**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 | [15 Mar 2019] | |
| Source | [Pat Kinney] [] [Chicago, IL] | Voice: [+1.847.960.3715] Fax: [+1.847.790.3805] E-mail: [pat.kinney@ieee.org] |
| Re: | [802.15 Plenary Meeting in Vancouver, Canada] | |
| Abstract | [IEEE 802.15 Working Group Minutes] | |
| Purpose | [Official minutes of the Working Group Session] | |
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**119th IEEE 802.15 WSN MEETING**

**HYATT REGENCY VANCOUVER**

**VANCOUVER, BC, CANADA**

**March 11-14, 2019**

**Monday, 11 Mar 2019**

**10:30 AM** The chair, Bob Heile (Decawave), called the meeting to order (15-18-0074-04)

The chair showed a face-to-face presentation on this venue, i.e. “Top Ten Things to Know”.

The chairasked for new attendees to raise their hands; there were three.

Announcements:

* Don’t forget to register for Atlanta Buckhead, GA
* Next May will be the 20th anniversary meeting

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>).

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. There were no attendant responses to this call.

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

Gary Stuebing moved to *approve the agenda (document 15-19-0074-04-0000)* with Rick Alfvin seconding the motion. Following no objection, the agenda was approved.

Tim Harrington moved *to approve the previous meeting minutes (document 15-19-0020-00-0000)* and Rick Alfvin seconded the motion. Following neither discussion nor objection the minutes were approved. There were no matters resulting from the previous minutes.

Rick Alfvin (Linespeed) presented the wireless network information.

Ben Rolfe (Blind Creek Associates) presented the treasurer’s report ([ec-19-0033-00-WCSG](https://mentor.ieee.org/802-ec/dcn/19/ec-19-0033-00-WCSG-wcsc-march-2019-status-report.pptx)).

B Heile verbally presented a report on the Wireless Chair Committee report. Minutes are available at [ec-19-0038-00-WCSG](https://mentor.ieee.org/802-ec/dcn/19/ec-19-0038-00-WCSG-wcsc-march-2019-status-report.pptx)

Future Sessions

* May 12-17, 2019, Grand Hyatt Atlanta in Buckhead, Atlanta, Georgia, USA *802 Wireless Interim Session.\**
* July 14-19, 2019, Austria Congress Centre, Vienna, Austria, *802 Plenary Session.*
* September 15-20, 2019- Marriott Hanoi, Hanoi, Vietnam, *802 Wireless Interim Session.\**
* November 10-15, 2019, Hilton Waikoloa Village, Kona, HI, USA, *802 Plenary Session*
* January 12-17, 2020 Hotel Irvine, Irvine CA (TBC) *Wireless Interim Session.\**
* May 10-15, 2020 Warsaw Marriott (TBC) *Wireless Interim Session.\**
* Future venues 2020 Lisbon Marriott, Budapest Marriott, Vienna Hilton, Athens Hilton, Sorrento Hilton, JW Bucharest.

**Status Reports**

802.18 by Jay Holcomb (Itron)

* Ofcomm changes discussion
  + Vehicles to anything update
  + NPRM on 6 GHz rule changes

802.15

Task Group 4md – Revision by G Stuebing (Cisco Systems)

* Working on comment resolution
* 39 comments to be resolved

Task Group 4w – LPWA by J Robert (University of Erlangen-Nuremberg)

* Working on finishing the draft of the specification

Task Group 4y – SECN by D Sturek (Itron)

* Presentations to be heard

Task Group 4z – ELR by T Harrington (UWB Alliance)

* Coexist assurance document effort
* Working on draft

Task Group 10a – RMA by C Perkins (Futurewei)

* + - Done, draft was approved

Task Group 12 –Upper Layer Interface (ULI) by P Kinney (Kinney Consulting)

* + - Continuing work on preliminary draft

Task Group 13 –Multi Gigabit/sec OWC by V Jungnickel (Fraunhofer Heinrich Hertz Institute)

* + - Presentations on MAC
    - Working on draft

IG Dep by R Kohno (YNU/CWC-Nippon)

* Looking to amend 15.6 in collaboration with ETSI

IG THz by T Kürner (TU Braunschweig)

* Hearing 4 presentations

IG Profiles by D Sturek (Itron)

* Looking to canvas who’s using what will use Wi-SUN as an example

Standing Committees (SCmaintenance, SC IETF, SCwng) by P Kinney (Kinney Consulting)

* + No maintenance requests for published standards but changes requested for operation manual
  + IETF103 accomplishments for 6tisch, 6lo, core, roll, suit, and lp-wan
  + WNG- three presentations

802.19 Coexistence Group by B Rolfe (BCA/MERL/UWB Alliance)

* 19.3 effort is active

**11:20 PM** The chair recessed the meeting

**Wednesday, 13 Mar 2019**

**10:31** Bob Heile, WG chair (Decawave) called the meeting to order.

WG Chair made announcements concerning social, logistics, and affiliation requirements. Straw Poll:how many wouldn’t mind coming back? 25, there were 0 against

Straw Poll: *how many would want to have a session in Australia?* 29/2/0

Straw Poll: *how many would want to have a session in Cairns, Australia?* 16/3/0

**10:40** 802.18 Tag liaison by J Holcomb (Itron)

* ETSI CEPT discussion
* Ofcom discussion on Thursday
* FCC NPRM on changes to 902 – 928 MHz on Thursday

**10:42** TG4md by D Sturek (Itron)

* Comment resolution from WG ballot, 5 remaining technical comments

**10:44** TG4w by J Robert (Friedrich-Alexander-Universität Erlangen)

* Continue drafting process

**10:48** TG4y by D Sturek (Itron)

* Looking to delay timeline

**10:50** TG4z by T Harrington (Pro ID)

* Working on finishing the draft

**10:49** TG13 by S Kim (ETRI)

* Consolidating the MAC
* Later this week will have a discussion on security

**10:52** IG Dependability by R Kohno (YNU/CWC-Nippon)

* Working on collaboration with ETSI M2M

**10:56** IG THz closing report by T Kürner (TU Braunschweig) (15-19-0112-01)

**10:57** SC reports by P Kinney (Kinney Consulting)

* SC IETF: will review status from constrained IETF WGs
* SC Maintenance: no requested changes
* SC WNG: one presentation to be heard

**10:58** TG 15.12 ULI by P Kinney (Kinney Consulting)

* Working on the profile configurations

**10:58** 802.18 by B Heile (Decawave)

* Working on redefining coexistence assurance documentation
* Document will be epolled by WGs

**11:04** WG chair recessed the meeting until Thursday evening.

**Thursday, 14 Mar 2019**

**18:33** WG chair called the meeting to order

**18:36** TG4md closing report by Gary Stuebing (Cisco Systems) (15-19-0102-03)

Move that *802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4-REVd-D01 with the following membership: Gary Stuebing (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 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: Ben Rolfe (Blind Creek Associates)

Upon neither discussion nor objection the motion carries by unanimous consent

**18:39** TG4w LPWA closing report by Jörg Robert (Friedrich-Alexander-Universität Erlangen) (15-19-0175-01)

Move that *802.15 WG start a WG Letter Ballot requesting approval of CA document 15-19-0165-00-004w and document P802-15.4w\_D1 and to forward document P802-15.4w\_D1, to Standards Association ballot.*

Moved by J Robert, seconded by Ben Rolfe (Blind Creek Associates)

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

Move that *802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4w\_D1 with the following membership: Joerg Robert (Chair), Charlie Perkins, Johannes Wechsler, Hendricus De Ruijter, and Yeong Min Jang. 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, seconded by Tim Harrington (Pro ID)

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

**18:46** TG4x FANE closing report by Matt Gillmore (Itron) (15-19-0173-00)

Move that *802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association Balloting of P802.15.4x-D2 with the following membership: Matt Gillmore (Chair), Kunal Shah, Chris Calvert, Ruben Salazar, Phil Beecher, Gary Stuebing. The 802.15.4x CRG is authorized to approve 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: Matt Gillmore

Seconded by: Rick Alfvin (Linespeed)

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

Motion to

* *Approve sending P802 15 4x-D2 to RevCom.*
* *Approve CSD documentation in* [*https://mentor.ieee.org/802-ec/dcn/18/ec-18-0083-00-ACSD-802-15-4x.docx*](https://mentor.ieee.org/802-ec/dcn/18/ec-18-0083-00-ACSD-802-15-4x.docx)

Moved By: Matt Gillmore

Seconded by: Gary Stuebing (Cisco)

Upon no discussion the vote was taken with the results of 30/0/0, motion carries

**18:50** TG4y by D Sturek (Itron) (15-19-0139-01)

**18:55** TG4z **(**EIR) closing report by Tim Harrington(Pro ID) (15-19-0181-01)

Move that *802.15 WG start a WG Letter Ballot requesting approval of CA document 15-18-0523-04-004z and document P802-15-4z\_D06e, as edited in accordance with the instructions in document 15-19-0109-15-004z, to forward draft and CA document to the Standards Association Ballot, with the condition of approval by both the CRG and TEG combined. For this purpose the CRG voters are Tim Harrington, Billy Verso, Ayman Naguib, Aditya Padaki, Frank Leong, David Barras, Daniel Knobloch, Peter Sauer, Ben Rolfe, and Jochen Hammerschmidt. The CRG is authorized to make changes to the draft. The TEG currently consists of James Gilb, Clint Chaplin, Pat Kinney, and Tero Kivinen.*

Moved by Tim Harrington, seconded by Ben Rolfe (Blind Creek Associates)

Many comments made on the fact that the draft wouldn’t be ready within 30 days due to the many errors noted in the current revision. Other comment noted that the state of this draft was equal to or better than other drafts that have gone to letter ballot.

Upon no further discussion the vote was taken with the results of 29/4/2, the motion carries.

Move that *802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4z\_D06e or current draft with the following membership: Tim Harrington (Chair), Ayman Naguib, Seongah Jeong, Aditya Padaki, Billy Verso, Frank Leong, Ben Rolfe, David Barras, Daniel Knobloch, Jochen Hammerschmidt, Boris Danev, Brima Ibrahim, Peter Sauer, and Jarek Niewczas. The 802.15.4z CRG is authorized to approve comment resolutions and edit the draft according to the comment resolutions between sessions will be conducted via reflector email and via teleconferences announced to the reflector as per the LMSC 802 WG P&P.*

Moved by Tim Harrington, seconded by Ben Rolfe (Blind Creek Associates)

Upon neither discussion the vote was taken with the results of 25/4/2, motion carries.

**19:50** IG Dependability closing report by Huan Bang Li (NICT) (15-19-0140-00)

**19:54** IG VAT by Yeong Min Jang (Kookmin University) (15-19-0178-00)

Comment made that the presentations need to be made by individuals, not companies.

**20:02** TG13 closing report by Volker Jungnickel (Fraunhofer Heinrich Hertz Institute) (15-19-0180-01)

**20:07** TG 12 (ULI) closing report by P Kinney (Kinney Consulting) (15-19-0085-01)

**20:12** Standing Committees closing report by P Kinney (Kinney Consulting) (15-19-0089-02)

**20:14** 802.11 liaison report by A Petrick (Jones-Petrick and Associates) (15-19-0168-00)

**20:22** 802.18 liaison report by J Holcomb (Itron) (15-19-0135-00)

**20:26** 802.19 liaison by Ben Rolfe (Blind Creek Associates**)** (19-19-0022-00)

Effort will continue to develop a coexistence assessment document

**20:29** 802.24 liaison by T Godfrey (EPRI) (24-19-0183-01)

**AoB**

**20:32** Motion *to adjourn* was made by Ben Rolfe, seconded by Rick Alfvin. Upon hearing no objection, the motion carries; the session is adjourned.

**Annex A** Attendance = 79

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| **Last Name** | **First Name** | **Affiliation** |

|  |  |  |
| --- | --- | --- |
| Ahlendorf | Hendrik | NXP Semiconductors |
| Akhavan | Koorosh | Qualcomm Incorporated |
| Alfvin | Richard | Linespeed Events LLC |
| Arokkiam | Jerome | OSRAM GmbH |
| Baer | Bernd | Marquardt |
| Barras | David | 3db Access AG |
| Berens | Friedbert | FBConsulting Sarl |
| Bims | Harry | Bims Laboratories, Inc. |
| Bober | Lennert | Fraunhofer Heinrich Hertz Institute |
| Byun | Woo-Jin | Electronics and Telecommunications Research Institute (ETRI) |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Cha | Jaesang | SNUT |
| Chang | Matthew | Apple, Inc. |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Chaplin | Clint | Samsung Research America |
| Danev | Boris | 3db Access AG |
| DARMON | Luc | DecaWave |
| De Ruijter | Hendricus | Silicon Laboratories |
| Fagan | Anthony | DecaWave |
| Fathy | Ramy |  |
| Gilb | James | Gilb Consulting, Inc. |
| Gillmore | Matthew | Itron Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Hammerschmidt | Joachim | Apple, Inc. |
| Hara | Shinsuke | Osaka City University (OCU) |
| Harrington | Timothy | Pro-ID |
| Hartman | Chris | Apple, Inc. |
| Heile | Robert | Decawave |
| Holcomb | Jay | Itron Inc. |
| HOSAKO | IWAO | National Institute of Information and Communications Technology (NICT) |
| Ibrahim | Brima | NXP Semiconductors |
| Ikegami | Tetsushi | Meiji University |
| Jeon | Jeongho | Samsung Research America |
| Jeong | Seongah | Samsung Electronics Co., Ltd. |
| JOO | SEONG-SOON | Electronics and Telecommunications Research Institute (ETRI) |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Karthik | S. G. | SAMSUNG ELECTRONICS |
| Kettle | Paul | Decawave |
| KINNEY | PATRICK | Kinney Consulting LLC |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| Knobloch | Daniel | BMW Group |
| Kohno | Ryuji | YNU/CWC-Nippon |
| Kuerner | Thomas | TU Braunschweig |
| Lee | Jack | Samsung Electronics Co., Ltd. |
| LEE | Mingyu | Samsung Electronics Co., Ltd. |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| Lorbach | Thomas | NXP Semiconductors |
| Marquez | Alejandro | Apple, Inc. |
| McInnis | Michael | The Boeing Company |
| Mueller | Robert | Technische Universitaet Ilmenau |
| Naguib | Ayman | Apple, Inc. |
| Neef | Edward |  |
| Niewczas | Jaroslaw | DecaWave |
| Orlik | Philip | Mitsubishi Electric Corporation |
| Perkins | Charles | Futurewei Technologies |
| Petrick | Albert | Jones-Petrick and Associates, LLC. |
| Polland | Joe | CommScope, Inc. |
| Rakanovic | Demir | u-blox |
| Robert | Joerg | University of Erlangen-Nuremberg |
| Rolfe | Benjamin | Blind Creek Associates |
| Sakata | Ren | TOSHIBA Corporation |
| Salazar Cardozo | Ruben E | Landis Gyr Group Worldwide |
| Sarris | Ioannis | u-blox |
| Sasoglu | Eren | Apple, Inc. |
| SAUER | PETER | Microchip Technology, Inc. |
| Shah | Tushar | Apple, Inc. |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Itron Inc. |
| Verso | Billy | DecaWave |
| V Padaki | Aditya | Samsung Research America |
| Wechsler | Johannes | Fraunhofer Institute for Integrated Circuits IIS |
| Yee | Peter | NSA/IAD |
| Yokota | Hidetoshi | Landis Gyr Group Worldwide |
| Yu | Shaun | Apple, Inc. |
| Zuniga | Juan Carlos | SIGFOX |