**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | **<IEEE802.15 WG minutes>** | |
| Date Submitted | [19 May 2021] | |
| Source | [Clint Powell] [] [Chandler, AZ] | Voice: [+1.480.586.8457] Fax: [--] E-mail: [cpowell@ieee.org] |
| Re: | [May 802.15 Interim Meeting held virtually] | |
| Abstract | [IEEE 802.15 Working Group & CAC Minutes] | |
| Purpose | [Official minutes of the Working Group and CAC Sessions] | |
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**131st IEEE 802.15 WSN MEETING**

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

**May 11-19, 2021**

# Tuesday, 11 May 2021

**Opening**

**9:04 AM** WG Chair, Pat Kinney (Kinney Consulting), called the meeting to order and opened the WG Agenda (*15-21-0167-05-0000*)

<https://mentor.ieee.org/802.15/documents?is_dcn=167&is_year=2021>

**Announcements**

WG Chair announced the agenda doc. # for the week.

WG Vice-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 of DirectVoteLive (DVL) for all WG votes. DVL will only be used during this session and at the closing plenary meeting on Wednesday, 19 May. 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), Vice-Chair (Rick Alfvin), and Secretary (Clint Powell) by the end of EV2 on Tues. 5/18 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 Pat beforehand.

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

1 new participant and 1 returning participant announced on the chat window that this was their first meeting.

## 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.

Chair went through the agenda

## WG Approvals

Rick Alfvin (LineSpeed) moved to *approve the agenda (document# 15-21-0167-05-0000)* with Clint Powell (Facebook) seconding the motion. Following no objection, the agenda was approved.

Rick Alfvin (LineSpeed) moved *to approve the previous meeting minutes (document 15-21-0149-00-0000)* and Ben Rolfe (Blind Creek Assoc.) 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 Vice-Chair presented the general meeting information:

* IMAT will be used for attendance
  + 75% Attendance = 12 time slots (any 12 of the 28)
* There was 88 attendees at the start of this 802.15 Opening Plenary
* Voters: (voters: 96, nearly: 1, aspirant: 46)
* Webex will be used for sessions

Ben Rolfe (BCA) gave the treasurers report *(document: ec-21-0093-00)*

* Still no income currently
* Continue to have some expenses
* Current balance of ~$356,884.18, ~$12k less than balance reported at March session

WG Chair gave notice of the March 802.15 CAC meeting, the mins which are included in the WG minutes *(minutes: 15-21-0237-00-0000).* The main discussion point was on how attendance credit would be achieved.

WG Chair gave notice of the Wireless Chairs Steering Committee meeting mins  
*(minutes: ec-21-0110-00)*

One of the main topics of the meeting was survey results. The results clearly indicated that there would not be enough in person attendance to support a Sept. Interim mtg. face-2-face. Additionally, there will be a meeting fee for the Sept. Interim as follows:

$50 - early

$75 - 15 days prior

$125 - form the start on

## RevCom

P802.15.4y was approved on May 9, publication to follow

P802.15.9rev1 was submitted to RevCom for review at 15 June RevCom mtg.

## NesCom

4 PARs and 1 PAR modification to be discussed/drafted this week (w/ June 8 802 EC submission deadline)

## 802.15.12 Task Group Discussion

Should we continue 802.15.12, change it, or withdraw the PAR? Chair asks the everyone think about this as the question will be formally brought to the 802.15 closing session.

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

802.15 Status and Activities for the Week

* Task Group 15.4 Cor1 (3 sessions)
  + Will continue hearing inputs and address name of project in PAR
* Task Group 15.4aa – JRE (3 sessions)
  + Work on LB183 CRs, ~30 comments were received
* Task Group 15.7a – VAT (4 sessions)
  + Continue work on draft
* Task Group 15.9ma – KMP (1 session)
  + Will form a CRC in case it’s needed
* Task Group 13 – Multi Gigabit/sec OWC (3 sessions)
  + Working on CRs from 1st SB
* Task Group 16t – 802.16 Amendment (2 sessions)
  + Continue to work on content, review of proposals and TGD
* Study Group 6a – (DEP) (3 sessions)
  + Work on PAR & CSD
* Study Group 4ab – NG-UWB (3 sessions + Joint 4ab/14/15)
  + Hear presentations
  + Continue work on TGD and call for contributions
* Study Group 14 – NS-UWB (3 sessions + Joint 4ab/14/15)
  + Work on PAR, CSD, and 802.15.4 PICS analysis
* Study Group 15 – NS-NB (3 sessions + Joint 4ab/14/15)
  + Work on PAR, CSD, and 802.15.4 PICS analysis
* Standing Committee – THz (1 session)
  + Report to ITU-R 5a
  + Discussion SG for frequency extension
  + Hear 1 contribution
* Standing Committee – IETF (1 session)
  + Will be a short mtg., not much activity
* Standing Committee – SC-M, Rules (1 session)
  + 3 topics to discuss, including our favorite recurring topic - turnaround time
* Standing Committee – WNG (1 session)
  + 1 presentation on “Proactive Spectrum Planning” is definite
  + 1 presentation is a potential

**Operations Manual Overview**

NTR

**Any Other Business**

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

**WG Recess**

**10:22 AM** WG Chair recessed the meeting

# Wednesday, 19 May 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)

## Announcements

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

* Things seemed so much easier when Bob did it

## Closing Reports

**9:03 AM 802.15 WG** Closing Agenda by Pat Kinney (Kinney Consulting) (15-21-0167-06)

**9:05 AM** Motion to share drafts with UWB Alliance

*MOTION:  That the 802.15 WG requests that the IEEE SA establish a draft sharing relationship with the UWB Alliance.*

Moved by Ben Rolfe, Seconded by Rick Alfvin

32 out of 35 on DVL voted

Upon no discussion the vote was taken with the results of 32/1/2, motion carries.

Background: 802.15 WG previously requested this draft sharing relationship with: Wi-SUN groups, Connectivity Standards Alliance groups, Thread Group, ETSI, and ISA

Form for draft sharing with external group's url: <https://saforms.ieee.org/external-draft-sharing/>

Working Group Draft sharing list for coordination: <https://ieee-sa.imeetcentral.com/ieeeliaisons/doc/WzIsNjE0OTc3MzZd/w-WorkingGroupDraftSharingForCoordination>

**9:15 AM TG4 Cor1** closing report by Kunal Shah (Itron) (15-21-0313-00)

Plan to review draft at the July mtg. and hear additional proposals.

*MOTION: “*Move *that the PAR modification contained in document [15-21-0270-04-Cor2], 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 as needed to reflect EC discussion at its closing meeting.”*

Moved by Kunal Shah on behalf of 2020 TG4 Cor1

42 out of 49 on DVL voted

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

**9:25 AM TG4aa** closing report by Takashi Kuramochi (Lapis) (15-21-0317-01)

Plan to review comments at the July mtg.

*MOTION: “Move that 802.15 WG start a WG Letter Ballot requesting approval of CA document [15-21-0083-08-04aa] and document P802-15-4aa\_D7 (as edited in accordance with the instructions in document 15-21-0241-04-04aa) and to forward document P802-15-4aa\_D7 , as edited in accordance with the instructions in document 15-21-0241-04-04aa, and CA document [15-21-0083-08-04aa] to Standards Association ballot pending the completion and inclusion of the edits in the draft.”*

Moved by Takashi Kuramochi on behalf of TG4aa

45 out of 51 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 WG balloting of the P802.15.4aa\_D7 with the following membership:Takashi Kuramochi(Chair), Kunal Shah(ITRON), Hiroshi Harada(Kyoto University), Kiyoshi Fukui(OKI), and Henk de Ruijter(Silicon Labs). 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 on behalf of TG4aa

44 out of 51 on DVL voted

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

**9:35 AM TG7a** closing report by Yeong Min Jang (Kookmin University) (15-21-0305-00)

Hear several proposals during the mtg. Deadline for full proposals is July 10.

**9:40 AM TG9ma** closing report by Tero Kivinen (Self) (15-21-0257-01)

*MOTION: “Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.9ma-D06 with the following membership: Tero Kivinen(Chair), Ben Rolfe, Don Sturek, Pat Kinney, and Peter Yee. The 802.15.9ma 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 Tero Kivinen on behalf of TG9ma

46 out of 51 on DVL voted

Upon no discussion the vote was taken with the results of 45/0/1, motion carries.

**9:44 AM TG13** closing report by Volker Jungnickel (Fraunhofer HHI) (15-21-0310-01)

Worked on comment resolution.

*MOTION: “802.15 WG requests that the 802 EC forward the P802.15.13 PAR extension documentation contained in 15-21-0267-01-0013 to NesCom.”*

Moved by Volker Jungnickel, Seconded by Rick Alfvin

45 out of 51 on DVL voted

Upon no discussion the vote was taken with the results of 38/0/7, motion carries.

*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, Nikola Serafimovski, 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 Volker Jungnickel, Seconded by Rick Alfvin

46 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 43/1/2, motion carries.

**9:55 AM TG16** closing report by Tim Godfrey (EPRI) (15-21-0311-0)

Looking for an editor to be able to begin to work on draft.

**9:58 AM SG6a** closing report by Ryuji Kohno (YNU/CWC U of Oulu) (15-21-0312-01)

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to extend the study group in 802.15 to develop the PAR and CSD documents for SG15.6a.”*

Moved by Ryuji Kohno, Seconded by Rick Alfvin

40 out of 53 on DVL voted

Upon no discussion the vote was taken with the results of 31/0/9, motion carries.

*MOTION: “Move that the PAR and CSD contained in documents [15-21-0259-03] and [15-21-0260-02], respectively, be approved for submission to the WG for its approval 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 Ryuji Kohno, Seconded by Rick Alfvin

39 out of 53 on DVL voted

Upon no discussion the vote was taken with the results of 26/1/12, motion carries.

**10:05 AM SG4ab** closing report by Ben Rolfe (BCA/UWBA/et al) (15-21-0309-02)

Continued working on TGD. Heard several contributions.

*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 “SG15.4ab.”*

Moved by Ben Rolfe, seconded by Rick Alfvin

36 out of 53 on DVL voted

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

*MOTION: “Request that the PAR and CSD contained in documents [15-21-0126-02] and [15-21-0047-05], respectively, be approved for submission to the WG for its approval 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 Ben Rolfe, Seconded by Clint Powell

44 out of 54 on DVL voted

Upon no discussion the vote was taken with the results of 42/1/1, motion carries.

**10:15 AM SG14** closing report by Clint Powell (Facebook) (15-21-0273-05)

Worked on PAR and CSD. Status update on PICS analysis.

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to extend the study group in 802.15 to develop the PAR and CSD documents for “SG14 NS-UWB.”*

Moved by Clint Powell, Seconded by Rick Alfvin

39 out of 54 on DVL voted

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

*MOTION: “Request that the PAR and CSD contained in documents [15-21-0274-04-0014] and [15-21-0278-04-0014], 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 Clint Powell on behalf of SG14

39 out of 54 on DVL voted

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

**10:25 AM SG15** closing report by Phil Beecher (Wi-SUN Alliance) (15-21-0318-00)

Worked on PAR and CSD. Reviewed update on PICS analysis.

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to extend the study group in 802.15 to develop the PAR and CSD documents for “SG15 NS-NB.”*

Moved by Phil Becher on behalf of SG14

40 out of 54 on DVL voted

Upon no discussion the vote was taken with the results of 38/0/2, motion carries.

*MOTION: “Move that the PAR and CSD contained in documents 15-21-0265-03-0015-sg15-ns-nb-par-working-draft.docx] and [15-21-0301-00-0015-sg15-draft-csd-for-ns-nb.docx], 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 Phil Becher on behalf of SG14

41 out of 54 on DVL voted

Upon no discussion the vote was taken with the results of 40/0/1, motion carries.

**10:38 AM SC THz** closing report by Thomas Kurner (TU Braunschweig) (15-21-0290-00)

Heard 3 contributions.

*MOTION: “Request that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for “SG 15.3g 300 GHz Frequency Extension” and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Thomas Kurner on behalf of SC THz

42 out of 54 on DVL voted

Upon no discussion the vote was taken with the results of 37/1/4, motion carries.

**10:48 AM SC IETF** closing report by Tero Kivinen (Self) (15-21-0253-00)

Next IETF mtg. July 26-30

**10:51 AM SC WNG** closing report by Ben Rolfe (BCA/UWBA) (15-21-0319-00)

Heard 1 presentation.

**10:55 AM SC M, Rules** closing report by Phil Beecher (Wi-SUN Alliance) (15-21-0263-01)

Heard 3 questions and discussed responses.

Will discuss PARs from other WG on conf. calls between June 8 and July Plenary.

Plan to discuss 802.15 OP’s manual in July Plenary.

**10:58 AM 802.24** Liaison verbal report by Tim Godfrey (EPRI) (verbal rpt.)

One session was used to discuss the 3 reports being worked on.

**11:02 AM 802.18** Liaison report by Jay Holcomb (Itron) (15-21-0242-00)

Looking at countries adopting 6 GHz.

Continue efforts on 802 frequencies use doc.

Looking at a couple of FCC actions regarding additional bands.

**11:04 AM 802.19** Liaison report by Ben Rolfe (BCA/UWBA) (verbal rpt.)

802.19.3 was published.

**11:06 AM 802.11** Liaison report Clint Chaplin

NTR

## Review of July Virtual Plenary Meeting Plans

WG Chair reviewed the July 802 Plenary Session Dates

* EC Opening held on 7/9, 3-5pm Eastern
* EC Closing held on 7/23, 2-6pm Eastern
* There will be a $50 early registration fee through 6/30, and a $75 fee after 7/1
  + Registration is open: <https://cvent.me/D5LYLq>
* The 802.15 WG plan for in person was July 11-16, 2021
* 802.15 WG will hold its Sessions July 13-22, 2021
  + No objections were heard
* 802.15 CAC (a.k.a. AC - Advisory Committee) on 7/7, 10:00 am - Noon Eastern
  + No objections were heard
* Fixed slots will be used for the TG, SG, IG chairs to select from

## Important PAR and CSD Dates

* June 8 Pre-circulation of PARs to all WGs
* July 14 All comments on any 802 PAR and CSD are due

(802.15 SC Maint. will need to setup a couple of interim telco’s to rvw.)

* July 21 Responses to comments due back to WG’s and EC
* July 23 EC approval of Study Groups to be proposed to NesCom
* Aug 13 NesCom submission deadline
* Sept 21-23 NesCom approval

## Open Discussion / Next Steps

Informal question on whether Nov. Vancouver mtg. should be in person or virtual.

Preference is for in person, but regional restrictions etc., will prevail.

Hybrid is cost prohibited.

## WG Adjourn

**11:16** Upon hearing no objections, the WG Chair adjourned the meeting.

# Annex A Virtual attendance = 150

|  |  |  |
| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Ahlendorf | Hendrik | NXP Semiconductors |
| Akhavan | Koorosh | Qualcomm Incorporated |
| Aldana | Carlos | Facebook |
| Alfvin | Richard | Linespeed Events LLC |
| Al-kadi | Ghiath | NXP Semiconductors |
| Amezawa | Yasuharu | Mobile Techno Corp. |
| Ariyarathna | Viduneth | NXP Semiconductors |
| Ayaz | Serkan | DENSO |
| Bahn | Christy | IEEE STAFF |
| Barras | David | 3db Access AG |
| Baykas | Tuncer | Kadir Has University |
| Beecher | Philip | Wi-SUN Alliance |
| Bims | Harry | Bims Laboratories, Inc. |
| Bober | Lennert | Fraunhofer Heinrich Hertz Institute |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Card | Stuart William | AX Enterprize, LLC |
| Chaplin | Clint | Self |
| Clanney | Nathan | Siemens Mobility, Inc. |
| Connerley | Royce | Union Pacific Railroad |
| Danev | Boris | 3db Access AG |
| de PErthuis | Hugues | NXP Semiconductors |
| De Ruijter | Hendricus | Silicon Laboratories |
| Doedlinger | Dominik | NXP Semiconductors |
| Dolmans | Guido | Holst Centre / IMEC-NL |
| Dotlic | Igor | Qorvo |
| Ekrem | Ersen | Apple, Inc. |
| Fukui | Kiyoshi | Oki Electric Industry Co., Ltd. |
| Fukunaga | Masatoshi | Yokohama National University |
| Gallegos Ramonet | Alberto | 0 |
| Ghosh | Chittabrata | Facebook, Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Golshan | Robert | Apple, Inc. |
| Granhaug | Kristian | novelda |
| Grosswindhager | Bernhard | NXP Semiconductors |
| Guimond | Raphael | SPARK Microsystems |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Gupta | Ajeya | Ford Motor Company |
| Gupta | Santosh | Qualcomm Incorporated |
| Ha | Taeyoung | Samsung Electronics Co., Ltd. |
| Haasz | Jodi | IEEE Standards Association (IEEE-SA) |
| Hafuka | Takamitsu | LAPIS Technology Co., Ltd |
| Hammerschmidt | Joachim | Apple, Inc. |
| Harada | Hiroshi | Kyoto University |
| hata | naoki | Yokohama National University |
| Henry | Jerome | Cisco Systems, Inc. |
| Hernandez | Marco | National Institute of Information and Communications Tech. (NICT) |
| Hett | Christopher | Landis Gyr Group Worldwide |
| Hirata | Masayuki | Osaka University Graduate School of Medicine |
| Holcomb | Jay | Itron Inc. |
| HOSAKO | IWAO | National Institute of Information and Communications Tech. (NICT) |
| Hu | Chunyu | Facebook |
| Ikegami | Tetsushi | Meiji University |
| Imai | Tatsuo | Yokohama National University |
| Ishigata | Hiroshi | Yokohama National University |
| Jang | Yeong Min | Kookmin 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. |
| Kashiwagi | Yoshio | Nissin Systems |
| Keren | Rani | Huawei Technologies Co., Ltd |
| Kim | Minsoo | Yokohama National University |
| Kinney | Patrick | Kinney Consulting LLC |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| Kobayashi | Takumi | Yokohama National University |
| Kohno | Ryuji | YNU/CWC UofOulu |
| Krieger | Ann | US Department of Defense |
| Kuechler | Wolfgang | NXP Semiconductors |
| Kuerner | Thomas | TU Braunschweig |
| Kume | Hiroshi | Wi-SUN Alliance |
| Kuramochi | Takashi | LAPIS Technology Co., Ltd |
| Kuribayashi | Hideyuki | Rohm Co., Ltd |
| Lee | Mingyu | Samsung Electronics Co., Ltd. |
| Lemsitzer | Stefan | NXP Semiconductors |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Information and Communications Tech. (NICT) |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| Liu | Chenchen | Huawei Technologies Co., Ltd |
| Liu | Yong | Apple, Inc. |
| Luo | Xiliang | Apple, Inc. |
| Ma | Yongsen | Redpoint Positioning |
| Mariappan | Vinayagam | SMR Automotive Modules Korea Ltd |
| Matsumura | Yuki | Rohm Co., Ltd |
| McCann | Stephen | BlackBerry |
| McKay | Thomas | GLOBALFOUNDIRES |
| Mody | Apurva | BAE Systems |
| Mori | Kenichi | Self |
| Mori | Yumi | Yokohama National University |
| Mueller | Robert | Technische Universitaet Ilmenau |
| Murray | Carl | Qorvo |
| Nabki | Frederic | SPARK Microsystems |
| Naguib | Ayman | Apple, Inc. |
| Nakanishi | Seiji | Lapis |
| Neirynck | Dries | novelda |
| Niewczas | Jaroslaw | Qorvo |
| Paillusseau | Nicolas | SPARK Microsystems |
| Palmer | Clark | Meteorcomm LLC |
| Parsons | Glenn | Telefon AB LM Ericsson |
| Parthasarathi | Srivathsa Masthi | NXP Semiconductors |
| Pirhonen | Riku | NXP Semiconductors |
| Polland | Joe | Self |
| Powell | Clinton | Facebook |
| Rahmani | Mohammad | SPARK Microsystems |
| Robert | Joerg | TU Ilmenau/Fraunhofer IIS |
| rocha | alessandra | Wimax forum |
| Rolfe | Benjamin | Blind Creek Associates |
| Saito | Hiroki | Yokohama National University |
| Salazar Cardozo | Ruben E | NO AFFILIATION |
| Sand | Stephan | German Aerospace Center (DLR) |
| Sasoglu | Eren | Apple, Inc. |
| Sato | Takahiro | Renesas Electronics Corporation |
| Sayrafian | Kamran | National Institute of Standards and Technology |
| Schuessler | James | Samsung Research America |
| Sekine | Norihiko | National Institute of Information and Communications Tech. (NICT) |
| Senna | Josh | Humatics |
| Serang | Daoud | CML Microcircuits (USA) Inc. |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shah | Tushar | Apple, Inc. |
| Simpson | Guy | Full Spectrum |
| Smith | William | BNSF Railway |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Itron Inc. |
| Suzuki | Takafumi | National Institute of Information and Communications Tech. (NICT) |
| Tada | Kiyoshi | Yokosuka Telecom Research Park, Inc |
| Tanaka | Hitoshi | LAPIS Semiconductor Co., Ltd |
| Taylor | George | SPARK Microsystems |
| Thimme Gowda | Kiran | NXP Semiconductors |
| Toda | Hiroyuki | LAPIS Semiconductor Co., Ltd |
| Turner | Max | Ethernovia |
| UEDA | YUTAKA | Yokohama National University |
| Verso | Billy | DecaWave;Qorvo |
| Wang | Chao Chun | MediaTek Inc. |
| Warnez | Dimitri | NXP Semiconductors |
| Wechsler | Johannes | Fraunhofer Institute for Integrated Circuits IIS |
| Wendt | Matthias | Signify |
| Wienckowski | Natalie | General Motors Company |
| Wisland | Dag | Novelda AS; University of Oslo |
| Xiao | Bo | ZTE Corporation |
| Yamamoto | Tetsushi | Yokohama National University |
| Yang | Shang-Te | Apple, Inc. |
| Yang | Xun | Huawei Technologies Co., Ltd |
| Yee | Peter | NSA-CSD |
| Yong | Su Khiong | Apple, Inc. |
| Youssef | Mohamed | Apple, Inc. |
| Zakaib | Larry | SPARK Microsystems |
| Zeisberg | Sven | ZIGPOS GmbH |
| Zhou | Mingda | Redpoint Positioning |
| Zou | Qiyue | Facebook |

**802.15 CAC Mtg.**

**Wednesday, 5 May 2021**

## Attendance

Clint Powell

Pat Kinney

Kunal Shah

Christy Bahn

Jay Holcomb

Kai Lennert Bober

Marco Hernandez

Phil Beecher

Rick Alfvin

Ryuji Kohno

Takashi Kuramochi

Tero Kivinen

Thomas Kurner

## Minutes

* 802.15 WG May Agenda is now at r3:  
  <https://mentor.ieee.org/802.15/dcn/21/15-21-0167-03-0000-may-2021-agenda.xlsx>
* Attendance for 802.15 was discussed ad nauseum
  + For the May Session the following 16 time slots are defined as required
    - AM1, excepting Thurs. 5/13 (6)
    - AM2, excepting Thurs. 5/13 (5)
    - PM1, excepting Thurs. 5/13 (5)
    - The remaining time slots are deemed extra credit, and will be counted towards the 12 minimum needed
  + To meet the 5% attendance requirement, attendance would be needed at 12 time slots

**A/I: Chair and Vice Chairs will explain attendance terminology** - something along the lines of (as suggested by Tero):

Required meeting slot == only used to count the number of slots required to get voting rights, i.e., 75% of number of required slots needed. There is 16 required slots so you need 12 credits, and you can get them by attending required or extra credit slots.

* Voting will again be done using DirectVoteLive (DVL) in the closing plenary
  + Motions are due to Chair by the end of the EV2 time slot on Tues. May 18th.
* Study Group requests? PAR approvals, RevCom submissions?
* 802.9ma was approved by EC and is on RevCom agenda
* 802.15 July Plenary Session
  + July 13 – 21
    - Opening Plenary: 7/13, 9-11am Eastern
    - Closing Plenary: 7/21, 9-11am Eastern
  + CAC July 7 @ 10 am Eastern
* PAR Reminders
  + 802.15Cor1 will have a PAR change
  + 802.4ab, 802.14, 802.15, and 802.6a will possibly have PARs
  + 802.4ab, 802.14, 802.15, and 802.6a SGs will need SG extensions, regardless, to keep SGs active
  + 1 SG Request from SC THz
  + Important Dates
    - June 8 Pre-circulation of PARs to all WGs
    - July 14 802.15 SC Maintenance submits 802.15 comments on other  
      PARs (SC Maint. Chair will need to setup a couple of interim telco’s to rvw.)
    - July 21 802.15 response to other WG comments
    - July 23 EC approval Study Groups to be proposed to EC
* IEEE SA Dates
  + May 6 Submittal date for NesCom & RevCom (next date is Aug 13)
  + June 15 NesCom/RevCom teleconference (next meeting is Sept 22-23)
* Next Wireless Chairs Webex meeting
  + 5 May, 15:00 - 16:30 ET
  + <https://ieeesa.webex.com/ieeesa/j.php?MTID=mb88e4dd899ccf0f952693f6e770587d8>
* Special Notes
  + Kunal: schedule time and TG motions for an amended PAR to be submitted in July
  + Tero: schedule time for TG motion to approve draft and CSD and form CRG
  + Volker: need timeline to determine when we need the RevCom package ready
  + Ben: reaffirm PAR and CSD in TG and again request WG to forward PAR to NesCom in July
  + Ryuji: determine/setup some joint time slot(s) in July with 802.1 for TSN effort
  + Ryuji, Clint, and Phil: decide if more time is needed than is available by trying to get PAR and CSDs for July, and therefore ask for an extension to November  
    or  
    Prepare PAR and CSD for May WG Closing
* Subgroup Status and Plenary Plans
  + TG4 2020 Cor1
    - 3 sessions
    - Will work on PAR modification and draft text
  + TG4aa
    - 3 sessions
    - LB183 closes today, will work on comments and prepare motion for LB recric
  + TG7a
    - 4 sessions
    - NTR
  + TG9ma
    - 1 session
    - Need to form a CRG
    - Tero requested a (virtual meeting) private area be setup to host draft
  + A temporary private are pwd may be requested of the Chair and Vice-Chairs to access normally accessible docs at face-2-face meetings

**A/I: Vice Chair (Rick) will work on making this happen**

* + TG13
    - 3 sessions
    - Work on CR’s
  + TG16t
    - 2 sessions
    - NTR
  + SG6a
    - 3 sessions
    - Work on catching up schedule, and finalizing draft PAR and CSD for submission
  + SG4ab NG-UWB
    - 3 sessions + 1 Joint 15.4ab, 15.14, 15.15
    - Hearing presentations
    - Work on TGD
  + SG14 NS-UWB
    - 3 sessions + 1 Joint 15.4ab, 15.14, 15.15
    - Work on PAR, CSD, and motions
    - Hear any presentations
  + SG15 NS-NB
    - 3 sessions + 1 Joint 15.4ab, 15.14, 15.15
    - Work on PAR, CSD, and motions
    - Hear any presentations
  + SC THz
    - 1 session
    - Work on frequency bands
    - Hear 1 contribution
    - SC Chair has been working with 802.11 Chair (Dorothy Stanley) has been seeking guidance on what to say during 802.11 openings w.r.t. this topic, and on ITU-R issues
  + SC WNG
    - 1 session
    - No presentations currently scheduled
  + SC IETF
    - 1 session
  + SC Main
    - 1 session
    - No issues currently scheduled to discuss
    - Chair email address needs to change
* AOB
  + Question by Rick w.r.t. 15.4 2020 Corr and in SA system it is names Corr2, where as 802.15 is using Corr2.
    - Chair responded that Corr1 is the correct name and that it needs to be fixed on the SA side