**IEEE 802.15**

**Wireless Specialty Networks (WSN)**

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| --- | --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSN) | |
| Title | **802.15 WG & CAC Minutes January 2023 Hybrid Mtg** | |
| Date Submitted | [20 January 2023] | |
| Source | [Ann Krieger]  [U.S. Department of Defense]  [Clint Powell] [ Platforms, Inc.] [Chandler, AZ] | email: [AnnKrieger.dod@gmail.com]  Voice: [+1.480.586.8457] Fax: [--] email: [cpowell@ieee.org] |
| Re: | [January 802.15 Meeting] | |
| Abstract | [IEEE 802.15 Working Group & CAC Minutes] | |
| Purpose | [Official minutes of the Working Group Opening/Closing and CAC Sessions] | |
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| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by 802.15. | |

**141th IEEE 802.15 WSN MEETING**

**Held Hybrid from Hilton Inner Harbor Baltimore (all times in local)**

**Jan. 15-19, 2023**

# 802.15 WG Opening

# Monday, 16th January 2023

**9:13 AM** WG Chair, Clint Powell (Meta), called the meeting to order and opened the WG Agenda ([*15-22-0682-02*](https://mentor.ieee.org/802.15/dcn/22/15-22-0683-02-0000-january-2023-agenda-for-802-15.xlsx))

**Announcements**

This meeting, January mtg. will be mixed mode (in-person and remote participants).

When you speak the first time, say your name and affiliation. You are required to pay to attend these sessions. There are several people who have not paid and if any of the dead beat attend, remove them from the webex.

WG Vice-Chair, Phil Beecher (Wi-Sun Alliance) announced the use of DirectVoteLive (DVL) for all WG votes. DVL will only be used at the closing plenary meeting on Thursday, 19 January. All voting members will receive an email link before Thursday. If you think you may be a voting member, let us know. One problem may be if you have different emails, if this is a problem consider using the free IEEE email reflector.

WG Chair asked for new participants to speak up, Xxx (Samsung) was in the room. Nancy Lee (Signify) – replied in the chat window.

## Legal

WG Chair informed the group of and displayed the IEEE-SA patent policy presentation  
slides 0-5 ([*http://standards.ieee.org/board/pat/pat-slideset.ppt*](http://standards.ieee.org/board/pat/pat-slideset.ppt)).

WG Chair asked the participants who wished to declare a Letter of Assurance (LoA) or to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for any of the ongoing activities within the 802.15 WG.

No essential patent claims were brought forth.

WG Chair displayed and read the standard IEEE Anti-Trust statement.

WG Chair displayed and read the standard IEEE Copyright Policy, including Code of Ethics.

WG Chair went through the agenda.

## WG Approvals

Phil Beecher (Wi-Sun) **moved** to *approve the agenda (document#* [*15-22-0683-02*](https://mentor.ieee.org/802.15/dcn/22/15-22-0683-02-0000-january-2023-agenda-for-802-15.xlsx)*)* with Ben Rolf (BCA) seconding the motion. Following no objection, the agenda was approved.

Phil Beecher (Wi-Sun) **moved** *to approve the previous meeting minutes (document#* [*15-22-0566-00*](https://mentor.ieee.org/802.15/dcn/22/15-22-0566-00-0000-802-15-wg-cac-min-nov-2022-hybrid-plenary.docx)*)* and Ben Rolf (BCA) seconded the motion. Following neither discussion nor objection the minutes were approved. There were no matters resulting from the previous minutes.

NesCom – 802.15.4 corrigendum was approved.

## General and Administrative

WG Chair presented the general meeting information:

* TG chairs need to have either yourself or a vice-chair is in the room.
* Voters: (voters: 136, nearly: 9, aspirant: 26)
* DVL list will go out to the voters on record.
* Register your attendance in IMAT and if you have any problems please reach out to Phil Beecher
  + 75% Attendance = 9 time slots (any 9 of the 12)

Ben Rolfe (BCA) gave the treasurers report (verbal) with a full report at the WG closing. Highlights: EC-23-0003

* Financial summary of 2022
* May meeting was planned to be in person, but delayed that so that gave us a surplus. Also, in September, we had more people attend then expected which also gave us a surplus.
* About 587 attending (in person and remote) in Baltimore. We are approaching our pre-pandemic numbers of around 300 in person. We are not losing the in-person attendance due to remote that we expected.
* It does cost a lot more to do a mixed mode meeting. Also, food & meeting space has also increased. Forecasting a loss on this meeting, but with our surpluses last year, we should be OK.
* Fees for May and September have been set and lowered a little. Both are expected to be mixed mode.
* Deadbeat consequences were listed.

The January 802.15 CAC meeting minutes are included in the WG minutes  
*(minutes: 15-22-0039-00* – this doc.*)*

The Wireless Chairs Steering Committee meeting minutes are contained in  
*(minutes:*[*ec-23-xxxxx-WCSG -minutes*](https://mentor.ieee.org/802-ec/dcn/22/ec-22-0188-01-WCSG-minutes-september-11-2022.docx)*)*

Chair shows 802.15 WG Opening report that was shown at the combined wireless opening previous to this meeting (*document #* [*15-22-0682-02*](https://mentor.ieee.org/802.15/dcn/22/15-22-0682-02-0000-january-2023-opening-report-for-802-15.pptx)*)*

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

802.15 Status and Activities Planned for the Week

* Task Group 15.3mb (1 meeting)
  + Wednesday AM1- Motion for SA ballot
* THz – (not meeting) will be back in March.
* Task Group 15.4 Cor1 (not meeting) in IEEE Editing
* SC Privacy (3 meetings)
  + Working on the PAR
* SC IETF (1 meeting)
  + Not much going on since November meeting, should be short.
* Task Group 4ab – NG-UWB (8 meetings)
  + Continue to hear and discuss PHY & MAC presentations
  + Technical framework – transition from Power Point to Text for editor
  + Time in agenda for technical breakouts (including virtual)
    - If you want a virtual break out room, check with Clint.
* Standing Committee - WNG (1 meeting)
  + 2 presentations – Coexistence in sub 1 GHz bands.
* Task Group 4me Revision to 2020 (4 meetings)
  + Looking at submissions
* Task Group 6ma – (BAN/VAN) (3 meetings)
  + Hear and discuss presentations
* Task Group 7a – OCC (3 meetings)
  + motion on Thursday – coordinate with Phil
* Task Group 13 – Multi Gigabit/sec OWC (2 meetings)
  + One slot to discuss future events and the other as a joint with 802.1
* Task Group 16t – 802.16 Lic-NB Amendment (3 meetings)
  + Working on pre-draft 0.2
* Joint 802.1/802.15 Mtg. (1 meeting)
  + TG 13 content.
* Standing Committee – SC-M, Rules (1 meeting)
  + Statement on 802.18

## New Business

WG Chair asked if there was any new business. None was raised.

## Any Other Business

Andrew Miles stated this would be his last meeting (He is the chair of JTC and Coex in 802.11)

WG Chair asked if there was any other business. None was raised.

## WG Recess

**10:10 PM** WG Chair recessed the meeting

# 802.1 / 802.15 Joint Mtg.

# Tuesday, 17th January 2023

**6:09 PM** 802.15 WG Chair Clint Powell (Meta) and 802.1 WG Chair Glenn Parsons (Ericsson) called the meeting to order. Glenn:

This activity is looking at 802.1 features/concepts that can be applied to the various 802.15 standards.

Glenn shared the [agenda](https://1.ieee802.org/2023-01-interim-joint-1-15-agenda/) and went through the IEEE patent and other legal slides.

**11:37 am**: Lennert Bober (Fraunhofer HHI) presented (*document #* [*15-23-0063-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0063-00-0013-ieee-p802-15-13-architecture-overview.pptx))

* Purpose – to explain the architecture of IEEE 802.15
* There is no encryption, authentication, cryptographic integrity protection in 802.15.13 Hope to use 802.1X, 802.1AE, 802.1AR, 802.15.9.
* Goal was to integrate with existing IEEE Std 802 LANS
* Support real-time networking and relevant TSM standards
* D10 is currently in RevCom.

There were several questions:

* Association ID – is that used in the addressing at all or used for some other purpose? Not used for addressing but could be used. They are using it for management.
* Data frames are using the EOI – 6 octects.
* Frame control (2 octets – a lot of frames) – how many are currently defined – 3 (data, control and management)
* Full MAC address is 48 bits. EPD format in the payload.
* Integrity, what scope? Might need lower level integrity protection

What is the next step in .13? Currently, there is no such PAR underway, but are looking to see what interest comes together in the next month. We may do an analysis of gaps.

802.15.13, reach out to 802.1 when you are ready to discuss these items.

Next session, in March, will be on 802.15.3.

**6:57pm** 802.15 Chair & 802.1 Chair adjourned the meeting

# 802.15 WG Mid-week

# Wednesday, 18th January 2023

**10:36 AM** WG Chair, Clint Powell (Meta) called the meeting to order displaying (document #[*15-22-0683-02*](https://mentor.ieee.org/802.15/dcn/22/15-22-0683-02-0000-january-2023-agenda-for-802-15.xlsx))

Announcements:

* Registration for this meeting is required.
* Motions immediately after your last session. Closing meeting is PM2 – please send all motions to Clint and Phil ASAP. Direct Vote Live will be used for all motions at closing, and the emails should be sent out later today.
* Still looking for a full-time secretary and third Vice-Chair, and some volunteers from time to time, we have some small projects we could use help with.
* A TG chair or Vice-Chair should be in the room to run the meeting, if possible.

No Polls

Upcoming Meetings:

* March 2023 Plenary in Atlanta – registration is up. Anniversary social is an additional cost.
* May 2023 Wireless Interim in Orlando, Florida.

All TG, SG and SC chairs gave a quick verbal status update except TG7a which was closing.

**TG7a Closing Report** : Samsung Choi (Kookmin University) presents *#*[*15-23-0072-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0072-00-007a-tg7a-closing-report-for-january-2023-meeting.pptx).

**802.15 TG7a – Start WG Letter Ballot**

*Move that 802.15 WG start a WG Letter Ballot requesting approval of CA document [15-22-0292-r3] and document P802.15.7a/D3 (as edited in accordance with the instructions in document 15-22-0674-03-007a) and to forward document P802.15.7a/D3, as edited in accordance with the instructions in document 15-22-0674-03-007a, and CA document [15-22-0292-r3] to Standards Association ballot pending the completion and inclusion of the edits in the draft.*

*Moved By Sangsung Choi*

*Seconded By Phil Beecher*

Approved by unanimous consent

**802.15 TG7a - Form CRG**

*Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.7a/D3 with the following membership: Yeong Min Jang(Chair), 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 Sangsung Choi*

*Seconded By Phil Beecher*

Approved by unanimous consent

No new business.

**11:01 802.15 Midweek recessed by WG Vice-Chair Phil Beecher**

**11:07 802.15 WNG Called to order by Ben Rolfe (BCA)**

The WNG slides were presented (*document #* [*15-23-0003-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0003-01-wng0-january-agenda-and-meeting-slides.pptx))

**11:10** Presentation: New ideas on improving many-to-many ranging in dynamic and dense networks by Feng Shan (*document #* [*15-23-0051-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0051-00-04ab-ultra-wideband-swarm-ranging-protocol-for-dynamic-and-dense-networks.pptx) ).

**11:59** Presentation: Channel Considerations for Next Generation Japanese Metering Applications by Phil Orlik (*document #* [*15-23-0064-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0064-01-wng0-channel-considerations-for-next-generation-japanese-metering-applications.pptx)).

* It is suggested to form an interest group to further evaluate impact of spectrum availability in Japan and alignment of CSMA behavior

**12:24** WNG Adjourned by Ben Rolfe

# 802.15 WG Closing

# Thursday, 19th January 2023

**4:04 PM** WG Chair, Clint Powell (Meta) called the meeting to order displaying the closing agenda (document #[*15-22-0683-02*](https://mentor.ieee.org/802.15/dcn/22/15-22-0683-02-0000-january-2023-agenda-for-802-15.xlsx))

## Announcements

WGChair reiterated the need to be registered for this meeting.

WG Vice-Chair Phil Beecher (Wi-Sun Alliance) did an attendance check in IMAT and 6 people did not have the 75% attendance (9 out of 12 meetings). After the reminder the ones who were close achieved that mark. Attendance closes when we adjourn.

Direct Vote Live (DVL) will be used for all votes. You should have received an email with a link. If you did not, please let Clint or Phil know. All votes are recorded below as Y/N/A (Yes/No/Abstain)

802.15 is still in need for one more WG vice chair and secretary.

**Future Meetings**

The next plenary will be in Atlanta Georgia (USA) in March, the details were discussed in the opening and mid-week. The R0 schedule will be posted soon, please look at it. The 802.15 closing will be Thursday PM3 (6:30-8:30 local time). Please plan your travel accordingly.

## Closing Reports

**4:10 PM 802.15 WG** Closing Agenda by Clint Powell (Meta)

**TG3mb Closing Report**: Thomas Kurner presents: [*15-23-0013-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0013-00-03ma-tg3mb-closing-plenary-slides-meeting-january-2023.pptx) (needs 5 meetings at Plenary, 4 for TG3mb plus a joint meeting)

**TG3mb – Motion on SA Ballot**

WG 802.15 has reviewed and approves the CSD 15-21-0477-04-03ma-draft-csd-15-3ma.docx, and the CA document 15-22-0462-05-03ma-coexistence-assurance.doc; and requests unconditional approval from the EC to submit P802-15-3-Rev B-D4.pdf to Standards Association ballot.

Moved: Thomas Kürner

Seconded: Phil Beecher

No discussion, DVL vote: **30/0/1** (Y/N/A)

**TG3MB - Motion on CRG formation**

Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802-15-3-Rev B-D4.pdf  with the following membership: Thomas Kürner (Chair), Iwao Hosako, Josep Jornet, Shoichi Kitazawa and Jörg Robert. The 802.15.3mb 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: Thomas Kürner

Seconded: Phil Beecher

No discussion, DVL vote: **35/0/0** (Y/N/A)

**SC THz Closing Report:** did not meet (needs 1 meeting in March)

**TG4ab Closing Report**: Ben Rolfe presents [*15-23-0082-00*](https://mentor.ieee.org/802.15/dcn/23/15-23-0082-00-04ab-january-2023-closing-report.pptx)(needs 7 meetings in March, break out room for middle 5)

**WNG Closing Report**: Ben Rolfe discussed verbally (Need 1 meeting in March)

**TG4me Closing Report**: Phil Beecher presents [*15-23-0008-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0008-01-04me-tg4me-opening-agenda-and-closing.pptx)(needs 4 meetings in March)

**TG6ma Closing Report**: Ryuji Kohno presents [*15-23-0075-02*](https://mentor.ieee.org/802.15/dcn/23/15-23-0075-02-006a-tg15-6ma-closing-report-for-january-2023.pptx)(needs 3 meetings in March, joint meeting with 4ab)

**TG7a Closing Report:** Sangsung Choi presented at midweek.

**TG13 Closing Report:** Volker Jungnickel presents [*15-22-0081-03*](https://mentor.ieee.org/802.15/dcn/23/15-23-0081-03-0013-tg13-closing-report-for-january.pptx)(no more meetings)

**WG Motion to reconfirm TG13 CRG**

**﻿**Move that 802.15 WG approves the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.13\_D10 with the following membership: Volker Jungnickel as Chair, Tuncer Baykas, Sang-Kyu Lim, Tero Kivinen. The 802.15.13 CRG is authorized to approve comment resolutions, edit the draft according to the comment resolutions, and to approve the start of recirculation ballots of the revised draft on behalf of the 802.15 WG. Comment resolution on recirculation ballots between sessions will be conducted via reflector email and via teleconferences announced to the reflector as per the LMSC 802 WG P&P.

Moved: Volker Jungnickel

Second: Phil Beecher

No discussion, passed by unanimous consent.

**TG13 Approval of Minutes**

Motion to approve the January meeting minutes of TG13 in doc. 15-23/0077r0.

Moved: Volker Jungnickel

Second: Phil Beecher

No discussion, carries by unanimous consent.

**TG16t Closing Report:** Tim Godfrey presents [*15-23-0024-03*](https://mentor.ieee.org/802.15/dcn/23/15-23-0024-03-016t-jan-2023-interim-meeting-presentation.pptx)(Need 6 meetings in March)

**SC-IETF Closing Report:** Tero Kivinen – no report (Need 1 meeting in March)

**SG Privacy Closing Report:** Tero Kivinen presents [*15-23-0032-02*](https://mentor.ieee.org/802.15/dcn/23/15-23-0032-02-0017-priv-opening-and-closing-slides.pptx) (Need 2 meetings in March)

**SG Privacy - Motion to approve PAR and CSD**

Move that the PAR and CSD contained in documents 15-23-0040-00 and 15-23-0041-02, respectively, be approved by the IEEE 802.15 WG and that the IEEE 802 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 by: Tero Kivinen

Seconded by: Phil Beecher

No discussion, DVL vote: **30/0/0** (Y/N/A)

**Joint Session 802.1/802.15** reported at the mid week**.**

**SC-Maintenance:** Phil Beecher presents [*15-23-0055-01*](https://mentor.ieee.org/802.15/dcn/23/15-23-0055-01-0mag-scm-opening-and-closing-report-interim-january-2023.pptx)(Need 3 meetings in March)

**802.15 WG - Motion to forward IEEE 802.15.4-2020/Cor 1-2022 to ISO**

IEEE 802.15 WG requests IEEE 802 LMSC approval to forward IEEE 802.15.4-2020/Cor 1-2022 to ISO/IEC JTC1/SC6, for information and adoption under the PSDO agreement

Proposed: Phil Beecher

Second: Tero Kivinen

No discussion, DVL vote: **28/0/1** (Y/N/A)

**Liaison Reports**

**802.24 Liaison Report –** Tim Godfrey gives verbal report

**802.18 RRTAG Liaison Report –** no liaison present, posted [*15-22-0688-02*](https://mentor.ieee.org/802.15/dcn/22/15-22-0688-02-0000-802-18-to-802-15-liaison-report-january-2023.ppt)

**802.19 Coexistence TAG Liaison Report –** Ben Rolfe gives verbal report, there is a table of all the frequencies used for IEEE 802.

**802.11 –** no liaison present

## AOB

Additional fee for social at the March Plenary.

**WG Adjourn**

**5:38 PM** The WG Chair Clint Powell adjourned the meeting

# Annex A Total attendance (in-person + remote) = 135

|  |  |  |
| --- | --- | --- |
| Last Name | First Name | Affiliation |
| Aldana | Carlos | Facebook |
| Amezawa | Yasuharu | Mobile Techno Corp. |
| Andre | Jean-Marie | ST micro |
| Anliker | Claudio | ETH Zurich |
| Anzai | Daisuke | Nagoya Institute of Technology |
| Bahn | Christy | IEEE STAFF |
| Bansal | Ankur | SAMSUNG ELECTRONICS |
| Barras | David | 3db Access AG |
| Baykas | Tuncer | Ofinno |
| Beecher | Philip E | Wi-SUN Alliance |
| Beg | Chris | Cognitive Systems Corp. |
| Bettesh | Ido | Apple Inc. |
| Bims | Harry | Bims Laboratories, Inc. |
| Bober | Lennert | Fraunhofer Heinrich Hertz Institute |
| Brown | Monique | National Institute of Info. and Comms. Tech. (NICT) |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Canchi | Radhakrishna | Kyocera International Inc |
| Cao | Rui | NXP Semiconductors |
| Chaplin | Clint | Self |
| Chen | You-Wei | Mediatek Inc |
| Chitrakar | Rojan | Huawei International Pte Ltd |
| Cho | Hangyu | LG ELECTRONICS |
| Choi | Jinsoo | LG ELECTRONICS |
| Choi | Sangsung | Kookmin University |
| Corbalan Pelegrin | Pablo | NXP Semiconductors |
| Danev | Boris | 3db Access AG |
| De Ruijter | Hendricus | Silicon Laboratories |
| Dotlic | Igor | Qorvo |
| Dowd | Garrett | Battelle Memorial Institute |
| 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. |
| Granhaug | Kristian | novelda |
| Grosswindhager | Bernhard | NXP Semiconductors |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Ha | Taeyoung | Samsung Electronics Co., Ltd. |
| Haasz | Jodi | IEEE Standards Association (IEEE-SA) |
| Harada | Hiroshi | Kyoto Univ.; National Institute of Info. and Comms. Tech. (NICT) |
| Hernandez | Marco | National Institute of Info. and Comms. Tech. (NICT) |
| Hirata | Masayuki | Osaka Univ. Grad School of Med, Dept of Neurological Diag. & Rest. |
| Hjortland | Haakon | Novelda AS |
| Hosako | Iwao | National Institute of Info. and Comms. Tech. (NICT) |
| Hotchkiss | Ron | IEEE STAFF |
| Huang | Lei | Huawei Technologies Co., Ltd |
| Ikegami | Tetsushi | Meiji University |
| Jiang | Jinjing | Apple Inc. |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Juntunen | Juha | Meteor Communications Corp. |
| Kabbinale | Aniruddh | SAMSUNG |
| Kalkundrikar | Vishal | Ondas Networks |
| Kandala | Srinivas | SAMSUNG |
| Kasamatsu | Akifumi | National Institute of Info. and Comms. Tech. (NICT) |
| Kennedy | Richard | IEEE member / Self Employed |
| Keren | Rani | Huawei Technologies Co., Ltd |
| Kerry | Stuart | OK-Brit; Self |
| Kim | Minsoo | YRP International Alliance Institute |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| KOBAYASHI | Takumi | Yokohama National University |
| Kohno | Ryuji | YNU/CWC UofOulu; YNU/YRP-IAI |
| Krebs | Alexander | Apple Inc. |
| Krieger | Ann | US Department of Defense |
| kristem | vinod | Apple Inc. |
| Kuechler | Wolfgang | NXP Semiconductors |
| Kuerner | Thomas | TU Braunschweig |
| Lee | Hong Won | LG ELECTRONICS |
| LEE | Mingyu | Samsung Electronics Co., Ltd. |
| Lee | Nancy | Signify |
| Lemsitzer | Stefan | NXP Semiconductors |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Info. and Comms. Tech. (NICT) |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| Lin | Wei | Huawei Technologies Co., Ltd |
| Lindskog | Erik | Samsung |
| Liu | Chenchen | Huawei Technologies Co., Ltd |
| Luo | Xiliang | Apple, Inc. |
| Ma | Yongsen | Redpoint Positioning |
| Mak | Siukai | Broadcom Corporation |
| Marks | Roger | EthAirNet Associates |
| Murray | Carl | Qorvo |
| Nabki | Frederic | SPARK Microsystems |
| Nagai | Yukimasa | Mitsubishi Electric Corporation |
| Namboodiri | Vamadevan | SAMSUNG ELECTRONICS |
| Neirynck | Dries | Ultra Radio Ltd |
| Niewczas | Jaroslaw | Qorvo |
| Orlik | Philip | Mitsubishi Electric Corporation |
| Pakrooh | Pooria | Qualcomm Technologies, Inc. |
| Pare | Thomas | MediaTek Inc. |
| Parthasarathi | Srivathsa Masthi | NXP Semiconductors |
| Peng | Xiaohui | Huawei Technologies Co., Ltd |
| Pirhonen | Riku | NXP Semiconductors |
| Pleym | Jan | Novelda AS |
| Powell | Clinton | Powell Wireless Consulting, LLC |
| QIAN | BIN | Huawei Technologies Co., Ltd |
| Rahmani | Mohammad | SPARK Microsystems |
| Redlich | Oded | Toga Networks, a Huawei company |
| Robert | Joerg | TU Ilmenau/Fraunhofer IIS |
| Rolfe | Benjamin | Blind Creek Associates |
| Saito | Hiroki | ARIS Inc. |
| Sakaguchi | Naotaka | Mitsubishi Electric Corporation |
| Sand | Stephan | German Aerospace Center (DLR) |
| Sayrafian | Kamran | National Institute of Standards and Technology |
| Segev | Jonathan | Intel corporation |
| Sekine | Norihiko | National Institute of Info. and Comms. Tech. (NICT) |
| Shahar | Menashe | Ondas Networks |
| Shellhammer | Stephen | Qualcomm Incorporated |
| Shilo | Shimi | Huawei Technologies Co., Ltd |
| So | Youngwan | Samsung Electronics Co., Ltd. |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sumi | Takenori | Mitsubishi Electric Corporation |
| Sun | Li | Huawei Technologies Co., Ltd |
| Sun | Li-Hsiang | MediaTek Inc. |
| Suzuki | Takafumi | National Institute of Info. and Comms. Tech. (NICT) |
| Takabayashi | Kento | Okayama Prefectural University |
| Tian | Bin | Qualcomm Incorporated |
| Verso | Billy | Qorvo |
| Wang | Chao Chun | MediaTek Inc. |
| Ward | Lisa | Rohde & Schwarz |
| Wendt | Matthias | Signify |
| Wilhelmsson | Leif | Ericsson AB |
| Wisland | Dag | Novelda AS; University of Oslo |
| Wu | Kanke | Qualcomm Incorporated |
| Wu | Kuan | Huawei Technologies Co., Ltd |
| Xiao | Libra | NewRadio Technology Co., Ltd. |
| Yang | Shang-Te | Apple, Inc. |
| Yang | Xun | Huawei Technologies Co., Ltd |
| Ye | Zhenzhen | Red Point Positioning |
| Yee | Peter | NSA-CSD |
| Yong | Su Khiong | Apple, Inc. |
| Yoon | Jeonghwan | LG ELECTRONICS |
| Yoon | Kangjin | Meta Platforms Inc. |
| Zakaib | Larry | SPARK Microsystems |
| Zeisberg | Sven | ZIGPOS GmbH |
| Zou | Qiyue | Meta |

# 802.15 CAC Mtg.

# Sunday, 15th January 2023

## Attendance

Phil Beecher

Tim Godfrey

Tero Kivinen

Ann Krieger

Sangsung Choi

Clint Powell

Ben Rolfe

Volker Jungnickel

Gary Stuebing

Jodi Haaz

James Glib

Clint Chapman (on-line)

Marco Hernandez (on-line)

Thomas Kurner (on-line)

## Minutes

**5:42 pm**: WG Chair, Clint Powell (Meta) called the mtg. to order and presented the agenda (document #[*15-22-0683-02*](https://mentor.ieee.org/802.15/dcn/22/15-22-0683-02-0000-january-2023-agenda-for-802-15.xlsx))

General Announcements:

* General information about this meeting to include information about Baltimore was sent out through an email.
* Attendance for 802.15 in the January interim is as follows
  + 12 slots are deemed as 100%, therefore 75% is 9 slots.
* Chairs are still needed for TG14 and TG15
* Still use a WG Secretary and another WG Vice-Chair – need help with website
* 15.4 Corrigendum was approved on 9/21.

January sessions:

* 802 Wireless Chairs (WCSC) meeting: 4pm to 5:30pm on Sun. Jan 15, 2023
* Opening 802.15 WG CAC meeting: 5:30pm to 6:30pm on Sun. Jan 15, 2023
* Opening Wireless Joint meeting: 8:00am to 9:00am on Mon. Jan 16, 2023
* Opening 802.15 WG meeting: 9:00am to 10:00am on Mon. Jan 16, 2023
* Mid-Week 802.15 WG CAC meeting: 7:30am to 8:30am on Wed. Jan 18, 2023
* Mid-Week 802.15 WG meeting: 10:30am to 11:30am on Wed. Jan 18, 2023
* Closing 802.15 WG meeting: 4pm to 6pm on Thurs. Jan 19, 2023
* Joint meeting with 802.1/802.15 Tuesday Jan 17, 2023

Subgroup Status and Objectives for January Wireless Interim.

* Task Group 3mb (1 meeting)
  + Motions for SA ballot – had two recirculations
* Study Group THz (not meeting)
* Task Group 15.4 2020 Cor1 (not meeting)
  + Published, nothing to do here
* SC Privacy (3 meetings)
  + Work on PAR
* SC IETF (1 meeting)
  + Short – not really much happening since November
* Task Group 4ab – NG-UWB (8 meetings)
  + Continue to hear and discuss PHY & MAC presentations
  + Technical framework documents – transition from power point to text, with power point explaining why it was done.
  + Time in the agenda for technical breakouts (including virtual breakouts) - Chinese consultation that includes UWB rules something for 802.18.
* SC WNG (1 meeting)
  + There will be two presentations
* Task Group 4me Revision to 2020 (4 meetings)
  + First draft was loaded. Some comments
  + Adjourning on Tuesday
* Task Group 7a – OCC (3 meeting)
  + Comment resolution
* Task Group 6ma – (BAN/VAN) (3 meetings)
  + MAC, FEC and discussions with 4ab.
  + No motions
* Task Group 13 – Multi Gigabit/sec OWC (2 meetings) - Jungnickel
  + Joint slot with 802.1
  + 1 slot to discuss future events
* TG 14 and 15 in hibernation.
* Task Group 16t – 802.16 Lic-NB Amendment (3 meetings) - Godfrey
  + Working on draft D0.2 - First review of draft in November 2022
  + Direct peer to peer mode
  + Letter ballot after the May meeting.
* Joint 802.1/802.15 Mtg (1 meeting)
  + 802.15.13 will be giving a presentation.
* Standing Committee – SC-M (2 meetings)
  + Discuss 802.18 and frequency table from 802.19

Upcoming Meetings:

* March 2023 – Plenary in Atlanta
* May 2023 – Wireless Interim in Orlando

AOB:

* 15.13mb draft to SA Ballot
* 802.1/802.15 joint topics

**6:20pm** WG chair adjourned the CAC meeting.

# 802.15 Mid-Week CAC Mtg.

# Wednesday, 18th January 2023

## Attendance

Clint Powell

Phil Beecher

Tim Godfrey

James Glib

Volker Jungnickel

Tero Kivinen

Ann Krieger

Jodi Haaz

Ryuji Kohno

Ben Rolfe

Sangsung Choi

On-line:

Thomas Kurner

Takumi Kobayashi

Clint Chapman

Swen Zeisberg

Huan-Bang Li

Feng Shan

Stuart Kerry

## Minutes

**7:34am**: WG Chair, Clint Powell (Meta) called the mtg. to order and presented the agenda ([*15-22-0683-02*](https://mentor.ieee.org/802.15/dcn/22/15-22-0683-02-0000-january-2023-agenda-for-802-15.xlsx) )

General Announcements:

* TG7a will be doing their motion during the Mid-week.
* Most motions will be using DVL at the closing.
* EC agenda items (1) for Feb call
  + SA ballot for 3mb
  + JTC – distribute for information for 3mb
* SG Privacy – expected to be TG 17 will now be TG 15.4ac
* Still need a chair for TG14 and TG15 still need a dedicated Secretary and 3rd vice-chair
* Keep status short and verbal at the mid-week
* Registration is open for March meeting
* Social tonight in the hotel

Subgroup Status and Objectives for January Wireless Interim.

* Task Group 3mb
  + Closing motions – Yes (2)
  + EC Agenda items – No
  + PAR extension needed – No
* Task Group 4ab – NG-UWB
  + Closing motions – No
  + EC Agenda items – No
  + PAR extension needed – No
* Task Group 4me Revision to 2020
  + Closing motions – No
  + EC Agenda items – No
  + PAR extension needed – No
* Task Group 6ma – (BAN/VAN)
  + Closing motions – No
  + EC Agenda items – No
  + PAR extension needed – No
* Task Group 7a – OCC
  + Closing motions – yes (2) – mid week
  + EC Agenda items – No
  + PAR extension needed – No
* Task Group 13 – Multi Gigabit/sec OWC
  + Closing motions – Yes (2)
  + EC Agenda items – No
  + PAR extension needed – No
* Task Group 16t – 802.16 Lic-NB Amendment
  + Closing motions – No
  + EC Agenda items – No
  + PAR extension needed – No
* Joint 802.1/802.15 Mtg
  + Closing motions – No
  + EC Agenda items – No
* Study Group Privacy
  + Closing motions – Yes (1)
  + EC Agenda items – No
* Standing Committee – IETF
  + Closing motions – No
  + EC Agenda items – No
* Standing Committee – SC-M, Rules
  + Closing motions – Yes (1)
  + EC Agenda items – No
* Standing Committee – WNG
  + Closing motions – No
  + EC Agenda items – No

Any Other Business:

* Ad-hoc meetings set up in advanced, come to Clint to request a room.
* Give the # of sessions for the March meeting at the Closing.

**8:04am** WG chair adjourned the CAC meeting.