IEEE P802.11  
Wireless LANs

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| Minutes of the IEEE P802.11 Full Working Group | | | | |
| Date: 2017-09-11 | | | | |
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Abstract

This document constitutes the minutes of the IEEE 802.11 full working group for the September 2017, Waikoloa, Hawaii, USA meeting.

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

**IEEE 802 Wireless Interim Meeting – #165 Joint Opening Plenary**

**Waikoloa Hilton Hotel**

**Big Island, Hawaii, USA**

**September 11 - 15, 2017**

**Monday, 11th September 2017**

**Call to Order**

**8:00 (Hawaiian-Aleutian Standard Time - HST)** 802.11, 802.15, 802.16, 802.18, 802.19, 802.21, 802.22, and 802.24 Chairs called the joint meeting to order.  IEEE 802.11 attendance is included as Annex A.

General announcements:

* No photography, no audio recording
* Social –  Reception on Wednesday 18:00 – 20:30
* Don’t forget, book your room and register for November’s session
* Straw Poll of new attendees: 0

**8:10**   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: ([**http://standards.ieee.org/board/pat/pat-slideset.ppt**](http://standards.ieee.org/board/pat/pat-slideset.ppt)**)**.

802.15 WG chair read IEEE anti-trust policy.

**8:14** Financial report by J Rosdahl (Qualcomm) docs 11-17-01265-00, 15-17-0502-01

Total liabilities and equity          $ 702,065.34

**8:16**   Wireless and IMAT announcements, 15-17-0043-00, by R Alfvin (Linespeed)

**8:17**  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-17-0003-00-WCSG](https://mentor.ieee.org/802-ec/dcn/17/ec-17-0003-00-WCSG-802-wireless-chairs-minutes-2017-january-atlanta.docx)

**8:20**   Review future sessions (document # 15-16-0857-04)

* **November 5-10, 2017, Caribe Hotel and Convention Center, Orlando, FL, USA,** 802 Plenary Session
* **January 14-19, 2018, Hotel Irvine, Irvine, California, 802 Wireless Interim Session.**
* **March 4-9, 2018, Hyatt Regency O'Hare, Rosemont, IL, USA,** 802 Plenary Session
* **May 6-11, 2018, Warsaw Marriott,** 802 Wireless Interim Session.\*
* **July 8-13, 2018, Manchester Grand Hyatt, San Diego, CA, USA,** 802 Plenary Session
* **September 9 - 14, 2018, Hilton Waikoloa Village, Kona, HI, USA,** 802 Wireless Interim Session.\*
* **November 11-16, 2018, Bangkok Thailand,** 802 Plenary Session

**8:23   Working Group Updates**

802.11 by Adrian Stephens (Intel), (document 11-17-1168-00)

·      316 voters

802.15 by B Heile (document 15-17-0464-04)

·      94 voters

·      TG4s: SRU (Spectrum Resource Utilization)

·      TG 7m: Optical Wireless Communications

·      TG8: PAC (Peer Aware Communications)

·      TG12 Upper Layer Interface (ULI) for 802.15.4

·      TG13 Multi-Gigabit OWC

·      SC IETF

·      IG VOC (Vehicular Assistive Technology)

·      IG LPWA (low power wide area)

802.16 by R Marks

·      Finishing 802.16s and follow-up revision project

802.18  by R Kennedy

·      Regulatory changes

·      EC NOI

802.19  S Shellhammer

·      34 voting members

·      approved revision PAR

802.21  S Das

·      18 voting members

·      Working on Corrigendum

802.24  B Rolfe

·      36 voting members

·      Discussion of EC NOI

**AoB**

**8:32**   Joint meeting adjourned

**IEEE 802.11 Interim Meeting – Session #165**

**Waikoloa Hilton Hotel, Big Island, Hawaii, USA**

**September 11th – 15th, 2017**

**IEEE 802.11 Opening Plenary, Monday 11th September 2017**

Presiding chair: Adrian Stephens (Intel) opened the meeting at 09:00 Hawaiian-Aleutian Standard Time (HST) and declared Quorum for the Session.

2nd Vice-chair (VC2): Dorothy Stanley Hewlett Packard Enterprise

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

Acting Secretary: Michael Montemurro BlackBerry Ltd.

There are 316 voting members and 12\*\* Ex Officio voters of IEEE 802.11

There were 154 people in the room

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

1. **Notices** (11-17-1168r0)
   1. No photographs at this meeting and please turn your mobiles to vibrate.
   2. There will be a group photo taken on the stairs on Wednesday. Details to follow later in the week.
   3. Chair: Are there any members of the press present.
      1. Yes. A member from “Article19” is present.
2. **Approve/modify joint opening agenda** (11-17-1167r1)
   1. This is a summary of all room allocations for the week.
   2. Chair: I suggest we approve this agenda.
   3. **Move to approve the agenda 11-17-1167r1 (“Agenda Graphic” tab and the “WG11” tab Monday agenda)**
      1. Moved: Mark Hamilton, 2nd: Ian Sherlock
      2. No objection to approving by unanimous consent
3. **July 2017 WG Minutes**
   1. **Move to approve the Berlin July 2017 WG minutes document 11-17-1035r2**
   2. Moved: Michael Montemurro, 2nd: Dorothy Stanley
   3. Following neither discussion nor dissent the minutes were approved by unanimous consent.
4. **Attendance**
   1. Welcome to the 7 new participants in this meeting.
   2. Chair: Please note that Jon Rosdahl (VC1) will be holding a newcomer’s session at 10:30 in room Queens 4.
5. **Call for essential Patents** (11-17-1201r0)
   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: read out other policies and procedures for the meeting.
   4. VC2: There were no rule changes in the 802 governing documents at the July meeting.
   5. VC2: One proposed future changes to the 802.11 policies and procedures is to provide a process where TG slides are approved by the WG after the TG stops meeting.
   6. No questions
6. **Announcements**
   1. **Liaisons (11-17-1168r0 slide #5)**
      1. Chair: There was a liaison from the Wi-Fi Alliance to 3GPP on Coexistence Test for LTE-LAA
   2. **EC Decisions**
      1. Chair: The EC approved the 802.11ah-2016 press release along with the LC Study Group.
   3. **Meeting logistics (11-17-1266r1 slide #4)**
      1. VC1: this slide deck shows information about future meetings and logistics this week.
      2. Slide #5 shows a link to this week’s online room schedule.
      3. Slide #6 shows the meeting room layout within this convention center.
      4. There is an online google IEEE 802.11 calendar which is available for most hand held devices.
      5. The next meeting is in November 2017 in Orlando, Florida. The IEEE 802.11 will be in the Caribe Royale hotel.
      6. The January 2018 meeting will be in Irvine, CA.
   4. **Recording Attendance (slide #9)**
      1. VC1: Please remember to record your attendance for each 2 hour slot during the week.
   5. **WG Documents (slide #10)**
      1. VC1: 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. The IT support center is along the corridor from the IEEE 802 registration desk.
   6. **Social and Catering options (slide #11)**
      1. VC1: Please note that breakfast and lunch are provided at Lagoon Lanai.
      2. There is a social on Wednesday evening, from 6:30pm-8:30pm at Lagoon Lanai. Everyone must have a badge.
7. **Status of all groups** (11-17/1168r0)
   1. **Sub-Group Status**
      1. Chair: Please note that Light Communications is operating as a study group and Nikola Serafimovski from pureLiFi will be appointed as Chair protem.
      2. P802.11ax created a PAR modification request but needs to approve the CSD for submission.
      3. P802.11az created a PAR modification request.
   2. **Summary of Ballots**
      1. A TGaq sponsor ballot closed on the weekend but the summary needs to be updated.
   3. **Voting Status (slide #18)**
      1. No questions
8. **Group Summaries** (11-17-1200r1)
   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. **PAR**
      1. The NesCom deadline is the same as the RevCom deadline.
      2. The challenge from 2018 is that the Standards board meets the same week as IEEE 802. This may delay approvals.
   4. **WNG**
      1. There are 2 presentations this week for this group, which meets on Tuesday at 8am.
   5. **TGmd**
      1. Reminder that there is a call for contributions on 3GPP metrics.
      2. The plan is to hear the 3GPP metrics contributions in the November session
   6. **TGaj**
      1. Congratulations on completing Sponsor Ballot with no unsatisfied comments.
   7. **TGaq**
      1. The topic of the RAC comments came up during the CAC meeting and the recommendation is not to seek EC approval to go to RevCom at the beginning of October.
   8. **LC SG**
      1. This group will meet for the first time and elect officers.
9. **Recess**
   1. Meeting recessed at 10:00 HST.

**Wednesday, 13th September 2017**

**IEEE 802.11 Mid-Week Plenary**

Presiding chair: Adrian Stephens (Intel) opened the meeting at 10:31 HST.

130 people present.

1. **Approve/modify joint opening agenda** (11-17-1167r3)
   1. Chair: There are a couple of minor changes to the agenda fixing links and various items.
   2. Chair: Please note that there will a group photograph on the steps, once this meeting has recessed. Otherwise the taking of photographs is not allowed.
   3. **Move to approve the agenda 11-17-1167r4.**
      1. Moved: Mark Hamilton, 2nd: Ian Sherlock
      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. **Social** (11-17-1266r2)
   1. VC1: Please remember that there is a social this evening, as shown on slide #15. Please wear your name badge to attend.
   2. No questions
5. **Wi-Fi Alliance liaison** (11-17-1486r0)
   1. This is report about the current IEEE 802.11 related activities within the Wi-Fi Alliance. The next meeting is scheduled for 23rd October 2017 in Bucharest.
   2. Question (Q): Please can you explain the Vantage program?
   3. Answer (A): This program will include Agile Multiband (based on 11v, 11k, 11r and 11u) and Optimized Connectivity (based on 11ai).
6. **IETF Liaison** (11-17-1204r0)
   1. This is report about the current IEEE 802.11 related activities within the IETF.
   2. The next meeting is in the middle of November in Singapore, which is the week after the IEEE 802.11 face to face meeting in November.
   3. No questions
7. **Room assignment updates** (11-17-1167r4)
   1. LC SG: The slot for Wednesday PM2 can be released.
   2. **Motion to approve the updated room graphic in the agenda 11-17-1167r5**
      1. Moved: Nicola Serafimovski, 2nd: Jim Petranovich
      2. No objection to approving the agenda by unanimous consent.
8. **802c summary and impact on architecture** (11-17-1466r1)
   1. The IEEE 802c technical editor presents this new document, published on August 25th 2017.
   2. Q: This is described as an optional standard. Who determines whether IEEE 802c is optional or not?
   3. A: Originally it would have been the local administrator. However, now the local administrator can follow the SLAP. If IEEE 802c were to be mandatory, it would be very hard to police. Instead, it’s now possible to say that a protocol is SLAP compliant.
   4. Q: How would the SAI quadrant be used by IEEE 802? Some administrators may consider this to be for private usage?
   5. A: If standards are developed to ensure good interoperability, then there should be no concern. Therefore, administrators are not supposed to duplicate addresses which are used by others. The standard is there to encourage conventions to be adopted.
   6. Q: When I looked at the tutorial, there are lot of links which is very confusing. Is there a simple way for a manufacturing company to understand this?
   7. A: The IEEE RAC has recently renovated the tutorial on this, although a tutorial summary is required.
9. **Any Other Business**
   1. None
   2. Meeting recessed at 11:41 HST

**Friday, 15th September 2017**

**IEEE 802.11 Closing Plenary**

Call to order at 08:00 HST by Adrian Stephens (Intel).

74 people present in the room.

1. **Agenda** (11-17-1167r6)
   1. Chair: There have been some minor changes to the agenda from earlier this week.
   2. **Adopt the changes to the agenda as shown in 11-17-1167r6**
      1. Moved: Jim Petranovich, 2nd: Nikola Serafimovski
      2. No objection to approving by unanimous consent.
2. **Call for Essential Patents** (11-17-1169r2)
   1. Call for Essential Patents and Letters of Assurance (LoA)
   2. No statements
   3. No questions
3. **Announcements** (11-17-1169r2)
   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. Please be aware of the Chair’s schedule for the chair’s committee meetings (CAC), which are on 5th October and 30th October 2017 at noon ET.
   3. **Letters of Assurance (LoA)** (slide #11)
      1. Chair: please remember about the LoA requirements.
   4. **IEEE Store and ISO SCG** (slides #12)
      1. Chair: Please note that this was actually updated on 13th September and so the date on the slide is a typo. Please note that the links to the IEEE Store have now been updated as it is now associated with IEEE Explorer.
      2. No questions
4. **Current Venues** (11-17-1266r1 slide #18)
   1. **Straw Poll: How many people would like to come back to this venue?**
   2. Y: 37, N: 5
   3. **Straw Poll: How many people enjoyed the social? 29**, **Did not**: 0
   4. **Straw Poll: How many people did not attend the social? 5**
5. **Upcoming Venues** (11-17-1266r1 slide #19)
   1. VC1: This slide shows the future wireless interim locations.
   2. Slide #19 shows the confirmed upcoming wireless sessions.
   3. Slide #20 shows the confirmed upcoming plenary sessions.
   4. VC1: Please note that the Orlando venue is fine following Hurricane Irma earlier this month. The registration is now open.
6. **Treasury Report** (11-17-1265r1)
   1. VC1: This is the treasurer’s report from 31st August 2017. The final figures for this week will be available later in the year. There will be a small loss for this week, as the number of attendees are down a little (273).
7. **Timelines**
   1. There are timelines updates for TGaj, TGaq and TGba. It will be updated over the weekend.
8. **Documentation & Attendance** (11-17-1203r0 slide #3)
   1. These are the usual attendance statistics for this week and IEEE 802.11ax is by far the largest project this week, although IEEE 802.11ba is close behind.
   2. The number of document uploads per meeting is quite steady, although the current trend is a slow increase.
9. **WG Committee Reports** (11-17-1203r0)
   1. **Technical editor** (slide #8)
      1. Q: As 11aj is almost finished, perhaps it should update it’s references to the other drafts it depends on.
      2. A: Yes, I’ll talk to TGaj about this.
   2. **AANI Standing Committee** (slide #14)
      1. Chair: Regarding the future of AANI SC, perhaps we should review this at the Thursday CAC during the November face to face meeting, to see if AANI should meet in January 2018.
   3. **ARC Standing Committee** (slide #20)
      1. No questions
   4. **Co-existence Standing Committee** (slide #26)
      1. No questions
   5. **WNG** (slide #29)
      1. There were 2 presentations this week.
      2. No questions
   6. **JTC1** (slide #32)
      1. No questions
   7. **TGmd** (slide #36)
      1. Current plan is for the 1st working group letter ballot in January 2018.
      2. Comment (C): If you attend the ad-hoc in December 2017, I would encourage you to also attend the IEEE-SA meetings which are being held during the same week in the same location. Please let either the chair or VC1 know if you wish to attend, as they can provide you with more information.
   8. **TGaj** (slide #41)
      1. TGaj will not meet during the IEEE 802.11 November face to face meeting.
      2. No questions
   9. **TGak** (slide #50)
      1. No questions
   10. **TGaq** (slide #52)
       1. Chair: IEEE RAC is a co-ordination group that RevCom will check if the RAC has any outstanding -ve comments. This can result in a draft being sent back to the WG and therefore the IEEE RAC comments need to be considered carefully and satisfied to the best of the WG’s ability. I believe that TGaq have indeed engaged the IEEE RAC this week and are striving to resolve and satisfy their comments.
       2. No questions
   11. **TGax** (slide #56)
       1. No questions
   12. **TGay** (slide #61)
       1. Current plan is for the 1st working group letter ballot in January 2018.
       2. No questions
   13. **TGaz** (slide #66)
       1. No questions
   14. **TGba** (slide #71)
       1. No questions
   15. **LC SG** (slide #76)
       1. Current plan to have a PAR and CSD ready for the November 2017 plenary.
       2. No questions
10. **Liaison Reports** (11-17-1203r0)
    1. **IEEE 802.18** (slide #81)
       1. Chair: What is the objection to the IEEE 802.11 in schools?
       2. A: It’s with regard to IEEE 802.11 and radiation health issues.
    2. **IEEE 802.24**
    3. The smart grid group met this week and they addressed two whitepapers that 802.24 is currently working on:
    4. TSN whitepaper: <https://mentor.ieee.org/802.24/dcn/17/24-17-0006-08-sgtg-tsn-utility-applications-white-paper.docx>
    5. Wireless characteristics matrix: <https://mentor.ieee.org/802.24/dcn/17/24-17-0004-06-sgtg-wireless-characteristics-matrix-update-2017.xlsx>
    6. The 802.24 closing report can be found here for anyone with interest in the details of our week: <https://mentor.ieee.org/802.24/dcn/17/24-17-0023-02-0000-september-meeting-report.pptx>
    7. No questions
11. **Working Group Motions (Old Business)** (11-17-1202r1)
    1. **Teleconferences** (slide #6)
       1. **Move to approve the following teleconferences**

|  |  |  |  |
| --- | --- | --- | --- |
| **Group** | **Date(s)** | **Start** | **Duration** |
| **CAC** | **Thursday Oct 5, Monday Oct 30** | **Noon ET** | **1 hr** |
| **TGak** | **Mon Sept 25, Oct 2, 16, 30** | **9:00 ET** | **1 hr** |
| **TGaq** | **Friday Sept 29, Oct 6, 13, 20, Nov 3** | **Noon ET** | **2 hrs** |
| **TGax** | **Thurs Sept 21**  **Thurs Sept 28, Nov 2** | **20:00 ET**  **10:00 ET** | **2 hrs**  **2 hrs** |
| **TGay** | **Wed Sept 27, Oct 11,18, Nov 1**  **Weds Oct 25** | **10:00 ET**  **10:00 ET** | **1.5 hrs**  **1 hr** |
| **TGaz** | **Wed Oct 25** | **11:00 ET** | **1 hr** |
| **TGba** | **Mon Oct 9**  **Mon Oct 23**  **Mon Oct 30** | **10:00 ET**  **17:00 ET**  **23:00 ET** | **1 hr**  **1 hr**  **1 hr** |
| **TGmd** | **Friday Sept 29, Oct 6, 13, Nov 3** | **10:00 ET** | **2 hr** |

* + 1. Moved: Mark Hamilton, 2nd: John Notor
    2. No objection to approving by unanimous consent.
  1. **LC SG Chair confirmation** (slide #7)
     1. **Confirm Nikola Serafimovski as LC Study Group Chair**
     2. Moved: Harry Bims, Seconded: Richard Kennedy
     3. No objection to approving by unanimous consent.
  2. **LC SG Vice-Chair confirmation** (slide #8)
     1. **Confirm LI Qiang as LC Study Group Vice-Chair**
     2. Moved: Nikola Serafimovski, Seconded: Lei Wang
     3. No objection to approving by unanimous consent.
  3. **ISO/IEC/JTC1/SC6 Reply re: 802.11ai** (slide #9)
     1. **Approve the response in 11-17/1398r0 as the resolution of the comment by the China NB on 802.11ai (second printing) during the recent 60-day ballot under the PSDO process, and request the IEEE 802 EC that this response document be liaised to ISO/IEC JTC1/SC6.**
     2. Moved: Andrew Myles, Seconded: Nikola Serafimovski
     3. When the IEEE 802.11ai amendment was sent to ISO, comments were then received and so this liaison responds to those comments.
     4. For: 39, Against: 0, Abstain: 3 (Motion passes)
  4. **TGmd ad-hoc Motion** (slide #10)
     1. **Authorize a TGmd ad-hoc December 7-8, 2017 in Piscataway NJ for the purposes of comment resolution**
     2. Moved: Dorothy Stanley on behalf of the TG
     3. [TGmd result: Moved: Mark Hamilton, Seconded: Jon Rosdahl , Result: 9-0-2 passes]
     4. No objection to approving by unanimous consent.
  5. **TGax WG Letter Ballot** (slide #11)
     1. **Having approved changes to P802.11ax D1.0, as defined in 11-17/0010r13 in addition to motions passed during September 2017 session.**
     2. **Instruct the editor to prepare P802.11ax D2.0, and**
     3. **Approve a 30 day Working Group Technical Letter Ballot asking the question “Should P802.11ax D2.0 be forwarded to Sponsor Ballot?”**
     4. Moved: Osama Aboul-Magd on behalf of TGax
     5. [TGax result: Moved: Robert Stacey, Seconded: Alfred Asterjadhi, Result: 53-0-0]
     6. For: 44, Against: 0, Abstain: 1 (Motion passes)
  6. **TGax CSD approval** (slide #12)
     1. **Move to approve the IEEE P802.11ax CSD in document 11-14/0169r1**
     2. Moved: Osama Aboul-Magd, Seconded: Jon Rosdahl
     3. [TGax result: Moved: Yasuhiko Inoue, Second: Rich Kennedy, Y/N/A : 95/0/0]
     4. For: 43, Against: 0, Abstain: 1 (Motion passes)
  7. **TGaz PAR modification approval** (slide #13)
     1. **Believing that the PAR contained in the document referenced below meets IEEE-SA guidelines,**
     2. **Request that the PAR contained in 11-17-1319r1 be posted to the IEEE 802 Executive Committee (EC) agenda for WG 802 preview and EC approval to submit to NesCom.**
     3. Moved: Jonathan Segev, Seconded: Carlos Aldana
     4. The PAR has been modified to include that “security related changes” are now in scope for the TGaz project.
     5. [TGaz result: Moved: Jon Rosdahl, Seconded: SK Yong, Results (Y/N/A): 17–0–0]
     6. For: 39, Against: 2, Abstain: 3 (Motion passes)
  8. **TGaz CSD approval** (slide #14)
     1. **Believing that the CSD contained in the document referenced below meets IEEE 802 guidelines,**
     2. **Request that the CSD contained in 11-17-1318r0 be posted to the IEEE 802 Executive Committee (EC) agenda for WG 802 preview and EC approval.**
     3. Moved: Jonathan Segev, Seconded: Edward Au
     4. Chair: Is this is the same CSD that was approved earlier?
     5. A: No, as some aspects have been changed regarding the inclusion of security issues.
     6. [TGaz result: Moved: Jon Rosdahl, Seconded: SK Yong, Results (Y/N/A): 16–0–1]
     7. For: 38, Against: 1, Abstain: 7 (Motion passes)
  9. **LC SG LOA Question - 1** (slide #15)
     1. **Move to ask the IEEE 802.11 Working Group Chair to request a statement from the IEEE SA Standards Board to provide clarification on the applicability of the existing Letters of Assurance as worded, granting the WG Chair editorial license:**
        1. **Do the Letters of Assurance provided to the IEEE Standards Association by all organizations current and past apply to a potentially new standalone standard formed as part of the 802.11 WG, e.g., 802.11.3, in the same manner as they apply to any current and future amendments to the IEEE 802.11-2016 document, e.g., 802.11ba?**
     2. Moved: Nikola Serafimovski.
     3. [LC SG Result: Moved: Andrew Myles, Seconded: Li Qiang (John), Y: 7 N: 0, Abstain: 4]
     4. C: I have sent an email to Dave Ringle and his response states that existing LoAs do not apply for new standalone standards such as 802.11.3.
     5. Chair: Are you therefore withdrawing the motion.
     6. A: Yes.
     7. Chair: Motion withdrawn.
     8. C: When dealing with the IEEE-SA board, we can’t expect a formal answer. Therefore I think it’s a mistake not to proceed. Therefore, I would like to move this motion
     9. **Move to ask the IEEE 802.11 Working Group Chair to request a statement from the IEEE SA Standards Board to provide clarification on the applicability of the existing Letters of Assurance as worded, granting the WG Chair editorial license:**
        1. **Do the Letters of Assurance provided to the IEEE Standards Association by all organizations current and past apply to a potentially new standalone standard formed as part of the 802.11 WG, e.g., 802.11.3, in the same manner as they apply to any current and future amendments to the IEEE 802.11-2016 document, e.g., 802.11ba?**
     10. Moved: Joseph Levy, Seconded: Nikola Serafimovski
     11. C: So, we’ll ask formally and not expect a formal answer?
     12. A: I’m not sure.
     13. For: 19, Against: 5, Abstain: 20 (Motion passes)
  10. **LC SG LOA Question - 2** (slide #16)
      1. **Move to ask the IEEE 802.11 Working Group Chair to request a statement from the IEEE SA Standards Board to provide clarification on the applicability of the existing Letters of Assurance as worded, granting the WG Chair editorial license:**
         1. **Do the Letters of Assurance provided to the IEEE Standards Association by all organizations current and past apply to a potentially new clause within the IEEE 802.11-2016 standard? If the LoAs do not apply, then under what conditions do those LoAs not apply?**
      2. Moved: Nikola Serafimovski, Seconded: Joseph Levy
      3. [LC SG Result: Moved: Andrew Myles, Seconded: Li Qiang (John), Y: 10, N:1, Abstain: 0]
      4. C: My opinion is I don’t think we’ll receive a formal response on this. I think they will just direct us to the FAQs. I speak against the motion.
      5. C: Please can we change the text of the motion, as a new clause in IEEE 802.11-2016 is not possible. I don’t understand the motion.
      6. C: I think this motion is for a new self-contained clause within a future baseline IEEE 802.11 document.
      7. For: 4, Against: 15, Abstain: 17 (Motion fails)
  11. **Liaison establishment for draft distribution: University of Washington** (slide #17)
      1. **Approve establishment of a liaison for draft distribution coordination between the IEEE 802.11 Working Group and the University of Washington per 6.1.3.4 of the Standards Board Operations Manual.**
      2. Motion note: 6.1.3.4 Draft distribution for coordination If a Working Group intends to coordinate drafts of a project with a standards-developing organization or technical organization involved in the technology covered by that project, the Sponsor and Working Group Chair shall work with the IEEE Standards Department to establish the liaison relationship, subject to the IEEE-SA Liaison Organization Guidelines for the Provision of Draft IEEE Standards. Once the relationship has been established, the Working Group Chair may submit drafts to the liaison organization for coordination. Prior to, or simultaneously with, the submission of a draft to the liaison organization, the Working Group Chair shall inform the IEEE Standards Department of the submission and shall also supply the relevant draft. The Working Group Chair shall immediately inform the IEEE Standards Department when the liaison relationship is no longer needed. All drafts submitted to liaison organizations shall have as its cover page a liaison organization cover letter that outlines the IEEE copyright, permitted uses, distribution mechanisms, and additional recipients of the draft. Template liaison organization cover letters are available from the IEEE Standards Department.
      3. Chair: I would like to handover the meeting chair to the VC2 at this point.
      4. Moved: Adrian Stephens, Seconded: Jim Lansford
      5. Discussion from 11-17-1169r2 (slide 14)
      6. C: This is regarding the development of an ns-3 simulation model using 11ax. As 11ax does not have a published draft, this is a way of sharing a draft with them.
      7. C: The IEEE 802 chair is supportive of this action. A cover letter will be attached to the draft to explain the terms and conditions of its use.
      8. Q: This motion appears to be rather generic and is not specifically for 11ax. I support this motion as I would like to encourage such initiatives, as many educational establishments do not have the resources to attend our meetings.
      9. C: I wish that we had an easier process where drafts can be automatically shared with such establishments, rather than having to establish such liaisons
      10. C: I’m content with an open-ended motion, as it will allow other documents to be liaised to the University of Washington. Please note that IEEE maintains copyright on this document.
      11. C: I speak against this motion, as I don’t agree that IEEE should impose such limitations on the distribution of drafts.
      12. C: I speak for this motion, as this is a very useful initiative by this university.
      13. C: I also speak in favour, as I don’t know of many graduates purchasing copies of IEEE 802.11ax.
      14. For: 33, Against: 1, Abstain: 9 (Motion passes)
      15. C: **Action** - Please can the chair ask the IEEE-SA about making this type of motion more generic, so that distribution of future drafts also applies to other universities.
  12. **P802.11ax D2.0 available for sale (conditional)** (slide #18)
      1. **Approve making P802.11ax D2.0 available for sale pending WG Letter Ballot approval**
      2. Moved: Osama Aboul-Magd, Seconded: Donald Eastlake
      3. C: Can IEEE 802.11 set the price of this draft please? For example, $0.
      4. Chair: Apologies, as I can’t do that.
      5. No objection to approving by unanimous consent.

1. **Next Meeting** (11-17-1169r2 slide #16)
   1. The next meeting is at the Caribe Royal Hotel, Orlando, Florida, USA, November 5th – 10th 2017. Registration is now open for this meeting and please note the new type of web-page.
   2. There will be an IEEE 802 Wireless Chairs meeting, as shown in slide #15, on Sunday at 16:00 local time at the November 2017 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 09:57 HST.

**Annex A: Attendance & Affiliation**

| **Name** | **Affiliation** | **Attended >= 75%?** |
| --- | --- | --- |
| Aboulmagd, Osama | Huawei Technologies Co. Ltd | Yes |
| Adachi, Tomoko | TOSHIBA Corporation | Yes |
| Ahn, Jinsoo | Yonsei University | No |
| Ahn, Woojin | WILUS | Yes |
| Akhmetov, Dmitry | Intel Corporation | Yes |
| Aldana, Carlos | Intel Corporation | Yes |
| Alpert, Yaron | Intel Corporation | Yes |
| Andersdotter, Amelia | Article 19 | Yes |
| Armstrong, Lee | US Department of Transportation | Yes |
| Asai, Yusuke | NTT | Yes |
| Asterjadhi, Alfred | Qualcomm Incorporated | Yes |
| Au, Kwok Shum | Huawei Technologies Co. Ltd | Yes |
| Azizi, Shahrnaz | Intel Corporation | Yes |
| Baeten, Robert | Qorvo | Yes |
| Baik, Eugene | Qualcomm Incorporated | Yes |
| Bajko, Gabor | MediaTek Inc. | Yes |
| bang, saehee | LG ELECTRONICS | No |
| Bar-Shalom, Ofer | Intel Corporation | Yes |
| Bazhanov, Vladimir | Ericsson AB | No |
| Berens, Friedbert | FBConsulting Sarl | Yes |
| Berger, Christian | Marvell | Yes |
| Bhandaru, Nehru | Broadcom Corporation | Yes |
| Bims, Harry | Bims Laboratories, Inc. | Yes |
| Bolotin, Ilya | Intel | Yes |
| Calcev, George | Huawei R&D USA | Yes |
| Cao, Rui | Marvell Semiconductor, Inc. | Yes |
| Cariou, Laurent | Intel Corporation | Yes |
| Carney, William | Sony Corporation | Yes |
| Cha, Jaesang | Seoul National University | Yes |
| Chang, Soo-Young | California State University, Sacramento (CSUS) | No |
| Chen, Cheng | Intel Corporation | Yes |
| Chen, Jiamin | HUAWEI | Yes |
| Chen, Xiaogang | Intel Corporation | Yes |
| CHERIAN, GEORGE | Qualcomm Incorporated | Yes |
| Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. | Yes |
| Cho, Hangyu | lg electronics | Yes |
| Choi, Jinsoo | LG ELECTRONICS | Yes |
| Chu, Liwen | Marvell Semiconductor, Inc. | Yes |
| CHUN, JINYOUNG | LG ELECTRONICS | Yes |
| Ciochina, Dana | Sony Corporation | Yes |
| Coffey, John | Realtek Semiconductor Corp. | Yes |
| Cordeiro, Carlos | Intel Corporation | Yes |
| da Silva, Claudio | Intel | Yes |
| de Vegt, Rolf | Qualcomm Incorporated | Yes |
| Derham, Thomas | Broadcom Corporation | No |
| Eastlake 3rd, Donald | Huawei Technologies Co. Ltd | Yes |
| Erceg, Vinko | Broadcom Corporation | Yes |
| Fellhauer, Felix | University of Stuttgart | Yes |
| Fischer, Matthew | Broadcom Corporation | Yes |
| Fletcher, Paul | Samsung Cambridge Solution Center | Yes |
| Fujio, Shunsuke | FUJITSU LABORATORIES LIMITED | Yes |
| Furuichi, Sho | Sony Corporation | Yes |
| Gan, Ming | Huawei Technologies Co. Ltd | Yes |
| Ghosh, Chittabrata | Intel | Yes |
| Gomadam, Krishna | Facebook | No |
| Grigat, Michael | Deutsche Telekom AG | Yes |
| Guo, Qiang | Huawei R&D USA | Yes |
| Guo, Yuchen | Huawei Technologies Co., Ltd | Yes |
| Hamilton, Mark | Ruckus Wireless | Yes |
| HAN, Xiao | Huawei Technologies Co., Ltd | Yes |
| Hansen, Christopher | Covariant Corporation | Yes |
| Harkins, Daniel | Aruba Networks, Inc. | Yes |
| Hartman, Chris | Apple, Inc. | Yes |
| Hiertz, Guido | Ericsson AB | Yes |
| Hong, Hanseul | Yonsei University | No |
| Hsu, Chien-Fang | MediaTek Inc. | Yes |
| Huang, Lei | Panasonic Asia Pacific Pte Ltd. | Yes |
| Huang, Po-Kai | Intel Corporation | Yes |
| Huang, Zhiyong | LitePoint Corporation/Teradyne | Yes |
| Hurtarte, Jeorge | Teradyne, Inc. | No |
| Inoue, Yasuhiko | Nippon Telegraph and Telephone Corporation (NTT) | Yes |
| Ishizu, Kentaro | National Institute of Information and Communications Technology (NICT) | Yes |
| Jacobs, Darnell | US Department of Defense | No |
| Jang, Yeong Min | Kookmin University | No |
| jiang, feng | Intel Corporation | Yes |
| Jiang, Jinjing | Marvell Semiconductor, Inc. | Yes |
| Jin, Liang | Spirent Communications | Yes |
| Johnsson, Kerstin | Intel Corporation | Yes |
| Jones, Vincent Knowles IV | Qualcomm Incorporated | Yes |
| Jungnickel, Volker | Fraunhofer Heinrich Hertz Institute | Yes |
| Jurczak, Christophe | lucibel | Yes |
| Kain, Carl | Noblis, Inc. | Yes |
| Kakani, Naveen | Qualcomm Incorporated | Yes |
| Kapetanovic, Dzevdan | Ericsson AB | Yes |
| Kasher, Assaf | Qualcomm Incorporated | Yes |
| Kedem, Oren | Intel Corporation | Yes |
| Kennedy, Richard | Hewlett Packard Enterprise | No |
| Khalid, Ihtisham | Article 19 | Yes |
| Kim, Jeong Gon | Korea Polytechnic University | No |
| Kim, Jeongki | LG ELECTRONICS | Yes |
| Kim, Jin Min | LG ELECTRONICS | Yes |
| Kim, Namgi | Kyonggi University | No |
| Kim, Sang Gook | LG ELECTRONICS | Yes |
| Kim, Suhwook | LG ELECTRONICS | Yes |
| Kim, Yongho | Korea National University of Transportation | Yes |
| Kim, Youhan | Qualcomm Incorporated | Yes |
| Kitazawa, Shoichi | Muroran IT | No |
| KNECKT, JARKKO | Apple, Inc. | Yes |
| Kumar, Manish | Marvell Semiconductor, Inc. | Yes |
| Lalam, Massinissa | SAGEMCOM SAS | Yes |
| Lan, Zhou | Broadcom Corporation | Yes |
| Lanante, Leonardo | Kyushu Institute of Technology | Yes |
| Lansford, James | Qualcomm Incorporated | Yes |
| Lee, Hyeong Ho | Electronics and Telecommunications Research Institute (ETRI) | No |
| LEE, SUNGEUN | Cypress Semiconductor Corporation | Yes |
| Lee, Wookbong | SAMSUNG | Yes |
| Lepp, James | BlackBerry | Yes |
| Levy, Joseph | InterDigital, Inc. | Yes |
| Li, Dejian | Huawei Technologies Co. Ltd | Yes |
| Li, Guoqing | Apple, Inc. | Yes |
| Li, Huan-Bang | National Institute of Information and Communications Technology (NICT) | Yes |
| Li, Qinghua | Intel Corporation | Yes |
| Li, Yanchun | Huawei Technologies Co. Ltd | Yes |
| Li, Yunbo | Huawei Technologies Co. Ltd | Yes |
| Lim, Dong Guk | LG ELECTRONICS | Yes |
| Lin, Wei | Huawei Technologies Co. Ltd | Yes |
| Lin, Yingpei | Huawei Technologies Co. Ltd | Yes |
| Lindskog, Erik | Qualcomm Incorporated | Yes |
| Liu, Jianhan | MediaTek Inc. | Yes |
| Loc, Peter | Huawei Technologies Co. Ltd | Yes |
| Lv, Kaiying | ZTE Corporation | Yes |
| Lv, Lily | Huawei Technologies Co. Ltd | Yes |
| Lynch, Michael | MJ Lynch & Associates, LLC. | No |
| Ma, Jing | National Institute of Information and Communications Technology (NICT) | No |
| Ma, Mengyao | HUAWEI | Yes |
| MADHAVAN, NARENDAR | TOSHIBA Corporation | Yes |
| Mano, Hiroshi | Koden Techno Info K.K. | Yes |
| Marks, Roger | EthAirNet Associates | Yes |
| Mccann, Stephen | BlackBerry | Yes |
| McGarry, Andrew | Octoscope | Yes |
| Merlin, Simone | Qualcomm Incorporated | Yes |
| Mo, Jianhua | Samsung Research America | Yes |
| Montag, Bruce | Advanced Micro Devices (AMD) | Yes |
| Montemurro, Michael | Research In Motion Limited | Yes |
| Morioka, Hitoshi | SRC Software | Yes |
| Morioka, Yuichi | Sony Corporation | Yes |
| Motozuka, Hiroyuki | Panasonic Corporation | Yes |
| Mueller, Robert | Ilmenau University of Technology - TU Ilmenau | Yes |
| Murakami, Yutaka | Panasonic Corporation | Yes |
| Myles, Andrew | Cisco Systems, Inc. | Yes |
| Nakanishi, Kensuke | Toshiba | Yes |
| Ng, Boon Loong | Samsung Research America | No |
| Noh, Yujin | Newracom Inc. | Yes |
| Noshad, Mohammad | VLNComm | Yes |
| Notor, John | Notor Research; ARM, Inc. | Yes |
| Oh, Minseok | Kyonggi University | Yes |
| Oteri, Oghenekome | InterDigital, Inc. | Yes |
| Palm, Stephen | Broadcom Corporation | Yes |
| Park, Eunsung | LG Electronics | Yes |
| Park, Minyoung | Samsung Semiconductor Inc. | Yes |
| Park, Sung-jin | LG ELECTRONICS | Yes |
| Patil, Abhishek | Qualcomm Incorporated | Yes |
| Petranovich, James | ViaSat, Inc. | Yes |
| porat, ron | Broadcom Corporation | Yes |
| Pudeyev, Andrey | Intel | Yes |
| Qi, Emily | Intel Corporation | Yes |
| Robert, Joerg | University of Erlangen-Nuremberg | No |
| Rong, Zhigang | Huawei Technologies Co. Ltd | Yes |
| ROPITAULT, Tanguy | National Institute of Standards and Technology (NIST) | No |
| Rosdahl, Jon | Qualcomm Technologies, Inc. | Yes |
| Ryu, Kiseon | LG ELECTRONICS | Yes |
| Sadeghi, Bahareh | Intel Corporation | Yes |
| Sakamoto, Takenori | Panasonic Corporation | Yes |
| Sakata, Ren | TOSHIBA Corporation | No |
| Sakoda, Kazuyuki | Sony Corporation | Yes |
| Sambasivan, Sam | AT&T | Yes |
| Sampath, Hemanth | Qualcomm Incorporated | No |
| Sato, Naotaka | Sony Corporation | Yes |
| Schelstraete, Sigurd | Quantenna Communications, Inc. | Yes |
| Segev, Jonathan | Intel Corporation | Yes |
| Seok, Yongho | MediaTek Inc. | Yes |
| Serafimovski, Nikola | pureLiFi | Yes |
| Sevin, Julien | Canon Research Centre France | Yes |
| Shah, Kunal | Silver Spring Networks Inc. | Yes |
| Shellhammer, Stephen | Qualcomm Incorporated | No |
| Sherlock, Ian | Texas Instruments Incorporated | Yes |
| Son, Ju-Hyung | WILUS Inc. | Yes |
| Song, Taewon | LG ELECTRONICS | Yes |
| Stacey, Robert | Intel Corporation | Yes |
| Stanley, Dorothy | Hewlett Packard Enterprise | Yes |
| Stephens, Adrian | Intel Corporation | Yes |
| Stott, Noel | Keysight Technologies | Yes |
| Suh, JUNG HOON | Huawei Technologies Co. Ltd | Yes |
| Sumi, Takenori | Mitsubishi Electric Corporation | Yes |
| Sun, Bo | ZTE Corporation | Yes |
| Sun, Li-Hsiang | InterDigital, Inc. | Yes |
| Sundman, Dennis | Ericsson AB | Yes |
| Takai, Mineo | Space-Time Engineering | Yes |
| Tanaka, Yusuke | Sony Corporation | Yes |
| Tao, Wu | Huawei Technologies Co. Ltd | Yes |
| Tian, Bin | Qualcomm Incorporated | Yes |
| Tian, Tao | Spreadtrum Communications, Inc. | Yes |
| Tujkovic, Djordje | Facebook | No |
| Urabe, Yoshio | Panasonic Corporation | Yes |
| Varshney, Prabodh | Nokia | Yes |
| Venkatachalam Jayara, Venkata Ramanan | Qualcomm Incorporated | No |
| Venkatesan, Ganesh | Intel Corporation | Yes |
| Verma, Lochan | Qualcomm Incorporated | Yes |
| Vermani, Sameer | Qualcomm Incorporated | Yes |
| VIGER, Pascal | Canon Research Centre France | Yes |
| Vlantis, George | STMicroelectronics | Yes |
| Wang, Chao Chun | MediaTek Inc. | Yes |
| Wang, Haiming | Southeast University, China | No |
| Wang, Huizhao | Quantenna Communications, Inc. | Yes |
| Wang, James June | MediaTek Inc. | Yes |
| Wang, Lei | Huawei R&D USA | Yes |
| Wang, Xiaofei | InterDigital, Inc. | Yes |
| Wang, Xuehuan | Huawei Technologies Co. Ltd | No |
| Want, Roy | Google | Yes |
| Ward, Lisa | Rohde & Schwarz | No |
| Webber, Julian | Advanced Telecommunications Research Institute International (ATR) | Yes |
| Wentink, Menzo | Qualcomm Incorporated | Yes |
| Wilhelmsson, Leif | Ericsson AB | Yes |
| Wu, Tianyu | MediaTek Inc. | Yes |
| Xin, Yan | Huawei Technologies Co. Ltd | Yes |
| Xu, Mingguang | Apple, Inc. | Yes |
| YANG, RUI | InterDigital, Inc. | Yes |
| Yang, Xun | Huawei Technologies Co. Ltd | Yes |
| Yang, Yunsong | Huawei Technologies Co. Ltd | Yes |
| Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) | Yes |
| Yee, James | MediaTek Inc. | Yes |
| Yee, Peter | NSA/IAD | Yes |
| Yi, Su | Fujitsu Research & Development Center | No |
| Yong, Su Khiong | Apple, Inc. | Yes |
| Yu, Jian | Huawei Technologies Co. Ltd | Yes |
| Yun, SunWoong | LG ELECTRONICS | Yes |
| Zeleznikar, Alan | ARRIS Group | Yes |
| Zhang, Hongyuan | Marvell Semiconductor, Inc. | Yes |
| Zhang, Xingxin | Huawei Technologies Co. Ltd | Yes |
| Zhang, Yan | Marvell Semiconductor, Inc. | Yes |
| Zheng, Xiayu | Marvell Semiconductor, Inc. | Yes |
| Zhu, Chunhui | Huawei Technologies Co., Ltd | Yes |

**Annex B : Working Group Officers**

Working group

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Adrian Stephens  (Intel Corporation UK Ltd.) | IEEE 802.11 Working Group Chair | +44 1793 404825 (office)  [adrian.p.stephens@ieee.org](mailto:adrian.p.stephens@ieee.org) |
| Jon Rosdahl (Qualcomm) | 1st Vice Chair (Policies and Procedures) Treasurer | +1 (801) 492-4023 [jrosdahl@ieee.org](mailto:jrosdahl@ieee.org) |
| Dorothy V. Stanley  (HPE) | 2nd Vice Chair (Rules and reflectors)  IEEE 802 (LMSC) EC delegate | +1 (630) 363-1389  [dorothy.stanley@hpe.com](mailto:dorothy.stanley@hpe.com) |
| Stephen McCann (BlackBerry Ltd.) | Secretary | +44 1753 667099 [stephen.mccann@ieee.org](mailto:stephen.mccann@ieee.org) |
| Peter Ecclesine (Cisco) | Co-Technical Editor | [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) |
| Mark Hamilton (Ruckus Wireless) | Architecture (ARC) Chair | +1 (303) 441-7553  [mark.hamilton2152@gmail.com](mailto:mark.hamilton2152@gmail.com) |
| Andrew Myles (Cisco Systems, Inc.) | ISO/IEC/JTC1/SC6 shadow committee (JTC1) Chair | +61 2 84461010 [andrew.myles@cisco.com](mailto:andrew.myles@cisco.com) |
| Jon Rosdahl (Qualcomm ) | Project Authorization Request (PAR) review Chair | +1 (801) 492-4023 [jrosdahl@ieee.org](mailto:jrosdahl@ieee.org) |
| Joseph Levy  (InterDigital Communications Inc.) | Advanced Access Network Interface (AANI) Chair | +1.631.622.4139  [jslevy@ieee.org](mailto:jslevy@ieee.org) |
| Andrew Myles (Cisco Systems, Inc.) | Co-existence (Coex) Chair | +61 2 84461010 [andrew.myles@cisco.com](mailto:andrew.myles@cisco.com) |

Task Groups

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Dorothy V. Stanley  (HPE) | TGmd Chair  (Revision md | +1( 630) 363-1389  [dorothy.stanley@hpe.com](mailto:dorothy.stanley@hpe.com) |
| 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) | +1 773 782 6875  [edward.ks.au@huawei.com](mailto:edward.ks.au@huawei.com) |
| Jonathan Segev (Intel Corporation) | TGaz Chair (Next Generation Positioning) | +972-54-2403587  [jonathan.segev@intel.com](mailto:jonathan.segev@intel.com) |
| Minyoung Park (Samsung Semi-conductor Inc) | TGba Chair (Wake-up Radio) | [mpark.ieee@gmail.com](mailto:mpark.ieee@gmail.com) |

Technical Interest Groups

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

Study Groups

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Nikola Serafimovski (pureLiFi) | LC Chair (Light Communication) | +44 131 516 1816 [nikola.serafimovski@purelifi.com](mailto:nikola.serafimovski@purelifi.com%3E) |

Liaison Officials to non IEEE 802 organizations

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Dorothy V. Stanley (HPE) | Liaison to IETF (Internet Engineering Task Force) | +1 (630) 363-1389  [dorothy.stanley@hpe.com](mailto:dorothy.stanley@hpe.com) |
| Ian Sherlock (Texas Instruments Inc.) | Liaison to WFA (Wi-Fi Alliance) | +1-972-995-2011 [isherlock@ieee.org](mailto:isherlock@ieee.org) |

Liaison Officials to IEEE 802 organizations

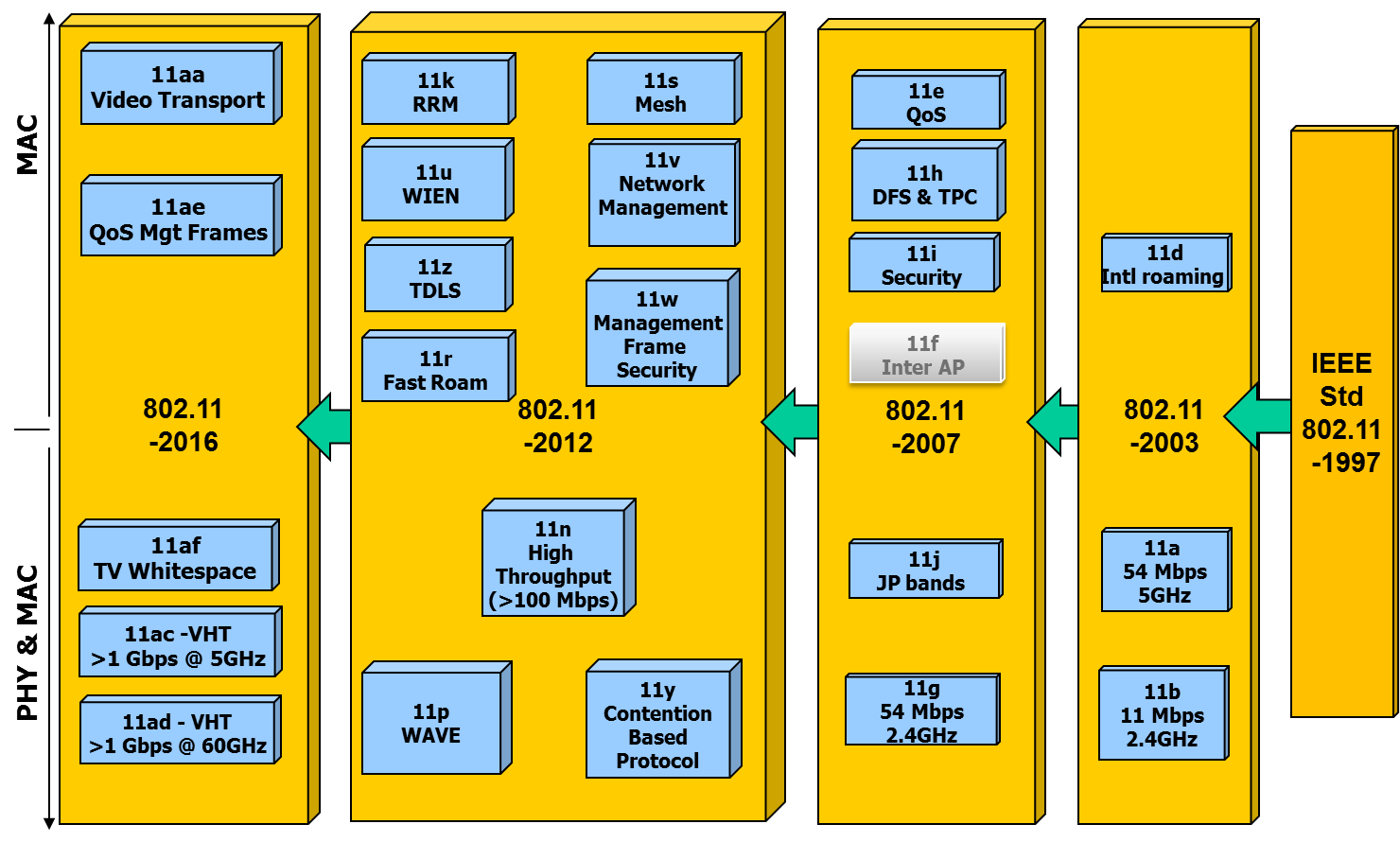
|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Rich Kennedy  (HPE) | Liaison to IEEE 802.18 | +1 (832) 298-1114  [rkennedy1000@gmail.com](mailto:rkennedy1000@gmail.com) |
| Tim Godfrey (Electric Power Research Institute) | Liaison to IEEE 802.24 | +1 (650) 855-8584 (office) [tim.godfrey@ieee.org](mailto:tim.godfrey@ieee.org) |

**Annex C : Minutes**

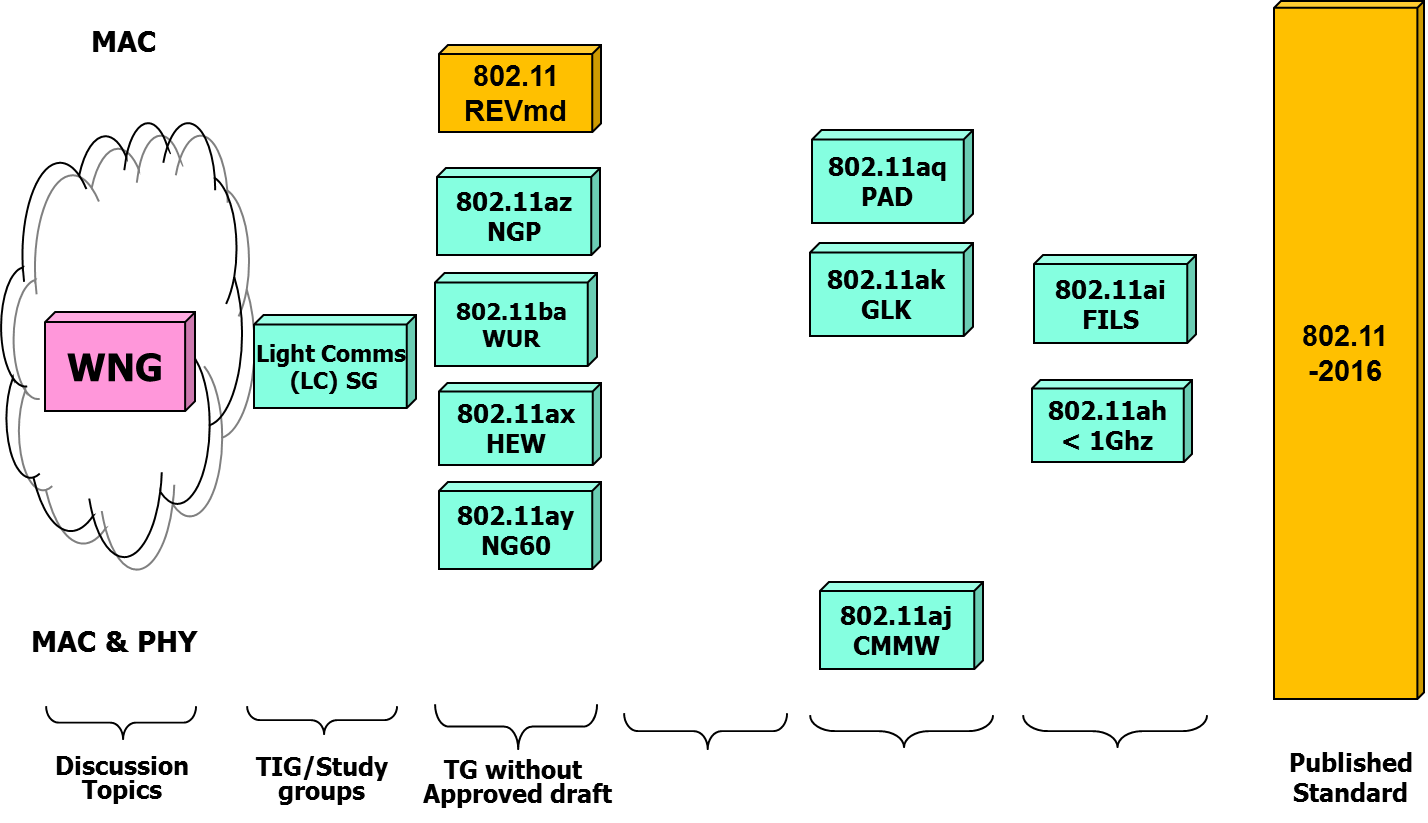
This Annex contains references to all IEEE 802.11 SC/TG/SG & Ad Hoc Committee (AHC) minutes from this meeting. Please note that they are NOT subject to the approval of these minutes, but are confirmed and approved by their individual group in the opening meeting at their next session.

|  |  |  |
| --- | --- | --- |
| WG | TE | 17-1218r1 |
| TGmd | TG | 17-1505r0 |
| TGak | TG | 17-1457r3 |
| TGaj | TG | 17-1484r0 |
| TGaq | TG | 17-1480r0 |
| TGax | TG | 17-1465r0 |
| TGay | TG | 17-1512r0 |
| TGaz | TG | 17-1481r0 |
| TGba | TG | 17-1522r2 |
| LC | SG | 17-1513r0 |
| WNG | SC | 17-1482r0 |
| ARC | SC | 17-1483r0 |
| JTC 802 | SC | 17-1564r0 |
| AANI | SC | 17-1458r1 |
| COEX | SC | 17-1544r0 |

**Annex D : Revisions and Standards Pipeline**

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**IEEE 802.11 Revisions**

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**IEEE 802.11 Standards Pipeline**

End.