**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 | [11 Sep 2017] |
| 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 Waikoloa, HI, 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 – #106 Joint Opening Plenary**

**Hilton Waikoloa**

**Waikoloa, HI, USA**

**Sep 11 - 14, 2017**

**Monday, 11 Sep 2017**

**8:00** 802.11, 802.15, 802.16, 802.18, 802.19, 802.21, 802.22, 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 – Reception on Wednesday 18:00 – 20:30
* Don’t forget, book your room and register for November’s session

Straw Poll of new attendees: 0

**8:10**  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.

**8:14** Financial report by J Rosdahl (Qualcomm) docs 11-17-01265-00,
15-17-0502-01

Total liabilities and equity $ 702,065.34

**8:16** Wireless and IMAT announcements, 15-17-0043-00, by R Alfvin (Linespeed)

**8:17** 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-17-0003-00-WCSG](https://mentor.ieee.org/802-ec/dcn/17/ec-17-0003-00-WCSG-802-wireless-chairs-minutes-2017-january-atlanta.docx)

**8:20** Review future sessions (document # 15-16-0857-04)

* **November 5-10, 2017, Caribe Hotel and Convention Center, Orlando, FL, USA,** 802 Plenary Session
* **January 14-19, 2018, Hotel Irvine, Irvine, California, 802 Wireless Interim Session.\***
* **March 4-9, 2018, Hyatt Regency O'Hare, Rosemont, IL, USA,** 802 Plenary Session
* **May 6-11, 2018, Warsaw Marriott,** 802 Wireless Interim Session.\*
* **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, Bangkok Thailand,** 802 Plenary Session

**8:23 Working Group Updates**

802.11 by Adrian Stephens (Intel), (document 11-17-1168-00)

* 316 voters

802.15 by B Heile (document 15-17-0464-04)

* 94 voters
* TG4s: SRU (Spectrum Resource Utilization)
* TG 7m: Optical Wireless Communications
* TG8: PAC (Peer Aware Communications)
* TG12 Upper Layer Interface (ULI) for 802.15.4
* TG13 Multi-Gigabit OWC
* SC IETF
* IG VOC (Vehicular Assistive Technology)
* IG LPWA (low power wide area)

802.16 by R Marks

* Finishing 802.16s and follow-up revision project

802.18 by R Kennedy

* Regulatory changes
* EC NOI

802.19 S Shellhammer

* 34 voting members
* approved revision PAR

802.21 S Das

* 18 voting members
* Working on Corrigendum

802.24 B Rolfe

* 36 voting members
* Discussion of ec NOI

**AoB**

**8:32** Joint meeting adjourned

**Working group opening plenary (110th session of 802.15)**

**9:33** B Heile (WiSUN Alliance), WG chair called the 802.15 WG plenary to order (15-17-0464-04)

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 (15-17-0464-04)

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

Review and approve 802.15 WG minutes from the Berlin session (15-17-0370-00-0000)

* Moved by R Alfvin, seconded by C Powell. Upon neither discussion nor objection the joint minutes were approved.

**9:47** WG recessed

**Wednesday 13 Sept 2017**

**802.15 mid-session plenary meeting**

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

**802.18 liaison** by Jay Holcomb

* Discussed:
* FCC NOI: consideration to open up mid band GHz for sharing
* FCC technical advisory: looking to reduce the number of rules
* Legislation curtailing WiFi in schools for safety
* 60 GHz harmonized standard was stopped due to lack of receiver sensitivity specification

**TG3f** by B Rolfe

* no additional recirculations are required

**TG4s** by S Kitazawa

* Working on comment resolutions

**TG7m** by Yeong Min Jang

* Resolved all but 10 comments

**IG VAT** by Yeong Min Jang

* Looking to form a SG

**TG8 (PAC)** closing reportby Myung Lee (15-17-0531-00)

*Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the P802.15.8-D01 with the following membership: Myung Lee (chair), Huan-bang Li, BJ Kwak, Marco Hernandez, Billy Verso, and Seong-Soon Joo. The 802.15.8 BRC 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: Myung Lee Seconded by Bill Verso

Upon neither discussion nor objection the motion carries with unanimous consent

* *Move that 802.15 WG seeks approval from the EC to extend the P802.15 PAR and submit the PAR extension to NesCom*
	+ Moved by Myung Lee and seconded by Yeong Min Jang
	+ Upon no discussion the vote was taken with the results of 21/0/0, motion carries

**TG13 closing report** by V Jungnickel (15-17-530-00)

**IG LPWA** by J Robert

* Two presentations: frequency hopping benefits in interference, and what use cases to continue looking at

**TG12 ULI** by P Kinney

* Hearing presentations on details of the ULI such as primitives and data flows

**SCm** by P Kinney

* **Corrigendum**
* *Motion: 802.15 affirms its previous approval for submission of d2P802.15.4-2015-Corri-1-2017 to Sponsor Ballot.*
	+ Moved by P Kinney and seconded by R Alfvin
* *Move that the 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the Sponsor Balloting of the d2P802.15.4-2015-Corri-1-2017 with the following membership:* *Pat Kinney (Chair), Clint Powell, Ben Rolfe, Jay Holcomb, Don Sturek, Billy Verso, and Kunal Shah.   The 802.15 Corr-1 BRC 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*
	+ Moving by Pat and seconded by Be
* **Revision:** roll-up from IEEE SA will be sent out to 802.15 WG and WiSUN (P Beecher), ZigBee (T Richardson, V Berrios), Thread (Chair, S Ashton), ISA100 (H Storey, P Kinney), WirelessHART (Nelson), TIA TR51 (M Lynch, D Sturek), ISO/IEC JTC1/ SC31/WG4, JUTA (Kawata), EIA, IETF: 6tisch, Core, 6lo
*

**SC IETF** by P Kinney

* No meeting yet

**SC WNG** by P Kinney

* + Two presentations:
		- Coexistence issues between 802.15.4g and 802.11ah
		- 802.15.4g OFDM data rate extensions

**AoB**

* + **TG3f** by Ben Rolfe

*Request that the PAR and CSD contained in documents [15-17-0055-00-0000] and [15-17-0049-00-0000] respectively, be approved by the IEEE 802.15 WG and that the EC 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 EC discussion at its closing meeting.*

Moved by B Rolfe

Seconded by C Powell

Upon no further discussion the motion was voted upon with the results of 28/0/0, motion carries

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

**Thursday, 14 Sept 2017**

**16:01** 802.15 WG chair called the meeting to order

**16:04** 802.18 liaison report by J Holcomb (15-17-0536-00)

## Why does 60GHz have receiver sensitivity but 2.4 GHz doesn’t?

**16:15** TG3f by B Rolfe (15-17-559-00)

*Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the Sponsor Balloting of the P802.15.3f-D01 with the following membership:****B****enjamin Rolfe (Chair),****R****ick Alfvin and****C****lint Powell. The 802.15.3f BRC 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: Benjamin Rolfe

Second by: Pat Kinney

Upon neither discussion nor objection the motion carries by unanimous consent

**16:17** TG4s (SRU) closing report by S Kitazawa (15-17-0544-00)

*Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the P802.15.4s-D06 with the following membership: Shoichi Kitazawa, Hidetoshi Yokota, Ben Rolfe and James Glib. The 802.15.4s BRC 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: S Kitazawa
* Seconded By: B Rolfe

Upon neither discussion nor objection the motion carries by unanimous consent

**16:21** TG7m (OWC) closing report by Yeong Min Jang (15-17-0561-00)

**16:28** IG VAT by Yeong Min Jang (15-17-0560-00)

**16:33** TG13by V Jungnickel ( 15-17-0562-01)

*Move that the WG is asked to reply to the ITU-T SG15 Q18 concerning the G.vlc work item. The draft text is contained in doc. 15-17-0546-00-0013. The WG chair is allowed final editing to this document.*

*Moved by: V Jungnickel*

*Seconded by:* Yeong Min Jang

Upon neither discussion nor objection the motion carries by unanimous consent

**16:41** IG LPWA closing reportby J Robert (15-17-0558-00)

**16:46** TG12 ULI closing report by Pat Kinney (15-17-0508-02)

**16:50** SCclosing report by Pat Kinney (15-17-0409-021)

**16:52** 802.24 liaison by B Rolfe

* Presentation on FCC NOI

**16:53** Draft submission relating to the FCC mid-band spectrum NOI by B Verso (15-17-0543-00)

Motion *that the 802.15 WG approve document 15-17-0543-01 as its official position on the FCC NOI, GN Docket No. 17-183. The 802.15 WG chair is allowed final editing to this document to include a coexistence statement.*

Moved by B Verso, seconded by C Powell

Upon neither discussion nor objection the motion carries by unanimous consent

**AoB**

**17:05** Motion *to adjourn* was made by B Rolfe, seconded by C Powell, upon no objection the motion carried, this session is adjourned.

**Annex A** Attendance = 43

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| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Alfvin | Richard | Linespeed Events LLC |
| Aoyama | Hideki | Panasonic Corporation |
| BEECHER | PHILIP E | Wi-SUN Alliance |
| Bims | Harry | Bims Laboratories, Inc. |
| Cha | Jaesang | SNUT |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Chen | Jiamin |  |
| De Ruijter | Hendricus | Silicon Laboratories |
| Gillmore | Matthew | Itron Inc. |
| Guo | Jianlin | Mitsubishi Electric Corporation |
| Guo | Qiang | Huawei Technologies Co. Ltd |
| Heile | Robert | Wi-SUN Alliance |
| Hernandez | Marco | National Institute of Information and Communications Technology (NICT) |
| Hirota | Tomoyuki | Panasonic Corporation |
| Holcomb | Jay | Itron Inc. |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| KINNEY | PATRICK | Kinney Consulting LLC |
| Kitazawa | Shoichi | Muroran IT |
| Le | Namtuan | Kookmin University |
| Lee | Hyeong Ho | Electronics and Telecommunications Research Institute (ETRI) |
| Lee | Myung | CUNY - City University of NY |
| Li | Qiang | HUAWEI |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| MARIAPPAN | VINAYAGAM | SNUT |
| Nagai | Yukimasa | Mitsubishi Electric Corporation |
| Nguyen | Trang | Kookmin University |
| Oshima | Mitsuaki | Panasonic Corporation |
| Perkins | Charles | Futurewei Technologies |
| Polland | Joe | CommScope, Inc. |
| Powell | Clinton | Powell Wireless Consulting, LLC |
| Rakanovic | Demir | u-blox |
| Robert | Joerg | University of Erlangen-Nuremberg |
| Roberts | Richard | Intel Corporation |
| Rolfe | Benjamin | Blind Creek Associates |
| Sakata | Ren | TOSHIBA Corporation |
| Salazar Cardozo | Ruben E | Landis Gyr Group Worldwide |
| Sato | Noriyuki | Oki Electric Industry Co., Ltd. |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Silver Spring Networks Inc. |
| Verso | Billy | DecaWave |
| Vu | Luan | Kookmin University |
| Yi | Su | Fujitsu Research & Development Center |
| Yokota | Hidetoshi | Landis Gyr Group Worldwide |