**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | **<802.15 TG4ab (NG-UWB) Conf. Call Mins. Mar. to May. 2024>** | |
| Date Submitted | [11 May, 2024] | |
| Source | [David Xun Yang] [Huawei] [Bantian, Shenzhen, China] | Voice: [+86.159.1411.7462] Fax: [--] E-mail: [david.yangxun@huawei.com] |
| Source | [Benjamin A. Rolfe] [BCA] [--] | Voice: [+1.408.395.7207] Fax: [--] E-mail: [ben.rolfe@ieee.org] |
| Re: | [802.15 TG4ab Conf. Call Mins] | |
| Abstract | [Official Minutes of the Call] | |
| Purpose | [Record the main points of the call] | |
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**802.15 TG4ab (NG-UWB) Conf. Call Minutes**

**between Mar. and May. 2024 Mtgs.**

# Tuesday, 26 Mar 2024

**Opening**

**9:02 AM ET** 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>25 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-00, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-02). There was no objection to the updated agenda. It was approved with unanimous consent.

Carl Murray (Qorvo) presented “Toward consensus before resolving MMS ranging CIDs”

(doc. # 15-24-0156-02)

There were lots of discussion on the possible solutions.

Chair asked if there is any other business to discuss. No request heard.

Chair recessed the call @10:00am ET until 7pm ET.

# Tuesday, 26 Mar 2024

**Opening**

**7:01 PM ET** 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order

**Minutes**

>25 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-00, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-02). There was no objection to the updated agenda.

Carl Murray (Qorvo) continued his presentation “Toward consensus before resolving MMS ranging CIDs”

(doc. # 15-24-0156-02)

There were lots of discussion on the possible solutions. Based on the fruitful discussion, people reached initial consensus. Carl planned to prepare the comment resolutions based on the consensus.

Chair asked if there is any other business to discuss. No request heard.

Chair recessed the call @8:00pm ET until 9am, 2 Apr, ET.

# Tuesday, 2 Apr 2024

**Opening**

**9:02 AM ET** 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>25 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-02, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-05). There was no discussion on the updated agenda.

Alex Krebs (Apple) presented “DraftC comment resolution CIDs 237, 66, 67, and related comments”

(doc. # 15-24-0198-00)

This presentation proposes resolution for MMS related comments.

Vice chair Clint Chaplin (Samsung) checked the status of resolved comments with assignees.

Chair asked if there is any other business to discuss. No request heard.

Chair recessed the call @9:51am ET until 9am 9 Apr, ET.

# Tuesday, 9 Apr 2024

**Opening**

**9:02 AM ET** 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>25 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-03, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-06). There was no discussion on the updated agenda.

Panpan Li (Huawei) presented “UWB channel numbering”

(doc. # 15-24-0203-02)

Strawpoll:

Which kind of channel numbering do you prefer?

A: Duplicated channel numbering

B: One-to-one channel numbering

C: Abstain

Results: Option A: 7, Option B: 6, Abs: 7

The agenda was revised to r7. (doc. # 15-24-0192-07)

Editor Billy Verso (Qorvo) commented the resolution about 10.31.1 in doc. # 15-24-0143-04 cannot be applied. The author Youngwan So (Samsung) agreed and planned to think about alternative solutions.

Chair briefly introduced the progress summary and extrapolation.

There was some discussion on hotel booking issues for Warsaw meeting.

Chair recessed the call @9:57am ET until 9am 16 Apr, ET.

# Tuesday, 16 Apr 2024

**Opening**

**9:01 AM ET** 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>25 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-04, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-08). There was no discussion on the updated agenda.

Billy Verso (Qorvo) introduced the progress of comment resolutions.

Alex Krebs (Apple) presented “DraftC comment resolution CIDs 237, 66, 67, and related comments”

(doc. # 15-24-0198-02)

This presentation proposes resolution for MMS related comments.

There was no objection to the comment resolutions as in doc. # 15-24-0198-02.

Panpan Li (Huawei) presented “Draft C comment resolution CID 222”

(doc. # 15-24-0204-01)

This presentation proposes resolution for CID 222.

There was no objection to the comment resolutions as in doc. # 15-24-0204-01.

Vice chair Clint Chaplin (Samsung) checked the status of resolved comments with assignees.

Chair asked if there is any other business to discuss. No request heard.

Chair recessed the call @9:38am ET until 7pm ET.

# Tuesday, 16 Apr 2024

**Opening**

**7:01 PM ET** 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>25 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-04, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-08). There was no discussion on the updated agenda.

Vinod Kristem (Apple) presented “Proposed Resolutions for UWB HRP PHY Comments”

(doc. # 15-24-0205-00)

This presentation proposes resolution for several PHY comments.

There were lots of discussions. Vinod made changes based on the discussion and update the contribution to doc. # 15-24-0205-01.

There was no objection to the comment resolutions as in doc. # 15-24-0205-01.

Vice chair Clint Chaplin (Samsung) updated “Consolidated Comments Draft c” to doc. # 15-24-0010-25.

Chair asked if there is any other business to discuss. No request heard.

Chair recessed the call @8:00pm ET until 9am 23 Apr, ET.

# Tuesday, 23 Apr 2024

**Opening**

**9:01 AM ET** 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>20 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-04, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-08). There was no discussion on the updated agenda.

Billy Verso (Qorvo) reviewed the updates in doc. # 15-24-0178-04.

There was no objection to the comment resolutions as in doc. # 15-24-0178-04.

Alex Krebs (Apple) presented “DraftC comment resolution proposals for LBT related comments (CIDs 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 289, 290, and 291)”

(doc. # 15-24-0207-00)

This presentation is to resolve comments related to narrow band coexistence.

Carlos Aldana (Meta) presented “CCA Modes in 802.15.4”

(doc. # 15-23-0360-04)

This presentation further analyzes the interference and proposes to mandate CCA mode 1.

Chair recessed the call @10:00am ET until 7pm 23 Apr, ET.

# Tuesday, 23 Apr 2024

**Opening**

**7:07 PM ET** 802.15 TG4ab Vice Chair, David Yang (Huawei), called the meeting to order.

**Minutes**

>20 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-04, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-09). There was no discussion on the updated agenda. There was no objection to the updated agenda.

Alex Krebs (Apple) further reviewed the discussions in “DraftC comment resolution proposals for LBT related comments (CIDs 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 289, 290, and 291)”

(doc. # 15-24-0207-00)

There were lots of discussions on how to move forward.

Carlos Aldana (Meta) further reviewed the discussions in “CCA Modes in 802.15.4”

(doc. # 15-23-0360-04)

Carlos requested a SP to collect opinions on slide 12.

There was an objection to extend the meeting time. Then Chair converted the SP to count the votes.

SP: Do you agree to extend the meeting by 5 minutes?

Results: Y: 9, N: 2, Abs: 2. SP passed.

The SP on slide 12 as in doc. # 15-23-0360-04 was postponed.

Chair recessed the call @8:08pm ET until 9am 30 Apr, ET.

# Tuesday, 30 Apr 2024

**Opening**

9:02 AM ET, 802.15 TG4ab Chair, Ben Rolfe (BCA) and 802.11 coex Chair Marc Ellema (), called the meeting to order.

**Minutes**

>30 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-06, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-10). There was no discussion on the updated agenda. There was no objection to the updated agenda.

Carlos Aldana (Meta) presented “Response to CoexSC 11-24 360r3”

(doc. # 15-24-0212-01)

Discussion follows.

Alex Krebs (Apple) presented “DraftC comment resolution proposals for LBT related comments (CIDs 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 289, 290, and 291)”

(doc. # 15-24-0207-01)

Discussion follows.

Request for technical presentations for joint meeting in May interim. The suggested topics include “Impact on 802.15.4 NB from 802.11 operating in the same band”.

Chairs adjourned joint meeting and recessed TG4ab at 10:01am ET.

# Tuesday, 30 Apr 2024

**Opening**

7:02 PM ET, 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>20 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-06, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-10): Changed second slot from "Editor's report" to "comment resolutions" presented by Billy; changed time allocation; following no further discussion, changes approved and posted as doc. # 15-24-0192-11.

Review of comment status:  Vice chair (Clint P) leads review of status based on doc. # 15-24-0010-28.  Reviews status of assignments. Records updates in doc. # 15-24-0010-29.

Comment resolution contribution:  Doc. # 15-24-0222-00 presented by Billy Verso (Qorvo). Following discussion, proposed resolutions adopted for inclusion in the comment database by unanimous consent.

March interim planning: Reviewed session agenda, current requests (2).  Suggestion by the chair:  Using the latest revision of document 0010, where notes indicate that resolution proposals will be presented in the May Interim, the chair will assign agenda time.  No objections heard.  Action: Chair to assign time based as indicated.  Reminder to provide chair with any constraints or preferences on presentation times.

Next steps:  Reminder for calls next week.

Chair recessed the call @7:51pm ET until 9am 7 May, ET.

# Tuesday, 7 May 2024

**Opening**

**9:03 AM ET** 802.15 TG4ab Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>20 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-07, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-12). There was no discussion on the updated agenda. There was no objection to the updated agenda.

Ben Rolfe (BCA) presented “Proposed Resolutions CIs 40 and 715”

(doc. # 15-24-0211-00)

There were lots of discussions.

Carlos Aldana (Meta) presented “Coex Proposal by Meta to Bluetooth”

(doc. # 15-24-0238-00)

There were lots of discussions on the parameter settings, simulations, etc.

Editor Billy Verso (Qorvo) mentioned the updates in his uploaded consolidated comments. (doc. # 15-24-0010-30)

Chair recessed the call @10:00am ET until 7pm 7 May, ET.

# Tuesday, 7 May 2024

**Opening**

**7:02 PM ET** 802.15 TG4ab Vice Chair, Ben Rolfe (BCA), called the meeting to order.

**Minutes**

>20 participants were noted during the duration of the call

Utilizing the meeting and agenda doc. # 15-24-0196-07, the Chair conducted the following business:

* Opening
* Reviewed IEEE Patent Policy
  + Made call for claims with no responses
* Reviewed IEEE SA Participation Policy
* Reviewed IEEE SA Copyright Policy
* Reviewed 802 Rules

**Announcement**

Chair reviewed the proposed agenda (doc. # 15-24-0192-12). There was no discussion on the updated agenda.

Alex Krebs (Apple) presented “DraftC comment resolution - NB Channel Map - CIDs 78, 210, 326, 341, 617, 618, 896”

(doc. # 15-24-0224-00)

There was no objection to the comment resolutions as in doc. # 15-24-0224-00.

Alex Krebs (Apple) presented “DraftC comment resolution - Round Skipping - CIDs 160, 612”

(doc. # 15-24-0227-00)

There was no objection to the comment resolutions as in doc. # 15-24-0227-00.

The presentation for doc. # 15-24-0225-00 was deferred to Warsaw F2F meeting next week.

Carlos Aldana (Meta) recapped the presentation “Coex Proposal by Meta to Bluetooth” (doc. # 15-24-0238-00) and “” (doc. # 15-24-0212-03)

Carlos had two straw polls to collect opinions. There were concerns on the straw poll text.

Chair introduced the plan for the Warsaw meeting.

Chair adjourned the call @8:12pm ET until 9am 7 May, ET.