**IEEE P802.15**

**Wireless Personal Area Networks**

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| --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title |  |
| Date Submitted | [7 May 2018] |
| Source | [][][Chicago, IL] | Voice: [+1.847.960.3715]Fax: [+1.847.790.3805]E-mail: [pat.kinney@ieee.org] |
| Re: | [802.15 Interim Meeting in Warsaw, Poland, USA] |
| Abstract | [IEEE 802.15 Working Group Minutes] |
| Purpose | [Official minutes of the Working Group Session] |
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 **IEEE 802.15 Interim Meeting – #109 Joint Opening Plenary**

**Marriott Hotel**

**Warsaw, Poland**

**May 7 - 11, 2018**

**Monday, 7 May 2018**

**8:00** 802.11, 802.15, 802.18, 802.19, 802.21, and 802.24 Chairs called the joint meeting to order. IEEE 802.15 attendance is included as Annex A.

General announcements:

* No photography, no audio recording
* Social – Wednesday is on level 2 of the hotel
* Don’t forget, book your room and register for July’s session

Straw Poll of new attendees: 1

**8:08**  IEEE patent policy

802.15 WG chair read the IEEE-SA instructions and displayed the four slides explaining patent policy and informed the attendees that additional information could be found on the PatCom web site: ([**http://standards.ieee.org/board/pat/pat-slideset.ppt**](http://standards.ieee.org/board/pat/pat-slideset.ppt)**)**.

802.15 WG chair read IEEE anti-trust policy.

**8:11** Financial report by J Rosdahl (Qualcomm) docs [11-18-0615-00](https://mentor.ieee.org/802.11/dcn/18/11-18-0615-00-0000-treasurer-report-may-2018-warsaw.pptx),
[15-18-0193-00](https://mentor.ieee.org/802.15/dcn/18/15-18-0193-00-0000-treasurer-report-may-2018-warsaw.pptx)

Total liabilities and equity $519,324.31 (not including this meeting)

The number of people who are currently registered at this meeting is 279

**8:20** Wireless and IMAT announcements by R Alfvin (Linespeed) ([15-18-0111-01](https://mentor.ieee.org/802.15/dcn/18/15-18-0111-01-0000-opening-plenary-information-2018.pptx))

**8:21** WG15 Chair informed the group that the Wireless Chairs Standing Committee (WCSC) met yesterday, Sunday at 16:00 local time. Chair noted that this is an open meeting, all are encouraged to attend. Minutes are available at [ec-18-0009-00-WCSG](https://mentor.ieee.org/802-ec/dcn/18/ec-18-0009-00-WCSG-irvine-january-2018-minutes.docx)

**8:23** Review future sessions (document # [15-17-0209-00](https://mentor.ieee.org/802.15/dcn/18/15-18-0209-00-0000-802-15-waw-2018-graphic-agenda.xlsx))

* July 8-13, 2018, Manchester Grand Hyatt, San Diego, CA, USA, 802 Plenary Session.
* September 9-14, 2018, Hilton Waikoloa Village, Kona, HI, USA, *802 Wireless Interim Session.*\*
* November 11-16, 2018, Marriott Marquis Queens Park Bangkok Thailand, 802 Plenary Session.
* January 13-18, 2019 Hilton St. Louis, MO, at the Ballpark (TBC)
* March 10-15, 2019, Hyatt Regency / Fairmont Hotel Vancouver, Vancouver, Canada
* May 12-17, 2019, Grand Hyatt Atlanta in Buckhead , Atlanta, Georgia, USA
* July 14-19, 2019, Austria Congress Centre, Vienna, Austria, 802 Plenary Session.
* September 15-20, 2019 - Marriott Hanoi, Hanoi, Vietnam (TBC)
* November 10-15, 2019, Hilton Waikoloa Village, Kona, HI, USA, 802 Plenary Session
* Future venues 2020 Lisbon Marriott, Budapest Marriott, Vienna Hilton, Athens Hilton, Sorrento Hilton, JW Bucharest.

**8:26 Working Group Updates**

802.11 by Dorothy Stanley (HPE), (document [11-18-0623-00](https://mentor.ieee.org/802.11/dcn/18/11-18-0623-00-0000-may-2018-working-group-agenda.xlsx))

* 303 voters

802.15 by B Heile (document [15-17-0209-00](https://mentor.ieee.org/802.15/dcn/18/15-18-0209-00-0000-802-15-waw-2018-graphic-agenda.xlsx))

* 63 voters
* TG4md 15.4 revision
* TG 7m Optical Wireless Communications
* TG10a Routing Mode Addressing (RMA) 15.10 MAC
* TG12 Upper Layer Interface (ULI) for 802.15.4
* TG13 Multi-Gigabit OWC
* TG 15.4w Low Power Wide Area (LPWA)
* TG 15.4x FAN enhancements (FANE)
* TG 15.4y Security Next Generation (SECN)
* TG 15.4z (enhanced low rate UWB RFID PHY)

802.18 by J Holcomb ([18-18-0050-00](https://mentor.ieee.org/802.18/dcn/18/18-18-0050-00-0000-agenda-warsaw-interim-8-10-may-2018-rr-tag.pptx))

* 41 voting members
* FCC NPRM Section 7
* FCC NOI/PN 4GHz
* EU Items
* WiFi / UWB points
* IEEE EU position statement
* IEEE 802 Fellowship request

 802.19 S Shellhammer (19-18-0025-00)

* 34 voters
* Ongoing revision effort (in Sponsor Ballot)
* Interest Group formed on coexistence in sub-GHz
* Review of 802.11ax’s coexistence’s statement re: 6GHz

802.21 Subir Das (21-18-0020-00)

* 15 voting members
* Interest Group on Network Enablers for Seamless HMD based VR content Service

802.24 Tim Godfrey

* 28 voting members
* discussion on liaison activities (IEEE PES and IEC)
* TSN white paper

**AoB**

* R Marks (Huawei) – NENDICA activities, meeting this afternoon

**9:02** Joint meeting adjourned

**Working group opening plenary (114th session of 802.15)**

**9:33** B Heile, WiSUN Alliance, WG chair called the 802.15 WG plenary to order ([15-17-0209-00](https://mentor.ieee.org/802.15/dcn/18/15-18-0209-00-0000-802-15-waw-2018-graphic-agenda.xlsx))

Announcements:

* Social is Wednesday is on level 2 of the hotel
* Network and projectors are from LineSpeed
* There were 7 first time attendees

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. (<http://standards.ieee.org/board/pat/pat-slideset.ppt>).

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.

Approve/modify joint opening agenda ([15-17-0209-00](https://mentor.ieee.org/802.15/dcn/18/15-18-0209-00-0000-802-15-waw-2018-graphic-agenda.xlsx))

* Moved by B Rolfe, seconded by T Kürner. Following neither discussion nor objection the agenda was approved.

Review and approve 802.15 WG minutes from the March session ([15-18-0098-00-0000](https://mentor.ieee.org/802.15/dcn/18/15-18-0098-00-0000-minutes-from-rosemont-mar-2018.docx))

* Moved by B Rolfe, seconded by T Kürner. Upon neither discussion nor objection the joint minutes were approved.

**9:42** Network and attendance information by R Alfvin, Linespeed ([15-18-0111-01](https://mentor.ieee.org/802.15/dcn/18/15-18-0111-01-0000-opening-plenary-information-2018.pptx))

**9:46** Treasury report by Ben Rolfe, BCA ([15-18-0193-00](https://mentor.ieee.org/802.15/dcn/18/15-18-0193-00-0000-treasurer-report-may-2018-warsaw.pptx))

**10:07** WG recessed

**Wednesday 9 May 2018**

**802.15 mid-session plenary meeting**

**10:30** Bob Heile called the meeting to order.

Announcements:

* Please don’t use 802.15 as your affiliation
* Social: Level 2 of the hotel
* Reminder to book your room and register for the July plenary

**802.18 liaison** by Jay Holcomb

* Discussed:
	+ NPRM section 7 of FCC on speeding up rules
	+ Public notice on 3.7 – 4.2 GHz
	+ IEEE European position management
	+ 4.9 GHz – 6 GHz NPRM

**TG4md (revision)** by D Sturek

* no comments received

**TG4y** **(secn)** closing report by D Sturek (15-18-219-01)

* Motion *to approve Don Sturek as chair of TG4y*
* Moved by Ben Rolfe, seconded by Tim Harrington
* Upon neither discussion nor objection the motion carries with unanimous consent

**TG 15.4w (lpwan)** by Jörg Robert

* discussion Static Context Header Compression (SCHC)
* *Request that the IEEE 802.15 WG establishes a working liaison with ETSI LTN covering the work of the TG 802.15.4w under the existing MoU between IEEE and ETSI. The IEEE 802.15 working group chair and technical editor are authorized to take the corresponding actions in order to create the liaison.*
* Moved by Jörg Robert, seconded by Ben Rolfe
* Upon neither discussion nor objection the motion carries with unanimous consent
* Motion that *Jörg Robert be approved as chair of TG4w*
* Moved by Rick seconded by Clint Powell
* Upon neither discussion nor objection the motion carries with unanimous consent

**TG 15.4x (FANE)** closing reportby M Gillmore

* Contributions on efforts required
* Motion *to approve Matt Gillmore as chair of TG4x*
* Moved by Ben Rolfe, seconded by Tim Harrington
* Upon neither discussion nor objection the motion carries with unanimous consent

**TG 15.4z (EIR)** closing reportby T Harrington

* 2 contributions so far
* discussions on coexistence with 802.11ax
* Motion *to approve Tim Harrington as Chair of TG4z*
* Moved by Clint Powell seconded by Ben Rolfe
* Upon neither discussion nor objection the motion carries with unanimous consent

**TG7m** by Soo Young Chang

* 77 comments, 73 accepted

**IG VAT** by Soo Young Chang

* 4 contributions

**TG10a** closing reportby C Perkins(15-18-0233-00)

**TG13** by Volker Jungnickel

* Discussion on MAC architecture

**IG THz** by Thomas Kürner (15-18-0197-00)

**TG12 (ULI)** by P Kinney

* Profile architecture is sufficiently complete to continue working on primitives

**SC maintenance** by P Kinney

* No effort required

**SC WNG** by P Kinney

* + There will be no meeting since there has been no presentation request

**802.19** Liaison by B Rolfe

* + Discussion on coexistence issues 802.11ax and UWB

**AoB**

**11:13** Recessed until Thursday at 18:30

**Thursday, 10 May 2018**

**18:29** 802.15 WG chair called the meeting to order

**18:32** TG4m closing report by D Sturek (15-18-0252-02)

**18:36** TG 4w (LPWAN) closing report by Jörg Robert (15-18-0263-00)

**18:40** TG 15.4x (FANE) closing reportby M Gillmore (15-18-0264-001)

**18:42** TG 4z (ELR) closing reportby T Harrington (15-18-0261-02)

**18:46** TG7a closing report by Soo Young Chang (15-18-0244-01)

**Motion**: *802.15 has reviewed and approves the CSD [15-14-0216-05], and the CA document [15-17-627-01]; and requests unconditional approval from the EC to submit P802.15.7m-D2 to Sponsor Ballot.*

*Moved by* Soo Young Chang, Seconded by Clint Powell

Upon no discussion the vote was taken with the results of 19/0/3, motion carries

**Motion:** *Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the Sponsor balloting of the P802.15.7m- D2 with the following membership: Yeong Min Jang, Rick Roberts, Jaesang Cha, Soo-Young Chang, Vinayagam Mariappan, Van Trang Nguyen and Ben Rolfe. The 802.15 TG7m BRC is authorized to approve comment resolutions and to approve the start of sponsor 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* Soo Young Chang, Seconded by Ben Rolfe

Q:To what companies are these BRC members affiliated? R: Upon reviewing some of the members it was obvious that they are not all from a single company.

 Q: could we add Volker to the list? R: Volker is welcome to attend the calls.

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

**Motion:** *Move that the 802.15 WG request that the EC approve forwarding the one year 802.15.7 PAR extension request (15-18-02621-00-007a) to NesCom*

*Moved by* Soo Young Chang, Seconded by Rick Alfvin

Upon no discussion the vote was taken with the results of 16/1/3, motion carries

**19:01** TG13closing report by Volker Jungnickel (15-18-0265-00)

**19:07** TG12 ULI closing report by Pat Kinney (15-18-0201-021)

**19:10** SCclosing report by Pat Kinney (15-18-0217-00)

**19:11** 802.11 liaison report by A Petrick (15-18-0242-00)

**19:20** 802.18 liaison report by J Holcomb (15-18-0236-00)

**19:28** 802.24 liaison by T Godfrey (EPRI)

* Liaison with WiFi, IEC SEV8
* Sub-GHz white paper and TSN white paper efforts are finishing

**AoB**

* B Rolfe: sub-GHz coexistence IG will be continuing
* D Sturek: PAR extensions should have a documented reason for WG review
* J Goldberg: should include name and affiliation with motions

**19:36** Motion *to adjourn* was made by C Powell (SCE), seconded by B Rolfe (BCA), upon no objection the motion carried, this session is adjourned.

**Annex A** Attendance = 60

|  |  |  |
| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Akhavan | Koorosh | Qualcomm Incorporated |
| Alfvin | Richard | Linespeed Events LLC |
| Baer | Bernd | Marquardt |
| Barras | David | 3db Access AG |
| Batra | Anuj | Apple, Inc. |
| Baykas | Tuncer | Istanbul Medipol University |
| Bober | Lennert | Fraunhofer Heinrich Hertz Institute |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Cha | Jaesang | SNUT |
| Chang | Matthew | Apple, Inc. |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| De Ruijter | Hendricus | Silicon Laboratories |
| Gillmore | Matthew | Itron Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Hammerschmidt | Joachim | Apple, Inc. |
| HAN | CHONG | pureLiFi |
| Harrington | Timothy | Pro-ID |
| Hartman | Chris | Apple, Inc. |
| Heile | Robert | Wi-SUN Alliance |
| Holcomb | Jay | Itron Inc. |
| HOSAKO | IWAO | National Institute of Information and Communications Technology (NICT) |
| Ibrahim | Brima | NXP Semiconductors |
| JOO | SEONG-SOON | Electronics and Telecommunications Research Institute (ETRI) |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| KINNEY | PATRICK | Kinney Consulting LLC |
| Kivinen | Tero | Self Employed |
| Kneckt | Jarkko | Apple, Inc. |
| Knobloch | Daniel | BMW Group |
| Kojima | Fumihide | National Institute of Information and Communications Technology (NICT) |
| Kuerner | Thomas | TU Braunschweig |
| LEE | MINWOO | SNUT |
| Leong | Frank | NXP Semiconductors |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| MAQBOOL | Masood | Apple, Inc. |
| MARIAPPAN | VINAYAGAM | SNUT |
| Marquez | Alejandro | Apple, Inc. |
| Mennecke | Ryan | Johns Hopkins University Applied Physics Lab |
| Nagakubo | Sakie | Toshiba |
| Naguib | Ayman | Apple, Inc. |
| Nejatian | Alireza | Ericsson AB |
| Niewczas | Jaroslaw | DecaWave |
| Park | Taejoon | Electronics and Telecommunications Research Institute (ETRI) |
| Perkins | Charles | Futurewei Technologies |
| Petrick | Albert | Jones-Petrick and Associates, LLC. |
| Powell | Clinton | Powell Wireless Consulting, LLC |
| Rakanovic | Demir | u-blox |
| Robert | Joerg | University of Erlangen-Nuremberg |
| Rolfe | Benjamin | Blind Creek Associates |
| Salazar Cardozo | Ruben E | Landis Gyr Group Worldwide |
| Sauer | Peter | Microchip Technology, Inc. |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shah | Tushar | Apple, Inc. |
| Sturek | Don | Itron Inc. |
| Sumi | Takenori | Mitsubishi Electric Corporation |
| Verso | Billy | DecaWave |