IEEE P802.11
Wireless LANs

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| IEEE 802.11 TGbp Ambient Power CommunicationTeleconference Minutes August and September 2025 |
| Date: 2025-07-08 |
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Abstract

This document contains the IEEE 802.11 TGbp minutes for the teleconferences in August and September 2025.

Rev 0: Minutes for the IEEE 802.11 TGbp teleconference on 2025-08-19 added.

TG Chair: Bo Sun (Sanechips)

TG Vice Chairs: Steve Shellhammer (Qualcomm)

 Rakesh Taori (Infineon)

TG Secretary: Sebastian Max (Ericsson)

TG Technical Editor: Yinan Qi (OPPO)

Abbrevations:

Q Question

A Answer

C Comment

SP Straw Poll

# Tuesday, August 19 2025, 10:00am - 12:00am (EDT)

## Opening

The TG Chair, Bo Son (Sanechips), presents the TG bp meeting agenda slides (IEEE 802.11-25/1429r1).

* Chair calls the meeting to order at 10:00 EDT.
* Chair instructs members to record attendance in IMAT.
* Chair reviews the meeting rules and patent policy (slides 2-6).
* No response to the call for patents.
* Chair reviews IEEE-SA COPYRIGHT POLICY (slides 7-8)
* Chair reviews other Guidelines, Participation, Suggested Best Practices (slides 9-10).
* Chair reviews the principles for the PDT development to generate 11bp D0.1 (slide 11)
* Chair reviews the current TGbp session submission list (slide 12-14), and the teleconference plan (slide 15).

## Agenda

Chair presents the agenda of the session, slide 17.

* + Call meeting to order and remind the group to record attendance on imat.ieee.org
	+ IEEE-SA IPR policies and meeting rules
	+ Approve meeting agenda
	+ Review updated SFD (11-24/1613r12), Spec skeleton (11-25/0614r6), PDT volunteers (11-25/0613r8)
	+ Presentation and discussion (Tech contributions, PDTs)
		- 11-25/1333r0, PDT PHY UL Modulation And Coding, Alice Chen (Qualcomm)
		- 11-25/1308, Discussion on OFDM Sample-level Modulation for Uplink Backscatter AMP STAs, Yuxiao Hou (TP-LINK)
		- 11-25/1263, Remaining Issues on WPT Protocols, Yinan Qi (OPPO)
		- ~~11-25/1243, Follow-up on AMP Operation Status Reporting, Ian Bajaj (Huawei)~~
		- 11-25/1424, A WPT device option, Amichai Sanderovich (Wiliot) [10 mins]
		- 11-25/1344r2 PDT Components of architecture
	+ Any other business?
	+ Recess

Chair calls for approval of the agenda of the TGbp session.

No objection, agenda approved.

## Review of the updated SFD (11-24/1613r12), Spec skeleton (11-25/0614r6), PDT volunteers (11-25/0613r8)

Yinan Qi (OPPO) presents document IEEE 802.11-24/1613r12, the current SFD, which includes updates according to the motion passed during the July meeting. He goes through the changes with respect to r10, the version of the document before the July meeting.

He continues with the presentation of the documents IEEE 802.11-25/0614r6 and IEEE 802.11-25/0613r8.

No questions or comments.

## Technical Contributions and PDTs

### Presentation of IEEE 802.11-25/1333r0, PDT PHY UL Modulation And Coding, Alice Chen (Qualcomm)

No questions or comments. The presenter asks for questions and comments to be send to the TGbp eMail reflector.

The chair proposes not to strawpoll the PDT during the next week, as there is only one week for the attendees to submit. However, if there is no request to defer, then a SP on this PDT may be run during the next telco.

### Presentation of IEEE 802.11-25/1308, Discussion on OFDM Sample-level Modulation for Uplink Backscatter AMP STAs, Yuxiao Hou (TP-LINK)

The author is not present in the call to present.

### Presentation of IEEE 802.11-25/1263, Remaining Issues on WPT Protocols, Yinan Qi (OPPO)

Q: Slide 10. Initialization requires non-AP STA to report before being energized. But it has no power yet. How can this work?

A: WPT needs to be there first. The figure is not complete.

Q: Are devices expected to transmit and receive during WPT? In the slide it's not done during tx and rx. This requires synchronization of the WPT and the AP. This cannot work with LBT.

A: LBT is there to avoid interference with other devices. It's always non-overlaping with Tx/Rx.

Q: But if the energizer does LBT, the AP cannot know when it transmits.

A: We can have reporting to solve this. With LBT, there can be unexpected issues.

Q: Slide 12. This is not standard-related, but an implementation issue.

A: The AP needs to know which energizer to activate, and the link to the AMP STA. How this is aquired needs to be specified.

Q: Slide 10. How is the reporting done?

A: This figure does not show the reporting, it is about the WPT part.

Q: But to report these parameters the AMP STA needs to win the medium. Does the AMP STA content for the medium?

A: No, this is also triggered by the AP.

Q: There is a gap on 2.4GHz while the WPT is done in Sub-1GHz. So the medium can be captured by a neighboring STA.

A: Yes, this can happen.

Q: Slide 4. How does the AP make use of these parameters?

A: E.g., power source type. If the AP knows it is not RF energy harvesting, the AP does not need to activate energizers. If it is solar, it has implications on the behavior of the STA, it can only collect during daytime. This knowledge allows the AP to optimize the communication.

Q: Slide 7. Request is optional. Active tags shall not transmit autonomously. So, the request should be mandatory?

A: Autonomous reporting still needs to be solicited by the AP. So it's not autonomous.

Q: Slide 4. Many options on how to do the reporting. Cannot really imagine how to do this in a frame format, with the different energy sources. Maybe provide more details on how to do the reporting.

A: Agree.

C: Slide 5. Report may also be piggy-backed with the data, which would be kind of autonomous reporting.

### Presentation of IEEE 802.11-25/1424, A WPT device option, Amichai Sanderovich (Wiliot)

Q: If the red channels are used for WPT, can they still be used for data communication?

A: Yes, they can still be used.

Q: Center frequencies are not aligned with 11bh. They do not have the 11bh preamble?

A: It's an option, this presentation does not go into these details. They might be aligned.

Q: In some areas frequency hopping is required. So WPT cannot dwell on one channel for a long time.

A: Need to think about this.

C: Channel dwell time for China is 2s. That should be enough for WPT.

C: For EU this might be stricter.

### Presentation of IEEE 802.11-25/1344r2 PDT Components of architecture

Q: Non-AP AMP STA is not defined yet, right? Do we need to define it?

A: We define three types of non-AP AMP STA. Not sure how to define it based on the current motions.

Q: Second sentence sounds like normative language, does not belong here?

A: Yes, might be moved later.

C: Is it sufficient just to say "UHR"? Probably not.

Q: Non-AP AMP STA, why does it need to be "active transmission"?

A: To differentiate to a backscatter transmission.

C: Currently all 802.11 architectures provide access to the distribution system. If this is not the case, we need to define it.

A: Yes, context/implication of "may not" is not clear currently.

Agenda is ammended by the presentation of IEEE. 802.11-25/0776r2.

### Presentation of IEEE 802.11-25/0776r2 AMP frames - follow up, Alfred Asterjadhi, Qualcomm

Q: Slide 3. FCS contains CRC or MIC. What is the purpose of the MIC?

A: If security is enabled, instead of the CRC a "Message Integrity Check" is transmitted, verifying the actual transmitter of the PDU.

Q: Do you assume immediate ACK?

A: This is inherited from 11ba, where the WUR is not turned on if the MIC does not verify. Here, the validity might be checked before sending the ACK, this needs to be discussed.

C: It might be a problem to require immediate ACK when sending the MIC.

Q: FCS length, 16b. UL and DL should be the same.

A: CRC design should be simple. We would like to re-use 11ba sizes.

Q: 12b for the ID might be too small, expected number of devices is like RFID, so 16b might be more appropriate.

A: Larger IDs might be supported. Also have the option to embed the BSS ID.

## Adjourn

The chair announces the session adjourned at 12:00 EDT.

Next telephone conference will be on August 26th.

## Attendance