

**IEEE P802.15**  
**Wireless Personal Area Networks**

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Project	IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)	
Title	IG NG-UWB Minutes Jan 2021 Interim	
Date Submitted	25-January-2021	
Source	[Benjamin Rolfe] [Blind Creek Associates] [Benjamin A. Rolfe] [BCA]	E-mail: [ben.rolfe @ ieee.org ]
Re:	Meeting minutes	
Abstract	Minutes from Interest Groups meetings during the January 2021 Wireless Interim (virtual)	
Purpose	Document IG meeting	
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**IEEE Project 802  
Working Group 15,  
Interest Groups: Next Generation UWB  
Meeting Minutes: January 13 2021 through January 20 2021  
Virtual Meeting (New Jersey Time Zone)**

Acting IG Chair: Benjamin A. Rolfe (Blind Creek Associates)

## Contents

1. Wednesday 13-Jan-2021 4:00 PM .....	3
Call to Order .....	3
Meeting Preamble .....	4
Logistics .....	4
Agenda .....	4
Technical Presentation and Discussion .....	4
Process Summary .....	5
Recess .....	5
2. Monday 18-January-2021 2:00 PM .....	5
Call to order .....	5
Meeting reminder: .....	5
Agenda Amendment .....	5
Technical Presentation and Discussion .....	5
CSD Discussion and Work .....	5
Recess .....	6
3. Tuesday 19-January-2021 10:00am .....	6
Call to order .....	6
Meeting reminder: .....	6
Project Objectives and Scope discussion .....	6
Recess .....	7
4. Wednesday 20-January-2021 10:00 .....	7
Call to order .....	7
Meeting reminder: .....	7
Agenda .....	7
Technical Presentations and Discussion on PAR .....	7
Next Steps Discussion .....	7
Teleconference Schedule: .....	8
Any Other Business .....	8
Adjourn .....	8
5. Gratuitous Squirrel Reference .....	8

### **1. Wednesday 13-Jan-2021 4:00 PM**

#### **Call to Order**

Called to order at 16:02 ET. IG char present and acting as recording secretary. Reference document number 15-21-0015 for the meeting slides.

<https://mentor.ieee.org/802.15/dcn/21/15-21-0015-02-nuwb-january-meeting-slides.ppt>

### **Meeting Preamble**

Reminder that the meeting is within the scope of the 802 Wireless Interim meeting and the relevant rules presented in the WG opening apply including patent policy, copyright policy, and rules of conduct. An opportunity for patent disclosures is provided: none heard.

### **Logistics**

Each presenter will take control of WebEx to share. Each presenter will state if they prefer questions in-line or at the end of the presentation. Attendees are reminded to mute when not speaking and turn video cameras off. Use the chat window to queue.

### **Agenda**

Agenda: Chair presents proposed agenda document # [15-21-0008-00](#).

Discussion: Following discussion, revised agenda posted as [15-21-0008-01](#). Following no further discussion nor objection, agenda is approved by unanimous consent.

#### Introduction to Interest Group Process

Following discussion with the WG chair, he notes that the prior IG meetings have established strong interest sufficient to justify developing a PAR and CSD for a new project. He suggests the IG prepare the CSD and PAR as is allowed by the 802 and WG rules.

The chair presents the schedule and objectives for the week. Follow short discussion, consensus on the goals is reached. The recommended process is outlined in the meeting slides, document [15-21-0015](#). Discussion of use cases and new requirements provides the input to the Criteria for Standards Development document (CSD). So it is suggested we hear technical presentations and then have a discussion on the CSD before beginning to draft the PAR.

### **Technical Presentation and Discussion**

Document 15-20-0004 presented (Verso). Discussion follows. Several points from discussion on PAR scope seem to have general support:

- Require a means to be compatible with 802.15.4 UWB (4z)
- Coexistence mechanisms to share fairly between new and legacy systems are important.
- Improved performance in environments with high density device deployment is desired.
  - more orthogonal channels (logical)
  - new channel plans
- Alternate MAC features focused on new applications

Other discussion:

- Chair notes that there is clear interest in HRP enhancements and MAC work and asks if there is also interest in LRP enhancements. Support and interest expressed in further evolution of LRP.

- Interest suggested in a new UWB PHY. To be discussed further.

### **Process Summary**

The plan for the week is reviewed and discussed. Chair outlines the timeline for CSD and PAR to meet the deadlines for the March EC meeting.

Chair reminds everyone that if there are additional requests for agenda time to please submit those to the chair as soon as practical.

### **Recess**

Recessed at 18:01 ET

## **2. Monday 18-January-2021 2:00 PM**

### **Call to order**

Called to order at 14:04 ET.

### **Meeting reminder:**

Reminder is given that this is still part of the 802 Wireless Interim and the rules apply. The objectives for the week are reviewed. An opportunity is given for IPR disclosures: None heard.

### **Agenda Amendment**

Request to add presentations for Wednesday. Following discussion, Revision 2 of the agenda is posted in document [15-21-0008-02](#).

### **Technical Presentation and Discussion**

Document [15-21-0035-01](#) is presented (Nabki, Deslandes). Discussion follows.

### **CSD Discussion and Work**

Draft CSD is presented (document [15-21-0047-00](#)). Discussion and work follow. Result captured in Revision 01 ([15-21-0047-01](#)).

Some discussion points emerge from the CSD work (further discussion planned):

- Enhancing what is already available with
  - Lower latency
  - Lower energy
  - Improved coexistence (high device density)

- Achieve without hindering the performance of existing ranging applications.
- Is this an evolution of the 802.15.4 MAC or something else?
- Enhance HRP and LRP.
- Allow for possibility of a new UWB PHY

### Recess

Recessed at 16:00 ET.

### 3. Tuesday 19-January-2021 10:00am

#### Call to order

Called to order at 10:08 ET (following technical difficulties)

#### Meeting reminder:

Reminder is given that this is still part of the 802 Wireless Interim and the rules apply. The objectives for the week are reviewed. An opportunity is given for IPR disclosures: None heard.

#### Project Objectives and Scope discussion

Document 15-21-0057 is presented (Verso). Discussion follows considering the use case requirements discussed so far. Some points to include:

- Ensuring compatibility and coexistence with existing 802.15.4 UWB based systems is a priority.
- UWB is generally a “good neighbor” and supports good coexistence.
- Some applications require greater link margin and distance, some less distance is better
- Higher data rates do not necessarily mean high duty cycles
- There are parts of the spectrum allowed by regulation for which no channel plan exists in 802.15.4
- MAC requirements are different for UWB applications.
  - There are many parts of 802.15.4 that are proven and useful (e.g. MAC security, frame structures)
  - There are many parts of 802.15.4 that are not being used for UWB applications
  - There are assumptions in the MAC, especially around timing, that are based on other than UWB PHYs
  - UWB PHY provides very fine relative timing capability
- Discussion on the technical and project implications of a new standard vs amending 802.15.4
  - There are advantages building on the existing framework (less work, proven parts)
  - There are some significant differences needed to support new applications of UWB

- No conclusion reached
- It is noted that when we “dig into” the technical work it may become more clear

### **Recess**

Recessed at 12:09 ET.

## **4. Wednesday 20-January-2021 10:00**

### **Call to order**

Called to order at 10:08 ET.

### **Meeting reminder:**

Reminder is given that this is still part of the 802 Wireless Interim and the rules apply. The objectives for the week are reviewed. An opportunity is given for IPR disclosures: None heard.

### **Agenda**

Request to add technical presentation to agenda. Following discussion amended agenda approved by unanimous consent and posted as Revision 3 ([15-21-0008-03](#)).

### **Technical Presentations and Discussion on PAR**

Technical presentations:

- Document # [15-21-0049-00](#)
- Document # [15-21-0066-00](#)
- Document # [15-21-0067-00](#)

Following discussion, chair presents a summary of the PAR discussion (see Slide 10 and 11 of meeting slides, Document [15-21-0015-02](#)).

### **Next Steps Discussion**

The goal is EC approval of PAR and CSD in March (ambitions):

- Complete PAR and CSD for circulation by February 12<sup>th</sup>
- Continue via teleconferences bi-weekly starting next week
  - It is noted that calls are ad-hoc prior to Jan 30
- March meeting plan:
  - Review and respond to comments on PAR and CSD.
  - Revise PAR and CSD accordingly
  - Achieve EC approval
  - Issue a call for contributions
  - Begin technical work

***Teleconference Schedule:***

Meet bi-weekly, Tuesday and Friday, 10:00 ET.

January 26<sup>th</sup>, 29<sup>th</sup>.

February 2<sup>nd</sup>, 5<sup>th</sup>, and 9<sup>th</sup>.

**It is so announced.**

***Any Other Business***

None heard.

***Adjourn***

Adjourn at 12:01 ET.

**5. Gratuitous Squirrel Reference**

The squirrel has gone missing. If the squirrel had a UWB enabled device, then perhaps the squirrel would be found.