**IEEE P802.15.16t**

**Wireless Personal Area Networks**

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| Project | **IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)** | |
| Title | **TG16t Jan 14 Task Group Minutes** | |
| Date Submitted | [January 14, 2020] | |
| Source | [Kathy Nelson] [Ondas Netoworks] [Sunnyvale, CA] | Voice: 612 865-3485 Fax: [ ] E-mail: [kathy.nelson@ondas.com] |
| Re: |  | |
| Abstract | [IEEE 802.15 TG16t Interim January 2020 Task Group Minutes.] | |
| Purpose | [Report progress to WG.] | |
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IEEE 802.15.16t January 2020 Task Group Minutes

TUESDAY AM 1 AT 8:00 AM

Meeting started at 8:01AM on January 14, 2020.

Meeting was chaired by Tim Godfrey (EPRI).

Meeting presentation was shared by Tim Godfrey, Document 15-20-0006-04-016t.

As this is a new task group, introductions were made.

iMAT procedures for signing into IEEE 802 attendance for working groups and accessing documents through Linespeed were reviewed.

Patent and Copyright Policies were read and conveyed.

The duty to inform the IEEE was reviewed. Anyone that has any IP needs to file a LOA. Bob said the TG is operating under old rules currently. Need to refile LOAs. Don’t have to do LOA immediately. Can submit LOA up until Sponsorship Ballot. There was a call for LOAs and none were provided.

The agenda was approved with unanimous consent.

Tim Godfrey reviewed a tutorial for 802.

Everyone should subscribe to the 802.15 and 802.16t reflector email list at a minimum.

Bob Heile (Decawave) said the 802.15.16t amendment will need to submitted in “Frame”. It could be started in Word, but will ultimately need to be in Frame. It was highly recommended that it be started in Frame for ease.

Voting member requirements and the PAR development process were reviewed.

Tim Godfrey reviewed IEEE 802.16 history.

The PAR for 802.16t includes the ability to develop a new PHY due to the very narrow channels that are planned. Will need to streamline the MAC to support the PHY.

Tim Godfrey reviewed the Task Group Process.

There was discussion on leadership roles for 802.15.16t TG.

Chair – Tim Godfrey, EPRI (Daoud Serang moved and was approved by unanimous consent)

Vice chair –

Secretary –

Technical Editor –

There was discussion on meeting quorum requirements. There are no quorum requirements for meetings announced greater than 30 days. There is a quorum (greater than 45%) requirement for meetings announced less than 30 days out. Normal plenary and interim meetings are announced greater than 30 days out so this is typically not an issue.

No option for teleconference participation for interim and plenary meetings. Teleconferences can be held in between, but no motions can occur during the teleconference (they can occur, but decisions have to be affirmed at the next face to face meeting)

Must have a minimum of 7 days advanced notice for teleconference. It’s a good practice to decide at the closing working group meeting if there will be teleconference meeting held in between meetings.

The meeting was adjourned by at 10:00 a.m.

TUESDAY PM 1 AT 1:30 PM

The meeting was called to order at 1:30 p.m.

The group agreed upon the following process for IEEE 802.16t:

* Develop System Requirements Document (SRD)
* Develop System Design Document (SDD)
* Outline Draft
* Draft Standard

There was discussion about removing TDD from the scope of the PAR to allow FDD operation. This decision will be revisited at the Plenary meeting in March 2020.

There was discussion on Timeline Milestones (Presentation slide #39)

* TG Start - January 2020
* SRD Approval – July 2020 (Technical editor needed by this time)
* SDD Approval – January 2021
* Informal TG review of draft – May 2021
* Working Group Letter Ballot – July 2021
* Working Group Recirculation Letter Ballot – November 2021
* SA Ballot – March 2022
* Forward to RevCom - October 2022 (From PAR)

A draft for a call for contribution was created and will be sent out following NesCom’s approval of the PAR. Documents need to be uploaded prior to the presentation. Documents need to be in the 802.15 template which is a different template than 802.16.

SRD and SDD documents will be maintained and developed on mentor and can be linked to. These are public documents and can be sent to outside user groups for review. Anyone can also upload a document for review as well. Many users can’t be here but would like to provide input. Most impact will be before the SRD is approved.

Documents should be uploaded to IEEE Mentor. <https://mentor.ieee.org/802.15> to the TG16t task group.

Meeting was adjourned at 3:22 p.m.

WEDNESDAY Session AM 1 started at 8:32 a.m.

Menashe Shahar went through a “Band Terminology” presentation. See document IEEE 802.15-20-0041-00-016t. There was some discussion about channel sizes. Menashe will submit a revision to the presentation for clarification.

Klaus Bender of UTC will submit a document on channel sizes, bands, uses and restrictions as defined by the FCC prior to the next meeting.

There was discussion about the need for making a distinction between regulatory environment and the operating environment for terminology.

The meeting was adjourned at 9:59 a.m.

THURSDAY Session AM 2 started at 10:33 a.m.

There was discussion on other names for Private Land Mobile Radio can be used in ITU. The ITU uses “Professional Land Mobile Radio”. “Public Land Mobile Radio” may also be used in some places.

Tim Godfrey went through a tutorial on how to subscribe to Reflector Email list.

The group reviewed and d:

* 802.15-20-0050r0 (edits were made during the discussion and a new revision was uploaded 802.15-20-0050r1)
  + Need to define use cases
  + Discussion about listen before transmit
  + Discussion about non mission critical applications for Specialized Mobile Radio (SMR) users and the need to capture their requirements through EWA.

Meeting adjourned at 12:13 p.m.

THURSDAY Session PM started at 1:32 p.m.

802.15-20-0055r1 – Presentation by Frederick Smith (Chevron) Frequency Band Layout.

Captures the diversity of the bands not in depth and needs to be completed. How the channels are set up and different separations.

450 band has been well characterized. FCC does not recognize 12.5KHz anymore. 150 to 174 MHz no standard. 800 MHz there are two segments, standardized.

There are other frequencies on 900 MHz. Another band that should be considered by the group is the 960 MHz band and 1.4 GHz but only point to point and not point to multipoint. FCC rules written in a flexible way. Don’t have to pay for the spectrum, must request FCC, Total size 5 MHz half duplex.

Rick Smith, Klaus, Bob will work on the document and submit a new one for consideration.

802.15-20-0059-00-016t – Presentation by Michael Gagne (AURA Network Systems) AURA Networks Use Case for 450 MHz.

13 channel blocks with guard band, allowed to combine all channels into a band. Spectrum utilization allows for spectrum to be used as a block.

Every site is individual licensed. Spectrum with minimum power requirement.

Needs another channel for access. Narrowband 900MHz not specific for aviation and for alternative use ground base.

Wishlist – Requirement and use of the channels.

802.15-20-0060-02-016t – Reviewed documents uploaded by Zach Smith - BNSF Railway - AAR 160 MHz Channel Plan.

It is unclear the color code. Frequency separation is 7.5 kHz.

It may add another complexity to the group.

Smaller granularity 6.25 kHz 12.5 kHz may be desirable.

802.15-20-0006-03-016t – Revisited the call for contributions. Kathy Nelson to provide document. Added more details to the document.

Roger Marks does not recommend to distribute the Call for Contributions unless it is listed as “draft” until PAR is approved on January 22 by vote on NESCOM.

Roger suggested to add more details about what is being done on the Call for Contributions to call more attention. Tim has modified the content.

Alessandra motion to authorize the Chair to make modifications to the presentation content if necessary. Guy second. Motion passed without objection.

Tim to create an 802.16t web page.

Roger will send a message to 802.16 reflector when call for contributions has gone out.

Teleconference tentative for Thursday January 30 8am PST for 1 hour.

To be announced on the 16t reflector with dial-in details.

Future meetings the 802.16t meets on Tuesday-Thursday during the meeting sessions.

The meeting was adjourned at 3:15 p.m.