**IEEE 802.15**

**Wireless Specialty Networks (WSN)**

|  |  |  |
| --- | --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSN) | |
| Title | **802.15 WG & CAC Minutes November 2023 Plenary** | |
| Date Submitted | [17 November 2023] | |
| Source | [Ann Krieger]  [U.S. Department of Defense] | Email: [AnnKrieger.dod@gmail.com]  Voice: [+1.614.545.8255] |
| Re: | [November 802.15 Session] | |
| Abstract | [IEEE 802.15 Working Group & CAC Minutes] | |
| Purpose | [Official minutes of the Working Group Opening/Mid-week/Closing/Joint 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. | |
| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by 802.15. | |

**147th IEEE 802.15 WSN SESSION**

**Hilton Hawaiian Village Waikiki -Honolulu, HI (all times in local)**

**November 12-17, 2023**

# 802.15 WG Opening

# Monday, 13th November 2023

**10:39AM** WG Chair, Clint Powell (HID), called the meeting to order and opened the WG Agenda ([*15-23-0531-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0531-01-0000-november-2023-802-15-agenda.xlsx))

## Announcements

Welcome to Honolulu.

Watch out for pickpockets

Social – Wednesday night – don’t forget to have your wristband. Don’t forget it!

Don’t forget to log in to IMAT, when you speak, state your name and affiliation

One agenda change: we will not have a formal IETF meeting, but it will be discussed at the mid-week.

You must be registered to participate in any of these session meetings. If you do not, you are classified as a “dead-beat”.

* Using Direct Vote Live (DVL) for the mid-week and closing plenary.
* Make sure your email address is up to date with the WG.
* TG and SC chairs, get motions to the WG chairs as soon as possible and immediately after your TG closing meeting. Send to Phil Beecher and copy Clint
* 75% Attendance = 12 time slots (of 16)

WG Chair asked for new participants to speak up; none in the room, none on line

## 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 and the standard IEEE Copyright Policy, including Code of Ethics.

TG/SG/SC must show them but do not need to reread through them all.

## Opening Report

WG Chair presented the WG Agenda: ([*15-23-0531-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0531-01-0000-november-2023-802-15-agenda.xlsx))

* Showed the graphic schedule
* Joint meeting with 802.1 is PM3 (Tuesday)
* Closing on Thursday PM2

## WG Approvals

Motion to *approve the agenda (*[*15-23-0531-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0531-01-0000-november-2023-802-15-agenda.xlsx))

* Moved by: Ben Rolfe (BCA)
* Seconded by: Gerry Stubing (Cisco)
* Discussion: none
* Approved by unanimous consent.

Motion to *approve the previous meeting minutes (*[*15-23-0473-02*](https://mentor.ieee.org/802.15/dcn/23/15-23-0473-02-0000-802-15-wg-cac-min-sept-2023-wireless-interim.docx)*)*

* Moved by: Ann T Krieger (U.S. DoD)
* Seconded by: Ben Rolfe (BSA)
* Discussion: none
* Approved by unanimous consent.

WG Chair presented the SASB dates, on a tab in the agenda *(*[*15-23-0531-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0531-00-0000-november-2023-802-15-agenda.xlsx)),

## General and Administrative

WG Chair presented the general meeting information:

* Voters: (voters: 137, nearly: 10, aspirant: 22)

Ben Rolfe (BCA) gave a verbal treasurers report (information can be found in (# [ec-23-0003-07](https://mentor.ieee.org/802-ec/dcn/23/ec-23-0003-07-WCSG-wireless-treasurer-report-2023.pptx))

* We have received a subsidy from the Government of Panama
* Our budget is on track, we did better in Buckhead than expected.
* Target to have net zero in a 2-3 year window. And we have enough to absorb a complete meeting loss.
* Mixed mode creates a substantial expense. That is why we have gone back to the discount of staying at the hotel (and to support the room block)
* If you change your plans, not coming in person, let the meeting planners know so they can adjust the F&B costs.
* He will broadcast the document

The November 802.15 CAC meeting minutes are included in the WG minutes   
*(this document, 15-23-0553-02) –* Everyone is welcome, but chairs are required.

The Wireless Chairs Steering Committee meeting minutes are contained in  
*(document #:*[*ec-23-0171-WCSG-minutes*](https://mentor.ieee.org/802-ec/dcn/23/ec-23-0171-00-WCSG-minutes-september-10-2023.docx)*)*

The Opening Report was displayed: 532-r2

* IETF SC is cancelled and we will hear those activities at midweek.

## Future Meetings and Polls

Future Meetings:

* January Wireless – Panama City Panama – Dec 1st for Early Bird. $300 discount for in-person at the hotel. At the moment, there is some political unrest – stopping traffic, so during the day, stay in the hotel.

Running Subgroup meeting:

* Every Subgroup mtg. requires a Chair, Vice-Chair, or other Subgroup Officer (in person or remote) to run each mtg. of the Subgroup.
* Every Subgroup mtg. requires a designated person in person to run the video and audio for the virtual component.
  + A 2nd computer is highly encouraged (hotel or 802 will not supply this, to be brought by Subgroup designee), which needs to support HMDI out and audio in/out via USB
  + Training on the video/audio tool will be provided before and possibly at the mtg. as well
* All Subgroup Chairs must identify who will be Chairing (if not the Chair) and who will be running the video and audio portion of virtual component in person and send info to WG Chair and Vice Chairs no later than 30 days prior to the start of the mtg.

Poll:

* How many will need Breakfast on Friday? 23
* How many will be attending the EC meeting on Friday? 10 (all will need lunch)

.

## 802.15 Status Reports (Goals/Objectives for the Week)

**TG 15.3mb Revision**: not meeting

**SC THz**: not meeting

**TG 4ab (NG-UWB)**: #546r2 – use of breakout time, request for joint time with 4ac.

**SC WNG**: 2 topics (Jorge Robert, spectrum measurements; NG optical camera)

**TG 4ac (Privacy Amendment):** joint time with 4ac is needed

**SC IETF:** not meeting, give a summary during the mid-week.

**TG 4me (Revision to 2020)**: 4 sessions, completed our 2nd ballot, 100/137 votes (300 comments)

**TG 6ma (BAN/VAN)**: 4 sessions, updating draft

**TG 7a (OCC)**: prepare sponsor ballot.

**TG 14 & TG15** are still in hibernation

**TG 16t (802.16 Lic-NB Amendment)**: 2nd comment collection, LB on Thursday.

**SG SUNPHYs (p.k.a. NG-OFDM)**: During AC meeting, Phil Beecher would facilitate running the meeting locally working on the comments from the other working groups. Looking at the next steps.

**Joint 802.1/802.15 Mtg**. – Tues 6:30-7:30pm– Amendment for 802.15.6ma, PAR/CSD comments. If there is additional time, there may be a talk.

**SC (Maintenance& Rules)**: Reviewing PARs from other WG, looking at rules and possible rule change (formalizing in-person running of meetings)

## New Business

WG Chair asked if there was any new business. Nothing was raised.

## Any Other Business

WG Chair asked if there was any other business. Nothing was raised.

## WG Recess

**10:38 AM** WG Chair recessed the meeting until the mid-week on Wednesday.

# 802.1 / 802.15 Joint Mtg.

# Tuesday 14th November, 2023

**6:10 pm** 802.1 and 802.15 joint activity is looking at 802.1 features/concepts that can be applied to the various 802.15 standards. This meeting is a joint mixed mode meeting between 802.1 and 802.15 as part of their respective sessions with both chairs, 802.1 Glenn Parsons (Ericsson) and 802.15 Clint Powell (HID) attending.

Glenn Parsons went through the meeting introduction [slides](https://www.ieee802.org/1/files/public/templates/admin-TG-intro-0721-v01.pdf) (made available beforehand) and made the Call for Potential Essential Patents (there was no response to the call). He continued with the [Agenda](https://1.ieee802.org/2023-11-plenary-joint-1-15-agenda/) which was approved by unanimous consent. 802.15’s Ann Krieger (U.S. DoD) agreed to take the minutes.

The next meeting of this group will be in March 2024 at the Plenary in Denver. This id due to different weeks for the respective interims in January. .15 will discuss possible topics in January for the March Plenary.

The group reviewed the comments on the [PAR](https://www.ieee802.org/1/files/public/docs2023/ea-PAR-0923-v02.pdf) and [CSD](https://www.ieee802.org/1/files/public/docs2023/ea-CSD-0923-v01.pdf) for the P802.1ACea amendment from .3, .11 and .15. The comments and changes were noted in the [Comment Resolution](https://www.ieee802.org/1/files/public/docs2023/ea-hernandez-PAR-and-CSD-comment-resolutions-1123-v01.pdf) document. It was mentioned that the text in this PAR will also allow for maintenance changes to 802.1ACea.

**6:54pm** Meeting adjournment

# 802.15 WG Mid-week

# Wednesday, 15th November 2023

**10:33 am** WG Chair, Clint Powell (HID) called the meeting to order displaying (document #[*15-23-0531-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0531-00-0000-november-2023-802-15-agenda.xlsx)

1. **Announcements**

Registration is required (both virtual and remote) and remember to register you attendance.

We will be using DVL, you will be getting that in your email shortly.

If there are any motions that need to be run, please give notice before hand.

## General and Administrative

Don’t forget about the social tonight.

Treasurer’s report was posted – (doc # [ec-23-0003-07](https://mentor.ieee.org/802-ec/dcn/23/ec-23-0003-07-WCSG-wireless-treasurer-report-2023.pptx))

Elections will be coming up in March 2023.

## Future Meetings and Polls

Epolls will be launched and you have until the end of the session on Thursday.

Next meeting, January in Panama, early bird ends Dec 1st.

It is the responsibility of the TG/SG/SC/IG chair to cover the in-person meeting by having someone in the room.

## All TG, SG and SC chair verbal status.

**TG 15.3mb Revision**: at editors

**SC THz**: not meeting

**TG 4ab (NG-UWB)**: working on draft 0 version C, comment collection opening next week. Goal: Draft ready for LB after January meeting.

**SC WNG**: 2 presentations: spectrum measurements from Atlanta and NG Optical

**TG 4ac (Privacy Amendment):** visited 4ab, need more discussion.

**SC IETF:** Not meeting – Presentation - #592

* IETF 118 was held last week in Prague, with 119 held in March in Brisbane
* RAW – Reliable and Available Wireless
  + Completed, and will be merged back into DETNET
* 6lo – IPv6 over networks of resource-constrained Nodes.
  + They have several documents in progress
  + Transmission of SCHS-compressed packets over IEEE 802.15.4
  + Had a presentation of packets over .15.7
* Lpwan – Ipv5 over Low Power Wired Area Networks.
  + Has completed (in July 2023)
* Lake – lightweight Authenticated Key exchange
  + There is some interest in this groups, to do work in 802.15.9
* Suit – software updates for Internet of Things
  + A couple published RFCS and many in WG last call
* 4 BOFS
  + Wimse – workload identity in Multi System Environments
  + Spice – Secure Patterns for Internet Credentials
  + Dult – detecting unwanted location trackers (google/apple)
  + Vcon –
* Was it helpful to have during the mid-week? Yes.

**TG 4me (Revision to 2020)**: expect a CRG in the closing.

**TG 6ma (BAN/VAN)**: Draft 1.9 has been uploaded.

**TG 7a (OCC)**: Preparing SA ballot package, WG motion at the closing

**TG 14 & TG15** are still in hibernation

**TG 16t (802.16 Lic-NB Amendment)**: Completing Draft 1.0, WG LB

**SG SUNPHYs (p.k.a. NG-OFDM)**: Not sure if we can get through all the comments, will need to extend the study group. Need a chair and vice-chair to lead this.

**Joint 802.1/802.15 Mtg**.: Resolved the comments from the PAR/CSD. Good collaboration. We will not be meeting in January but will meet in March.

**SC (Maintenance& Rules)**: Prepared comments for other WG PAR/CSD. We are still going to be discussing Rules and the operation manual in our final meetings.

**JTC1** : 802.15.4 approved. 802.15.9 had one comment about using 802.1.

## New Business

WG Chair asked if there was any new business. Nothing was raised.

## Any Other Business

WG Chair asked if there was any other business. Nothing was raised.

## WG Recess

**11:16am** 802.15 Midweek recessed by WG Chair Clint Powell (HID) until Thursday 4:00.

**Wireless Next Generation (WNG)**

**11:25am** 802.15 WNG Called to order with Ben Rolfe displaying (# [15-23-0570-01](https://mentor.ieee.org/802.15/dcn/23/15-23-0570-01-wng0-november-agenda-and-meeting-slidesa.pptx))

Agenda

* Was adopted without discussion
* Presentations and discussion
  + Channel Measurements, sub-1GHz bands (Robert) (# [15-23-0589-00](https://mentor.ieee.org/802.15/dcn/23/15-23-0589-00-wng0-sub-ghz-license-exempt-frequency-use-in-atlanta.pdf))
    - Measured from the Buckhead Hotel in September 2023
  + Next Generation Optical Camera Communication Standard (Yeong Min Jang) (#[15-23-0598-00](https://mentor.ieee.org/802.15/dcn/23/15-23-0598-00-wng0-proposal-for-the-next-generation-optical-camera-communication-standard.pdf) )
    - A request to start an Interest Group was forwarded to the Working Group Chair with Yeong Min Jang as IG chair.

**Any other business** - none

**12:22pm** WNG Adjourned by Ben Rolfe.

# 802.15 WG Closing

# Thursday, 16th November 2023

**4:05 PM** WG Chair, Clint Powell (HID) called the meeting to order displaying the closing agenda document (document #[*15-23-0531-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0531-00-0000-november-2023-802-15-agenda.xlsx))

## Announcements

150th celebration will be at the May 2024 meeting in Warsaw Poland (The accounting was fixed as this is the #147 802.15 Session.

* How about a football (soccer) style shirt with a 15 on the back? 3
* Button down?– much more than 3

Announce your name and affiliation when you speak.

Please log into DVL now – if you don’t have the email, let us know.

## General and Administrative

Voting rights calculator is working well. We are working on adding in the letter ballot voting. Website is going slower than anticipated.

## Future Meetings and Polls

January 2024 – early bird registration ends Dec 1st. Rates are good.

Reminder: Running a subgroup meeting, requires a Chair, Vice-Chair or some other officer to be present.

A future meeting poll was sent out about the Denver Plenary.

Would you like to come back to this venue – yes (13) no (8)

Did you go to the social? Y 34: N 2

Did you like the social? Y 17: N 1

Did you like the social food Y 5: N 17

Do you prefer having a lunch as part of the plenary? Y 28: N 0

## Sub-Groups and Committees Closing Reports

Please let 802.15 leadership know if there are any problems with this requirement.

**TG3mb Closing Report**: Did not meet

* 0 slot for Jan

**SC THz Closing Report:** Did not meet

* 1 slot for Jan

**TG4ab Closing Report**: Ben Rolfe (BCA) presented doc # *15-23-6012-01*

* 8 slots in Nov. with 4/5 teleconferences in between. Work with 4ac for joint 1 hr session. Prefer AM2 on Thursday, not AM1.
* Working on completing the draft (pre ballot draft 0B), ready for the technical editor to create draft 0C.

**WNG Closing Report**:

* There were 2 Presentations.
* An Interest Group is starting looking at additional Optical items for 15.7.

**TG4ac Closing Report:** Tero Kivinen (self) presented doc # [*15-23-0578-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0578-00-04ac-november-opening-and-closing.pptx)

* 2 slots in Jan. that do not overlap with 802.11bh or .11bi or 802.15.4ab
* 1 hr joint meeting with 802.4ab.

**SC IETF Closing Report:** Did not meet

* 0 slot in Jan – it will continue to be discussed at the mid-week.

**TG4me Closing Report**: Gary Steubing (Cisco) presented doc # [*15-23-0518-05*](https://mentor.ieee.org/802.15/dcn/23/15-23-0518-05-04me-november-2023-opening-and-closing-report.pptx)

* 4 slots in Jan. do not compete with JTC1
* **TG4me - form a CRG**
  + Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.04.me\_D01 with the following membership: Gary Stuebing (chair), Tero Kivinen, Phil Beecher, Billy Verso, Ann Krieger and Ben Rolfe. The 802.15.4me 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: Gary Stuebing
  + Second: Phil Beecher
  + Result: Y 34 : N 0 : A 2

**TG6ma Closing Report**: Ryuji Kohno (YNU/YRP-IAI) presented doc # [*15-23-0594-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0594-01-006a-tg15-6ma-closing-report-for-november-2023.pptx)

* 4 slots in Jan. – Preferences AM1 preferred, AM1 acceptable.

**TG7a Closing Report:** Yeong Min Jang (Kookmin University) presented doc# [*15-23-0616-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0616-00-007a-15-7a-higher-rate-longer-range-occ-tg-closing-report-nov-2023.pptx)

* + 3 slots in Jan, Preference AM1
  + **TG7a - Move to SA Ballot**
    - *WG 802.15 has reviewed and approved the CSD document [15-19-0297-03-0vat], and the CA document [15-22-0292-r3], and requests unconditional approval from the EC to submit P802.15.7a\_D6 to Standards Association ballot.*
    - Moved By: Yeong Min Jang
    - Seconded By: Phil Beecher
    - Result: Y 36 : N 0 : A 4

**TG16t Closing Report:** Tim Godfrey (EPRI) presented doc #[*15-23-0615-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0615-01-016t-tg16t-nov-2023-closing-report.pptx)

* + 4 slots in Jan with 3 teleconferences
  + **TG16t - Move to Letter Ballot**
    - Move that 802.15 WG start a WG Letter Ballot requesting approval of document P802-15-16t\_D1.0 and to forward document P802-15-16t\_D1.0, to Standards Association ballot.
    - Moved by: Tim Godfrey
    - Seconded by: Phil Beecher
    - Results Y 36 : N 0 : A 6

**SG SUN PHYs:** Thomas Almholt (TI) presented doc # [*15-23-0600-04*](https://mentor.ieee.org/802.15/dcn/23/15-23-0600-04-04ad-sg-sun-phy-next-gen-nov-23.pptx)

* + 2 slots in Jan. preferred PM2, PM1 acceptable. One webex call.
  + **Motion: SG4ad - Extend Study Group**
    - *Motion: that the 802.15 Working Group seeks approval from the IEEE 802 LMSC to extend the study group in 802.15 to develop the PAR and CSD documents for SG SUN PHYs.*
    - Moved by: Thomas Almholt
    - Seconded by: Phil Beecher
    - Result: Y 34 : N 0 : A 2
  + **Motion: SG4ad - Approve comment responses**
    - *Request that the responses to received PAR and CSD review comments contained in document [*15-23-0606-00-04ad]*be approved for submission to the EC. The 802.15 working group chair and technical editor are authorized to make additional modifications to the responses as needed.*
    - Moved by: Thomas Almholt
    - Seconded by: Phil Beecher
    - Result: Y 33 : N 0 : A 6
  + **Motion: SG4ad - Approve PAR and CSD**
    - Move that the PAR and CSD contained in documents [[15-23-0436-08-04ad](https://mentor.ieee.org/802.15/dcn/23/15-23-0436-08-04ad-p802-15-4ad-draft-par-on-sun-phys.pdf)] and [[15-23-0494-03-04ad](https://mentor.ieee.org/802.15/dcn/23/15-23-0494-03-04ad-next-gen-sun-phys-draft-csd.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: Thomas Almholt
    - Seconded by: Phil Beecher
    - Result: Y 34 : N 1 : A 4
  + The SG needs to give the EC an update on what the SG has accomplished.

**Joint Session 802.1/802.15** Phil Beecher (Wi-SUN) gave a verbal presentation.

* + 0 slots for Jan. one slot for Mar.

**SC-Maintenance:** Phil Beecher (Wi-SUN) presented doc # [*15-23-0567-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0567-01-0mag-scm-agenda-opening-and-closing-report-plenary-november-2023.pptx)

* + 2 slots in Nov, do not overlap with JTC1.
  + Put JTC1 on our schedule (only at plenaries)

**ISO IEC JTC1 SC6**

* We will start including the JTC1 meeting on the .15 calendar. It normally occurs at PM2 on Tuesdays.
* The WG leadership is working to better organize our submissions.
* **Motion: 802.15.3-2023 to ISO/IEC**
  + Move that the IEEE 802.15 WG requests that IEEE 802 EC approve submission of the following project IEEE Std 802.15.3™-2023 to ISO/IEC JTC1/SC6 for information under the PSDO agreement.
  + Moved: Ann Krieger
  + Seconded: Phil Beecher
  + Results: Y 31: N 1 : A 4
* **Motion: 802.15.4y-2021 to ISO/IEC**
  + Move that the IEEE 802.15 WG requests that IEEE 802 EC approve submission of the following project IEEE Std 802.15.4y™-2021 to ISO/IEC JTC1/SC6 for information under the PSDO agreement.
  + Moved: Ann Krieger
  + Seconded: Phil Beecher
  + Results: Y 39: N 0 : A 2

**Liaison Reports**

**802.24 Liaison Report –** Tim Godfrey (EPRI) discussed doc # [*24-23-0034-00*](https://mentor.ieee.org/802.24/dcn/23/24-23-0034-00-0000-nov-2023-closing-report.pptx):

* Same meeting pattern in Jan. (Tues & Wed PM2)

**802.18 RRTAG Liaison Report –** None.

**802.19 Coexistence TAG Liaison Report –** Ben Rolfe (BCA) gave a verbal report.

**802.11 Liaison Report** – Al Petrick (Jones, Petrick, Associates) shared #[*15-23-0617-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0617-00-0000-ieee802-11-liaison-report-november-2023.pptx)

## New Business

WG Chair asked if there was any new business. Nothing was raised.

## Any Other Business

WG Chair asked if there was any other business. Nothing was raised.

## Adjourn

**5:43 PM** The WG Chair adjourned the meeting

# Annex A Total attendance (in-person + remote) =

|  |  |  |
| --- | --- | --- |
| Last Name | First Name | Affiliation |
| Akhavan | Koorosh | Qualcomm Incorporated |
| Aldana | Carlos | Meta Platforms Inc. |
| Almholt | Thomas | Texas Instruments Inc. |
| Amezawa | Yasuharu | Mobile Techno Corp. |
| Anzai | Daisuke | Nagoya Institute of Technology |
| Bahn | Christy | IEEE STAFF |
| BEECHER | PHILIP E | Wi-SUN Alliance |
| Bettesh | Ido | Apple Inc. |
| Bims | Harry | Bims Laboratories, Inc. |
| Canchi | Radhakrishna | Kyocera International Inc |
| Chaplin | Clint | Self |
| Chen | Run | New Radio Technology Co., Ltd. |
| Chitrakar | Rojan | Huawei International Pte Ltd |
| Cho | Hangyu | LG ELECTRONICS |
| Choi | Sangsung | Kookmin University |
| De Ruijter | Hendricus | Silicon Laboratories |
| Ekrem | Ersen | Google, LLC |
| Gilb | James | General Atomics Aeronautical Systems, Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Golshan | Robert | Apple, Inc. |
| Grosswindhager | Bernhard | NXP Semiconductors |
| Gruber | Josef | Infineon Technologies |
| Guimond | Raphael | SPARK Microsystems |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Ha | Taeyoung | Samsung Electronics Co., Ltd. |
| Harada | Hiroshi | National Institute of Info and Comms Technology (NICT) |
| Henry | Jerome | Cisco Systems, Inc. |
| Hernandez | Marco | National Institute of Info and Comms Technology (NICT) |
| Hirata | Masayuki | Osaka U. Grad School of Med, Dept of Neuro Diag and Restoration |
| Huang | Lei | Huawei Technologies Co., Ltd |
| Ikegami | Tetsushi | Meiji University |
| Jang | Yeong Min | Kookmin University |
| Jiang | Jinjing | Apple Inc. |
| JOO | SEONG-SOON | Korea Platform Service Technology (KPST) |
| Juntunen | Juha | Meteor Communications Corp. |
| Kabbinale | Aniruddh | SAMSUNG |
| Kalkundrikar | Vishal | Ondas Networks |
| Kerry | Stuart | OK-Brit; Self |
| Kim | Jeong Gon | Korea Polytechnic University (KPU) |
| Kipness | Michael | IEEE Standards Association (IEEE-SA) |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| Ko | Jun Ho | Telecommunications Technology Association (TTA) |
| KOBAYASHI | Takumi | YRP International Alliance Institute |
| Kohno | Ryuji | YNU/YRP-IAI |
| Krebs | Alexander | Apple Inc. |
| Krieger | Ann | US Department of Defense |
| kristem | vinod | Apple Inc. |
| Kuechler | Wolfgang | NXP Semiconductors |
| Lee | Hong Won | LG ELECTRONICS |
| Lee | Jaegook | SAMSUNG ELECTRONICS |
| Lee | Kyeseon | Electronics and Telecommunications Research Institute (ETRI) |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Info. and Comms Technology (NICT) |
| Liu | Yong | Apple, Inc. |
| Luo | Xiliang | Apple, Inc. |
| Ma | Li | MediaTek Inc. |
| Maman | Mickael | STMicroelectronics |
| Mueller | Robert | Ilmenau University of Technology - TU Ilmenau |
| Murray | Carl | Qorvo |
| Nabki | Frederic | SPARK Microsystems |
| Nagai | Yukimasa | Mitsubishi Electric Corporation |
| Neirynck | Dries | Ultra Radio Ltd |
| Oh | Sung Hyun | Technical University of Korea |
| Pakrooh | Pooria | Qualcomm Technologies, Inc. |
| Palmer | Clark | Meteorcomm LLC |
| Parthasarathi | Srivathsa Masthi | NXP Semiconductors |
| Patel | Tushar | Teradyne, Inc. |
| Pirhonen | Riku | NXP Semiconductors |
| Powell | Clinton | PWC, LLC |
| Robert | Joerg | TU Ilmenau/Fraunhofer IIS |
| Rolfe | Benjamin | Blind Creek Associates |
| Sand | Stephan | German Aerospace Center (DLR) |
| Sayrafian | Kamran | National Institute of Standards and Technology |
| Schmidt | Reinhold | Infineon Technologies |
| SHAHAR | MENASHE | Ondas Networks |
| Shan | Feng | Southeast University, China |
| Shellhammer | Stephen | Qualcomm Incorporated |
| So | Youngwan | Samsung Electronics Co., Ltd. |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sun | Li-Hsiang | MediaTek Inc. |
| Suzuki | Takafumi | NICT |
| Takabayashi | Kento | Toyo University |
| Tang | Weidong | NewRadio Techologies Co., Ltd. |
| Verso | Billy | Qorvo |
| Wendt | Matthias | Signify |
| Wisland | Dag | Novelda AS; University of Oslo |
| Xiao | Libra | NewRadio Technology Co., Ltd. |
| YANG | Ning | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| Yang | Shang-Te | Apple, Inc. |
| Yang | Xun | Huawei Technologies Co., Ltd |
| YE | ZHENZHEN | Red Point Positioning |
| Zakaib | Larry | SPARK Microsystems |
| Zeisberg | Sven | ZIGPOS GmbH |

# 802.15 CAC Mtg.

# Sunday, 12th November 2023

## Attendance (12)

Clint Powell

Phil Beecher

Ann Krieger

Ben Rolfe

Tero Kivinen

Gary Stuebing

Clint Chapman

Ryuji Kohno

Christy Bahn

James Glib

Yeong Min

Tim Godfrey

Thomas Almholt - absent

## Minutes

**5:43 pm**: WG Chair, Clint Powell (HID) called the mtg. to order and presented the Agenda ([*15-23-0531-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0531-01-0000-november-2023-802-15-agenda.xlsx))

General Announcements:

* Chair showed the opening slides and ask patent claim question, please show them at your TG opening.
* Must register and pay registration fee.
* We have one rule change.

November Meetings:

* 802.15 Chairs Corner: 2pm to 3:00pm on Sun., Nov 12, 2023
* 802 Wireless Chairs (WCSC) meeting: 4pm to 5:30pm on Sun. Nov 12, 2023
* Opening 802.15 WG AC meeting: 5:30pm to 6:30pm on Sun. Nov 12, 2023
* Opening 802 LMSC: 8:00am to 10:00am on Mon. Nov 13, 2023
* Opening 802 Wireless: N/A
* Opening 802.15 WG meeting: 10:30 am to 12:30pm on Mon. Nov 13, 2023
* Mid-Week 802.15 WG AC meeting: 8:00am to 9:00am on Wed. Nov 15, 2023
* Mid-Week 802.15 WG meeting: 10:30am to 11:30am on Wed. Nov 15, 2023
* 802.15 WNG meeting: 11:30am to 12:30pm on Wed. Nov 15, 2023
* Closing 802.15 WG meeting: 4pm to 6pm on Thurs. Nov 16, 2023
* Closing 802 LMSC: 1:00pm to 6:00pm on Fri. Nov 17, 2023
* Joint meeting with 802.1/802.15 Tues. Nov 14, 2023

Subgroup Status and Objectives for November Plenary.

* **TG 3mb** – at IEEE editors
* **SG THz** – not meeting, will be in January
* **TG 4ab – NG-UWB –** full agenda document #546r2, resolve comments collected. First letter ballot after January.
* **SC WNG** – Jorge giving a presentation for RF management.
* **TG 4ac Privacy Amendment** – Working with 4ab about what they need for privacy, trying to set up a joint session.
* **SC IETF** – Cancel meeting, mention information at the mid-week.
* **TG 4me - Revision to 2020** – ballot just concluded.
* **TG 6ma – BAN/VAN** – still working on comments.
* **TG 7a – OCC** – letter ballot -> sponsor ballot. Use 3mb’s template.
* **TG 16t – 802.16 Lic-NB Amendment** – completed 2nd comment collection. Prepare for Letter ballot.
* **SG SUN PHYs (p.k.a. NG-OFDM)** – chair not here – resolve the comments, Phil will lead. Tell LMSC to pull it from the agenda.
* **Joint 802.1/802.15 Mtg. –** Tuesday PM3 - PAR and CSD feedback review.
* **SC – SC-M / Rules** – Need to add that someone must be in the room to run the meeting.

Upcoming Meetings:

* Plans for November 2023 –
* Plans for January 2024 meeting in Panama City Panama, early bird Dec 1st.

AOB:

* Wednesday morning.

**6:30pm** WG chair recessed until Wednesday (8:00-9:00am)

# 802.15 Mid-Week CAC Mtg.

# Wednesday, 15th Nov. 2023

## Attendance

Clint Powell

Phil Beecher

Ann Krieger

Tero Kivinen

Gary Stuebing

Clint Chapman

Ryuji Kohno

Christy Bahn

Yeong Min

Tim Godfrey

Stuart Kerry

Thomas Almholt - absent

## Minutes

**8:07am**: WG Chair, Clint Powell (HID) called the mtg. to order.

General Announcements:

* Chairs, show the Patent Policy, flip through the slides and make the call.

Mid-week motions: none

Subgroup Status and Objectives for November Plenary

* **TG 3mb** 
  + Not meeting
* **SG THz** 
  + Not meeting
* **TG 4ab – NG-UWB** 
  + No motions
  + Same number of rooms.
* **SC WNG** 
  + Presentation on spectrum and on NG optical networking for cameras.
* **TG 4ac Privacy Amendment**
  + No motions
* **SC IETF**
  + Not meeting.
* **TG 4me Revision to 2020**
  + Closing motions – yes (CRG)
* **TG 6ma – BAN/VAN**
  + No motions
* **TG 7a – OCC** 
  + WG motion – SA ballot package.
* **TG 16t – 802.16 Lic-NB Amendment**
  + Motions – start letter ballot
* **SG SUN PHYs (p.k.a. NG-OFDM)**
  + Received a number of comments for PAR and CSD
  + Probably not be completed for the EC meeting and will pull from the agenda, but would extend the study group.
* **SC – SC-M / Rules**
  + Closing Motions – yes.
  + Update attendance requirements and training requirements.
* **Joint 802.1/802.15**
  + Resolved PAR and CSD comments.
* **JTC1**
  + Comment on 802.15.9 due to the connection with 802.1.
  + EC Motion – for consent agenda on 802.15.4 amendments

Any Other Business:

* none

**8:36am** WG chair adjourned the CAC meeting.