**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | **<IEEE802.15 WG minutes>** | |
| Date Submitted | [15 May 2014] | |
| Source | [Pat Kinney] [<Kinney Consulting LLC>] [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, Hawaii] | |
| 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 #90**

**Hilton Waikoloa Village Resort and Convention Center**

**Waikoloa, Hawaii, USA**

**May 12 - 15, 2014**

**Monday, 12 May 2014**

**8:03** 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 – will be at the Lagoon patio
* Straw Poll of new attendees: 1

**8:08**  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. Chair provides an opportunity for those who know of essential patents to inform; none heard.

802.15 WG chair read IEEE anti-trust policy.

**8:13** Wireless and IMAT announcements by Rick Alfvin (15-14-035-02)

**8:15** Financial report by Jon Rosdahl (CSR) docs 11-14-0494-00, 15-14-280-00

**Dec 31, 2013 – $597,980.08**

IEEE account: $364,885.08 + $83.67 + $80.99 + $21,515 -25 = $386,539.74

Face-to-Face: $54,033.50 + $95,700 – $32,306.83 +104,850 – 10,836.33 = $211,440.34

**Feb 28, 2014 – $432,242.38**

IEEE account: $386,539.74 + 87.84 + 88.66 = $386,716.24

Face-to-Face: $211,440.34 + $90,600.00 - $46,283.81 + $650 - $210,880.39 = $45,526.14

**March 31, 2014 – $515,184.92**

IEEE account: $386,716.24 +68.23 = $386,784.47

Face-to-Face: $45,526.14 + $120,300.00 - $37,425.69 = $128,400.454

**Nanjing, China – Sept 2013 Update:**

* Jon reports that there were expense not taken out of “surplus” returned to the sponsor thus previously reported “net zero” has been updated:
* Additional expenses to 802.15/802.11 Treasury:
  + Transfer fee: $25
  + Site visit expense: $7,450.06
  + Net cost to 802.11/15: $7,475.06

**Century City, January 2014:**

**Proposed Estimated Actual**

**Nov 2013 Jan 2014 April 2014**

* Registration Income: $200,250 $268,050 $294,150.00
  + Hotel Credits $0 $7,600 $8,738.60
  + Registrations 300 402 430
* Meeting Expense Estimate: $209,563 $275,753 $304,970.65
  + AV $17,000 $17,000 $ 19,200.06
  + Financial Fees $10,513 $ 13,902 $ 19,396.46
  + Meeting Planner $38,000 $ 45,750 $ 51,061.35
  + Food & Beverage $85,000 $122,000 $129,456.46
  + Network Services $36,000 $ 57,000 $ 47,590.07
  + Social $18,000 $ 28,500 $ 33,673.00
  + Shipping $ 6,500 $ 4,000 $ 3,576.33
  + Misc $ 1,400 $ 1,600 $ 1,016.92
* Surplus/(Deficit) $(9,313.00) $(103) $(2,082.05**)**
* Currently projecting a surplus for May meeting in the range of $6k to $9k
* John gave a status overview of the process of “adopting” the reporting tools mandated by IEEE (Net Suite) and explained the new report formats we will be using moving forward.

**8:30** Review future sessions (Bob, document # 15-14-0222-02)

* July 13-18, 2014, Grand Hyatt Manchester, San Diego, CA, USA, 802 Plenary Session.
* September 14-19, 2014, Hilton Athens, Athens, Greece, 802 Wireless Interim Session\*. Announces early bird registration set at $850.
* November 2-7, 2014, Grand Hyatt San Antonio, San Antonio, TX, USA, 802 Plenary Session
* January 18-23, 2015 Hyatt Regency Atlanta, Atlanta, GA, USA Interim\*
* March 8-13, 2015 March 15-20, 2015, Estrel Hotel and Convention Center, Berlin, Germany, Plenary Session.
* May 10-15, 2015 Hyatt Regency Vancouver Interim\*

**8:40 Working Group Updates**

* 802.11 by Adrian Stephens, (document 11-14-0510-01)

802.15 by B Heile (document 15-14-0222-02)

TG4m: TVWS - No meeting, standard published

TG4n: CMB - resolving comments from letter ballot

TG4p: RCC - No meeting, standard published

TG4q: ULP (Ultra Low Power) – preparing draft

TG8: PAC (Peer Aware Communications) - working on draft document

TG9: KMP (Key Management Protocol) draft development

TG10-L2R: Layer 2 Routing, hearing proposals

TG 3d 100G 100Gbps THz – getting started

SG-SRU (Spectrum Resource Utilization)

TG 4r Distance Measurement Technologies (DMT) – getting started

SG 4s EU Band Coordination

SG 7a Optical Camera Communications

IG 6tisch

IG Dependability

802.16 by Roger Marks (not present)

802.18 by M Lynch (doc # 18-0023-00)

802.19 S Shellhammer (not present)

802.21 Subir Das (doc # 21-14-0081-00)

* TG21c – single radio handover – sponsor ballot (98% approval, no comments)
* TG21d – multicast group management – resolving comments from letter ballot
* TG21m – revision project
* TG21.1 – media independent services and use cases – just started

802.22 Chang-Woo, NIC (doc .22-0070-00)

* TG22.1 revision project
* SG22.2 spectrum occupation sensing
* TG22b – enhancement for broadband services and monitoring applications

802.24 James Gilb (no slides)

* Will be working on task group process, SGIP dilemma, whitepaper.

Other 802 news: 802 O&A is done. OMNI RAN is now 802.1cf (a brief discussion follows on how appropriate that designation is).

**9:00** Joint meeting adjourned

**Working group opening plenary**

**9:30** B Heile (ZigBee Alliance), WG chair called the 802.15 WG plenary to order (15-14-0222-02)

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 (15-14-0222-03)

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

Review and approve 802.15 WG minutes from the Beijing session (15-14-0152-00-0000)

* 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 (15-14-0035-02)

* 120 voters and 12 nearly voters
* Rick described the attendance requirements for the week, 13 meetings must be attended to obtain credit for this session

**9:47** WG recessed

**Wednesday 14 May 2014**

**802.15 mid-session plenary meeting**

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

**802.18** by J Notor

* Number of Ofcom and FCC documents were review but no responses
* 802.15 has no formal regulation subcommittee, but plans to participate with 802.11 in a joint regulatory subcommittee
  + many regulatory concerns are consistent between 802.11 and 802.15
  + meetings scheduled for AM2 on Tuesday and open to all
  + subcommittee could create a document for action at mid-week plenaries
  + if 802.11 and 802.15 agree, one document goes to 802.18, if not two documents could go to 802.18

**TG3d** by T Kürner

* first meeting, worked on leadership and plan for moving forward
* motion: *to affirm TG3d’s approval of T Kürner as TG3d chair*. Moved by I Reede, and seconded by E Callaway. Upon neither discussion nor objection the motion carries.

**TG4n (CMB)** by Art Astrin

* working on draft 1
* 236 comments, most have been closed

**TG4q (ULP)** by Shahriar Emami

* working on draft
* list of things to do before letter ballot

**TG4r (Ranging)** by Dietmar Eggert (Atmel)

* working on plan for going forward
* working on TGD
* final determination of TG4r chair at July session

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

* finishing up proposal effort

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

* D7 is posted at private area
* Better organized use cases have been requested

**TG10 (L2R)** by C Powell

* Heard 4 proposals

**SG SRU** by Shoichi Kitazawa

* heard two presentations
* edited PAR

**TG15.4r** by D Eggert

* drafting PAR and 5C

**IGdep** by R Kohno

* in discussions

**IGsec** by Tero Kivinen

* discussed MAC frame counter issue

**IG6t**isch by P Kinney

* meeting at PM1 on Thursday

**SC Maintenance** by P Kinney

* discussed WG editor issues with 802.15.4 document
* 2 meetings tomorrow
* The current short term schedule for this revision is:
  + Comment collection
    - Start  23 May (week after Kona)
    - End  6 June
  + Letter Ballot
    - Start  14 June
    - End  13 July (start of San Diego)
  + Recirculations
    - Start  27 July
    - End   14 Oct

**SC WNG** by P Kinney

* No presentations

**AoB**

* 802.16 Merger presentation (IEEE 802.16-14-0038-00-Gcon)
  + fold 16 into 15? Reason:15 has multiple independent MACs
  + chair asked for any responses to objection to this possible merger; there were none
  + Personal Metropolitan Area Network (PMAN)?
  + Synergy with TG3d

**11:05** Recessed until Thursday at 16:00

**Thursday, 15 May 2014**

**16:02** 802.15 WG chair called the meeting to order (agenda 15-14-0222-03)

**16:07** TG3d by Thomas Kürner (15-14-313-00)

**16:11** TG4n (CMB) by Art Astrin (15-14-0314-00)

*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: E Callaway

Upon no discussion nor objection the motion carries with unanimous consent

**16:19** TG4q (ULP) by Shariar Emami (15-14-0329-01)

**16:23** TG4r (Ranging) by D Eggert (15-14-331-00)

**16:27** TG8 (PAC) by Myung Lee (15-14-0330-00)

**16:30** TG9 (KPM) by R Moskowitz (15-14-0325-00)

**16:33** TG10 (L2R) by Clint Powell (15-14-0322-01)

**16:38** SGSRU by Shoichi Kitazawa (15-14-0316-00)

WG Motion:*request that the PAR and CSD contained in documents 15-13-615-07 and 15-14-175-04, 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 to meet the needs of the initial submission to 802 for review at its July plenary.*

*Moved: Shoichi Kitazawa*

*Second: C Powell*

*Upon no discussion, the vote was taken with the results of 29/0/0, motion carries*

**16:56** IGdep by R Kohno (15-14-0318-03)

**17:01** IGsec by T Kivinen (15-14-0315-01)

**17:06** IG6tisch by Pat Kinney (15-14-0334-00)

**17:19** SCclosing report by Pat Kinney (15-14-0324-00)

*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, Benjamin Rolfe, Clint Powell, Billy Verso, Kunal Shah, Dalton Victor, Phil Beecher, Fumihide Kojima, and Patrick Melet. 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 at least 7 days in advance.*

Moved by Pat Kinney (no second needed)

Upon neither discussion nor opposition, the motion carries

**17:20** 802.18 report by John (15-14-302-00)

**17:21** 802.24 by James Gilb

* Authorized to conduct a LB to change 802.24’s scope

**17:22** Motion *to adjourn* was made by Ed Callaway, seconded by Rick Alfvin, upon no objection the motion carried, this session is adjourned.

**Annex A** Attendance = 68

|  |  |  |
| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Alfvin | Richard | Verilan |
| Ariyoshi | Masayuki | ATR |
| Astrin | Arthur | Astrin Radio |
| Beecher | Philip | Wi-SUN Alliance |
| Beer | Frederik | University of Erlangen-Nuremberg, Fraunhofer IIS |
| Callaway | Edgar | Sunrise Micro Devices, Inc. |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Chang | Kapseok | ETRI |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Chaplin | Clint | Imagicon |
| Cho | Sungrae | Chung-Ang University |
| De Ruijter | Hendricus | Silicon Laboratories |
| Dotlic | Igor | NICT |
| Eggert | Dietmar | Atmel Corporation |
| Emami | Shahriar | Samsung Information Systems America, Inc. |
| Flammer | George | Silver Spring Networks Inc. |
| Fukui | Kiyoshi | Oki Electric Industry Co., Ltd. |
| 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) |
| Harrington | Timothy | WhereNet - Zebra ESG |
| Hartman | James | Landis Gyr Group Worldwide |
| Heile | Robert | ZigBee Alliance |
| Hernandez | Marco | NICT |
| Hiraga | Ken | NTT |
| Holcomb | Jay | Itron Inc. |
| Hong | Young-Jun | SAMSUNG |
| Hosako | Iwao | NICT |
| Iwaoka | Mitsuru | Yokogawa Electric Corporation |
| Kasamatsu | Akifumi | NICT |
| Kent | Jeritt | Analog Devices Inc. |
| Kinney | Patrick | Kinney Consulting LLC |
| Kitazawa | Shoichi | ATR Wave Engineering Laboratories |
| Kivinen | Tero | INSIDE Secure |
| Kohno | Ryuji | YNU/CWC-Nippon |
| Kürner | Thomas | TU Braunschweig |
| Lee | Jae Seung | ETRI |
| Lee | Myung | CUNY - City University of NY |
| Lee | Sangjae | ETRI |
| Li | Qing | InterDigital, Inc. |
| Lynch | Michael | Nortel Networks |
| Melet | Patrick | Landis Gyr Group Worldwide |
| Mori | Kenichi | Panasonic Corporation |
| Moskowitz | Robert | Verizon |
| Nair | Jinesh | SAMSUNG |
| Notor | John | Notor Research |
| P S Bhat | Chandrashekhar | SAMSUNG |
| Powell | Clinton | PWC, LLC |
| Rabarijaona | Verotiana | NICT |
| Ramasastry | Jayaram | Silver Spring Networks Inc. |
| Reddy | Joseph | texas instruments |
| Reede | Ivan | AmeriSys Inc. |
| Rolfe | Benjamin | Blind Creek Associates |
| Russell | Paul | InterDigital, Inc. |
| Salazar Cardozo | Ruben | Landis Gyr Group Worldwide |
| Sato | Noriyuki | Oki Electric Industry Co., Ltd. |
| Sekine | Norihiko | NICT |
| Seto | ichiro | TOSHIBA Corporation |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shelby | Zachary |  |
| Shimada | Shusaku | Schubiquist Technologies Guild |
| Shimizu | Masashi | NTT |
| Stuebing | Gary | Cisco Systems, Inc. |
| Toshimitsu | kiyoshi | TOSHIBA Corporation |
| Verso | Billy | DecaWave |
| Victor | Dalton | Silver Spring Networks Inc. |
| Zhu | Chunhui | SAMSUNG |