IEEE P802.11  
Wireless LANs

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| 802.11 AMP SG Telecon minutes for June 13th 2023 | | | | |
| Date: 2023-6-13 | | | | |
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Abstract

This document includes minutes of AMP TIG Telecon of June 13th 2023.

Version Tracking:

R0: Creating the minutes, June 13th.

# Tuesday 13 June 2023 @ 10:00-12:00 am ET

## Opening (IEEE 802.11-23/ 0930 r1)

* 1. Call to order 10:00 am ET.
  2. Chair instructed members to record attendance in IMAT.
  3. Chair introduced the patent policy and meeting rules (slides 2-8).
  4. No response to the call for patents.
  5. Chair introduced IEEE-SA COPYRIGHT POLICY (slides 9-10)
  6. Chair reviewed other Guidelines, Participation and Guideline for Straw Polls (slides 11-13).
  7. Chair reviewed current TC plan till July Plenary (slides 14).
  8. Hao Wang is taking minutes.
  9. Chair call for approval of the agenda of the AMP session.

## Agenda (IEEE 802.11-23/ 0930 r1)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/23/11-23-0930-01-0amp-amp-sg-tc-agenda-till-jul-2023.pptx. (slide 17)
     + Call meeting to order and remind the group to record attendance on imat.ieee.org
     + IEEE-SA IPR policies and meeting rules
     + Approval of agenda
     + Timeline update
     + Contribution discussion
       - 11-23/0876, X-band Operation, Joerg Robert (TU Ilmenau / Fraunhofer IIS)
       - 11-23/1005, Discussion on Requirements for AMP Use Cases, Yinan Qi (OPPO)
       - 11-23/1006, ieee-802-11-amp-sg-proposed-par, Bo Sun (Sanechips)
     + Any other business?
     + Adjourn
  2. No objection, Agenda approved.

## Contribution discussion

* 1. Presentation of IEEE 802.11-23/0876, X-band Operation, Joerg Robert (TU Ilmenau / Fraunhofer IIS):

Q(uestion): Regarding slide 14, different operation band for downlink and uplink could make it difficult for the calibration.

A: Calibration may work in a different way, for example, the frequency estimation could generate 1MHz signal then drives the PLL, and it will be used for downlink decoder. The PLL will consume more power, so capacitor may be required assuming the uplink duration is short.

Q: On sub-1Ghz band, there could be multiple data channels available. The DL signal may be sent on any of these data channels. In this case, how the fraction PLL work?

A: Yes, we thought about the issue too. The downlink may sent the information beforehand and let the receiver know the current data channel.

Comment: 2.4Ghz may not be an appropriate band for the energizer because the TX power is limited according to regulation.

Q: Question on slide 11, 5dBm power efficiency margin seems too tight for implementation, it’s unlikely to provide enough power for 1ms frame duration.

A: Yes, the margin is determined by the RX sensitivity. If the sensitivity could be lower than -80dBm then it will allow higher margin.

Q: On slide 5, the location of energizer is also a factor. If it is far away from the receiver, it will be also difficult decode the signal.

A: The reference paper provides some implementation thought. It shows that backscatter can work on the broadcast signal as well and distance seems not a big issue.

Q: On slide 9, how uplink can provide higher data rate? And If DSSS is used for UL, it will require higher bandwidth and higher power consumption.

A: The UL can do max power transmission in a shorter time window, so higher data rate is achievable.

Comment: Please note that spread communication can provide better frequency diversity. The narrow band transmission may face fading and difficult channel environments.

* 1. Presentation of IEEE 802.11-23/1005, Discussion on Requirements for AMP Use Cases, Yinan Qi (OPPO):

Q(uestion): Where are the requirements coming from?

A(nswer): Referring to some research study, some comes from 3GPP documents.

Comment: The achievable peak data rate depends on power consumption. It would be better to use ‘required peak data rate’ instead.

Q: The density value for UC 4 and 8 seems too low.

A: We would refine the numbers but also need to consider realistic scenarios.

Comment: Suggest to consider higher parameters and performance compared to legacy RFID.

Comment: For the DC use case, the density number seems too low considering the number of sensors deployed.

Comment: Suggest to further polish the number for the requirements.

* 1. Quick review on IEEE 802. 11-23/1006, ieee-802-11-amp-sg-proposed-par, Bo Sun (Sanechips)

Chair provides a quick overview on the initial PAR draft. No discussion at the conference call due the time limit.

Chair suggests the group to review the PAR draft and provide comments for the next call.

## Closing

* 1. Chair adjourned the teleconference at 12:00am ET.