**IEEE P802.15**

**Wireless Personal Area Networks**

|  |  |
| --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **<IEEE802.15 WG minutes>** |
| Date Submitted | [17 March 2021] |
| Source | [Clint Powell][Facebook][Chandler, AZ] | Voice: [+1.480.586.8457]Fax: [--]E-mail: [cpowell@ieee.org] |
| Re: | [March 802.15 Plenary Meeting held virtually] |
| Abstract | [IEEE 802.15 Working Group & CAC Minutes] |
| Purpose | [Official minutes of the Working Group and CAC Sessions] |
| 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. |

**130th IEEE 802.15 WSN MEETING**

**Held Virtually via Webex (all times in EDT)**

**March 9-17, 2021**

# Tuesday, 9 March 2021

**Opening**

**9:04 AM** WG Chair, Pat Kinney (Kinney Consulting), called the meeting to order and opened the WG Agenda (*15-21-0093-05-0000*)

**Announcements**

WG Chair announced the agenda doc. # for the week.

WG Vice-Chair reviewed attendance tool.

Don’t forget to announce your name and affiliation before you speak.

WG Chair announced the of DirectVoteLive (DVL) for all WG votes. DVL will only be used during this session and at the closing plenary meeting on Wednesday, 17 March. He also noted that the motions would be loaded in advance of the meeting. This process will require that the TG chairs send the WG Chair - Pat Kinney the motions for the closing meeting by end of Wednesday.

WG Chair asked for new participants to speak up using the chat window in Webex.

11 new participants (from N.A., Asia, and Europe) announced on the chat window that this was his first meeting.

## Legal

WG 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>).

WG 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.

No essential patent claims were brought forth.

WG Chair displayed and read the standard IEEE Anti-Trust statement.

WG Chair displayed and read the standard IEEE Copyright Policy, including Code of Ethics.

Chair went through the agenda

## WG Approvals

Rick Alfvin (LineSpeed) moved to *approve the agenda (document 15-21-0093-05-0000-mar-2021-agenda)* with Clint Powell (Facebook) seconding the motion. Following no objection, the agenda was approved.

Rick Alfvin (LineSpeed) moved *to approve the previous meeting minutes (document 15-21-0011-00-0000)* and Phil Beecher (Wi-SUN Alliance) seconded the motion. Following neither discussion nor objection the minutes were approved. There were no matters resulting from the previous minutes.

**General and Administrative**

WG Vice-Chair presented the general meeting information:

* There was 85 attendees at the start of this 802.15 Opening Plenary
* Voters: (voters: 88, nearly: 15, aspirant: 14)
* Webex and other tools will be used for sessions
* IMAT will be used for attendance
	+ 75% Attendance = 12 sessions
* All WG motions (especially those relating to PARS) need to be sent to the Chair (Pat Kinney), Vice-Chair (Rick Alfvin), and Secretary (Clint Powell) by Noon EST, Tues. 3/16 so that they may be entered into DVL (Direct Vote Live) by the EOD. If you are not able to meet this deadline please work with Pat beforehand.

Ben Rolfe (BCA) gave the treasurers report *(document: ec-21-0024-00)*

* Still no income currently
* Still have some expenses
* Holding at a balance of ~$368,914.87

WG Chair gave notice of the March 802.15 CAC meeting, the mins which will be included in these WG minutes *(minutes: 15-21-0149-00-0000)*

WG Chair gave notice of the Wireless Chairs Steering Committee meeting mins
*(minutes: ec-21-0049-00)*

The main event of the meeting was that the May Interim will be a virtual meeting. A decision for the Sept. Interim (whether or not it will be live or virtual) will be made at the May 5th WCSC Mtg.

## Officer Election Status

Election Results from doc. # 15-21-0146-00

Chair: P Kinney 54/0/0 100%

Operational Vice Chair: R Alfvin 52/0/1 100%

Technical Vice Chair:

Clint Powell 27/0/0 50%

Phil Beecher 27/0/0 50%

Secretary: Clint Powell 54/0/0 100%

Details of the roles and responsibilities are included in the posted doc.

Affirmation of 802.15 Officers per ballot results

*Motion: “that the IEEE 802.15 WG affirms the results of the 802.15 Officer Election for the duration of end of March 2021 Plenary to end of March 2022 Plenary:*

* *Chair: Pat Kinney*
* *Vice Chairs: Rick Alfvin, Clint Powell, Phil Beecher*
* *Secretary: Clint Powell*

*The duties of the Vice chairs as stated in WG P&P will be distributed among R Alfvin, C Powell, and
P Beecher. R Alfvin shall assume the position of acting WG Chair in P Kinney’s absence.”*

Moved by Ben Rolfe (BCA) , Seconded by Tim Godfrey (EPRI)

45 out of 45 on DVL voted

Upon no discussion the vote was taken with the results of 44/0/1, motion carries.

## Meeting Straw Poll (Jon Rosdahl Q.)

When do you expect the next in person 802.x Session will be?

Sept. 2021 21

Nov. 2021 26

After 2021 22

No Answer 2

## 4 Proposed Study Groups

See doc. 15-21-0138-00 for descriptions of each of the 4 below proposed Study Groups

* SG-EDBAN on enhanced dependability, amending 802.15.6 2012
* SG-EUWB on enhanced UWB PHY Layers, amending 802.15.4
* SG-NSUWB on a new UWB standard
* SG-NNBS on a new Narrow Band standard

## 802.15.12 Task Group Discussion

Should we continue 802.15.12, change it, or withdraw the PAR? Chair asks the everyone think about this as the question will be formally brought to the 802.15 closing session.

**Status Reports (Goals and objectives for the week)**

802.15 Status and Activities for the Week

* Task Group 15.4 Cor1 (2 sessions)
	+ Will continue hearing inputs.
* Task Group 15.4y – SECN (2 sessions)
	+ Currently in SB Recirc.
	+ Plan to ask WG approval to go to RevCom
* Task Group 15.4aa – JRE (4 sessions)
	+ Continue work on draft and anticipate starting LB soon
* Task Group 15.7a – VAT (3 sessions)
	+ NTR
* Task Group 15.9ma – KMP (2 sessions)
	+ Plan to ask WG approval to go to RevCom
* Task Group 13 – Multi Gigabit/sec OWC (3 sessions)
	+ Continue to address comments from SB
* Task Group 16t – 802.16 Amendment (2 sessions)
	+ Continue to work on content
* Interest Group – DEP (3 sessions)
	+ Continue to work on issues
* Interest Group – NG-UWB (4 sessions)
	+ Approved PAR and CSD, to be brought to WG closing for approval
	+ Joint session w/IG-DEP
* Interest Group – NS-UWB (1 session)
	+ Ben will work w/Clint on session activities
* Standing Committee – THz (1 session)
	+ Working on response to ITU-R
	+ Discussion future THz activities
* Standing Committee – IETF (1 session)
	+ Will give an overview of concurrent IETF Virtual F2F Mtg. activities
* Standing Committee – SC-M, Rules (1 session)
	+ Revision will go to 27 shortly
* Standing Committee – WNG (1 session)
	+ 2 presentations will be given
	+ Comments on 802.15.4
	+ NB overview
* Task Group 12 – ULI (not meeting)
	+ NTR

**Operations Manual Overview**

WG Chair gave a brief overview of the update to the 802.15 Operations Manual.

Current doc. # 15-10-0235-26

**Any Other Business**

WG Chair asked if there was any other business. None was raised.

**WG Recess**

**11:01 AM** WG Chair recessed the meeting

# Wednesday, 17 March 2021

## Closing

**9:01 AM** WG Chair, Pat Kinney (Kinney Consulting) called the meeting to order

**9:02 AM** WGVice Chair, Rick Alfvin (LineSpeed) spoke to the attendance method (IMAT) and voting method (DVL)

## Announcements

#### WG Chair presented his Lessons Learned from this week:

* IMAT - went ok, considering time zone issue
* Webex - had many instances of not allowing host to initially join as host

#### 802.15 Officers Election Process for 2022

Chair proposes an electronic ballot for next March, but not DVL

## Closing Reports

**9:29 AM 802.15 WG** Closing Agenda by Pat Kinney (Kinney Consulting) (15-21-0093-06)

**9:30 AM TG4 Cor2** closing report by Kunal Shah (Itron) (15-21-0174-01)

Will seek to go to LB at the May mtg.

**9:32 AM TG 4y** closing report by Don Sturek (Itron) (15-21-0151-04)

No comments on recent ballot. Plan to kick back and relax at the May mtg.

*MOTION: “Move that 802.15 WG has reviewed and approves the CSD [EC-18-0084-00] and requests unconditional approval from the EC to submit P802.15.4y-D4 to RevCom.”*

Moved by Don Sturek, Seconded by Rick Alfvin

37 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 36/0/1, motion carries.

*MOTION: “Move that TG4y requests 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the SA balloting of the P802.15.4y-D4 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, Seconded by Clint Powell

40 out of 52 on DVL voted

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

**9:55 AM TG4aa** closing report by Takashi Kuramochi (Lapis) (15-21-0193-01)

Plan to review comments at the May mtg.

*MOTION: “Move that 802.15 WG start a WG Letter Ballot requesting approval of Coexistence Assessment (CA) document [15-21-0083-06-04aa] and draft document P802-15-4aa\_D6 and to forward document P802-15-4aa\_D6, to Standards Association ballot.”*

Moved by Takashi Kuramochi, Seconded by Rick Alfvin

44 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 41/0/3, motion carries.

*MOTION: “Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4aa\_D6 with the following membership: Takashi Kuramochi (Chair), Kunal Shah (ITRON), Hiroshi Harada (Kyoto University), Kiyoshi Fukui (OKI), and Henk de Ruijter (Silicon Labs). The 802.15.4aa 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 Takashi Kuramochi, Seconded by Clint Powell

42 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 41/0/1, motion carries.

**9:43 AM TG7a** closing report by Yeong Min Jang (Kookmin University) (15-21-0196-00)

Finalized TCD and call for proposals (see dates in TG7a closing report).

Will hear proposals in the May mtg.

**9:50 AM TG9ma** closing report by Tero Kivinen (Self) (15-21-0147-01)

*MOTION: “Move that 802.15 WG has reviewed and approves the CSD [ec-20-0250-00-ACSD-p802-15-9-revision-1] and requests unconditional approval from the EC to submit P802.15.9ma-D05 to RevCom.”*

Moved by Tero Kivinen, Seconded by Ben Rolfe

38 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 36/0/2, motion carries.

*MOTION: “Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.9ma-D05 with the following membership: Tero Kivinen (Chair), Ben Rolfe, Don Sturek, Pat Kinney, and Peter Yee. The 802.15.9ma 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 Tero Kivinen, Seconded by Ben Rolfe

40 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 39/0/1, motion carries.

**10:00 AM TG13** closing report by Kai Lennert Bober (Fraunhofer HHI) (15-21-0198-00)

Work on comment resolution.

Will go out for recirc next.

*MOTION: “Move that 802.15 WG approves the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.13\_D5 with the following membership: Volker Jungnickel as Chair, Nikola Serafimovski, Tuncer Baykas, Sang-Kyu Lim, and Tero Kivinen. 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 Lennert Bober, Seconded by Clint Chaplin

38 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 36/0/2, motion carries.

**10:05 AM TG16t** closing report by Tim Godfrey (EPRI) (15-21-0184-1)

Completed SRD approval.

Will begin to work on draft.

**10:12 AM IG DEP** closing report by Ryuji Kohno (YNU/CWC U of Oulu) (15-21-0189-01)

*MOTION: “Motion: that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for SG15.6a, an amendment to IEEE Std 802.15.6 for enhanced dependability, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Ryuji Kohno, Seconded by Clint Powell

41 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 35/1/5, motion carries.

**10:08 AM IG NG-UWB** closing report by Ben Rolfe (BCA/UWBA/et al) (15-21-0186-00)

Heard a few presentations and began taking next steps.

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for SG15.4ab, an amendment to IEEE Std 802.15.4 for enhanced Ultra Wideband (UWB) features, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Ben Rolfe, Seconded by Clint Powell

44 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 43/0/1, motion carries.

*MOTION: “Request that the PAR and CSD contained in documents [15-21-0126-01] and [15-21-0047-05], respectively, be approved for submission to the WG for its approval and that the 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 reflect EC discussion at its closing meeting.”*

Moved by Ben Rolfe, Seconded by Clint Powell

Question raised on calling out specific PAR and CSD in the 2nd used by Ruben Salizar. This will be an item for future changes to the 802.15 P&P discussion.

43 out of 53 on DVL voted

Upon no further discussion the vote was taken with the results of 40/0/3, motion carries.

**10:12 AM IG NS-UWB** closing report by Clint Powell (Facebook) (15-21-0192-00)

Heard 1 presentation.

Discussed IG NG-UWB / IG NS-UWB / IG NS-NB differences, coordination, and next steps

There were 56 people attending the session.

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for SG15.14, a new standard focused only on UWB devices, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Clint Powell, Seconded by Clint Chaplin

45 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 41/2/2, motion carries.

**10:12 AM IG NS-NB** closing report by Phil Beecher (Wi-SUN Alliance) (verbal rpt.)

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for SG15.15, a new IEEE 802.15 standard focused only on Narrow Band (NB) types of devices, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Phil Beecher, Seconded by Clint Powell

40 out of 52 on DVL voted

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

**10:20 AM SC THz** closing report by Thomas Kurner (TU Braunschweig) (15-21-0176-01)

Heard 1 contribution.

Discussed potentially launching a Study Group at the May mtg.

*MOTION: “Request that the text proposal contained in 15-21-0122-03-0thz-ieee-802-15-tag-thzliaison-statement-to-itu-r-wp5a be approved by the WG and submitted to 802.18.”*

Moved by Thomas Kurner, Seconded by Cint Powell

38 out of 53 on DVL voted

Upon no discussion the vote was taken with the results of 34/0/4, motion carries.

**10:22 AM SC IETF** closing report by Tero Kivinen (Self) (verbal rpt.)

IETF mtg. was 3/8 - 3/12 (overlapped with this 802 Mtg.)

Discussed some of the IETF activities.

**10:18 AM SC WNG** closing report by Ben Rolfe (BCA/UWBA) (15-21-00199-00)

Heard 2 presentations.

**10:24 AM SC M, Rules** verbal closing report by Pat Kinney (Kinney Consulting) (15-21-0156-00)

*MOTION: “Move that the IEEE 802.15 WG approves the IEEE 802.15 operation manual document 15-10-0235-27 as its Operations Manual following the conclusion of this March 2021 Plenary session.”*

Moved by Pat Kinney

31 out of 53 on DVL voted

Upon no discussion the vote was taken with the results of 29/0/2, motion carries.

**10:25 AM 802.24** Liaison verbal report by Tim Godfrey (EPRI) (verbal rpt.)

Session to occur after 802.15 closing.

Will hear 3 presentations.

**10:26 AM 802.18** Liaison report by Jay Holcomb (Itron) (15-21-0155-00)

1 session so far, 2nd session to occur after 802.15 closing.

802 is having a series of Tech Talks.

**10:30 AM 802.19** Liaison report by Ben Rolfe (BCA/UWBA) (verbal rpt.)

Worked on coexistence assessment document.

802.19 had a successful coexistence assessment document ballot - off to EC for approval

**10:31 AM 802.11** Liaison report Clint Chaplin (verbal rpt.)

NTR

## Review of May Virtual Interim Meeting Plans

WG Chair reviewed the May 802 Wireless Interim Session Dates

* The plan for in person was May 9-14, 2021
* 802.15 WG will hold its Sessions 5/11 - 5/20
* 802.15 CAC (a.k.a. AC - Advisory Committee) on 5/5, 10:00 am - Noon Eastern
* Fixed slots will be used for the TG, SG, IG chairs to select from

## Open Discussion / Next Steps

Happy St. Patricks Day!

Straw polls being collected from all WG w.r.t. next actual F2F 802 Mtg. There are many changing factors to consider, including:

* Personal
* Company
* Country
* Venue
* State (in the case of HI)

A Virtual Mtg. Registration Fee is being looked at for the July Plenary (this will be small w.r.t. to the normal registration fee)

## WG Adjourn

**11:25** Upon hearing no objections, the WG Chair adjourned the meeting.

## Summary of all Motions

### Motions

TG4y

*MOTION: “Move that 802.15 WG has reviewed and approves the CSD [EC-18-0084-00] and requests unconditional approval from the EC to submit P802.15.4y-D4 to RevCom.”*

Moved by Don Sturek, Seconded by Rick Alfvin

37 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 36/0/1, motion carries.

*MOTION: “Move that TG4y requests 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the SA balloting of the P802.15.4y-D4 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, Seconded by Clint Powell

40 out of 52 on DVL voted

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

TG4aa

*MOTION: “Move that 802.15 WG start a WG Letter Ballot requesting approval of Coexistence Assessment (CA) document [15-21-0083-06-04aa] and draft document P802-15-4aa\_D6 and to forward document P802-15-4aa\_D6, to Standards Association ballot.”*

Moved by Takashi Kuramochi, Seconded by Rick Alfvin

44 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 41/0/3, motion carries.

*MOTION: “Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the WG balloting of the P802.15.4aa\_D6 with the following membership: Takashi Kuramochi (Chair), Kunal Shah (ITRON), Hiroshi Harada (Kyoto University), Kiyoshi Fukui (OKI), and Henk de Ruijter (Silicon Labs). The 802.15.4aa 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 Takashi Kuramochi, Seconded by Clint Powell

42 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 41/0/1, motion carries.

TG9ma

*MOTION: “Move that 802.15 WG has reviewed and approves the CSD [ec-20-0250-00-ACSD-p802-15-9-revision-1] and requests unconditional approval from the EC to submit P802.15.9ma-D05 to RevCom.”*

Moved by Tero Kivinen, Seconded by Ben Rolfe

38 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 36/0/2, motion carries.

*MOTION: “Move that 802.15 WG approve the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.9ma-D05 with the following membership: Tero Kivinen (Chair), Ben Rolfe, Don Sturek, Pat Kinney, and Peter Yee. The 802.15.9ma 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 Tero Kivinen, Seconded by Ben Rolfe

40 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 39/0/1, motion carries.

TG13

*MOTION: “Move that 802.15 WG approves the formation of a Comment Resolution Group (CRG) for the Standards Association balloting of the P802.15.13\_D5 with the following membership: Volker Jungnickel as Chair, Nikola Serafimovski, Tuncer Baykas, Sang-Kyu Lim, and Tero Kivinen. 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 Lennert Bober, Seconded by Clint Chaplin

38 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 36/0/2, motion carries.

IG-DEP

*MOTION: “Motion: that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for SG15.6a, an amendment to IEEE Std 802.15.6 for enhanced dependability, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Ryuji Kohno, Seconded by Clint Powell

41 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 35/1/5, motion carries.

IG NG-UWB

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for SG15.4ab, an amendment to IEEE Std 802.15.4 for enhanced Ultra Wideband (UWB) features, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Ben Rolfe, Seconded by Clint Powell

44 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 43/0/1, motion carries.

*MOTION: “Request that the PAR and CSD contained in documents [15-21-0126-01] and [15-21-0047-05], respectively, be approved for submission to the WG for its approval and that the 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 reflect EC discussion at its closing meeting.”*

Moved by Ben Rolfe, Seconded by Clint Powell

Question raised on calling out specific PAR and CSD in the 2nd used by Ruben Salizar. This will be an item for future changes to the 802.15 P&P discussion.

43 out of 53 on DVL voted

Upon no further discussion the vote was taken with the results of 40/0/3, motion carries.

IG NS-UWB

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for SG15.14, a new standard focused only on UWB devices, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Clint Powell, Seconded by Clint Chaplin

45 out of 52 on DVL voted

Upon no discussion the vote was taken with the results of 41/2/2, motion carries.

IG NS-NB

*MOTION: “Move that the 802.15 Working Group seeks approval from the 802 EC to form a study group in 802.15 to develop the PAR and CSD documents for SG15.15, a new IEEE 802.15 standard focused only on Narrow Band (NB) types of devices, and additionally authorize the 802.15 WG Chair to make any necessary changes to these docs required to support the submission.”*

Moved by Phil Beecher, Seconded by Clint Powell

40 out of 52 on DVL voted

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

SC THz

*MOTION: “Request that the text proposal contained in 15-21-0122-03-0thz-ieee-802-15-tag-thzliaison-statement-to-itu-r-wp5a be approved by the WG and submitted to 802.18.”*

Moved by Thomas Kurner, Seconded by Cint Powell

38 out of 53 on DVL voted

Upon no discussion the vote was taken with the results of 34/0/4, motion carries.

SC M, Rules

*MOTION: “Move that the IEEE 802.15 WG approves the IEEE 802.15 operation manual document 15-10-0235-27 as its Operations Manual following the conclusion of this March 2021 Plenary session.”*

Moved by Pat Kinney

31 out of 53 on DVL voted

Upon no discussion the vote was taken with the results of 29/0/2, motion carries.

## Action Items and Other Info

### PARS

NTR

# Annex A Virtual attendance = 133

|  |  |  |
| --- | --- | --- |
| **Last Name** | **First Name** | **Affiliation** |
| Ahlendorf | Hendrik | NXP Semiconductors |
| Al-kadi | Ghiath | NXP Semiconductors |
| Aldana | Carlos | Facebook |
| Alfvin | Richard | Linespeed Events LLC |
| Amezawa | Yasuharu | Mobile Techno Corp. |
| Bahn | Christy | IEEE STAFF |
| Barras | David | 3db Access AG |
| Baykas | Tuncer | Kadir Has University |
| Beecher | Philip E | Wi-SUN Alliance |
| Bims | Harry | Bims Laboratories, Inc. |
| Bober | Lennert | Fraunhofer Heinrich Hertz Institute |
| Bromley | Paul | Wyde Labs |
| Calvert | Chris | Landis Gyr Group Worldwide |
| Card | Stuart William | AX Enterprize, LLC |
| Chaplin | Clint | Self |
| Choi | Sangsung | Kookmin University |
| Clanney | Nathan | Siemens Mobility, Inc. |
| Connerley | Royce | Union Pacific Railroad |
| Danev | Boris | 3db Access AG |
| de PErthuis | Hugues | NXP Semiconductors |
| De Ruijter | Hendricus | Silicon Laboratories |
| Deslandes | Dominic | SPARK Microsystems |
| Doedlinger | Dominik | NXP Semiconductors |
| Dolmans | Guido | Holst Centre / IMEC-NL |
| Dotlic | Igor | Qorvo |
| Ekrem | Ersen | Apple, Inc. |
| Finch | Robert | Select Spectrum |
| Fukui | Kiyoshi | Oki Electric Industry Co., Ltd. |
| Godfrey | Tim | Electric Power Research Institute, Inc. (EPRI) |
| Granhaug | Kristian | Novelda |
| Grosswindhager | Bernhard | NXP Semiconductors |
| Guimond | Raphael | SPARK Microsystems |
| Guo | Jianlin | Mitsubishi Electric Research Labs (MERL) |
| Ha | Taeyoung | Samsung Electronics Co., Ltd. |
| Hafuka | Takamitsu | LAPIS Technology Co., Ltd |
| HAN | CHONG | pureLiFi |
| Harada | Hiroshi | Kyoto University |
| Henry | Jerome | Cisco Systems, Inc. |
| Hernandez | Marco | National Institute of Information and Communications Tech. (NICT) |
| Hett | Christopher | Landis Gyr Group Worldwide |
| Hirata | Masayuki | Osaka Univ. Grad. School of Medicine, Dept of Neurological Diagnosis and Restoration |
| Holcomb | Jay | Itron Inc. |
| Holland | Oliver | Advanced Wireless Technology Group, Ltd. |
| HOSAKO | IWAO | National Institute of Information and Communications Tech. (NICT) |
| Hu | Chunyu | Facebook |
| Ikegami | Tetsushi | Meiji University |
| Jang | Yeong Min | Kookmin University |
| Jiang | Jeng-Shiann | Vertexcom Technologies |
| Joo | Seong-Soon | Electronics and Telecommunications Research Institute (ETRI) |
| Jornet | Josep Miquel | Northeastern University |
| Jungnickel | Volker | Fraunhofer Heinrich Hertz Institute |
| Juntunen | Juha | Meteor Communications Corp. |
| Kashiwagi | Yoshio | Nissin Systems |
| Kettle | Paul | Wyde Labs |
| Kim | Minsoo | Yokohama National University |
| Kinney | Patrick | Kinney Consulting LLC |
| Kitazawa | Shoichi | Muroran IT |
| Kivinen | Tero | Self Employed |
| KOBAYASHI | Takumi | Yokohama National University |
| Kohno | Ryuji | YNU/CWC UofOulu |
| Korowajczuk | Leonhard | CelPlan Technologies, Inc. |
| Krieger | Ann | US Department of Defense |
| Kuechler | Wolfgang | NXP Semiconductors |
| Kuerner | Thomas | TU Braunschweig |
| Kume | Hiroshi | Wi-SUN Alliance |
| Kuramochi | Takashi | LAPIS Technology Co., Ltd |
| Kuribayashi | Hideyuki | Rohm Co., Ltd |
| LEE | Mingyu | Samsung Electronics Co., Ltd. |
| Lemsitzer | Stefan | NXP Semiconductors |
| Leong | Frank | NXP Semiconductors |
| Li | Huan-Bang | National Institute of Information and Communications Tech. (NICT) |
| Lim | Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| Liu | Yong | Apple, Inc. |
| Luo | Xiliang | Apple, Inc. |
| Mariappan | Vinayagam | SMR Automotive Modules Korea Ltd |
| Matsumura | Yuki | Rohm Co., Ltd |
| Miele | Gianfranco | University of Cassino and Southern Lazio |
| Mori | Kenichi | Self |
| Mueller | Robert | Technische Universitaet Ilmenau |
| Murray | Carl | Qorvo |
| Nabki | Frederic | SPARK Microsystems |
| Naguib | Ayman | Apple, Inc. |
| Nakanishi | Seiji | LAPIS Semiconductor Co., Ltd |
| Neirynck | Dries | novelda |
| Niewczas | Jaroslaw | Qorvo |
| Nikolich | Paul | YAS Broadband Ventures, LLC. |
| Ogawa | Hiroyo | National Institute of Information and Communications Tech. (NICT) |
| Okumura | Ryota | Kyoto University |
| Orlik | Philip | Mitsubishi Electric Corporation |
| Pace | James | Wyde Labs |
| Paget | Martin | Ondas Networks |
| Paillusseau | Nicolas | Spark microsystems |
| Palmer | Clark | Meteorcomm LLC |
| Parsons | Glenn | Telefon AB LM Ericsson |
| Parthasarathi | Srivathsa Masthi | NXP Semiconductors |
| Pirhonen | Riku | NXP Semiconductors |
| Polland | Joe | Self |
| Powell | Clinton | Facebook |
| Rahmani | Mohammad | SPARK Microsystems |
| Robert | Joerg | TU Ilmenau/Fraunhofer IIS |
| Rocha | alessandra | Wimax forum |
| Rolfe | Benjamin | Blind Creek Associates |
| Salazar Cardozo | Ruben E | Landis+Gyr AG |
| Sand | Stephan | German Aerospace Center (DLR) |
| Sasaki | Shigenobu | Niigata University |
| Sasoglu | Eren | Apple, Inc. |
| Sayrafian | Kamran | National Institute of Standards and Technology |
| Sekine | Norihiko | National Institute of Information and Communications Tech. (NICT) |
| Senna | Josh | Humatics |
| Serang | Daoud | CML Microcircuits (USA) Inc. |
| Shah | Kunal | Silver Spring Networks Inc. |
| Shah | Tushar | Apple, Inc. |
| SHAHAR | MENASHE | Ondas Networks |
| Simpson | Guy | Full Spectrum |
| Stuebing | Gary | Cisco Systems, Inc. |
| Sturek | Don | Itron Inc. |
| Suzuki | Takafumi | National Institute of Information and Communications Tech. (NICT) |
| Tanaka | Hitoshi | LAPIS Semiconductor Co., Ltd |
| Taylor | George | Spark Microsystems |
| Thimme Gowda | Kiran | NXP Semiconductors |
| Toda | Hiroyuki | LAPIS Semiconductor Co., Ltd |
| Turner | Max | Ethernovia |
| Verso | Billy | DecaWave;Qorvo |
| Warnez | Dimitri | NXP Semiconductors |
| Wendt | Matthias | Signify |
| Wisland | Dag | Novelda AS; University of Oslo |
| Yang | Shang-Te | Apple, Inc. |
| Yee | Peter | NSA-CSD |
| Yong | Su Khiong | Apple, Inc. |
| Zakaib | Larry | Spark Microsystems |
| Zeisberg | Sven | ZIGPOS GmbH |
| Zhou | Mingda | Redpoint Positioning |
| Zou | Qiyue | Facebook |

**802.15 CAC Mtg.**

**Wednesday, 3 March 2021**

## Attendance

Clint Powell

Pat Kinney

Kunal Shah

Ben Rolfe

Don Sturek

Gary Stuebing

Paul Nikolich

Phil Beecher

Rick Alfvin

Takashi Kuramochi

Tero Kivinen

Thomas Kurner

Marco Hernandez

Christy Bahn

Kai Lennert Bober

## Minutes

* Discussed Agenda for March Plenary
	+ Attendance for 802.15 was discussed ad nauseum, to come up with a way to capture granularity
		- For March meeting will use 12 sessions as the bar to achieve 75% attendance
		- For 802.15 CAC will have an ad-hoc to set this for future meetings
* 802.15 May Sessions
	+ May 11 - 20
	+ CAC May 5 @ 10 am Eastern
* Four Study Groups to be proposed to EC
	+ NG-UWB
	+ NS-UWB
	+ NB (Narrow Band)
	+ IG-DEP

* Subgroup Status and Plenary Plans
	+ TG4 2020 Cor1
		- 2 sessions
		- Will start going through draft
	+ TG4y
		- 2 sessions this week
		- Don is fighting with Word
	+ TG4aa
		- 4 sessions this week
		- Will discuss draft and CAD
	+ TG7a
		- 3 session this week
		- NTR
	+ TG9ma
		- 2 sessions this week
		- < 20 comments received on the recirc.
	+ TG13
		- 3 sessions this week
		- Will address the few hundred comments receive on recent ballot
	+ TG16t
		- 2 sessions this week
		- NTR
	+ IG-Dep
		- Will give an update presentation in WNG, and why the need for Study Group
	+ IG NG-UWB
		- 4 sessions this week
		- PAR and CSD drafted
		- Will ask for WG approval
	+ IG NS-UWB
		- 1 session this week
		- Will discuss NS-UWB and NB differences
	+ SC THz
		- 1 session this week
		- Will work on a motion w.r.t. ITU-R
	+ SC WNG
		- 1 session this week
		- Will hear NB proposal
	+ SC IETF
		- 1 session this week
	+ SC Main
		- 1 session this week
		- Will review and discuss 8021.5 Operations Manual changes
* AOB
	+ It was brought up to CAC to consider whether or not to nominate Bob for an IEEE award posthumously, or if it might be more fitting to create an award from the perspective of Bob being one of the founding members of 802.