**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 & Joint 1/15 Minutes May 2024** | |
| Date Submitted | [13 June 2024] | |
| Source | [Joerg Robert]  [TU Ilmenau] | Email: [joerg.robert@ieee.org]  Voice: [+49 3677 69 4260] |
| Re: | [May 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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**150th IEEE 802.15 WSN SESSION**

**Marriott Warsaw; Warsaw, Poland (all times in local)**

**May 13-16, 2024**

# 802.15 WG Opening

# Monday, 15th May 2024

**9:10AM** WG Chair, Clint Powell (HID), called the meeting to order and opened the WG Agenda (Doc #[*15-24-0199-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0199-01-0000-may-2024-802-15-agenda.xlsx))

## Announcements

Welcome to the 150th session.

The chair reminds everybody of wearing the shirt on Wednesday. Photo for 150th meeting will be taken at the start of the mid-week plenary.

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 reminds everybody to update his/her e-mail address if not longer valid.

WG Chair asked for new participants to speak up; one 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.

The questions for patent claims has to be done at every single meeting.

## WG Approvals

Motion to *approve the agenda* (Doc #[*15-24-0199-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0199-02-0000-may-2024-802-15-agenda.xlsx))

* Moved by: Ann T Krieger (U.S. DoD)
* Seconded by: Tim Godfrey (EPRI)
* Discussion: none
* Approved by unanimous consent.

Motion to *approve the previous meeting minutes (*doc #[*15-24-0148-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0148-00-0000-802-15-wg-cac-min-mar-2024-plenary.docx)*)*

* Moved by: Ann T Krieger (U.S. DoD)
* Seconded by: Tim Godfrey (EPRI)
* Discussion: none
* Approved by unanimous consent.

WG Chair presented the SASB dates, on a tab in the agenda (Doc #[*15-24-0199-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0199-02-0000-may-2024-802-15-agenda.xlsx))

* Formation of new task group TG4ad
* New IG on optical communication
* New IG on crypto
* Two PARs have to be extended (TG 15.16t, TG 7a)

## 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 May 802.15 CAC meeting minutes are included in the WG minutes   
*(this document) –* Everyone is welcome, but chairs are required.

The Wireless Chairs Steering Committee meeting minutes for May are contained in  
*(doc #:*[*ec-24-0120-00-WCSG-minutes*](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0120-00-WCSG-minutes-2024-05-wireless-interim-opening-plenary.docx)*)*

Chair shows opening report (doc #[*15-24-0200-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0200-01-0000-may-2024-802-15-opening-report.pptx))

* WG Chair shows 802.15 Standards Pipeline
* Graphical agenda is shown
* No individual experts during this meeting

Ben Rolfe (BCA) presents the treasures report (doc #[*EC-24/0007r4*](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0007-04-WCSG-wireless-treasurer-report-2024.pptx))

The WG chair appoints Phil Beecher (Wi-SUN) at the chair of the new TG4ad

## Future Meetings and Polls

Future Meetings:

* 802.15 WG will hold its session July 14-19, 2024, with the in-person part being held at the Sheraton Le Centre Montreal @ Montreal, Quebec
* There are multiple parallel meetings and festivals. Early booking of the hotel is  
  recommended.

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)

* Two meetings, liaison statement, 4 technical presentations on channel models

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

* Full all agenda, focus on comment resolution

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

* No presentation scheduled yet

**Joint 802.11/802.15 Mtg**. Ben Rolfe (BCA)

* No real updates

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

* Two sessions, two different amendments planned

**IG Crypto:** Tero Kivinen (self)

* Review of two proposals

.

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

* No real updates

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

* First SA ballot finished, 141 comments, 4 sessions during the week

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

* 4 meetings this week, new draft uploaded, focus on comment resolution

**TG 7a (OCC)**: Sangsung Choi (A2UICT)

* Comment resolution

**IG NG-OCC:** Sangsung Choi (A2UICT)

* 2 meetings

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

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

* The meetings, focus on completing comment resolution

**TG 4ad**: Phil Beecher (Wi-SUN)

* Use-cases and technical guidance document

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

* One joint meeting

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

* Two topics on the agenda

## Any Other Business

Phil Beecher (Wi-SUN) mentions relevant discussions in 802.18 concerning sub-GHz spectrum

In case of any room issues contact Ann T Krieger (U.S. DoD)

## WG Recess

**10:15 PM** WG Chair recessed the meeting until the mid-week on Wednesday.

# 802.1 / 802.15 Joint Mtg.

# Tuesday 14th 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/2024-05-interim-1-15-joint-agenda/). The agenda was approved. 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).

Phil Beecher (Wi-SUN Alliance) gave a verbal report on the current activities in IEEE 802.15. Currently there no additional projects that require coordination with IEEE 802.1.

Marco Hernandez (YRP-IAI, Japan; CWC Oulu University, Finland) gave an update on current activities on TG 802.15.6ma. The group plans to go for letter ballot after this meeting. Therefore, there are no updates on the joint work with IEEE 802.1. Clint Powell gave some recommendation for the next steps of TG 802.15.6ma. Joint work with IEEE 802.1 will continue when next draft is available, most likely at the next meeting.

Mark Hantel (RA) will schedule a meeting to review possible input.

Johannes Specht (self) presented a document on Time Reference Points in IEEE 802.1/TSN (document #[524-v01](https://www.ieee802.org/1/files/public/docs2024/new-specht-time-ref-points-0524-v01.pdf)). The presentation relates to IEEE 802.1 Maintenance Item #314. 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?”

Current 802.1Q points to 802.1AS, then pointing to the different standards such as 802.3. This should be changed to all standards pointing to 802.1AC then pointing to the different standards.

Currently, the definition where a link starts and where a link ends is not clearly defined.

Fixing the aforementioned things requires changes in different IEEE 802.1 standards. There is a list of projects that are suitable vehicles for the required changes. 802.15 could be a starting point for the work.

Q: There are already implementations, e.g. in IEEE 802.11. How will changes here affect this?

A: There is some degree of freedom for this. Currently, there is nothing for IEEE 802.15.

Q: The standards depend on a grandmaster. What does it mean for IEEE 802.15?

A: This is an element in IEEE 802.1AS. It can be connected to IEEE 802.15. But this goes beyond the current discussions. The grandmaster in general is the source of the time.

Phil Beecher comments, for the physical layer the reference point is the antenna. Phil Beecher will take responsibility to bring this information to the 802.15 WG.

Glenn Parsons proposed that the next joint meetings will start at 6:15pm.

There is not AoB.

**6:55pm** Meeting adjournment

# 802.15 WG Mid-week (& WNG)

# Wednesday, 15th May 2024

**10:47 am** WG Chair, Clint Powell (HID) called 150th session to order after the IEEE 802.15 group photo was taken. He is displaying the agenda (Doc #[*15-24-0199-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0199-02-0000-may-2024-802-15-agenda.xlsx)).

1. **Announcements**

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

Leadership reelected and other appointed positions filled during the opening.

There are a number of motions at the closing. Please provide to the WG chairs as early as possible. We will be using DVL at the closing for all motions.

James Gilb introduces himself to the group.

## General and Administrative

Remember the social tonight.

## Future Meetings and Polls

Next meeting will be the wireless plenary in July in Montreal.

Please register soon as the early bird ends this week.

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

No polls for today.

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

**TG 4ab**: still some comments left, working on comment resolution

**SC WNG**: no request for presentations

**TG 4ac:** did not meet yet

**TG 4ad:** two meetings so far, work on use-cases and channel models

**SC IETF:** Tero Kivinen (self) presented a status (Doc #[15-24-0291-00](https://mentor.ieee.org/802.15/dcn/24/15-24-0291-00-IETF-sc-ietf-may-slides.pptx))

* Currently nothing really relevant to report
* The next IETF meeting will be one week before the next plenary, also in Montreal
* BOF requests not finished yet

**TG 4me**: Comment resolution for first SA ballot almost complete. Recirculation motion   
 expected for the closing

**TG 6ma**: Working on draft. Coexistence Assurance document has to be crated. Plan to   
 go for WG letter ballot in July.

**TG 7a**: Working on comment resolution. Recirculation motion expected for closing.

**IG NG-OCC**: Four contributions during the week

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

**TG 16t**: Comment resolution complete. Recirculation motion during closing. Preparation   
for SA ballot started.

**SC MAINTANCE/RULES:** Work on Task Group check list and JTC1

**Joint 802.1/802.15 Mtg**. : Held last evening, minutes are in the WG minutes (this document). Presentation on reference points on timing in standards.

**Joint 802.11/802.15 Mtg**. : Progress on understanding the needs of the different groups. Next joint meeting in July.

**IG Crypto**: Development of two separate PARs and CSDs, motion during closing plenary

**SC THz**: Thomas Kürner (TU Braunschweig) presents the closing report (Doc. #[15-24-0260-02](https://mentor.ieee.org/802.15/dcn/24/15-24-0260-02-0thz-sc-thz-closing-plenary-slides-meeting-may-2024.pptx)).

* Two meetings, four contributions
* Next meeting in November in Vancouver

**Liaison Report: 802.18**: Edward Au (Huawei) present the 802.18 liaison report (Doc. #[15-24-0202-01](https://mentor.ieee.org/802.15/dcn/24/15-24-0202-01-0000-802-18-to-802-15-liaison-report-may-2024.pptx))

* Approved 6 IEEE 802 LMSC submissions
* Further discussion on spectrum topics in different areas of the world
* Edward Au thanks the WG 15 for the support over the last two years

## Any Other Business

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

## WG Recess

**11:27am** 802.15 Midweek recessed by WG Chair Clint Powell (HID) until Thursday 4:00pm.

**Wireless Next Generation (WNG)**

No planned presentations. The WNG was cancelled.

# 802.15 WG Closing

# Thursday, 16th May 2024

**4:05 PM** WG Chair, Clint Powell (HID) called the meeting to order displaying the closing agenda document (Doc #*15-24-*[*0199*](https://mentor.ieee.org/802.15/dcn/24/15-24-0199-03-0000-may-2024-802-15-agenda.xlsx)*-03*)

## 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.

## General and Administrative

## Future Meetings and Polls

802.15 WG will hold its session July 14-19, 2024, with the in-person part being held at the Sheraton Le Centre Montreal @ Montreal, Quebec

Early bird registration ends tomorrow.

For the TG chairs: If not present in person, please ensure somebody is there to run the meeting in the room.

Polls:

* Would you like to come back to this venue? Y 28; N 0
* Did you go to the social? Y 30; N 4
* Did you NOT like the social? Y 29; N 1

## Sub-Groups and Committees Closing Reports

**TG4ac Closing Report:** Tero Kivinen (self) presented doc #[*15-24-0217-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0217-02-04ac-may-opening-and-closing.pptx)

* 2 slots in July that do not overlap with IG Crypto or TG4ME
* Created frame formats and template for MLME-primitives

**IG Crypto:** Tero Kivinen (self) presented doc # [*15-24-0219-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0219-02-cryp-may-opening-and-closing.pptx)

* Worked on Ascon, amendment for 15.4
* Worked on EDHOD, amendment to 15.9
* 2 slots in July to work on comments for PAR and CSD
* **IG Crypto Motion: TG9a PAR and CSD**
  + **﻿**Move that the PAR and CSD contained in documents 15-24-0284-00 and 15-24-0286-02, respectively, be approved by the IEEE 802.15 WG and that the LMSC 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 LMSC discussion at its closing meeting.
  + Moved: Tero Kivinen
  + Second: Phil Beecher
  + Discussion none
  + Result 36 Y; 0 N; 1 A
* **IG Crypto Motion: Approval of PAR and CSD**
  + Move that the PAR and CSD contained in documents 15-24-0267-01 and 15-24-0268-01, respectively, be approved by the IEEE 802.15 WG and that the LMSC 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 LMSC discussion at its closing meeting.
  + Moved: Tero Kivinen
  + Second: Phil Beecher
  + Discussion none
  + Result 36 Y; 0 N; 1 A

**TG4ab Closing Report**: Ben Rolfe (BCA) presented doc #[*15-24-0317-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0317-01-04ab-tg4ab-closing-report.pptx)

* 8 slots for July
* Still resolving comments, teleconferences set up
* 49 comments still outstanding from informal comment collection

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

* There were no presentations

**Joint 802.15/802.11Closing Report**: Ben Rolfe (BCA) verbal report.

* Still long way for common ground, but progress is there
* Conference calls planned, next meeting in July

Ben Rolfe (BCA) emphasize the importance of spectrum sharing. Therefore, he   
 proposes an IG on spectrum sharing. The WG chair will create this IG. First meeting will   
 be in July.

**TG4ad Closing Report**: Phil Beecher (Wi-SUN) presented doc #[*15-24-0253-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0253-01-04ad-opening-and-closing-report.pptx)

* 4 slots for July – use cases and technical guidance document, call for proposals
* Discussions on use-cases, channel models and interference models

**SC-Maintenance:** Phil Beecher (Wi-SUN) presented doc # [*15-24-0254-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0254-01-0mag-scm-agenda-opening-and-closing-report-may-2024.pptx)

* + Updates on 802.1, JTC1 topics, prepared IEC/ISO JTC1/C6 motions
  + Updated motion templates
  + 3 slots in July, two on Tuesday, one on Wednesday
  + **IEC/ISO JTC1/SC6 Informational motion**
    - Move that the IEEE 802.15 WG requests that IEEE 802 EC approve submission of the following project IEEE P802.15.4me\_D03 to ISO/IEC JTC1/SC6 for information under the PSDO agreement.
    - ﻿Moved: Phil Beecher
    - Second: Ann Krieger
    - Discussion: none
    - Results Y 40; N 0: A 0
  + **IEC/ISO JTC1/SC6 Informational motion**
    - Move that the IEEE 802.15 WG requests that IEEE 802 EC approve submission of the following project IEEE P802.15.7a\_D7 to ISO/IEC JTC1/SC6 for information under the PSDO agreement.
    - Moved: Phil Beecher
    - Second: Ann Krieger
    - Discussion: none
    - Results Y 38 ; N 0: A 0
  + **IEC/ISO JTC1/SC6 Informational motion**
    - Move that the IEEE 802.15 WG requests that IEEE 802 EC approve submission of the following project IEEE Std 802.15.13™ to ISO/IEC JTC1/SC6 for information under the PSDO agreement.
    - Moved: Phil Beecher
    - Second: Ann Krieger
    - Discussion: none
    - Results Y 37; N 0: A 0
  + **IEC/ISO JTC1/SC6 Liaison motion**
    - Move that the IEEE 802.15 WG requests IEEE 802 EC approval of the liaison statement contained in doc. # 15-24-0292-00-0000 describing the liaison of IEEE Std 802.15.3™-2023 to ISO/IEC JTC1/SC6 under the PSDO agreement.
    - Moved: Phil Beecher
    - Second: Ann Krieger
    - Discussion: none
    - Results Y 37; N 0; A 0
  + **IEC/ISO JTC1/SC6 Adoption motion**
    - Move that the IEEE 802.15 WG requests IEEE 802 EC approval to forward submission IEEE Std 802.15.3™-2023 to ISO/IEC JTC1/SC6 for adoption as an ISO/IEC/IEEE standard under the PSDO agreement.
    - Moved: Phil Beecher
    - Second: Ann Krieger
    - Discussion: none
    - Results Y 36; N 0; A 0

**Joint Session 802.1/802.15**

* + One slot for July

**TG4me Closing Report**: Gary Steubing (Cisco) presented doc # [*15-24-0159-03*](https://mentor.ieee.org/802.15/dcn/24/15-24-0159-03-04me-may-2024-ieee-802-15-4me-opening-agenda-and-closing.pptx)

* 3 slots in July
* 141 Comments from SA Ballot, all comments resolved, TG motions made to accept comment and to do recirculation
* **TG4me Motion SA recirculation ballot:**
  + Motion: Move that 802.15 WG start a Standards Association Recirculation Ballot of document P802.15.4-D04 (as edited in accordance with the instructions in document 15-24-0251-004-04me pending the completion and inclusion of the edits in the draft.
  + Moved by: Gary Stuebing
  + Seconded by: Phil Beecher
  + Discussion none
  + Result Y 31; N 1; A 1
* **TG4me Motion CRG:**
  + Move that IEEE 802.15 WG approves the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.4me\_D04 with the following membership: Gary Stuebing (Chair), Phil Beecher, Ann Krieger, Ben Rolfe, Billy Verso, Alex Krebs. 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
  + Discussion none
  + Result Y 36; N 0; A 0

**TG6ma Closing Report**: Ryuji Kohno (YNU/YRP-IAI) presented doc #[*15-24-0300-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0300-00-006a-tg15-6ma-closing-report-for-may-2024-meeting.pptx)

* 4 slots in July – AM1 preferred
* Preparing draft for pre-ballot

**TG7a Closing Report:** Yeong Min Jang (Kookmin University) doc# [*15-24-0320-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0320-01-007a-15-7a-higher-rate-longer-range-occ-tg-closing-report-may-2024.pptx)

* + Comment resolution completed
  + 3 slots in July, all AM1
  + **TG7a Motion CRG formation for the SA Ballot**
    - Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the SA balloting of the P802.15.7a 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: Phil Beecher
    - Discussion:
      * Q: All members are voting members
      * A: Yes
      * Q: Are the affiliations diverse
      * A: Yes
    - Result Y 22; N 0; A 2
  + **TG7a Motion: SA Recirculation Ballot** 
    - Motion: Move that 802.15 WG start a Standards Association Recirculation Ballot of CA document [15-22-0292-r3] and document P802.15.7a\_D7 (as edited in accordance with the instructions in document 15-24-0072-16-007a) pending the completion and inclusion of the edits in the draft.
    - Moved By: Yeong Min Jang
    - Seconded By: Phil Beecher
    - Discussion: None
    - Result Y 30; N 0; A 1

**IG NG-OCC Closing Report:** Yeong Min Jang (Kookmin Univ.) doc #[*15-24-0321-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0321-01-07ma-ieee-802-15-ig-ng-occ-closing-report-may-2024.pptx)

* + 8 contributions
  + 2 slots in July, plan is to invite research institutes and companies

**TG16t Closing Report:** Tim Godfrey (EPRI) presented doc #[*15-24-0310-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0310-02-016t-tg16t-closing-report-may-2024.pptx)

* + Completed comment resolution on LB204
  + 3 slots requested for July
  + **TG16t Motion CRG:**
    - Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.16t\_D03 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: Tim Godfrey
    - Second: Phil Beecher
    - Discussion: None
    - Result Y 28; N 0; A 1
  + **TG16t Motion Recirculation LB:**
    - Move that 802.15 WG start a WG Recirculation requesting approval of document P802-15-16t\_D3.0 and to forward document P802-15-16t\_D3.0, to Standards Association ballot.
    - Moved: Tim Godfrey
    - Second: Phil Beecher
    - Discussion:
      * Q: Is the draft posted in the private area?
      * A: If not available it will be there shortly.
    - Result Y 28; N 0; A 2
  + **TG16t Motion: PAR Extension**
    - MOTION: 802.15 WG requests that the IEEE 802 LMSC forward the 802.15.16t PAR extension documentation contained in 15-24-0299-00-016t-P802.16t\_PAR-Extension.pdf to NesCom.
    - Moved: Tim Godfrey
    - Second: Phil Beecher
    - Discussion: None
    - Result Y 30; N 0; A 2

**Liaison Reports**

**802.24 Liaison Report –** Tim Godfrey (EPRI) discussed doc # [*24-24-0012-03*](https://mentor.ieee.org/802.24/dcn/24/24-24-0012-03-0000-may-2024-interim-meeting-agenda-and-presentation.pptx):

* Different white papers in process and completed
* Update of white paper on smart grid planned

**802.18 RRTAG Liaison Report –** None.

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

* One more meeting
* No CA documents to review

**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.

## Adjourn

**5:40 PM** The WG Chair adjourned the meeting.

# 802.15 CAC Mtg.

# Sunday, 12th May 2024

## Attendance (13)

Clint Powell

Phil Beecher

Ann Krieger

Ben Rolfe

Tero Kivinen

Gary Stuebing

Clint Chapman

Ryuji Kohno

Christy Bahn

Yeong Min Jang (online)

~~Tim Godfrey~~

James Glib

Joerg Robert

Thomas Kürner

## Minutes

**5:42 pm**: WG Chair, Clint Powell (HID) called the mtg. to order and presented the WG Agenda (Doc #[*15-24-0199-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0199-00-0000-may-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.
* The patent claim question must be asked at every meeting.
* You must register and pay registration fee to participate this week.
* Update on Nescom and Revcom
* Two PARs have to be extended this year, i.e. for group 802.7 and 802.15.16. The PAR extension should be also added to the project spreadsheet.
* Phil will be the chair of new TG4ad.
* Photo with shirts will be taken on Wednesday.
* Confirmation for the social is necessary, as the social is overbooked. Vegetarians have to be in the first busses.
* Hotel reservation for Montreal should be made due to many parallel meetings in Montreal.
* Starting from Warsaw, Ad-hoc meetings get credit, AC meetings get extra credit.
* Updates on voting rights will be discussed in the rules meeting in July.

May Meetings:

* 802.15 Chairs Corner 2pm to 3:00pm on Sun., May. 12, 2024
* 802 Wireless Chairs (WCSC) meeting: 4pm to 5:30pm on Sun., May. 12, 2024
* Opening 802.15 WG AC meeting: 5:30pm to 6:30pm on Sun., May. 12, 2024
* Opening 802 LMSC: n/a
* Opening 802 Wireless: 8:00am to 9:00am on Mon., May. 13, 2024
* Opening 802.15 WG meeting: 9:15am to 10:00am on Mon., May. 13, 2024
* Mid-Week 802.15 WG AC meeting: 8:00am to 9:00am on Wed., May. 15, 2024
* Mid-Week 802.15 WG meeting: 10:30am to 11:30am on Wed., May. 15, 2024
* 802.15 WNG meeting: 11:30am to 12:30pm on Wed., May. 15, 2024
* Closing 802.15 WG meeting: 4:00pm to 6:00pm on Thu., May. 16, 2024
* Closing 802 LMSC: n/a

Subgroup Status and Objectives for March Plenary.

* **TG 4ab UWB-NG Amendment –** working on comment resolution
* **SC WNG –** currently zero presentations
* **TG 4ac Privacy Amendment –** potentially faster than 4ab
* **SC IETF -** update at WG15 Mid-Week
* **IG Crypto –** potential amendments to 15.9, and 15.4
* **TG 4ad NG-SUN PHYs Amendment –** chair confirmation
* **Joint .15/.1 Mtg. –**
* **Joint .15/.11 Mtg. -**
* **SC MAINT/RULES –** preparation of the joint .15/.1 session
* **TG 4me Revision to 2020 –** 4 sessions, potentially go for recirculation after the week
* **TG 6ma BAN/VAN Revision –** 4 session, internal comment resolution, TEC review required
* **TG 7a OCC Amendment** – SA ballot recirculation planned
* **IG NG-OCC -**
* **TG 16t Lic-NB Amendment -**
* **SC THz –** two meetings

Upcoming Meetings:

* May Plenary in Montreal, Canada.

AOB:

* Contribution in 802.18 planned on FCC for sub-GHz regulation

**6:39pm** WG chair recessed until Wednesday (8:00-9:00am)

# 802.15 Mid-Week CAC Mtg.

# Wednesday, 15th May 2024

## Attendance (12)

Clint Powell

Phil Beecher

Ann Krieger

Ben Rolfe

Tero Kivinen

Gary Stuebing

Clint Chapman

Ryuji Kohno

Christy Bahn

~~Yeong Min Jang~~

Tim Godfrey

James Glib

Joerg Robert

Thomas Kürner

James Gilb

## Minutes

**8:08am**: WG Chair, Clint Powell (HID) called the mtg. to order.

General Announcements:

* Tonight is the social. Do not forget the IEEE 802.15 shirt.
* Show the patent slides during every meeting of the session
* Only use the latest graphical agendas for the Webex rooms, as the others may be outdated

Administrative Items:

* LMSC approval for the two PAR extension targeted for July meeting.
* Fostering of SA Ballot pool for 16t should start soon.

Mid-week motions: none

Midweek Subgroup Status Updates

* **TG 4ab UWB-NG Amendment –** down to 68 comments, two contentious areas left
* **SC WNG –** still zero presentations
* **TG 4ac Privacy Amendment –** has not met yes, start working draft
* **SC IETF –** very short update
* **IG Crypto –** two PARs and CSDs created and already on mentor, motions in the closing plenary
* **TG 4ad NG-SUN PHYs Amendment –** two vice chairs appointed, discussions on use-cases and channel models
* **Joint .15/.1 Mtg. –** Phil Beecher will work with Johannes on reference points for timing
* **Joint .15/.11 Mtg. –** Real discussions on potential solutions, discussions will continue in July
* **SC MAINT/RULES –** 5 motions for JTC1 at the closing
* **TG 4me Revision to 2020 –** all comments resolved except the CCA and one PSD, recirculation at the end of the week, two motions for the closing
* **TG 6ma BAN/VAN Revision –** working on comment resolution, Coexistence Assurance document has to be created, start of letter ballot most likely in July
* **TG 7a OCC Amendment** – comment resolution completed, recirculation motion planned for the closing
* **IG NG-OCC –** 4 contributions
* **TG 16t Lic-NB Amendment –** Comment resolution completed, recirculation motion planned for the closing, SA ballot pool will be set up soon
* **SC THz –** two meetings, 4 contributions, next meeting in Vancouver

Any Other Business:

* Don’t forget about July registration.
* Attendance credit now available for the CAC meetings.

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

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

|  |  |  |
| --- | --- | --- |
| Last Name | First Name | Affiliation |
| Aldana | Carlos | Meta Platforms Inc. |
| Almholt | Thomas | Texas Instruments Inc. |
| Amezawa | Yasuharu | Mobile Techno Corp. |
| Anzai | Daisuke | Nagoya Institute of Technology |
| Au | Kwok Shum | Huawei Technologies Co.; Ltd |
| Bahn | Christy | IEEE STAFF |
| Barras | David | 3db Access AG |
| 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 |
| Choi | Sangsung | A2UICT |
| De Ruijter | Hendricus | Silicon Laboratories |
| de Vegt | Rolf | Qualcomm Incorporated |
| Dolmans | Guido | Holst Centre / IMEC-NL |
| El Soussi | Mohieddine | IMEC-NL |
| EMMELMANN | MARC | Self |
| 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. |
| Granhaug | Kristian | Novelda AS |
| Gruber | Josef | Infineon Technologies |
| Ha | Taeyoung | Samsung Electronics Co.; Ltd. |
| Harada | Hiroshi | National Institute of Information and Communications Technology (NICT) |
| Hart | Brian | Cisco Systems; Inc. |
| Henry | Jerome | Cisco Systems; Inc. |
| Hernandez | Marco | National Institute of Information and Communications Technology (NICT) |
| HOSAKO | IWAO | National Institute of Information and Communications Technology (NICT) |
| Huang | Lei | Huawei Technologies Co.; Ltd |
| Jang | Yeong Min | Kookmin University |
| Jiang | Jinjing | Apple Inc. |
| Jones | Vincent Knowles IV | Qualcomm Incorporated; Qualcomm Technologies; Inc |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Kabbinale | Aniruddh | Samsung Electronics |
| Kalkundrikar | Vishal | Ondas Networks |
| Kasamatsu | Akifumi | National Institute of Information and Communications Technology (NICT) |
| Keren | Rani | Huawei Technologies Co.; Ltd |
| 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 |
| kristem | vinod | Apple Inc. |
| Kuerner | Thomas | TU Braunschweig |
| Lee | Hong Won | LG ELECTRONICS |
| Lee | Jaegook | SAMSUNG ELECTRONICS |
| LEE | Mingyu | Samsung Electronics Co.; Ltd. |
| Lemsitzer | Stefan | NXP Semiconductors |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Li | Panpan | Huawei Technologies Co.; Ltd |
| Li | Wenzheng | Calterah Semiconductor Technology (Shanghai) Co.; Ltd. |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| LIU | CHENCHEN | Huawei Technologies Co.; Ltd |
| Luo | Xiliang | Apple; Inc. |
| Ma | Li | MediaTek Inc. |
| Ma | Zhepeng | Calterah Semiconductor Technology (Shanghai) Co.; Ltd. |
| Magrin | Davide | Meta Platforms Inc. |
| Maman | Mickael | STMicroelectronics |
| Megahed | Abdelfattah | Renesas Electronics Corporation |
| Mohamed Hassan Salem | Nedime Pelin | Cisco Systems; Inc. |
| Murray | Carl | Qorvo |
| Nagai | Yukimasa | Mitsubishi Electric Corporation |
| Neirynck | Dries | Ultra Radio Ltd |
| Pakrooh | Pooria | Qualcomm Technologies; Inc. |
| Patel | Tushar | Teradyne; Inc. |
| Patwardhan | Gaurav | Hewlett Packard Enterprise |
| Pirhonen | Riku | NXP Semiconductors |
| Powell | Clinton | PWC; LLC |
| QIAN | BIN | Huawei Technologies Co.; Ltd |
| Redlich | Oded | Huawei Technologies Co.; Ltd |
| Robert | Joerg | Technische Universitaet Ilmenau |
| Rolfe | Benjamin | Blind Creek Associates |
| Sand | Stephan | German Aerospace Center (DLR) |
| Sasaki | Shigenobu | Niigata University |
| Schmidt | Reinhold | Infineon Technologies |
| Sekine | Norihiko | National Institute of Information and Communications Technology (NICT) |
| Selander | Goran | Ericsson AB |
| SHAHAR | MENASHE | Ondas Networks |
| Shilo | Shimi | Huawei Technologies Co.; Ltd |
| So | Youngwan | Samsung Electronics Co.; Ltd. |
| Stuebing | Gary | Cisco Systems; Inc. |
| Sumi | Takenori | Mitsubishi Electric Corporation |
| Sun | Li-Hsiang | MediaTek Inc. |
| Suzuki | Takafumi | NICT |
| Takabayashi | Kento | Toyo University |
| Takai | Mineo | Space-Time Engineering |
| Tang | Weidong | NewRadio Techologies Co.; Ltd. |
| Verso | Billy | Qorvo |
| Walk | Philipp | MOXZ GmbH |
| Wendt | Matthias | Signify |
| Wisland | Dag | Novelda AS |
| Xiao | Libra | NewRadio Technology Co.; Ltd. |
| Yang | Shang-Te | Apple; Inc. |
| Yang | Xun | Huawei Technologies Co.; Ltd |
| Yao | Lichen | Holst Centre / IMEC-NL |
| Yee | James | MediaTek Inc. |
| Yee | Peter | NSA-CSD |
| Yu | zhongxing | Calterah Semiconductor Technology (Shanghai) Co.; Ltd. |
| Zakaib | Larry | SPARK Microsystems |
| Zeisberg | Sven | ZIGPOS GmbH |