**IEEE 802.15**

**Wireless Specialty Networks (WSN)**

|  |  |  |
| --- | --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSN) | |
| Title | **802.15 WG & CAC Minutes March 2024** | |
| Date Submitted | [15 March 2024] | |
| Source | [Ann Krieger]  [U.S. Department of Defense] | Email: [AnnKrieger.dod@gmail.com]  Voice: [+1.614.545.8255] |
| Re: | [March 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] | |
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**149th IEEE 802.15 WSN SESSION**

**Hyatt Regency Denver; Denver, Colorado, USA (all times in local)**

**March 10-14, 2024**

# 802.15 WG Opening

# Monday, 11th March 2024

**9:09AM** WG Chair, Clint Powell (HID), called the meeting to order and opened the WG Agenda (Doc #[*15-24-0098-04*](https://mentor.ieee.org/802.15/dcn/24/15-24-0098-04-0000-march-2024-802-15-agenda.xlsx))

## Announcements

Welcome to the 149th session. Our 150th session shirts were passed out beforehand this opening.

Election week – for WG 15 and LMSC. Nominations are concluded. Paul Nikolich said a few words of thanks, as this is his last session as IEEE 802 chair

Don’t forget to log in to IMAT to record your attendance and to use the microphone when you speak, stating your name and affiliation

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

* Mixed mode meeting.
* Using Direct Vote Live (DVL) for opening and closing Plenary.
* 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 and Ann. Phil will be attending the WG & EC closing remotely.
* 75% Attendance = 12 time slots (of 16)

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

The opening report gives a good overview of WG15 and will be located on our new WG15 website. The opening report (Doc #[*15-24-0099-04*](https://mentor.ieee.org/802.15/dcn/24/15-24-0099-04-0000-march-2024-802-15-opening-report.pptx)) was shared and we went through the agenda:

* No THz this week
* Joint sessions on Tuesday PM3 (802.1 & 802.15) and Coex (802.11 & 802.15)
* Reminder about the social on Wednesday.

## 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.

## WG Approvals

Motion to *approve the agenda* (Doc #[*15-24-0098-04*](https://mentor.ieee.org/802.15/dcn/24/15-24-0098-04-0000-march-2024-802-15-agenda.xlsx))

* Moved by: Ben Rolfe (BCA)
* Seconded by: Clint Chaplin (Samsung)
* Discussion: none
* Approved by unanimous consent.

Motion to *approve the previous meeting minutes (*doc #[*15-24-0008-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0008-01-0000-802-15-wg-cac-min-jan-2024-interim.docx)*)*

* Moved by: Ann T Krieger (U.S. DoD)
* Seconded by: Phil Beecher (Wi-Sun Alliance)
* Discussion: none
* Approved by unanimous consent.

WG Chair presented the SASB dates, on a tab in the agenda (Doc #[*15-24-0098-04*](https://mentor.ieee.org/802.15/dcn/24/15-24-0098-04-0000-march-2024-802-15-agenda.xlsx))

* One item – formation of TG4ad

## General and Administrative

WG Chair presented the general meeting information:

* Voters: (voters: 138, nearly: 5, aspirant: 20)

Treasurer’s report – during the mid week

The March 802.15 CAC meeting minutes are included in the WG minutes   
*(this document, 15-24-0148-00) –* Everyone is welcome, but chairs are required.

The Wireless Chairs Steering Committee meeting minutes for March are contained in  
*(doc #:*[*ec-24-0052-01-WCSG-minutes*](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0052-01-WCSG-2024-03-10-wireless-chairs-sc-meeting-agenda.docx)*)*

EC items:

* The Rules committee is working on a rule change to voting rights and in-person attendance.
  + They provided slides to be presented at each WG opening (9-12) (Doc # [ec-24-0059-01-00EC-march-rules-meeting.odp](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0059-01-00EC-march-rules-meeting.odp) )
  + A discussion ensued.
  + Everyone was to consider the proposed rule changes and a straw poll will be held at the mid-week to direct the WG chairs in their preparation for the EC closing discussion on Friday.
* Plenary in Denver
  + Please look through the welcome slides to help you get the most out of Denver Plenary: (Doc #[ec-24-0032-02-00EC-802-0324-thingstoknow-hyatt-regency-denver.pptx](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0032-02-00EC-802-0324-thingstoknow-hyatt-regency-denver.pptx))
* IEEE 802 Media emails went out last night, but there was an issue with the download (300 MB vs 1GB). A new email was sent today as it was fixed. If you downloaded before 10am today, then re-download.

Elections Motions:

* Motion: To approve Clint Powell (HID Global) as 802.15 WG Chair.
  + Moved: Phil Beecher
  + Second: Ann Krieger
  + Y 35; N 0; A 1
* Motion: To approve Phil Beecher (Wi-SUN Alliance) as 802.15 WG 1st Vice Chair.
  + Moved: Ann Krieger
  + Second: Phil Beecher
  + Y 37; N 0; A 0
* Motion: To approve Ann Krieger (US DoD) as 802.15 WG 2nd Vice Chair.
  + Moved: Phil Beecher
  + Second: Ann Krieger
  + Y 38; N 0; A 1
* Motion: To affirm 802.15 appointed officers: Joerg Robert as 802.15 WG Secretary, Ben Rolfe as 802.15 WG Treasurer, Tero Kivinen as 802.15 Technical Editor.
  + Moved: Phil Beecher
  + Second: Ann Krieger
  + Y36; N 0; A 4

## Future Meetings and Polls

Future Meetings:

* May 13-17 2024 Wireless Interim will be held in Warsaw Poland. Book your hotel early, you can cancel close to the event. Please bring your shirt.

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.
* 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.

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

**SC THz**: Thomas Kürner (TU Braunschweig)

* not meeting, no report

**TG 4ab (NG-UWB)**: Ben Rolfe (BCA)

* Doc # 128, and #155 – 44% of the comments were resolved.

**SC WNG**: Ben Rolfe (BCA)

* 1 presentation on items going on in Europe.

**TG 4ac (Privacy Amendment):** Tero Kivinen (self)

* 2 Meetings – probably closing at mid-week.

**SC IETF:** Tero Kivinen (self)

* 0 Meetings - update at WG15 mid-week

**TG 4me (Revision to 2020)**: Gary Steubing (Cisco)

* 2 Meetings; upload the voting results.

**TG 6ma (BAN/VAN)**: Ryuji Kohno (YNU/YRP-IAI)

* 4 Meetings; new presentations.
* Problems with the time zones on the Graphic (they should be removed).

**TG 7a (OCC)**: Yeong Min Jang (Kookmin University)

* 3 Meetings - comments for the first SA ballot

**IG NG-OCC:** Yeong Min Jang (Kookmin University)

* 2 Meetings – 3 presentations

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

**TG 16t (802.16 Lic-NB Amendment)**: Tim Godfrey (EPRI)

* Doc #130 – completed resolution of comments. Draft 1.1

**SG SUNPHYs (p.k.a. NG-OFDM)**: Jorge Robert (TU Ilmenau/Fraunhofer IIS)

* 4 Meetings; working on the technical guidance document.

**Joint 802.1/802.15 Mtg**. Phil Beecher (Wi-SUN)

* Meeting Tuesday PM3 6pm – presentation on current status of TG6 integration into 802.1

**SC (Maintenance& Rules)**: Phil Beecher (Wi-SUN)

* Reviewing 4 PAR submitted by other WG,

## Any Other Business

WG Chair asked if there was any other business.

## WG Recess

**12:31 PM** WG Chair recessed the meeting until the mid-week on Wednesday.

# 802.1 / 802.15 Joint Mtg.

# Tuesday 12th March, 2024

**6:08 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 [Agenda](https://1.ieee802.org/2024-03-plenary-joint-1-15-agenda/) , adding Maintenance item in 802.1 in AOB. It was approved by unanimous consent. He continued with 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).

Clint provided a brief update on 802.15 projects: TG 6ma is working on the BAN revision. Which one will be next? 802.15 will have a meeting, early in the May Interim (i.e. Monday) to discuss what should be the next items for 802.1. The plan is to have a Joint session (802.1 & 802.15) on Tuesday PM3 (starting at 6:15pm).

Mark Hantel (RA) chair of Maintenance TG in 802.1, discussed the presentation given by Marco Hernandez (YRP-IAI, Japan; CWC Oulu University, Finland) to this TG: [Amendment P802.1ACea: Support for IEEE Std 802.15.6](https://www.ieee802.org/1/files/public/docs2024/ea-hernandez-introduction-0324-v00.pdf). The first draft of 802.1ACea/D1was also discussed. The timeline might be compressed but Marco is the expert and can drive the urgency. Dr Kohno, chair of TG6ma, gave some additional information about 802.15.6ma. 802.1 needs 802.15 expertise to help map to the 802.1 MAC service interface.

AOB – Maintenance Item Proposal – Johannes Specht presented an old Maintenance request for 802.1Q (active May 2021 until now). There was previous discussion that 802.1AE might be more applicable. The request stated: The text “boundary between the network media and PHY” is problematic. This started the discussion of “What is the boundary of the box; i.e. where does the physical medium start and stop?”

* 802.15 mentioned that the antenna is that point in wireless; the emitter and collector, where it becomes analog. But often you have to measure at the MAC.
* Is this discussed in the 802.15 standard? It may be the “interface to the antenna”.
* Can we incorporate this problem in this project – Amendment to 802.1AC?

802.1 will also need to socialize this with 802.3 and 802.11. It should also be socialized with

* IEC 62657 part 2 , coexistence management document
* 802.15.16, currently in 802.15, there is an amendment, TG16t.

It was decided to discuss this offline to try to craft the true problem, coming up with a slide or two to discuss at the next joint session.

**7:00pm** Meeting adjournment

# 802.15 WG Mid-week (& WNG)

# Wednesday, 13th March 2024

**10:35 am** WG Chair, Clint Powell (HID) called the meeting to order displaying the agenda (Doc #[*15-24-0098-04*](https://mentor.ieee.org/802.15/dcn/24/15-24-0098-04-0000-march-2024-802-15-agenda.xlsx))

1. **Announcements**

Remember the Social tonight.

Registration is required to attend this session. State your name and affiliation when you speak.

Leadership reelected and other appointed positions filled during the opening.

If there are any motions that need to be run at the closing, please provide to the WG chairs as early as possible. We will be using DVL at the closing for all motions.

## General and Administrative

We will be streamlining our documents. The graphic currently resides in 4 different files. The updated graphic will be located in the agenda. The opening report will have a general graphic and not the specific session.

Agendas must be in posted 30 days before the meeting.

## Future Meetings and Polls

Next meeting will be the wireless interim in May in Warsaw.

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

Ann Krieger (US DoD) presented the possible rule change to the LMSC P&P on Attendance for Voting credit.

A straw poll was taken with the following results: Total (in-person, remote)

* 5 (4,1) - Approve, takes effect at end of March plenary
* 12 (2,10) - Approve, takes effect at some future date
* 15 (8,7) - Defer approval pending further discussion until future date
* 2   (0,2) - Reject idea

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

**SC THz**: did not meet

**TG 4ab**: working on comment collection.

**SC WNG**: 2 presentations.

**TG 4ac:** Tero Kivinen (self) presented the Closing (Doc #[*15-24-0149-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0149-02-04ac-march-opening-and-closing.pptx))

* 2 meetings for May, do not overlap with 4ab,

**SC IETF:** Tero Kivinen (self) presented (Doc #[*15-24-0169-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0169-00-IETF-sc-ietf-march-slides.pptx))

* IETF 119 (Brisbane Australia) is next week.
* Covering 3 groups 6lo, Lake, Suit
* Lake participants may come to the IEEE 802 interim in Warsaw to discuss 802.15.9.
* BOFs: allDispatch, deleg, spice, sconepro, srv6ops

**TG 4me**: finished for the week. Sponsor Ballot at closing.

**TG 6ma**: One more meeting to go.

**TG 7a**: closing on Thursday

**IG NG-OCC**: closing on Thursday

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

**TG 16t**: Resolving comment from LB

**SG SUNPHYs**: 1 meeting left.

**SC (M&R)**: Ann Krieger (US DoD) presented the closing (Doc #[*15-24-0147-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0147-01-0mag-scm-agenda-opening-and-closing-report-plenary-march-2024.pptx))

* 4 PARs were reviewed. There were no comments for 802.1ASeb, 802.3dm, and 802.11bf.
* 802.15 provided comments to 802.11bp, with most of them having to do with coexistence.
* 802.11 met last evening and rejected all of .15’s comments as too technical. They are not considering coexistence with 802.15

**Joint 802.1/802.15 Mtg**. : Held last evening, minutes are in the WG minutes (this document)

## Any Other Business

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

## WG Recess

**11:20am** 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 (doc# *15-24-0162-01*)

The Agenda was shared and accepted.

Friedbert Berens (FBConsulting Sarl) presented “TRPsd Measurements of UWB devices by JRC” (doc #[*15-24-0158-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0158-02-wng0-trpsd-measurements-of-uwb-devices-by-jrc.pdf))

* Total Radiate Power spectral density (TRPsd)
* If you have a specific device to measure, send it to JRC.

Florian Mendel (Infineon) presented “A Lightweight Cryptographic algorithm for IoT Devices” (doc #[*15-24-0168-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0168-00-wng0-ascon-the-lightweight-cryptography-standard-for-iot.pptx))

* NIST selects Ascon as the standard to protect small devices.
* It is permutation based (single 320-bit permutation) and sponge based.
* Can you add another size, as you only support 64 and 128, (we use 32)? NIST only supports 64 and 128.
* Discussion on slide 5
  + It was built to be light weight devices.
  + You will not be able to use Ascon for NIST PQ level 5, but it should be able to do level 1 and using some of its features, you can get to level 3.
  + Low end sensors
* Good with 802.15 because of the Hash. We don’t have any hashing in hardware currently, so if this will be in hardware, then that is a win. We should look into this, and will it produce a new project, like we had 802.15.4y, an amendment. Ask for an IG now.

**Any other business** - none

**12:30 pm** WNG Adjourned by Ben Rolfe.

# 802.15 WG Closing

# Thursday, 14th March 2024

**4:05 PM** WG Chair, Clint Powell (HID) called the meeting to order displaying the closing agenda document (doc #*15-23-*[*0627*](https://mentor.ieee.org/802.15/dcn/23/15-23-0627-05-0000-january-2024-802-15-agenda.xlsx)*-05*)

## Announcements

Remote information on calendar – this is Virtual Room 1. Registration is required.

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

150th celebration will be at the May 2024 meeting in Warsaw Poland.

## 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

10-15 May 2024 Wireless Interim – Bring your shirt, picture at the mid-week. What are we going to do overall for the 802 community? Cake?

Polls:

* Would you like to come back to this venue – yes (20)
* Did you go to the social? Y 19
* Did you like the social? Y 16

## Sub-Groups and Committees Closing Reports

**SC THz Closing Report:** Thomas Kürner (TU Braunschweig)

* Did not meet

**TG4ab Closing Report**: Ben Rolfe (BCA) presented doc #[*15-24-0188-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0188-02-04ab-tg4ab-closing-report-march-2024.pptx)

* 8 slots for May
* Still resolving comments, teleconferences set up for every week.

**WNG Closing Report**: Ben Rolfe (BCA) verbal report.

* There were 2 Presentations. (Minutes are in this document)
* Set up an IG for the Lightweight crypto.

**TG4ac Closing Report:** Presented at midweek doc # [*15-24-0149-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0149-02-04ac-march-opening-and-closing.pptx)

* 2 slots in Mar. that do not overlap with 802.11bi or 802.15.4ab
* 1 hr joint meeting with 802.4ab. (perhaps at the end of the week)

**SC IETF Closing Report:** Discussed during the Mid-week.

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

**TG4me Closing Report**: Gary Steubing (Cisco) presented doc # *15-24-*[*0136*](https://mentor.ieee.org/802.15/dcn/24/15-24-0136-01-04me-march-2024-ieee-802-15-4me-opening-agenda-and-closing-report.pptx)*-01*

* 4 slots in May
* **TG4me motion to EC:**
  + 802.15 requests unconditional approval from the EC to submit P802.15.4me-D03 to Standards Association ballot.
  + Moved By: Gary Stuebing
  + Seconded By: Ben Rolfe
  + Discussion none
  + Results Y 31; N 1; 2 A
* **TG4me Motion for CRG:**
  + Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the SA balloting of the P802.15.04.me\_D03 with the following membership: Gary Stuebing(chair), Tero Kivinen, Ann Krieger, Ben Rolfe, Phil Beecher, Billy Verso. 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: Ann Krieger
  + Discussion: none
  + Results: Y 36, N 0; A 1

**TG6ma Closing Report**: Ryuji Kohno (YNU/YRP-IAI) presented doc # [*15-24-0185-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0185-00-006a-tg15-6ma-closing-report-for-march-2024.pptx)

* 4 slots in May. – Preferences AM1 preferred, PM2 second choice.

**TG7a Closing Report:** Yeong Min Jang (Kookmin University) doc# [*15-24-0180-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0180-00-007a-15-7a-higher-rate-longer-range-occ-tg-closing-report-march-2024.pptx)

* + 3 slots in May, AM1
  + **TG7a CRG formation for SA ballot**
    - Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.7a\_D6 with the following membership: Yeong Min Jang(Chair), Sangsung Choi, Sang-Kyu Lim, Ryuji Kohno, and Seongsoon Joo. The 802.15.7a 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:  Yeong Min Jang
    - Seconded By: Ann Krieger
    - Discussion: none
    - Results Y 31; N 1 : A 4

**IG NG-OCC Closing Report:** Yeong Min Jang (Kookmin Univ.) doc# [*15-24-0181-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0181-00-07ma-ieee-802-15-ig-ng-occ-closing-report-march-2024.pptx)

* + 2 slots in May, Preference AM2 (Tues & Thurs)

**TG16t Closing Report:** Tim Godfrey (EPRI) presented doc #[*15-24-0184-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0184-02-016t-tg16t-march-2024-closing-report.pptx)

* + 3 slots in May; AM2, Tues, Wed, Thurs
  + Resolved all comments
  + **TG16t Recirculation**
    - Move that 802.15 WG formally request that 802.15 WG start a WG recirculation requesting approval of document P802-15-16t\_D2.0 and to forward document P802-15-16t\_D2.0, to Standards Association ballot.
    - Moved By:  Tim Godfrey
    - Seconded By: Ann Krieger
    - Discussion: none
    - Results: Y 31; N 0; A 3
  + **TG16t Motion to create a CRG**
    - Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.16t\_D02 with the following membership: Tim Godfrey (Chair), Vishal Kalkundrikar, Harry Bims, Tero Kivinen, and Joerg Robert. The 802.15.16 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: Tim Godfrey
    - Seconded by: Ann Krieger
    - Discussion: none
    - Results: Y 35 : N 0 : A 2

**SG SUN PHYs:** Jorge Robert (TU Ilmenau/Fraunhofer IIS) doc # [*15-24-0191-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0191-00-04ad-march-2024-sg-next-gen-sun-phy-closing-report.pptx)

* + 4 slots in May PM1. 2 teleconference calls. Avoid collitions with

**Joint Session 802.1/802.15**

* + Discussed at midweek, notes in this document.

**SC-Maintenance:** Given at midweek doc # [*15-24-0147-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0147-01-0mag-scm-agenda-opening-and-closing-report-plenary-march-2024.pptx)

* + 3 slots in Mar, two on Tuesday, one on Wednesday

**Liaison Reports**

**802.24 Liaison Report –** Tim Godfrey (EPRI) discussed doc # [*24-24-0010-00*](https://mentor.ieee.org/802.24/dcn/24/24-24-0010-00-0000-802-24-march-2024-liaison-report.pptx):

* Same meeting pattern in May (Tues & Wed PM2)

**802.18 RRTAG Liaison Report –** None.

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

* Elections Chair Tuncer Baykas and Vice-Chair Steve Shellhammer
* TG 19.3a will be meeting after the .15 closing.
* Joint session in May with 802.11 AMP to discuss coexistence.

**802.11 Liaison Report** – None.

## 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.

Attendance 64, 24 people in-room;

## Adjourn

**5:14 PM** The WG Chair adjourned the meeting.

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

|  |  |  |
| --- | --- | --- |
| Last Name | First Name | Affiliation |
| Aldana | Carlos | Meta Platforms Inc. |
| Al-kadi | Ghiath | STMicroelectronics |
| Almholt | Thomas | Texas Instruments Inc. |
| Amezawa | Yasuharu | Mobile Techno Corp. |
| Andre | Jean-Marie | ST micro |
| Anzai | Daisuke | Nagoya Institute of Technology |
| Bahn | Christy | IEEE STAFF |
| Baykas | Tuncer | Ofinno |
| BEECHER | PHILIP E | Wi-SUN Alliance |
| Berens | Friedbert | FBConsulting Sarl |
| Bettesh | Ido | Apple Inc. |
| Bims | Harry | Bims Laboratories, Inc. |
| Canchi | Radhakrishna | Kyocera International Inc |
| Chaplin | Clint | Samsung Electronics |
| Chen | Run | New Radio Technology Co., Ltd. |
| Chitrakar | Rojan | Huawei International Pte Ltd |
| Choi | Jinsoo | LG ELECTRONICS |
| De Ruijter | Hendricus | Silicon Laboratories |
| Dolmans | Guido | Holst Centre / IMEC-NL |
| Ekrem | Ersen | Google, LLC |
| Gan | Ming | Huawei Technologies Co., Ltd |
| Gilb | James | General Atomics Aeronautical Systems, Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Golshan | Robert | Apple, Inc. |
| Gonzalez | Dalisa | IEEE SA |
| Granhaug | Kristian | Novelda AS |
| Grosswindhager | Bernhard | NXP Semiconductors |
| Gruber | Josef | Infineon Technologies |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Harada | Hiroshi | National Institute of Information and Communications Technology (NICT) |
| Hartman | James | Landis Gyr Group Worldwide |
| Henry | Jerome | Cisco Systems, Inc. |
| Hernandez | Marco | National Institute of Information and Communications Technology (NICT) |
| Hirata | Masayuki | Osaka Univ Grad School of Med, Dept of Neuro Diag and Restoration |
| Huang | Lei | Huawei Technologies Co., Ltd |
| Ikegami | Tetsushi | Meiji University |
| Jiang | Jinjing | Apple Inc. |
| JOO | SEONG-SOON | Korea Platform Service Technology (KPST) |
| Kabbinale | Aniruddh | Samsung Electronics |
| Kalkundrikar | Vishal | Ondas Networks |
| Keren | Rani | Huawei Technologies Co., Ltd |
| Kerry | Stuart | OK-Brit; Self |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| KOBAYASHI | Takumi | YRP International Alliance Institute |
| Kohno | Ryuji | YNU/YRP-IAI |
| Krebs | Alexander | Apple Inc. |
| Krieger | Ann | US Department of Defense |
| Kuechler | Wolfgang | NXP Semiconductors |
| Lee | Hong Won | LG ELECTRONICS |
| Lee | Jaegook | SAMSUNG ELECTRONICS |
| LEE | Mingyu | Samsung Electronics Co., Ltd. |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| Luo | Xiliang | Apple, Inc. |
| Ma | Li | MediaTek Inc. |
| Ma | Zhepeng | Calterah Semiconductor Technology (Shanghai) Co., Ltd. |
| 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 |
| Pakrooh | Pooria | Qualcomm Technologies, Inc. |
| Pirhonen | Riku | NXP Semiconductors |
| Powell | Clinton | PWC, LLC |
| QIAN | BIN | Huawei Technologies Co., Ltd |
| Robert | Joerg | TU Ilmenau/Fraunhofer IIS |
| Roder | Patricia | IEEE-SA |
| Rolfe | Benjamin | Blind Creek Associates |
| Sand | Stephan | German Aerospace Center (DLR) |
| Sasaki | Shigenobu | Niigata University |
| Sayrafian | Kamran | National Institute of Standards and Technology |
| Schmidt | Reinhold | Infineon Technologies |
| SHAHAR | MENASHE | Ondas Networks |
| So | Youngwan | Samsung Electronics Co., Ltd. |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Itron Inc. |
| Sumi | Takenori | Mitsubishi Electric Corporation |
| Sun | Li-Hsiang | MediaTek Inc. |
| Suzuki | Takafumi | NICT |
| Takabayashi | Kento | Toyo University |
| Tang | Weidong | NewRadio Techologies Co., Ltd. |
| Tian | Bin | Qualcomm Incorporated |
| Verso | Billy | Qorvo |
| Wang | Yi-Hsiu | Calterah |
| Wendt | Matthias | Signify |
| Wisland | Dag | Novelda AS; University of Oslo |
| Xiao | Libra | NewRadio Technology Co., Ltd. |
| Yang | Shang-Te | Apple, Inc. |
| Yang | Xun | Huawei Technologies Co., Ltd |
| YE | ZHENZHEN | Red Point Positioning |
| Yu | zhongxing | Calterah Semiconductor Technology (Shanghai) Co., Ltd. |
| Zakaib | Larry | SPARK Microsystems |
| Zalach | Hagai | CEVA |
| Zeisberg | Sven | ZIGPOS GmbH |
| Zhang | Xiaolong | Calterah Semiconductor Technology (Shanghai) Co., Ltd. |
| ZHENG | ZE | iTenest |

# 802.15 CAC Mtg.

# Sunday, 10th March 2024

## Attendance (13)

Clint Powell

Phil Beecher

Ann Krieger

Ben Rolfe

Tero Kivinen

Gary Stuebing

Clint Chapman

Ryuji Kohno

Christy Bahn

Yeong Min Jang (remote)

Tim Godfrey

James Glib

Daisuke Anzai

## Minutes

**5:40 pm**: WG Chair, Clint Powell (HID) called the mtg. to order and presented the WG Agenda (Doc #[*15-24-0098-04*](https://mentor.ieee.org/802.15/dcn/24/15-24-0098-04-0000-march-2024-802-15-agenda.xlsx))

General Announcements:

* WG Chair showed the opening slides and ask patent claim question, please show them at your TG opening.
* You must register and pay registration fee to participate this week.
* Update on Nescom and Revcom.
* We will not have an award ceremony for TG13 this session, it will be at a different session.
* Phil will be leaving on Tuesday, Ann & Clint on Thursday afternoon.
* Cancelling meetings, contact Ann and she will update imat and meeting planners.
* 2024 802 Elections – Will happen during the opening:
  + Voting: WG Chair (Clint Chapman); WG 1st Vice Chair (Phil Beecher); WG 2nd Vice Chair (Ann Krieger)
  + Appointments: WG Secretary (Jorge Roberts); Treasurer (Ben Rolfe); Technical Editor (Tero Kivinen)
* Thank you to all the TG chair for providing the webpages.
* We are close to launching the new WG15 home page.
* The WG opening will begin at 1100, the 802.15 WSNs 150th Session Shirts will be passed out beforehand starting at 1030.

March Meetings:

* 802.15 Chairs Corner: 2pm to 3:00pm on Sun., Mar 10, 2024
  + A room for Clint to do whatever he needs to do to get things done.
* 802 Wireless Chairs (WCSC) meeting: 4pm to 5:30pm on Sun. Mar 10, 2024
* Opening 802.15 WG AC meeting: 5:30pm to 6:30pm on Sun. Mar 10, 2024
* Opening 802 LMSC: 8am to 10am on Monday Mar 11, 2024
* Opening 802 Wireless: N/A
* Opening 802.15 WG meeting: 10:30am to 12:30pm on Mon. Mar 11, 2024
* Mid-Week 802.15 WG AC meeting: 8:00am to 9:00am on Wed. Mar 13, 2024
* Mid-Week 802.15 WG meeting: 10:30am to 11:30am on Wed. Mar 13, 2024
* 802.15 WNG meeting: 11:30am to 12:30pm on Wed. Mar 13, 2024
* Closing 802.15 WG meeting: 4pm to 6pm on Thurs. Mar 14, 2024
* Closing 802 LMSC: 1pm to 6pm on Fri. Mar 15, 2024
* Joint meeting with 802.1/802.15 – 6:30pm to 7:30pm on Tues. Mar 12, 2024

Subgroup Status and Objectives for March Plenary.

* **SG THz** – not meeting
* **TG 4ab** – agenda in document 128,
  + Joint meeting with 802.11 Coex on Tuesday AM3
* **SC WNG** – 0 presentations at the current time.
* **TG 4ac** – 2 meetings – very quiet. Look to 4ab
* **SC IETF** – summary at the mid-week.
* **TG 4me** – 2 meetings – will know tomorrow if we need the second one.
* **TG 6ma** – 4 meetings –
* **TG 7a -**3 meetings – had 3 teleconferences
* **IG NG-OCC** – several presentations.
* **TG 16t –** 4 meetings -completed resolution of LB201, issue a WG recirculation ballot
* **SG SUN PHYs** – 4 meetings,
* **Joint 802.1/802.15 Mtg. –** Tuesday 6:00-7:00, don’t think we have anything in WG 15
* **SC – SC-M / Rules** – 3 meetings – 3 PARs .1, .3, .11 update, .11 new PAR

Upcoming Meetings:

* May Wireless Interim is in Warsaw Poland.

AOB:

* Request – last November – TG4ab Thursday AM1 – (clashes with future venues)
* Issues with meeting graphic, IMAT and on-line schedule, we will be working this out.

**6:20pm** WG chair recessed until Wednesday (8:00-9:00am)

# 802.15 Mid-Week CAC Mtg.

# Wednesday, 13th Mar 2024

## Attendance (12)

Clint Powell

~~Phil Beecher~~

Ann Krieger

Joerg Robert

Ben Rolfe

Tero Kivinen

Gary Stuebing

Ryuji Kohno

Yeong Min Jang (remote)

Tim Godfrey

~~Thomas Kurner~~

Christy Bahn

Shoicki Kitazawa

Xiolong Zhang

## Minutes

**8:15am**: WG Chair, Clint Powell (HID) called the mtg. to order.

General Announcements:

* Chairs, show the Patent Policy, flip through the slides and make the patent call. Have a hypertext link in your slide deck to the IEEE 802
* Chairs – please let us know if you are not able to attend the session, ASAP.
  + CAC – obligation of the chair, if you can’t be there, delegate. Designate your second, so if you are delayed, your fall back is guaranteed.
  + During every meeting (both in-person and remote), you must have a chair and a secretary. If you do not have those, you can’t run that meeting. If you are working on a draft, then the technical editor must be there as well.
  + Agendas must be posted 30 days in advance.
* Agenda, we are changing where we store and change the graphic document. We have removed the timezones, it will only be local time.
  + Initial agenda – one month before to lock it down.
  + Bring all your changes to the Sunday AC meeting, we will not add or move meetings during the session. Only drop meetings.
  + Send emails to all three WG chairs (Clint, Phil, Ann).
  + Please check the graphic and IMAT and meeting planner as soon as they are posted.
* Getting credit for the CAC meetings? It might encourage someone to come.
* 802 leadership is aging, getting ready for retirement! We need to attract people from the younger population. Jon Rosdahl is currently the only person in 802 working on current and future venues, we need someone to shadow him.
* We must follow the policy and procedures and we have been lax, James has offered to host a session to help with this.

Nescom, Revcom – waiting for 4ad approval (there are currently 11 yes, waiting on 5 people)

Tonight is the social

Mid-week motions: none

Subgroup Status and Objectives for March Plenary

* **SG THz** 
  + Did not meet
* **TG 4ab** 
  + Closing Motions – No
  + Slots – what we ended up with 4ab is good. There are other evening sessions (.193a)
* **SC WNG** 
  + 2 presentations: Measurement studies done in the EU & Lightweight crypto (from the tutorial on Monday)
* **TG 4ac** 
  + Closing Motions – No
  + Adjourned for this session, closing at midweek.
* **SC IETF**
  + Discuss at midweek.
* **TG 4me** 
  + Closing Motions – Yes
  + On EC consent agenda.
* **TG 6ma** 
  + Closing Motions – No
  + Is the draft stable enough to have a MEC and technical editor review? Need a little longer.
* **TG 7a** 
  + Closing Motions – Yes (CRG)
  + Work on motion at morning meeting.
* **IG NG-OCC**
  + Closing Motions - No
  + Adjourned for the session, closing at closing.
* **TG 16t** 
  + Closing Motions – Yes (recirc and CRG)
  + Preparing to advance the draft
* **SG SUN PHYs** 
  + Closing Motions - No
  + Technical discussions
* **SC-M / Rules**
  + Closing Motions – No
* **Joint 802.1/802.15** 
  + Good meeting, 802.1 had some questions for 802.15.

Any Other Business:

* Don’t forget about May Registration and bring your shirt.

**9:01am** WG chair adjourned the CAC meeting.