**IEEE 802.15**

**Wireless Specialty Networks (WSN)**

|  |  |
| --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSN) |
| Title | **802.15 WG & CAC Minutes Virtual Nov. Plenary 2021** |
| Date Submitted | [9 November, 2021]  |
| Source | [Clint Powell][][Chandler, AZ] | Voice: [+1.480.586.8457]Fax: [--]E-mail: [cpowell@ieee.org] |
| Re: | [November 802.15 Plenary Meeting held virtually] |
| Abstract | [IEEE 802.15 Working Group & CAC Minutes] |
| Purpose | [Official minutes of the Working Group Opening/Closing and CAC Sessions] |
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**134th IEEE 802.15 WSN MEETING**

**Held Virtually via Webex (all times in EDT)**

**Nov. 9-17, 2021**

# Tuesday, 9 November 2021

**Opening**

**9:00 AM** WG Chair, Pat Kinney (Kinney Consulting), called the meeting to order and opened the WG Agenda (*15-21-0541-02-0000*)

<https://mentor.ieee.org/802.15/documents?is_dcn=541&is_year=2021>

**Announcements**

WG Chair reviewed attendance tool.

Don’t forget to turn on your mic and announce your name and affiliation before you speak.

WG Chair announced the use of DirectVoteLive (DVL) for all WG votes. DVL will only be used during this session and at the closing plenary meeting on Wednesday, 17 November. He also noted that the motions would be loaded in advance of the meeting.

All WG motions (especially those relating to PARS) need to be sent to the Chair (Pat Kinney), and Secretary (Clint Powell) by the end of EV2 on Tues. 11/16 so that they may be entered into DVL (Direct Vote Live) by the EOD. If you are not able to meet this deadline please work with Rick beforehand.

WG Chair asked for new participants to speak up using the chat window in Webex.

## Legal

WG Chair informed the group of and displayed the IEEE-SA patent policy presentation slides 0-5 (<http://standards.ieee.org/board/pat/pat-slideset.ppt>).

WG Chair asked the participants who wished to declare a Letter of Assurance (LoA) or to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for any of the ongoing activities within the 802.15 WG.

No essential patent claims were brought forth.

WG Chair displayed and read the standard IEEE Anti-Trust statement.

WG Chair displayed and read the standard IEEE Copyright Policy, including Code of Ethics.

WG Chair went through the agenda.

## WG Approvals

WG Vice-Chair, Clint Chaplin (SRA) moved to *approve the agenda (document# 15-21-0541-02-0000)* with Clint Powell, WG Vice-Chair (Meta) seconding the motion. Following no objection, the agenda was approved.

WG Vice-Chair, Clint Chaplin (SRA) moved *to approve the previous meeting minutes (document 15-21-0448-00-0000)* and Clint Powell, WG Vice-Chair (Meta) seconded the motion. Following neither discussion nor objection the minutes were approved. There were no matters resulting from the previous minutes.

**General and Administrative**

WG Chair presented the general meeting information:

* IMAT will be used for attendance
	+ 75% Attendance = 12 time slots (any 12 of the 29)
* Voters: (voters: 121, nearly: 15, aspirant: 43)
* There were 83 attendees at this point of the 802.15 Opening Plenary
* Webex will be used for all sessions

Ben Rolfe (BCA) gave the treasurers report *(document: ec-21-0228-00)*

* Still no income currently
* Continue to have some expenses
* Current balance of ~$328,721.34, ~$1k more than balance reported at Sept. session
	+ Due to the minimal fees being collected for this Interim, the balance is expected to remain flat

802 Wireless is targeting it’s next face-to-face meeting for the May 2022 Mtg.

The Nov. 802.15 CAC meeting minutes are included in the WG minutes
*(minutes: 15-21-0546-00-0000* – this doc.*)*

The Wireless Chairs Steering Committee meeting minutes are contained in
*(minutes: ec-21-0259-00-WCSG)*

Straw Poll for March Plenary Session, Mar 13-19 – Hilton Orlando Lake Buena Vista, Orlando, FL, United States (anybody can vote)

1. If the 2022 March Plenary Session is held in Orlando, Florida as an in-person only session, will you attend?
* 34 - Yes
* 33 - No
* 34 - did not vote
1. If the 2022 March Plenary Session is held in Orlando, Florida as a mixed-mode session, will you attend:
	1. Attend In-person - 24
	2. Attend Virtually (remotely) - 43
	3. Will not attend plenary - 4

Did not answer - 30

PARs for Nov. Mtg.

* PAR and associated documentation available to 802 EC by 05 Oct 2021, AoE
* Comments are due back to WG(s) by 10 Oct 2021, AoE
* WG responses to comments and Final PAR due back to EC and other WGs by 17 Oct 2021, AoE
* PARs to be considered by NesCom at Dec.7 mtg. must have been submitted by 18 October

**Status Reports (Goals and objectives for the week)**

802.15 Status and Activities for the Week

* Task Group 15.4 Cor1 (2 sessions)
	+ With Kunal Shah changing companies, Tero Kivinen has taken over as Chair of the TG
	+ 1st LB still open, over 50% voted so far, w/30 comments so far
* Task Group 15.4aa – JRE (2 sessions)
	+ SA Ballot passed
	+ Will prepare for RevCom submission
* Task Group 4ab – NG-UWB (5 sessions + Joint 4ab/14/15 + Joint 6a/4ab/14)
	+ Hear presentations
	+ Refine TGD and begin work on technical framework
* Task Group 6a – (DEP) (3 sessions + Joint 6a/4ab/14)
	+ Continue laying foundation for TG
	+ 1 Guest Presentation
* Task Group 7a – VAT (4 sessions)
	+ Continue work on draft
* Task Group 13 – Multi Gigabit/sec OWC (4 sessions)
	+ Resolving comments from 1st LB
* Task Group 14 – UWB-AHN (1 session + Joint 4ab/14/15 + Joint 6a/4ab/14)
	+ Continue laying foundation for TG
	+ For time being will conduct activity under TG .4ab, until enough interest/BW of participants is evident and TG Leadership roles are permanently filled
* Task Group 15 – NB-AHN (3 sessions + Joint 4ab/14/15)
	+ Continue laying foundation for TG
* Task Group 16t – 802.16 Amendment (2 sessions)
	+ Continue to work on content and to kick off draft development
* Study Group 15.3ma (1 session + Joint w/SC-THz)
	+ Work on and complete PAR and CSD
	+ Relatively few comments received on PAR
* Standing Committee – THz (Joint w/SC-THz)
	+ No standalone sessions
* Standing Committee – IETF (1 session)
	+ IETF is having a mtg. this week, will report on this in SC-IETF mtg. next week.
* Standing Committee – SC-M, Rules (1 session)
	+ Operations manual update
	+ Updating templates for RevCom/SA Ballot Submission
	+ Update WG template
	+ Work on standard format for call for officers (for TG’s)
* Standing Committee – WNG (1 session)
	+ TBD
* Task Group 12 (0 sessions)
	+ WG Chair will be asking WG to withdraw the PAR in Jan.
	+ A presentation will be given at Jan. mtg. on the pieces that could be potentially picked up by other TG’s

**Any Other Business**

WG Chair asked if there was any other business. None was raised.

**WG Recess**

**10:30 AM** WG Chair recessed the meeting

# Wednesday, 17 November 2021

## Closing

**9:01 AM** WG Chair, Pat Kinney (Kinney Consulting) called the meeting to order

**9:02 AM** WGVice-Chair, Rick Alfvin (Linespeed) spoke to the attendance method (IMAT) and voting method (DVL)

> 70 participants on the call

All votes are recorded below as Y/N/A (Yes/No/Abstain)

## Announcements

#### WG Chair presented his Lessons Learned from this week:

* Things continue run more smoothly with more people involved

## Closing Reports

**9:03 AM 802.15 WG** Closing Agenda by Pat Kinney (Kinney Consulting) (15-21-0437-03)

**9:05 AM Straw Poll**

Should 802.15 use the same time slots as 802.11 uses?

A great deal of discussion ensued. The consensus seems to be to keep the 2hr time slots that 802.15 currently uses and use 10-15 within the 2-hour slots at the front or end of the 2 hours as the break, and have 802.11 adopt that schedule, giving them 6 time slots.

As a side item adding an AM0 for 802.15 to have another EURO/ASIA friendly time slot was also suggested, giving 802.15 7 time slots.

Another suggestion was to offset the 802.11 and 802.15 sessions by different weeks, when meeting virtually.

Should 802.15 use the same time slots as 802.11 uses?

At the time there were 76 participants during the below question.

There were no one in favor of the question.

Should 802.15 use 2 hours slots, but start the mtgs. at 10 after, thereby giving a short break?

At the time there were 76 participants during the below question.

There were no objections to the question.

**9:30 AM TG4 Cor1** closing report by Tero Kivinen (Self) (15-21-0520-00)

Developed draft for Letter Ballot.

***Motion:****Move that 802.15 WG start a WG Letter Ballot requesting approval of P802-15-4-2020Cor1\_D1 and to forward document P802-15-4-2020Cor1\_D1, to Standards Association ballot pending the completion and inclusion of the edits in the draft.*

**Moved by:**Kunal Shah (Itron)

**Seconded by:** Rick Alfvin (Linespeed)

42 out of 49 on DVL voted

Upon no discussion the vote was taken with the results of 42/0/0, motion carries.

***Motion:****Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802-15-4-2020Cor1\_D1 with the following membership : Kunal Shah(Itron - Chair), Takashi Kuramochi(Lapis), Hiroshi Harada (Kyoto University), Tero Kivinen (self) and Jeng-Shiann Jiang (Vertexcom). The 802.15.4-2020-Cor1 CRG is authorized to approve comment resolutions, edit the draft according to the comment resolutions, and to approve the start of recirculation ballots of the revised draft on behalf of the 802.15 WG. Comment resolution on recirculation ballots between sessions will be conducted via reflector email and via teleconferences announced to the reflector as per the LMSC 802 WG P&P.*

**Moved by:**Kunal Shah (Itron)

**Seconded by:** Rick Alfvin (Linespeed)

44 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 44/0/0, motion carries.

3 sessions requested for Nov. Mtg.

**9:27 AM TG4aa** closing report by Takashi Kuramochi (Lapis) (15-21-0519-01)

Worked on comment resolution and prepared draft for recirc.

***Motion:****802.15 has reviewed and approves the CSD [15-20-0319-00-04aa], and the CA document [15-21-0083-08-04aa]; and approves forwarding draft P802.15.4aa\_D9 to Standards Association Recirculation ballot.*

**Moved by:**Takashi Kuramochi (Lapis Technology)

**Seconded by:**Rick Alfvin (Linespeed)

45 out of 53 on DVL voted

Upon no discussion the vote was taken with the results of 45/0/0, motion carries.

***Motion:***Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association Recirculation balloting of the P802.15.4aa\_D9 with the following membership: Takashi Kuramochi(Chair), Hiroshi Harada, Kunal Shah, Henk De Ruijter, and Kiyoshi Fukui. The 802.15.4aa CRG is authorized to approve comment resolutions, edit the draft according to the comment resolutions, and to approve the start of recirculation ballots of the revised draft on behalf of the 802.15 WG. Comment resolution on recirculation ballots between sessions will be conducted via reflector email and via teleconferences announced to the reflector as per the LMSC 802 WG P&P

**Moved by:**Takashi Kuramochi (Lapis Technology)

**Seconded by:**Rick Alfvin (Linespeed)

44 out of 53 on DVL voted

Upon no discussion the vote was taken with the results of 44/0/0, motion carries.

2 sessions requested for Nov. Mtg. (EV1 preferred on 9th and 15th)

**10:00 AM TG4ab** closing report by Ben Rolfe (BCA/UWBA/et al.) (15-21-0518-00)

Heard several contributions. (see closing report for details)

7 sessions requested for Nov. Mtg.: 5 standalone + 1 joint w/.14, .15 + 1 joint w/.14, .6a

**9:53 AM TG6a** closing report by Ryuji Kohno (YNU/YRP-IAI)) (15-21-0512-00)

Several presentations were heard.

4-5 sessions requested for Nov. Mtg.: 3 standalone + 1-2 joint w/.4ab, .14 (AM1 preferred)

Joint session w/ 802.1 SG6a, SG4ab, SG14, SG15 also needed

**9:34 AM TG7a** closing report by Yeong Min Jang (Kookmin University) (15-21-0522-00)

Hear several proposals during the mtg.

4 sessions requested for Nov. Mtg. (prefer AM1 or alternatively EV2)

**9:40 AM TG13** closing report by Kai Lennert (Fraunhofer HHI) (15-21-0514-01)

Worked on comment resolution and prepared draft for recirc.

***Motion:***Move that 802.15 WG approves the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.13\_D5 with the following membership: Volker Jungnickel as Chair, Chong Han, Tuncer Baykas, Sang-Kyu Lim, Tero Kivinen. The 802.15.13 CRG is authorized to approve comment resolutions, edit the draft according to the comment resolutions, and to approve the start of recirculation ballots of the revised draft on behalf of the 802.15 WG. Comment resolution on recirculation ballots between sessions will be conducted via reflector email and via teleconferences announced to the reflector as per the LMSC 802 WG P&P.

**Moved by:**Kai Lennert (Fraunhofer HHI)

**Seconded by:**Rick Alfvin (Linespeed)

39 out of 54 on DVL voted

Upon no discussion the vote was taken with the results of 37/0/2, motion carries.

***Motion:****Move that the 802.15 WG starts a SA ballot requesting approval of CSD doc. 15-17-0075-02 and draft doc. P802-15-13\_D05 and approves forwarding draft P802-15-13\_D05 to Standards Association ballot.*

**Moved by:**Kai Lennert (Fraunhofer HHI)

**Seconded by:**Rick Alfvin (Linespeed)

37 out of 54 on DVL voted

Upon no discussion the vote was taken with the results of 35/0/2, motion carries.

***Motion:****Move that the 802.15 WG approves the reply to ITU-R liaison contained in doc. 15-21-0434-01.*

**Moved by:**Kai Lennert (Fraunhofer HHI)

**Seconded by:**Rick Alfvin (Linespeed)

38 out of 54 on DVL voted

Upon no discussion the vote was taken with the results of 30/0/8, motion carries.

4 sessions requested for Nov. Mtg.

**10:05 AM TG14** closing report by Clint Powell, WG Vice-Chair (Facebook) (15-21-0460-05)

Discussed template for determining 802.15.4 features to reference

Reviewed templates for call for Chair, Call for Officers, and Outreach Letter

5 sessions requested for Nov. Mtg.: 3 standalone + 1 joint w/.4ab, .15 + 1 joint w/.4ab, .6a

**10:10AM TG15** closing report by Phil Beecher (Wi-SUN Alliance) (15-21-0455-01)

Reviewed templates for call for Chair, Call for Officers, and Outreach Letter

4 sessions requested for Nov. Mtg.: 3 standalone + 1 joint w/.4ab, .14

**9:48 AM TG16t** closing report by Tim Godfrey (EPRI) (15-21-0516-00)

Developing SRD (System Requirements Document) and SDD (System Description Document).

2 sessions requested for Nov. Mtg. (PM2 on 11/9 or PM1 on 11/16)

**10:10AM SG3ma** closing report by Iwao Hosako (NICT) (15-21-0479-00)

Worked on PAR and CSD.

***Motion:****Request that the PAR and CSD contained in documents [15-21-0475-04] and [15-21-0477-04] respectively, be approved by the IEEE 802.15 WG and that the EC be requested to forward the PAR to NesCom. The 802.15 working group chair and technical editor are authorized to make additional modifications to the PAR and CSD as needed to reflect EC discussion at its closing meeting*

**Moved by:**Thomas Kuerner (TU Braunschweig)

**Seconded by:**Rick Alfvin (Linespeed)

35 out of 55 on DVL voted

Upon no discussion the vote was taken with the results of 29/0/6, motion carries.

***Motion:****Move that the 802.15 Working Group seek approval from the 802 EC to extend the study group in 802.15 to develop the PAR and CSD documents for “SG15.3ma.”*

**Moved by:**Thomas Kuerner (TU Braunschweig)

**Seconded by:**Rick Alfvin (Linespeed)

37 out of 55 on DVL voted

Upon no discussion the vote was taken with the results of 33/0/4, motion carries.

2 sessions requested for Nov. Mtg. (prefer 11/12 AM1 and 11/15 AM1 joint w/SC THz)

**10:15 AM SC THz** closing report by Thomas Kurner (TU Braunschweig) (15-21-0481-00)

Heard contributions.

1 session requested for Nov. Interim Mtg. (joint w/SG3ma)

**10:20 AM SC IETF** closing report by Tero Kivinen (Self) (verbal rpt.)

1 session requested for Nov. Interim Mtg.

**10:23 AM SC WNG** closing report by Ben Rolfe (BCA/UWBA) (15-21-0523-00)

Three presentations were heard. (see closing report for details)

1 session requested for Nov. Interim Mtg.

**10:25 AM SC M, Rules** closing report by Phil Beecher (Wi-SUN Alliance) (15-21-0456-02)

Developed templates for Call for Chair for Subgroup and Call for Officers for Subgroup*.*

***Motion:****Move that the IEEE 802.15 WG approves the IEEE 802.15 operation manual document 15-10-0235-29-0000-802-15-operations-manual as its Operations Manual following the conclusion of this September 2021 Interim session.*

**Moved by:**Phil Beecher (Wi-SUN Alliance)

**Seconded by:**Rick Alfvin (Linespeed)

38 out of 56 on DVL voted

Upon no discussion the vote was taken with the results of 37/0/1, motion carries.

1 session requested for Nov. Interim Mtg.

**10:32 AM 802.24** Liaison verbal report by Tim Godfrey (EPRI) (verbal rpt.)

Continues to develop three white papers: “Low latency” White Paper, IoT White Paper, and "IEEE 802 Solutions for Vertical Applications”.

Developing a strategy to function as a venue for vertical stakeholders, identifying and initiating standardization needs for vertical markets.

**10:35 AM 802.18** Liaison report by Jay Holcomb (Itron) (15-21-0458-00)

Discussed activities in the following forums/regions: ETSI, CEPT, Malaysia, Chile, Canada

Reviewed Liaisons – need to tie 3 responses to ITU-R

Reviewed FCC NPRM on 60 GHz on Radar Sensing Tech.

Sept. FFC Mtg. at the end of the month.

**10:43 AM 802.19** Liaison report by Ben Rolfe (BCA/UWBA) (verbal rpt.)

Document from 802.11, 802.11bb is expected to go to Letter Ballot in November, and they are expected to have a CA document

IEEE 802.11be is expected to go to Letter Ballot next spring and they will have a CA document to vote on

Then 802.11bf will have one on the future

**10:45 AM 802.11** Liaison report Clint Chaplin

NTR

## Review of November Virtual Interim Meeting Plans

WG Chair reviewed the Nov. 802 Wireless Plenary Session Dates: to be held 11/5 – 11/19

* EC Opening on Fri. 11/5, 3-5pm Eastern
* EC Closing on Fri. 11/19, 1-5pm Eastern
* There will be a $50 early registration fee through Thurs. 10/21
	+ a $75 fee after Thurs. 10/21 and through Fri. 11/5
	+ a $125 fee after Fri. 11/5
	+ Registration is open: <https://cvent.me/4xn8Ql>
* 802.15 WG will hold its Sessions Tues., Nov. 9 – Wed., Nov. 17, 2021
* 802.15 CAC (a.k.a. AC - Advisory Committee) on 11/2, 10:00 am - Noon Eastern
* Future 802 WCSC (Wireless Chairs Standing Committee) will occur:
	+ Oct. 6 (Wed.), 3-4:30 pm Eastern
	+ Nov. 3 (Wed.), 3-4:30 pm Eastern
	+ Dec. 1 (Wed.), 3-4:30 pm Eastern
* Fixed slots will be used for the TG, SG, IG chairs to select from

## Important PAR and CSD Dates

PARs to be considered for approval by the IEEE 802 LMSC during the closing IEEE 802 LMSC meeting 19 Nov 2021 electronic meeting shall pass through the following process:
The proposed PAR shall be available at a publicly accessible URL and an email sent to the IEEE 802 LMSC reflector that contains the URL required for viewing the PAR and associated documentation no later than 05 Oct 2021, AoE.
Working Groups, other than the proposing Working Group, shall express concerns to the proposing Working Group as soon as possible and shall submit comments to the proposing Working Group and the IEEE 802 LMSC by e-mail not later than 10 Nov 2021, AoE.
The proposing Working Group shall post a response to commenting Working Group and to the IEEE 802 LMSC together with a Final PAR on a public website and circulate the relevant URL on the IEEE 802 LMSC reflector not later than 17 Nov 2021, AoE.

## Jan. Mtg.

* 802.15 Jan. Interim Plenary Session will be Virtual
* 802.15 will hold sessions Nov. 15 (Tues.) – Nov. 24 (Wed.)
	+ Opening Plenary: Tues. 11/15, 9-11 am Eastern
	+ Closing Plenary: Wed. 11/24, 9-11 am Eastern
	+ CAC mtg. will be held on Nov. 10 (Wed.) @ 10am-12pm Eastern
* Wireless Chairs future mtgs. will occur:
	+ Oct. 6 (Wed.), 3-4:30 pm Eastern
	+ Nov. 3 (Wed.), 3-4:30 pm Eastern
	+ Dec. 1 (Wed.), 3-4:30 pm Eastern

## Open Discussion / Next Steps

Concern raised that IEEE and IETF are recently having overlapping mtg. dates, which is problematic for 802 & IETF participants. This issue will be raised on the next 802 EC mtg.

None.

## WG Adjourn

**11:18** Upon hearing no objections, the WG Chair adjourned the meeting.

# Annex A Virtual attendance = 128

|  |  |  |
| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Akhavan | Koorosh | Qualcomm Incorporated |
| Aldana | Carlos | Facebook |
| Alfvin | Richard | Linespeed Events LLC |
| Amezawa | Yasuharu | Mobile Techno Corp. |
| Au | Kwok Shum | Huawei Technologies Co., Ltd |
| Bahn | Christy | IEEE Staff |
| Bansal | Ankur | Samsung |
| Barras | David | 3db Access AG |
| Baykas | Tuncer | Kadir Has University |
| Beecher | Philip E | Wi-SUN Alliance |
| Berens | Friedbert | FBConsulting Sarl |
| Bettesh | Ido | Apple Inc. |
| Bims | Harry | Bims Laboratories, Inc. |
| Bober | Lennert | Fraunhofer Heinrich Hertz Institute |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Chaplin | Clint | Self |
| Choi | Junyoung | Samsung Electronics Co., Ltd. |
| Choi | Sangsung | Kookmin University |
| Clanney | Nathan | Siemens Mobility, Inc. |
| Connerley | Royce | Union Pacific Railroad |
| da Silva | Claudio | Facebook |
| Danev | Boris | 3db Access AG |
| Dolmans | Guido | Holst Centre / IMEC-NL |
| Dotlic | Igor | Qorvo |
| Du | Rui | Huawei Technologies Co., Ltd |
| Ekrem | Ersen | Apple, Inc. |
| Fukui | Kiyoshi | Oki Electric Industry Co., Ltd. |
| Fukunaga | Masatoshi | Yokohama National University |
| Gan | Ming | Huawei Technologies Co., Ltd |
| Ghosh | Chittabrata | Facebook, Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Golshan | Robert | Apple, Inc. |
| Granhaug | Kristian | novelda |
| Grosswindhager | Bernhard | NXP Semiconductors |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Guo | Ziyang | Huawei Technologies Co., Ltd |
| Ha | Taeyoung | Samsung Electronics Co., Ltd. |
| Harada | Hiroshi | Kyoto University; National Institute of Info. and Comms. Technology (NICT) |
| Henry | Jerome | Cisco Systems, Inc. |
| Hernandez | Marco | National Institute of Info. and Comms. Technology (NICT) |
| Hett | Christopher | Landis Gyr Group Worldwide |
| Hirata | Masayuki | Osaka U. Grad. School of Med., Dept of Neurological Diagnosis & Restoration |
| Holcomb | Jay | Itron Inc. |
| Hosako | Iwao | National Institute of Info. and Comms. Technology (NICT) |
| Hu | Chunyu | Facebook |
| Hu | Mengshi | Huawei Technologies Co., Ltd; Huawei Technologies Co., Ltd |
| Ikegami | Tetsushi | Meiji University |
| Jiang | Jeng-Shiann | Vertexcom Technologies |
| Joo | Seong-Soon | Electronics and Telecommunications Research Institute (ETRI) |
| Jornet | Josep Miquel | Northeastern University |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Juntunen | Juha | Meteor Communications Corp. |
| Kabbinale | Aniruddh | Samsung |
| Kasamatsu | Akifumi | National Institute of Info. and Comms. Technology (NICT) |
| Kashiwagi | Yoshio | Nissin Systems |
| Kerry | Stuart | OK-Brit; Self |
| Kettle | Paul | Wyde Labs |
| Kim | Minsoo | YRP International Alliance Institute |
| Kinney | Patrick | Kinney Consulting LLC |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| Kobayashi | Takumi | Yokohama National University |
| Kohno | Ryuji | YNU/CWC UofOulu; YNU/YRP-IAI |
| Koo | Jonghoe | Samsung Electronics |
| Kuechler | Wolfgang | NXP Semiconductors |
| Kuerner | Thomas | TU Braunschweig |
| Kuramochi | Takashi | Lapis Technology |
| Lee | Mingyu | Samsung Electronics Co., Ltd. |
| Lemsitzer | Stefan | NXP Semiconductors |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Info. and Comms. Technology (NICT) |
| Li | Jialing | Qualcomm Technologies, Inc. |
| Li | Liang | Vinno Technologies Inc. |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| Liu | Chenchen | Huawei Technologies Co., Ltd |
| Liu | Peng | Huawei Technologies Co., Ltd |
| Liu | Yong | Apple, Inc. |
| Lu | Yi | Huawei Technologies Co., Ltd |
| Ma | Yongsen | Redpoint Positioning |
| Mariappan | Vinayagam | SMR Automotive Modules Korea Ltd |
| McCann | Stephen | Huawei Technologies Co., Ltd |
| Mueller | Robert | Technische Universitaet Ilmenau |
| Murray | Carl | Qorvo |
| Nabki | Frederic | Spark Microsystems |
| Naguib | Ayman | Apple, Inc. |
| Neirynck | Dries | novelda |
| Niewczas | Jaroslaw | Qorvo |
| Ogawa | Hiroyo | National Institute of Info. and Comms. Technology (NICT) |
| Oh | Hyunseob | Samsung Electronics Co., Ltd. |
| Pace | James | Wyde Labs |
| Palmer | Clark | Meteorcomm LLC |
| Parthasarathi | Srivathsa Masthi | NXP Semiconductors |
| Pirhonen | Riku | NXP Semiconductors |
| Powell | Clinton | Powell Wireless Consulting, LLC |
| Redlich | Oded | Huawei Technologies Co., Ltd |
| Robert | Joerg | TU Ilmenau/Fraunhofer IIS |
| Rolfe | Benjamin | Blind Creek Associates |
| Saito | Hiroki | Aris Inc. |
| Salazar Cardozo | Ruben E | No Affiliation |
| Sand | Stephan | German Aerospace Center (DLR) |
| Sasoglu | Eren | Apple, Inc. |
| Sayrafian | Kamran | National Institute of Standards and Technology |
| Segev | Jonathan | Intel corporation |
| Sekine | Norihiko | National Institute of Info. and Comms. Technology (NICT) |
| Serang | Daoud | CML Microcircuits (USA) Inc. |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shahar | Menashe | Ondas Networks |
| Shilo | Shimi | Huawei Technologies Co., Ltd; Toga Networks, a Huawei company |
| Simpson | Guy | Ondas Networks |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Itron Inc. |
| Suzuki | Takafumi | National Institute of Info. and Comms. Technology (NICT) |
| Tada | Kiyoshi | Yokosuka Telecom Research Park, Inc |
| Tian | Bin | Qualcomm Incorporated |
| Verso | Billy | DecaWave;Qorvo |
| Wang | Yi | Huawei Technologies Co., Ltd |
| Ward | Lisa | Rohde & Schwarz |
| Wisland | Dag | Novelda AS; University of Oslo |
| Wu | Kanke | Qualcomm Incorporated |
| Yamamoto | Tetsushi | Yokohama National University |
| Yang | Shang-Te | Apple, Inc. |
| Yang | Xun | Huawei Technologies Co., Ltd |
| Yee | Zhenzhen | Red Point Positioning |
| Yee | Peter | NSA-CSD |
| Yoon | Kangjin | Facebook |
| Zeisberg | Sven | Zigpos GmbH |
| Zhou | Mingda | Redpoint Positioning |
| Zou | Qiyue | Facebook |

**802.15 CAC Mtg.**

**Wednesday, 3 November 2021**

## Attendance

Rick Alfvin

Phil Beecher

Marco Hernandez

Jay Holcomb

Pat Kinney

Tero Kivinen

Ryuji Kohno

Takashi Kuramochi

Clint Powell

Ben Rolfe

Gary Steubing

## Minutes

* WG Chair, Pat Kinney (Kinney Consulting) called the mtg. to order at 10:03 am
* 802.15 WG Nov. Agenda is now at r1:

<https://mentor.ieee.org/802.15/documents?is_dcn=541&is_year=2021>

* Attendance for 802.15 in the Nov. Plenary is similar to the Sept. Interim
* For the Nov. Plenary the following 16 time slots are defined as required:
	+ AM1, AM2, PM1
		- 11/9-11/11, 11/15-11/16
	+ AM1
		- 11/17
* The remaining time slots are deemed extra credit, and all (required and extra credit) will be counted towards the 12 minimum needed
* To meet the 75% attendance requirement, attendance would be needed at any 12 (required and or extra credit) time slots
* Voting will again be done using DirectVoteLive (DVL) in the closing plenary
* Motions are due to Chair by the end of the EV1 time slot on Tues. Nov. 16th
* PARs for Nov. Mtg.
* PAR and associated documentation available to 802 EC by 05 Oct 2021, AoE
* Comments are due back to WG(s) by 10 Oct 2021, AoE
* WG responses to comments and Final PAR due back to EC and other WGs by 17 Oct 2021, AoE
* PARs to be considered by NesCom at Dec.7 mtg. must have been submitted by 18 October
* Nov. Plenary Sessions
* 802.15 CAC Mtg. was held 10am - 12 pm EST on Wed. 11/3
* 802 LMSC (EC) Mtg. will be held 3-4:30 pm EST on Fri. 11/5
* Opening 802.15 WG Mtg. will be held 1-11 am EST on Tues. 11/9
* Opening 802.15 WG Mtg. will be held 1-11 am EST on Wed. 11/17
* 802 LMSC (EC) Mtg. will be held 1-5 pm EST on Fri. 11/19
* Wireless Chairs Mtg. will be held 3-4 pm EST on Wed. 11/3
* Subgroup Status and Objectives for Nov. Plenary
* TG4 2020 Cor1
	+ 2 mtgs
	+ Will work on PAR modification and draft text
* TG4aa
	+ 2 mtgs
	+ Will work on SA ballot comments (SA ballot ends 9/14)
* TG4ab NG-UWB
	+ 5 mtgs + 1 Joint 15.4ab, 15.14, 15.15
	+ Working on contributions
	+ Will have 3 Vice-Chairs, one being Secretary as well
	+ Outreach to CCC, FiRa, UWBA, omlox, and CSA
* TG6a
	+ 3 mtgs + 1 Joint 6a, 15.4ab, 15.14
	+ Working on responses to comments received on PAR and CSD
	+ Need to start working on a PAR modification to a revision PAR
* TG7a
	+ 5 mtgs
	+ Start merging proposals
* TG13
	+ 3 mtgs
	+ Work on SA ballot comments
	+ Request to remove .13/.7 joint session from Agenda, Webex, and Chairs code info
* TG14 UWB-AHN
	+ 1 mtg + 1 Joint 15.4ab, 15.14, 15.15
	+ All other mtgs. for .14 will be joint with .4ab
	+ Issue call for officers
	+ Outreach to CCC, FiRa, UWBA, omlox, and CSA
* TG15 NB-AHN
	+ 3 mtgs + 1 Joint 15.4ab, 15.14, 15.15
	+ Identify content
	+ Issue call for officers
	+ Outreach to Wi-SUN Alliance, CSA, Thread, ISA SP100.11a, Wireless Hart, etc.
* TG16t
	+ 2 mtgs
	+ Continue working on use cases
* SG15.3ma
	+ 2 mtgs, including 1 Joint w/SC THz
	+ Respond to comments on PAR/CSD
* SC THz
	+ 1 mtg Joint w/SC THz
* SC WNG
	+ 1 mtg
	+ 1 presentation1 currently scheduled
* SC IETF
	+ 1 mtg
* SC Main
	+ 1 mtgs
	+ 1 topic to discuss
* 802.15 Jan. Interim Plenary Session will be Virtual

**CAC Adjourn**

* WG Chair adjourned the mtg. at 11:20 am