**IEEE 802.15**

**Wireless Specialty Networks (WSN)**

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| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSN) |
| Title | **IEEE 802.15 TG14 (UWB-AHN) minutes** |
| Date Submitted | [18 November, 2021] |
| Source | [Clint Powell][Meta][Chandler, AZ] | Voice: [+1.480.586.8457]Fax: [--]E-mail: [cpowell@ieee.org] |
| Re: | [November 802.15 Plenary Meeting held virtually] |
| Abstract | [IEEE 802.15 TG14 mtg. minutes] |
| Purpose | [Official minutes of IEEE 802.15 TG14] |
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# Thursday, 11 November 2021 – PM1 (Joint .4ab, .14, .15)

**Opening**

**1:05 PM** TG Chairs, Ben Rolfe (Blind Creek Associates), Clint Powell (Meta), Phil Beecher (Wi-Sun Alliance), called the meeting to order and opened the agenda
(*doc. # 15-21-0584-01-0000*)

* ~ 65 attendees joined the meeting

## Legal

TG Chairs 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**

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

Chairs reviewed the agenda (contained in the opening slides) for the week. After reviewing no changes were made and the Chairs asked if there were any objections to approving the agenda.

No one objected to approving the agenda, and it was approved by unanimous consent.

**TG Meeting Activity**

Chairs communicated that Outreach Letters to External SDO’s using 802.15.4 Standard will go out after Nov. Mtg.

Discussed preparation for 802.1 Architecture Mtg., being held on Thurs. 12/2, from 4-6pm Eastern

* Topics to include in presentation/discussion to include:
	+ 48 / 64 bit addressing
	+ Propose 802.1 develop sol’n. for 48 / 64 bit addressing, and initiate IG’s within 802.11 and 802.15 to proactively support this effort
* Bridging requirements/issues beyond resolving 48 / 64 bit in integrating 802.15.4 into the 802.1 architecture
	+ Collect use cases from 802.11 and 802.15, dependent SDOs (Wi-Fi Alliance, CSA, Wi-SUN Alliance, etc.), and other stakeholders to determine requirements
	+ EtherType issues in 802.15
* Propose
	+ 802.1 starting a project to work on all of this and more
	+ With work in parallel in 802.15, 802.11, via WNGs and/or amendments to interface with 802. project

Chairs asked if there was any other business?

* None was heard

Chairs adjourned the joint mtg. @ 2:10pm.

# Thursday, 11 November 2021 – PM2

**Opening**

**3:05 PM** Chair, Clint Powell (Meta), called the meeting to order and opened the TG Opening Slides (*doc. # 15-21-0545-03-0014*)

* ~ 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

**Announcements**

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

Chair reviewed the agenda (contained in the opening slides) for the mtg. After reviewing no changes were made and the Chair asked if there were any objections to approving the agenda.

No one objected to approving the agenda, and it was approved by unanimous consent.

Chair asked if there were any objections to approval of prior mtg. mins.

No one objected to approving the prior mtg. mins., and it was approved by unanimous consent.

*(doc. # 15-21-0500-01-0014)*.

**TG Meeting Activity**

Using the meeting slides *(doc. # 15-21-0545-03-0014)* Chair proceeding with running the meeting.

Chair reviewed status and objectives for the week.

Clint Powell (Meta) will continue as acting Chair until a permanent Chair is found.

TG14 activities will be rolled into TG4ab until new officers identified for TG14 and bandwidth of participants interested in TG14 UWB eases up from high overlap of participants in TG4ab.

Chair made a verbal call for Chair and other officers, with no response.

Chair communicated that Outreach Letters to External SDO’s using 802.15.4 Standard will go out after Nov. Mtg.

Chair asked if there was any other business?

* None was heard

Chair adjourned the mtg. @ 3:35pm.

# Monday, 15 November 2021 – AM2 (Joint .4ab, .6a, .15)

**Opening**

**11:05 AM** TG Chairs, Clint Powell (Meta), Ben Rolfe (Blind Creek Associates), Ryuji Kohno (YNU), called the meeting to order and opened the agenda
(*doc. # 15-21-0596-00-0000*)

* ~ 45 attendees joined the meeting

## Legal

TG Chairs 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**

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

Chairs reviewed the agenda (contained in the opening slides) for the week. After reviewing no changes were made and the Chairs asked if there were any objections to approving the agenda.

No one objected to approving the agenda, and it was approved by unanimous consent.

**TG Meeting Activity**

Goals from Sept. Interim – updates from TG6a on

* PHY direction (common w/15.4 UWB or not)
* Channel model development for HBAN/VBAN applications

Once the PHY and Channel Model(s) are determined, this will help in paving the way to discussing coexistence

Presentation given by Marco Hernandez, Ryuji Kohno, Takumi Kobayashi, Minsoo Kim (YRP-IAI, YNU) "Joint session 15.6a, 15.4ab, 15.14 November Plenary Meeting", on material for harmonization discussions of UWB technologies across UWB-based IEEE 802.15 Stds

<https://mentor.ieee.org/802.15/dcn/21/15-21-0604-00-006a-join-session-15-6a-15-4ab-15-14-november-plenary-meeting.pptx>

Covering:

* Channel models
1. TG6a working on models for VBAN (document 15-21-0516)
	1. Based on 15.4a channel models and 15.6 BAN channel models updated for vehicles and other systems expected to operate in and around vehicles
* PHY similarities and differences
1. 6a needs at least 50 Mbps to 64 Mbps
2. Packet delivery rate (PDR) 99% of 100msec, end to end latency 250 msec
3. MAC and PHY implications
4. Some proposals in 15.4ab look useful
5. Not seen much MAC yet (but it is coming)
* Discussion then ensued on:
1. Note 15.4z added longer packet lengths
2. TG6a is expecting to adopt the 4ab PHY (more or less)
3. Coexistence if a primary goal of cooperation between TGs
4. May see influence both ways to achieve harmonization
5. Use case summary for 4ab would be useful
6. The TGD (Document 15-21-0297) summarizes requirements derived from presented use cases
7. Adding a summary of the use cases from which the requirements were derived would be useful (seeking volunteer)
8. Emphasis of coexistence
	* Coexistence between UWB and also other systems like 802.11
9. Emphasis that FEC may be another common ground with similar needs
10. Noted that there is a dependence in 6a on development of proposals and content in 4ab
11. Achieving the goals of commonality and coexistence
12. Input into the 6a TRD from participants in 4ab would be greatly appreciated
* TG6a will present their TRD to TG4ab during the Mon. EV1 Session
* TG4ab will present their TGD to TG46a during the Tues. AM1 Session
* After the 802.15 closing plenary TG4ab and TG6a leadership will discuss offline the goals for the Jan. Mtg.

Chairs asked if there was any other business?

* None was heard

Chairs adjourned the joint mtg. @ 12:05pm.