**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 | [16 January 2020] | |
| Source | [Pat Kinney] [] [Chicago, IL] | Voice: [+1.847.960.3715] Fax: [+1.847.790.3805] E-mail: [pat.kinney@ieee.org] |
| Re: | [802.15 Interim Meeting in IRVINE CA, USA] | |
| 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. | |
| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by P802.15. | |

**124th IEEE 802.15 WSN MEETING**

**HOTEL IRVINE**

**IRVINE, CALIFORNIA, USA**

**January 13-17, 2020**

**Monday, 13 January 2020**

**8:02** 802.11, 802.15, 802.18, 802.19, and 802.21 Chairs called the 112th joint wireless meeting to order.

B Heile (Decawave) presented the IEEE 802 Wireless Top 10 prepared by the meeting organizer for the attendees of this session (included as Annex A).

General announcements:

* No photography, no audio recording
* Don’t forget, book your room and register for March’s session

Straw Poll of new attendees: 5

**8:06**  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: (<https://standards.ieee.org/about/sasb/patcom/materials.html>).

802.15 WG chair read IEEE anti-trust policy. (<http://standards.ieee.org/develop/policies/antitrust.pdf>)

**8:10** Financial report by J Rosdahl (Qualcomm) doc [ec-19-0216-00](https://mentor.ieee.org/802-ec/dcn/19/ec-19-0216-00-WCSG-wireless-treasurer-report-jan-2020-irvine.pptx)

Total liabilities and equity $689,791.90 (includes revenue from this meeting, however expenses from this meeting have not been entered)

The number of people who are currently registered at this meeting is 335.

Comment made that thanked Jon for this service he provides to the groups.

**8:18** Wireless and IMAT announcements by R Alfvin (Linespeed)

* Information can be found at [ieee802.linespeed.io](http://ieee802.linespeed.io/)
* Noted that hot-spots from PCs or phones have been creating a lot of interference to the meeting Aps, requested that people turn off their hot-spots.

**8:22** WG15 Chair informed the group that the Wireless Chairs Standing Committee (WCSC) met yesterday, Sunday at 16:00 local time. Chair noted that this is an open meeting, all are encouraged to attend. Minutes are available at <https://mentor.ieee.org/802-ec/dcn/20/ec-20-0003-00-WCSG-irvine-january-2020-minutes.docx>

**8:23** Review future interim sessions

* + May 10-15, 2020 Warsaw Marriott
  + Sept 13-18, 2020 Grand Hyatt Atlanta in Buckhead
  + Jan 10-15, 2021 Marriott New Orleans (TBC)
  + May 9-14, 2021 Sapporo, Japan (TBC)
  + Sept 12-17, 2021 Hilton Waikoloa Village
  + Jan 16-21, 2022 Hotel Irvine
  + May 15-20, 2022 Hilton Panama (TBC)
  + Sept 11-16, 2022 Hilton Waikoloa Village
  + Jan 15-20, 2023 Baltimore Marriott Waterfront (TBC)

**8:24 Working Group Updates**

802.11 by Dorothy Stanley (HPE), ([11-19-2131-00](https://mentor.ieee.org/802.11/dcn/19/11-19-2131-00-0000))

* Voters: 323, Nearly: 39, Aspirant: 103

802.15 by B Heile (Decawave)

* Voters: 94, Nearly: 9, Aspirant: 16
* TG4md 15.4 revision 4
* TG 15.4y Security Next Generation (SECN)
* TG 15.4z Enhanced impulse radio (EIR)
* TG 9ma 15.9 revision of Key Management Protocol
* TG 12 Upper Layer Interface (ULI) for 802.15.4
* TG 13 Multi-Gigabit OWC
* TG16t Amendment to 802.16
* IG VAT Vehicular Assistive Technology

802.18 by J Holcomb (Itron) ([18-20-0003-00](https://mentor.ieee.org/802.18/dcn/19/18-20-0003-00-0000-agenda-stl-interim-15-17-jan-2019-rr-tag.pptx))

* Voters: 44, Aspirant 19
* EU activities in ETSI, CEPT, etc.
* ITU-R activities
* FCC 5.9 GHz NPRM (primary agenda item)

802.19 S Shellhammer (Qualcomm) ([19-20-0002-01](https://mentor.ieee.org/802.19/dcn/19/19-20-0002-01-0000-.pptx))

* 52 voting members

802.24 Tim Godfrey (EPRI) ([24-20-0002-00](https://mentor.ieee.org/802.24/dcn/20/24-20-0002-00-0000-january-2020-meeting-presentation.pptx))

* 27 voting members
* SEPA request for update to Wireless Matrix: Last version provided by 802.24 is [24-18-0028-00](24-18-0028-00-sgtg-wireless-characteristics-matrix-update-2018-08-29-Draft-dot24edits.xlsx)
* White Papers:
  + Low latency: Latest Draft is [802.24-19-0003r5](https://mentor.ieee.org/802.24/dcn/19/24-19-0003-05-0000-low-latency-communication-white-paper.docx)
  + IEEE 802 Solutions for Vertical Applications: Draft is posted as [IEEE802-24/19-0017r3](https://mentor.ieee.org/802.24/dcn/19/24-19-0017-03-0000-ieee-802-solutions-for-vertical-applications.docxhttps:/mentor.ieee.org/802.24/dcn/19/24-19-0017-02-0000-ieee-802-solutions-for-vertical-applications.docxhttps:/mentor.ieee.org/802.24/dcn/19/24-19-0017-01-0000-ieee-802-solutions-for-vertical-applications.docx)
* ZigBee “Project Connected Home over IP: <https://www.connectedhomeip.com/>
* Update on various liaisons

**8:44 AoB**

* comment made that “myProject” will be shut down for a period to allow the new “myProject” to be installed.
* Melissa Russell, Executive Director of the IEEE Computer Society, was introduced to the group.

**8:50** Joint meeting adjourned

**Working group opening plenary (124th session of 802.15)** (33 attendees)

**9:15** B Heile, Decawave, WG chair called the 802.15 WG plenary to order ([15-19-0586-02](https://mentor.ieee.org/802.15/dcn/19/15-19-0586-02-0000)). IEEE 802.15 attendance is included as Annex B.

Announcements:

* IEEE 802 Wireless Top 10
* Social is Wednesday
* Network and projectors are from LineSpeed
* There were 0 first time attendees
* Chair noted that next March is the 802.15 officer election for the next two years. He further noted that he would be running as 802.15 chair along with P Kinney and R Alfvin as vice chairs. He concluded that he would send out an email explaining the procedure to run for 802.15 offices.

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 1-5 and reading the instructions for the WG Chair. (<https://standards.ieee.org/about/sasb/patcom/materials.html>**)**.

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:

* There were no responses

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

**Motion:** *Approve/modify joint opening agenda* ([15-19-0586-04](https://mentor.ieee.org/802.15/dcn/19/15-19-0586-04-0000))

* Moved by R Alfvin (Linespeed)
* Seconded by B Rolfe (Blind Creek Associates)
* Following neither discussion nor objection the agenda was approved.

**Motion:** *Review and approve 802.15 WG minutes from the November session* ([15-19-0499-00-0000](https://mentor.ieee.org/802.15/dcn/19/15-19-0499-00-0000-wg-minutes-from-waikoloa-nov-2019.docx))

* Moved by R Alfvin (Linespeed)
* Seconded by B Rolfe (Blind Creek Associates)
* Upon neither discussion nor objection the WG minutes were approved.

**9:30** Network and attendance information by R Alfvin (Linespeed) (<http://ieee802.linespeed.io/)>

**9:31** Treasury report by Ben Rolfe (Blind Creek Associates) ([ec-19-0216-00](https://mentor.ieee.org/802-ec/dcn/19/ec-19-0216-00-WCSG-wireless-treasurer-report-jan-2020-irvine.pptx))

**9:37** Chair informed the group that the Wireless Chairs Standing Committee (WCSC) met yesterday, Sunday at 16:00 local time. Chair noted that this is an open meeting, all are encouraged to attend. Minutes are available at <https://mentor.ieee.org/802-ec/dcn/20/ec-20-0003-00-WCSG-irvine-january-2020-minutes.docx>

**9:38** AoB

* 802.15 Chair noted that since he had to leave on Wednesday the vice-chair will be the acting-chair for the closing meeting on Thursday.
* T Godfrey (ETRI) presented an overview of TG 16t. Chair noted that T Godfrey has volunteered to be the chair of TG 16t.
* P Kinney (Kinney Consulting) reviewed the agenda for SC maintenance
* Volker Jungnickel (Fraunhofer Heinrich Hertz Institute) asked for voting members to vote on the TG 13 draft.
* Chair announced that Jonathan Goldberg will make a short presentation on the impending changes to “myProject” at this week’s WNG.
  + Comment resolutions can still be submitted up until 27 January 2020 on the old system. Mentor and Imat will not be available on January 26 for about 24 hours.

**9:50** WG recessed

**Wednesday 15 January 2020**

**802.15 mid-session plenary meeting**

**10:32** Bob Heile (Decawave) called the meeting to order.

Announcements:

* Please don’t use 802.15 as your affiliation
* Reminder to book your room and register for the March plenary

**802.18 liaison** by Jay Holcomb (Itron)

* Not much going on
* Report from Europe on 802.11

**TG4md (revision)** by G Stuebing (Cisco Systems)

* expect to have the 301 comments completed by end of week, recirc after draft
* Motion: *TG4md requests 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standard Association balloting of the P802.15.4-REVd-D04 with the following membership: Gary Stuebing (as Chair), Don Sturek, Kunal Shah, Ruben Salazar, Tero Kivinen, Phil Beecher, Clint Powell and Shoichi Kitazawa. The 802.15.4md CRG is authorized to approve comment resolutions, edit the draft according to 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: Gary Stuebing (Cisco Systems)
* Seconded by: Clint Powell (Powell Wireless Consulting, LLC)
* Upon neither discussion nor objection the motion carries with unanimous consent.

**TG 15.4w** (**lpwan**)by Bob Heile (Decawave)

* draft “on hold” until 15.4 revision is published.
* Move that *the WG approve forming a draft sharing arrangement between IEEE802.15.4w and ETSI LTN*
* Moved by Ben Rolfe (Blind Creek Associates)
* Second by Rick Alfvin (Linespeed)
* Question: isn’t there a liaison MoU with ETSI? Reply: Yes
* Upon neither discussion nor objection the motion carries with unanimous consent.

**TG 15.4y (SEC)** closing reportby D Sturek (Itron) (15-20-0010-01)

* Motion: *Move that 802.15 WG start a WG Letter Ballot requesting approval of document P802-15-4y\_D0 and to forward document P802-15-4y\_D0 to Standards Association*
* Moved by Don Sturek (Itron)
* Seconded by Kunal Shah (Itron)
* Upon neither discussion nor objection the motion carries with unanimous consent.
* Motion*: approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4y-D0 with the following membership: Don Sturek (as Chair), Tero Kivinen, Peter Yee, Ruben Salazar. The 802.15.4y CRG is authorized to approve comment resolutions and to approve the start of recirculation ballots of the revised draft on behalf of 802.15 WG. Comment resolution on 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 Don Sturek (Itron)
* Seconded by Tim Harrington (Pro ID)
* Upon neither discussion nor objection the motion carries with unanimous consent.

**TG 15.4z (EIR)** by T Harrington (Pro ID)

* Out of 265 comments to be resolved, only 2 comments remain
* *Move that 802.15 Working Group approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4z\_D6 with the following membership: Ayman Naguib (Apple),* *Mingyu Lee (Samsung), Aditya Padaki(Samsung), Billy Verso (Decawave), Frank Leong (NXP), Tim Harrington (Chair) (Pro-ID), Ben Rolfe (Blind Creek), David Barras (3dB), Boris Danev (3dB), Brima Ibrahim (NXP), Paul Kettle (Decawave), Clint Chaplin (Samsung), Jochen Hammerschmidt (Apple). The 802.15.4z CRG is authorized to approve comment resolutions, edit the draft according to the 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, via teleconferences and face to face meeting(s) announced to the reflector as per the LMSC 802 WG P&P.*
* Moved by Tim Harrington (Pro ID), Second by Clint Chaplin (Samsung).
* Upon neither discussion nor objection the motion carries with unanimous consent.

**TG 9ma** by T Kivinen (self)

* Sent preballot out for review

**TG13** by Volker Jungnickel (Fraunhofer Heinrich Hertz Institute)

* WG letter ballot still running
* Working on must be satisfied comments

**TG 16t** by Tim Godfrey (ETRI)

* TG is operating as per document 15-20-0006-02
* Motion *that the 802.15 WG affirm Tim Godfrey as TG 16t chair*
  + Moved by Ben Rolfe (Blind Creek Associates)
  + Seconded by Clint Chaplin (Samsung)
  + Upon neither discussion nor objection the motion carries with unanimous consent.

**TG12 (ULI)** by P Kinney (Kinney Consulting)

* Reviewed TG12, discussed possible directions

**SC maintenance** by P Kinney (Kinney Consulting)

* No comments received concerning published standards were received.
* SEG (clause 11) was added to Op Manual resulting in 15-10-0235-24

**SC WNG** by P Kinney (Kinney Consulting)

* There will be two presentations:
* Extension of the 802.15.4 FSK PHY for utility applications by Takashi Kuramochi (LAPIS Semiconductor)
* Changes to myProject by Jonathan Goldberg (IEEE Standards Association)

**802.19** Liaison by B Rolfe (Blind Creek Associates)

* + TG 3: Completed its work

**AoB**

**11:23** Recessed until Thursday at 18:30

**Thursday, 16 January 2020**

**18:30** 802.15 acting-WG chair (Pat Kinney, Kinney Consulting) called the meeting to order (26 attendees)

* + Attendance reminder
  + March plenary registration reminder
  + Straw Polls:
  + How many would find it acceptable to come back to this venue? Yes: 18, No: 4, Don’t care: 1
* Did you go to the social? Yes: 9 No: 13
  + Of the people that went to the social, did you like the social? Yes: 3 No: 3

**18:34** TG4md closing report by G Stuebing (Cisco Systems) (15-20-0001-02)

**18:37** TG 4z (ELR) closing reportby Ben Rolfe (Blind Creek Associates) (15-20-0042-01)

**18:42** TG9ma closing report by Tero Kivinen (self) (15-20-0043-00)

**18:44** TG13closing report by Volker Jungnickel (Fraunhofer Heinrich Hertz Institute) (15-20-0064-00)

Move that *802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.13-D2 with the following membership: Volker Jungnickel, Nikola Serafimovski, Tuncer Baykas* *, Sang-Kyu Lim, Jörg Robert. The 802.15.13 CRG is authorized to approve comment resolutions, edit the draft according to the 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 Volker Jungnickel (Fraunhofer Heinrich Hertz Institute);

Seconded by Clint Powell (Powell Wireless Consulting, LLC)

Upon neither discussion nor objection the motion carries with unanimous consent.

**18:49** TG 16t closing report by Tim Godfrey (EPRI) (15-20-0063-00)

**18:53** 802.24 liaison report by Tim Godfrey (EPRI) (15-20-0066-00)

**18:55** IG VAT closing report by Volker Jungnickel (Fraunhofer Heinrich Hertz Institute) (15-20-0056-00)

**18:57** TG12 ULI closing report by Pat Kinney (Kinney Consulting) (15-20-0201-01)

**19:04** SC closing report by Pat Kinney (Kinney Consulting) (15-20-0027-01)

Motion: *SC maintenance requests that the WG approve the revised Operations Manual described in 15-10-0235-25*

Seconded by Ben Rolfe (Blind Creek Associates)

Upon neither discussion nor objection the motion carries with unanimous consent

**19:13** 802.11 liaison report by Al Petrick (Jones-Petrick and Associates) (15-20-0062-00)

**19:23** 802.18 liaison report by J Holcomb (Itron) (15-20-0018-00)

**19:29** 802.19 liaison report by B Rolfe (Blind Creek Associates)

* Discussion on proposed revision of Coexistence Assessment document. Moved onto rules committee.
* TG3 looking to ballot the 802.11ah and 802.15.4g coexistence strategy draft after this session.

**AoB**

**19:34** **Motion** *to adjourn* was made by Rick Alfvin (Linespeed), seconded by B Rolfe (Blind Creek Associates), upon no objection the motion carried, this session is adjourned.

**Annex A** 802W\_0120\_Things to Know for the January 2020 IEEE 802 Wireless Interim

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| |  |  | | --- | --- | | |  | | --- | | **January 2020 IEEE 802 Wireless Interim** | | |
| |  | | --- | | **Welcome to the January 2020 IEEE 802 Wireless Interim**  To: January 2020 IEEE 802 Wireless Interim Attendees From: Dawn Slykhouse, Face To Face Events, Inc. CC: Lisa Ronmark, Face To Face Events, Inc. Date: Sunday, January 12, 2020  The Face to Face Event’s Team looks forward to welcoming you to the Hotel Irvine in Irvine, California for the January 2020 IEEE 802 Wireless Interim Session. The enclosed information will provide you with some important details to help you make the most of the session. If you have any questions or concerns about the session do not hesitate to visit us at the event registration desk in the Ballroom Foyer.  **MEETING HOTEL INFORMATION**  **HOTEL IRVINE** 17900 Jamboree Road Irvine, California 92614 USA  Phone 1 (877) 614-2137 Hotel Information Website: [http://www.hotelirvine.com](http://www.hotelirvine.com/)  **GUEST ROOM INTERNET**  **Network Name and Password**   * SSID: vipieee * Password: V1pieee!   **MEETING PLANNER & NETWORK OFFICE** Pelican Hill  **WORKING GROUP DOCUMENTS** Accessed online at <http://ieee802.linespeed.io/>  **ATTENDANCE TOOL** Accessed online at <https://imat.ieee.org/my-site/home>  **MEETING MAP (FLOOR PLAN)** <http://802world.org/wireless/meeting-map/>  **MOBILE DEVICE SCHEDULE** <http://schedule.802world.com/>  **REGISTRATION DESK** Ballroom Foyer  **REGISTRATION DESK HOURS** **Sunday**  6:00 PM to 8:00 PM **Monday - Tuesday**   7:30 AM to 5:00 PM  **Wednesday**  7:30 AM to 1:30 PM  **MEETING SPACE NETWORK**   * Wireless Encryption Protocol: WPA2 Pre-Shared-Key * SSID: IEEE802 * Password: ieeeieee   Please report any disruption of service to a Linespeed.  **AV MANAGEMENT** Linespeed/Encore will manage AV equipment services for the IEEE 802 Wireless Interim Session.   * Please share reports of any disruption of projector equipment with Linespeed. * Please share reports of any disruption of screens, or sound equipment with Face to Face Events.   **BREAKS SERVICE** Ballroom Foyer  **Continental Breakfast** 7:30 AM – 8:30 AM **Morning Coffee/Tea** 10:00 AM – 11:00 AM **Afternoon Coffee/Tea** 3:00 PM – 4:00 PM **Lunch**  12:00 – 1:30 PM in Patio & Pavilion  Breakfast service, breaks, and lunch are Included in event registration fees.  See event board for daily selections.  **SOCIAL EVENT** Wednesday January 15th 6:00 PM – 9:30 PM K1 Racing (Offsite)   * Indoor racing center featuring electric go-karting, video games, pool tables, plus food and beverages. * Included in registration fee for all attendees and guests.   **SOCIAL EVENT  SHUTTLE BUS**   * First Bus @ approximately 6:00 PM * Boarding: Hotel East Lobby Entrance * Busses will depart as filled * Last Bus approximately 7:00-7:15 PM * Busses will drop off attendees in front of K1 Speed. * First Return Bus @ approximately 7:45 PM * Board at K1 Speed Drop Off Location * Last Drop Off @ approximately 9:15- 9:30 PM   **SOCIAL REGISTRATION FORMS, WAIVERS & GUESTS**  **Online Registration Forms** In order to participate in the races, online registration forms and a waiver must be completed by all attendees and their guests.   * Please use the link provided to access the registration form: <https://k1irvine.clubspeedtiming.com/registration/> * The event code is: 1033259   Once pre-registered with the provided event code, a customer profile is created. Please complete pre-registration for you and your guest, **no later than 5:00 PM Tuesday, January 14th.**  **Guest Badges** Guest Badges are available for pick up at the Registration Desk until 5:00 PM Tuesday January 14th.  **Waiver Forms** Waivers must be completed to participate in the races.  There are 3 waiver options: **1. Onsite at K1:**On the day of the event, all attendees and guests will need to do is check in at K1 Racing and electronically sign their waiver form. **2. Email:**Attendees and Guests can complete the attached form in advance and email it to Lisa [lisa@facetoface-events.com](mailto:lisa@facetoface-events.com) **3. Registration Desk:**Waiver Forms shall be available at the Registration desk.  Forms can be filled out and returned to the desk until 11:00 AM January 15th.  **HOTEL SHUTTLE (AIRPORT)** The Hotel Irvine supplies a complimentary shuttle from John Wayne/Orange County Airport. Shuttles pick up travelers in the Ground Transportation Center (GTC).  **AIRPORT (SNA)** John Wayne Airport (Orange County) Arrivals Information, Including Links for International Travelers: <https://www.ocair.com/default>  **Airport Ground Transportation** <https://www.ocair.com/groundtransportation/> Within easy walking distance from all baggage claim areas, Ground Transportation Pick Up can be reached by crossing the Airport roadway at the traffic light near the John Wayne Statue.  Options include: \* Taxi \* Rental Car \* Shuttle \* Ride Share\*  **\*Ride Share:**Lyft, Uber and Wingz are permitted to pick up and drop off passengers at John Wayne Airport and are available by reservation only. Please visit the [Ride Apps page](https://www.ocair.com/groundtransportation/tnc) for details.  **WEATHER FORECAST**   * Forecasted Daily High 65 F Low 46 F * Mostly Sunny and Dry   **TOURISM INFORMATION** General Information: [https://www.destinationirvine.com](https://www.destinationirvine.com/) Places to Eat: <https://www.destinationirvine.com/restaurants/> | |
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**Annex B** Attendance = 60

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| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Akhavan | Koorosh | Qualcomm Incorporated |
| Alfvin | Richard | Linespeed Events LLC |
| BEECHER | PHILIP E | Wi-SUN Alliance |
| Bender | Klaus | Utilities Telecom Council |
| Bims | Harry | Bims Laboratories, Inc. |
| Burtzos | Trevor | BlueCats |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Chang | Soo-Young | California State University, Sacramento (CSUS) |
| Chaplin | Clint | Samsung Research America |
| Clanney | Nathan | Siemens Mobility, Inc. |
| Danev | Boris | 3db Access AG |
| Davis | Greg | Analog Devices Inc. |
| De Ruijter | Hendricus | Silicon Laboratories |
| Finch | Robert | Select Spectrum |
| Gagne | Michael | AURA Network Systems |
| Gilb | James | Gilb Consulting, Inc. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Hammerschmidt | Joachim | Apple, Inc. |
| Hara | Shinsuke | Osaka City University (OCU) |
| Harrington | Timothy | Pro-ID |
| Heile | Robert | DecaWave |
| Holcomb | Jay | Itron Inc. |
| Hurtarte | Jeorge |  |
| Ikegami | Tetsushi | Meiji University |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Juntunen | Juha | Meteor Communications Corp. |
| KINNEY | PATRICK | Kinney Consulting LLC |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| Krieger | Ann | US Department of Defense |
| Kuramochi | Takashi | LAPIS Semiconductor Co., Ltd |
| LEE | Mingyu | Samsung Electronics Co., Ltd. |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Information and Communications Technology (NICT) |
| Marks | Roger | EthAirNet Associates |
| Moskowitz | Robert | HTT Consultant |
| Naguib | Ayman | Apple, Inc. |
| Nelson | Kathleen | Ondas Networks |
| Palmer | Clark | Meteorcomm LLC |
| Petrick | Albert | Jones-Petrick and Associates, LLC. |
| Polland | Joe | CommScope, Inc. |
| Powell | Clinton | Powell Wireless Consulting, LLC |
| Rakanovic | Demir | u-blox |
| rocha | alessandra | Wimax forum |
| Rolfe | Benjamin | Blind Creek Associates |
| Salazar Cardozo | Ruben E | Landis+Gyr AG |
| Serafimovski | Nikola | pureLiFi |
| Serang | Daoud | CML Microcircuits (USA) Inc. |
| SHAHAR | MENASHE | Ondas networks |
| Simpson | Guy | Full Spectrum |
| Smith | Frederick | Chevron Corporation |
| Smith | William | BNSF Railway |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Itron Inc. |
| Tedrow | Craig | General Electric |
| V Padaki | Aditya | Samsung Research America |
| Verso | Billy | DecaWave |
| Yang | Shang-Te | Apple, Inc. |
| Yee | Peter | NSA-CSD |
| YU | YU | Toshiba |