IEEE P802.11
Wireless LANs

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| Minutes of the IEEE P802.11 Full Working Group |
| Date: 2016-09-12 |
| Author(s): |
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Abstract

This document constitutes the minutes of the IEEE 802.11 full working group for the September 2016, Warsaw, Poland meeting.

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

**IEEE 802 Wireless Interim Meeting**

**Marriott Warsaw**

**Warsaw, Poland**, **September 12 - 15, 2016**

**Monday, 12 Sept 2016**

**8:01** 802.11, 802.15, 802.16, 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.

General announcements:

·      No photography, no audio recording

·      Social –  Reception on Wednesday 18:00 – 20:30

·      Don’t forget, book your room and register for September’s session

Straw Poll of new attendees: 0

**8:04**   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.

**8:07** Financial report by J Rosdahl (Qualcomm) docs [11-16-01070-00](https://mentor.ieee.org/802.11/dcn/16/11-16-1070-00-0000-treasurer-report-september-2016-warsaw.pptx),
[15-16-0606-00](https://mentor.ieee.org/802.15/dcn/15/15-16-0606-00-0000)

Total liabilities and equity          $457,637.63

**8:10**   Wireless and IMAT announcements by C Reilly (Verilan)

**8:12**  WG15 Chair informed the group that the Wireless Chairs Standing Committee (WCSC) met yesterday, Sunday. Chair noted that this is an open meeting, all are encouraged to attend.

**8:13**   Review future sessions (document # 15-16-0574-02)

·      November 6-11, 2016, Grand Hyatt San Antonio, San Antonio, TX, USA, 802 Plenary Session.

·      January 15-20, 2017, Hyatt Regency Atlanta, Atlanta, GA, USA, 802 Wireless Interim Session.

·      March 12-17, 2017, Hyatt Regency Vancouver, 802 Plenary Session.

·      May 7-12, 2017, Daejeon Convention Center, Daejeon, Korea (TBC), 802 Wireless Interim Session.

·      July 9-14, 2017, Estrel Hotel and Convention Center, Berlin, Germany, 802 Plenary Session.

·      September 10-15,  2017, Hilton Waikoloa Village, Kona, HI, USA, 802 Wireless Interim Session.

·      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.

**8:14   Working Group Updates**

802.11 by Adrian Stephens (Intel), (document [11-16-1066-00](https://mentor.ieee.org/802.11/dcn/16/11-16-1066-00-0000-september-2016-802-11-opening-report.pptx))

·      372 voters

802.15 by B Heile (document [15-16-0574-02](https://mentor.ieee.org/802.15/dcn/16/15-16-0574-02-0000-802-15-waw-2016-graphic-agenda.xlsx))

·      96 voters

·      TG3d: 100G

·      TG3e: HRCP (High Rate Close Proximity)

·      TG4s: SRU (Spectrum Resource Utilization)

·      TG4t: High(er) rate amendment

·      TG4u: India 865 Band Phy (IBP) amendment

·      TG4v: Regional Sub-GHz Bands adds and updates

·      TG 7r1: Optical Wireless Communications

·      TG8: PAC (Peer Aware Communications) – going to WG letter ballot

·      TG10: L2R (Layer 2 Routing) – going to Sponsor Ballot

·      TG12 Upper Layer Interface (ULI) for 802.15.4

·      SC IETF

·      IG LPWA

802.16  by H Bimms ([16-16-0052-00](https://mentor.ieee.org/802.16/dcn/16/16-16-0052-00-Gdoc-ieee-802-16-status-report-for-session-105.pdf))

·      5 voters

·      802.16s is the only active project

802.18  by R Kennedy

·      discussing ETSI BRAN meeting, EU radio equipment directive,  FCC NPRM

802.19  S Shellhammer (19-16-0139-00)

·      32 voting members

·      3GPP Liaison -  have not heard back

·      TG1- doing draft review

·      SG formation: Wireless automotive coexistence - working on PAR & CSD

·      Possible additional liaisons

802.21  S Das (21-16-0100-00)

·      21 voting members

·      TG21m – revision project – passed Sponsor Ballot, working on comments

·      TG21.1 –use cases and services – passed Sponsor Ballot, working on comments

802.24  Tim Godfrey (24-16-0100-00)

·      37 voters

·      Task Groups

o   802.24.1      Smart Grid TG      Sub-GHz white paper

o   802.24.2      IoT TG                Chris DiMinico

**AoB**

**8:32**   Joint meeting adjourned

**IEEE 802.11 Interim Meeting – Session #159**

**Marriott Warsaw, Warsaw, Poland**

**September 12th – 16th, 2016**

**IEEE 802.11 Opening Plenary, Monday 12th September 2016**

Presiding chair: Adrian Stephens (Intel) opened the meeting at 09:00 Central European Summer Time (CEST) and declared Quorum for the Session.

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

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

Secretary: Stephen McCann BlackBerry Ltd

There are 389 voting members and 11\*\* Ex Officio voters of IEEE 802.11

There were 135 people in the room

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

1. **Notices** (11-16-1066r0)
	1. No photographs at this meeting and please turn your mobiles to vibrate. Please note that this slide has been updated regarding members of the press.
	2. Chair: Are there any members of the press present.
		1. None
2. **Approve/modify joint opening agenda** (11-16-1065r1)
	1. Chair: 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 11-16-1065r1 (“Agenda Graphic” tab and the “WG11” tab Monday agenda)**
		1. Moved: Jon Rosdahl, 2nd: Marc Emmelmann
		2. No objection to approving by unanimous consent
3. **July 2016 WG Minutes**
	1. **Move to approve the San Diego July 2016 minutes document 11-16-0984r1**
	2. Moved: Stephen McCann, 2nd: Stuart Kerry
	3. Following neither discussion nor dissent the minutes were approved by unanimous consent.
4. **Attendance**
	1. Welcome to the 1 new participants in this meeting.
	2. Chair: Please note that Stephen McCann (Secretary) will be holding a newcomer’s session at 10:30.
	3. The room is Baltic II on Level 3. (BTW – how did this go?)
5. **Call for essential Patents** (11-16-1124r0)
	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 are also several current documents which describe the policies and procedures. Note that there were a few changes made in July 2016, as shown in slide #12.
	5. VC1: regarding slide #16, you can also remove yourself from any email reflector list.
	6. No questions
6. **Announcements**
	1. **Liaisons (11-16-1066r0 slide #4)**
		1. Chair: This is a summary of the single liaison.
		2. **Action**: At the moment, there is no volunteer to move this issue forward, so this will be considered within a potential future IEEE 802.11REVmd project.
	2. **Other information and agendas for this meeting (slide #6)**
		1. Chair: This is information about the other IEEE 802.11 and IEEE 802 group meeting logistics for this week. Please note the joint meetings and reciprocal credit with some of the other IEEE 802 groups.
	3. **Meeting logistics (11-16-1071r0 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. Most meetings are being held on level 2 and 3 of this hotel.
		3. The next meeting is in November 2016 in San Antonio, TX, USA. Registration should be open later this week and the early bird deadline is the end of November.
	4. **Recording Attendance (slide #11)**
		1. VC1: Please remember to record your attendance for each 2 hour slot during the week.
	5. **WG Documents (slide #11)**
		1. VC1: If you want to synchronize all the documents on mentor, please use the local server (griffin) and not the external link.
	6. **Social and Catering options (slide #15)**
		1. VC1: Please note that breakfast and lunch is available within the restaurant on Level 2.
		2. There is a social on Wednesday evening, near the old town at “the Fortress”. There will be coaches provided to/from the hotel to this venue starting at 6pm.
		3. Guests are also invited along, although they do require a guest badge.
		4. Within the hotel rooms, Wi-Fi is provided for free, even though the landing page states that you will be charged.
7. **IEEE 802 EC decisions** (11-16-1066r0 slide #7)
	1. Chair: These are the July 2016 decisions made by the IEEE 802 EC.
8. **Status of all groups** (11-16-1066r0)
	1. **Sub-Group Status**
		1. Chair: this summarizes all the IEEE 802.11 sub-groups including officers.
		2. Slide #11 indicates the working group appointed positions.
		3. Question (Q): Regarding the Advanced Access Network Interface (AANI) group, what is its status please?
		4. Chair: It’s a IEEE 802.11 Standing Committee (SC). It’s going to look at a liaison to 3GPP and also to consider IEEE 802 5G related activities. Therefore, it cannot create any specifications. If you attend the group this week, an explanation will be given as to its scope.
		5. Chair: Please note that VC1 will be acting chair from Wednesday lunchtime, as the chair will be leaving early this week.
		6. TGaj is not meeting this week.
		7. WUR is the only study group this week.
9. **Group Summaries** (11-16-1123r1)
	1. Special notes were mentioned for the following groups:
	2. WNG, TGaj are not meeting this week.
	3. **Editor’s meeting**
		1. Tomorrow morning at 7.00am, including the ANA status, style guides and numbering situation.
	4. **ANA**
		1. There have been some new assignments since the July 2016 meeting.
	5. **AANI SC**
		1. This group will be working on a liaison to 3GPP this week, so that they receive it for their meetings next week.
	6. **PAR**
		1. This group is not meeting this week, but this is a reminder that any upcoming PARs do have deadlines to meet. Please see VC1 if you have any questions
	7. **TGmc**
		1. There is now only 1 comment in the last sponsor ballot re-circulation round. As this was from a ‘yes’ voter, the draft does not need to be re-circulated and therefore most of their work is done.
	8. **TGai**
		1. There will be an extra slot during Tuesday PM1 to discuss a new security issue.
	9. **TGax**
		1. There were 2919 comments received from the comment collection process in April 2016 which will continued to be dealt with, this week. There are about 1400 comments left to be resolved, so it is highly unlikely that all these will be dealt with this week.
	10. **WUR (Wake Up Radio) SG**
		1. There are 5 meetings this week to discuss the PAR and CSD documents.
10. **Recess**
	1. Meeting recessed at 09:57 CEST.

**Wednesday, 14th September 2016**

**IEEE 802.11 Mid-Week Plenary**

Presiding chair: Adrian Stephens (Intel) opened the meeting at 10:30 CEST.

147 people present.

1. **Approve/modify joint opening agenda** (11-16-1065r2)
	1. Chair: There are a couple of minor changes to the agenda
	2. **Move to approve the agenda 11-16-1065r3 on “WG11” tab Wednesday’s agenda.**
		1. Moved: Mark Hamilton, 2nd: Marc Emmelmann
		2. No objection to approving the agenda by unanimous consent.
2. **Call for Essential Patents** (11-16-1067r0)
	1. The chair read out the Potentially Essential Patents slide.
	2. Chair: The TGaz chair has notified me that there is an interested party in that group. A LoA request will be sent to that party.
3. **CAC**
	1. Reminder about 19.30 CEST meeting on Thursday. The purpose of this meeting is to prepare for the Friday closing plenary. It will be chaired by the VC1 this week.
4. **IETF Liaison** (11-16-1153r0)
	1. This is report about the current IEEE 802.11 related activities within the IETF.
	2. A new topic is Neighbor Discovery Optimization within IPv6.
	3. Q: Is IT’S A new group
	4. Answer (A): It’s actually being charted at the moment.
	5. Q: Does it have a relationship with IEEE 1609. What is the new work that has to be done in IETF?
	6. A: If you look on slides #6 and #7, there is some more information.
5. **Privacy 802E**
	1. The group is not meeting this week.
	2. There is some work going on the background regarding the privacy threat model. There was also a joint discussion with the IETF in Paris (as mentioned in the IETF Liaison above).
	3. There is a draft available within IEEE 802.1.
6. **Room assignment updates** (11-16-1065r2)
	1. TGay: Please delete the Thurs AM2 slot.
	2. TGmc: Please delete the Wed PM2 slot.
	3. TGah: Please delete the Wed PM2 slot
	4. TGax: Please can we have two slots for ad-hocs during Thurs AM1
	5. TGai: Please add slots for Wed PM2 and Thurs AM1, PM1 and PM2.
	6. TGak: Please add a slot for Wed PM2
	7. OmniRAN: This will now occur in Wed PM2
	8. **Motion to approve the updated room graphic in the agenda 11-16-1065r4**
		1. Moved: Stuart Kerry, 2nd: Marc Emmelmann
		2. No objection to approving by unanimous consent.
7. **Report on the investigation on IEEE 802.11ai dominance** (11-16-1187r1)
	1. Chair: This is the report into the investigation on IEEE 802.11ai dominance.
	2. Q: The report states that the DILS outcome would not have changed if the voting system had been changed. I believe that the quoted results in the report are in-accurate and I have some correct ones.
	3. Chair: Please can you send an email to me with your specific amended voting counts and I’ll re-consider them.
	4. Comment (C): As a task group chair, I would like to thank to thank the WG chair for his guidance regarding the behavior of members during votes in a room.
	5. Q: Did you consider interviewing non-interested parties who were not 11ai officers or from Huawei, but still have interests in 11ai.
	6. Chair: No, as we needed to bound the investigation.
	7. C: I would like IEEE 802.11 to consider creating a security experts group, as this is a very difficult topic for a task group like 11ai to deal with and this should be remedied.
	8. Chair: Thanks for the question. This has also been mentioned in other discussions and will be considered in the future.
	9. C: I think when task group chairs should make sure that all members in groups have enough information to make an informed decision when these complicated votes occur.
	10. C: Please can everyone remember that you are here as an individual. Therefore, if a lot of people from one company are presented in a room, dominance cannot be automatically assumed.
8. **Status update on TGax dominance investigation**
	1. VC2: The investigation is ongoing. It should be finished before the November 2016 meeting, when a report will be produced.
9. **Technical Editor: REVmc, 11ai and 11ah** (11-16-1265r0)
	1. This report is about the publication process for REVmc, 11ai and 11ah, which are all shortly to complete their work.
	2. No questions
10. **Working Group Motions** (11-16-1125r1)
	1. **TGay vice-chair (slide #4)**
		1. **Move to confirm Sang Kim as TGay vice-chair.**
		2. Moved: Edward Au on behalf of the TGay
		3. No objection to approving by unanimous consent.
	2. **Forward P802.11REVmc D8.0 to RevCom (slide #5)**
		1. **Motion: Approve sending draft P802.11REVmc D8.0 to RevCom.**
		2. **P802.11REVmc D8.0 had 99% approval on the last Sponsor Recirculation Ballot. There were 2 voters that had voted NO.**
		3. Moved Dorothy Stanley, 2nd Mike Montemurro
		4. [In the TG: Moved: Emily Qi, 2nd: Carlos Cordeiro Result: 16-0-0]
		5. For: 122, Against: 0, Abstain: 2 (Motion passes)
	3. **TGmc Report to EC for forwarding P802.11REVmc D8.0 to RevCom (slide #6)**
		1. **Approve the report in 11-16-1094r1 to the EC for forwarding to RevCom, granting the chair editorial license.**
		2. Moved Dorothy Stanley, 2nd Marc Emmelmann
		3. [In the TG: Moved: Jon Rosdahl, 2nd: Marc Emmelman Result: 16-0-0]
		4. For: 122, Against: 0, Abstain: 1 (Motion passes)
	4. **Forward P802.11ah D10.0 to RevCom (slide #7)**
		1. **Motion: Request the IEEE 802 Executive Committee to conditionally approve forwarding P802.11ah D10.0 to RevCom.**
		2. Moved: Yongho Seok, 2nd: Bin Tian
		3. [In the TG: Moved: Young-Hoon Kwon, 2nd: Alfred Asterjadhi Result: 7-0-0]
		4. For: 118, Against: 0, Abstain: 3 (Motion passes)
	5. **TGah Report to EC for forwarding P802.11ah D10.0 to RevCom (slide #8)**
		1. **Approve document 11-16/777r4 as the report to the IEEE 802 Executive Committee on the requirements for conditional approval to forward P802.11ah D10.0 to RevCom, granting the chair editorial license.**
		2. Moved: Yongho Seok, 2nd: Osama Aboul-Magd
		3. [In the TG: Moved: Young-Hoon Kwon, 2nd: Alfred Asterjadhi Result: 7-0-0]
		4. For: 109, Against: 0, Abstain: 3 (Motion passes)
	6. **WUR SG PAR approval (slide #9)**
		1. **Believing that the PAR contained in the document referenced below meets IEEE-SA guidelines,**
		2. **Request that the PAR contained in 11-16/1045r6 be posted to the IEEE 802 Executive Committee (EC) agenda for 802 WG preview and EC approval to submit to NesCom.**
		3. Moved: Minyoung Park, 2nd: Osama Aboul-Magd
		4. [In the TG: Moved: Shahrnaz Azizi, 2nd: Yunsong Yang, Result: 39-0-2]
		5. Q: Was the draft PAR posted to the document reflector.
		6. A: yes, it was.
		7. For: 104, Against: 1, Abstain: 8 (Motion passes)
	7. **WUR CSD approval (slide #10)**
		1. **Believing that the CSD contained in the document referenced below meets IEEE 802 guidelines,**
		2. **Request that the CSD contained in 11-16/936r3 be posted to the IEEE 802 Executive Committee (EC) agenda for 802 WG preview and EC approval.**
		3. Moved: Minyoung Park, 2nd: Osama Aboul-Magd
		4. [In the TG: Moved: Osama Aboul-Magd, 2nd: Yunsong Yang, Result: 43-0-3]
		5. For: 103, Against: 1, Abstain: 8 (Motion passes)
		6. VC1: Thanks to the WUR study group for approving these documents. The chair will now inform the EC that a PAR should be considered for the November meeting EC plenary on the Friday of that week. Therefore, the other WGs will provide feedback to the WUR SG, which need to be addressed on the Wednesday of that week, so that corrections and replies can be made to the PAR and CSD prior to the EC meeting.
		7. Chair: I will try and determine the required letters for the new task group, although it is the NesCom administrator who has the final word.
11. **AANI SC Liaison** (11-16-1128r2 slide #17)
	1. This is an update of the progress within AANI SC this week, which is working on a liaison to 3GPP RAN/SA.
	2. The current version of the draft liaison is 11-16-1101r7 and it is intended to bring a final version to this week’s closing plenary on Friday for approval.
	3. There is an AANI SC meeting tomorrow to finalize this document.
	4. Q: There is an 11-16-1101r8 posted on the server.
	5. A: Thanks, although I’m sure that will be updated before Friday.
12. **Liaison from 3GPP** (11-16-1263r0)
	1. This document arose from a discussion in IEEE 802.19 about a liaison from 3GPP to IEEE 802 in June 2016, as it was felt that further discussion within IEEE 802.11 is now required.
	2. 3GPP have requested a change in IEEE 802.11, regarding a detection threshold.
	3. It looks as though some discussion could occur in TGax and perhaps a liaison response to 3GPP should be created to inform them of the intended IEEE 802.11 actions.
	4. So, there are several options for IEEE 802.11 to move forward, as shown on slide #6
	5. IEEE 802.19 chair: Liaisons from 3GPP have been dealt with by IEEE 802.19 in the recent past, but this is really an IEEE 802.11 issue.
	6. TGax chair: TGax is rather busy at the moment, so I would suggestion option 4.
	7. C: I also think that option 4 is the preferred option.
	8. C: This value currently exists in an ETSI standard, which will be finished in November 2016, so we need to move quickly on this.
	9. **Straw Poll: (slide #6)**
	10. **1: Do nothing: 4**
	11. **2: Leave to 802.19: 0**
	12. **3: Ask 802.11ax to produce a response: 7**
	13. **4: Establish an 802.11 ad-hoc to consider the request: 56**
	14. Chair: So it looks as though an ad-hoc would be suitable. Andrew Myles has volunteered to the chair and can choose the name of the group. I think that some teleconferences will need to be arranged, so that some work can be done before the November 2016 meeting and those do require 10 days’ notice.
13. **Social**
	1. Please remember that there is a social event this evening. The buses will start to leave the hotel at 6pm.
	2. If you are not going to attend, please can you return your blue ticket to the registration desk, as we’re trying to assess how many people actually go along to the socials.
14. **Any Other Business**
	1. Meeting recessed at 12:12 CEST

**Friday, 16th September 2016**

**IEEE 802.11 Closing Plenary**

Call to order at 08:00 CEST by Jon Rosdahl (Qualcomm) who is chairing the meeting today.

47 people present in the room.

1. **Agenda** (11-16-1065r5)
	1. Chair: There have been some changes due to the addition of extra items which were not presented earlier in the week.
	2. C: I encourage people to use the share ride link on the IEEE 802.11 front web page.
	3. **Adopt the changes to the agenda as shown in 11-16-1065r5 (I don’t know what was said at the time, but this should have been the Friday content of the WG11 tab.)**
	4. Moved: Marc Emmelmann, 2nd: Harry Bims
	5. No objection to approving by unanimous consent.
2. **Call for Essential Patents**
	1. Call for Essential Patents and Letters of Assurance (LoA)
	2. No statements
	3. No questions
3. **Announcements**
	1. **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 October 3rd and October 31st 2016 at noon ET.
	2. **Letters of Assurance (LoA)** (11-16-1067r1 slide #9)
		1. Chair: please remember about the LoA requirements.
	3. **IEEE Store and ISO SCG** (11-16-1067r1 slide #11)
		1. Chair: Please can everyone review the state of the store and drafts going to ISO SCG
		2. No questions
4. **Current Venues** (11-16-1071r1 slide #22)
	1. **Straw Poll: How many people would like to come back to this venue?**
	2. Y: 39, N: 0
	3. **Straw Poll: How many people enjoyed the social?** 29
	4. **Straw Poll: How many people did not attend the social?** 4
5. **Upcoming Venues** (11-16-1071r1 slide #23)
	1. Chair: This slide shows the future wireless interim locations. Slide #24 shows the upcoming plenary sessions.
6. **Treasury Report** (11-16-1070r0)
	1. Chair: This is the treasurer’s report. The final figures for this week will be available later in the year.
	2. The budgeted costs were for 300 people attending, but the actual numbers were closer to 270 so a deficit is likely. An update will be provided at the November 2016 meeting.
	3. Q: Some of our Chinese colleagues could not attend. Do we know what the issue was?
	4. Chair: It was because the Chinese consulate was closed for two weeks and they could not obtain their visas.
7. **Timeline update**
	1. Secretary: there are updates for TGah, TGak, TGaq and TGax this week. The timeline chart will be updated over the weekend.
8. **Documentation & Attendance** (11-16-1126r0 slide #3)
	1. These are the usual attendance statistics for this week and IEEE 802.11ax is by far the largest project this week.
9. **WG Committee Reports** (11-16-1126r0)
	1. **Technical editor** (slide #8)
		1. Q: There is an error regarding the draft version number of 11ah.
		2. A: The separate editors’ report will be updated.
		3. No questions
	2. **AANI Standing Committee** (separate updated report 11-16-1281r1)
		1. No questions
	3. **ARC Standing Committee** (slide #17)
		1. No questions
	4. **IEEE 802.11/15 Regulatory (REG) Standing Committee** (slide #26)
		1. No questions
	5. **TGmc** (slide #32)
		1. Has now completed its work.
		2. Everyone acknowledged their appreciation to Dorothy Stanley for all her hard work running this group.
		3. No questions
	6. **TGah** (slide #38)
		1. Has also complete its work.
		2. Everyone acknowledged their appreciation to Yongho Seok for all his hard work running this group.
		3. No questions
	7. **TGai** (slide #44)
		1. Nearly all the work is completed, but there is one slot in November just in case the final draft has some issues.
		2. Everyone acknowledged their appreciation to Marc Emmelmann for all his hard work this week finishing off all the sponsor ballot comments.
		3. No questions.
	8. **TGak** (slide #57)
		1. No questions
	9. **TGaq** (slide #61)
		1. No questions
	10. **TGax** (slide #64)
		1. All the submissions have now been presented this week.
		2. All the comment collection issues should be completed by November 2016 and hopefully D1.0 will be produced about that time.
		3. No questions
	11. **TGay** (slide #70)
		1. No questions
	12. **TGaz** (slide #76)
		1. No questions
	13. **WUR SG** (separate updated report 11-16-1271r1)
		1. No questions
10. **Liaison Reports**
	1. **IEEE 802.18** (11-16-1126r0 slide #89)
		1. No questions
	2. **IEEE 802.24** (11-16-1126r0 slide #96)
		1. No questions
	3. **IEEE 802.1CF – OmniRAN** (11-16-1126r0 slide #99)
		1. No questions
11. **Working Group Motions (Old Business)** (11-16-1125r2)
	1. **Teleconferences** (slide #13)
		1. **Move to approve the following teleconferences**

|  |  |  |  |
| --- | --- | --- | --- |
| **Group** | **Date(s)** | **Start** | **Duration** |
| **CAC** | **Mon Oct 3rd, Oct 31st** | **Noon ET** | **1 hr** |
| **TGaj** | **Scheduled with 10 day notice** |  |  |
| **ARC** | **Scheduled with 10 day notice** |  |  |
| **TGah** | **Weekly Sep 27th to Nov 1st**  | **20:00 ET** | **1 hrs** |
| **TGai** | **Weekly Tues Aug 16th to Nov 1st**  | **10:00 ET** | **1.5 hrs** |
| **TGak** | **Mon Sep 26th, Oct 3rd, 24th** | **10:00 ET** | **1.5 hrs** |
| **TGmc** | **Scheduled with 10 day notice** |  |  |
| **TGaq** | **Friday Sept 30th**  | **Noon ET** | **2 hr** |
| **TGax** | **Thur Sept 29th, Oct 20th, 27th, Nov 17th** **Thurs Oct 13th**  | **10:00 ET****20:00 ET** | **2 hrs****2 hrs** |
| **TGay** | **Wed Oct 26th** | **10:00 ET** | **1 hr** |
| **TGaz** | **Wed Nov 2nd**  | **10:00 ET** | **1 hr** |
| **WUR** | **Monday Oct 24th**  | **18:00 ET** | **1 hr** |
| **AANI** | **Sep 27th, Oct 27th**  | **10:00 ET** | **1 hr** |
| **PDED** | **Tuesday Sep 27th**  | **17:00 ET** | **1 hr** |

* + 1. Please note that the new name of the ad-hoc regarding changing the value of the IEEE 802.11 ED threshold, is called “Pre-amble Detection, Energy Detection” (PDED). There is a teleconference for this group shown on the bottom line of the motion slide.
		2. Moved: Donald Eastlake, 2nd: Mark Hamilton
		3. No objection to approving by unanimous consent.
	1. **Forward P802.11ai D11.0 to RevCom** (slide #14)
		1. **Motion: Request the IEEE 802 Executive Committee to conditionally approve forwarding P802.11ai D11.0 to RevCom.**
		2. Moved: Marc Emmelmann, 2nd: Jouni Malinen
		3. [In the TG: Moved: Dan Harkins, Seconded: Jon Rosdahl, Result: 4-0-0]
		4. For: 40, Against: 0, Abstain: 0 (Motion passes)
	2. **TGai Report to EC for forwarding P802.11ai D11.0 to RevCom** (slide #15)
		1. **Moved: Approve document 11-16/1270r2, <https://mentor.ieee.org/802.11/dcn/16/11-16-1270-02-00ai-p802-11ai-report-to-ec-on-conditional-approval-to-forward-draft-to-revcom.pptx> as the report to the IEEE 802 Executive Committee on the requirements for conditional approval to forward P802.11ai D11.0 to RevCom, granting the chair editorial license.**
		2. Moved: Marc Emmelmann, 2nd: Jouni Malinen
		3. [In the TG: Moved: Peter Yee, 2nd: Dan Harkins, Result: 4-0-0]
		4. For: 39, Against: 0, Abstain: 0 (Motion passes)
	3. **AANI Liaison document** (slide #12)
		1. **Approve forwarding the liaison document in 11-16-1101r10, granting the chair editorial license.**
		2. Moved: Joseph Levy, 2nd: Guido Hiertz
		3. [In the AANI SC Straw poll: 16-0-0]
		4. For: 36, Against: 1, Abstain: 2 (Motion passes)
	4. **TGaq Conditional Sponsor Ballot Report (slide #17)**
		1. **Approve document 11-16/1026r3 as the report to the IEEE 802 Executive Committee on the requirements for conditional approval to forward P802.11aq to Sponsor Ballot, allowing editorial updates where necessary and**
		2. **Request the IEEE 802 Executive Committee to conditionally approve forwarding P802.11aq to Sponsor Ballot.**
		3. Moved: Stephen McCann, Seconded: Yunsong Yang
		4. [similar motion in the TG, Moved: Mike Montemurro, 2nd: Yunsong Yang result: 6/0/0]
		5. For: 36, Against: 0, Abstain: 0 (Motion passes)
1. **Next Meeting** (11-16-1067r1 slide #13)
	1. The next meeting is at the Hyatt, San Antonio, TX in November 2016. Registration is now open for this meeting and please note the new type of web-page.
	2. C: There is another major activity in the hotel, so please make your room reservations as soon as possible.
	3. There will be an IEEE 802 Wireless Chairs meeting as shown in Slide #20 at the November 2016 meeting. This is an open meeting and everyone is welcome.
2. **AoB:**
	1. **Document Revision Authorship**
	2. C: I noticed that the AANI liaison was originally authored by the IEEE 802.11 WG chair, but during revisions, the authorship changed. This is rather confusing and I wonder if there is a guideline for when changes are made to the same document number.
	3. Chair: From my own personal view, it should reflect the author who made the changes. If there is some doubt, a new document number (DCN) should be created.
	4. C: When you revise a document the mentor system adopts the previous authors name, so you need to change it if required. Perhaps we need to consider adding names to the author list on the front page should be.
	5. Chair: There are actually some guidelines in the OM.
	6. C: Ok, but perhaps the OM could be clarified and updates.
	7. Chair: Sure, and I think you have an action item.
	8. C: To take authorship of a document, when you add a little bit of text to a document. is not the right thing to do. I took part in the AANI liaison work this week and the behavior of changing the authorship has caused a lot of confusion.
	9. C: This has also happened in TGai and TGmc
	10. **Action**: To bring this topic back at the November mid-week plenary.
	11. **November Meeting Registration**
	12. C: There is an issue with entering non-NA telephone numbers.
	13. Chair: Yes, this has been noted.
	14. **Document issue in TGax**
	15. Q: In TGax, there was an instance of someone who could not post a document. So, how do you register to upload documents?
	16. Chair: There is a page where Aspirants can register for this. I can currently see 5 people who are in the system waiting for such privileges.
	17. **AANI Liaison affiliation**
	18. C: Since 3GPP is a corporate entity, I am willing to add your company name to the outgoing liaison, if you want to inform Joseph Levy.
	19. Q: Is that in order? Shouldn’t it be from IEEE 802.11.
	20. A: Yes, I think so, as 3GPP usually requires a specific 3GPP member company to make such a presentation.
	21. Chair: So, such names can be regarded as co-sponsors of the liaison
3. **Adjournment**
	1. Chair: Having completed the agenda, the chair announced that the meeting was adjourned at 09:47 CEST.

**Annex A: Attendance & Affiliation**

|  |
| --- |
| **Name** | **Affiliation** | **Attended >= 75%?** |
| Aboulmagd, Osama | Huawei Technologies Co. Ltd | Yes |
| Ahn, Jinsoo | Yonsei University | Yes |
| Ahn, Woojin | WILUS | Yes |
| Aio, Kosuke | Sony Corporation | Yes |
| Aldana, Carlos | Intel Corporation | Yes |
| Asai, Yusuke | NTT | Yes |
| Asterjadhi, Alfred | Qualcomm Incorporated | Yes |
| Au, Kwok Shum | Huawei Technologies Co. Ltd | Yes |
| Azizi, Shahrnaz | Intel Corporation | Yes |
| bang, saehee | LG ELECTRONICS | Yes |
| baron, stephane | Canon Research Centre France | Yes |
| Berens, Friedbert | FBConsulting Sarl | Yes |
| Bims, Harry | Bims Laboratories, Inc. | Yes |
| Bocus, Mohammud | Toshiba of Europe Ltd. | Yes |
| Bourdoux, Andre | IMEC | Yes |
| Caillerie, Alain | Canon Research Centre France | Yes |
| Calcev, George | Huawei R&D USA | Yes |
| Cariou, Laurent | Intel Corporation | Yes |
| Carney, William | Sony Corporation | Yes |
| Chang, Soo-Young | California State University, Sacramento (CSUS) | Yes |
| Cheng, Paul | MediaTek Inc. | Yes |
| Cheong, Minho | Newracom Inc. | Yes |
| CHERIAN, GEORGE | Qualcomm Incorporated | Yes |
| Cherniavsky, Dmitry | SiBEAM, Inc. | 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 |
| Ciochina, Dana | Sony Corporation | Yes |
| Coffey, John | Realtek Semiconductor Corp. | Yes |
| Cordeiro, Carlos | Intel Corporation | Yes |
| da Silva, Claudio | Intel Corporation | Yes |
| Davuluru, Uday Teja | Lemonbeat | No |
| de Vegt, Rolf | Qualcomm Incorporated | Yes |
| Debergh, Pierre | Orange | Yes |
| Deng, Der-Jiunn | National Changhua University of Education | Yes |
| Eastlake 3rd, Donald | Huawei Technologies Co. Ltd | Yes |
| Edgar, Richard | Imagination Technologies Ltd. | Yes |
| Emmelmann, Marc | Self Employed | Yes |
| Epstein, Leonid | Celeno Communications | Yes |
| Fang, Yonggang | ZTE TX Inc | Yes |
| Fischer, Matthew | Broadcom Corporation | Yes |
| Fujio, Shunsuke | FUJITSU LABORATORIES LIMITED | Yes |
| Furuichi, Sho | Sony Corporation | Yes |
| Gagiev, Yaroslav | Intel Corporation | Yes |
| Gan, Ming | Huawei Technologies Co. Ltd | Yes |
| Ghosh, Chittabrata | Intel Corporation | Yes |
| Grass, Eckhard | Humboldt-University in Berlin | Yes |
| Grochla, Krzysztof | IITIS PAN | No |
| Guo, Yuchen | Huawei Technologies Co. Ltd | Yes |
| Hamilton, Mark | Ruckus Wireless | Yes |
| HAN, Xiao | Huawei Technologies Co. Ltd | Yes |
| Handte, Thomas | Sony Corporation | Yes |
| Har Zion, Yuval | Celeno Communications | Yes |
| Harkins, Daniel | Aruba Networks, Inc. | Yes |
| Hart, Brian | Cisco Systems, Inc. | Yes |
| Hartman, Chris | Apple, Inc. | Yes |
| Hedayat, Ahmadreza | Newracom Inc. | Yes |
| Hiertz, Guido | Ericsson AB | Yes |
| Holcomb, Jay | Itron Inc. | No |
| Hong, Hanseul | Yonsei University | Yes |
| Huang, Lei | Panasonic Asia Pacific Pte Ltd. | Yes |
| Huang, Po-Kai | Intel Corporation | 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 |
| Iwatani, Junichi | Nippon Telegraph and Telephone Corporation (NTT) | Yes |
| Jeffries, Timothy | Huawei R&D USA | Yes |
| Jin, Liang | Spirent Communications | Yes |
| Jo, Kyungtae | LG ELECTRONICS | Yes |
| Johnsson, Kerstin | Intel Corporation | Yes |
| Jones, Vincent Knowles IV | Qualcomm Incorporated | Yes |
| Kakani, Naveen | Qualcomm Incorporated | Yes |
| Kapetanovic, Dzevdan | Ericsson AB | No |
| Kedem, Oren | Intel Corporation | No |
| Kennedy, Richard | Hewlett Packard Enterprise | No |
| Kerry, Stuart | OK-Brit | Yes |
| Kim, Jeongki | LG ELECTRONICS | No |
| Kim, Jin Min | LG ELECTRONICS | Yes |
| Kim, Joonsuk | Apple, Inc. | Yes |
| Kim, Sang Gook | LG ELECTRONICS | Yes |
| Kim, Suhwook | LG ELECTRONICS | Yes |
| Ko, Geonjung | WILUS Institute | Yes |
| Kojima, Fumihide | National Institute of Information and Communications Technology (NICT) | No |
| Kotzer, Igal | General Motors Company | No |
| Kulkarni, Parag | Toshiba | Yes |
| Kwak, Byung-Jae | Electronics and Telecommunications Research Institute (ETRI) | No |
| Kwon, Young Hoon | Newracom Inc. | Yes |
| Lalam, Massinissa | SAGEMCOM SAS | Yes |
| Lan, Zhou | Huawei Technologies Co. Ltd | Yes |
| Lanante, Leonardo | Kyushu Institute of Technology | Yes |
| Lansford, James | Qualcomm Incorporated | Yes |
| Lee, Daewon | Newracom Inc. | Yes |
| Lee, Hyeong Ho | Electronics and Telecommunications Research Institute (ETRI) | No |
| Lee, Jae Seung | ETRI | No |
| LEE, SUNGEUN | Cypress Semiconductor Corporation | Yes |
| Lepp, James | BlackBerry | Yes |
| Levy, Joseph | InterDigital, Inc. | Yes |
| Li, Qinghua | Intel Corporation | Yes |
| Li, Yunbo | Huawei Technologies Co. Ltd | Yes |
| Lichtensteiger, William Robert | Landis Gyr Group Worldwide | No |
| Lim, Dong Guk | LG ELECTRONICS | Yes |
| Lin, Yingpei | Huawei Technologies Co. Ltd | Yes |
| Liu, Jinnan | HUAWEI | Yes |
| Loc, Peter | Huawei Technologies Co. Ltd | Yes |
| Lomayev, Artyom | Intel Corporation | Yes |
| Lou, Hui-Ling | Marvell Semiconductor, Inc. | No |
| Lv, Kaiying | ZTE Corporation | Yes |
| Ma, Jing | National Institute of Information and Communications Technology (NICT) | No |
| MADHAVAN, NARENDAR | TOSHIBA Corporation | Yes |
| Malinen, Jouni | Qualcomm Incorporated | Yes |
| Maltsev, Alexander | Intel Corporation | Yes |
| Matsuo, Ryoko | TOSHIBA Corporation | Yes |
| Mccann, Stephen | BlackBerry | Yes |
| Montemurro, Michael | Research In Motion Limited | Yes |
| Morioka, Yuichi | Sony Corporation | No |
| Motozuka, Hiroyuki | Panasonic Corporation | Yes |
| Murakami, Yutaka | Panasonic Corporation | Yes |
| Myles, Andrew | Cisco Systems, Inc. | Yes |
| Nagai, Yukimasa | Mitsubishi Electric Corporation | No |
| Nagao, Yuhei | Radrix Co., Ltd | Yes |
| Nandagopalan, SAI SHANKAR | Cypress Semiconductor Corporation | Yes |
| Nejatian, Alireza | Ericsson AB | No |
| Notor, John | Notor Research; ARM, Inc. | Yes |
| Oh, Minseok | Kyonggi University | Yes |
| OH, MIN-SEOK | LG Electronics | Yes |
| Oshima, Mitsuaki | Panasonic Asia Pacific Pte Ltd. | No |
| Oteri, Oghenekome | InterDigital, Inc. | Yes |
| Palm, Stephen | Broadcom Corporation | Yes |
| Park, Eunsung | LG Electronics | Yes |
| Park, Hyunhee | LG ELECTRONICS | Yes |
| Park, Minyoung | Intel Corporation | Yes |
| Park, Sung-jin | LG ELECTRONICS | Yes |
| Patil, Abhishek | Qualcomm Incorporated | Yes |
| Persson, Hakan | Ericsson AB | No |
| Petranovich, James | ViaSat, Inc. | Yes |
| Pienciak, Walter | IEEE | No |
| porat, ron | Broadcom Corporation | No |
| Pulikkoonattu, Rethnakaran | Broadcom Corporation | Yes |
| Qi, Emily | Intel Corporation | Yes |
| Qu, Shouxing | BlackBerry | Yes |
| Rakanovic, Demir | u-blox | Yes |
| Ren, Yazhen | Huawei Technologies Co. Ltd | Yes |
| Riegel, Maximilian | Nokia Networks | 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 |
| Sadri, Ali | Intel Corporation | Yes |
| Sakamoto, Takenori | Panasonic Corporation | Yes |
| Salazar Cardozo, Ruben E | Landis Gyr Group Worldwide | No |
| Sambasivan, Sam | AT&T | Yes |
| Sato, Naotaka | Sony Corporation | Yes |
| Schelstraete, Sigurd | Quantenna Communications, Inc. | Yes |
| Segev, Jonathan | Intel Corporation | Yes |
| Seok, Yongho | Newracom Inc. | Yes |
| Shellhammer, Stephen | Qualcomm Incorporated | No |
| Shimada, Shusaku | Schubiquist Technologies | No |
| Shimizu, Masahiko | Fujitsu Labs. Ltd. | No |
| Son, Ju-Hyung | WILUS Institute | Yes |
| Song, Nah-Oak | Korea Advanced Institute of Science and Technology (KAIST) | Yes |
| Stacey, Robert | Intel Corporation | Yes |
| Stanley, Dorothy | Hewlett Packard Enterprise | Yes |
| Stephens, Adrian | Intel Corporation | No |
| Sumi, Takenori | Mitsubishi Electric Corporation | Yes |
| Sun, Bo | ZTE Corporation | Yes |
| Sun, Chen | Sony Corporation | Yes |
| Sun, Li-Hsiang | InterDigital, Inc. | Yes |
| sun, sheng | Huawei Technologies Co. Ltd | Yes |
| Szott, Szymon | AGH University of Science and Technology | Yes |
| Tanaka, Yusuke | Sony Corporation | Yes |
| Tao, Wu | Huawei Technologies Co. Ltd | Yes |
| Tian, Bin | Qualcomm Incorporated | Yes |
| Trainin, Solomon | Intel Corporation | Yes |
| Urabe, Yoshio | Panasonic Corporation | Yes |
| Van Nee, Richard | Qualcomm Incorporated | Yes |
| Varshney, Prabodh | Nokia | Yes |
| Venkatesan, Ganesh | Intel Corporation | Yes |
| Venkateswaran, Sriram | Broadcom Corporation | Yes |
| Verma, Lochan | Qualcomm Incorporated | Yes |
| Vermani, Sameer | Qualcomm Incorporated | Yes |
| VIGER, Pascal | Canon Research Centre France | Yes |
| Wang, Chao Chun | MediaTek Inc. | Yes |
| Wang, Hao | Fujitsu Research & Development Center | No |
| Wang, Huizhao | Quantenna Communications, Inc. | Yes |
| Wang, James June | MediaTek Inc. | Yes |
| Wang, Lei | Marvell Semiconductor, Inc. | Yes |
| Wang, Qi | Broadcom Corporation | Yes |
| Wang, Xiaofei | InterDigital, Inc. | Yes |
| Ward, Lisa | Rohde & Schwarz | No |
| Webber, Julian | ATR Wave Engineering Laboratories | Yes |
| Wilhelmsson, Leif | Ericsson AB | Yes |
| Wu, Tianyu | MediaTek Inc. | Yes |
| Xin, Yan | Huawei Technologies Co. Ltd | Yes |
| Xing, Weimin | ZTE Corporation | Yes |
| Yang, Ou | Intel Corporation | 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 |
| YAO, KE | ZTE Corporation | Yes |
| Yee, Peter | NSA/IAD | Yes |
| Yokota, Hidetoshi | Landis Gyr Group Worldwide | Yes |
| Yoshii, Isamu | Panasonic Corporation | No |
| Yu, Jian | Huawei Technologies Co. Ltd | Yes |
| Yun, SunWoong | LG ELECTRONICS | Yes |
| Yunoki, Katsuo | KDDI R&D Laboratories | Yes |
| Zeleznikar, Alan | ARRIS Group | Yes |
| Zhang, Xingxin | Huawei Technologies Co. Ltd | Yes |
| Zhang, Yan | Marvell Semiconductor, Inc. | Yes |
| Zhu, Chunhui | Huawei Technologies Co. Ltd | Yes |
| Zhu, Jun | Huawei Technologies Co. Ltd | Yes |
| Zuniga, Juan Carlos | SIGFOX | No |

**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  |
| Jon Rosdahl(Qualcomm) | 1st Vice Chair (Policies and Procedures)Treasurer | +1 (801) 492-4023jrosdahl@ieee.org |
| Dorothy V. Stanley(HPE) | 2nd Vice Chair (Rules and reflectors)IEEE 802 (LMSC) EC delegate | +1 (630) 363-1389dorothy.stanley@hpe.com  |
| Stephen McCann(BlackBerry Ltd.) | SecretaryPublicity ad-hoc Chair | +44 1753 667099stephen.mccann@ieee.org |
| Peter Ecclesine(Cisco Systems, Inc.) | Co-Technical Editor | +1 (408) 527-0815petere@cisco.com |
| Robert Stacey(Intel Corporation) | Co-Technical Editor802.11 Assigned Numbers Authority | +1 (503) 712 4447robert.stacey@intel.com  |

Standing Committees

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Jim Lansford (CSR Technologies Inc. a Qualcomm Company) | Wireless Next Generation (WNG) Chair | +1-719-286-8660jim.lansford@ieee.org  |
| Mark Hamilton(Ruckus Wireless) | Architecture (ARC) Chair | +1 (303) 441-7553mark.hamilton2152@gmail.com  |
| Andrew Myles(Cisco Systems, Inc.) | ISO/IEC/JTC1/SC6 shadow committee (JTC1) Chair | +61 2 84461010andrew.myles@cisco.com |
| Rich Kennedy(Unlicensed Spectrum Advocates) | Regulatory Chair | +1 (832) 298-1114rkennedy1000@gmail.com  |
| Jon Rosdahl(Qualcomm ) | Project Authorization Request (PAR) review Chair | +1 (801) 492-4023jrosdahl@ieee.org |

Task Groups

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Dorothy V. Stanley(HPE) | TGmc Chair(Revision mc) | +1( 630) 363-1389dorothy.stanley@hpe.com  |
| Yongho Seok(Self) | TGah Chair(Sub 1 GHz Operation) | +82-10-7581-0828yongho.seok@gmail.com  |
| Hiroshi Mano(Koden Techno Info K.K.) | TGai Chair(Fast Initial Link Setup) | +81-3-5436-8350mano@koden-ti.com  |
| Xiaoming Peng(Institute for Infocomm Research) | TGaj Chair(China Millimeter Wave) | +65-64082429pengxm@i2r.a-star.edu.sg  |
| Donald Eastlake, 3rd(Huawei Technologies) | TGak Chair(General Link) | +1 508-333-2270d3e3e3@gmail.com  |
| Stephen McCann(BlackBerry Ltd.) | TGaq Chair(Pre-association Discovery) | +44 1753 667099stephen.mccann@ieee.org  |
| Osama Aboul-Magd(Huawei) | TGax Chair (pro-tem)(High Efficiency WLAN) | +1 (613) 287-1405osama.aboulmagd@huawei.com  |
| Edward Au (Huawei) | TGay Chair (Next Generation 60 GHz) | +1 773 782 6875edward.ks.au@huawei.com  |
| Jonathan Segev (Intel Corporation) | TGaz Chair (Next Generation Positioning) | +972-54-2403587jonathan.segev@intel.com |

Study Groups

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

Topic Interest Groups

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Tim Godfrey(Electric Power Research Institute) | Long Range Low Power (LRLP) TIG | +1 (650) 855-8584 (office)tim.godfrey@ieee.org |

Liaison Officials to non IEEE 802 organizations

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Stephen McCann(BlackBerry Ltd.) | Liaison to 3GPP(3rd Generation Partnership Project) | +44 1753 667099stephen.mccann@ieee.org |
| Dorothy V. Stanley(Aruba Networks) | Liaison to IESTF(Internet Engineering Task Force) | +1( 630) 363-1389 dorothy.stanley@hpe.com  |
| Ian Sherlock(Texas Instruments Inc.) | Liaison to WFA(Wi-Fi Alliance) | +1-972-995-2011isherlock@ieee.org |

Liaison Officials to IEEE 802 organizations

|  |  |  |
| --- | --- | --- |
| **Name (Affiliation)** | **Position** | **Contact Details** |
| Clint Chaplin(Samsung Electronics) | Liaison to IEEE 802.15  | +1 (408) 768-0827 clint.chaplin@gmail.com |
| Rich Kennedy(Unlicensed Spectrum Advocates) | Liaison to IEEE 802.18 | +1 (832) 298-1114rkennedy1000@gmail.com  |
| Tim Godfrey(Electric Power Research Institute) | Liaison to IEEE 802.24 | +1 (650) 855-8584 (office)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 | 16-1107r1 |
| TGmc | TG | 16-1072r0 |
| TGah | TG | 16-1297r1 |
| TGai | TG | 16-1258r0 |
| TGak | TG | 16-1250r5 |
| TGaq | TG | 16-1253r1 |
| TGax | TG | 16-1231r0 |
| TGay | TG | 16-1267r0 |
| TGaz | TG | 16-1320r0 |
| WUR | SG | 16-1248r0 |
| ARC | SC | 16-1319r0 |
| JTC1 | SC | 16-1321r0 |
| REG | SC | 16-1086r0 |
| AANI | SC | 16-1287r0 |

**Annex D : Revisions and Standards Pipeline**



**IEEE 802.11 Revisions**



**IEEE 802.11 Standards Pipeline**

End.