**IEEE 802.15**

**Wireless Specialty Networks (WSN)**

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| Project | IEEE 802.15 Working Group for Wireless Specialty Networks (WSN) |
| Title | **IEEE 802.15 TG 4ab (NG-UWB) minutes** |
| Date Submitted | [6 Mar, 2025] |
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|  | [Benjamin A. Rolfe][Blind Creek Associates] | E-mail : Ben@blindcreek.com |
| Re: | [Jan 802.15 Interim Meeting held in Hybrid Mode] |
| Abstract | [IEEE 802.15 Task Group 4ab minutes] |
| Purpose | [Official minutes of IEEE 802.15 TG 4ab] |
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# Monday, 13 Jan, 2025 – PM1

**Opening**

**1:32 PM EST** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-25-0032-01-04ab*)

* >30 attendees joined the meeting

Chair introduced the hybrid meeting logistics.

Chair reminded the group of registration for 802 LMSC and wireless interim.

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
* IEEE Copyright Policy, including Code of Ethics

**Announcements**

Chair announced the agenda doc. *#15-24-0678-02-04ab* for the week. There were several requests on the time slots for presentations. The agenda was updated to doc. *#15-24-0678-03-04ab.* There was no further discuss on the agenda. It was passed with unanimous consent.

Chair raised the motion of minutes for Nov plenary *(doc. # 15-25-0010-00-04ab)* and telecons between Nov 2024 and Jan 2025 *(doc. # 15-25-0011-00-04ab)*. No discussion heard.

Motion to approve minutes contained in documents 15-25-0010-00 and 15-25-0011-00

* Moved by: Panpan Li (Huawei)

No one objected to approve the motion. It was approved by unanimous consent.

Chair reviewed the objectives of this week.

**TG Meeting Activity**

Using the agenda *(doc. # 15-24-0678-03-04ab)* Chair proceeded with running the meeting.

Chair reviewed the near term working milestones.

Vice Chair Clint Chaplin (Samsung) and Billy Verso (Qorvo) reviewed the consolidated comments and assigned comments to volunteers. (*doc. # 15-24-0371-35-04ab*)

**Presentation #1:**

Xiliang Luo (Apple) presented “Proposed Resolutions for CID 100, 962.”

(*doc. # 15-25-009-03-04ab*)

There was no objection to the comment resolutions as in *doc. # 15-25-009-03-04ab.*

**Presentation #2:**

Jinjing Jiang (Apple) presented “updated resolution for one-to-many CID 584, 590, 593, 594 and 1166.”

(*doc. # 15-25-0015-00-04ab*)

CID 1166 is removed.

There was no objection to the comment resolutions as in *doc. # 15-25-0015-04-04ab.*

Chair reviewed the slots for breakout.

Chair recessed the mtg. @ 3:27PM EST, until Mon. PM2.

# Monday, 13 Jan, 2025 – PM2

## Opening

**4:02 PM EST** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-5-032-01-04ab*)

* ~ 40 attendees joined the meeting (26 in the room)

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
* IEEE Copyright Policy, including Code of Ethics

**TG Meeting Activity**

Using the agenda *(doc. # 15-25-0678-04-04ab)* Chair proceeded with running the meeting.

**Presentation #3:**

Billy (Qorvo) presented “D01 comment resolutions misc-C

(*doc. # 15-24-0609-00-04ab*)

Some discussions between Ben and Billy regarding the disposition details.

There was no objection to the comment resolutions as in *doc. # 15-24-0609-04-04ab.*

**Presentation #4:**

Rojan (Huawei) presented “Proposed Resolution for Security – PT Data”

(*doc. # 15-24-* *0381-03-04ab*)

Some discussions with Riku, Billy regarding the positioning of the Security Control field.

Rojan will discuss offline with Riku and represent the CR doc.

**Presentation #5:**

Rojan (Huawei) presented “CRs for Extended address”

(*doc. # 15-25-0016-00-04ab*)

Billy expressed disagreement with the rejection of 2 CIDs: 1198 and1203. Billy mentioned that a comment similar to 1198 is assigned to Alex. Rojan will check with offline with Alex. Further discussions required for CIDs: 1198 and1203.

**Presentation #6:**

Rojan (Huawei) presented “CRs for miscel MMS comments 1”

(*doc. # 15-25-0018-01-04ab*)

There was no objection to the comment resolutions as in *doc. # 15-24-0609-04-04ab.*

**Presentation #7:**

Rojan (Huawei) presented “CRs for CIR Report”

(*doc. # 15-25-0017-00-04ab*)

Disposition of CID 137 changed to REVISE (from Accept).

Some discussions with Li-Hsiang regarding CID 266 and whether Figures 140 and 141 need to be redrawn to reflect the proposed changes.

Rojan to bring back revised resolutions for CID 266 and related to Figures 140 and 14.

Chair recessed the mtg. @ 5:51pm JST, until 8:00am Tue. AM1.

# Tuesday, 14 Jan, 2025 – AM1

## Opening

**8:02 AM ET** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-25-0032-01-04ab*)

39 attendees (17 in room) joined the meeting

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
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**TG Meeting Activity**

Using the agenda *(doc. # 15-25-0678-05-04ab)* Chair proceeded with running the meeting.

**Presentation #8:**

Hongwon (LGE) presented “Proposed Resolution for MMS – Public part 3”

(*doc. # 15-25-0012-00-04ab*)

Some discussions with Pooria, Billy regarding CID 1363.

Hongwon will remove CID 1316 for offline discussions and post r1.

There was no objection to the other comment resolutions in *doc. # 15-25-0012-01-04ab.*

**Presentation #9:**

Hongwon (LGE) presented “Message Control -- CIDs 289, 313, 1032, and 1033”

(*doc. # 15-24-0687-04-04ab*)

There was no objection to the comment resolutions in *doc. # 15-24-0687-04-04ab.*

**Presentation #10:**

Carlos (Meta) presented “channel access mechanisms in ETSI”

(*doc. # 15-24-0407-07-04ab*)

Some discussions with Alex, Menzo, Riku, Pooria regarding ETSI developments. Frank expressed disagreement to the proposed resolution. Li-Hsiang spoke in favor of the proposed resolution. Bin Tian urged the group to consider coexistence mechanisms. Xiliang suggested considering duty-cycle based approach.

Ben will arrange an ad-hoc time for LBT related discussions.

**Presentation #11:**

Billy (Qorvo) presented “CID 11”

(*doc. # 15-25-0038-00-04ab*)

Some discussion with Xiliang.

There was no objection to the comment resolutions in *doc. # 15-24-0687-04-04ab.*

**Presentation #12:**

Mikael (STM) presented “Proposed resolution for comment ID 417-420-421-424-444 on message sequence charts”

(*doc. # 15-25-0008-00-04ab*)

Some discussions with Alex, Rojan, Billy.

For CID 444, Mikael changed the disposition to Revise.

Mikael will come back with a revised version.

Vice chair Clint Chaplin (SRA) continued to review the consolidated comments and assigned comments to volunteers.

Chair recessed the mtg. @ 10:00am EST, until Tue. AM2.

# Tuesday, 14 Jan, 2025 – AM2

## Opening

**10:30 AM ET** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-25-0032-01-04ab*)

>30 attendees joined the meeting

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
* IEEE Copyright Policy, including Code of Ethics

**TG Meeting Activity**

Using the agenda *(doc. # 15-25-0678-06-04ab)* Chair proceeded with running the meeting.

**Presentation #13:**

Alex Krebs (Apple) presented “LB207/D01 comment resolution -- Miscellaneous -- CIDs 23, 24, 30, 32, 33, 34, 103, 111, 149, 400, 408, 411, 439, 440, 476, 539, 1021, 1022, 1036, 1037, 1068, 1119, 1120, 1131, 1132, 1133, 1134, 1137, 1161, 1166, 1176, 1177, 1177, 1200, 1221, 1240, 1386”

(*doc. # 15-25-0028-01-04ab*)

Billy and Xiliang need more offline discussion regarding CID 23.

This document is not finished and will come back for breakout slots.

Chair recessed the mtg. @ 11:59am EST, until Tue. PM1.

# Tuesday, 14 Jan, 2025 – PM1

## Opening

**1:33 PM EST** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-25-0032-01-04ab*)

* >40 attendees joined the meeting

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
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**TG Meeting Activity**

Using the agenda *(doc. # 15-25-0678-07-04ab)* Chair proceeded with running the meeting.

**Presentation #14:**

Panpan Li (Huawei) presented “Proposed Resolutions for CID 261,900”

(*doc. # 15-25-0014-00-04ab*)

There was no objection to the comment resolutions in *doc. # 15-25-0014-00-04ab.*

**Presentation #15:**

Wenzheng Li (Calterah Semiconductor) presented “Proposed resolutions for CID 192,198”

 (*doc. # 15-24-0471-01-04ab*)

Need more discussion offline and will come back on Thursday AM.

**Presentation #16:**

Rojan Chitrakar (Huawei) updated “CRs for CIR Report”

(*doc. # 15-25-0017-01-04ab*)

There was no objection to the comment resolutions as in *doc. # 15-25-0017-01-04ab.*

**Presentation #17:**

Alex Krebs (Apple) continued “LB207/D01 comment resolution -- Miscellaneous -- CIDs 23, 24, 30, 32, 33, 34, 103, 111, 149, 400, 408, 411, 439, 440, 476, 539, 1021, 1022, 1036, 1037, 1068, 1119, 1120, 1131, 1132, 1133, 1134, 1137, 1161, 1166, 1176, 1177, 1177, 1200, 1221, 1240, 1386”

(*doc. # 15-25-0028-02-04ab*)

Need more discussion offline with Billy regarding CID 1120.

**Presentation #18:**

Rojan Chitrakar (Huawei) updated “ LB207-CRs for Extended address”

(*doc. # 15-25-0016-01-04ab*)

Need more discussion offline.

Chair recessed the mtg. @ 3:27pm EST, until Wed. PM1.

# Wednesday, 15 Jan, 2025 – PM1

## Opening

**1:37 PM EST** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-25-0032-01-04ab*)

* >30 attendees joined the meeting

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
* IEEE Copyright Policy, including Code of Ethics

**TG Meeting Activity**

Using the agenda *(doc. # 15-25-0678-08-04ab)* Chair proceeded with running the meeting.

**Presentation #19:**

Youngwan So (SAMSUNG) presented “Comment Resolution - Part 3”

(*doc. # 15-25-0050-01-04ab*)

discussions on various CIDs. Youngwan will bring back a revised version.

**Presentation #20:**

Billy Verso (Qorvo) presented “CID 1287 DRBG for RIFs”

(*doc. # 15-25-0004-01-04ab*)

some discussions with Alex, Frank, Xiliang. More offline discussions required.

**Presentation #21:**

Hongwon Lee (LG Electronics) presented “Proposed Resolution for MMS - Public part3++ - remaining comment”

(*doc. # 15-25-0059-02-04ab*)

Billy thinks that the modified text is not clear. Billy changed his mind.

There was no objection to the comment resolutions in *doc. # 15-25-0059-02-04ab.*

**Presentation #22:**

Rojan Chitrakar (Huawei) presented “Proposed Resolution for Security – PT Data”

(*doc. # 15-24-0381-03-04ab*)

There was no objection to the comment resolutions in *doc. # 15-24-0381-03-04ab.*

**Presentation #23:**

Rojan Chitrakar (Huawei) presented “CRs for Extended address: 4 CIDs (10 mins)”

(*doc. # 15-25-0016-02-04ab*)

modifications made on the fly.

There was no objection to the comment resolutions in *doc. # 15-25-0016-03-04ab.*

Chair recessed the mtg. @ 3:27pm EST, until Wed. PM1.

# Thursday, 16 Jan, 2025 – AM1

## Opening

**8:08 AM ET** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-25-0032-01-04ab*)

>20 attendees joined the meeting

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
* IEEE Copyright Policy, including Code of Ethics

**TG Meeting Activity**

Using the agenda *(doc. # 15-25-0678-09-04ab)* Chair proceeded with running the meeting.

**Presentation #24:**

Carlos Aldana (Meta) presented “Proposed Resolution for #1059”

(*doc. # 15-25-0065-00-04ab*)

There was no objection to the other comment resolutions in *doc. # 15-25-0065-00-04ab.*

**Presentation #25:**

Mickael () presented “Message Control -- CIDs 289, 313, 1032, and 1033”

(*doc. # 15-25-0008-02-04ab*)

There was no objection to the comment resolutions in *doc. # 15-24-0008-02-04ab.*

**Presentation #26:**

Alex Krebs (Apple) continued “LB207/D01 comment resolution -- Miscellaneous -- CIDs 23, 24, 30, 32, 33, 34, 103, 111, 149, 400, 408, 411, 439, 440, 476, 539, 1021, 1022, 1036, 1037, 1068, 1119, 1120, 1131, 1132, 1133, 1134, 1137, 1161, 1166, 1176, 1177, 1177, 1200, 1221, 1240, 1386”

(*doc. # 15-25-0028-04-04ab*)

There was no objection to the comment resolutions in *doc. # 15-25-0028-05-04ab.*

Carlos summarized ad hoc discussion, doc to be uploaded.

**Presentation #27:**

Alex Krebs (Apple) presented “LB207/D01 comment resolution -- No censensus -- CIDs 994, 1008”

(*doc. # 15-24-0521-01-04ab*)

No consensus has been reached regarding some comments.

Chair recessed the mtg. @ 10:00am EST, until Tue. PM1.

# Thursday, 16 Jan, 2025 – AM2

## Opening

**10:30 AM ET** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-25-0032-01-04ab*)

39 attendees (17 in room) joined the meeting

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
* IEEE Copyright Policy, including Code of Ethics

**TG Meeting Activity**

Using the agenda *(doc. # 15-25-0678-10-04ab)* Chair proceeded with running the meeting.

**Presentation #28:**

Riku Pirhonen (NXP Semiconductors) presented “ Comment resolution - 31, 40, 137, 957, 1400, 958, 671, 963”

(*doc. # 15-24-0576-03-04ab*)

There was no objection to the comment resolutions in *doc. # 15-24-0576-03-04ab.*

**Presentation #29:**

Aniruddh Rao (Samsung Electronics) presented “ Proposed Resolution Draft 1.0 comments CID - 271, 272, 1259,1260”

(*doc. # 15-24-0619-02-04ab*)

There was no objection to the comment resolutions in *doc. # 15-24-0619-02-04ab.*

Vice Chair Clint Chaplin (Samsung) and Billy Verso (Qorvo) continued to review the consolidated comments.

**Presentation #30:**

Pooria Pakrooh (Qualcomm) presented “ Resolution to CIDs 1360 and 1362 for 15.4ab Draft 1.0”

(*doc. # 15-25-0069-01-04ab*)

Need more discussion.

Chair recessed the mtg. @ 11:59am EST, until Tue. PM1.

# Thursday, 16 Jan, 2025 – PM1

## Opening

**1:33 PM EST** Chair, Ben Rolfe (Blind Creek Associates), called the meeting to order and opened the TG Agenda.
(*15-25-0032-02-04ab*)

* >40 attendees joined the meeting

## Legal

Chair reminded the group of the following from the 802.15 opening meeting:

* IEEE-SA patent policy
* Submission of Letter(s) 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
* IEEE Anti-Trust statement
* IEEE Copyright Policy, including Code of Ethics

**TG Meeting Activity**

Using the agenda *(doc. # 15-25-0678-11-04ab)* Chair proceeded with running the meeting.

**Presentation #31:**

Pooria Pakrooh (Qualcomm) presented “ Proposed Comments Resolution for 15.4ab D1.0 NB Channel Map Comments: Part 2”

(*doc. # 15-25-0043-00-04ab*)

Need more discussion.

CRG request was formed. (*doc. # 15-25-0032-02-04ab*)

Chair recessed the mtg. @ 3:27pm EST.