IEEE P802.11
Wireless LANs

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| IEEE 802.11 TGbp Ambient Power CommunicationTeleconference Minutes August - September |
| Date: 2024-10-05 |
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Abstract

This document contains the IEEE 802.11 TGbp minutes for the teleconferences in October and November 2024.

Rev 0: Minutes for the IEEE 802.11 TGbp teleconference on 2024-10-05 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, November 05 2024, 09:00am - 11:00am (EDT)

## Opening

The TG Chair, Bo Son (Sanechips), presents the TG bp meeting agenda slides (IEEE 802.11-24/1672r1).

* Chair calls the meeting to order at 09:00 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 current TGbp session submission list (slide 11-12), and the meeting agenda for the telephone conference (slide 15).

## Agenda

Chair presents the agenda of the session: https://mentor.ieee.org/802.11/dcn/24/11-24-1672r1 (slide 15).

* + 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
	+ Report of updated FRD and SFD
	+ Contribution discussion
		- 11-24/1560, Follow up on capability report and ID allocation for AMP STA, Zhanjing Bao (TCL)
		- 11-24/1584, Ascon: the lightweight cryptography as a better cipher than AES for 802.11bp, Hui Luo (Infineon)
	+ Any other business?
	+ Recess

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

No discussion, no objection, agenda approved.

## Report of updated FRD and SFD

Bin Qian (Huawei) presents the current updated FRD (IEEE 802.11-24/1307r2), that now includes the motions passed during the IEEE 802.11 September meeting. No discussion.

Yinan Qi (OPPO) presents the current updated SFD (IEEE 802.11-24/1613r2), that now includes the motions passed durig the IEEE 802.11 September meeting plus some additional comments from the TG members. No discussion.

It is planned to run a motion confirming the updated FRD and SFD at the beginning of the next meeting.

## Contributions

### Presentation of IEEE 802.11-24/1560, Follow up on capability report and ID allocation for AMP STA, Zhanjing Bao (TCL)

Q: Slide 8, 2nd point. There should be a timeout related to this, right?

A: Yes, a random-access procedure also needs a timeout, and a retry.

Q: Slide 6. How are collisions resolved? How do AMP STAs know to transmit or not to transmit? There is no clock, or wait for slots.

A: It's open to discussion. Here, response frames are sent during different slots. The figure is simplified. Multiple other contributions talk about details, here it's not in the focus.

Q: Slide 12, SP1. How does reporting the "existence" work?

A: For HT STA for example the capability reporting is done during the association. Here, the capability reporting is used to identify the AMP STA. If the AMP STA fails to send a response it can try next time.

Q: What is a "reader"?

A: "Reader", or AMP AP, is a tentative name. Currently there's no clear definition.

Q: Then what is the difference between a reader and an AMP AP?

A: It's dependent on the use case. In 802.11 it should be called AMP STA.

Q: Is the association required?

A: I'm not assuming there always should be an association. The capability report may bring different benefits, depending on the type of device.

Q: How can the AP get the capabilities without knowing the capabilities? It's a contradiction. It's not like an association, which is initiated by the device.

A: AMP STA could simply send a reply to declare its existence.

### Presentation of IEEE 802.11-24/1584, Ascon: the lightweight cryptography as a better cipher than AES for 802.11bp, Hui Luo (Infineon)

Q: The difference in the diagram is in the box doing the encryption?

A: Yes. The interfaces are compatible.

Q: AES needs the packet number in the frame, and a lot of state in the memory of both devices, so also ASCON needs it. This is a lot of overhead. AMP STAs may not keep the state for a longer duration.

A: Looks like there are several types of AMP devices, with different power. For low capability devices refer to older presentations.

Q: What are the use cases where security is needed in AMP?

Q: Is this about active transmit devices, or also about backscatter devices?

A: Short range backscatter probably does not need security. For long range, 10m to 20m, similar to typical range of Wi-Fi, we need security, no matter what device type is used.

C: Slide 10 (SPs). Still open if all device types need security, and also which device types need what kind of security. Refer to earlier presentation for less complex security modes. This presentation is if something similar to AES is needed, just with less power / area.

## Adjourn

The chair announces the session adjourned at 10:30 EDT.

Next hybrid (face to face & online) session will be the IEEE 802 wireless interim meeting starting from November 11th.

## List of Attendees

TGbp 11/05/2024 Taori, Rakesh Infineon Technologies

TGbp 11/05/2024 Amtmann, Franz NXP

TGbp 11/05/2024 Bao, Zhanjing TCL

TGbp 11/05/2024 Bower, Patricia HaiLa Technologies, Inc

TGbp 11/05/2024 Campiglio, Ugo Cisco Systems, Inc

TGbp 11/05/2024 Choi, JinHo SAMSUNG ELECTRONICS

TGbp 11/05/2024 Costa, D.Nelson HaiLa Technologies

TGbp 11/05/2024 Ha, Taeyoung Samsung Electronics Co., Ltd.

TGbp 11/05/2024 Kezys, Vytas HaiLa Technologies

TGbp 11/05/2024 Max, Sebastian Ericsson

TGbp 11/05/2024 Qi, Yinan Guangdong OPPO Mobile Telecommunications Corp

TGbp 11/05/2024 Sun, Bo Sanechips Technology Co., Ltd.

TGbp 11/05/2024 Shellhammer, Stephen Qualcomm Incorporated

TGbp 11/05/2024 Trainin, Solomon Wiliot