**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **<IEEE802.15 WG minutes>** |
| Date Submitted | [20 September 2019] |
| Source | [Pat Kinney][][Chicago, IL][Benjamin Rolfe][Blind Creek Associates][Los Gatos, CA, USA] | Voice: [+1.847.960.3715]Fax: [+1.847.790.3805]E-mail: [pat.kinney@ieee.org]Voice: [+1.408.395.7207]Fax: [Deprecated]E-mail: [ben.rolfe@ieee.org] |
| Re: | [802.15 Wireless Interim Meeting in Hanoi, Vietnam] |
| Abstract | [IEEE 802.15 Working Group Minutes] |
| Purpose | [Official minutes of the Working Group Session] |
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**122nd IEEE 802.15 WSN MEETING**

**J. W. MARRIOT HOTEL AND EVENT CENTER**

**HANOI, VIETNAM**

**September 16-19, 2019**

**Monday, 16 September 2019**

**Working group opening plenary (122nd session of 802.15)**

**122 session called to order at 09:32 Local by WG Chair Bob Heile**

**09:30** B Heile, Decawave, WG chair called the 802.15 WG plenary to order

Announcements:

* Meeting Logistics and Housekeeping
* Social location update – will be in the hotel
* Network from LineSpeed
* There is 1 first time attendee
* Jay Holcomb (802.18 chair) put out a request for a vice-chair and secretary for 802.18

Chair reminded attendees that highlights of the IEEE-SA Standards Board Bylaws on Patents in Standards. Chair referred those who wished to review these policies that the IEEE-SA patent policy presentation slides 1-5 and reading the instructions for the WG Chair. (<https://standards.ieee.org/about/sasb/patcom/materials.html>**)**.

Chair asked participants 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 the use of that standard:

* There were no responses

Chair reminded participants of IEEE anti-trust rules and obligations.

**Agenda** ([15-19-0374-03](https://mentor.ieee.org/802.15/dcn/19/15-19-0374-03-0000-han-2019-graphic-agenda.xlsx))

Discussion: Item 1.4 Approval of Minutes from VIE, not YVR. Correction posted as r04.

**Motion:** *Approve opening agenda* ([15-19-0374-04](https://mentor.ieee.org/802.15/dcn/19/15-19-0374-04-0000-han-2019-graphic-agenda.xlsx))

* Moved by Rick Alfvin (Linespeed)
* Seconded by Tim Harrington (ProID Consulting)
* Following no further discussion nor objection the agenda was approved by unanimous consent.

**Motion:** *Review and approve 802.15 WG minutes from the July session* ([15-19-0299-00-0000](https://mentor.ieee.org/802.15/dcn/19/15-19-0299-00-0000-wg-minutes-from-vienna-july-2019.docx))

* Moved by Rick Alfvin (Linespeed)
* Seconded by Tim Harrington (ProID Consulting)
* Upon neither discussion nor objection the WG minutes were approved.

**Network and attendance information** by R Alfvin (Linespeed) ([http://ieee802.linespeed.io/)](http://ieee802.linespeed.io/%29);

94 voters 9 hearly 16 aspirants;

Network report: we have 100M total, ieee802.linespeed.io has the links for everything you need to know. Network office is in Studio 1.

Pro-tip: Toggle your Wi-Fi interface off and on when moving rooms.

Reminder: Mobile Wi-Fi hotspots are disruptive, please do not use mobile hotspots in or around the meeting rooms

**Treasury report** by Ben Rolfe (Blind Creek Associates)

Document ([ec-19-0136-01](https://mentor.ieee.org/802-ec/dcn/19/ec-19-0136-01-WCSG-wireless-treasurer-report-sept-2019-hanoi.pptx))

**AoB**

None

**09:59** WG recessed until Wednesday, 10:30 local.

**Wednesday 18 Sept 2019**

**802.15 mid-session plenary meeting**

**10:32** Bob Heile (Decawave) called the meeting to order.

Announcements:

* Please don’t use 802.15 as your affiliation
* Reminder to book your room and register for the November plenary
* Straw Polls on the HAN venue:
	+ How many like the venue: Yes 20, No 1
	+ How many would like to return here in May 2023: Yes 9 No 5
	+ Reasons to not return:
		- Travel: 10
		- Hotel proximity to other stuff: 8

**Reports:**

**802.18 liaison** by Jay Holcomb (Itron)

* Still needs a permanent recording secretary.

**TG4md (revision)** by G Stuebing (Cisco Systems)

* Comment resolution Continues
* Expect to recirculation ballot before November meeting

**TG 15.4w** (**LPWAN**)by Jörg Robert (University of Erlangen-Nuremberg)

* Sponsor Association ballot still open
* Expect comment resolution and recirculation following this meeting

**TG 15.4y (SEC)** by D Sturek (Itron)

* Draft still being developed

**TG 15.4z (EIR)** by Benjamin A. Rolfe (BCA)

* Resolving recirculation ballot comments
* Expect to begin 2nd recirculation following this meeting

**TG9ma** by Tero Kivenin

* TG chair confirmation Motion:

802.15 Working Group confirms the appointment of Tero Kivinen as the task group 9ma chair.

Moved by: Ben Rolfe (BCA)

Second by: Phil Beecher (Wi-SUN Alliance)

Following neither discussion nor objection motion carries by unanimous consent.

**TG13** by Volker Jungnickel (Fraunhofer Heinrich Hertz Institute)

* Draft work continues

**IGDEP** by R Khono (self)

* Continued IG
* WNG presentation on 802.15.6 BAN UWB in brain interface applications

**IG Profiles by** Don Sturek

* IG decided to roll up results into document and move further work into SCM

**IG VAT** by Yeong Min Jang (Kookmin University)

* Working on PAR and CSD for revision of 802.15.7-2018

**SC maintenance report** by Bob Heile (Decawave)

* Did not meet

**SC WNG report** by Bob Heile (Decawave)

* UWB BAN for Brain/Machine interface
* 802.16t amendment report

**AoB**

* None

**10:59** Recessed until Thursday at 18:30

**WNG**

10:59 WNG called to order

* Document 15-19-0421-02 Takafumi Suzuki (NICT)

<https://mentor.ieee.org/802.15/dcn/19/15-19-0421-02-0dep-brain-machine-interface-based-on-electrocorticography-using-high-speed-uwb-wireless-body-area-network.pdf>

* Document /15-19-0412-02 Tim Godfrey

Proposed 802.16 amendment and why WG15 should know about it. <https://mentor.ieee.org/802.15/dcn/19/15-19-0412-02-wng0-licensed-narrowband-amendment.pptx>

**Thursday, 19 September 2019**

**18:32** 802.15 WG chair called the meeting to order (some number of attendees)

* Usual reminders given.

**TG4md closing report** by G Stuebing (Cisco Systems) (15-19-0392-02)

* Meeting objectives met.

***Motion****:* *Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4-REVd-D04 with the following membership: Gary Stuebing (As Chair), Don Sturek, Kunal Shah, Ruben Salazar, Tero Kivinen, Phil Beecher and Shoichi Kitazawa. The 802.15.4md CRG is authorized to approve comment resolutions and to approve the start of a recirculation letter ballot of the revised draft on behalf of the 802.15 WG. Comment resolution on 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 (Cisco Systems)

Seconded by: Rick Alfvin (Linespeed)

Upon neither discussion nor objection the motion carries with unanimous consent.

**Profiles closing report** by D Sturek (Itron) (15-19-0357-00)

* Gave closing report at mid-week.

**TG 4w (LPWAN) closing report** by Jörg Robert (University of Erlangen-Nuremberg) (15-19-0458-01)

* ***BRC Motion:***

*Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.4w\_D5 with the following membership: Joerg Robert (Chair), Charlie Perkins, Johannes Wechsler, and Hendricus De Ruijter. The 802.15.4w 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 Jörg Robert

Second by Rick Alfvin

Upon neither discussion nor objection the motion carries with unanimous consent.

**18:50** TG 4y (SECN) closing reportby D Sturek (Itron) (15-19-0426-02)

* Meeting objectives met.
* Motions

*Move that 802.15 WG start a WG Letter Ballot requesting approval of document P802-15-4y\_D01 (as edited in accordance with the instructions in document 15-19-0433-00-004y) and to forward document P802-15-4y\_D01 to Standards Association.*

Moved by: Don Sturek

Second by: Rick Alfvin

Upon neither discussion nor objection the motion carries with unanimous consent.

*Move that TG4y requests 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4y-D01 with the following membership: Don Sturek (As Chair), Tero Kivinen, Peter Yee, Ruben Salazar. The 802.15.4y CRG is authorized to approve comment resolutions and to approve the start of recirculation ballots of the revised draft on behalf of 802.15 WG. Comment resolution on 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: Don Sturek

Second by: Rick Alfvin

Upon neither discussion nor objection the motion carries with unanimous consent.

**TG 9ma closing report** by Tero Kivinen **(15-19-0417-00)**

* Meeting objectives met.

**TG 4z (ELR) closing report** by T Harrington (Pro-ID) (15-19-0450-01)

* Meeting objectives met.
* Motion:

*Move that 802.15 Working Group approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4z\_D3 with the following membership:*

*Ayman Naguib (Apple), Mingyu Lee (Samsung), Aditya Padaki(Samsung), Billy Verso (Decawave), Frank Leong (NXP), Tim Harrington (Chair) (Pro-ID), Ben Rolfe (Blind Creek), David Barras (3dB), Boris Danev (3dB), Brima Ibrahim(NXP), Peter Sauer (Microchip), Paul Kettle (Decawave), Zheda Li (Samsung), Clint Chaplin (Samsung), Jochen Hammerschmidt (Apple)*

*The 802.15.4z 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, via teleconferences and face to face meeting(s) announced to the reflector as per the LMSC 802 WG P&P.*

Moved by: Tim Harrington

Second by: Ben Rolfe

Upon neither discussion nor objection the motion carries with unanimous consent.

**19:03** TG12 ULI did not meet

**19:08** TG13closing report by Volker Jungnickel (Fraunhofer) (15-19-0461-00)

* Meeting objectives met.
* Motion:

*Move to send out copyright request from ITU-T in doc. 15-19/0422r1 Proposed Liaison from IEEE 802.15 Working Group to ITU-T Q18/15.*

Moved by Volker Jungnickel

Seconded by Rick Alfvin

Count: 21 yes, 0 no, 2 abstain

Motion carries.

**19:11 802.15.22.3** closing report by Bob Heile (Decawave)

* **Task group did not meet. WG Chair on behalf of TG brings the following motion to extend the CRG:**

***Motion:*** *Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the SA balloting of the P802.15.22.3 D05 with the following membership: Apurva Mody (Chair), Oliver Holland, Roger Hislop, Gianfranco Miele, Ranga Reddy. The 802.15.22.3 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 Ben Rolfe

Seconded by Rick Alfvin

Count: 0 yes / 0 no / 0 abstain

**19:20** IGDEP closing report by Ryogi Khono () (15-19-0454-00)

* Meeting objectives met

**19:24** IGVAT closing report by Yeong Min Jang (Kookmin University) (15-19-0454-00)

* Meeting objectives met
* Motion:

*Motion: Request that the 802.15 WG seek 802 EC approval at the Nov 2019 Plenary to forward the PAR (dcn 15-19-0296-02) and the CSD (dcn 15-19-0297-02)  to NesCom, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.*

Moved by Yeong Min Jang

Seconded by Vinayagam Mariappan

Count: 18 yes, 0 no, 3 abstain

**SC closing report** by Bob Heile (Decawave) (Verbal)

* ***Report on WNG: Review of possible 802.16 project***

**802.11 liaison report**

* None given.

**802.18 liaison** report by J Holcomb (Itron) (15-19-0399-00)

* Reviews activities for the week and plan for November.

**802.19 liaison report** by Ben Rolfe (Blind Creek, Mitsubishi Electric Research Labs)

* Discussion on Coexistence Assessment process document. Revised document being balloted in 802.19. WG15 chair Bob Heile requests review and forward any comments to him to submit with WG15 chair’s vote.
* 802.11ax CAD will be balloted by 802.19. WG15 chair Bob Heile requests review and forward any comments to him to submit with WG15 chair’s vote.

**802.24 liaison report** by T Godfrey (EPRI) (15-19-365-00)

* Reviews activities for the week and plan for November. 802.16t PAR has been developed and posted [insert doc #s] and will circulate for WG review before November. Relevant to 802.15 in that the EC may assign the project to 802.15.

**AoB**

* November meeting update by Bob Heile. Register early and often.
* Working Group approval to publish P802.15.4z-D03.

Motion: The 802.15 WG approves publication of P802.15.4z-D03 and post for sale by IEEE-SA.

Moved by Clint Chaplin

Second by Ayman Naguib

Following neither discussion nor objection motion carries by unanimous consent.

**Motion** ***to adjourn*** was made by Ayman Naguib, seconded by Rick Alfvin; upon no objection the motion carried, this session is adjourned.

**19:50 Adjourned**

**Annex A** Attendance = 45

|  |  |  |
| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Alfvin | Richard | Linespeed Events LLC |
| Barras | David | 3db Access AG |
| Baykas | Tuncer | Istanbul Medipol University |
| BEECHER | PHILIP E | Wi-SUN Alliance |
| Bims | Harry | Bims Laboratories, Inc. |
| Bober | Lennert | Fraunhofer Heinrich Hertz Institute |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Chaplin | Clint | Samsung Research America |
| Choi | Sangsung | Woosong University |
| Danev | Boris | 3db Access AG |
| De Ruijter | Hendricus | Silicon Laboratories |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Harrington | Timothy | Pro-ID |
| Heile | Robert | DecaWave |
| Holcomb | Jay | Itron Inc. |
| Ibrahim | Brima | NXP Semiconductors |
| Jang | Yeong Min | Kookmin University |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| Kohno | Ryuji | YNU/CWC UofOulu |
| LEE | Mingyu | Samsung Electronics Co., Ltd. |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Li | Zheda | Samsung Research America |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| MAQBOOL | Masood | Apple, Inc. |
| MARIAPPAN | VINAYAGAM | SNUT |
| Naguib | Ayman | Apple, Inc. |
| Powell | Clinton | Powell Wireless Consulting, LLC |
| Purwita | Ardimas |  |
| Robert | Joerg | University of Erlangen-Nuremberg |
| Rolfe | Benjamin | Blind Creek Associates |
| Sakata | Ren | TOSHIBA Corporation |
| Salazar Cardozo | Ruben E | Landis+Gyr AG |
| Shah | Kunal | Silver Spring Networks Inc. |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Itron Inc. |
| Suzuki | Takafumi | NICT |
| Verso | Billy | DecaWave |
| Ward | Lisa | Rohde & Schwarz |
| Wechsler | Johannes | Fraunhofer Institute for Integrated Circuits IIS |
| Wu | Dave | Google |
| Yee | Peter | NSA/IAD |
| Alfvin | Richard | Linespeed Events LLC |
| Barras | David | 3db Access AG |
| Baykas | Tuncer | Istanbul Medipol University |
| BEECHER | PHILIP E | Wi-SUN Alliance |
| Bims | Harry | Bims Laboratories, Inc. |
| Bober | Lennert | Fraunhofer Heinrich Hertz Institute |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Chaplin | Clint | Samsung Research America |
| Choi | Sangsung | Woosong University |
| Danev | Boris | 3db Access AG |
| De Ruijter | Hendricus | Silicon Laboratories |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |