**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 July 2024** | |
| Date Submitted | [23 July 2024] | |
| Source | [Joerg Robert]  [TU Ilmenau] | Email: [joerg.robert@ieee.org]  Voice: [+49 3677 69 4260] |
| Re: | [July 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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**151th IEEE 802.15 WSN SESSION**

**Le Sheraton Centre Montreal; Montreal, Canada (all times in local)**

**July 15-17, 2024**

# 802.15 WG Opening

# Monday, 15th July 2024

**10:40AM** WG Chair, Clint Powell (HID), called the meeting to order and opened the WG Agenda (Doc #[*15-24-0335-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0335-02-0000-july-2024-802-15-agenda.xlsx))

## Announcements

Welcome to the 151th session.

Additional column are added in the graphical agenda to highlight sessions with reciprocal credits. Groups that span all columns are always in virtual room 1.

AC meetings give optional attendance credit.

Do not forget to log in to IMAT to record your attendance.

Use the microphone when you speak, stating your name and affiliation.

The new 802.15 website will be launched soon. The new website will also contain templates for various things.

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 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 = min 12 time slots (of 15)

Motions for the closing plenary should be send to Phil Beecher and Ann Krieger as soon as possible.

WG Chair asked for new participants to speak up; none in the room, two online

## 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 question for patent claims has to be done at every single meeting.

## WG Approvals

Motion to *approve the agenda* (doc #[*15-24-0355-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0335-02-0000-july-2024-802-15-agenda.xlsx))

* Moved by: Ann T Krieger (U.S. DoD)
* Seconded by: Joerg Robert (TU Ilmenau)
* Discussion: none
* Approved by unanimous consent.

Motion to *approve the previous meeting minutes (*doc #[*15-24-0334-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0334-02-0000-802-15-wg-cac-joint-1-15-minutes-may-2024.docx)*)*

* Moved by: Ann T Krieger (U.S. DoD)
* Seconded by: Joerg Robert (TU Ilmenau)
* Discussion: none
* Approved by unanimous consent.

WG Chair presented the SASB dates, on a tab in the agenda (doc #[*15-24-0355-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0335-02-0000-july-2024-802-15-agenda.xlsx))

* Updates are given in Doc #[*15-24-0355-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0335-02-0000-july-2024-802-15-agenda.xlsx)

## General and Administrative

WG Chair presented the general meeting information:

* Voters: (voters: 132, nearly: 3, aspirant: 20)
* For questions regarding voting rights contact Ann Krieger

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 July will be contained in  
*doc #ec-24-0170-00*

Chair shows opening report (doc #[*15-24-0336-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0336-02-0000-july-2024-802-15-opening-report.pptx))

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

Workshop between ITU and 802

* Ann Krieger (U.S. DoD) presents doc #[ec-24-0160-00](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0160-00-INTL-joint-ieee-802-itu-t-sg15-workshop-summary.pptx)
* All presentation will be uploaded to the ITU website
* No specific focus on wireless technologies
* Approx. 200 people attended the meeting

## Future Meetings and Polls

Poll on attendance on Friday

* Breakfast - 15
* Lunch - 12
* Afternoon break - 9

Future Meetings:

* 802.15 WG will hold its session Sept. 8-13, 2024, with the in-person part being held at the Hilton Waikola
* Make the hotel reservation as soon as possible

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.

Registration required for social

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

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

* Multiple meetings this week
* Multiple presentations on various topics planned

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

* One joint meeting
* Discussion on time reference position

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

* PAR reviews
* Potential updates on the rules

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

* 4 session, plan to go for conditional submission to RevCom
* Very few comments left on UWB

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

* First letter ballot reached 75%
* Approx. 1400 comments
* Focus will be on comment resolution and new version of CA document

**IG Access:** Ben Rolfe (BCA)

* Objective is on method enhancing the channel access

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

* Two or three presentations planned

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

* Two presentations planned

**TG 4ac (Privacy Amendment):** Tero Kivinen (Wi-SUN)

* Creation of additional things beside the specification

**IG Crypto:** Tero Kivinen (Wi-SUN)

* 3 meetings, some comments received

**SC IETF:** Tero Kivinen (Wi-SUN)

* No updates

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

* Four sessions
* New draft uploaded
* Discussions on MAC

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

* Three sessions
* PAR extension
* All comments resolved, SA ballot recirculation planned

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

* 2 meetings
* 8 presentations planned

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

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

* Plan to go for SA ballot

## New Business

No new business

## AOB

Now AoB

## WG Recess

**12:05 PM** WG Chair recessed the meeting until the mid-week on Wednesday.

# 802.1 / 802.15 Joint Mtg.

# Tuesday 16th July, 2024

**6:15 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.

1. Meeting Introduction  
   The chair Glenn Parsons went through the [Agenda](https://1.ieee802.org/2024-07-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).
2. IEEE 802.15 update  
   Phil Beecher (Wi-SUN Alliance) presented parts of doc. #[15-24-0336-02](https://mentor.ieee.org/802.15/dcn/24/15-24-0336-02-0000-july-2024-802-15-opening-report.pptx).  
   He gave an update on the current 802.15 WG standards pipeline and their applications. Currently no additional activities with link to IEEE 802.1.  
     
   Marco Hernandez (YRP-IAI, Japan; CWC Oulu University, Finland) presented doc. #[15-24-0396-00](https://mentor.ieee.org/802.15/dcn/24/15-24-0396-00-006a-practical-aspects-of-solving-the-incompatibility-of-64-bit-mac-addresses-in-ieee-stds-802-15-with-the-ieee-std-802-1q-2022.pdf) on solving incompatibility of 64 bit MAC addresses.  
   Currently, 64-bit MAC addresses cannot make use of bridges and bridged networks. Interconnecting is currently possible with a switch in L2. Different approaches for connecting different MAC address lengths were presented.  
   Q: Is the suggestion to have dedicated bridge ports? Some are for 64 bits, others for 48 bits?  
   A: Yes.  
   Q: A port is only 64 bits or 48 bits?  
   A: Yes.  
   Q: How does the address translation work?  
   A: The addresses are mapped via a private address.  
   Q: How does multicast work?  
   A: The addresses can be changed to multicast addresses as well.  
   Q: Are the ARPs with 64 or 48 bits?  
   A: ARPs are 64 bits.  
   Q: What happens in case of multiple bridges?  
   A: This would be covered by the method shown on slide 9.  
   C: There could be problems, e.g. if security mechanisms are used.  
   C: Potentially all things can be solved von L3.  
   C: Different solution could be using 48 bit addresses for the 64 bits devices.  
   Q: What is the proposal?  
   A: Start a revision on the 802 architecture.

1. P802.1ACea  
   Marco Hernandez gave an update on the [draft](https://www.ieee802.org/1/files/private/ea-drafts/d1/802-1ACea-d1-1.pdf). In the next joint session he will be able to give a more comprehensive update.
2. 802.15 Physical interface  
   There has been no progress on 802.1 [Maintenance item 314](https://www.802-1.org/items/427). Offline discussions on this topic are planned between Johannes Specht and Phil Beecher.
3. Next steps & next meeting  
   Next meeting will be in the usual slot in November
4. Any other business  
   Nothing was raised

**7:15pm** Meeting adjournment

# 802.15 WG Mid-week (& WNG)

# Wednesday, 17th July 2024

**10:47 am** WG Chair, Clint Powell (HID) called the session to order. He is displaying the agenda (doc #[*15-24-0335-03*](https://mentor.ieee.org/802.15/dcn/24/15-24-0335-03-0000-july-2024-802-15-agenda.xlsx)).

1. **Announcements**

Please do not register to IMAT if you are not participating to the meeting.

Several motions during this session.

## Chair Reminders

Please follow the different policies.

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

## General and Administrative

Remember the social tonight. Registration is required to attend.

## Update on NesCom and RevCom and Dates

No new updates.

## Midweek Subgroup Status Updates

**TG 4ab**: Resolving comments. Approx. 3% of the comments are resolved.

**SC WNG**: Two presentations planned.

**IG Access**: Scope is still to be defined

**Joint .15/.11 Mtg.:** Interesting presentations and discussions. Trying to raise the coexistence awareness.

**TG 4ac:** Planning for draft at the end of September.

**IG Crypto:**

* Several comments from other groups. Motion to approve comment resolution
* **IG Crypto Motion:** WG approval of comment responses for PARs and CSDs
  + Request that the responses to received PAR and CSD review comments contained in document 15-24-0382-02 be approved for submission to the LMSC. The 802.15 working group chair and technical editor are authorized to make additional modifications to the responses as needed.
  + Moved by: Tero Kivinen
  + Seconded by: Phil Beecher
  + Discussion:
    - Q: Were there any controversial comments?
    - A: Only minor comments. Most comments were accepted.
  + Result Y 38; N 0; A 3
  + Motion passes

**SC IETF:** Tero Kivinen (Wi-SUN Alliance) presented status (doc #[15-24-0400-00](https://mentor.ieee.org/802.15/dcn/24/15-24-0400-00-IETF-sc-ietf-july-slides.pptx))

* Next IETF meeting will be in Vancouver
* 5 BoF

**TG 4ad:** Different presentations on various topics. Work continued on technical   
 guidance document.

**Joint 802.1/802.15 Mtg**.: Work of 802.15 was presented. Presentation on bridging of 48 and 64bit addresses. Next meeting in November.

**SC MAINTANCE/RULES:** PAR reviews of other groups without comments. Additional work on templates planned.

**TG 4me**:

* All comments resolved. Recirculation as soon as possible.
* **TG 4me Motion:** TG4me SA Ballot Recirculation
  + Move that 802.15 WG start a Standards Association Recirculation Ballot of document P802.15.4me-D07.
  + Moved by: Gary Stuebing
  + Seconded by: Phil Beecher
  + Discussion: None
  + Result Y 34; N 0; A 1
  + Motion passes
* **TG 4me Motion:** TG4me CRG Formation
  + Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.4me\_D07 with the following membership: Gary Stuebing (Chair), Alex Krebs, 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 by: Gary Stuebing
  + Seconded by: Phil Beecher
  + Discussion:
    - Q: Any dominance in the CRG?
    - A: No
  + Result Y 37; N 0; A 2
  + Motion passes

**TG 6ma**: First draft submitted to the technical editor for review.

**TG 7a**:

* Comment resolution for SA recirculation complete.
* **TG 7a Motion:** TG7a SA Ballot Recirculation
  + Move that 802.15 WG start a Standards Association Recirculation Ballot of CA document [15-22-0292-r3] and document P802.15.7a\_D8.
  + Moved by: Yeong Min Jang
  + Seconded by: Phil Beecher
  + Discussion: None
  + Result Y 37; N 0; A 4
  + Motion passes
* **TG 7a Motion:** TG7a 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\_D8 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: None
  + Result Y 37; N 0; A 4
  + Motion passes

**IG NG-OWC**: Group renamed to Next Generation Optical Wireless Communication to   
 attract more contributors

**TG 14 & TG15**: Still in hibernation

**TG 16t**: Plan to go to SA ballot. MEC review will start shortly. CRG motion at the end of the week.

**Liaison Report: 802.18**: Edward Au (Huawei) present the 802.18 liaison report (doc. #[15-24-0338-00](https://mentor.ieee.org/802.15/dcn/24/15-24-0338-00-0000-802-18-to-802-15-liaison-report-july-2024.pptx))

* Approved different IEEE 802 LMSC submissions
* Discussion on CEPT ERR ERC Report, Canada RABC, and EU RSPG for long-term vision of upper 6 GHz band
* Presentation from Dr. Steve Leach (Ofcom) on hybrid sharing of upper 6 GHz band

## New Business

No new business.

## Any Other Business

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

## WG Recess

**11:41am** 802.15 Midweek recessed by WG Chair Clint Powell (HID) until Thursday 4:00pm.

**Wireless Next Generation (WNG)**

**11:45 am** WNG Chair, Ben Rolfe (BCA) called the session to order. He is displaying the agenda (Doc #[*15-24-0358-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0358-01-wng0-july-meeting-slides.pptx)).

## Announcements

* The chair reminds everybody of the required registration and the meeting rules.
* The proposed agenda is approved.

## Presentation: on Diversified Range Communication for Disaster Response Operations

* Presentation of Mineo Takai (Space-Time Engineering) and Shoichi Kitazawa (Muroran IT) (doc. #[15-24-0402-00](https://mentor.ieee.org/802.15/dcn/24/15-24-0402-00-wng0-diversified-range-communication-for-disaster-response-operations.pptx))
* Different use-cases and data rate requirements are presented
* The system changes the data rate by changing the bandwidth while keeping the transmit power constant
* Improved spectrum resource measurement and transmit power control required
* Q: What are the next steps?
* A: Plan is to make additional gap analyses.
* Q: What do you want the group to do?
* A: Idea is the formation of an IG for September.

## Presentation: Feasibility Study on the use of UWB in ITS-G5

* Presentation of Friedbert Behrens (FB Consulting) (doc. #[15-24-0375-00](https://mentor.ieee.org/802.15/dcn/24/15-24-0375-00-wng0-etsi-tr-103-970-feasibility-study-on-the-use-of-uwb.pptx))
* Introduction to the scope of ITS in ETSI
* Presentation of current and potential future use-cases of UWB in the automotive sector
* Overview of next steps in ETSI
* Q: What do you want the group to do?
* A: Information for the group.

## AoB

* No topics were raised

**12:30pm** The WNG chair adjourns the session.

# 802.15 WG Closing

# Thursday, 18th July 2024

**4:07 PM** WG Chair, Clint Powell (HID) called the meeting to order displaying the closing agenda document (doc #[*15-24-0335-03*](https://mentor.ieee.org/802.15/dcn/24/15-24-0335-03-0000-july-2024-802-15-agenda.xlsx))

## Announcements

Registration is required to attend this meeting.

Please log into DVL now. If you have not received an email, please contact the vice chair.

## General and Administrative

The TG chairs should respond to email of Ann Krieger.

## Future Meetings and Polls

Polls:

* Did you like this venue
  + Yes, and I'd like to come back - 26
  + Yes, but I don't want to come back - 2
  + No - 0
* Did you go to the social? Y 21; N 7
* Did you like the social? Y 18; N 3

802.15 WG will hold its session Sept. 8-13, 2024, with the in-person part being held at the Hilton Waikola.

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

## Sub-Groups and Committees Closing Reports

**TG4ab Closing Report**: Ben Rolfe (BCA) presented doc #[*15-24-0377-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0377-01-04ab-july-plenary-tg-meeting-slides.pptx)

* Group worked on comment resolution and update of CA document
* 1470 comments, 47 comments resolved
* Two calls per week scheduled
* **TG4ab Motion:** TG4ab: Draft for Sale
  + Move to request the IEEE802 Wireless group chair to make the draft, P802.15.4ab-D01, available for sale via the IEEE Standards Store.
  + Moved by: Clint Chaplin
  + Seconded by: Benjamin Rolfe
  + Discussion: None
  + Result: Y 34; N 12; A 5
  + Motion passes

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

* Two presentations
* One request for new IG on new group focusing on disaster recovery

**IG Access**: Ben Rolfe (BCA) verbal report.

* Objective to look at spectrum access wrt. coexistence
* Lively discussion
* Request for at least one additional IG Access meeting in September

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

* Several technical presentations and many discussions
* Means to achieve coexistence still to be defined
* Next meeting in September

**TG4ac Closing Report:** Tero Kivinen (Wi-SUN Alliance) presented doc #[*15-24-0372-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0372-01-04ac-july-opening-and-closing.pptx)

* Working on the draft
* Discussed different issues
* Plan to start letter ballot in November

**IG Crypt Closing Report:** Tero Kivinen (Wi-SUN Alliance) presented doc #[*15-24-0373-02*](https://mentor.ieee.org/802.15/dcn/24/15-24-0373-02-cryp-july-opening-and-closing.pptx)

* Comment resolution of received PAR comments
* New versions of PARs and CSDs created
* One session for the planned TG4ae and TG9A in September

**TG4ad Closing Report**: Phil Beecher (Wi-SUN Alliance) presented doc #[*15-24-0365-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0365-01-04ad-tg4ad-agenda-opening-and-closing-report-july-2024.pptx)

* Consensus on channel and interference model
* Working on technical guidance document
* One conference call
* Issue Call for Intent

**SC-Maintenance:** Phil Beecher (Wi-SUN Alliance) presented doc # [*15-24-0364-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0364-01-0mag-scm-agenda-opening-and-closing-report-july-2024.pptx)

* Extensive review of motion templates
* Reviewed project checklist

**TG4me Closing Report**: Gary Steubing (Cisco) presented doc # [*15-24-0297-05*](https://mentor.ieee.org/802.15/dcn/24/15-24-0297-05-04me-july-2024-ieee-802-15-4me-opening-agenda-and-closing.pptx)

* Resolved all comments from Recirculation 3
* Generated LMSC package
* **TG4me Motion:** TG4me LMSC Conditional approval for Draft to RevCom
  + Move that 802.15 WG requests conditional approval from the IEEE 802 LMSC to submit P802.15.4me-D07 (or current revision) to RevCom.
  + Moved by: Gary Stuebing
  + Seconded by: Phil Beecher
  + Discussion: None
  + Result: Y 42; N 0; A 0
  + Motion passes

**TG6ma Closing Report**: Ryuji Kohno (YNU/YRP-IAI) presented doc #[*15-24-0404-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0404-01-006a-tg15-6ma-closing-report-july-2024.pptx)

* Draft prepared for pre-ballot
* CA document prepared
* Draft has to be updated concerning MAC

**TG7a Closing Report:** Yeong Min Jang (Kookmin University) doc# [*15-24-0417-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0417-00-007a-15-7a-higher-rate-longer-range-occ-tg-closing-report-july-2024.pptx)

* + Comment resolution completed for first SA ballot
  + Discussion of PAR extension
  + **TG7a Motion:** TG7a PAR Extension
    - Move that 802.15 WG requests that the IEEE 802 LMSC forward the P802.15.7a PAR extension documentation contained in 15-24-0370-01-007a to NesCom.
    - Moved: Yeong Min Jang
    - Second: Phil Beecher
    - Discussion: None
    - Result: Y 35; N 0; A 3
    - Motion passes

**IG NG-OWC Closing Report:** Yeong Min Jang (Kookmin Univ.) doc #[*15-24-0416-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0416-00-07ma-ieee-802-15-ig-ng-owc-closing-report-july-2024.pptx)

* + Eight presentations

**TG16t Closing Report:** Tim Godfrey (EPRI) presented doc #[*15-24-0418-00*](https://mentor.ieee.org/802.15/dcn/24/15-24-0418-00-016t-july-2024-tg16t-closing-report.pptx)

* + Comment resolution on LB205
  + Preparation for SA ballot, MEC started
  + Submission of PAR extension
  + **TG16t Motion:** TG16t - WG Recirculation
    - Move that 802.15 WG start a WG recirculation requesting approval of document P802.16t\_D4.0 and to forward document P802.16t\_D4.0, to Standards Association ballot
    - Moved by: Tim Godfrey
    - Second: Phil Beecher
    - Discussion: None
    - Result: Y 28; N 1; A 6
    - Motion passes
  + **TG16t Motion:** TG16t CRG
    - Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of P802.16t\_D4.0 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 31; N 0; A 5
    - Motion passes
  + **TG16t Motion:** TG16t Conditional SA Ballot:
    - Move that 802.15 requests conditional approval from the LMSC to submit P802.16t\_D4.0 (or current revision) to Standards Association ballot.
    - Moved: Tim Godfrey
    - Second: Phil Beecher
    - Discussion: None
    - Result: Y 32; N 0; A 4
    - Motion passes
  + **TG16t Motion:** TG16t PAR Extension
    - Move that 802.15 WG requests that the IEEE 802 LMSC forward the P802.16t PAR extension documentation contained in 15-24-0299-01-016t to NesCom.
    - Moved: Tim Godfrey
    - Second: Phil Beecher
    - Discussion: None
    - Result: Y 29; N 0; A 4
    - Motion passes

**802.11/802.15 Treasurer Report**: Ben Rolfe (BCA) presented doc #[*ec-24-0007-05*](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0007-05-WCSG-wireless-treasurer-report-2024.pptx)

**Liaison Reports**

**802.24 Liaison Report –** Ben Rolfe (BCA) gave a verbal report.

* Will publish white paper soon
* Working on additional white papers

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

* Technical input on spectrum measurements

**802.11 Liaison Report** – None.

## New Business

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

## Any Other Business

Roger Marks (EthAirNet Associates) presents doc # [ec-24-0174-00-00](https://mentor.ieee.org/802-ec/dcn/24/ec-24-0174-00-00EC-what-s-up-with-the-rac.pdf) on the IEEE Registration Authority Committee (RAC).

## Adjourn

**6:00 PM** The WG Chair adjourned the meeting.

# 802.15 CAC Mtg.

# Sunday, 14th July 2024

## Attendance (13)

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~~

## Minutes

**5:44 pm**: WG Chair, Clint Powell (HID) called the mtg. to order and presented the WG Agenda (Doc #[*15-24-0335-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0335-01-0000-july-2024-802-15-agenda.xlsx))

General Announcements:

* Chair reminds everybody of the IEEE policy
* Chair asks for potentially essential patents. No response from the group.
* Chair reminds everybody to pay registration fees.
* New voting rights calculator will be in force for November meeting.
* Registration for Waikoloa is open. Room rate is already exhausted. In case of room needs contact the meeting planner.

NesCom/RevCom Meetings:

* Dates are available in Doc #[*15-24-0335-01*](https://mentor.ieee.org/802.15/dcn/24/15-24-0335-01-0000-july-2024-802-15-agenda.xlsx)

July Meetings:

* 802.15 Chairs Corner 2pm to 3:00pm on Sun., Jul. 14, 2024
* 802 Wireless Chairs (WCSC) meeting: 4pm to 5:30pm on Sun., Jul. 14, 2024
* Opening 802.15 WG AC meeting: 5:30pm to 6:30pm on Sun., Jul. 14, 2024
* Opening 802 LMSC: 8:00am to 10:00am on Mon., Jul. 15, 2024
* Opening 802 Wireless: n/a
* Opening 802.15 WG meeting: 10:30am to 12:30pm on Mon., Jul. 15, 2024
* Mid-Week 802.15 WG AC meeting: 8:00am to 9:00am on Wed., Jul. 17, 2024
* Mid-Week 802.15 WG meeting: 10:30am to 11:30am on Wed., Jul. 17, 2024
* 802.15 WNG meeting: 11:30am to 12:30pm on Wed., Jul. 17, 2024
* Closing 802.15 WG meeting: 4:00pm to 6:00pm on Thu., Jul. 18, 2024
* Closing 802 LMSC: 1:00pm to 6:00pm on Fri., Jul. 19, 2024

Subgroup Status and Objectives for July Plenary.

* **TG 4ab UWB-NG Amendment –** Comment resolution and comment resolution on Coexistence Assessment Document, LB207 passed with 75%
* **SC WNG –** currently one presentation
* **IG Access –**
* **Joint .15/.11 Mtg. –** Session on Tuesday evening
* **TG 4ac Privacy Amendment –** Two PARs
* **SC IETF –** Part of the mid-week
* **IG Crypto –**
* **TG 4ad NG-SUN PHYs Amendment –** Four sessions
* **Joint .15/.1 Mtg. –** Agreed agenda
* **SC MAINT/RULES –** PAR review, potential rule updates for letter ballot
* **TG 4me Revision to 2020 –** Recirculation planned at the end of the week, 4 sessions
* **TG 6ma BAN/VAN Revision –** Work on Coexistence Assessment Document, still working on draft
* **TG 7a OCC Amendment –** Mainly editorial comments from first SA ballot, plan for recirculation, PAR extension required
* **IG NG-OCC –** Two sessions
* **TG 16t Lic-NB Amendment –** Motion for recirculation required, planned for Tuesday AM2
* **SC THz –** does not meet in Montreal

Upcoming Meetings:

* September Plenary in Waikoloa, US

AOB:

* 802.15.4ab wants to request publication of the draft

**6:33pm** WG chair recessed until Wednesday (8:00-9:00am)

# 802.15 Mid-Week CAC Mtg.

# Wednesday, 17th July 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 Gilb~~

Joerg Robert

~~Thomas Kürner~~

~~James Gilb~~

## Minutes

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

General Announcements:

* Automated tools for tracking progress in groups will be available soon.
* Emergency contacts should be provided if some things go wrong.
* Social tonight, ticket required

Mid-week motions:

* IG Crypto one motion on PAR and CSD comments
* TG 4me two motions for recirculation and CRG
* TG7a two motions for recirculation and CRG
* TG4ab motion to approve publication of draft for sale

Midweek Subgroup Status Updates

* **TG 4ab UWB-NG Amendment –** working on comment resolution
* **SC WNG –** three presentations, potentially not enough time
* **IG Crypto –** motion to approve PARs and CSDs comments
* **TG 4me Revision to 2020 –** one meeting left, motion for recirculation
* **TG 6ma BAN/VAN Revision –**  no decision made whether to go for letter ballot at the end of the week
* **TG 16t Lic-NB Amendment –** Motion to go for conditional SA ballot at the end of the week, MEC has to be completed before start of SA ballot

Any Other Business:

* The chair agreed to make the draft of 15.4ab available for purchase. The WG has to approve this. It has to go for MEC before the publication.
* It seems many people sign on to IMAT but do not attend the meeting at all. Vice chairs will send an e-mail on the reflector.

**8:59am** WG chair adjourned the CAC meeting.

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

|  |  |  |
| --- | --- | --- |
| Last Name | First Name | Affiliation |
| Adakeja | olubukola | Teradyne; Inc. |
| Aldana | Carlos | Meta Platforms Inc. |
| Alfvin | Richard | Linespeed Events LLC |
| Al-kadi | Ghiath | STMicroelectronics |
| Amezawa | Yasuharu | Mobile Techno Corp. |
| Andre | Jean-Marie | ST micro |
| Anzai | Daisuke | Nagoya Institute of Technology |
| Au | Kwok Shum | Huawei Technologies Co.; Ltd |
| Bahn | Christy | IEEE STAFF |
| Barbour | Ian | IEEE STAFF |
| BEECHER | PHILIP E | Wi-SUN Alliance |
| Berens | Friedbert | FBConsulting Sarl |
| Berger | Catherine | IEEE STAFF |
| Bettesh | Ido | Apple Inc. |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Canchi | Radhakrishna | Kyocera International Inc |
| Chaplin | Clint | Samsung Electronics |
| Chen | Run | New Radio Technology Co.; Ltd. |
| Chitrakar | Rojan | Huawei International Pte Ltd |
| Choi | Sangsung | A2UICT |
| Corbalan Pelegrin | Pablo | NXP Semiconductors |
| De Ruijter | Hendricus | Silicon Laboratories |
| Dolmans | Guido | Holst Centre / IMEC-NL |
| Ekrem | Ersen | Google; LLC |
| Gilb | James | General Atomics Aeronautical Systems; Inc. |
| Godfrey | Tim | Electric Power Research Institute; Inc. (EPRI) |
| Golshan | Robert | Apple; Inc. |
| 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 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 University Graduate School of Medicine; Dept of Neurological Diagnosis and Restoration |
| Ikegami | Tetsushi | Meiji University |
| Jang | Yeong Min | Kookmin 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 |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Wi-SUN Alliance |
| 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 |
| 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. |
| Liu | Yong | Apple; Inc. |
| Luo | Xiliang | Apple; Inc. |
| Ma | Li | MediaTek Inc. |
| Ma | Zhepeng | Calterah Semiconductor Technology (Shanghai) Co.; Ltd. |
| Maman | Mickael | STMicroelectronics |
| Megahed | Abdelfattah | Renesas Electronics Corporation |
| Minter | Jenaye | NSA |
| Murali | Sriram | Texas Instruments |
| Murray | Carl | Qorvo |
| Nabki | Frederic | SPARK Microsystems |
| Nagai | Yukimasa | Mitsubishi Electric Corporation |
| Neirynck | Dries | Ultra Radio Ltd |
| Nomura | Tetsuya | DENSO TEN LIMITED |
| Ott | Greg | USG |
| Pakrooh | Pooria | Qualcomm Technologies; Inc. |
| Parthasarathi | Srivathsa Masthi | NXP Semiconductors |
| Pirhonen | Riku | NXP Semiconductors |
| Powell | Clinton | PWC; LLC |
| QIAN | BIN | Huawei Technologies Co.; Ltd |
| Rahmani | Mohammad | SPARK Microsystems |
| Robert | Joerg | Technische Universitaet Ilmenau |
| 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 |
| 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. |
| Tian | Bin | Qualcomm Incorporated |
| Verso | Billy | Qorvo |
| Wang | Pu | Mitsubishi Electric Research Laboratories (MERL) |
| Wang | Yi-Hsiu | Calterah |
| Wendt | Matthias | Signify |
| Wentink | Menzo | Qualcomm |
| Wisland | Dag | Novelda AS |
| Xiao | Libra | NewRadio Technology Co.; Ltd. |
| Yang | Shang-Te | Apple; Inc. |
| YE | ZHENZHEN | Red Point Positioning |
| Yee | Peter | NSA-CSD |
| Yong | Su Khiong | Apple; Inc. |
| Yoon | Kangjin | Spark Microsystems |
| Yu | zhongxing | Calterah Semiconductor Technology (Shanghai) Co.; Ltd. |
| Zakaib | Larry | SPARK Microsystems |
| Zeisberg | Sven | ZIGPOS GmbH |
| Zhang | Xiaolong | Calterah Semiconductor Technology (Shanghai) Co.; Ltd. |