IEEE P802.11  
Wireless LANs

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| Wireless Next Generation (WNG) Standing Committee Meeting Minutes for May-2021 Electronical Meeting | | | | |
| Date: 05-10-2020 | | | | |
| Author(s): | | | | |
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Abstract

Meeting Minutes for the WNG SC meeting held electronically, on May 10th, 2021.

**WNG Session: May 10th, 2021, 11:15am to 1:15pm ET**

Chair: Jim Lansford (Qualcomm)

Vice Chair & Secretary: Lei Wang (Futurewei)

**Meeting Agenda:**

The meeting agenda is shown below, and also published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/21/11-21-0632-02-0wng-agenda-for-wng-sc-2021-may.pptx>

* Call Meeting to Order
* Agenda approval
* Attendance reminder
* Documentation reminder
* Announcements
* Approval of Previous meeting minutes
* Minutes from March 2020 WNG Meeting
  + <https://mentor.ieee.org/802.11/dcn/21/11-21-0412-00-0wng-wng-meeting-minutes-2021-march-electronic-meeting.docx>
* Presentations
  + Monday 10 May 2021, 11:15 – 13:15 EDT
* Plans for July 2021
* Adjournment

**Meeting Minutes:**

* Chair called the meeting to order at 11:15am ET on Monday, May 10th, 2021.
* Chair reminded the group to record the attendance of this meeting by using the IEEE Attendance Tool. The link to the attendance tool is also provided in the chat window of the electronical meeting.
* Agenda approval:

<https://mentor.ieee.org/802.11/dcn/21/11-21-0632-02-0wng-agenda-for-wng-sc-2021-may.pptx>

* The agenda was approved by unanimous consent.
* Chair also noted the affiliation FAQ, anti-trust FAQ, ethics code, IEEE 802.11 policies and procedures, and IEEE 802 policies and procedures.
* Chair covered the voting rules for WNG SC, being a standing committee.
* Approval of previous meeting minutes
  + Minutes from 2021-March WNG Meeting

<https://mentor.ieee.org/802.11/dcn/21/11-21-0412-00-0wng-wng-meeting-minutes-2021-march-electronic-meeting.docx>

* + The 2021-March WNG SC meeting minutes was approved by unanimous consent.
* Approximately 168 people attended the WNG Session electronically.
* Presentation #1: Proactive Spectrum Planning – Rich Kennedy (Self)

[https://mentor.ieee.org/802.11/dcn/21/11-21-0665-00-0wng-proactive-spectrum-planning.pptx](https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Fmentor.ieee.org%2F802.11%2Fdcn%2F21%2F11-21-0665-00-0wng-proactive-spectrum-planning.pptx&data=04%7C01%7Clei.wang1%40futurewei.com%7C0031f48997ae4561f40f08d91487754f%7C0fee8ff2a3b240189c753a1d5591fedc%7C1%7C0%7C637563394283515136%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=7UmtnYM5NnVD7jmVtEHzWUArhbpm0u9u2d9VO6zUJGg%3D&reserved=0)

* + Rich presented the contribution.
  + Summary of Discussion
    - Multiple speakers indicated that they would like to support the proposed proactive spectrum planning effort and activity.
    - Some suggestions were provided during the discussion, including:
      * To be prepared, e.g., identify the incumbents, and proactively contact the incumbents.
      * Work with other people with the best interests.
      * Identify people who may stand on the road to slow down the process.
      * Work with people who would like to share the spectrum with other wireless technologies, e.g., 802.15 and other 802 technologies, as well as cellular.
    - Questioned any plan/intention to study any particular zone; and the answer was to study the zones where Wi-Fi has the biggest impact. This helps to drive the other zone.
    - Suggested to bring this to 802.19, Coexistence WG, as this does affect multiple techs in 802 and some of 802 technologies may not have the same visibility/impact as 802.11. The presenter indicated that he plans to present this contribution in this week’s 802.15 meeting; and may also present it in 802.18 and/or 802.19 meeting.
    - Discussed the experienced difficulties when trying to get information from governments when doing spectrum survey, e.g.,
      * For lots of reserved bands / modes, they won’t tell the information.
      * Some bands are setup long time ago, but not used at all. But they made the information confidential, not to disclose.
      * There are some bands where the government use is not made obvious, but where we can expect significant opposition to sharing.
    - Pointed out that lots of details need to work out, based on the lessons learnt during 6GHz allocation effort. The presenter indicated that he probably would do another contribution in 2/4 months, with detailed proposals, e.g., propose to form a task force.
* Presentation #2: “DeepBeam: Deep Waveform Learning for Coordination-Free Beam Management in mmWave Networks” – Francesco Restuccia (Northeastern University)

<https://mentor.ieee.org/802.11/dcn/21/11-21-0776-00-0wng-deepbeam-deep-waveform-learning-for-coordination-free-beam-management-in-mmwave-networks.pdf>

* + Francesco presented the contribution.
  + Summary of Discussion
    - Multiple speakers expressed their thanks to the presenter for bringing in a very interesting presentation.
    - Pointed out that 11ay has lots of improvements in beam tracking, comparing to 11ad.
    - Commented that it could be very difficult to do in real hardware, although it seems easy to do in MATHLAB.
    - Explained that this proposal takes a constant time to measure and only needs to measure once, although it still needs to measure all the antennas. CNN can be implemented in ASIC, actually already in FPGA today.
    - Questioned if the presenter has looked at other bands in addition to mmWave bands, e.g., improve beam tracking / beam steering in 6GHz band; and the presenter responded that they use this deep-learning in many areas. e.g., use this in spectrum sensing, spectrum sharing, etc. He is going to present a contribution about deep sensing in 802.11bf.
    - Explained what it is meant by training on one device and testing on another; and confirmed that the test data set is totally different from the training data set.
    - Discussed what could be the next step for 802.11 to take regarding this contribution; there are some suggestions, e.g., do some further study to answer the following questions:
      * What changes are needed in 802.11 standards to support this proposal?
      * Are you able to do it without any 802.11 standards changes?
      * What changes in 802.11 standards could make it work more effectively, even if you can do it without standards spec changes?
    - Discussed how to involve more academia people into standardization work and how to interact / sync up between industry and academia. Paul Nikolich, the IEEE 802 Executive Committee (802 EC) Chair, expressed his strong support to the effort to attract academia to standards work, converting something from research labs to standards / products / industry.
    - Discussed the sensitivity issue of the data set in deep learning; and the presenter indicated that they work extensively on the sensitivity study. Try to restore the accuracy by different technologies. Try to gain as much data as possible.
* Plans for July 2021:
  + Call for contributions: WNG chair will issue a call for contributions before 802.11 plenary meeting in July 2021.
* Any other business: none
* Adjourned at 12:40pm ET.