Technologies France | TRUE | Voter |
| Kezys, Vytas | CONSULTANT | TRUE | Voter |
| Khericha, samir | Broadcom Corporation | TRUE | Voter |
| Khorov, Evgeny | IITP RAS | TRUE | Voter |
| Khosroazad, Somayeh | NXP Semiconductors | TRUE | Aspirant |
| Kiessling, Marcel | Beckhoff Automation | FALSE | Non-Voter |
| KIM, DONGWAN | Broadcom Corporation | TRUE | Voter |
| Kim, Geon Hwan | LG ELECTRONICS | TRUE | Voter |
| Kim, Jeongki | Ofinno | TRUE | Voter |
| Kim, Jungjun | Samsung Electronics | TRUE | Aspirant |
| Kim, Sang Gook | LG ELECTRONICS | TRUE | Voter |
| Kim, Sanghyun | WILUS Inc. | TRUE | Voter |
| Kim, Suhwook | Samsung Electronics | TRUE | Aspirant |
| Kim, Yongho | Korea National University of Transportation | TRUE | Voter |
| Kim, Youhan | Qualcomm Technologies, Inc. | TRUE | Voter |
| Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) | TRUE | Voter |
| Kitazawa, Shoichi | Muroran IT | FALSE | Voter |
| Klein, Arik | Huawei Technologies Co., Ltd | TRUE | Voter |
| Kneckt, Jarkko | Apple, Inc. | TRUE | Voter |
| Koo, Jonghoe | SAMSUNG ELECTRONICS | TRUE | Potential Voter |
| Koundourakis, Michail | Samsung Cambridge Solution Center | TRUE | Voter |
| Krebs, Alexander | Apple Inc; Apple Inc. | TRUE | Voter |
| Ku, Chung-Ta | Mediatek Inc | TRUE | Voter |
| Kumar, Manish | NXP Semiconductors | TRUE | Voter |
| Kumbhkar, Ratnesh | Intel Corporation | TRUE | Potential Voter |
| Kuo, Chih-Chun | MediaTek Inc. | TRUE | Voter |
| Kureev, Aleksey | IITP RAS | TRUE | Voter |
| Lal, Kunal | Synaptics Incorporated | TRUE | Potential Voter |
| Lalam, Massinissa | SAGEMCOM BROADBAND SAS | TRUE | Voter |
| Lanante, Leonardo | Ofinno | TRUE | Voter |
| Lansford, James | farafir, SRL | TRUE | Voter |
| Law, Andrew | University of Strathclyde | TRUE | Aspirant |
| Lee, Gwangho | Korea National University of Transportation | TRUE | Aspirant |
| Lee, Hong Won | LG ELECTRONICS | TRUE | Voter |
| Lee, Hyeong Ho | Netvision Telecom Inc. | TRUE | Voter |
| Lee, Il-Gu | Sungshin University | TRUE | Voter |
| Lee, Jack | SAMSUNG ELECTRONICS | TRUE | Potential Voter |
| LEE, JOONSOO | Newracom Inc. | TRUE | Voter |
| LEE, Mingyu | Samsung Electronics Co., Ltd. | TRUE | Potential Voter |
| Lee, Wookbong | Apple Inc. | TRUE | Voter |
| Lee, Yen-Wei | Acer, Inc. | TRUE | Aspirant |
| Levitsky, Ilya | IITP RAS | TRUE | Voter |
| Levy, Joseph | InterDigital, Inc. | TRUE | Voter |
| Li, Bo | Northwestern Polytechnical University | TRUE | Voter |
| Li, Guoqing | Meta | TRUE | Voter |
| Li, Haozheng | TP-Link Corporation Limited | TRUE | Voter |
| Li, Jialing | Qualcomm Technologies, Inc | TRUE | Voter |
| Li, Panpan | Huawei Technologies Co., Ltd | TRUE | Potential Voter |
| Li, Qinghua | Intel | TRUE | Voter |
| Li, Weiyi | Spreadtrum Communication USA, Inc | TRUE | Voter |
| Li, Xin | Huawei Technologies Co., Ltd | TRUE | Voter |
| Li, Yan | ZTE Corporation | TRUE | Voter |
| Li, Yanchun | Huawei Technologies Co., Ltd | TRUE | Voter |
| Li, Yapu | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Voter |
| li, yun | ZTE Corporation | FALSE | Voter |
| Li, Yunbo | Huawei Technologies Co., Ltd | TRUE | Voter |
| Lim, Dong Guk | LG ELECTRONICS | TRUE | Voter |
| Lin, Wei | Huawei Technologies Co., Ltd | TRUE | Voter |
| LIU, CHENCHEN | Huawei Technologies Co., Ltd | TRUE | Voter |
| liu, dekun | Huawei Technologies Co., Ltd | TRUE | Voter |
| Liu, Der-Zheng | Realtek Semiconductor Corp. | TRUE | Voter |
| Liu, Jeff | Broadcom Corporation | TRUE | Voter |
| Liu, Jianhan | MediaTek Inc. | TRUE | Voter |
| Liu, Peng | Huawei Technologies Co., Ltd | FALSE | Voter |
| LIU, QINGLAI | Panasonic Holdings Corporation | TRUE | Potential Voter |
| Liu, Stone | Carleton University | TRUE | Aspirant |
| Liu, Ying | NXP Semiconductors | TRUE | Voter |
| Liu, Yong | Apple, Inc. | FALSE | Voter |
| Loginov, Vyacheslav | IITP RAS | TRUE | Voter |
| Lorgeoux, Mikael | Canon Research Centre France | TRUE | Voter |
| Lou, Hanqing | InterDigital, Inc. | TRUE | Voter |
| Lou, Hui-Ling | NXP Semiconductors | TRUE | Voter |
| Lovison, Federico | Cisco Systems, Inc. | TRUE | Voter |
| Lu, kaiying | MediaTek Inc. | TRUE | Voter |
| Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Voter |
| LU, Yuxin | TCL Industries | TRUE | Potential Voter |
| Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. | TRUE | Voter |
| Luo, Hui | Infineon Technologies | TRUE | Voter |
| Luo, Sixian | SHARP CORPORATION | TRUE | Aspirant |
| Ma, Jing | Toyota Motor Corporation | TRUE | Voter |
| Ma, Li | MediaTek Inc. | TRUE | Voter |
| Ma, Yongsen | SAMSUNG ELECTRONICS | TRUE | Voter |
| Ma, Yunsi | HiSilicon Technologies Co., LTD. | TRUE | Voter |
| Madpuwar, Girish | Synaptics | TRUE | Voter |
| Magrin, Davide | Meta Platforms Inc. | TRUE | Voter |
| Mak, Siukai | Broadcom Corporation | TRUE | Voter |
| Malinen, Jouni | Qualcomm Technologies, Inc | TRUE | Voter |
| Mano, Hiroshi | Koden Techno Info K.K. | TRUE | Non-Voter |
| Mantha, Abhishek | Broadcom Corporation | TRUE | Voter |
| Marks, Roger | EthAirNet Associates | FALSE | ExOfficio |
| Martinez Vazquez, Marcos | MaxLinear Corp | TRUE | Voter |
| Max, Sebastian | Ericsson AB | TRUE | Voter |
| McCann, Stephen | Huawei Technologies Co., Ltd | TRUE | Voter |
| Mehrnoush, Morteza | Apple Inc | TRUE | Voter |
| Mehta, Mehul | Pharrowtech BV | TRUE | Voter |
| MELZER, Ezer | Toga Networks, a Huawei company | TRUE | Voter |
| Merlin, Simone | Qualcomm Incorporated | TRUE | Non-Voter |
| Minotani, Jun | Panasonic Holdings Corporation | TRUE | Voter |
| Minter, Jenaye | NSA | FALSE | Non-Voter |
| Miwa, Shinya | Canon Research Centre France | TRUE | Voter |
| Mohamed, Ahmed | NXP Semiconductors | TRUE | Potential Voter |
| Mohamed Hassan Salem, Nedime Pelin | Cisco Systems, Inc. | TRUE | Voter |
| Mohanty, Bibhu | Qualcomm Incorporated | TRUE | Non-Voter |
| Monajemi, Pooya | Apple Inc. | TRUE | Voter |
| Montemurro, Michael | Huawei Technologies Co., Ltd | TRUE | Voter |
| Montreuil, Leo | Broadcom Corporation | TRUE | Voter |
| Moon, Juseong | Korea National University of Transportation | TRUE | Voter |
| Morioka, Hitoshi | SRC Software | TRUE | Voter |
| Motozuka, Hiroyuki | Panasonic Holdings Corporation | TRUE | Voter |
| Mourtada, Yasser | Ofinno | TRUE | Potential Voter |
| Mukherjee, Suprojit | Infineon Technologies | TRUE | Potential Voter |
| Mutgan, Okan | Nokia | TRUE | Voter |
| Nagai, Yukimasa | Mitsubishi Electric Corporation | FALSE | Voter |
| Naik, Gaurang | Qualcomm Technologies, Inc | TRUE | Voter |
| Nakamura, Osamu | SHARP CORPORATION | TRUE | Aspirant |
| Nam, Junyoung | Qualcomm Incorporated | TRUE | Voter |
| Namvar, Nima | Charter Communications | TRUE | Aspirant |
| NANDAGOPALAN, SAI SHANKAR | Synaptics | TRUE | Voter |
| Narengerile, Narengerile | Huawei Technologies Co., Ltd | TRUE | Voter |
| Nassiri Toussi, Karim | Broadcom Corporation | TRUE | Voter |
| Nayak, Peshal | Samsung Research America | TRUE | Voter |
| Neishaboori, Azin | General Motors Company | TRUE | Voter |
| Nezou, Patrice | Canon Research Centre France | TRUE | Voter |
| Ng, Boon Loong | Samsung Research America | TRUE | Voter |
| Nguyen, An | U.S. Department of Homeland Security | TRUE | Voter |
| Nikolich, Paul | None - Self-funded; Paul Nikolich | FALSE | Non-Voter |
| Nogami, Toshizo | SHARP CORPORATION | TRUE | Aspirant |
| Noh, Si-Chan | Newracom Inc. | TRUE | Voter |
| Nomura, Tetsuya | DENSO TEN Limited | FALSE | Non-Voter |
| Norouzi, Sara | Huawei Technologies Canada; Huawei Technologies Co., Ltd | TRUE | Potential Voter |
| Nurani Krishnan, Neelakantan | Apple Inc. | TRUE | Voter |
| Ohmoto, Ryutaro | Nihon Dengyo Kosaku Co. Ltd. | TRUE | Voter |
| Omar, Hassan | Huawei Technologies Co., Ltd | TRUE | Voter |
| Orr, Stephen | Cisco Systems, Inc. | TRUE | Voter |
| Ott, Greg | USG | FALSE | Non-Voter |
| ouzane, riadh | Vestel, IMU | TRUE | Aspirant |
| Pakrooh, Pooria | Qualcomm Incorporated | TRUE | Voter |
| Palayur, Saju | Maxlinear Inc. | TRUE | Voter |
| Palm, Stephen | Broadcom Corporation | TRUE | Voter |
| Pan, Ju Yan | Huawei Technologies Co., Ltd | TRUE | Aspirant |
| Pare, Thomas | MediaTek Inc. | TRUE | Voter |
| Park, Eunsung | LG ELECTRONICS | TRUE | Voter |
| Park, Sungjin | senscomm | TRUE | Voter |
| Parsons, Glenn | Ericsson AB | TRUE | ExOfficio |
| Patil, Abhishek | Qualcomm Incorporated | TRUE | Voter |
| Patil, Sandhya | Synaptics Inc | TRUE | Voter |
| Patwardhan, Gaurav | Hewlett Packard Enterprise | TRUE | Voter |
| Peng, Lan | Huawei Technologies Co., Ltd | TRUE | Voter |
| Peng, Ronny | MediaTek Inc. | TRUE | Voter |
| Perahia, Eldad | Hewlett Packard Enterprise | TRUE | Voter |
| Petrick, Albert | InterDigital, Inc. | TRUE | Voter |
| Petry, Brian | Broadcom Corporation | TRUE | Voter |
| Pettersson, Charlie | Ericsson AB | TRUE | Voter |
| Porat, Ron | Broadcom Corporation | TRUE | Voter |
| Pottigari, Sachin | NXP Semiconductors | TRUE | Voter |
| Prabhakaran, Dinakar | Broadcom Corporation | TRUE | Voter |
| Puducheri, Srinath | Broadcom Corporation | TRUE | Voter |
| Pulikkoonattu, Rethnakaran | Broadcom Corporation | TRUE | Voter |
| Qi, Emily | Intel | TRUE | Voter |
| Qi, Yinan | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Voter |
| Qi, Yue | Samsung Research America | TRUE | Voter |
| QIAN, BIN | Huawei Technologies Co., Ltd | FALSE | Voter |
| Qian, Yurong | ZTE Corporation | TRUE | Voter |
| Quan, Li | ZTE Corporation | TRUE | Aspirant |
| Quan, Yingqiao | Spreadtrum | TRUE | Voter |
| Rafique, Saira | Istanbul Medipol University, Vestel | TRUE | Voter |
| Rai, Kapil | Qualcomm Incorporated | TRUE | Aspirant |
| Raissinia, Alireza | Qualcomm Incorporated | TRUE | Voter |
| Rajashekar, Rakshith | Broadcom Corporation | TRUE | Voter |
| Ralle, Helene | Orange | TRUE | Potential Voter |
| Ratnam, Vishnu | Samsung Research America | TRUE | Voter |
| Redlich, Oded | Huawei Technologies Co., Ltd | TRUE | Voter |
| Regev, Dror | Toga Networks (A Huawei Company) | TRUE | Voter |
| REICH, MOR | Huawei Technologies Co., Ltd | TRUE | Voter |
| Rezk, Meriam | Qualcomm Technologies, Inc | TRUE | Voter |
| Riegel, Maximilian | IEEE member / Self Employed | TRUE | Voter |
| Rios, Carlos | Terabit Wireless Internet LLC | TRUE | Voter |
| Rison, Mark | Samsung Cambridge Solution Centre | TRUE | Voter |
| Robert, Joerg | Technische Universitaet Ilmenau | TRUE | Voter |
| Rosdahl, Jon | Qualcomm Technologies, Inc. | TRUE | Voter |
| Rosenzweig Arbel, Gil | Renesas Electronics Corporation | TRUE | Potential Voter |
| Roy, Rishabh | SAMSUNG ELECTRONICS | TRUE | Aspirant |
| Roy, Sayak | NXP Semiconductors | TRUE | Voter |
| Ryu, Kiseon | NXP Semiconductors | TRUE | Voter |
| Sadiq, Bilal | Samsung Research America | TRUE | Potential Voter |
| Sahyoun, Walaa | Canon Research Centre France | TRUE | Aspirant |
| Sakamoto, Ryunosuke | SHARP CORPORATION | TRUE | Aspirant |
| Sampath, Hemanth | Qualcomm Inc | TRUE | Aspirant |
| Sampath, Hemanth | Qualcomm Incorporated | FALSE | Non-Voter |
| Sand, Stephan | German Aerospace Center (DLR) | TRUE | Voter |
| Sanderovich, Amichai | Wiliot Ltd | TRUE | Voter |
| Santra, Avik | Infineon Technologies | TRUE | Voter |
| Sato, Takuhiro | SHARP CORPORATION | TRUE | Voter |
| Schelstraete, Sigurd | MaxLinear | TRUE | Voter |
| Schweizer, Benedikt | Apple Inc. | FALSE | Voter |
| Segev, Jonathan | Intel | TRUE | Voter |
| Seo, Sangho | Broadcom Corporation | TRUE | Voter |
| Seok, Joseph | Self | TRUE | Aspirant |
| Seok, Yongho | Apple Inc. | TRUE | Voter |
| Serafimovski, Nikola | pureLiFi | TRUE | Voter |
| Serizawa, Kazunobu | Advanced Telecommunications Research Institute International (ATR) | TRUE | Voter |
| Sethi, Ankit | NXP Semiconductors | TRUE | Voter |
| Sevin, Julien | Canon Research Centre France | TRUE | Voter |
| Shafin, Rubayet | Samsung Research America | TRUE | Voter |
| Shaw, Amit | Infineon Technologies | TRUE | Voter |
| Shayovitz, Shachar | Huawei Technologies Co., Ltd | TRUE | Aspirant |
| Shellhammer, Stephen | Qualcomm Incorporated | TRUE | Voter |
| shen, wendi | National Taiwan University | TRUE | Aspirant |
| Sherlock, Ian | Texas Instruments Inc. | TRUE | Voter |
| shi, shuyu | TP-Link Corporation Limited | TRUE | Voter |
| Shi, Yan | Mediatek | TRUE | Aspirant |
| Shi, Zhenpeng | Huawei Technologies Co., Ltd | TRUE | Aspirant |
| Shilo, Shimi | Huawei Technologies Co., Ltd | TRUE | Voter |
| Shirakawa, Atsushi | SHARP CORPORATION | TRUE | Voter |
| Shukla, Ashish | Amazon, Inc | TRUE | Voter |
| siaud, isabelle | Orange | TRUE | Voter |
| Singh, Aditi | Charter Communications | TRUE | Voter |
| Smith, Graham | SR Technologies | TRUE | Voter |
| Smith, Luther | Cable Television Laboratories Inc. (CableLabs) | TRUE | Voter |
| Smith, Malcolm | Cisco Systems, Inc. | TRUE | Potential Voter |
| So, Youngwan | Samsung Electronics Co., Ltd. | TRUE | Voter |
| Son, Ju-Hyung | WILUS Inc. | TRUE | Aspirant |
| Song, Hao | Intel Corporation | TRUE | Voter |
| Sood, Ayush | Infineon Technologies | FALSE | Voter |
| Sosack, Robert | Molex Incorporated | TRUE | Voter |
| Srinivasa, Sudhir | NXP Semiconductors | TRUE | Voter |
| Stacey, Robert | Intel | TRUE | Voter |
| Stanley, Dorothy | Hewlett Packard Enterprise | TRUE | Voter |
| Stott, Noel | Keysight Technologies | TRUE | Voter |
| Strobel, Rainer | MaxLinear | TRUE | Voter |
| Su, Hang | Broadcom Corporation | TRUE | Voter |
| Sugirtharaj, David | Ericsson AB | FALSE | Non-Voter |
| SUH, JUNG HOON | Huawei Technologies Co., Ltd | TRUE | Voter |
| Sumi, Takenori | Mitsubishi Electric Corporation | FALSE | Voter |
| Sun, Bo | Sanechips | TRUE | Voter |
| Sun, Li-Hsiang | MediaTek Inc. | FALSE | Voter |
| Sun, Yanbin | Huawei Technologies Co., Ltd | TRUE | Voter |
| Sun, Yanjun | Apple Inc | TRUE | Voter |
| Sung, Hyeonjun | WILUS Inc. | TRUE | Aspirant |
| SUZUKI, Shuntaro | Yamaha Corporation | TRUE | Voter |
| Tadahal, Shivkumar | Broadcom Corporation | TRUE | Potential Voter |
| Taherzadeh, Mahmoud | Qualcomm | TRUE | Aspirant |
| Takai, Mineo | Space-Time Engineering | FALSE | Voter |
| Takatori, Yasushi | Nippon Telegraph and Telephone Corporation (NTT) | TRUE | Aspirant |
| Talarico, Salvatore | Sony Corporation | TRUE | Potential Voter |
| Talha, Mohd. | NXP Semiconductors | TRUE | Voter |
| Tanaka, Yusuke | Sony Corporation | TRUE | Voter |
| Tang, Zhuqing | Huawei Technologies Co., Ltd | TRUE | Voter |
| tantri Paniyoor, yatiraj | Synaptics | TRUE | Voter |
| Taori, Rakesh | Infineon Technologies | TRUE | Voter |
| Thakur, Sidharth | Apple Inc. | TRUE | Voter |
| Tian, Bin | Qualcomm Incorporated | FALSE | Voter |
| Tinnakornsrisuphap, Peerapol | Qualcomm Incorporated | TRUE | Non-Voter |
| Tomeba, Hiromichi | SHARP CORPORATION | TRUE | Voter |
| Tota, Kazuyuki | Canon | TRUE | Voter |
| Trainin, Solomon | Wiliot | TRUE | Voter |
| Tsai, Tsung-Han | MediaTek Inc. | TRUE | Voter |
| Tseng, Yen Hsiung | MediaTek Inc. | TRUE | Aspirant |
| Tsodik, Genadiy | Huawei Technologies Co., Ltd | TRUE | Voter |
| Tsujimaru, Yuki | Canon | TRUE | Voter |
| Urabe, Yoshio | Panasonic Holdings Corporation | TRUE | Voter |
| Vaidya, Maulik | Charter Communications | TRUE | Potential Voter |
| Val, Inaki | MaxLinear, Inc. | TRUE | Voter |
| Van Nee, Richard | Qualcomm Technologies Netherlands BV | TRUE | Voter |
| Van Zelst, Allert | Qualcomm Technologies Netherlands B.V. | TRUE | Voter |
| Varshney, Prabodh | Nokia | TRUE | Voter |
| Venkatesh, Narasimhan | Silicon Laboratories | TRUE | Aspirant |
| Verenzuela, Daniel | Sony Group Corporation | TRUE | Voter |
| Verma, Sindhu | Broadcom Corporation | TRUE | Voter |
| Vermani, Sameer | Qualcomm Incorporated | TRUE | Voter |
| Videv, Stefan | Kyocera SLD Laser | TRUE | Aspirant |
| VIGER, Pascal | Canon Research Centre France | TRUE | Voter |
| Wang, Hao | Tencent | FALSE | Voter |
| Wang, Huizhao | NXP Semiconductors | TRUE | Voter |
| Wang, Lei | Futurewei Technologies | TRUE | Voter |
| Wang, Pu | Mitsubishi Electric Research Laboratories (MERL) | TRUE | Voter |
| Wang, Qi | Apple Inc. | TRUE | Voter |
| Wang, Steven Qi | Huawei Technologies Co., Ltd | TRUE | Voter |
| Wang, Xiaofei | InterDigital, Inc. | TRUE | Voter |
| Wang, Ying | InterDigital, Inc. | TRUE | Potential Voter |
| Wang, Zisheng | ZTE Corporation | TRUE | Voter |
| Want, Roy | Google | TRUE | Voter |
| Ward, Lisa | Rohde & Schwarz | TRUE | Voter |
| Wee, Gaius | Panasonic Holdings Corporation | TRUE | Aspirant |
| Wei, Dong | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Voter |
| Wendt, Matthias | Signify | TRUE | Voter |
| Wentink, Menzo | Qualcomm Technologies, Inc | TRUE | Voter |
| White, Gregory | Cable Television Laboratories Inc. (CableLabs) | TRUE | Potential Voter |
| Wilhelmsson, Leif | Ericsson AB | TRUE | Voter |
| Wu, Chao-Yi | Samsung Electronics Co., Ltd. | TRUE | Voter |
| Wu, Kanke | Apple Inc | TRUE | Voter |
| Wu, Ming | MediaTek Inc. | TRUE | Potential Voter |
| Wu, Tianyu | Apple, Inc. | TRUE | Voter |
| Wu, Wayne | MediaTek Inc. | TRUE | Voter |
| Wu, Xuming | Huawei Technologies Co., Ltd | TRUE | Voter |
| Xia, Qing | Sony Corporation | TRUE | Voter |
| xiang, Huangfu | Xidian University | TRUE | Voter |
| Xiao, Tong | Xiaomi Communications Co., Ltd. | TRUE | Aspirant |
| Xin, Liangxiao | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Voter |
| Xin, Yan | Huawei Technologies Co., Ltd | TRUE | Voter |
| Xu, Fangxin | Longsailing Semiconductor | TRUE | Voter |
| Xu, Weijie | Beijing OPPO telecommunications corp., ltd. | TRUE | Aspirant |
| Xu, Yanchao | Amlogic | TRUE | Voter |
| Xu, Yue | Huawei Technologies Co., Ltd | TRUE | Voter |
| Xue, Qi | Qualcomm Incorporated | TRUE | Non-Voter |
| YAGHOOBI, HASSAN | Intel | TRUE | Voter |
| Yahya, Salim | VESTEL,IMU | TRUE | Aspirant |
| Yan, Aiguo | SAMSUNG ELECTRONICS | TRUE | Voter |
| Yan, Peng | Wi-Fi Alliance | TRUE | Voter |
| Yan, Zhongjiang | Northwestern Polytechnical University | TRUE | Voter |
| Yanamandra, Subrahmanyam | Broadcom Corporation | TRUE | Voter |
| Yang, Hang | Ruijie Networks Co. Ltd | TRUE | Aspirant |
| Yang, Haorui | China Mobile | TRUE | Aspirant |
| Yang, Hui | Huawei Technologies Co., Ltd | TRUE | Potential Voter |
| Yang, Jay | ZTE Corporation | TRUE | Voter |
| Yang, Lin | Qualcomm Incorporated | TRUE | Voter |
| Yang, Mao | Northwestern Polytechnical University | TRUE | Voter |
| YANG, RUI | InterDigital, Inc. | TRUE | Voter |
| Yang, Steve TS | MediaTek Inc. | TRUE | Voter |
| Yang, Xun | Huawei Technologies Co., Ltd | FALSE | Voter |
| Yang, Yunpeng | TP-LINK Corporation Limited | TRUE | Aspirant |
| Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) | TRUE | Voter |
| Yee, James | MediaTek Inc. | TRUE | Voter |
| Yee, Peter | NSA-CSD | TRUE | Voter |
| Yong, Su Khiong | Apple, Inc. | FALSE | Voter |
| Yoon, Kangjin | Spark Microsystems | FALSE | Potential Voter |
| Yoon, Yelin | LG ELECTRONICS | TRUE | Voter |
| Yoshikawa, Yuki | Canon Inc. | TRUE | Aspirant |
| Young, Christopher | Broadcom Corporation | TRUE | Voter |
| Yu, Chinghwa | Amlogic | TRUE | Aspirant |
| Yu, Heejung | Korea University | TRUE | Voter |
| Yu, Jian | Huawei Technologies Co., Ltd | TRUE | Voter |
| Zeng, Ruochen | Apple Inc | TRUE | Voter |
| Zeng, Yan | Huawei Technologies Co., Ltd | TRUE | Voter |
| Zhang, Hongyuan | NXP Semiconductors | TRUE | Voter |
| Zhang, John | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Voter |
| Zhang, Maolin | Huawei Technologies Co., Ltd | TRUE | Voter |
| Zhang, Rong | NXP Semiconductors | TRUE | Voter |
| Zhang, Yan | Apple Inc | TRUE | Voter |
| Zhang, Yiyan | Huawei Technologies Co., Ltd | TRUE | Voter |
| Zhao, Yue | Huawei Technologies Co., Ltd | TRUE | Voter |
| Zheng, Xiayu | NXP Semiconductors | TRUE | Voter |
| Zhong, Ke | Ruijie Networks Co.,Ltd. | TRUE | Potential Voter |
| Zhou, Chengzhi | Apple Inc. | TRUE | Voter |
| Zhou, Lei | H3C Technologies Co., Limited | TRUE | Voter |
| Zhou, Pei | TCL | TRUE | Voter |
| Zhou, RenFang | TP-Link Global Inc. | TRUE | Aspirant |
| Zhou, Renlong | Sanechips Technology Co., Ltd. | TRUE | Potential Voter |
| Zhou, Richard (Yujia) | Google | TRUE | Aspirant |
| Zhou, Yan | Qualcomm | TRUE | Aspirant |
| Zhu, Yu | TP-Link Corporation Limited | TRUE | Voter |
| Zuniga, Juan Carlos | Cisco Systems, Inc. | TRUE | Voter |
| Zuo, Zhisong | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | TRUE | Aspirant |

# Annex C: Working Group Officers

**Working Group**

|  |  |  |
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| Xiaofei Wang(InterDigital) | Artificial Intelligence/Machine Learning (AIML) | Xiaofei.Wang@interdigital.com  |

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| Name (Affiliation) | Position | Contact Details |
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| Tony Xiao Han(Huawei Technologies Co., Ltd) | TGbf ChairWLAN Sensing (SENS) | tony.hanxiao@huawei.com  |
| Mark Hamilton(Ruckus/CommScope Wireless) | TGbh ChairRandom and Changing MAC address (RCM) | +1 (303) 818-8472mark.hamilton2152@gmail.com |
| Carol Ansley(Cox Communications) | TGbi ChairEnhanced Data Privacy (EDP) | carol@ansley.com  |
| Michael Montemurro (Huawei Technologies Co., Ltd) | TGme Chair802.11 revision project - P802.11REVme | montemurro.michael@gmail.com  |
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| Bo Sun(Sanechips) | TGbp ChairAmbient Power (AMP) | sun.bo1@sanechips.com.cn  |
|  |

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

|  |  |  |
| --- | --- | --- |
| Name (Affiliation)  | Position | Contact Details |
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**Liaison Officials to non-IEEE 802 organizations**

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| --- | --- | --- |
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**Liaison Officials to IEEE organizations**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| None | Liaison to IEEE 802.15 |  |
| Edward Au(Huawei Technologies Co., Ltd) | Liaison to IEEE 802.18 | edward.ks.au@gmail.com  |
| Tuncer Baykas(Ofinno) | Liaison to IEEE 802.19 | tbaykas@ieee.org  |

# Annex D : Revisions and Standards Pipeline

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**IEEE 802.11 Standards Pipeline**

End.