**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 | [13 July 2018] |
| Source | [][][Chicago, IL] | Voice: [+1.847.960.3715]Fax: [+1.847.790.3805]E-mail: [pat.kinney@ieee.org] |
| Re: | [802.15 Plenary Meeting in San Diego, IL] |
| Abstract | [IEEE 802.15 Working Group Minutes] |
| Purpose | [Official minutes of the Working Group Session] |
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**115th IEEE 802.15 WSN SESSION**

**Grand Hyatt**

**San Diego, California**

**July 9-12, 2018**

**Monday, 9 July 2018**

**10:30 AM** The chair, Bob Heile, called the meeting to order (15-18-0314-00)

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 two.

Announcements:

* Don’t forget to register for Waikoloa, Hawaii

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.

Ben Rolfe moved to *approve the agenda (document 15-18-0314-01-0000)* with Tim Harrington seconding the motion. Following no objection, the agenda was approved.

Ben Rolfe moved *to approve the previous meeting minutes (document 15-18-0194-00-0000)* and Tim Harrington seconded the motion. Following neither discussion nor objection the minutes were approved. There were no matters resulting from the previous minutes.

Chair presented the wireless network information.

Ben Rolfe (Blind Creek Associates) presented the WG11/WG15 treasurer’s report (15-18-0284-00).

B Heile presented a report on the EC meeting held just before this meeting (15-18-0321-00).

Future Sessions

* September 9-14, 2018, Hilton Waikoloa Village, Kona, HI, USA, *802 Wireless Interim Session.*\*
* November 11-16, 2018, Marriott Marquis Bangkok, *802 Plenary Session.*
* January 13-18, 2019 TBD Hilton Ballpark St Louis (TBC) *802 Wireless Interim Session.\**
* March
* May 12-17, 2019, Grand Hyatt Atlanta in Buckhead, Atlanta, Georgia, USA *802 Wireless Interim Session.\**
* July
* September 2019 - Marriott Hanoi/Centara Bangkok/Marriott City Center Shanghai *802 Wireless Interim Session.\**
* November
* Future venues 2020 Lisbon Marriott, Budapest Marriott, Vienna Hilton, Athens Hilton, Sorrento Hilton, JW Bucharest.

**Status Reports**

802.18 by Jay Holcomb (Itron)

* + EU Items
	+ Ofcom consultation
	+ NPRM on 3.7 to 4.2 GHz Band
	+ IEEE 802 6GHz single voice

802.15

Task Group 4md – Revision.

* Draft is uploaded into members section
* Waiting for responses from external organizations

Task Group 4w – LPWA

* Responses to call for proposals

Task Group 4x – FANE

* Discussing to responses

Task Group 4y – SECN

* Map out proposal into future plan

Task Group 4z – ELR

* 4 presentations will be reviewed

Task Group 10a – RMA

* + - Reviewing and comments on current draft document

Task Group 12 –Upper Layer Interface (ULI)

* + - Continuing work on ballot-able draft
		- Update Project Plan/Timeline

Task Group 13 –Multi Gigabit/sec OWC

* + - Merging PHYs in preparation for draft

Standing Committees (SCm, SC IETF, SCwng)

* + Maintenance contributions for standards and operation manual
	+ IETF102 agenda items for 6tisch, 6lo, core, roll, suit, and lp-wan
	+ WNG- two presentations

Task Group 7m – Optical Wireless Communications (OWC)

* + - Sponsor ballot started yesterday

Interest Group VAT

* 2 meeting slots are assigned

**11:33 PM** The chair recessed the meeting

**Wednesday, 10 July 2017**

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

WG Chair made announcements concerning social, logistics, and affiliation requirements.

**10:32** 802.18 Tag liaison by J Holcomb (Itron)

* Reviewed Ofcom presentation
* Discussion 6 GHz band issue with NPRM

**10:34** TG4md by G Steubing (Cisco)

* Resolution to send roll-up document to various groups still ongoing, 4 groups have responded positively

**10:36** TG4w by J Robert (Friedrich-Alexander-Universität Erlangen)

* Reviewed two responses to request for proposals

**10:38** TG4x by M Gilmore (Itron)

* Three proposals heard

**10:40** TG4y closing report by D Sturek (Itron) (15-18-0337-01)

**10:46** TG4z by T Harrington (Pro-ID)

* Joint meeting with 802.11ax showing shortfalls with their coexistence document
* Hearing presentations on proposals

**10:48** TG7m closing report by Yeong Min Jang (15-18-0346-00)

* Motion: *Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the Sponsor balloting of the P802.15.7m- D2a with the following membership: Yeong Min Jang, Rick Roberts, Jaesang Cha, Soo-Young Chang, Vinayagam Mariappan and Van Trang Nguyen. The 802.15 TG7m BRC is authorized to approve comment resolutions and to approve the start of sponsor 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:
* Seconded By*:*

**10:54** IG VAT closing report by Yeong Min Jang

* Two meeting slots tomorrow

**11:00** TG10a closing report by C Perkins (Futurewei) (15-18-0344-00)

* *Move that 802.15 WG start a WG Letter Ballot requesting approval of document P802-15-10a\_D01 and to forward document P802-15-10a\_D01 to Sponsor Ballot*
	+ Moved: Charlie Perkins
	+ Seconded: Clint Powell
	+ Upon no discussion nor objection the motion carries
* *Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the P802-15-10a\_D01 with the following membership: Kiyoshi Fukui, Joerg Robert, Clint Powell, Tero Kivinen, and Charlie Perkins. The 802.15.10a 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: Charlie Perkins
	+ Seconded: Clint Powell
	+ Upon no discussion nor objection the motion carries

**11:07** TG13 by Volker Jungnickel (Fraunhofer Heinrich Hertz Institute)

* Hearing proposals for PHYs
* Discussion on the MAC

**11:19** IG Dependability by R Kohno (YNU/CWC-Nippon)

* Will be discussing expanding charter of interest group

**11:21** SC reports by P Kinney (Kinney Consulting) (18-0343-01)

* SC Maintenance: resolved comments from ISO/IEC ballot of 802.15.6
* **Motion to 802.15 WG:** *that the 802.15 WG has reviewed and approves the resolutions to the comments from the ISO/IEC/IEEE FDIS 8802-15-6 ballot (15-18-0343-01) and requests IEEE 802 EC approval to forward the comment responses contained in document 15-18-0343-01 to ISO/IEC JTC1/SC6, as responses to the comments received on the 60 day ballot/FDIS ballot closing 9 Sept 2017 on ISO/IEC/IEEE FDIS 8802-15-6.*
* Moved by Pat Kinney, seconded by Ben Rolfe
* Upon no discussion on technical issues the vote was taken with the results of 26/0/0, motion carries
* SC WNG: 2 presentations

**11:23** TG 15.12 ULI by P Kinney (Kinney Consulting)

* Working on the primitives for the mandatory elements of the ULI

**11:30** WG chair recessed the meeting until Thursday evening.

**Thursday, 11 July 2018**

**18:31** WG chair called the meeting to order

**18:32** IG Dependability closing report by R Kohno (YNU/CWC-Nippon) (15-18-0379-00)

**18:38** IG VAT closing report by Yeong Min Jang (15-18-0381-00)

Q: TG13 chair asked if an IG can post a PAR and CSD? R: Yes, creation of PARs are not restricted to a SG

**18:41** TG4md closing report by Gary Steubing (Cisco Systems) (15-18-0300-04)

*Move that the 802.15 WG start a WG Letter Ballot requesting approval to forward document P802.15.4-REVd-D01 to Sponsor Ballot*

Moved by Gary Stuebing, Seconded by Kunal Shah

Upon neither discussion nor objection the motion carries by unanimous consent

*Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the P802.15.4-REVd-D01 with the following membership: Gary Stuebing, Don Sturek, Kunal Shah, Ruben Salazar, Tero Kivinen, Phil Beecher, and Clint Powell. The 802.15.4md 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 Gary Stuebing, and Seconded by Kunal Shah

Upon neither discussion nor objection the motion carries by unanimous consent

**18:48** TG4w LPWA closing report by Jörg Robert (Friedrich-Alexander-Universität Erlangen) (15-18-0383-00)

**18:51** TG4x FANE closing report by Matt Gillmore (Itron) (15-18-0374-01)

*Move that the 802.15 WG start a WG Letter Ballot requesting approval to forward document P802.15.4x-D0 to Sponsor Ballot*

Moved: Matt Gillmore, and Seconded by Gary Steubing

Upon neither discussion nor objection the motion carries by unanimous consent

*Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the ballot of P802.15.4x-D0 with the following membership: Matt Gillmore, Kunal Shah, Chris Calvert, Phil Beecher, Clint Powell. The 802.15.4x 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: Matt Gillmore, Seconded by: Gary Steubing

Upon neither discussion nor objection the motion carries by unanimous consent

**18:57** TG4z **(**EIR) closing report by Tim Harrington(Pro-ID) (15-18-0376-00)

**19:02** TG13 closing report by Volker Jungnickel (Fraunhofer Heinrich Hertz Institute) (15-17-0382-04)

**19:09** TG 12 (ULI) closing report by P Kinney (Kinney Consulting) (15-18-0303-01)

**19:11** Standing Committees closing report by P Kinney (Kinney Consulting) (15-18-0292-01)

**19:13** 802.11 liaison report by A Petrick (Jones-Petrick and Associates) (15-18-0370-00)

EHT TIG: ask to form a SG tomorrow and start work on PAR in September

FD TIG: expectation as to a APR and when it would come out? Right now TIG just a plans for a report

**19:23** 802.18 liaison report by J Holcomb (Itron) (15-18-0349-00)

**19:29** 802.19 liaison by Ben Rolfe (Blind Creek Associates**)**

* Coexistence issues for < 1 GHz
* Will request EC to form a study group on studying sub GHz coexistence

**19:32** 802.24 liaison by T Godfrey (EPRI) (24-18-0018-00)

**AoB**

Straw Poll

* Those who find this an acceptable venue to return; 21 yes, 1 no, 0 don’t care
* How many attended the social:16, How many liked the social:16

**19:39** Motion *to adjourn* was made by Clint Powell, seconded by Ben Rolfe. Upon hearing no objection, the motion carries; the session is adjourned.

**Annex A** Attendance = 77

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

|  |  |  |
| --- | --- | --- |
| Akhavan | Koorosh | Qualcomm Incorporated |
| Arokkiam | Jerome |  |
| Baer | Bernd | Marquardt |
| Barras | David | 3db Access AG |
| Baykas | Tuncer | Istanbul Medipol University |
| BEECHER | PHILIP E | Wi-SUN Alliance |
| Berens | Friedbert | FBConsulting Sarl |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Cepni | Gurkan |  |
| Chang | Matthew | Apple, Inc. |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Choi | Sangsung | Electronics and Telecommunications Research Institute (ETRI) |
| Choi | Sangsung | Woosong University |
| Cragie | Robert |  |
| Danev | Boris | 3db Access AG |
| DARMON | Luc | DecaWave |
| De Ruijter | Hendricus | Silicon Laboratories |
| Dewberry | Brandon | Apple, Inc. |
| Fagan | Anthony | DecaWave |
| Fukui | Kiyoshi | Oki Electric Industry Co., Ltd. |
| Gillmore | Matthew | Itron Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Hammerschmidt | Joachim | Apple, Inc. |
| Han | Youngnam |  |
| Harrington | Timothy | Pro-ID |
| Hartman | Chris | Apple, Inc. |
| Heile | Robert | Wi-SUN Alliance |
| Hett | Christopher | Landis Gyr Group Worldwide |
| Holcomb | Jay | Itron Inc. |
| Ibrahim | Brima | NXP Semiconductors |
| JOO | SEONG-SOON | Electronics and Telecommunications Research Institute (ETRI) |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Kettle | Paul | Decawave |
| KINNEY | PATRICK | Kinney Consulting LLC |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| Knobloch | Daniel | BMW Group |
| Kobayashi | Seiji | Sony Semiconductor Solutions |
| Kohno | Ryuji | YNU/CWC-Nippon |
| Kojima | Fumihide | National Institute of Information and Communications Technology (NICT) |
| Krieger | Ann | US Department of Defense |
| Lee | Jack | Samsung Electronics Co., Ltd. |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Loghin | Nabil |  |
| Lorbach | Thomas | NXP Semiconductors |
| MAQBOOL | Masood | Apple, Inc. |
| MARIAPPAN | VINAYAGAM | SNUT |
| Marquez | Alejandro | Apple, Inc. |
| Mennecke | Ryan | Johns Hopkins University Applied Physics Lab |
| Mo | Jianhua |  |
| Nagai | Yukimasa | Mitsubishi Electric Corporation |
| Naguib | Ayman | Apple, Inc. |
| Niewczas | Jaroslaw | DecaWave |
| Park | Taejoon | Electronics and Telecommunications Research Institute (ETRI) |
| Perkins | Charles | Futurewei Technologies |
| Polland | Joe | CommScope, Inc. |
| Powell | Clinton | Powell Wireless Consulting, LLC |
| Rakanovic | Demir | u-blox |
| Rakshit | Sushanta Mohan | Robert Bosch GmbH |
| Robert | Joerg | University of Erlangen-Nuremberg |
| Roberts | Richard | Intel Corporation |
| Rolfe | Benjamin | Blind Creek Associates |
| Sakata | Ren | TOSHIBA Corporation |
| Sarris | Ioannis | u-blox |
| SAUER | PETER | Microchip Technology, Inc. |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shah | Tushar | Apple, Inc. |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Itron Inc. |
| Turner | James | Landis+Gyr AG |
| Verso | Billy | DecaWave |
| V Padaki | Aditya |  |
| Wechsler | Johannes | Fraunhofer Institute for Integrated Circuits IIS |
| Yee | Peter | NSA/IAD |
| Yong | Su Khiong | Apple |