**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 | 21 July, 2011 | |
| Source | [] [Kinney Consulting, LLC] [Chicago, IL] | Voice: [1.847.960.3715] Fax: [] E-mail: [pat.kinney@ieee.org] |
| Re: | 802.15 Plenary Meeting in San Francisco | |
| Abstract | IEEE 802.15 Working Group Minutes | |
| Purpose | Official minutes of the Working Group Session | |
| Notice | This document has been prepared to assist the IEEE P802.15. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. | |
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**IEEE 802.15 Plenary Meeting – Session #73**

**Hyatt Regency, San Francisco**

**July 17 - 21, 2011**

**Monday, 18 July 2011**

**11:02 AM** The chair, Bob Heile, called the meeting to order.

The chairasked for new attendees to raise their hands; 2 were present.

Announcements:

* Social on Wednesday at 18:30

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.

Rick Alfvin stated the information (IEEE 802.15-11-035-03) 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 (as of 18 July 2011):

* 213 voting members
* 42 nearly voters
* 87 aspirants

Future Sessions (15-11-0492-00)

* 18-23 September, 2011, Convention Center, Okinawa, Japan
* 6-11 November, 2011, Hyatt Regency, Atlanta, GA, USA
* 15-20 January, 2012, Hyatt Regency Jacksonville, Jacksonville, FL
* 11-16 March, 2012, Hilton Waikoloa Village, Big Island, HI, USA
* 13-18 May, 2012, Hyatt Regency Atlanta, Atlanta, GA, USA
* 15-20 July, 2012, Grand Hyatt Manchester, San Diego, CA, USA
* 16-21 September, 2012,Hyatt Regency, Palm Springs, CA USA
* 11-16 November, 2012, Grand Hyatt San Antonio, San Antonio, TX,
* January, 2013 open
* 12 – 17 May 2013, Hilton Waikoloa Village, Big Island, HI, USA
* Sept, 2013 open
* 19 – 24 Jan, 2014
* 11 – 16 May 2014

Chair presented the EC Meeting Report (IEEE 802.15-11-0493-00)

C Chaplin presented the Treasurer Report (IEEE 802.15-11-0495-00)

* May 08, 2011 - $389,191.55
  + IEEE Account: $340,322.79
  + Face-to-Face: $48,868.76
  + (Interest rate is 0.35%)
* July 18, 2011 - $410,004.11
  + IEEE Account: $340,322.79 + $276.90 = $340,599.69
  + Face-to-Face: $48,868.76 + $20,535.66 = $69,404.42
  + (Interest rate is 0.37%)

Chair asked to have the WG approve the agenda (document IEEE 15-10-0439-03-0000). Art Astrin moved *to approve the agenda*, with Clint Powell seconding the motion. Following no objection the agenda was approved.

Art Astrin moved *to approve the previous meeting minutes (document 15-11-373-0000)* and Ben Rolfe seconded the motion. Following neither discussion nor objection the minutes were approved. There were no matters resulting from the previous minutes

802 Architecture report by James Gilb

* Two meetings this session: Tuesday AM1, Thursday AM1 to resolve comments from letter ballot
* Does the document explicitly declare only PHY and MAC sublayer? No

802.18 Radio regulatory by John Notor

* Reviewing ITU documents and liaisons (18-11-38-00)

802.19 by Shu Kato

* Downselection effort of 3 proposals

Task group reports follow:

Seong-Soon Joo presented the status for TG4e (MAC enhancement)

TG4e goals for week:

* Resolve comments from LB77
* Two motions: approve draft for Sponsor Ballot and approve BRC

Mike McInnis gave TG4f (RFID) goals

* Prepare Sponsor Ballot

P Beecher gave TG4g (SUN) goals

* LB75 closed with no new “no” votes nor comments
* Effort will be to go to Sponsor Ballot

R Krasinski gave TG4j report:

* Hearing final proposals

P Kinney gave TG4k report:

* hearing preliminary proposals

Arthur Astrin gave BAN TG6 review

* + - LB79 completed, no new “no” votes nor valid comments
    - Goal is to go for Sponsor Ballot

SG PSC by Bob Heile

* reworking PAR and 5C for scope changes
* path forward discussion

SG4TV by Sangsung Choi

* PAR discussion and resolve comments from other WGs

TerraHz IG by Tomas Kuerner

* + Presentations on technology and WRC regulations

SG KMP by Robert Moskowitz

* Working on key management and PAR for moving forward

SRU by Shoichi Kitazawa

* 2 presentations will be heard

WNG by P Kinney

* 3 presentations on LED-ID

Rules by Pat Kinney

* No meeting

WNG for 802.11 By Clint Chaplin

* Presentations on advanced CCA, channel contention for large networks, train control railroad communications

AoB - none

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

Wednesday, 20 July 2011

**10:31** Bob Heile, WG chair called the meeting to order.

WG Chair made announcements concerning social and logistics.

**10:36** WG18 liaison by J Notor

* Response from 802.15
* No inputs from other groups

**10:38** TG4e by Seong-Soon Joo (ETRI)

* Completed all objectives for this session
* Motion: *Move that 802.15 WG approve the following individuals as the Ballot Resolution Committee for the Sponsor Ballot of 802.15.4e : Seong-Soon Joo, Pat Kinney(Chair), Ludwig Winkel, Wei Hong, Jeff King, Wun-Cheol Jeong, Chang Sub Shin, Ben Rolfe, Yang Yang, Myung Lee, Jonathan Simon, and Kazuyuki Yasukawa.*
* Moved by Seong-Soon Joo, seconded by Pat Kinney
* Upon neither discussion nor objection the motion carries with unanimous consent.
* *Move that 802.15 WG requests unconditional approval from the EC to submit 802.15.4e draft (d6P802-15-4e\_Draft\_Standard.pdf) to Sponsor Ballot.*
* Moved by Seong-Soon Joo, seconded by Pat Kinney.
* Upon no discussion, the vote was taken with the following results 55/0/0, motion carries.

**10:40** TG4f by Michael McInnis

* Completed all objectives for this session
* Move *that the 802.15 WG approve the following individuals as the Ballot Resolution Committee for the Sponsor Ballot of 802.15.4f:*
* *Mike McInnis – Chair of TG4f and BRC*
* *Tim Harrington*
* *Dalibor Pokrajac*
* *Billy Verso*
* *Michael McLaughlin*
* *Adrian Jennings*
* *Andy Ward*
* Moved by Michael McInnis, seconded by Art Astrin
* Upon neither discussion nor objection the motion carries with unanimous consent.
* Move *that the 802.15 WG request unconditional approval from the EC to submit 802.15.4f (d5P802-15-4f-Draft-Standard) draft to Sponsor Ballot.*
* Moved by Michael McInnis, seconded by Art Astrin
* Upon no discussion, the vote was taken with the following results 63/0/1, motion carries.

**10:41** TG4g by Clint Powell

* Completed all objectives for this session
* Move *that the 802.15 WG requests unconditional approval from the 802 Executive Committee to submit D5P802-15-4g\_Draft\_Standard.pdf to Sponsor Ballot*
* Moved by Clint Powell, seconded by Hiroshi Harada
* Upon no discussion the vote was taken with the results 67/0/0, the motion carries.
* Move *that the 802.15 WG approve the following individuals as the Ballot Resolution Committee for the Sponsor Ballot of D5P802-15-4g\_Draft\_Standard.pdf*



* Moved by Clint Powell, seconded by Hiroshi Harada
* Upon neither discussion nor objection the motion carries with unanimous consent.

10:46 TG4j by R Krasinski

* Hearing presentations on proposals

10:47 TG4k by Pat Kinney

* hearing preliminary proposals

10:45 TG6-BAN by Art Astrin

* Completed all objectives for this session
* Move *that the IEEE 802.15 WG request unconditional approval from the EC to submit IEEE 802.15.6 draft (d04P802-15-6\_Draft\_Standard.pdf) to Sponsor Ballot*
* Moved by Art Astrin, seconded by Michael McInnis.
* Upon no discussion the vote was taken with the results 66/1/0, the motion carries.
* Motion: *that the 802.15 WG approve the following individuals as the Ballot Resolution Committee for the Sponsor Ballot of IEEE802.15.6: Daniel Lewis, Anuj Batra, Jin-Meng Ho, Omeni Okundu, Mark Dawkins, David Davenport, Hind Chebbo, Kaoru Yokoo, Marco Hernandez, Huan-Bang Li, Igor Dotlić, Ranjeet Kumar Patro, Clint Chaplin, Jung-hwan Hwang and Art Astrin. The committee will be chaired by Art Astrin.*
* Moved by Art Astrin, seconded by Michael McInnis
* Upon neither discussion nor objection the motion carries with unanimous consent.

**10:48** PSC SG by M Lee

* Will have meetings following this meeting

**10:55** SG4TV by Sangsung Choi

* SG4TV approved a motion to request the WG to submit revised PAR (15-11-337-05) and 5C (15-11-338-05).
* Motion: *request that the PAR and Five Criteria contained in documents 15-11-0337-05 and 15-11-0338-05 be approved by the IEEE 802.15 WG and that the EC be requested to forward the PAR to NesCom*
* Moved by Sangsung Choi, seconded by Cristina Seibert
* Following no discussion the vote was taken with the results of 75/0/0
* Motion *that the 802.15 WG empowers its WG chair to, at the Chair’s discretion, amend the proposed scope stated in 15-11-337-05 with either or both of the following changes:*
  + *It supports accepted methods of TV White Space coexistence in existence at the time of development.*
  + *This amendment also provides mechanisms that enable coexistence with other 802 systems in the same band.*
* Moved by Sangsung Choi, seconded by Ed Callaway
* Following no discussion the vote was taken with the results of 75/0/0, the motion carries

**11:04** IG THZ by Tomas Kuerner

* Two presentations were heard, four more presentation this week
* Next meeting will be in November

**11:06** IG KMP by Bob Moskowitz

* Working on key management protocols suitable for 802.15 standards such as 15.4

**11:06** IG SRU by Shoichi Kitazawa

* Has not met yet

**11:09** WG chair recessed the meeting until Thursday evening.

**Thursday, 21 July 2011**

**18:35** WG chair called the meeting to order

**18:36** 802.18 liaison by J Notor (15-11-0548-00)

* Approved 4 documents
* Working Party 5A and 5E documents were drafted
  + WG16 has submitted, but WG15 may submit comments as late as September

**18:35** 802.19 liaison byShu Kato

* Down selection completed

**18:38** Closing report for TG4e by Seong-Soon Joo (15-11-0515-00)

**18:41** Closing report for TG4f by M McInnis (15-11-0535-00-004f)

**18:44** Closing report for TG4g by P Beecher (15-11-0550-00-004g)

**18:48** TG4j (MBAN) closing report by Ray Krasinski (15-11-0544-00)

**18:51** TG4k **(**LECIM) closing report by Pat Kinney (15-11-538-00)

**18:53** Closing report for TG6 by A Astrin (15-11-0551-00-0006)

**19:01** SG PSC by Myung Lee (15-11-0542-00)

Motion: *to the WG to extend the SGPSC for the next cycle*

Moved by Myung Lee and seconded by James Gilb

Discussion as to the need to change the name since the reorganization of the study group.

Following discussion the vote was taken with the results of 36/0/7, the motion carries

**19:10** SG4TV by Sangsung Choi (15-11-0553-00)

Motion: *to the WG to extend the SG4-TV for the next cycle*

Moved by Ben Rolfe and seconded by Rick Alfvin

Upon no discussion the vote was taken with the results of 37/0/2, the motion carries

Motion *that the 802.15 WG empowers its WG chair to apply the following editorial changes to the proposed scope stated in 15-11-337-05:*

*Section 5.3 Change PAWs to protocol to access white space databases*

*Spelling correction of “providers”*

Moved by Phil Beecher, seconded by Ben Rolfe

Following no discussion the vote was taken with the results of 38/0/2, the motion carries

**19:18** IGTerraHz by ThomasKürner(15-11-524-00)

**19:21** SG SRU by Shoichi Kitazawa (15-11-552-00)

**19:24** IG KMP by Robert Moskowitz (15-11-541-01)

**19:30** SC WNG by Pat Kinney (15-11-0534-00)

**19:31** P2030 report by B Heile

* Still in sponsor ballot

**19:32** ZigBee liaison report by B Heile

* Announcement of Gateway release

**19:33** ISA100.11a liaison report by P Kinney

* ISA100.11a is now on its way to becoming an IEC standard with its issue of 65C/650/PAS (publicly available specification)

**19:36** Motion to adjourn was made by Ben Rolfe and seconded by Rick Alfvin. Upon hearing no objection, the motion carries; the session is adjourned.

**Annex A**

|  |  |  |
| --- | --- | --- |
| 159 Attendees |  | |
| **Name** | | **Declared Affiliation** |

|  |  |  |  |
| --- | --- | --- | --- |
| Adams | Jon |  | Freescale Semiconductor, Inc. |
| Ajito | Katsuhiro |  | NTT Microsystem Integration Labs. |
| Alfvin | Richard |  | Verilan, Inc. |
| Arunachalam | Arun |  | Southern California Edison |
| Asano | Takamasa |  | Fuji Electric |
| Assimiti | Robert |  | Nivis |
| Astrin | Arthur |  | Astrin Radio |
| Bae | Taehan |  | Samsung Electronics |
| Bahr | Michael |  | Siemens AG |
| Bajic | Zeljko |  | Savi Technology, Inc |
| Batra | Anuj |  | Texas Instruments Incorporated |
| Beecher | Philip |  | BCC Limited |
| Bhatti | Ghulam |  | Mitsubishi Electric Research Labs (MERL) |
| Boucachard | Philippe |  | Canon Research Centre France |
| Boyce | Christina |  | IEEE |
| Boytim | Mathew |  | Sensus |
| Britz | David |  | AT&T Labs Research |
| Brown | Monique |  | Silver Spring Networks Inc. |
| Buchanan | Brian |  | ON Semiconductor |
| Buffington | John |  | Itron Inc. |
| Bynam | Kiran |  | Samsung Electronics |
| Callaway | Edgar |  | Sunrise Micro Devices, Inc. |
| Calvert | Chris |  | Landis+Gyr Group worldwide |
| Canchi | Radhakrishna | | KYOCERA Corporation |
| Chang | Soo-Young |  | California State University, Sacramento (CSUS) |
| Chaplin | Clint |  | SAMSUNG |
| Chebbo | Hind |  | FUJITSU |
| Choi | Sangsung |  | Electronics and Telecommunications Research Instititute (ETRI) |
| Dahl | Matthew |  | Silver Spring Networks Inc. |
| Davenport | David |  | GE Global Research |
| De Ruijter | Hendricus |  | Silicon Laboratories |
| Dey | Sourav |  | On-Ramp Wireless, Inc. |
| Dotlic | Igor |  | National Institute of Information and Communications Technology (NICT) |
| Eggert | Dietmar |  | Atmel Corporation |
| Evans | David |  | Philips Electronics |
| Farlow | Charles | S | Medtronic, Inc. |
| Filin | Stanislav |  | National Institute of Information and Communications Technology (NICT) |
| Filippo | Will | San | Silver Spring Networks Inc. |
| Flammer | George |  | Silver Spring Networks Inc. |
| Fujiwara | Ryosuke |  | Hitachi, Ltd. |
| Gerdon | Patricia |  | IEEE SA |
| Gilb | James |  | Tensorcom, Inc. |
| Godfrey | Tim |  | Electric Power Research Institute, Inc. (EPRI) |
| Gottlib | Elad |  | Silver Spring Networks Inc. |
| Haapola | Jussi |  | Centre for Wireless Communications / University of Oulu |
| Hach | Rainer |  | Nanotron Technologies GmbH |
| Hammond | Catherine |  | France Telecom |
| Harada | Hiroshi |  | National Institute of Information and Communications Technology (NICT) |
| Heile | Robert | F | ZigBee Alliance |
| Hernandez | Marco |  | National Institute of Information and Communications Technology (NICT) |
| Hillman | Garth |  | OakTree Wireless |
| Hirakawa | Mitsuru |  | Innovation Core SEI |
| Ho | Jin-Meng |  | Texas Instruments Incorporated |
| Hong | Wei |  | Cisco Systems, Inc. |
| Hosako | Iwao |  | National Institute of Information and Communications Technology (NICT) |
| Howard | David |  | On-Ramp Wireless, Inc. |
| Hughes | Sterling |  | Silver Spring Networks Inc. |
| Huh | Jae | Doo | Electronics and Telecommunications Research Instititute (ETRI) |
| Hwang | Jung-Hwan |  | Electronics and Telecommunications Research Instititute (ETRI) |
| Ichimura | Junichi |  | Tokyo Gas |
| Ionescu | Dumitru |  | Olympus Communication Technology of America, Inc. |
| Iwaoka | Mitsuru |  | Yokogawa Electric Corporation |
| Jang | Yeong | Min | Kookmin University |
| Jennings | Adrian |  | Ubisense |
| Jeon | Beom | Jin | LG ELECTRONICS |
| Jillings | Steven |  | Semtech |
| Jin | Sunggeun |  | Electronics and Telecommunications Research Instititute (ETRI) |
| Johnson | Matthew |  | Itron Inc. |
| Joo | Seong-Soon | | Electronics and Telecommunications Research Instititute (ETRI) |
| Kang | Hyunduk |  | Electronics and Telecommunications Research Instititute (ETRI) |
| Kang | Tae-Gyu |  | Electronics and Telecommunications Research Instititute (ETRI) |
| Kato | Shuzo |  | National Institute of Information and Communications Technology (NICT) |
| Kent | Jeritt |  | Analog Devices Inc. |
| Kiernan | Brian |  | InterDigital Communications, LLC |
| Kim | Bonghoe |  | LG ELECTRONICS |
| Kim | Jinkyeong |  | Electronics and Telecommunications Research Instititute (ETRI) |
| Kim | Suhwook |  | LG ELECTRONICS |
| Kim | Youngsoo |  | SAMSUNG |
| Kinney | Patrick |  | Kinney Consulting LLC |
| Kitazawa | Shoichi |  | ATR Wave Engineering Laboratories |
| Kivinen | Tero |  | AuthenTec |
| Kohno | Ryuji |  | NICT/YNU |
| Krasinski | Raymond |  | Philips Electronics |
| Kuerner | Thomas |  | TU Braunschweig |
| Kwak | Kyung | Sup | Inha University |
| Lampe | John |  | Lampe Consulting |
| Lee | Myung |  | CUNY - City University of NY |
| LEWIS | DANIEL |  | National ICT Australia Limited (NICTA) |
| LI | DavidGK |  | david.gk.li@gmail.com |
| Li | Feng |  | China Academy of Telecommunication Technology(CATT) |
| Li | Huan-Bang |  | National Institute of Information and Communications Technology (NICT) |
| Li | Jia-Ru |  | Lilee Systems |
| Li | Liang |  | Vinno Technologies Inc. |
| Li | Yong |  | ChongQing University of Posts and Telecomunications |
| Lim | Sang-Kyu |  | Electronics and Telecommunications Research Instititute (ETRI) |
| Lin | Wang |  | ZTE Corporation |
| Liu | Yenfu |  | Telligent Investment Limited |
| Luo | Zhendong |  | China Academy of Telecommunication Research (CATR) |
| Lynch | Michael |  | Nortel Networks |
| Mason | Robert |  | Elster Solutions |
| McInnis | Michael |  | The Boeing Company |
| Mirnezami | Siamak |  | SFM Systems |
| Mori | Kenichi |  | Panasonic |
| Moskowitz | Robert |  | Verizon |
| Moy | Hamilton |  | Silver Spring Networks Inc. |
| Myers | Theodore |  | On-Ramp Wireless, Inc. |
| Nagai | Yukimasa |  | Mitsubishi Electric Corporation |
| Naganuma | Ken |  | Toko America Inc. |
| Ngo | Chiu |  | SAMSUNG |
| Notor | John |  | Notor Research |
| Ogawa | Hiroyo |  | (ARIB) Association of Radio Industries and Businesses |
| Oh | Mi-Kyung |  | Electronics and Telecommunications Research Instititute (ETRI) |
| Olson | David |  | Landis+Gyr |
| Oyama | Satoshi |  | Hitachi, Ltd. |
| Panchangam | Prasad |  | Applied Micro (AMCC) |
| Patro | Ranjeet |  | SAMSUNG |
| Ping | Xu | Ping | Southeast University, China |
| Pokrajac | Dalibor |  | Guard RFID Solutions |
| Pope | Steve |  | Self Employed |
| Powell | Clinton |  | Southern California Edison Company |
| Priebe | Sebastian |  | TU Braunschweig |
| Ramasastry | Jayaram |  | Silver Spring Networks Inc. |
| Reuss | Edward |  | Plantronics, Inc. |
| Riou | Emmanuel |  | Accent |
| Roberts | Richard |  | Intel Corporation |
| Rolfe | Benjamin |  | Blind Creek Associates |
| Sakamoto | Kentaro |  | Tokyo Gas |
| Sarkozy | Stephen |  | Northrop Grumman Corporation |
| Sasaki | Shigenobu |  | Niigata University |
| Sato | Naotaka |  | Sony Corporation |
| Schmidt | Michael |  | Atmel Corporation |
| Schwoerer | Jean |  | France Telecom |
| Seibert | Cristina |  | Silver Spring Networks Inc. |
| Semichi | Ryad |  | Savi Technology |
| Shah | Kunal |  | Silver Spring Networks Inc. |
| Shearer | Steve |  | Silver Spring Networks Inc. |
| Shellhammer | Stephen |  | Qualcomm Incorporated |
| Shimada | Shusaku |  | Yokogawa Co. |
| Simon | Jonathan |  | Dust Networks, Inc. |
| Song | Ho-Jin |  | NTT Microsystem Integration Laboratories |
| Stadnik | Paul |  | Micro Systems Engineering |
| Sungi | Gu |  | SAMSUNG |
| Tabroff | Ronald |  | Mueller Systems |
| Taylor | Larry |  | DTC (UK) |
| Timmons | Nicholas |  | WiSAR Lab - Letterkenny Institute of Technology |
| Tomcik | James |  | Independent |
| van Greunen | Jana |  | Silver Spring Networks Inc. |
| varadarajan | badri |  | Applied Micro (AMCC) |
| Victor | Dalton |  | Silver Spring Networks Inc. |
| Virk | Bhupender |  | Procubed Inc. |
| Wang | Junyi |  | National Institute of Information and Communications Technology (NICT) |
| Wang | Xiang |  | Wuxi SensingNet Industrialisation Research Institute |
| Winkel | Ludwig |  | Siemens AG |
| Won | Eun | Tae | Samsung Electronics |
| Xu | Quanping |  | China Electronics Standardization Institute |
| Yang | Yang |  | Wuxi SensingNet Industrialisation Research Institute |
| Yao | Guoliang |  | Beelinker Technology |
| Yokoo | Kaoru |  | FUJITSU |
| Zhou | Mingtuo |  | National Institute of Information and Communications Technology (NICT) |