**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 | [18 Mar 2016] |
| 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 Macau, China] |
| Abstract | [IEEE 802.15 Working Group Minutes] |
| Purpose | [Official minutes of the Working Group Session] |
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**IEEE 802.15 Plenary Meeting – Session #101**

**Venetian Macau Hotel and Convention Center**

**March 14-18, 2016**

**Monday, 14 March 2016**

**10:33 AM** The chair, Bob Heile, called the meeting to order (15-16-0112-04)

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

Announcements:

* Don’t forget to register for Waikoloa

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.

C Powell moved to *approve the agenda (document 15-16-0112-04-0000)* with Ben Rolfe seconding the motion. Following no objection the agenda was approved.

C Powell moved *to approve the previous meeting minutes (document 15-16-0048-00-0000)* and T Baykas seconded the motion. Following neither discussion nor objection the minutes were approved. There were no matters resulting from the previous minutes.

R Alfvin presented network information (15-16-0045-01).

B Rolfe presented the Treasurer Report (15-16-0201-00).

Future Sessions

* May 15-20, 2016, Hilton Waikoloa Village, Kona, HI, USA, *802 Wireless Interim Session.*\*
* July 24-29, 2016, Manchester Grand Hyatt, San Diego, CA, USA, *802 Plenary Session.*
* September 11-16, 2016, Marriott Warsaw, Warsaw, Poland, *802 Wireless Interim Session.*\*
* November 6-11, 2016, Grand Hyatt San Antonio, San Antonio, TX, USA, *802 Plenary Session.*
* January 15-20, 2017, Hyatt Regency Atlanta, Atlanta, GA, USA, *802 Wireless Interim Session.*\*
* March  12-17, 2017, Hyatt Regency Vancouver, *802 Plenary Session.*
* May 7-12, 2017, Daejeon Convention Center, Daejeon Korea (TBC), *802 Wireless Interim Session.*\*
* July 9-14, 2017, Estrel Hotel and Convention Center, Berlin, Germany, *802 Plenary Session.*

B Heile presented a report on the EC meeting held just before this meeting (15-16-0218-00).

**Status Reports**

802.15

Task Group 3d –100Gbps THz PHY

* Review and Discuss Contributions
* Resolve comments on 15.3d change PAR/CSD
* Secure EC approval to forward PAR to NesCom
* Update Project Plan/Timeline

Task Group 3e – High Rate Close Proximity (HRCP)

* Letter Ballot 114 Comment Resolution (140 comments)
* Update Project Plan/Timeline

Task Group 3m – 15.3 Revision

* Secure EC approval to forward to RevCom

Task Group 4s – Spectrum Resource Utilization (SRU)

* + Work on Technical Guidance Doc (TGD)
	+ Prepare the CFP
	+ Update Project Timeline

Task Group 4t – 15.4 High(er) Rate PHY (HRP)

* + - Review contributions for CFP
		- Update Project

Task Group 4u – PHY for 865-867 band in India

* + - Draft is complete, letter ballot to be started

Task Group 7R1 – Optical Wireless Communications (OWC)

* + - * Review and discuss proposals
			* Start writing draft
			* Generate/Update Project Timeline

Task Group 8 – Peer Aware Communications

* + - Continue work on draft’s technical items
		- Update Project Plan/Timeline

Task Group 9 – Key Management Protocol

* + Approved by RevCom on March 4 2016
	+ project complete – no further meetings

Task Group 10 – Layer 2 Routing (L2R)

* + Letter Ballot comment resolution (145 comments, 2 technical)
	+ Update Project Plan/Timeline

Study Group 12 –15.4 Upper Layer Interface (ULI)

* + Secure EC approval to forward PAR to NesCom
	+ Joint Meeting with 802.1

Study Group 4v –Add/Update Regional Sub Gig Bands

* + Secure EC approval to forward PAR to NesCom

Interest Group THz:

* + Hear contributions relating to THz comms.
	+ Review ongoing mission/goals/new project potential

Interest Group Dependability

* + Discuss Contributions
	+ Evaluate if Study Group is warranted

Interest Group High Rate Railroad Communications

* + Discuss opportunities for standards work
	+ Review ongoing mission of the group

Interest Group 6 TiSCH

* + Discuss issues as requested by IETF 6tisch
	+ Discuss increasing scope to include 6lo and core

New Projects Standing Committee (WNG)

* + Single presentation – Need for a simple dynamic on-demand bandwidth/range allocation mechanism for the 802.15.4 PHY/MAC by W Mulder

Working Group officer elections

* + Motion - *Approval of 802.15 officer slate of R Heile as chair (Wi-Sun), P Kinney (Kinney Consulting) as technology vice chair, and Rick Alfvin (Verilan) as operations vice-chair*
	+ Moved by Ben Rolfe, Nicola Serafimovski seconded
	+ Upon no discussion the vote was taken with the results of 36/0/0, motion prevails

**11:35 PM** The chair recessed the meeting

**Wednesday, 16 Mar 2016**

**10:33** Bob Heile, WG chair called the meeting to order.

WG Chair made announcements concerning social, and logistics.

**10:33** 802.18 Tag liaison

* Elections held, R Kennedy is chair
* Presentation from OfCom on 5G

**10:35** TG3d closing report by Thomas Kürner (15-16-0225-00)

* Worked on response to FCC NPRM

Motion: *to request that the text proposal contained in 15-15-0699-07-003d-draft-liaison-statement-to-itu-r-wp1a be submitted by the WG for further submission to 802.18.*

Moved by Thomas Kürner, seconded by Ben Rolfe

Upon neither discussion nor objection the motion carries

* Motion: *to request that the text proposal contained in 15-15-0722-05-003d-proposal-of-liaison-statement-to-etsi-isg-mwt is approved and further steps in an appropriate process for submission to ETSI ISG mWT are taken.*
* Moved by Thomas Kürner, seconded by Ben Rolfe
* Upon no discussion the vote was taken with the results 38/0/0, motion carriers

**10:42** THZ IG closing report by T Kürner (15-16-0226-00)

**10:39** TG 3e by Andrew Estrada

* Working on comment resolution, halfway through

**10:40** TG 3m report will be presented at closing plenary

**10:46** TG4s by S Kitazawa

**10:46** TG4t by C Powell

* approved baseline proposal

**10:46** TG4u by B Heile

* hasn’t met yet

**10:48** SG 4v by K Shah

* WG Motion: *request that the PAR and CSD contained in documents 15-16-130-02 and 15-16-131-017, 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 Kunal Shah, seconded by Tero Kivinen
* Upon no discussion the vote was taken as 42/0/0, motion carries

**10:55** TG7.1 LED by Yeong Min Jang

* Discussing ToC for draft

**10:56** TG8 by M Lee

* working on tbd items

**10:57** TG10 by C Powell

* finishing up comment resolution

**10:56** Study Group 15.12 ULI by P Kinney

WG Motion: *request that the PAR and CSD contained in documents 15-15-760-08 and 15-15-768-07, 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 Pat Kinney, seconded by Ben Rolfe

Upon no discussion the vote was taken with the results of 40/0/0, motion carries

**11:06** IG HRRC closing report by Junhyeong Kim (15-16-0260-00)

**11:09** IG Dependability report by R Kohno

* working on efforts required for SG

**11:06** SC maintenance by P Kinney

* resolved six questions on IEEE 802.15.4e, captured in document 15-16-0198-02

**11:08** IG 6T by P Kinney

* discussed TSCH issues such as use of a Payload ID
* discussed increasing scope to include 6lo and core
* Motion: *to request that the text proposal contained in 15-15-0722-05-003d-proposal-of-liaison-statement-to-etsi-isg-mwt is approved and further steps in an appropriate process for submission to ETSI ISG mWT are taken.*
* Moved by Thomas Kürner, seconded by Ben Rolfe
* Upon no discussion the vote was taken with the results 38/0/0, motion carriers

**11:13** Adoption of 802.15.4-2015 byISO/IEC/JTC1/SC6

* *Move to forward IEEE Std 802.15.4-2015 to ISO/IEC/JTC1/SC6 under the PSDO process.*
* Moved by Ben Rolfe, seconded by Tero Kivinen
* Upon no discussion the vote was taken 39/0/0

**11:20** WG chair recessed the meeting until Thursday evening.

**Thursday, 17 Mar 2016**

**18:30** WG chair called the meeting to order

**18:32** TG3e closing report by A Estrada (15-16-309-01)

*Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the P802.15.3e\_D01 with the following membership: Andrew Estrada (Chair), Ko Togashi, Itaru Maekawa, Jae Seung Lee, Keitarou Kondou, and Ken Hiraga. The 802.15.3e 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: Andrew Estrada; Seconded By: Ben Rolfe

Upon neither discussion nor opposition the motion carries.

**18:41** TG3m report by B Rolfe (15-16-0272-00)

*Motion: that 802.15 WG has reviewed and approves the CSD 15-15-0332-00-0000 and requests unconditional approval from the EC to submit P802.15.3.RevA-D02 to RevCom.*

Moved by Ben Rolfe Seconded by Rick Alfvin

Upon no discussion the vote was taken with the results of 32/0/0, motion carries

**18:43** TG4u closing report by B Rolfe (15-16-0253-01)

*Move that 802.15 WG start a WG Letter Ballot requesting approval to forward document P802.15.4u-D01 and CA document 15-16-0286-00 to Sponsor Ballot*

Moved by: Ben Rolfe Seconded by: Kunal Shah

Upon neither 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 P802.15.4u-D01 with the following membership: Phil Beecher (chair), Kunal Shah, Benjamin Rolfe, Ruben Salazar Cardozo, and Gary Stuebing. The 802.15.4u BRC is authorized to approve comment resolutions and to approve the start of recirculation ballot 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: Kunal Shah

Upon neither discussion nor objection the motion carries.

**18:46** TG4s closing report by S Kitazawa (15-16-0303-00)

**18:49** TG4t closing report by C Powell (15-16-0192-01)

**18:54** TG10 (L2R) closing report by Clint Powell (15-16-0191-02)

*Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the TG10 draft recommended practice with the following membership: Clint Powell, Verotiana Rabarijaona, Fumihide Kojima, Noriyuki Sato, Kiyoshi Fukui, Soo-Young Chang, Jaehwan Kim, SangSung Choi, and Charlie Perkins. The TG10 BRC is authorized to approve comment resolutions and to approve the start of balloting 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 as announced to the reflector.*

*Moved by: Clint Powell; Seconded by: Verotiana Rabarijaona*

Upon neither discussion nor objection the motion carries with unanimous consent

**19:01** SG4v closing report by K Shah (15-16-0267-02)

**19:04** TG7r1 closing report by Yeong Min Jang (15-16-0933-01)

**19:07** TG8 (PAC) closing report by M Lee (15-16-0313-00)

**19:10** SCm closing report by Pat Kinney (15-16-0198-02)

Move *that the 802.15 WG approve document* [*15-16-0302-00*](https://mentor.ieee.org/802.15/dcn/16/15-16-0302-00-0mag-responses-to-questions-concerning-802-15-4e-2012.docx) *as the response to the email from Koorosh Akhavan*.

Move: Pat Kinney; Seconded by Ben Rolfe

Upon neither discussion nor objection the motion carries with unanimous consent

**19:15** IG 6T closing report by P Kinney (15-16-0197-03)

**19:20** SG ULI closing report by P Kinney (15-16-0196-03)

*Motion: that the 802.15 Working Group seeks approval from the 802 EC to extend the 15.12 ULI study group in 802.15 to develop the PAR and CSD documents for “15.12 ULI”*

Moved by Pat Kinney, seconded by B Rolfe

Upon no discussion the vote was taken with the results of 28/0/0, motion carries

**19:23** 802.11 liaison report by A Petrick (15-16-0300-00)

**19:28** 802.18 liaison report by J Holcomb (15-16-0269-00)

**19:31** 802.24 liaison by B Rolfe (11-16-0468-00)

**19:35** 802.1 privacy by Juan-Carlos (15-16-0314-00)

**19:47** IG Dependability report by J Haapola (15-16-0289-00)

**19:52** Motion *to adjourn* was made by Clint Powell and seconded by Gary Steubing. Upon hearing no objection, the motion carries; the session is adjourned.

**Annex A** Attendance = 88

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

|  |  |  |
| --- | --- | --- |
| ABDALLAH | MOHAMED | Texas A&M University |
| Akhavan | Koorosh | Qualcomm Incorporated |
| Alfvin | Richard | Verilan |
| Aoyama | Hideki | Panasonic Corporation |
| Baykas | Tuncer | Istanbul Medipol University |
| Callaway | Edgar | ARM, Ltd. |
| Canchi | Radhakrishna | Kyocera Communications Inc. |
| Cha | Jaesang | SNUT |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Choi | Jinyong | LG ELECTRONICS |
| Choi | Sangsung | Electronics and Telecommunications Research Institute (ETRI) |
| De Ruijter | Hendricus | Silicon Laboratories |
| Dotlic | Igor | National Institute of Information and Communications Technology (NICT) |
| Estrada | Andrew | Sony Corporation |
| Evans | David | Philips Lighting |
| Fukui | Kiyoshi | Oki Electric Industry Co., Ltd. |
| Gillmore | Matthew | Itron Inc. |
| Gorday | Paul | ARM, Ltd. |
| GOTO | YOSHIHO | Panasonic Corporation |
| Haapola | Jussi | Centre for Wireless Communications / University of Oulu |
| Heile | Robert | Wi-SUN Alliance |
| Hernandez | Marco | National Institute of Information and Communications Technology (NICT) |
| Hiraga | Ken | NTT |
| Holcomb | Jay | Itron Inc. |
| HOSAKO | IWAO | National Institute of Information and Communications Technology (NICT) |
| Jang | Yeong Min | Kookmin University |
| JOO | SEONG-SOON | Electronics and Telecommunications Research Institute (ETRI) |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Kato | Toyoyuki | Anritsu Company |
| Kim | Jaehwan | Electronics and Telecommunications Research Institute (ETRI) |
| KIM | Jay | LG ELECTRONICS |
| Kim | Junhyeong | Electronics and Telecommunications Research Institute (ETRI) |
| KINNEY | PATRICK | Kinney Consulting LLC |
| Kitazawa | Shoichi | ATR Wave Engineering Laboratories |
| Kivinen | Tero | INSIDE Secure |
| Kizilirmak | Refik | Nazarbayev University |
| Kohno | Ryuji | YNU/CWC-Nippon |
| Kojima | Fumihide | National Institute of Information and Communications Technology (NICT) |
| Kondou | Keitarou | Sony Corporation |
| Kuerner | Thomas | TU Braunschweig |
| Laurent | Stephane | Gridbee communications |
| Le | Namtuan | Kookmin University |
| Le | Nam-Tuan | Kookmin University |
| Lee | Jae Seung | Electronics and Telecommunications Research Institute (ETRI) |
| Lee | Myung | CUNY - City University of NY |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Li | Qiang | HUAWEI |
| Lynch | Michael | Nortel Networks |
| Ma | Jing | National Institute of Information and Communications Technology (NICT) |
| maekawa | itaru | Japan Radio Co., Ltd. |
| Matsumura | Hiroyuki | Sony Corporation |
| Millet | Charles | Analog Devices Inc. |
| Mori | Kenichi | Space-Time Engineering |
| Nguyen | Trang | Kookmin University |
| Ogawa | Hiroyo | National Institute of Information and Communications Technology (NICT) |
| Oshima | Mitsuaki | Panasonic Corporation |
| Perkins | Charles | Futurewei Technologies |
| Petrick | Albert | Jones-Petrick and Associates, LLC. |
| Poegel | Frank | Atmel Corporation |
| Powell | Clinton | Powell Wireless Consulting, LLC |
| Rabarijaona | Verotiana | National Institute of Information and Communications Technology (NICT) |
| Riou | Emmanuel | Gridbee Communications |
| Robert | Joerg | University of Erlangen-Nuremberg |
| Roberts | Richard | Intel Corporation |
| Rolfe | Benjamin | Blind Creek Associates |
| RYAN | DANIEL | Nordic Semiconductor ASA |
| sah | suprita | Reliance JIO Infocomm LTD |
| Salazar Cardozo | Ruben E | Landis Gyr Group Worldwide |
| Sales | Leandro | Federal University of Alagoas (UFAL) |
| Sasaki | Shigenobu | Niigata University |
| Sato | Noriyuki | Oki Electric Industry Co., Ltd. |
| Serafimovski | Nikola | pureLiFi |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shimada | Shusaku | Schubiquist Technologies |
| Sonkki | Marko | CWC Nippon |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Silver Spring Networks Inc. |
| Togashi | Kou | TOSHIBA Corporation |
| TOSHINAGA | Hideki | NTT |
| Tsonev | Dobroslav | pureLiFi |
| Verso | Billy | DecaWave |
| Wang | Yiguang | Fudan University |
| Wilhelmsson | Leif | Ericsson AB |
| Xu | Dayin | Rockwell Automation |
| Yee | Peter | NSA/IAD |
| Yokota | Hidetoshi | Landis Gyr Group Worldwide |
| Zeng | Yu | China Telecommunications Corporation |
| Zhang | Junwen | Fudan University |