IEEE P802.11  
Wireless LANs

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| Minutes of the IEEE P802.11 Full Working Group | | | | |
| Date: 2018-09-14 | | | | |
| Author(s): | | | | |
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Abstract

This document constitutes the minutes of the IEEE 802.11 full working group for the September 2018, Waikoloa, Hawaii, USA meeting.

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

**IEEE 802 Wireless Interim Meeting – Joint Opening Plenary**

**Hilton Waikoloa Village**

**Waikoloa, Hawaii, USA**

**September 10 - 14, 2018**

**Monday, 10 September 2018**

**8:02** 802.11, 802.15, 802.18, 802.19, 802.21, and 802.24 Chairs called the joint meeting to order. IEEE 802.15 attendance is included as Annex A.

IEEE 802 Wireless Top 10 (read by B Heile) ([IEEE802W-0918-Top10\_Sept7\_DistributionCopy](https://www.regonline.com/custImages/490000/490750/IEEE802W-0918-Top10_Sept7_DistributionCopy.pdf))

General announcements:

* No photography, no audio recording
* Don’t forget, book your room and register for November’s session

Straw Poll of new attendees: 1

**8:08**  IEEE patent policy

802.15 WG chair read the IEEE-SA instructions and displayed the four slides explaining patent policy and informed the attendees that additional information could be found on the PatCom web site: ([**https://standards.ieee.org/about/sasb/patcom/materials.html**](https://standards.ieee.org/about/sasb/patcom/materials.html)**)**.

802.15 WG chair read IEEE anti-trust policy. ([**http://standards.ieee.org/develop/policies/antitrust.pdf**](http://standards.ieee.org/develop/policies/antitrust.pdf))

**8:13** Financial report by J Rosdahl (Qualcomm) docs [11-18-1400-00](https://mentor.ieee.org/802.11/dcn/18/11-18-1400-00-0000-treasurer-report-may-2018-warsaw.pptx),   
[15-18-0401-00](https://mentor.ieee.org/802.15/dcn/18/15-18-0401-00-0000-treasurer-report-may-2018-warsaw.pptx)

Total liabilities and equity $705,066.17 (not including this meeting)

The number of people who are currently registered at this meeting is 268

**8:22** Wireless and IMAT announcements by R Alfvin (Linespeed)

**8.23** WG15 Chair informed the group that the Wireless Chairs Standing Committee (WCSC) met yesterday, Sunday at 16:00 local time. Chair noted that this is an open meeting, all are encouraged to attend. Minutes are available at [ec-18-0171-00-WCSG-waikoloa-september-2018-minutes.docx](https://mentor.ieee.org/802-ec/dcn/18/ec-18-0171-00-WCSG-waikoloa-september-2018-minutes.docx)

**8:25** Review future sessions

* November 11-16, 2018, Marriott Marquis Queens Park Bangkok Thailand, 802 Plenary Session.
* January 13-18, 2019 Hilton St. Louis, MO, at the Ballpark (TBC)
* March 10-15, 2019, Hyatt Regency / Fairmont Hotel Vancouver, Vancouver, Canada
* May 12-17, 2019, Grand Hyatt Atlanta in Buckhead, Atlanta, Georgia, USA
* July 14-19, 2019, Austria Congress Centre, Vienna, Austria, 802 Plenary Session.
* September 15-20, 2019 - Marriott Hanoi, Hanoi, Vietnam (TBC)
* November 10-15, 2019, Hilton Waikoloa Village, Kona, HI, USA, 802 Plenary Session
* Future venues 2020 Lisbon Marriott, Budapest Marriott, Vienna Hilton, Athens Hilton, Sorrento Hilton, JW Bucharest.

**8:27 Working Group Updates**

802.11 by Dorothy Stanley (HPE), (documents [11-18-1389-00](https://mentor.ieee.org/802.11/dcn/18/11-18-1389-00-0000-may-2018-working-group-agenda.xlsx), [11-18-1390-00](https://mentor.ieee.org/802.11/dcn/18/11-18-1390-00-0000-may-2018-working-group-agenda.xlsx))

* voters: 322, Nearly 36, Aspirant 85

802.15 by B Heile (document [15-17-0387-02](https://mentor.ieee.org/802.15/dcn/18/15-18-0387-02-0000-802-15-waw-2018-graphic-agenda.xlsx))

* voters: 63, Nearly 9, Aspirant 22
* TG4md 15.4 revision
* TG 15.4w Low Power Wide Area (LPWA)
* TG 15.4x FAN enhancements (FANE)
* TG 15.4y Security Next Generation (SECN)
* TG 15.4z Enhanced impulse radio (EIR)
* TG 7m Optical Wireless Communications
* TG10a Routing Mode Addressing (RMA) amendment
* TG12 Upper Layer Interface (ULI) for 802.15.4
* TG13 Multi-Gigabit OWC

802.18 by J Holcomb ([18-18-0111-00](https://mentor.ieee.org/802.18/dcn/18/18-18-0111-00-0000-agenda-warsaw-interim-8-10-may-2018-rr-tag.pptx))

* voters: 40, Nearly 1, Aspirant 9
* Additional FS Protection ex parte
* 6 (5-7) GHz and single voice from IEEE 802.
* IEEE EU Spectrum Management Statement since July plenary. (Uganda and Ofcom)
* NPRM, Expanding Flexible Use of 3.7 to 4.2GHz Band

802.19 T Baykas ([19-18-0068-00](https://mentor.ieee.org/802.19/dcn/18/19-18-0068-00-0000-sept-2018-opening-report.pptx))

* 36 voters
* New study group on Coexistence in the sub-1GHz bands ([19-19-0069-01](https://mentor.ieee.org/802.19/dcn/18/19-18-0069-01-S1GH-study-group-opening-sllides.pptx))

802.21 Subir Das [(21-18-0045-00)](https://mentor.ieee.org/802.21/dcn/18/21-18-0045-00-0000-session-87-agenda.docx)

* Interest Group on Network Enablers for Seamless HMD based VR content Service

802.24 Tim Godfrey ([24-18-0019-00](https://mentor.ieee.org/802.24/dcn/18/24-18-0019-00-0000-sept-2018-agenda.xlsx))

* 28 voting members
* discussion on liaison activities (IEEE PES and IEC)
* TSN white paper

**AoB**

* R Marks (Huawei) – NENDICA activities
* meeting Tuesday evening

**8:50** Joint meeting adjourned

**IEEE 802.11 Interim Meeting – Session #171**

**Waikoloa, Hawaii, USA**

**September 10th – 14th, 2018**

**IEEE 802.11 Opening Plenary, Monday 10th September 2018**

Presiding chair: Dorothy Stanley (Hewlett Packard Enterprise) opened the meeting at 09:07 Hawaii–Aleutian Standard Time (HST) and declared quorum for the Session.

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

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

Secretary: Stephen McCann BlackBerry Ltd.

There are 322 voting members and 11 Ex Officio voters of IEEE 802.11\*

There were 149 people in the room

\*11 who ask to be recognized as such in the 802.11 voters list.

1. **Notices**
   1. No photographs at this meeting and please turn your mobiles to vibrate.
   2. Chair: Please note that Kathryn Bennett is no longer our IEEE staff representative. It is now Jonathan Goldberg.
   3. Chair: Are there any members of the press present.
      1. None
2. **Approve/modify working group agenda** (11-18-1389r1)
   1. This is a summary of all room allocations for the week.
   2. Chair: I suggest we approve this agenda.
   3. Changes to agenda graphic:
      1. There have been several changes made from last night’s CAC. Note that WNG has been cancelled as there are no presentations this week.
   4. **Move to approve the agenda 11-18-1389r1 (“Agenda Graphic” tab and the “WG11” tab Monday agenda)**
      1. Moved: Michael Fischer, 2nd: Ian Sherlock
      2. No objection to approving by unanimous consent
3. **July 2018 WG Minutes**
   1. **Move to approve the San Diego July 2018 WG minutes document 11-18-1089r1**
   2. Moved: Stephen McCann, 2nd: Tuncer Baykas
   3. Following neither discussion nor dissent the minutes were approved by unanimous consent.
4. **Attendance**
   1. Welcome to the 6 new participants in this meeting.
   2. Chair: Please note that Stephen McCann (Secretary) will be holding a new member’s session at 10:30am.
5. **Call for essential Patents** (11-18-1396r0)
   1. VC2: read out the current PatCom rules, and then called for essential patents information, as shown by:
   2. <http://standards.ieee.org/board/pat/pat-slideset.ppt>
      1. There were no issues raised regarding the call for essential patents. There was no response to the call for essential patents.
   3. VC2: The slide about IEEE 802 meeting participation was also read.
   4. VC2: Read out other policies and procedures for the meeting. Please note the slide about the valid abstain response in ballots.
6. **Announcements** (11-18-1390r0)
   1. **Liaisons** (slide #4)
      1. Chair: One liaison has arrived from 3GPP RAN1 – posted as document 11-08-1561r0. This will be discussed in the Coex meeting this week. There may be another one arriving from the WBA (Wireless Broadband Alliance) this week; assuming the WBA liaison, on the topic of MAC Randomization impacts, is received, it will be assigned to the ARC SC.
   2. **EC and standard board decisions** (slides #5 & #6)
      1. Chair: The EC approved the following items on the slide.
7. **Logistics and Key events/activities** (11-18-1390r0 / 11-18-1399r0)
   1. **Working group session documents** (11-18-1390r0 slide 7)
   2. **Joint meetings & Reciprocal Credit/802.18, 802.19 details** (11-18-1390r0 slide 8-10)

Reminder that there are topics relevant to IEEE 802.11 to be covered in IEEE 802.18 and IEEE 802.19 this week.

* 1. **“Top 10” items for the week** (11-18-1399r0 slides 4-13)
     1. Each registered attendee should have all received the “top 10” items email about this week.
     2. Slides #5 and #13 describes the social on Wednesday.
     3. Linespeed are managing the projectors this week. Please can you all remember to power them down at the end of each meeting. They have a network helpdesk outside in the hall way area.
  2. **M3.3 Other WG meeting plans** (11-18-1399r0 slide 14)
     1. this slide shows information about other WG meetings, future meetings and logistics this week.
     2. Please use the online schedule for the room allocations this week.
     3. Please remember to record your attendance for each 2 hour slot during the week.
     4. VC1: this slide deck shows information about other WG meetings, future meetings and logistics this week.
  3. **M3.4 Meeting Room Locations** (11-18-1399r0 slide 15)
     1. Slide #15 shows Meeting room layout
  4. **M3.5 Next meeting reminder**
     1. Next 802 Plenary: November 11-16, 2018 at the BANGKOK MARRIOTT MARQUIS QUEEN’S PARK, Bangkok, Thailand
  5. **M3.6 Meeting registration (**11-18-1399r0 slide 18)
     1. There are about 286 registered people for this week’s meeting.
  6. **M3.7 Recording attendance** (11-18-1399r0 Slide 19)
  7. **Local File Document Server information** (slide #20)
     1. If you want to synchronize all the documents on mentor, please use the local server and not the external link. The IT support company this week is Linespeed, so please note the new SSID, links and URLs.

1. **Status of all groups** (11-18-1390r0)
   1. **Group summary** (slide #12)
      1. Chair: Review current IEEE 802.11 groups.
   2. **Sub-Group Status** (slide #15)
      1. Chair: Please note the changes to sub-group officers for this week.
   3. **Summary of Ballots** (slide #18)
      1. There have some ballots between the July 2018 meeting and now
2. **Group Summaries** (11-18-1394r1)
   1. Special notes were mentioned for the following groups:
   2. **Editor’s meeting and ANA**
      1. Tomorrow morning at 7.00am, including the ANA status, style guides and numbering situation.
   3. **AANI**
      1. Primarily addressing a potential liaison to 3GPP/WFA/WBA/WifiForward regarding studies done regarding the benchmarking of 802.11ax capabilities for IMT 2020.
   4. **PAR SC**
      1. Not meeting this week.
   5. **WNG**
      1. There are no submissions for WNG this week and so the meeting has been cancelled.
   6. **JTC1**
      1. Review JTC1/SC6 status.
   7. **TGaq**
      1. Has completed their work and will no longer meet.
   8. **RTA TIG**
      1. This is the first face to face meeting of this group.
3. **Working Group Motions** (11-18-1395r0)
   1. **RTA TIG** (slide #4)
      1. **Confirm Allan Jones as RTA TIG chair**
      2. Moved: John Notor, Second: James Gilb
      3. No objection to approving by acclamation.
   2. **EHT SG** (slide #5)
      1. **Confirm Mike Montemurro as RTA TIG chair**
      2. Moved: Marc Emmelmann, Second: Ian Sherlock
      3. No objection to approving by acclamation.
   3. **TGay draft for sale** (slide #6)
      1. **Approve that Draft P802.11ay/D2.0 be made available for sale**
      2. Moved: Edward Au, Second: James Gilb
      3. For: 102, Against: 1, Abstain: 2 (Motion passes)
   4. **Agenda update**
      1. **Motion to update the agenda 11-18-1389r1 to move the JTC1 from Tuesday PM1 to Tuesday AM1**
      2. Moved: Jon Rosdahl, Second: Andrew Myles
      3. No objection to approving by unanimous consent.
4. **Recess**
   1. Meeting recessed at 10:11 HST.

**Wednesday, 12th September 2018**

**IEEE 802.11 Mid-Week Plenary**

Presiding chair: Dorothy Stanley (HPE) opened the meeting at 10:34 HST.

Secretary: Stephen McCann BlackBerry Ltd.

142 people present.

1. **Approve/modify working group agenda** (11-18-1389r2)
   1. Chair: There are a couple of minor changes to the agenda fixing links and various items.
   2. Chair: Please note that there will be an award ceremony and photographs today, once this meeting has recessed, as the taking of photographs is not allowed in the meeting.
   3. Comment (C): I would like to add an agenda item about video gaming.
   4. Chair: We’ll include it in item 5.5
   5. **Move to approve the agenda 11-18-1389r3.**
      1. Moved: Jim Lansford, 2nd: Marc Emmelmann
      2. No objection to approving the agenda by unanimous consent.
2. **Call for Essential Patents**
   1. The chair read out the Potentially Essential Patents slide.
   2. No statements were made.
   3. Please remember that everyone here is participating as an individual.
3. **CAC**
   1. Reminder about 19.30 HST meeting on Thursday. The purpose of this meeting is to prepare for the Friday closing plenary. This is an open meeting and everyone is welcome to attend.
4. **Meeting Decorum**
   1. Chair: Please remember that professional behavior is expected in all the IEEE 802.11 meetings and no photographs are allowed.
   2. No questions
5. **Announcement**
   1. There is a social reception this evening and it will be outside on the lagoon lanai from 6.30pm – 8.30pm. Please have your badge and if you have a guest please can you obtain a badge for them from the IEEE 802 registration desk. If it rains, the location will be moved into the adjoining ballroom.
   2. Please join us on the main steps once this meeting finishes, for a group photograph. Following that we’ll have the 802.11ak and 802.11aq awards.
   3. NGV Chair: This group has completed its work for this week. Therefore, some rooms can be released on Thursday morning.
   4. Chair: JTC1 met in their normal slot on Tuesday; the motion that was passed on Monday was actually out of order, as the JTC1 SC are an IEEE 802 group and not an IEEE 802.11 meeting, so IEEE 802.11 cannot move a motion to change their schedule.
   5. No questions
6. **Wi-Fi Alliance Liaison** (11-18-1644r0)
   1. This is a short report, as the Wi-Fi Alliance (WFA) have not met since the July IEEE 802.11 face to face meeting.
   2. The next WFA meeting is in October 2018 in Cannes, France.
   3. No questions
7. **IETF Liaison** (11-18-1640r0)
   1. This is report about the current IEEE 802.11 related activities within the IETF.
   2. The next IETF meeting is in November 2018 in Bangkok the week before the IEEE 802.11 meeting, scheduled to be in the same location.
   3. Q: In November 2018, there are some joint meetings between the IETF and IEEE 802 over the adjoining weekend. Do you know anything about the 3rd meeting on the Saturday afternoon, as I’m not sure about it.
   4. A: I’m also not sure, but I’ll check (also see 24.2 below)
   5. No questions.
8. **IEEE 802.18** (11-18-1635r0)
   1. This is a summary of the IEEE 802.18 activities this week.
   2. Richard Kennedy has received an IEEE Standards Medallion award for all his work in IEEE 802 regulatory work. He is the ex-IEEE 802.18 chair and has been very active in IEEE 802.11.
9. **IEEE 802.19** (11-18-1596r0)
   1. This is a summary of the IEEE 802.19 activities this week.
   2. No questions
10. **Room assignment updates** (11-18-1389r3)
    1. Released rooms: TGba Wed PM2, Thurs AM2, NGV SG Thurs AM1, TGbb Thurs AM2
    2. Required rooms: None
    3. **Motion to approve all of the above requests, with the updated room graphic included in an updated agenda**
       1. Moved: Al Petrick, 2nd: Tim Godfrey
       2. No objection to approving by unanimous consent.
11. **Comment Resolution Resources** (11-18-1391r2 slide #8)
    1. Chair: These are some documents which should assist with comment resolutions which have been created over the last few years. Please use them in your groups.
    2. No questions
12. **AANI SC Liaison update** (11-18-1340r1)
    1. The AANI SC consider this draft liaison and have decided not to proceed with it at the moment as several of the referenced documents are not yet complete. It will be re-considered either during a future AANI SC teleconference or the next AANI SC meeting in November 2018. Therefore, AANI SC has requested 2 slots for the November meeting.
13. **Nendica Report** (1-18-0056)
    1. This is a report from the IEEE 802.1 Nendica (Network Enhancements for the Next Decade Activity).
    2. There will be a workshop on data centre networking with the IETF on Saturday afternoon in November 2018. This may be the 3rd meeting that was referred to earlier in this meeting.
    3. No questions
14. **Full Duplex TIG update** (11-18-1645r2)
    1. This is an update about the Full Duplex (FD) TIG. The current status is that group would like to progress to a study group around November 2018 and is currently working on an output report from the TIG.
    2. There was a short video presentation of the technology. The video presentation is described in document 11-18-1588r2 with a video link URL on slide #14.
    3. In Thurs AM1, there will be a live demo with some colleagues in Ottawa, Canada.
    4. Chair: In November 2018, it’s likely that they will ask for Study Group approval.
    5. Q: Is there a relationship between FD and EHT?
    6. A: Not at the moment. FD could produce some small changes itself, or merge into EHT.
15. **IEEE 802.11ak recognition**
    1. Chair: I would like to invite Donald Eastlake as the 802.11ak chair to say a few words. The award ceremony was held in the meeting as shown in 11-18-1391r2 slide #10. Photographs will be held outside once this meeting finishes.
16. **IEEE 802.11aq recognition**
    1. Chair: I would like to invite Stephen McCann as the 802.11aq chair to say a few words. The award ceremony was held in the meeting as shown in 11-18-1391r2 slide #12. Photographs will be held outside once this meeting finishes.
17. **Any Other Business**
    1. Chair: Once we recess, we will have photographs for the whole IEEE 802.11 group and then for people who took part in the IEEE 802.11ak and IEEE 802.11aq projects.
    2. Meeting recessed at 12.08 HST

**Friday, 14th September 2018**

**IEEE 802.11 Closing Plenary**

Call to order at 08:02 HST by Dorothy Stanley (HPE).

81 people present in the room.

1. **Approve/modify working group agenda** (11-18-1389r4)
   1. Chair: There have been some minor changes to the agenda from earlier this week.
   2. **Approve the agenda for the Friday meeting as shown in 11-18-1389r4**
      1. Moved: Stephen McCann, 2nd: Michael Fischer
      2. No objection to approving by unanimous consent.
2. **Announcements** (11-18-1391r3)
   1. **Participation**
      1. Please can you remember to read this slide and understand that everyone is here as an individual subject matter expert.
   2. **Chair’s minutes, reports and web pages**
      1. Please can you ensure that the sub-group minutes are on the server within 30 days after the close of this meeting. Please can you also send web-page and timeline updates to the secretary.
      2. The next meeting of IEEE 802.11 is in November 2018 in Bangkok, Thailand.
      3. Please be aware of the Chair’s schedule for the chair’s committee meetings (CAC), which are on 9th October and 5th November at noon ET.
   3. **Letters of Assurance (LoA)** (slide #17)
      1. Chair: please remember about the LoA requirements.
      2. There are two LoAs open at the moment.
   4. **IEEE Store and ISO SCG** (slides #18 and #19)
      1. No questions
   5. **Press Releases** (slide #20)
      1. The slide summarizes the recent IEEE 802.11 related press releases
3. **Call for Essential Patents** (11-18-1391r3 slide #5)
   1. Call for Essential Patents and Letters of Assurance (LoA)
   2. No statements
   3. No questions
4. **Current Venues** (11-18-1399r2 slide #24)
   1. **Straw Poll: How many people would like to come back to this venue?**
   2. Y: 58, N: 19
   3. **How many people enjoyed the social?** 41
   4. **How many people disliked the social?**: 3
   5. **How many people did not attend the social?** 15
5. **Upcoming Venues** (11-18-1399r2 slides #25)
   1. VC1: This slide shows the future wireless interim and also IEEE 802 plenary locations.
   2. VC1: Please note that future venues are discussed at the IEEE 802 chairs meeting on Sunday afternoons at 4pm at the start of each IEEE 802.11 face to face meeting. You are all welcome to come along.
6. **Treasury Report** (11-18-1400r0)
   1. VC1: This is the treasurer’s report for 10th September 2018. There have been about 268 people here this week.
   2. VC1: Slide #9 shows the summary of the bank account as of 31st August 2018.
7. **Timelines**
   1. There are timeline updates for TGay, TGaz, TGba and TGmd. The timeline chart will be updated over the weekend.
8. **Documentation & Attendance**
   1. Chair: This information is not available today and will be added to a future revision of 11-18-1397r0. [See 11-18-1397r1 slide #3]
9. **WG Committee Reports** (11-18-1397r1)
   1. **Technical editor** (slide #6)
      1. No questions
   2. **AANI Standing Committee** (slide #12)
      1. No questions
   3. **ARC Standing Committee** (slide #15)
      1. No questions
   4. **COEX Standing Committee** (slide #23)
      1. No questions
      2. Chair: Regarding the withdrawn liaison that you mentioned in slide #24, I’ve not received any official notification. I’ll inform the group when I receive that notification.
   5. **JTC1** **Standing Committee** (slide #26)
      1. No questions
   6. **TGmd** (slide #30)
      1. No questions.
   7. **TGax** (slide #35)
      1. Draft 4.0 is scheduled to be ready in November 2018.
   8. **TGay** (slide #40)
      1. No questions
   9. **TGaz** (slide #45)
      1. No questions
   10. **TGba** (slide #50)
       1. No questions
   11. **TGbb** (slide #54)
       1. No questions
   12. **BCS (Broadcast Services) SG** (slide #59)
       1. Q: The BBC have some interesting use cases, but who are they?
       2. BCS chair: the BBC is the public broadcasting provider for the United Kingdom. They are interested in the broadcast services group. The IEEE 802.11 process has been explained to them, to encourage individuals affiliated with the BBC to join in the BCS SG.
   13. **EHT (Extremely High Throughput) SG** (slide #66)
       1. No questions
   14. **FD (Full Duplex) TIG** (slide #70)
       1. Chair: Please can you all review document 11-18-0498r0, which is the output report from this TIG.
   15. **NGV (Next Generation V2X) SG** (slide #74)
       1. No questions
   16. **RTA (Real Time Applications) TIG** (slide #79)
       1. No questions
10. **Liaison Reports**
    1. **IEEE 802.18** (11-18-1397r1 slide #85)
       1. Q: What is the document you are going to post?
       2. A: It is 11-18-1635r2.
       3. C: There is a lot of interest in the 6GHz band in the US. For those members outside of the US, it is also relevant to them.
    2. **IEEE 802.19** (slide #97)
       1. No questions
    3. **IEEE 802.24** (slide #102)
       1. Please note that this is the vertical applications TAG, so new ideas are always appreciated.
       2. No questions
11. **Working Group Motions (Old Business)** (11-18-1395r3)
    1. **Teleconferences** (slide #9)
       1. **Move to approve the following teleconferences**

|  |  |  |  |
| --- | --- | --- | --- |
| **Group** | **Date(s)** | **Start** | **Duration** |
| **CAC** | **Tuesday October 9, Monday November 5** | **Noon ET** | **1 hr** |
| **TGmd** | **Fridays: September 28, October 5, 12, 19, November 2** | **10:00 ET** | **2 hr** |
| **ARC** | **Thursday: October 11** | **Noon ET** | **1.5 hr** |
| **AANI** | **Thursday: October 11** | **10:00 ET** | **1 hr** |
| **TGax** | **Thursdays: October 4, 18, November 1**  **Thursdays: September 27, October 11** | **10:00 ET**  **20:00 ET** | **2 hr**  **2 hr** |
| **TGay** | **Wednesdays: September 19, 26, October 3, 10, 17, 31, November 7** | **10:00 ET** | **1.5 hr** |
| **TGaz** | **Wednesdays: October 10, 31** | **12:00 ET** | **1.5 hr** |
| **TGba** | **Monday: November 5** | **10:00 ET** | **1.5 hr** |
| **TGbb** | **October 5, 16, 30, November 6** | **9:30 ET** | **1 hr** |
| **NGV** | **October 16** | **10:00 ET** | **2 hr** |
| **BCS** | **Tuesdays: November 20, 27** | **10:00 ET** | **1 hr** |
| **FD** | **Tuesday: October 9**  **Monday: October 29** | **10:00 ET** | **1.5 hr** |
| **RTA** | **September 26, October 10, 24** | **21:00 ET** | **1.5 hr** |

* + 1. Moved: Mark Hamilton 2nd: Allan Jones
    2. No objection to approving by unanimous consent.
  1. **11aq and ECR minutes** (slide #10)
     1. **Approve 802.11aq minutes in 11-18/1024r2 and ECR final minutes in 11-18/1331r1**
     2. Moved: Stephen McCann, Second: Marc Emmelmann
     3. No objection to approving by unanimous consent.
  2. **TGax ad-hoc** (slide #11)
     1. **Authorize TGax to hold an ad-hoc meeting on 7-9 November in Shenzhen, China, for the purpose of working on comment resolution.**
     2. **The PHY ad hoc is planning a two-day meeting on Nov. 8-9.**
     3. Moved: Moved by Osama Aboul-Magd on behalf of TGax
     4. [TGax result: 33/8/10]
     5. No objection to approving by unanimous consent.
  3. **TGba – D1.0 WG LB** (slide #12)
     1. **Instruct the editor to generate TGba Draft 1.0, and**
     2. **Approve a 30 day Working Group Technical Letter Ballot asking the question “Should TGba Draft 1.0 be forwarded to Sponsor Ballot?”**
     3. Moved by Minyoung Park on behalf of TGba
     4. [TGba result: 30/0/1]
     5. For: 62, Against: 0, Abstain: 1 (Motion passes)
  4. **TGba – CA Doc** (slide #13)
     1. **Move to adopt 11-18/1069r0 as the coexistence assurance document for 802.11ba amendment.**
     2. Moved by Minyoung Park on behalf of TGba
     3. [TGba result: 28/0/2]
     4. For: 72, Against: 0, Abstain: 2 (Motion passes)
  5. **TGbb – comment collection** (slide #14)
     1. **Approve a comment collection on simulation scenarios document 18/1423r4 to close 1 October 2018**
     2. Moved: Oliver Luo, Seconded: Tuncer Baykas
     3. No objection to approving by unanimous consent.
     4. Chair: I will organize and start the comment collection over the weekend.
  6. **BCS PAR** (slide #15)
     1. **Believing that the PAR contained in the document referenced below meets IEEE-SA guidelines,**
     2. **request that the PAR contained in 11-18/0825r8 be posted to the IEEE 802 Executive Committee (EC) agenda for WG 802 preview and EC approval to submit to NesCom.**
     3. Moved on behalf of the SG by Marc Emmelmann, Seconded: Hiroshi Mano
     4. [SG result: 28/0/4]
     5. For: 64, Against: 0, Abstain: 1 (Motion passes)
  7. **BCS CSD** (slide #16)
     1. **Believing that the CSD contained in the document referenced below meets IEEE 802 guidelines,**
     2. **request that the CSD contained in 11-18/0826r8 be posted to the IEEE 802 Executive Committee (EC) agenda for WG 802 preview and EC approval.**
     3. Moved on behalf of the SG by Marc Emmelmann, Seconded: Hiroshi Mano
     4. [SG result: 28/0/3]
     5. For: 49, Against: 0, Abstain: 1 (Motion passes)
  8. **FD strawpoll** (slide #17)
     1. **Full duplex work should be:**
        1. **A: A separate SG and amendment**
        2. **B: A part of the EHT and follow-on activities and amendment**
     2. Q: Can we add abstain please?
     3. A: Yes, and also a “None of the above”
     4. A responder to the straw poll can indicate support for more than one option.
     5. The revised options are:
        1. **A: A separate SG and amendment**
        2. **B: A part of the EHT and follow-on activities and amendment**
        3. **C: None of the above**
        4. **D: Abstain**
     6. A: 32, B: 18, C: 20, D: 15
     7. Chair: I would like to state that the FD TIG should continue at the moment, as they still have useful work to do.
     8. Q: Will the future of the FD TIG be debated during the November 2018 meeting?
     9. Chair: Yes, and indeed there will be an FD presentation within the EHT SG during November. If there is a study group motion in November, it will be on the Friday.
     10. FD Chair: There will be a FD summary presentation during the EHT meeting.
     11. Chair: Perhaps you could also request some time during the November mid-week plenary for a summary.
     12. FD Chair: Yes, I will do that.
     13. Q; What is the correct revision of the FD report please, as there appears to be an error in the revision number within the document.
     14. A: Oh, I’ll correct the revision number and post a new document.
  9. **NGV PAR** (slide #18)
     1. **Believing that the PAR contained in the document referenced below meets IEEE-SA guidelines,**
     2. **request that the PAR contained in 11-18/0861r8 be posted to the IEEE 802 Executive Committee (EC) agenda for WG 802 preview and EC approval to submit to NesCom.**
     3. Moved on behalf of the SG by Bo Sun, Seconded: Michael Fischer
     4. [SG result: 41/0/2]
     5. For: 52, Against: 0, Abstain: 6 (Motion passes)
  10. **NGV CSD** (slide #19)
      1. **Believing that the CSD contained in the document referenced below meets IEEE 802 guidelines,**
      2. **request that the CSD contained in 11-18/0862r3 be posted to the IEEE 802 Executive Committee (EC) agenda for WG 802 preview and EC approval.**
      3. Moved on behalf of the SG by Bo Sun, Seconded: Michael Fischer
      4. [SG result: 40/0/2]
      5. For: 63, Against: 0, Abstain: 4 (Motion passes)

1. **Next Meeting** (11-18-1391r3 slide #22)
   1. The next meeting is at the Marriott Marquis Queen's Park, Bangkok Thailand from 11th – 16th November 2018. Registration and hotel reservation are now open for this meeting
   2. There will be an IEEE 802 Wireless Chairs meeting, as shown in slide #21, on Sunday at 16:00 local time at the November 2018 meeting. This is an open meeting, and everyone is welcome.
2. **AoB:**
   1. None
3. **Adjournment**
   1. Chair: Having completed the agenda, the chair announced that the meeting was adjourned at 09:38 HST.

**Annex A: Attendance & Affiliation**

| **Name** | **Affiliation** | **Attended >= 75%?** | **Status** |
| --- | --- | --- | --- |
| Abouelseoud, Mohamed | Sony Corporation | Yes | Voter |
| Aboulmagd, Osama | Huawei Technologies Co. Ltd | Yes | Voter |
| Adachi, Tomoko | TOSHIBA Corporation | Yes | Voter |
| Ahn, Jinsoo | Yonsei University | Yes | Voter |
| Ahn, Woojin | WILUS | Yes | Voter |
| Akhmetov, Dmitry | Intel Corporation | Yes | Aspirant |
| Alpert, Yaron | Texas Instruments Incorporated | Yes | Voter |
| An, Song-Haur | INDEPENDENT | Yes | Voter |
| Andersdotter, Amelia | Article 19 | Yes | Voter |
| Arokkiam, Jerome | OSRAM GmbH | Yes | Potential Voter |
| Asterjadhi, Alfred | Qualcomm Incorporated | Yes | Voter |
| Au, Kwok Shum | Huawei Technologies Co., Ltd | Yes | Voter |
| Baer, Bernd | Marquardt | No | Non-Voter |
| Baik, Eugene | Qualcomm Incorporated | Yes | Voter |
| baron, stephane | Canon Research Centre France | Yes | Voter |
| Barras, David | 3db Access | No | Non-Voter |
| Batra, Anuj | Apple, Inc. | Yes | Voter |
| Baykas, Tuncer | Istanbul Medipol University | No | Voter |
| Berens, Friedbert | FBConsulting Sarl | No | Voter |
| Berger, Christian | Marvell | Yes | Voter |
| Berkema, Alan | HP Inc. | Yes | Potential Voter |
| Bhandaru, Nehru | Broadcom Corporation | Yes | Voter |
| Bims, Harry | Bims Laboratories, Inc. | Yes | Voter |
| Bober, Lennert | Fraunhofer Heinrich Hertz Institute | Yes | Aspirant |
| Boldy, David | Broadcom Corporation | Yes | Potential Voter |
| Bredewoud, Albert | Broadcom Corporation | Yes | Voter |
| Buffington, John | Itron Inc. | No | Voter |
| Calcev, George | Huawei R&D USA | Yes | Voter |
| Cao, Rui | Marvell Semiconductor, Inc. | Yes | Voter |
| Cariou, Laurent | Intel Corporation | Yes | Voter |
| Carney, William | Sony Corporation | Yes | Voter |
| Cavalcanti, Dave | Intel Corporation | Yes | Potential Voter |
| Cepni, Gurkan | Apple, Inc. | Yes | Potential Voter |
| Chang, Soo-Young | California State University, Sacramento (CSUS) | Yes | Voter |
| Chen, Cheng | Intel Corporation | Yes | Voter |
| Chen, Xiaogang | Intel Corporation | Yes | Voter |
| CHERIAN, GEORGE | Qualcomm Incorporated | Yes | Voter |
| Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. | Yes | Voter |
| Choi, Jinsoo | LG ELECTRONICS | Yes | Voter |
| Chu, Liwen | Marvell Semiconductor, Inc. | Yes | Voter |
| Ciochina, Dana | Sony Corporation | Yes | Voter |
| Coffey, John | Realtek Semiconductor Corp. | Yes | Voter |
| Cordeiro, Carlos | Intel Corporation | Yes | Voter |
| da Silva, Claudio | Intel Corporation | Yes | Voter |
| Das, Dibakar | Intel | Yes | Voter |
| Dash, Debashis | Quantenna Communications, Inc. | Yes | Potential Voter |
| De Ruijter, Hendricus | Silicon Laboratories | No | Non-Voter |
| de Vegt, Rolf | Qualcomm Incorporated | Yes | Voter |
| Derham, Thomas | Broadcom Corporation | Yes | Voter |
| Eastlake 3rd, Donald | Huawei Technologies Co. Ltd | Yes | Voter |
| Ecclesine, Peter | Cisco Systems, Inc. | Yes | Voter |
| Eitan, Alecsander | Qualcomm Incorporated | No | Voter |
| Emmelmann, Marc | Self Employed / Koden-TI | Yes | Voter |
| Erceg, Vinko | Broadcom Corporation | Yes | Voter |
| erez, shai | Texas Instruments Incorporated | Yes | Aspirant |
| Fang, Yonggang | ZTE TX Inc | Yes | Voter |
| Fazel, Fatemeh | Intel Corporation | Yes | Potential Voter |
| Fischer, Matthew | Broadcom Corporation | Yes | Voter |
| Fischer, Michael | NXP Semiconductors | Yes | Voter |
| Friedrichs, Eike | OSRAM GmbH | Yes | Potential Voter |
| Gan, Ming | Huawei Technologies Co. Ltd | Yes | Voter |
| Ghosh, Chittabrata | Intel Corporation | Yes | Voter |
| Gilb, James | General Atomics Aeronautical Systems, Inc.; GenXComm; Gilb Consulting, Inc. | Yes | ExOfficio |
| Godfrey, Tim | Electric Power Research Institute, Inc. (EPRI) | Yes | ExOfficio |
| Grandhe, Niranjan | Marvell Semiconductor, Inc. | Yes | Voter |
| Gundavelli, Sri | Cisco Systems, Inc. | Yes | Aspirant |
| Guo, Yuchen | Huawei Technologies Co., Ltd | Yes | Voter |
| Hamilton, Mark | Ruckus Wireless | Yes | Voter |
| Hansen, Christopher | Covariant Corporation | Yes | Voter |
| Harkins, Daniel | Aruba Networks, Inc. | Yes | Voter |
| Harrington, Timothy | UWB Alliance | No | Non-Voter |
| Hart, Brian | Cisco Systems, Inc. | Yes | Aspirant |
| Hartman, Chris | Apple, Inc. | Yes | Voter |
| Hashemi, Morteza | Sony | Yes | Aspirant |
| Heberling, Allen | Tensorcom, Inc. | Yes | Voter |
| Henry, Jerome | Cisco Systems, Inc. | Yes | Potential Voter |
| hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) | Yes | Voter |
| Hiertz, Guido | Ericsson AB | Yes | Voter |
| Holcomb, Jay | Itron Inc. | No | ExOfficio |
| Hu, Glenn | Tencent | Yes | Potential Voter |
| Huang, Lei | Panasonic Asia Pacific Pte Ltd. | Yes | Voter |
| Huang, Po-Kai | Intel Corporation | Yes | Voter |
| Hwang, Sung Hyun | Electronics and Telecommunications Research Institute (ETRI) | Yes | Voter |
| Inoue, Yasuhiko | Nippon Telegraph and Telephone Corporation (NTT) | Yes | Voter |
| Ishizu, Kentaro | National Institute of Information and Communications Technology (NICT) | Yes | Potential Voter |
| iyer, karthik | Activision | Yes | Aspirant |
| Ji, Chenhe | Huawei Technologies Co., Ltd | Yes | Voter |
| jiang, feng | Intel Corporation | Yes | Voter |
| Jiang, Jinjing | Marvell Semiconductor, Inc. | Yes | Voter |
| Jin, Liang | Spirent Communications | Yes | Voter |
| Jones, Allan | Activision | Yes | Voter |
| JONES, JEFFRUM | Qorvo, Inc. | No | Voter |
| Jones, Vincent Knowles IV | Qualcomm Incorporated | Yes | Voter |
| Kain, Carl | Noblis, Inc. | Yes | Voter |
| Kalhan, Amit | KYOCERA Corporation | Yes | Potential Voter |
| KANG, Kyu-Min | Electronics and Telecommunications Research Institute (ETRI) | Yes | Potential Voter |
| Kasher, Assaf | Qualcomm Incorporated | Yes | Voter |
| Kenney, John | TOYOTA InfoTechnology Center U.S.A. | Yes | Potential Voter |
| Khalid, Ihtisham | Article 19 | Yes | Voter |
| Kim, Jeong Gon | Korea Polytechnic University (KPU) | Yes | Voter |
| Kim, Jeongki | LG ELECTRONICS | No | Voter |
| Kim, Jin Min | LG ELECTRONICS | No | Voter |
| Kim, Namgi | Kyonggi University | No | Non-Voter |
| Kim, Sang Gook | LG ELECTRONICS | Yes | Voter |
| Kim, Suhwook | LG ELECTRONICS | Yes | Voter |
| Kim, Yongho | Korea National University of Transportation | Yes | Voter |
| Kim, Youhan | Qualcomm Incorporated | Yes | Voter |
| Kishida, Akira | NTT DoCoMo, Inc. | Yes | Aspirant |
| Kitazawa, Shoichi | Muroran IT | No | Non-Voter |
| Kloper, David | Cisco Systems, Inc. | Yes | Aspirant |
| KNECKT, JARKKO | Apple, Inc. | Yes | Voter |
| Lalam, Massinissa | SAGEMCOM SAS | Yes | Voter |
| Lan, Zhou | Broadcom Corporation | Yes | Voter |
| Lansford, James | Qualcomm Incorporated | Yes | Voter |
| Latif, Imran | Quantenna Communications, Inc. | Yes | Aspirant |
| Lee, Hyeong Ho | Netvision Telecom Inc. | Yes | Potential Voter |
| Lee, Wookbong | SAMSUNG | Yes | Voter |
| Lepp, James | BlackBerry | Yes | Voter |
| Li, Guoqing | Apple, Inc. | Yes | Voter |
| Li, Qinghua | Intel Corporation | Yes | Voter |
| Li, Yunbo | Huawei Technologies Co. Ltd | Yes | Voter |
| Lim, Dong Guk | LG ELECTRONICS | Yes | Voter |
| Lin, Wei | Huawei Technologies Co. Ltd | Yes | Voter |
| Lindskog, Erik | Qualcomm Incorporated | Yes | Voter |
| Liu, Jianhan | MediaTek Inc. | Yes | Voter |
| Loc, Peter | Huawei Technologies Co. Ltd | Yes | Voter |
| Lopez, Miguel | Ericsson AB | Yes | Voter |
| Lopez-Perez, David | Nokia | Yes | Potential Voter |
| Luo, Pengfei | Huawei Technologies Co., Ltd | Yes | Voter |
| Lv, Kaiying | ZTE Corporation | Yes | Voter |
| Maltsev, Alexander | Intel Corporation | Yes | Voter |
| Mano, Hiroshi | Koden Techno Info K.K. | Yes | Voter |
| MAQBOOL, Masood | Apple, Inc. | No | Non-Voter |
| MARIAPPAN, VINAYAGAM | SNUT | Yes | Potential Voter |
| Marks, Roger | EthAirNet Associates; Huawei | No | ExOfficio |
| Mccann, Stephen | BlackBerry | Yes | Voter |
| Meng, Xing | Tencent | Yes | Potential Voter |
| Min, Alexander | Intel Corporation | Yes | Aspirant |
| Monajemi, Pooya | Cisco Systems, Inc. | Yes | Voter |
| Montemurro, Michael | BlackBerry | Yes | Voter |
| Morioka, Hitoshi | SRC Software | Yes | Voter |
| Motozuka, Hiroyuki | Panasonic Corporation | Yes | Voter |
| Mueller, Robert | Ilmenau University of Technology - TU Ilmenau | Yes | Voter |
| Myles, Andrew | Cisco Systems, Inc. | Yes | Voter |
| Nagai, Yukimasa | Mitsubishi Electric Corporation | Yes | Voter |
| Nagakubo, Sakie | Toshiba | No | Non-Voter |
| Nakano, Takayuki | Panasonic Corporation | Yes | Aspirant |
| Nandagopalan, SAI SHANKAR | Cypress Semiconductor Corporation | Yes | Voter |
| Nejatian, Alireza | Ericsson AB | No | Non-Voter |
| Ng, Boon Loong | Samsung Research America | No | Non-Voter |
| Noh, Yujin | Newracom Inc. | Yes | Voter |
| Notor, John | Notor Research | Yes | Voter |
| Ohsawa, Tomoki | NICT | No | Non-Voter |
| Olaziregi, Nikolas | Nokia | Yes | Potential Voter |
| Oteri, Oghenekome | InterDigital, Inc. | Yes | Voter |
| Palm, Stephen | Broadcom Corporation | Yes | Voter |
| Pare, Thomas | MediaTek Inc. | Yes | Potential Voter |
| Park, Eunsung | LG ELECTRONICS | Yes | Voter |
| Park, Minyoung | Intel | Yes | Voter |
| Patil, Abhishek | Qualcomm Incorporated | Yes | Voter |
| Patwardhan, Gaurav | Hewlett Packard Enterprise | Yes | Voter |
| petrick, Albert | InterDigital, Inc. | Yes | Voter |
| porat, ron | Broadcom Corporation | Yes | Voter |
| Qi, Emily | Intel Corporation | Yes | Voter |
| Raissinia, Alireza | Qualcomm Incorporated | Yes | Potential Voter |
| Rakanovic, Demir | u-blox | Yes | Voter |
| Regev, Alon | Keysight Technologies | Yes | Potential Voter |
| Robert, Joerg | University of Erlangen-Nuremberg | No | Non-Voter |
| Rosdahl, Jon | Qualcomm Technologies, Inc. | Yes | Voter |
| Ryu, Kiseon | LG ELECTRONICS | Yes | Voter |
| Sadeghi, Bahareh | Intel Corporation | Yes | Voter |
| Sahin, Alphan | InterDigital, Inc. | Yes | Voter |
| Sakamoto, Takenori | Panasonic Corporation | Yes | Voter |
| Sakoda, Kazuyuki | Sony Corporation | Yes | Voter |
| Sambasivan, Sam | AT&T | Yes | Voter |
| Sand, Stephan | German Aerospace Center (DLR) | Yes | Potential Voter |
| Sato, Naotaka | Sony Corporation | Yes | Voter |
| SAUER, PETER | Microchip Technology, Inc. | No | Non-Voter |
| Sawai, Ryo | Sony corporation | No | Non-Voter |
| Schelstraete, Sigurd | Quantenna Communications, Inc. | Yes | Voter |
| Segev, Jonathan | Intel Corporation | Yes | Voter |
| Seok, Yongho | MediaTek Inc. | Yes | Voter |
| Serafimovski, Nikola | pureLiFi | No | Potential Voter |
| Shah, Kunal | Itron Inc. | Yes | Potential Voter |
| Shaul, yossef | Auto-Talks | Yes | Aspirant |
| Shellhammer, Stephen | Qualcomm Incorporated | No | ExOfficio |
| Sherlock, Ian | Texas Instruments Incorporated | Yes | Voter |
| Smith, Graham | SR Technologies | Yes | Voter |
| Son, Ju-Hyung | WILUS Inc. | Yes | Voter |
| Stacey, Robert | Intel Corporation | Yes | Voter |
| Stanley, Dorothy | Hewlett Packard Enterprise | Yes | Voter |
| Stavridis, Athanasios | Ericsson AB | Yes | Potential Voter |
| Strauch, Paul | Cypress Semiconductor Corporation | Yes | Potential Voter |
| Suh, JUNG HOON | Huawei Technologies Co. Ltd | Yes | Voter |
| Sumi, Takenori | Mitsubishi Electric Corporation | Yes | Voter |
| Sun, Bo | ZTE Corporation | Yes | Voter |
| Sun, Li-Hsiang | InterDigital, Inc. | Yes | Voter |
| Sundman, Dennis | Ericsson AB | Yes | Voter |
| Takai, Mineo | Space-Time Engineering | Yes | Voter |
| Tanaka, Yusuke | Sony Corporation | Yes | Voter |
| Tao, Wu | Huawei Technologies Co. Ltd | Yes | Voter |
| Tian, Bin | Qualcomm Incorporated | Yes | Voter |
| Torab, Payam | Facebook | Yes | Voter |
| Trainin, Solomon | Qualcomm Incorporated | Yes | Voter |
| Uchiyama, Hiromasa | Sony Corporation | Yes | Aspirant |
| Urabe, Yoshio | Panasonic Corporation | Yes | Voter |
| V Padaki, Aditya | Samsung Research America | Yes | Potential Voter |
| Varshney, Prabodh | Nokia | Yes | Voter |
| Verma, Lochan | Qualcomm Incorporated | Yes | Voter |
| Vermani, Sameer | Qualcomm Incorporated | Yes | Voter |
| VIGER, Pascal | Canon Research Centre France | Yes | Voter |
| Wang, Chao Chun | MediaTek Inc. | Yes | Voter |
| Wang, Huizhao | Quantenna Communications, Inc. | Yes | Voter |
| Wang, James June | MediaTek Inc. | Yes | Voter |
| Wang, Lei | Huawei R&D USA | Yes | Voter |
| Wang, Peiwei | Huawei Technologies Co., Ltd | No | Non-Voter |
| Wang, Qi | Apple, Inc. | Yes | Voter |
| Wang, Xiaofei | InterDigital, Inc. | Yes | Voter |
| WANG, Ying | HUAWEI | Yes | Aspirant |
| Ward, Lisa | Rohde & Schwarz | Yes | Voter |
| Wentink, Menzo | Qualcomm Incorporated | Yes | Voter |
| Wilhelmsson, Leif | Ericsson AB | Yes | Voter |
| Wu, Tianyu | Samsung Electronics Co., Ltd. | Yes | Voter |
| Xin, Yan | Huawei Technologies Co. Ltd | Yes | Voter |
| YANG, RUI | InterDigital, Inc. | Yes | Voter |
| Yang, Xun | Huawei Technologies Co. Ltd | Yes | Voter |
| Yang, Yunsong | Huawei Technologies Co. Ltd | Yes | Voter |
| Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) | Yes | Voter |
| Yee, James | MediaTek Inc. | Yes | Voter |
| Yee, Peter | NSA-Cybersecurity | Yes | Voter |
| Yu, Bo | Marvell Semiconductor, Inc. | Yes | Voter |
| Yu, Jian | Huawei Technologies Co. Ltd | Yes | Voter |
| Yun, Ji-Hoon | SeoulTech | No | Non-Voter |
| Zhang, Hongyuan | Marvell Semiconductor, Inc. | Yes | Voter |
| Zhang, Xingxin | Huawei Technologies Co. Ltd | Yes | Voter |
| Zuo, Xin | Huawei Technologies Co., Ltd | Yes | Voter |

**Annex B : Working Group Officers**

**Working Group**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Dorothy Stanley (HP Enterprise) | IEEE 802.11 Working Group Chair | +1( 630) 363-1389  [dstanley@ieee.org](mailto:dstanley@ieee.org) |
| Jon Rosdahl (Qualcomm) | 1st Vice Chair (Venues and meeting planning) Treasurer | +1 (801) 492-4023 [jrosdahl@ieee.org](mailto:jrosdahl@ieee.org) |
| Robert Stacey (Intel Corporation) | 2nd Vice Chair (Rules and reflectors) IEEE 802 (LMSC) EC delegate | +1 (503) 712 4447 [robert.stacey@intel.com](mailto:robert.stacey@intel.com) |
| Stephen McCann (BlackBerry Ltd.) | Secretary | +44 1753 667099 [stephen.mccann@ieee.org](mailto:stephen.mccann@ieee.org) |
| Peter Ecclesine (Cisco Systems, Inc.) | Co-Technical Editor | +1 (408) 710-3403 [petere@ieee.org](mailto:petere@ieee.org) |
| Robert Stacey (Intel Corporation) | Co-Technical Editor 802.11 Assigned Numbers Authority | +1 (503) 712 4447 [robert.stacey@intel.com](mailto:robert.stacey@intel.com) |

**Standing Committees**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Jim Lansford (Qualcomm) | Wireless Next Generation (WNG) Chair | +1-719-286-8660 [jim.lansford@ieee.org](mailto:jim.lansford@ieee.org) |
| Joseph Levy  (InterDigital Communications Inc.) | Advanced Access Netowork Interface (AANI) Chair | +1.631.622.4139 [jslevy@ieee.org](mailto:jslevy@ieee.org) |
| Mark Hamilton (Ruckus Wireless) | Architecture (ARC) Chair | +1 (303) 818-8472 [mark.hamilton2152@gmail.com](mailto:mark.hamilton2152@gmail.com) |
| Jon Rosdahl (Qualcomm) | Project Authorization Request (PAR) review Chair | +1 (801) 492-4023 [jrosdahl@ieee.org](mailto:jrosdahl@ieee.org) |
| Andrew Myles (Cisco) | Coexistence Standing Committee Chair | +61 418 656587 [amyles@cisco.com](mailto:amyles@cisco.com) |

**Task Groups**

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Jiamin Chen (HiSilicon/Huawei Technologies) | TGaj Chair China Millimeter Wave | +86-10-8282-9532  [Jiamin.chen@mail01.huawei.com](mailto:Jiamin.chen@mail01.huawei.com) |
| Donald Eastlake, 3rd (Huawei Technologies) | TGak Chair General Link | +1 508-333-2270 [d3e3e3@gmail.com](mailto:d3e3e3@gmail.com) |
| Stephen McCann (BlackBerry Ltd.) | TGaq Chair Pre-association Discovery | +44 1753 667099 [stephen.mccann@ieee.org](mailto:stephen.mccann@ieee.org) |
| Osama Aboul-Magd (Huawei) | TGax Chair High Efficiency WLAN | +1 (613) 287-1405 [osama.aboulmagd@huawei.com](mailto:osama.aboulmagd@huawei.com) |
| Edward Au (Huawei) | TGay Chair Next Generation 60 GHz (NG60) | +1 773 782 6875  [edwardau@marvell.com](mailto:edwardau@marvell.com) |
| Jonathan Segev (Intel Corporation) | TGaz Chair Next Generation Positioning (NGP) | +972-54-2403587 [jonathan.segev@intel.com](mailto:jonathan.segev@intel.com) |
| Minyoung Park (Samsung Semiconductor Inc.) | TGba Chair Wake-up Radio (WUR) | [mpark.ieee@gmail.com](mailto:mpark.ieee@gmail.com) |
| Nikola Serafimovski (pureLiFi) | TGbbChair Light Communication (LC) | +44 131 516 1816 [nikola.serafimovski@purelifi.com](mailto:nikola.serafimovski@purelifi.com%3E) |
| Dorothy V. Stanley (HPE) | TGmd Chair 802.11 revision project - P802.11REVmd | +1( 630) 363-1389  [dorothy.stanley@hpe.com](mailto:dorothy.stanley@hpe.com) |

|  |
| --- |
|  |

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

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
| Marc Emmelmann (Koden-TI) | Broadcast Services (BCS) Study Group Chair | [marc.emmelmann@me.com](mailto:marc.emmelmann@me.com) |
| Michael Montemurro (BlackBerry) | Extremely High Throughput Topic Interest Group Chair | [mmontemurro@blackberry.com](mailto:mmontemurro@blackberry.com) |
| James P. K. Gilb (General Atomics Aeronautical Systems Inc., University of San Diego, Gilb Consulting) | Full Duplex Topic Interest Group Chair | +1 858-229-4822 [Gilb\_IEEE@yahoo.com](mailto:Gilb_IEEE@yahoo.com) |
| Bo Sun (ZTE) | Next Generation V2X (NGV) Study Group Chair | [sun.bo1@zte.com.cn](mailto:sun.bo1@zte.com.cn) |

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

|  |  |  |
| --- | --- | --- |
| Name (Affiliation) | Position | Contact Details |
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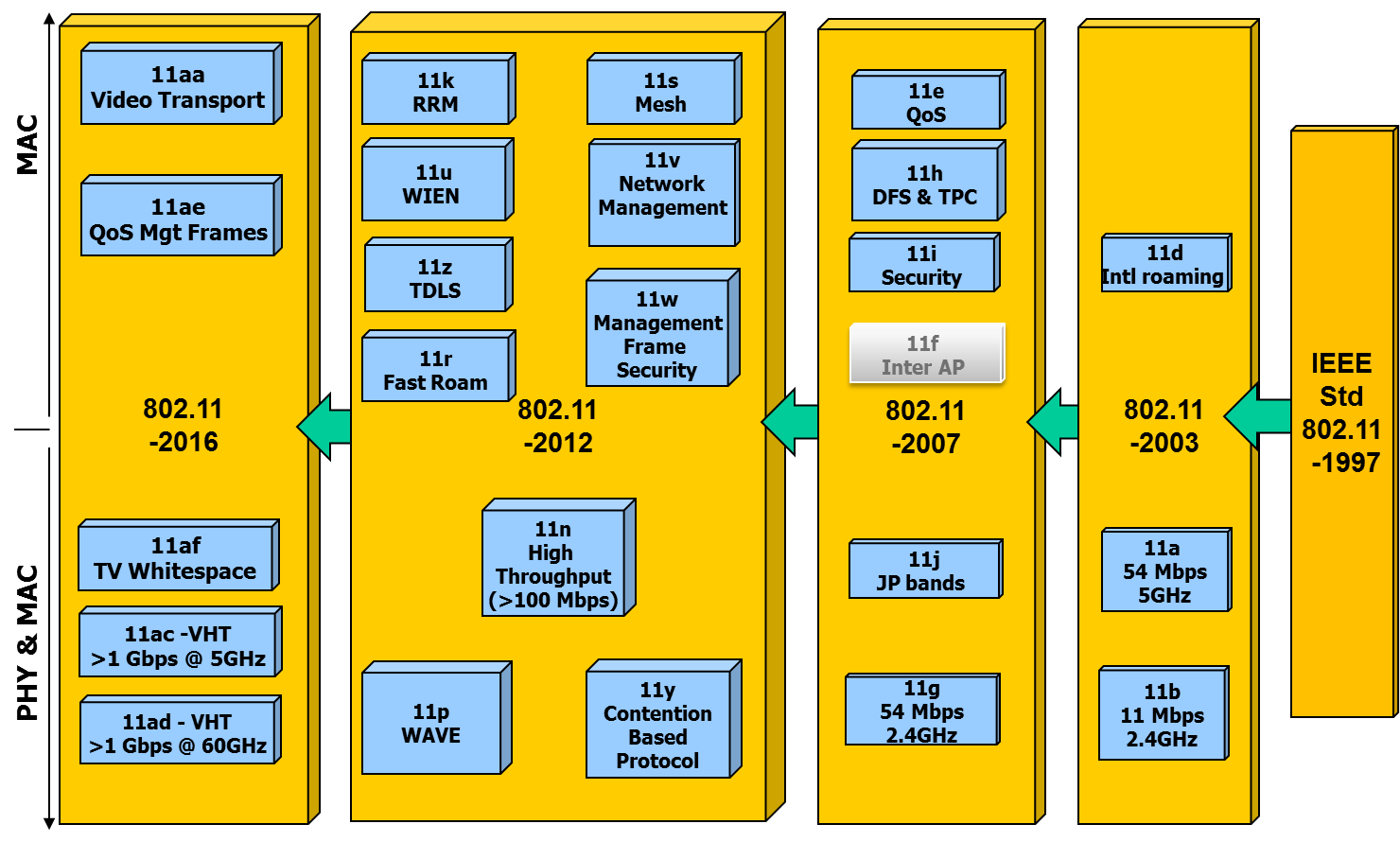
|  |  |  |
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**Annex C : Minutes**

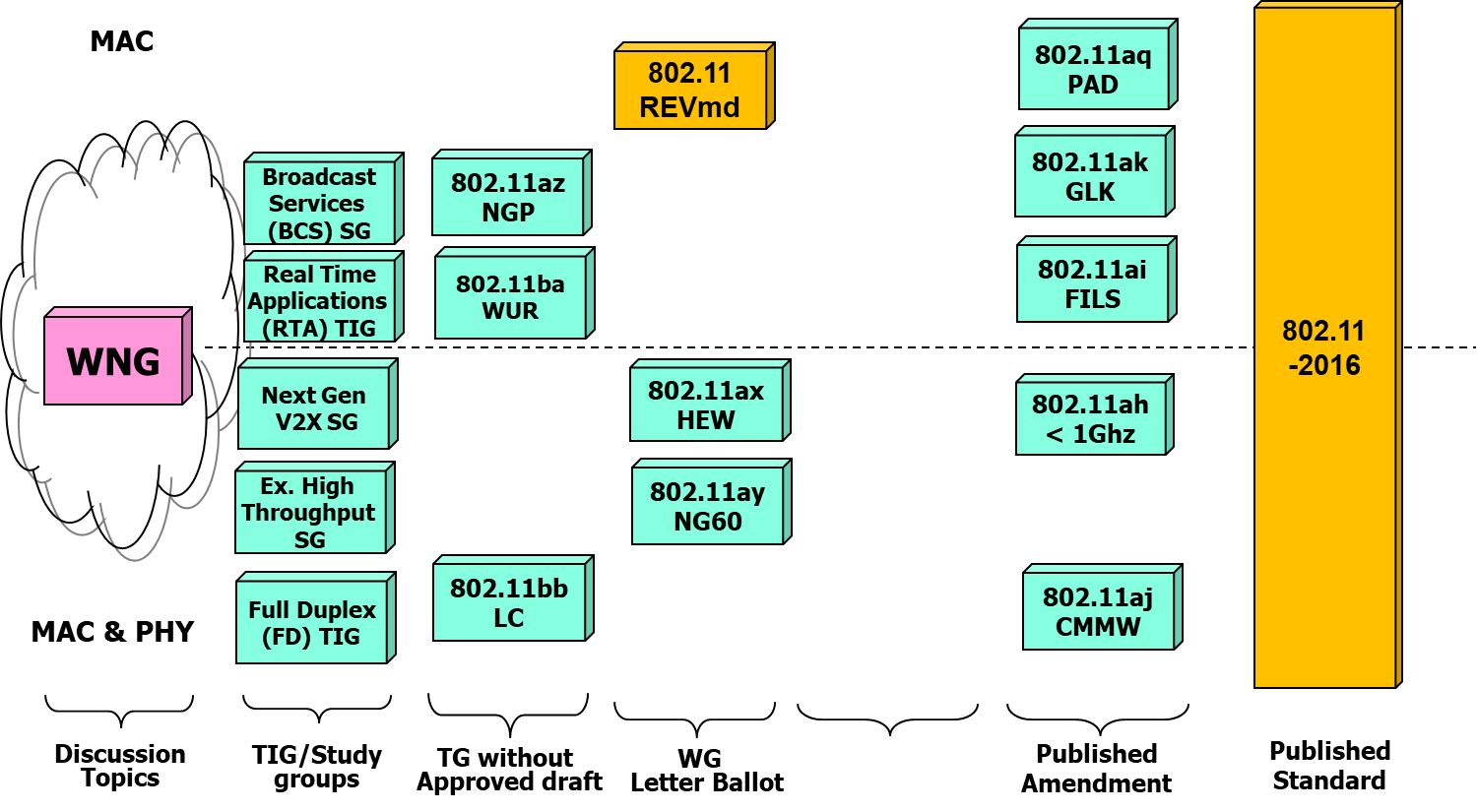
This Annex contains references to all IEEE 802.11 SC/TG/SG & Ad Hoc Committee (AHC) minutes from this meeting. Please note that they are NOT subject to the approval of these minutes, but are confirmed and approved by their individual group in the opening meeting at their next session.

|  |  |  |
| --- | --- | --- |
| WG | TE | 18-1414r1 |
| TGmd | TG | 18-1402r0 |
| TGax | TG | 18-1617r0 |
| TGay | TG | 18-1681r2 |
| TGaz | TG | 18-1627r0 |
| TGba | TG | 18-1674r0 |
| TGbb | TG | 18-1602r3 |
| ARC | SC | 18-1726r0 |
| JTC 802 | SC | 18-1693r0 |
| AANI | SC | 18-1633r0 |
| COEX | SC | 18-1744r0 |
| FD | TIG | 18-1685r0 |
| NGV | SG | 18-1680r1 |
| BCS | SG | 18-1578r0 |
| RTA | TIG | 18-1689r0 |
| EHT | SG | 18-1684r2 |

**Annex D : Revisions and Standards Pipeline**

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**IEEE 802.11 Revisions**

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**IEEE 802.11 Standards Pipeline**

End.