**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 May 2013] | |
| 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 Vancouver, Canada] | |
| Abstract | [IEEE 802.15 Working Group Minutes] | |
| Purpose | [Official minutes of the Working Group Session] | |
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**IEEE 802.15 Interim Meeting – Session #84**

**Hilton Waikoloa, Hawaii**

**May 12-16, 2013**

**Monday, 13 May 2013**

**8:06** 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 – same as last year
* Straw Poll of new attendees: 1

**8:09** 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.

802.15 WG chair read IEEE anti-trust policy.

**8:13** Financial report by Jon Rosdahl (CSR) docs 11-13-0531-00, 15-13-0297-00

Net Worth

* **Dec 31, 2012 – $599,205.26**
  + IEEE account: $392,765.18 + 123.43 - $7465.06 + 108.61 = $385,532.16
  + Face-to-Face: $64,502.51 +90,000- $14,285.23 +105,750.00 – 32,294.18 = $213,673.10
* **Feb 28, 2013 - $450,577.54**
  + IEEE account: $385,532.16 + 108.05 +88.43 = $385,728.64
  + Face-to-Face: $213,673.10 +56,700 – 63,953.92 + 6600 -158,170.28 = 64,848.90
* **May 1, 2013 - $569,314.79**
  + IEEE account: $385,728.64 +76.93+88.47 +82.47 = $385,976.51
  + Face-to-Face: $64,848.90 – 14,223.07+57150-25,537.56+101,100 = $183,338.28
  + IEEE account: $392,765.18 + 123.43 - $7465.06 + 108.61 = $385,532.16
  + Face-to-Face: $64,502.51 +90,000- $14,285.23 +105,750.00 – 32,294.18 = $213,673.10

Waikoloa Proposed Current

* Registration Income: $192,750 $218,850
  + Hotel Credits $0 $5,500
  + Registrations 300 325
  + Meeting Expense Estimate: $204,183 $238,703
  + AV $24,700 $ 19,460
  + Financial Fees $10,683 $ 11,443
  + Meeting Planner $37,500 $ 43,000
  + Food & Beverage $60,000 $ 85,000
  + Network Services $39,500 $ 42,500
  + Social $18,000 $ 23,500
  + Shipping $12,250 $ 12,250
  + Misc $ 1,550 $ 1,550
* Surplus/(Deficit) $(10,533) $(14,353)

**8:19** Wireless and IMAT announcements by Rick Alfvin (15-13-027-02)

**8:24** Review future sessions

* July 14-19, 2013, Geneva*, 802 Plenary Session*
* September 15-20, 2013, Nanjing China, *802 Wireless Interim Session*\*
* November 10-15, 2013, Hyatt Regency Reunion, Dallas, TX, USA, *802 Plenary Session*
* January 19-24, 2014, Hyatt Century Plaza, Los Angeles, CA, USA, 802 Wireless Interim Session\*
* March 16-21, 2014, China World Hotel, Beijing PRC, 802 Plenary Session. (pending)
* May 11-16, 2014, Hilton Waikoloa Village, Big Island, HI, USA, 802 Wireless Interim Session\*
* July 13-18, 2014, Grand Hyatt Manchester, San Diego, CA, USA, 802 Plenary Session.
* September 14-19, 2014, TBD, 802 Wireless Interim Session\*
* November 2-7, 2014, Grand Hyatt San Antonio, San Antonio, TX, USA, 802 Plenary Session.

**8:26 Working Group Updates**

* 802.11 by B Kraemer (Marvell): 323 voters, 31 potential voters

TGREVmc - Revision

TGac - VHT <6GHz – in Sponsor Ballot

TGaf- TVWS - in Letter Ballot

TGah- Sub 1GHz

TGai – Fast Initial Link Setup (FILS)

TGaj – China 45& 60 GHz bands (CMMW)

TGak – General Link (GLK)

TGaq – Pre-Association Discovery (PAD)

**Standing Committee**

WNG - WIRELESS NEXT GENERATION

ARCHITECTURE

JTC1

REGULATORY

**Study Group**

High efficiency Wireless LAN (HEW)

802.15 by B Heile (125 voters, 20 nearly voters)

TG4k: LECIM (submitted to RevCom)

TG4m: TVWS (in letter ballot)

TG4n: CMB

TG4p: PTC (in letter ballot)

TG4q: ULP (Ultra Low Power amendment) - drafting TRD

TG8: PAC (Peer Aware Communications) working on technical guidance document

TG9: KMP (Key Management Protocol) draft development

SG-L2R: Layer 2 Routing

IG-SRU (Spectrum Resource Utilization)

802.16 by Roger Marks (30 voters, 802.16-13-0099)

TG: 802.16q (heterogeneous)

TG: 802.16.r (small cell backhaul)

TG: 802.16.3 (metrology)

802.18 by M Lynch

* FCC: review of RF exposure, 5 GHz discussion, etc.
* ITU : response to use of radio in smart grid,

802.19 Ivan Reede (Amerisys)

* 802.15 ballot passed
* recirculation ballot is being reviewed

802.21 Subir Das (22 voters) (21-13-0079)

* TG21c – single radio handover – letter ballot
* TG21d – multicast group management – drafting standard
* TG21m - handover
* TG21.1 -

802.24 Gilb (27 voters) 24-13-004-02

* Response to ITU-R question 236r1

OmniRAN ECSG by Max Riegel

* Discussion on use case cases
* Functional requirements document
* Create a scope document

IEEE 802-ALL Email Server by J Rosdahl

* IEEE 802-ALL Email List Server only provide emailed session announcements
* Send email to <mailto:listserv@listserv.ieee.org>

**9:00** Joint meeting adjourned

**9:31** B Heile (ZigBee Alliance), WG chair called the 802.15 WG plenary to order (15-13-0238-03)

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 0-5 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, to which there were no responses.

Chair reminded participants of IEEE anti-trust rules and obligations.

Approve/modify joint opening agenda (15-12-0238-03-0000)

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

Review and approve 802.15 WG minutes from the Orlando session (15-13-0143-00-0000)

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

**9:41** Wireless Network Updates by Rick Alfvin (15-13-0027-02)

* 125 voters and 20 nearly voters
* Rick described the attendance requirements for the week, 12 meetings must be attended to obtain credit for this session

**9:47** WG recessed

**Wednesday 15 May 2013**

**802.15 mid-session plenary meeting**

**10:34** Bob Heile called the meeting to order.

**802.18** by J Notor

* 5 GHz uni-band NPRM drafting
* preliminary announcement that Prodigy is getting approval to field systems
* 802.24 is responding to 36/1

**TG4k (LECIM) closing report** by Pat Kinney (15-13-0296-01)

**TG4m (TVWS)** by SangSung Choi

* finished 25 comment resolutions

**TG4n (CMB)** by Art Astrin

* discussed translation errors in Chinese regulation

**TG4p (PTC)** by Jon Adams (15-13-313-01)

* comment resolution phase with 59 comments and 16 non-voters

**TG4q (ULP)** by Shahriar Emami

* + working on Technical Guidance Document
  + hearing channel model and PHY proposals

**TG8 (PAC)** by Myung Lee (CUNY)

* heard 14 proposals, 2 more to go

**TG9 (KMP)** by R Moskowitz (Verizon)

* working on the technical draft

**SGL2R** closing reportby C Powell

* wrapping up PAR and 5C

**IG SRU by Shoichi Kitazawa** (15-13-0318-00)

* heard three presentations
* considering moving to SG status

**SC Maintenance** by P Kinney

* meetings this afternoon

**SC WNG** by P Kinney

* no presentation

**Proposed updates to 5C** by James Gilb(13-00024-01-00ec)

**Proposed Working Group rename discussion** by Jon Adams (15-13-0302-00)

**AoB** none

**11:25** Recessed until Thursday at 16:00

**Thursday, 16 May 2013**

**16:00** 802.15 WG chair called the meeting to order (agenda 15-13-0238-04)

**16:03** TG4m (TVWS) Closing Report by Phil Beecher (15-13-0330-00)

**16:08** TG4n (CMB) Closing Report by Art Astrin(15-13-0332-00)

**16:10** TG4p (RCC) Closing Report by Jon Adams (15-13-0327-00)

Move that 802.15 WG approve the formation of a Ballot Resolution Committee (BRC) for the WG balloting of the 802.15.4p draft standard with the following membership: Monique Brown, Ben Rolfe, Dietmar Eggert, Meng-Doong Chang, and Jon Adams. The 802.15.4p BRC is authorized to approve comment resolutions and to approve the start of recirculation ballots of the 802.15.4p 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 7 days in advance.

Moved by Ed Callaway; Seconded by Ben Rolfe

WG chair appointed Jon Adams as BRC chair.

**16:15** TG4q by Shariar Emami (15-13-0336-00)

**16:18** TG8 (PAC) by Huan-Bang Li (15-13-0334-00)

**16:21** TG9 (KPM) by Peter Yee (15-13-0324-00)

**16:23** SGL2R by Clint Powell (15-13-0315-00)

Motion: *request that the PAR and Five Criteria contained in documents 15-13-0231-02 and 15-13-0232-03, respectively, be forwarded to the EC with the request to forward the PAR to NesCom*.

Moved by: Clint Powell

Seconded by: Pat Kinney

Upon no discussion, the vote was taken as 24/0/0, the motion carries

**16:31** IGSRC by Shoichi Kitazawa (15-13-0318-00)

**16:32** SCMaintenance closing report by Pat Kinney (15-13-0320-02)

**16:38** 802.11 liaison report by Clint Chaplin (15-13-0337-02)

**16:47** 802.19 liaison report by Tuncer Baykas

* .19 had just finished a recirculation before meeting, it will go out for another recirc after meeting

**16:48** 802.24 by James Gilb

* Approved 2 documents

**16:50** 802.18 liaison report by John Notor (15-13-0331-00)

**16:53** Motion *to adjourn* was made by Rick Alfvin, seconded by Jon Adams, upon no objection the motion carried, this session is adjourned.

**Annex A** Attendance = 107

|  |  |  |
| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Adams | Jon | Lilee Systems |
| Aiello | Roberto | Itron Inc. |
| Alfvin | Richard | Verilan |
| Astrin | Arthur | Astrin Radio |
| Baykas | Tuncer | Tohoku University |
| Beecher | Philip | Wi-SUN Alliance |
| Beer | Frederik | University of Erlangen-Nuremberg, Fraunhofer IIS |
| Bottomley | Andrew | Microsemi Corporation |
| Brown | Monique | M. B. Brown Consulting |
| Bynam | Kiran | SAMSUNG |
| Callaway | Edgar | Sunrise Micro Devices, Inc. |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Canchi | Radhakrishna | Kyocera Communications Inc. |
| Cha | Jaesun | Electronics and Telecommunications Research Instititute (ETRI) |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Chang | Sung-Cheol | Electronics and Telecommunications Research Instititute (ETRI) |
| Chaplin | Clint | Samsung Information Systems America, Inc. |
| Chasko | Stephen | Landis Gyr Group Worldwide |
| Cheong | Minho | Electronics and Telecommunications Research Instititute (ETRI) |
| Cho | Seungkwon | Electronics and Telecommunications Research Instititute (ETRI) |
| Cho | Sungrae | Chung-Ang University |
| Choi | Sangsung | Electronics and Telecommunications Research Instititute (ETRI) |
| CHUN | JINYOUNG | LG ELECTRONICS |
| Dotlic | Igor | National Institute of Information and Communications Technology (NICT) |
| DU | JiaDong | China Academy of Telecommunication Research (CATR) |
| Eggert | Dietmar | Atmel Corporation |
| Emami | Shahriar | Samsung Information Systems America, Inc. |
| Filin | Stanislav | National Institute of Information and Communications Technology (NICT) |
| Flammer | George | Silver Spring Networks Inc. |
| Fukui | Kiyoshi | Oki Electric Industry Co., Ltd. |
| Gilb | James | Tensorcom, Inc. |
| Gillmore | Matthew | Itron Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Gottlib | Elad | Silver Spring Networks Inc. |
| Haapola | Jussi | Centre for Wireless Communications / University of Oulu |
| Hara | Shinsuke | Osaka City University (OCU) |
| Harada | Hiroshi | National Institute of Information and Communications Technology (NICT) |
| 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) |
| Hur | Junbeom | Chung-Ang University |
| Iwaoka | Mitsuru | Yokogawa Electric Corporation |
| Jeon | Young-Ae | Electronics and Telecommunications Research Instititute (ETRI) |
| Jeong | Wuncheol | Electronics and Telecommunications Research Instititute (ETRI) |
| Jillings | Steven | Semtech Corporation |
| Jung | ChangYong | LG ELECTRONICS |
| Kang | Hyunduk | Electronics and Telecommunications Research Instititute (ETRI) |
| Kato | Shuzo | Tohoku University |
| Kent | Jeritt | Analog Devices Inc. |
| Kim | Eunkyung | Electronics and Telecommunications Research Institute (ETRI) |
| Kim | Jaehwan | Electronics and Telecommunications Research Instititute (ETRI) |
| Kim | Youngsoo | SAMSUNG |
| Kinney | Patrick | Kinney Consulting LLC |
| Kitazawa | Shoichi | ATR Wave Engineering Laboratories |
| Kivinen | Tero | INSIDE Secure |
| Kojima | Fumihide | National Institute of Information and Communications Technology (NICT) |
| Kwak | Byung-Jae | Electronics and Telecommunications Research Instititute (ETRI) |
| Lan | Zhou | NICT |
| Lee | Jae Seung | Electronics and Telecommunications Research Instititute (ETRI) |
| Lee | Myung | CUNY - City University of NY |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Li | Liang | Vinno Technologies Inc. |
| Liru | Lu | National Institute of Information and Communications Technology (NICT) |
| Lukyanenko | Andrey |  |
| luo | hui | China Academy of Telecommunication Research (CATR) |
| Lynch | Michael | Nortel Networks |
| McInnis | Michael | The Boeing Company |
| Melet | Patrick | Landis Gyr Group Worldwide |
| Mizutani | Keiichi | National Institute of Information and Communications Technology (NICT) |
| Moskowitz | Robert | Verizon |
| Na | Woongsoo |  |
| Na | Woongsoo | Chung-Ang University |
| nair | jinesh | SAMSUNG |
| Ngo | Chiu | SAMSUNG |
| Notor | John | Silver Spring Networks Inc. |
| Ohba | Yoshihiro | TOSHIBA Corporation |
| Park | Giwon | LG ELECTRONICS |
| Park | Seung-Hoon | Samsung |
| Popa | Daniel | Itron Inc. |
| Powell | Clinton | PWC, LLC |
| Rabarijaona | Verotiana | National Institute of Information and Communications Technology (NICT) |
| Ramasastry | Jayaram | Silver Spring Networks Inc. |
| Randall | Karen | NSA/IAD |
| Rolfe | Benjamin | Blind Creek Associates |
| Ryu | Cheol | Electronics and Telecommunications Research Instititute (ETRI) |
| Ryu | Kiseon | LG ELECTRONICS |
| Sasaki | Shigenobu | Niigata University |
| Sato | Noriyuki | Oki Electric Industry Co., Ltd. |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shin | ChangSub | Electronics and Telecommunications Research Instititute (ETRI) |
| SHIN | CheolHo | Electronics and Telecommunications Research Instititute (ETRI) |
| Song | Chunyi | National Institute of Information and Communications Technology (NICT) |
| Taylor | Larry | DTC (UK) |
| Tran | Khanh | Tokyo Institute of Technology |
| Tsai | Chia-Lung | Industrial Technology Research Institute (ITRI) |
| Verso | Billy | DecaWave |
| Victor | Dalton | Silver Spring Networks Inc. |
| Wang | Xiang | Wuxi SensingNet Industrialisation Research Institute |
| WON | Eun Tae | Samsung Electronics |
| Yamamoto | Takashi | Sumitomo Electric Industries, LTD |
| Yang | Yang | Wuxi SensingNet Industrialisation Research Institute |
| Yee | Peter | NSA/IAD |
| ZHAO | Bingxuan | Niigata University |
| Zhao | Mu | Huawei Technologies Co. Ltd |
| Zhou | Mingtuo | National Institute of Information and Communications Technology (NICT) |
| Zhu | Chunhui | SAMSUNG |