**IEEE 802.15**

**Wireless Specialty Networks (WSN)**

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| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSN) | |
| Title | **802.15 WG & CAC Minutes Virtual Jan. Interim 2022** | |
| Date Submitted | [12 January, 2022] | |
| Source | [Clint Powell] [] [Chandler, AZ] | Voice: [+1.480.586.8457] Fax: [--] E-mail: [cpowell@ieee.org] |
| Re: | [January 802.15 Interim Meeting held virtually] | |
| Abstract | [IEEE 802.15 Working Group & CAC Minutes] | |
| Purpose | [Official minutes of the Working Group Opening/Closing and CAC Sessions] | |
| Notice | This document has been prepared to assist the IEEE 802.15. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. | |
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**135th IEEE 802.15 WSN MEETING**

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

**Jan. 18-26, 2022**

# 802.15 WG Opening

# Tuesday, 18 January 2022

**~~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~~](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~~](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~~
  + ~~1~~~~st~~ ~~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 1~~~~st~~ ~~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~~

# 802.15 WG Closing

# Wednesday, 26 January 2022

**~~9:04 AM~~** ~~WG Chair, Pat Kinney (Kinney Consulting) called the meeting to order~~

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

~~~ 100 participants on the call~~

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

~~Chair the reviewed WG motion for the SG3ma PAR to EC (covered in doc. # 15-21-0608-02)~~

~~Chair reviewed the P802.15.4aa Submission to (covered in doc. # 15-21-0608-02)~~

## ~~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) (15-21-0541-04)~~

**~~9:30 AM TG4 Cor1~~** ~~closing report by Tero Kivinen (Self) (15-21-0595-02)~~

~~Resolved comments from 1~~~~st~~ ~~LB.~~

***~~Motion:~~***~~Move that 802.15 WG start a WG recirculation requesting approval of P802.15.4-2020-Cor1\_D02 and to forward document P802.15.4-2020-Cor1\_D02, to Standards Association ballot.~~

**~~Moved by:~~**~~Tero Kivinen (Self)~~

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

~~41 out of 46 on DVL voted~~

~~Upon no discussion the vote was taken with the results of 41/0/0, motion carries.~~

***~~Motion:~~***~~Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4-2020-Cor1-D02 with the following membership: Tero Kivinen(Chair), Henk de Ruijter, Takashi Kuramochi, Hiroshi Harada and Jeng-Shiann Jiang. 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:~~**~~Tero Kivinen (Self)~~

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

~~46 out of 52 on DVL voted~~

~~Upon no discussion the vote was taken with the results of 46/0/0, motion carries.~~

~~2 sessions requested for Jan. Mtg.~~

~~Chair asked if anyone oppose his appointment of Tero Kivinen as Chair of the TG.~~

~~No one opposed. Congrats to Tero!~~

**~~9:27 AM TG4aa~~** ~~closing report by Takashi Kuramochi (Lapis) (15-21-0622-01)~~

~~Worked on comment resolution and prepared draft for recirc.~~

***~~Motion:~~***~~Move that 802.15 WG has reviewed and approves the CSD [15-20-0319-00-4aa] and requests approval from the EC to submit P802.15.4aa-D10 to RevCom.~~

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

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

~~48 out of 58 on DVL voted~~

~~Upon no discussion the vote was taken with the results of 48/0/0, 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\_D10 or latest draft with the following membership: Takashi Kuramochi(Chair), Hiroshi Harada, Don Sturek, 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)~~

~~55 out of 65 on DVL voted~~

~~Upon no discussion the vote was taken with the results of 54/0/1, motion carries.~~

~~1 sessions requested for Jan. Mtg.~~

**~~10:00 AM TG4ab~~** ~~closing report by Ben Rolfe (BCA/UWBA/et al.) (15-21-0651-00)~~

~~Heard many contributions. (see TG4ab closing report for details)~~

~~8 sessions requested for Jan. Mtg.: standalone + 1 joint w/.14, .15 + 1 joint w/.14, .6a~~

~~Chair asked if anyone oppose his appointment of Ben Rolfe as Chair of the TG.~~

~~No one opposed. Congrats to Ben!~~

**~~9:53 AM TG6a~~** ~~closing report by Ryuji Kohno (YNU/YRP-IAI)) (15-21-0617-01)~~

~~Several presentations were heard.~~

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

~~Prefer AM1 on Wed, Thurs, and 2~~~~nd~~ ~~Tues, joints on AM1 Fri & Mon AM1 or EV2~~

~~Chair asked if anyone oppose his appointment of Ryuji Kohno as Chair of the TG.~~

~~No one opposed. Congrats to Ryuji!~~

**~~9:34 AM TG7a~~** ~~closing report by Yeong Min Jang (Kookmin University) (15-21-0625-00)~~

~~Heard several proposals during the mtg.~~

~~4 sessions requested for Jan. Mtg. (prefer AM0), followed by AM1, then EV2)~~

**~~9:40 AM TG13~~** ~~closing report by Volker Jungnickel (Fraunhofer HHI) (15-21-0623-00)~~

~~Worked on comment resolutions, nearly complete. Once completed will prepare draft and 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:~~**~~Volker Jungnickel (Fraunhofer HHI)~~

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

~~51 out of 73 on DVL voted~~

~~Upon no discussion the vote was taken with the results of 48/0/3, motion carries.~~

~~4 sessions requested for Jan. Mtg. (AM0 preferred)~~

**~~10:05 AM TG14~~** ~~closing report by Clint Powell, WG Vice-Chair (Meta) (15-21-0545-05)~~

~~3-4 sessions requested for Jan. Mtg.: 2 standalone + 1-2 joint w/.4ab, .15 + 1 joint w/.4ab, .6a~~

~~Clint will stand as acting Chair of the TG until a permanent Chair is found.~~

**~~10:10AM TG15~~** ~~closing report by Phil Beecher, WG Vice-Chair (Wi-SUN Alliance) (15-21-0559-01)~~

~~Discussed next steps.~~

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

~~Phil will stand as acting Chair of the TG until a permanent Chair is found.~~

**~~9:48 AM TG16t~~** ~~closing report by Tim Godfrey (EPRI) (15-21-0619-00)~~

~~Developing SDD System Description Document).~~

~~2 sessions requested for Jan. Mtg. (PM1 on 1~~~~st~~ ~~Tues. and PM1 on Mon.)~~

**~~10:10AM SG3ma~~** ~~closing report by Thomas Kurner (TU Braunschweig) (15-21-0598-00)~~

~~Worked on PAR and CSD.~~

***~~Motion:~~***~~Request that the PAR and CSD contained in documents [15-21-0475-05] 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)~~

~~51 out of 75 on DVL voted~~

~~Upon no discussion the vote was taken with the results of 45/0/6, 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)~~

~~53 out of 75 on DVL voted~~

~~Upon no discussion the vote was taken with the results of 50/0/3, motion carries.~~

~~2 sessions requested for Jan. Mtg. (Fri. AM1 and Mon. AM0, both joint w/SC THz)~~

**~~10:15 AM SC THz~~** ~~closing report by Thomas Kurner (TU Braunschweig) (15-21-0599-00)~~

~~See SG3ma for Jan. mtg. requests.~~

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

~~Hybrid mtg. expected for March IETF mtg.~~

~~1 session requested for Jan. Interim Mtg.~~

**~~10:23 AM SC WNG~~** ~~closing report by Ben Rolfe (BCA/UWBA) (15-21-0xxx-00)~~

~~No presentations were heard.~~

~~1 session requested for Jan. Interim Mtg.~~

~~Paul Nikolich gave a recap of the University outreach that he recently conducted at Northeastern University.~~

**~~10:25 AM SC M, Rules~~** ~~closing report by Phil Beecher (Wi-SUN Alliance) (15-21-0561-01)~~

~~Reviewed 802 PARs and CSDs.~~

~~Developed SA Ballot/Revcom Submission template.~~

~~1 session requested for Jan. Interim Mtg.~~

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

~~Continue 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) (15-21-0539-00)~~

~~40 voting members~~

~~Discussed activities in the following forums/regions: ETSI (TVWS, 60 GHz, Security of IoT devices, etc.), CEPT (UWB), APAC, Canada, UK~~

~~ITU-R accepted IEEE 802 proposed changes~~

~~Continue to work on IEEE frequency table~~

~~Closing on Thurs. 11/18~~

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

~~Not much going on.~~

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

~~NTR~~

## ~~Review of January Virtual Wireless Interim Meeting Plans~~

~~WG Chair reviewed the Jan. 802 Wireless Interim Session Dates: to be held 1/14 - 1/27~~

* ~~EC Opening on Fri. 1/14, 3-5pm Eastern~~
* ~~EC Closing on Fri. 1/28, 1-5pm Eastern~~
* ~~There will be a $50 early registration fee through Thurs. 12/30~~
  + ~~a $75 fee after Thurs. 12/30 and through Fri. 1/14~~
  + ~~a $125 fee after Fri. 1/14~~
  + ~~Registration is open:~~ [**~~https://touchpoint.eventsair.com/ieee-802-wireless-interim-session-jan-2022~~**](https://touchpoint.eventsair.com/ieee-802-wireless-interim-session-jan-2022)
* ~~802.15 WG will hold its Sessions Tues., Jan. 18 – Wed., Jan. 26, 2022~~
* ~~802.15 CAC (a.k.a. AC - Advisory Committee) on Wed., Jan. 12, 10:00 am - Noon Eastern~~
* ~~Joint Wireless Opening Plenary will be held on Fri., Jan. 14, 10:00 am - Noon Eastern~~
* ~~Future 802 WCSC (Wireless Chairs Standing Committee) will occur:~~
  + ~~Dec. 1 (Wed.), 3-4:30 pm Eastern~~
  + ~~Jan. 5 (Wed.), 3-4:30 pm Eastern~~
  + ~~Feb. 2 (Wed.), 3-4:30 pm Eastern~~
  + ~~March 2 (Wed.), 3-4:30 pm Eastern~~
  + ~~April 6 (Wed.), 3-4:30 pm Eastern~~
  + ~~May 4 (Wed.), 3-4:30 pm Eastern~~
  + ~~June 1 (Wed.), 3-4:30 pm Eastern~~
  + ~~July 6 (Wed.), 3-4:30 pm Eastern~~
  + ~~Aug. 3 (Wed.), 3-4:30 pm Eastern~~
  + ~~Sept. 9 (Wed.), 3-4:30 pm Eastern~~
  + ~~Oct. 5 (Wed.), 3-4:30 pm Eastern~~
  + ~~Nov. 2 (Wed.), 3-4:30 pm Eastern~~
  + ~~Dec. 7 (Wed.), 3-4:30 pm Eastern~~

## ~~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.~~

## ~~Open Discussion / Next Steps~~

~~802.1 Architecture Mtg. 12/2, from 4-6pm Eastern~~

~~Discussed 802.15 topics to include as part of discussion at 12/2 mtg.:~~

~~48 to 64 address bridge~~

~~What are features that are problematic?~~

~~Lower data rates~~

~~Need .7, .13, .6, .16t input~~

## ~~WG Adjourn~~

**~~10:58~~** ~~Upon hearing no objections, the WG Chair adjourned the meeting.~~

# Annex A Virtual attendance = ~~145~~

|  |  |  |
| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| ~~Akhavan~~ | ~~Koorosh~~ | ~~Qualcomm Incorporated~~ |
| ~~Aldana~~ | ~~Carlos~~ | ~~Facebook~~ |
| ~~Alfvin~~ | ~~Richard~~ | ~~Linespeed Events LLC~~ |
| ~~Al-kadi~~ | ~~Ghiath~~ | ~~NXP Semiconductors~~ |
| ~~Almholt~~ | ~~Thomas~~ | ~~Texas Instruments Inc.~~ |
| ~~Amezawa~~ | ~~Yasuharu~~ | ~~Mobile Techno Corp.~~ |
| ~~Andre~~ | ~~Jean-Marie~~ | ~~ST micro~~ |
| ~~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.~~ |
| ~~Bhatia~~ | ~~Bharat~~ | ~~3db Access AG~~ |
| ~~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~~ | ~~Meta Platforms, Inc.~~ |
| ~~Danev~~ | ~~Boris~~ | ~~3db Access AG~~ |
| ~~de Perthuis~~ | ~~Hugues~~ | ~~NXP Semiconductors~~ |
| ~~De Ruijter~~ | ~~Hendricus~~ | ~~Silicon Laboratories~~ |
| ~~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~~ |
| ~~Guimond~~ | ~~Raphael~~ | ~~SPARK Microsystems~~ |
| ~~Guo~~ | ~~Jianlin~~ | ~~Mitsubishi Electric Research Labs (MERL)~~ |
| ~~Guo~~ | ~~Ziyang~~ | ~~Huawei Technologies Co., Ltd~~ |
| ~~Ha~~ | ~~Taeyoung~~ | ~~Samsung Electronics Co., Ltd.~~ |
| ~~Harada~~ | ~~Hiroshi~~ | ~~Kyoto Univ.; National Institute of Info. and Comms. Tech. (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 Univ. Grad. School of Med., Dept of Neurological Diag. & Rest.~~ |
| ~~Holcomb~~ | ~~Jay~~ | ~~Itron Inc.~~ |
| ~~Hosako~~ | ~~Iwao~~ | ~~National Institute of Info. and Comms. Tech. (NICT)~~ |
| ~~Hu~~ | ~~Chunyu~~ | ~~Facebook~~ |
| ~~Hu~~ | ~~Mengshi~~ | ~~Huawei Technologies Co., Ltd; Huawei Technologies Co., Ltd~~ |
| ~~Ikegami~~ | ~~Tetsushi~~ | ~~Meiji University~~ |
| ~~Jang~~ | ~~Yeong Min~~ | ~~Kookmin University~~ |
| ~~Jiang~~ | ~~Jeng-Shiann~~ | ~~Vertexcom Technologies~~ |
| ~~Jiang~~ | ~~Jinjing~~ | ~~Apple Inc.~~ |
| ~~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. Tech. (NICT)~~ |
| ~~Kashiwagi~~ | ~~Yoshio~~ | ~~Nissin Systems~~ |
| ~~Keren~~ | ~~Rani~~ | ~~Huawei Technologies Co., Ltd~~ |
| ~~Kerry~~ | ~~Stuart~~ | ~~OK-Brit; Self~~ |
| ~~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~~ |
| ~~Krieger~~ | ~~Ann~~ | ~~US Department of Defense~~ |
| ~~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. Tech. (NICT)~~ |
| ~~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.~~ |
| ~~Luo~~ | ~~Xiliang~~ | ~~Apple, Inc.~~ |
| ~~Ma~~ | ~~Yongsen~~ | ~~Redpoint Positioning~~ |
| ~~Mani~~ | ~~Santhosh Kumar~~ |  |
| ~~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~~ |
| ~~Neirynck~~ | ~~Dries~~ | ~~novelda~~ |
| ~~Niewczas~~ | ~~Jaroslaw~~ | ~~Qorvo~~ |
| ~~Nikolich~~ | ~~Paul~~ | ~~YAS Broadband Ventures, LLC.~~ |
| ~~Oh~~ | ~~Hyunseob~~ | ~~Samsung Electronics Co., Ltd.~~ |
| ~~Paillusseau~~ | ~~Nicolas~~ | ~~SPARK Microsystems~~ |
| ~~Pakrooh~~ | ~~Pooria~~ | ~~Qualcomm Technologies, Inc.~~ |
| ~~Palmer~~ | ~~Clark~~ | ~~Meteorcomm LLC~~ |
| ~~Parthasarathi~~ | ~~Srivathsa Masthi~~ | ~~NXP Semiconductors~~ |
| ~~Pirhonen~~ | ~~Riku~~ | ~~NXP Semiconductors~~ |
| ~~Polland~~ | ~~Joe~~ | ~~Abbott Laboratories~~ |
| ~~Powell~~ | ~~Clinton~~ | ~~Powell Wireless Consulting, LLC~~ |
| ~~Rahmani~~ | ~~Mohammad~~ | ~~SPARK Microsystems~~ |
| ~~Reddy~~ | ~~Varun Amar~~ | ~~Qualcomm Technologies, Inc.~~ |
| ~~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)~~ |
| ~~Sasaki~~ | ~~Shigenobu~~ | ~~Niigata University~~ |
| ~~Sasoglu~~ | ~~Eren~~ | ~~Apple, Inc.~~ |
| ~~Sayrafian~~ | ~~Kamran~~ | ~~National Institute of Standards and Technology~~ |
| ~~Segev~~ | ~~Jonathan~~ | ~~Intel Corporation~~ |
| ~~Seidel~~ | ~~Hendrik~~ | ~~NXP Semiconductors~~ |
| ~~Sekine~~ | ~~Norihiko~~ | ~~National Institute of Info. and Comms. Tech. (NICT)~~ |
| ~~Serang~~ | ~~Daoud~~ | ~~CML Microcircuits (USA) Inc.~~ |
| ~~Shahar~~ | ~~Menashe~~ | ~~Ondas Networks~~ |
| ~~Shellhammer~~ | ~~Stephen~~ | ~~Qualcomm Incorporated~~ |
| ~~Shilo~~ | ~~Shimi~~ | ~~Huawei Technologies Co., Ltd; Toga Networks, a Huawei company~~ |
| ~~Smith~~ | ~~William~~ | ~~BNSF Railway~~ |
| ~~So~~ | ~~Youngwan~~ | ~~Samsung Electronics Co., Ltd.~~ |
| ~~Stuebing~~ | ~~Gary~~ | ~~Cisco Systems, Inc.~~ |
| ~~Sturek~~ | ~~Don~~ | ~~Itron Inc.~~ |
| ~~Suzuki~~ | ~~Takafumi~~ | ~~National Institute of Info. and Comms. Tech. (NICT)~~ |
| ~~Tada~~ | ~~Kiyoshi~~ | ~~Yokosuka Telecom Research Park, Inc~~ |
| ~~Tian~~ | ~~Bin~~ | ~~Qualcomm Incorporated~~ |
| ~~Verma~~ | ~~Lochan~~ | ~~Apple, Inc.~~ |
| ~~Verso~~ | ~~Billy~~ | ~~DecaWave;Qorvo~~ |
| ~~Wang~~ | ~~Yi~~ | ~~Huawei Technologies Co., Ltd~~ |
| ~~Wisland~~ | ~~Dag~~ | ~~Novelda AS; University of Oslo~~ |
| ~~Wu~~ | ~~Kanke~~ | ~~Qualcomm Incorporated~~ |
| ~~Wu~~ | ~~Kuan~~ | ~~Huawei Technologies Co., Ltd; Huawei Technologies Co., Ltd~~ |
| ~~Yamamoto~~ | ~~Tetsushi~~ | ~~Yokohama National University~~ |
| ~~Yang~~ | ~~Xun~~ | ~~Huawei Technologies Co., Ltd~~ |
| ~~Yee~~ | ~~Peter~~ | ~~NSA-CSD~~ |
| ~~Yee~~ | ~~Zhenzhen~~ | ~~Red Point Positioning~~ |
| ~~Yong~~ | ~~Su Khiong~~ | ~~Apple, Inc.~~ |
| ~~Yoon~~ | ~~Kangjin~~ | ~~Facebook~~ |
| ~~Zakaib~~ | ~~Larry~~ | ~~SPARK Microsystems~~ |
| ~~Zeisberg~~ | ~~Sven~~ | ~~ZIGPOS GmbH~~ |
| ~~Zhou~~ | ~~Mingda~~ | ~~Individual~~ |
| ~~Zou~~ | ~~Qiyue~~ | ~~Facebook~~ |

# 802.15 CAC Mtg.

# Wednesday, 12 January 2022

## Attendance

Rick Alfvin

Phil Beecher

Tim Godfrey

Marco Hernandez

Jay Holcomb

Pat Kinney

Tero Kivinen

Ryuji Kohno

Takashi Kuramochi

Thomas Kurner

Paul Nikolich

Clint Powell

Ben Rolfe

## Minutes

* WG Chair, Pat Kinney (Kinney Consulting) called the mtg. to order at 10:05 am
* 802.15 WG Jan. Agenda is now at r1:

<https://mentor.ieee.org/802.15/documents?is_dcn=6&is_year=2022>

* Attendance for 802.15 in the Jan. Interim is similar to the Nov. Plenary
* For the Jan. Interim the following 16 time slots are defined as required:
  + AM1, AM2, PM1
    - 1/18-1/20, 1/25
  + AM1, PM1, EV1
    - 1/24
  + AM1
    - 1/26
* 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
* Chair reviewed items in addition to normal agenda such as polls for May mtg., fees for March mtg., registration and fee requirement to attend Jan. mtgs.
* Jan. Interim Sessions
* 802.15 CAC Mtg. was held 10am - 12 pm EST on Wed. 1/12
* No 802 LMSC (EC) Opening Mtg. as this an 802 Interim
* Opening 802.15 WG Mtg. will be held 1-11 am EST on Tues. 1/18
* Opening 802.15 WG Mtg. will be held 1-11 am EST on Wed. 1/26
* No 802 LMSC (EC) Closing Mtg. as this an 802 Interim
* Wireless Chairs Mtg. will be held 3-4 pm EST on Wed. 2/2
* Subgroup Status and Objectives for Jan. Interim
* TG4 2020 Cor1
  + 2 mtgs
  + Finishing up current letter ballot
* TG4aa
  + 1 mtg
  + Will review feedback from RevCom
* TG4ab NG-UWB
  + 6 mtgs + 1 Joint w/.14, .15 + 1 Joint w/.6a, .14
  + Working on contributions
* TG6a
  + 3 mtgs + 1 Joint w/.4ab, .14
  + Determining how to change from amendment to revision
* TG7a
  + 4 mtgs
* TG13
  + 4 mtgs
* TG14 UWB-AHN
  + 1 mtg + 1 Joint w/.4ab, .15 + 1 Joint w/.6a, .15
  + Issue another call for officers
* TG15 NB-AHN
  + 2 mtgs + 1 Joint w/.4ab, .14
  + Issue another call for officers
  + Discuss potential .12 material to pull into .15
* TG16t
  + 2 mtgs
  + Continue working on use cases
* SG15.3ma
  + 2 mtgs
  + Need 15.3 docs from IEEE
* SC THz
  + 1 mtg
* SC WNG
  + 1 mtg
  + TG12 presentation on what’s happening
* SC IETF
  + 1 mtg
* SC Main
  + 1 mtg
  + Will circle back to catch any unfinished items on the WG P&P
* 802.15 March Plenary Session will be Virtual

**CAC Adjourn**

* WG Chair adjourned the mtg. at 11:05 am