**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 | [17 July 2014] |
| 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 San Diego, California] |
| 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 #91**

**Manchester Grand Hyatt, San Diego, California**

**July 14-17, 2014**

**Monday, 14 July 2014**

**11:01 AM** The chair, Bob Heile, called the meeting to order (15-14-0346-02)

The chairasked for new attendees to raise their hands; there were none.

Announcements:

* Athens hotel bookings are going fast, please make your reservations
* No Social on Wednesday

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.

Art Astrin moved to *approve the agenda (document IEEE 15-43-0346-02-0000)* with Ben Rolfe seconding the motion. Following no objection the agenda was approved.

Ben Rolfe moved *to approve the previous meeting minutes (document 15-14-0288-00-0000)* and Art Astrin seconded the motion. Following neither discussion nor objection the minutes were approved. There were no matters resulting from the previous minutes.

Rick Alfvin stated the information (IEEE 802.15-14-0035-03) on registration requirements and the network information. Basic topics covered were:

* Registration requirements
* Network information
* Attendance sheets
* Voting Tokens
* Voting Rights
* Meeting Video Audio recording – not allowed

802.15 Work Group Membership status:

* 121 voting members
* 20 nearly voters
* 44 aspirants

Chair presented the EC Meeting Report (IEEE 802.15-14-0413-00)

Future Sessions

* September 14-19, 2014, Hilton Athens, Athens, Greece *802 Wireless Interim Session*
* November 2-7, 2014, Grand Hyatt San Antonio, San Antonio, TX, US, *802 Plenary Session*
* January 11-16, 2015, Hyatt Regency Atlanta, Atlanta, Georgia, USA *all 802 Interim Session*
* March 8-13, 2015, Estrel Hotel and Convention Center, Berlin, Germany, *802 Plenary Session.*
* May 10-15, 2015, Hyatt Regency Vancouver, Vancouver BC, CA *802 Wireless Interim Session.*\*
* July 12-17, 2015, Hilton Waikoloa Village, Big Island, HI, US, *802 Plenary Session.*
* Straw Poll: How many would support (given good financials) to a venue of Korea for the May 2016 interim session? Results were 32 for and 1 against.

The Treasurer Report will be given at the midweek plenary

**Status Reports**

802.15

802.11/802.15 joint regulatory group

* Meet Tuesday, AM2

TG3d by T Kürner

* Liaison from ITU-R

IG THz by T Kürner

* Starts again, ITU-R discussion

TG4n CMB by A Astrin

* Working on resolutions for LB91 comments

TG4q ULP by S Emami

* Working on the draft

TG4r ranging by D Eggert

* Technical guidelines document
* D Eggert has received approval from employer to support his chair

TG8 PAC by M Lee

* Harmonize proposals

TG9 KMP by R Moskowitz

* Call for Technical Editor and secretary

TG10 L2R by Clint Powell

* Hearing final proposals

SG SRU by Shoichi Kitazawa

* Waiting for PAR and CSD comments

SG7a LED by Prof Jang

* working on PAR and CSD
* hearing presentations

SC WNG by P Kinney

* 2 presentations:
	+ 802.16 projects of possible interest to 802.15 by R Marks
	+ A true low power solution for 802.15.4 by J Gilb

SC MAG by P Kinney

* focus of meetings is Comment Resolution for LB94- 802.15.4 revision

IG sec by T Kivinen

* working on security fixes for 802.15.4

**WG Motion:** *to submit a comment on 802.1AEcg’s PAR concerning making it MAC address size agnostic* by Ed Callaway, second A Astrin. Upon no discussion nor objection the motion carries by unanimous consent.

**12:08 PM** The chair recessed the meeting

**Wednesday, 16 July 2014**

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

WG Chair made announcements concerning social and logistics.

Get802

* program to allow free delivery of IEEE 802 standards
* $75 out of every person’s meeting registration fee goes to fund IEEE802
* Straw Poll: those who agree to continue the Get802 program for 2015: 39/1/1

**10:38** 802.18 TAG by John Notor

* consideration of power at 5.8 GHz (as in GigaWatts)
* FCC waiver for end to end systems above 928 MHz
* LTE over unlicensed bands (LTE-A) being considered by 3PP

**10:44** TG3d report by Thomas Kürner

**10:46** IG THz closing report by Thomas Kürner (15-14-0440-00)

**10:50:** TG4n by Art Astrin

* Resolved all 240 LB93 comments
* Start editing draft

**WG Motion:** Move *that the 802.15 WG start a WG Letter Ballot recirculation, requesting approval to forward document d1P802-15-4n\_Draft\_Standard.pdf to Sponsor Ballot, pending the completion and inclusion of the edits of resolutions from 15-14-0160-05-004n-comment-list-for-lb93.*

* Moved by: Art Astrin
* Seconded by: Ed Callaway
* Upon neither discussion nor objection the motion carries with unanimous consent

**WG Motion:** Move that *802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the 802.15.4n draft standard with the following membership: Arthur Astrin, Kenichi Mori, Masahiro Kuroda, Dietmar Eggert, Rick Powell, Wei Xia Zou and Liang Li. The 802.15.4n BRC is authorized to approve comment resolutions and to approve the start of recirculation ballots of the 802.15.4n 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 at least 30 days in advance.*

* Moved by: Art Astrin
* Seconded by: Ben Rolfe
* Upon neither discussion nor objection the motion carries with unanimous consent

**10:53** TG4q by Shariar Emami

* Hearing presentations

**10:55** TG4r by Dietmar Eggert

* Will start meeting this afternoon

**10:56** TG8 (PAC) by Myung Lee

* Harmonizing proposals

**10:57** TG9 (KMP) closing report by Bob Moskowitz (15-14-0446-01)

**11:00** TG10 (L2R) by Clint Powell

* Intent is to include all remaining drafts in Sept

**11:01** SG SRU by Shoichi Kitazawa

* Resolving comments on PAR and CSD

**11:03** IG LED ID closing report by Yeong Min Jang

* 4 presentations
* updating PAR and CSD

**11:04** IG Depend report by R Kohno

* hearing presentations on various application spaces

**11:05** IGsec by Tero Kivinen

* reviewing security issues with 15.4

**11:12** IG 6T by Pat Kinney

* discussed TSCH and actions/requests to be forwarded to IETF 6tisch

**11:13** SC maintenance report by Pat Kinney

* working on revision comments

**11:15** SC WNG by Pat Kinney

* + 802.16 projects of possible interest to 802.15 by R Marks

**11:16** WG chair recessed the meeting until Thursday evening.

**Thursday, 17 July 2014**

**18:38** WG chair called the meeting to order

**18:40** TG3d **(**100G) closing report by T Kürner (15-14-0440-00)

**18:38** TG4n (CMB) closing report by Art Astrin (15-14-444-01)

**18:48** TG4q **(**ULP) by Shariar Emami (15-14-0480-01)

**WG Motion:** *Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG comment collection of the 802.15.4q draft standard with the following membership: Shariar Emami, Allan Zhu, Fredrik Beer, Hendricus De Ruijter, Chandrashekhar Thejaswi PS, Kiran Bynum, Younsoo Kim.  The 802.15.4n BRC is authorized to approve comment resolutions and to approve the start of recirculation ballots of the 802.15.4n 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 at least 30 days in advance.*

Moved by:  Art Astrin            Seconded by: John Notor

Upon neither discussion nor objection the motion carries with unanimous consent

The WG Chair appointed James Gilb and Pat Kinney as the 802.15.4q TEG. Upon request for affirmation of the TEG, there were no objections to TEG.

**18:57** TG4r closing report by Ben Rolfe (15-14-0476-00)

**19:02** TG8 (PAC) closing report by Myung Lee (15-14-0466-00)

**19:06** TG10 (L2R) closing report by Clint Powell (15-14-0473-00)

**19:01** SG SRU by Shoichi Kitazawa (15-14-0463-01)

**WG Motion:***request that the 802.15 WG confirm the responses to the 802.15.4s PAR and CSD comments (15-14-0462-00) and that the PAR and CSD contained in documents 15-13-615-08 and 15-14-175-05, respectively, be approved by the 802.15 WG and that the 802 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.*

*Moved: Shoichi Kitazawa*

*Second: James Gilb*

*Upon no discussion the vote was taken with the results of 41/0/0, motion carries*

**WG Motion**: *that the 802.15 Working Group seeks approval from the 802 EC to extend the study group SG SRU to develop PAR and CSD documents*

Moved by Shoichi Kitazawa, seconded by John Notor

Upon no discussion the vote was taken with the results of 41/0/0, motion carries

**19:19** SG7aOCC by Yeong Min Jang (15-14-0469-00)

**WG Motion**: *that the 802.15 Working Group seeks approval from the 802 EC to extend the study group SG OCC to develop PAR and CSD documents*

Moved by Yeong Min Jang, seconded by Tim Godfrey

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

**19:24** IGdep by Ryuji Kohno (15-14-0467-01)

**19:28** IGsec by Tero Kivinen (15-14-0454-00)

**19:35** IG 6T (6tisch) by Pat Kinney (15-14-0431-00)

**19:45** SCm closing report by Pat Kinney (15-14-0481-00)

**WG Motion:** *Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the 802.15.4 Revision draft standard with the following membership:* Pat Kinney, James Gilb, Jeritt Kent, Benjamin Rolfe, Clint Powell, Billy Verso, Kunal Shah, Dalton Victor, Phil Beecher, Fumihide Kojima, Tero Kivinen, and Tim Harrington. *The 802.15.4 Revision BRC is authorized to approve comment resolutions and to approve the start of balloting the 802.15.4 Revision 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 in advance.*

Moved by Pat Kinney

Seconded by Ben Rolfe

Upon neither discussion nor objection the motion carries with unanimous consent

**19:50** B Rolfe presented the Treasurer Report (15-14-0419-00)

**19:54** 802.11 liaison report by A Petrick (15-14-0477-00)

**19:58** 802.18 by John Notor (15-14-0470-00)

**20:02** 802.19 by Ivan Reede

* meetings for coexistence in unlicensed bands
* proper for 802 to respond to LTE-U community

**20:05** 802.24 liaison by J Gilb

* looking to expand scope to address vertical applications

**WG Motion**: *IEEE 802.15 WG supports the formation of IEEE 802.24 Smart Grid Task Group with the proposed TG scope defined in 24-14-0015-03 or current version. IEEE 802.15 WG has identified the following topics that are of interest to the WG*

* + *Advanced Meter Infrastructure (AMI)*
	+ *Distribution automation (DA)*

Moved by James Gilb and seconded by Tim Godfrey

Upon no discussion the vote was taken with the results of 30/1/1

**20:18**  **WG Motion**: to adjourn was made by Rick Alfvin and seconded by Ben Rolfe. Upon hearing no objection, the motion carries; the session is adjourned.

**Annex A** Attendance = 108

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

|  |  |  |
| --- | --- | --- |
| Achir | Mounir | Canon Research Centre France |
| Akiyama | Keiji | Sony Corporation |
| Alfvin | Richard | Verilan |
| Ariyoshi | Masayuki | Advanced Telecommunications Research Institute International (ATR) |
| Astrin | Arthur | Astrin Radio |
| Baek | Kwang-Hyun | Chung-Ang University |
| Beecher | Phiip | Wi-SUN Alliance |
| Beer | Frederik | University of Erlangen-Nuremberg, Fraunhofer IIS |
| Bynam | Kiran | SAMSUNG |
| Callaway | Edgar | Sunrise Micro Devices, Inc. |
| Canchi | Radhakrishna | Kyocera Communications Inc. |
| Cha | Jaesang | Seoul National University of Science and Technology(Seoul Tech) |
| Chang | Kapseok | Electronics and Telecommunications Research Institute (ETRI) |
| Chasko | Stephen | Landis Gyr Group Worldwide |
| Cho | Sungrae | Chung-Ang University |
| Choi | Sangsung | Electronics and Telecommunications Research Institute (ETRI) |
| De Ruijter | Hendricus | Silicon Laboratories |
| Dotlic | Igor | National Institute of Information and Communications Technology (NICT) |
| Drude | Stefan | NXP Semiconductors |
| Eggert | Dietmar | Atmel Corporation |
| Emami | Shahriar | Samsung Information Systems America, Inc. |
| Evans | David | Philips Electronics |
| Fukui | Kiyoshi | Oki Electric Industry Co., Ltd. |
| Gilb | James | Tensorcom, Inc. |
| Gillmore | Matthew | Itron Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Haapola | Jussi | Centre for Wireless Communications / University of Oulu |
| Hara | Shinsuke | Osaka City University (OCU) |
| Harrington | Timothy | WhereNet - Zebra ESG |
| Heile | Robert | ZigBee Alliance |
| Herbst | Thomas | Silver Spring Networks Inc. |
| Hernandez | Marco | National Institute of Information and Communications Technology (NICT) |
| Hiraga | Ken | NTT |
| Holcomb | Jay | Itron Inc. |
| Horisaki | Koji | TOSHIBA Corporation |
| Hosako | Iwao | National Institute of Information and Communications Technology (NICT) |
| IIZUKA | Nobuo | Casio Computer Co., Ltd. |
| Jang | Yeong Min | Kookmin University |
| Jiang | Robert |  |
| Joo | Seong-Soon | Electronics and Telecommunications Research Institute (ETRI) |
| Kang | Hyunduk | Electronics and Telecommunications Research Institute (ETRI) |
| Kasamatsu | Akifumi | National Institute of Information and Communications Technology (NICT) |
| Kato | Shuzo | Tohoku University |
| Kato | Toyoyuki | Anritsu Engineering Co.,Ltd, |
| Kent | Jeritt | Analog Devices Inc. |
| Kim | Basiliojun | Korea Smart Grid Association |
| Kim | Il Yeon |  |
| Kim | Jaehwan | Electronics and Telecommunications Research Institute (ETRI) |
| Kim | Youngsoo | SAMSUNG |
| Kinney | Patrick | Kinney Consulting LLC |
| Kitazawa | Shoichi | ATR Wave Engineering Laboratories |
| Kivinen | Tero | INSIDE Secure |
| Kohno | Ryuji | YNU/CWC-Nippon |
| Kojima | Fumihide | National Institute of Information and Communications Technology (NICT) |
| Kuerner | Thomas | TU Braunschweig |
| Kwon | Soon Yil | LG ELECTRONICS |
| Lee | Jae Seung | Electronics and Telecommunications Research Institute (ETRI) |
| Lee | Moon-Sik | Electronics and Telecommunications Research Institute (ETRI) |
| Lee | Myung | CUNY - City University of NY |
| Lee | Sangjae | Electronics and Telecommunications Research Institute (ETRI) |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Li | Liang | Vinno Technologies Inc. |
| Li | Qing | InterDigital, Inc. |
| Lynch | Michael | Nortel Networks |
| Matsumura | Hiroyuki | Sony Corporation |
| McInnis | Michael | The Boeing Company |
| Mc Laughlin | Michael | DecaWave |
| Mizoguchi | Yuichi | TOSHIBA Corporation |
| Mori | Kenichi | Pansonic Corporation |
| Moskowitz | Robert | Verizon |
| Nekoui | Mohammad | Olympus Communication Technology of America, Inc. |
| Ngo | Chiu | SAMSUNG |
| Nikolich | Paul | YAS Broadband Ventures, LLC. |
| Notor | John | Notor Research |
| Petrick | Albert | Jones-Petrick and Associates, LLC. |
| Pokrajac | Dalibor | Guard RFID Solutions |
| Powell | Clinton | PWC, LLC |
| P S Bhat | Chandrashekhar | SAMSUNG |
| Reddy | Joseph | texas instruments |
| Reede | Ivan | AmeriSys Inc. |
| Roberts | Richard | Intel Corporation |
| Rolfe | Benjamin | Blind Creek Associates |
| Russell | Paul | InterDigital, Inc. |
| Sarikaya | Behcet | Huawei R&D USA |
| Sasaki | Shigenobu | Niigata University |
| Sato | Noriyuki | Oki Electric Industry Co., Ltd. |
| Schwoerer | Jean | France Telecom |
| seto | ichiro | TOSHIBA Corporation |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shellhammer | Stephen | Qualcomm Incorporated |
| Shimada | Shusaku | Schubiquist Technologies Guild |
| Shimizu | Masashi | Nippon Telegraph and Telephone Corporation (NTT) |
| Smolinski | Daniel | Renesas Electronics Corporation |
| Song | Nah-Oak | Korea Advanced Institute of Science and Technology (KAIST) |
| Stuebing | Gary | Cisco Systems, Inc. |
| Takada | Takuma | NTT DoCoMo, Inc. |
| Takai | Mineo | Space-Time Engineering |
| Toshimitsu | Kiyoshi | TOSHIBA Corporation |
| Verso | Billy | DecaWave |
| Victor | Dalton | Silver Spring Networks Inc. |
| Villardi | Gabriel | National Institute of Information and Communications Technology (NICT) |
| Wei-Xia | Zou |  |
| Yaita | Makoto | Microsystem Integration Laboratories NTT |
| Yokota | Hidetoshi | Landis Gyr Group Worldwide |
| Yu | Jeongseok | Chung-Ang University |
| Zeng | Yu | China Telecom |
| Zhao | Mu | Huawei Technologies Co. Ltd |