IEEE P802.11
Wireless LANs

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| IEEE 802.11 TGbqTeleconference Minutes August/September 2025 |
| Date: 2025-09-04 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Jonghoe Koo | Samsung Electronics |  |  | jh89.koo@samsung.com |

Abstract

This document contains the IEEE 802.11 TGbq minutes for the teleconferences on August/September, 2025.

Revision history:

R0: initial version with the draft minutes for teleconference on 19 August 2025

R1 added the minutes for teleconference on 2 September 2025.

Abbreviations:

Q Question

A Answer

C Comment

# Tuesday, August 19 2025, 10:00am - 11:30am (EDT)

TGbq Chair: Edward Au (Huawei)

TGbq Vice-Chair: Rui Cao (NXP)

TGbq Vice-Chair: Abhishek Patil (Qualcomm)

TGbq Vice-Chair: Sang Kim (LG Electronics)

TGbq Secretary: Jonghoe Koo (Samsung Electronics)

TGbq Editor: Cheng Chen (Intel)

**Opening formalities**

1. The IEEE 802.11 TGbq meeting was called to order at 10:00am EDT by the Chair.
2. Chair introduced the TGbq leadership members.
3. Chair reminded the meeting registration.
4. Chair presented the TGbq meeting agenda [IEEE 802.11-25/1407r3](https://mentor.ieee.org/802.11/dcn/25/11-25-1407-03-00bq-august-september-2025-teleconference-agenda.xlsx).
5. Chair reviewed the meeting agenda and the agenda was approved by unanimous consent.

**[Administrative items]**

1. Chair presented TGbq supplementary materials [IEEE 802.11-25/0191r0](https://mentor.ieee.org/802.11/dcn/25/11-25-0191-00-00bq-tgbq-supplementary-materials-for-meetings.pptx).
2. Chair reviewed IEEE 802 required notices (emphasizing to ensure to announce name and affiliation at the first time to speak, anti-trust compliance, IEEE 802 WG rules and policies, etc.), IEEE SA meeting guidelines, IEEE Codes of Ethics and Conduct, IEEE individual process, and IEEE-SA standards activities with the fair and equitable consideration.
3. Chair reminded all to record their attendance in IMAT and other meeting reminders.

**Contributions**

**Presentation of** [**IEEE 11-25/1343r0**](https://mentor.ieee.org/802.11/dcn/25/11-25-1343-00-00bq-phase-rotation-for-immw-ppdu.pptx)**, Phase Rotation for IMMW PPDU (Mrugen Deshmukh, Ofinno)**

1. Mrugen presented the contribution [IEEE 11-25/1343r0](https://mentor.ieee.org/802.11/dcn/25/11-25-1343-00-00bq-phase-rotation-for-immw-ppdu.pptx).
2. Q: For sub-7 GHz, phase rotation is based on an 80 MHz sub-band. However, for IMMW transmission, if designing phase rotation coefficients based on 1.28 GHz (comprising 8 sub-bands, each 160 MHz wide) is considered, it is better to check if the PAPR of the legacy preamble constitutes a performance bottleneck. In addition, it is also better to check whether increasing the the complexity of the phase rotation coefficient for 16 sub-bands, which differs from the sub-7GHz’s condition based on 80MHz sub-band, is justified.
3. A: Thanks for the comment.
4. Q: You only mentioned the phase rotation for the wide band. How about 320 MHz and 640 MHz?
5. A: For 320 MHz and 640 MHz bandwidth, what we have for sub-7 GHz is already optimized so that we do not need to modify that.
6. Q: Why is a known phase relationship across different channels is needed for the LTF? If such a know phase relationship is not required, it could be left to implementation. The choice of sequence may focus to minimize the PAPR, and there is no need to restrict it to QPSK.
7. A: Among these sequences, if there is an additional criterion beyond minimizing the PAPR, one of them may be chosen over the others.
8. Q: My question was: why does the specification need to specify the phase relationship between the LTFs transmitted on different channels?
9. A: In this case, for wideband IMMW PPDUs, I considered that we have a single wideband channel, so we duplicate only the legacy fields, not the other fields. Essentially, it’s treated as a single channel bandwidth because we duplicate certain fields and apply phase rotation to minimize the PAPR.
10. The Chair asked Mrugen if he would like to run the SP in slide 16, and Mrugent expressed his intention to do so. The Chair initiated the discussion on the SP.
11. Q: Given the strong assumption that the base channel is 160 MHz and the intention to expand it up to 1.28 GHz as you presented, we need further discussion on numerology or a basic PPDU format before preceeding with the discussion on this SP. I kindly request to defer the SP.
12. A: I can defer it. My intention is to gather feedback from others.
13. Q: The phase rotation sequence doesn not need to be known at the receiver for detection. It’s left to implementation. Further discussion is required.
14. Q: We may need to first run a SP on the Non-HT duplicate preamble structure, and then we can discuss methods for the phase rotation. For cases where the PAPR of the data portion is higher than that of the preamble portion, there is no need to optimize the preamble portion.

**Closing formalities**

1. Chair noted that there is no agenda for August 26 teleconference call, and two presentations are scheduled on September 2 teleconference call with no straw poll planned.

**Adjourn**

1. The chair announced that the call was adjourned at 10:33am EDT.

**List of Attendees**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Name | Affiliation |
| TGbq | 08/19/2025 | Zuo, Xin | Xiaomi Communications Co., Ltd. |
| TGbq | 08/19/2025 | Byeon, Seongho | SAMSUNG ELECTRONICS |
| TGbq | 08/19/2025 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbq | 08/19/2025 | Carty, Clark | Juniper Networks, Inc. |
| TGbq | 08/19/2025 | Chen, Cheng | Intel Corporation |
| TGbq | 08/19/2025 | Cao, Bo | ZTE Corporation |
| TGbq | 08/19/2025 | Chen, Xu | Xiaomi Communications Co., Ltd. |
| TGbq | 08/19/2025 | Chen, Wei-Han | MediaTek Inc. |
| TGbq | 08/19/2025 | Patil, Abhishek | Qualcomm Incorporated |
| TGbq | 08/19/2025 | Qi, Yue | SAMSUNG ELECTRONICS |
| TGbq | 08/19/2025 | Rai, Kapil | Qualcomm Incorporated; Qualcomm Technologies, Inc |
| TGbq | 08/19/2025 | Sadiq, Bilal | Samsung Electronics Co., Ltd. |
| TGbq | 08/19/2025 | Silverman, Matt | Cisco Systems, Inc. |
| TGbq | 08/19/2025 | Singh, Aditi | Charter Communications |
| TGbq | 08/19/2025 | Wang, Zisheng | ZTE Corporation |
| TGbq | 08/19/2025 | Ward, Lisa | Rohde & Schwarz |
| TGbq | 08/19/2025 | Wee, Gaius | Panasonic Holdings Corporation |
| TGbq | 08/19/2025 | Wei, Dong | Futurewei Technologies |
| TGbq | 08/19/2025 | Xiao, Tong | Xiaomi Communications Co., Ltd. |
| TGbq | 08/19/2025 | Xin, Yan | Huawei Technologies Canada; Huawei Technologie… |
| TGbq | 08/19/2025 | Yano, Kazuto | Advanced Telecommunications Research Institute... |
| TGbq | 08/19/2025 | Zhong, Ke | Ruijie Networks Co.,Ltd. |
| TGbq | 08/19/2025 | Liu, Jianhan | MediaTek Inc. |
| TGbq | 08/19/2025 | Li, Weiyi | Spreadtrum Communication USA, Inc |
| TGbq | 08/19/2025 | Luo, Sixian | SHARP CORPORATION |
| TGbq | 08/19/2025 | Koo, Jonghoe | SAMSUNG ELECTRONICS |
| TGbq | 08/19/2025 | CHENG, yajun | Xiaomi Communications Co., Ltd. |
| TGbq | 08/19/2025 | Chisci, Giovanni | CSR Technologies Inc.; Qualcomm Technologies, Inc |
| TGbq | 08/19/2025 | Choi, JinHo | SAMSUNG ELECTRONICS |
| TGbq | 08/19/2025 | Choi, Jinsoo | LG ELECTRONICS |
| TGbq | 08/19/2025 | Lee, Hong Won | LG ELECTRONICS |
| TGbq | 08/19/2025 | Dong, Xiandong | Xiaomi Communications Co., Ltd. |
| TGbq | 08/19/2025 | Doostnejad, Roya | ofinno |
| TGbq | 08/19/2025 | da Silva, Claudio | MediaTek Inc. |
| TGbq | 08/19/2025 | Fan, Shuang | Sanechips Technology Co., Ltd. |
| TGbq | 08/19/2025 | Fang, Juan | Intel; Intel Corporation |
| TGbq | 08/19/2025 | feng, Shuling | Mediatek Inc |
| TGbq | 08/19/2025 | HUANG, CHIHAN | MediaTek Inc. |
| TGbq | 08/19/2025 | Jang, Insun | LG ELECTRONICS |
| TGbq | 08/19/2025 | Kim, Sang Gook | LG ELECTRONICS |
| TGbq | 08/19/2025 | Erkucuk, Serhat | Ofinno |
| TGbq | 08/19/2025 | Zhou, Lei | New H3C Technologies Co., Limited |

# Tuesday, August 26 2025, 10:00am - 11:30am (EDT)

The teleconference call on 26 August was canceled due to the lack of the agenda.

# Tuesday, September 2 2025, 10:00am - 11:30am (EDT)

TGbq Chair: Edward Au (Huawei)

TGbq Vice-Chair: Rui Cao (NXP)

TGbq Vice-Chair: Abhishek Patil (Qualcomm): the temporary chair for the September 2 teleconference call

TGbq Vice-Chair: Sang Kim (LG Electronics)

TGbq Secretary: Jonghoe Koo (Samsung Electronics)

TGbq Editor: Cheng Chen (Intel)

**Opening formalities**

1. TGbq Chair Edward Au arranged for vice-chair Abhishek Patil to lead for the September 2 teleconference call. Abhishek Patil conducted the temporary chair for the September 2 teleconfernce call on behalf of TGbq Chair Edward Au. (In the following minutes of this teleconference call, the term "Chair" refers to the temporary, Abhishek Patil).
2. The IEEE 802.11 TGbq meeting was called to order at 10:00 EDT by the Chair.
3. Chair introduced the TGbq leadership members.
4. Chair reminded the meeting registration.
5. Chair presented the TGbq meeting agenda [IEEE 802.11-25/1407r5](https://mentor.ieee.org/802.11/dcn/25/11-25-1407-05-00bq-august-september-2025-teleconference-agenda.xlsx).
6. Chair reviewed the meeting agenda and the agenda was unanimously approved.

**[Administrative items]**

1. Chair presented TGbq supplementary materials [IEEE 802.11-25/0191r1](https://mentor.ieee.org/802.11/dcn/25/11-25-0191-01-00bq-tgbq-supplementary-materials-for-meetings.pptx).
2. Chair reviewed IEEE 802 required notices (emphasizing to ensure to announce name and affiliation at the first time to speak, anti-trust compliance, IEEE 802 WG rules and policies, etc.), IEEE SA meeting guidelines, IEEE Codes of Ethics and Conduct, IEEE individual process, and IEEE-SA standards activities with the fair and equitable consideration.
3. Chair reminded all to record their attendance in IMAT and other meeting reminders.

**Contributions**

**Presentation of** [**IEEE 11-25/1443r1**](https://mentor.ieee.org/802.11/dcn/25/11-25-1443-01-00bq-on-demand-mmwave-link-activation-follow-up.pptx)**, On-demand mmWave link activation – follow up (Jonghoe Koo, Samsung Electronics)**

1. Chair noted that TGbq vice-chair Sang Kim would take the minutes on behalf of TGbq secretary Jonghoe Koo during this presentation and Q&A discussion.
2. Jonghoe presented the contribution [IEEE 11-25/1443r1](https://mentor.ieee.org/802.11/dcn/25/11-25-1443-01-00bq-on-demand-mmwave-link-activation-follow-up.pptx).
3. Q: In slide 5, shouldn’t terms such as IMMW AP STA and IMMW Non-AP STA be defined before defining the terminologies for MLD? For example, since the STA operating in a sub-7 GHz and the STA operating in the mmWave band have different behaviours, it would be possible to define terms like “mmWave AP MLD affiliated with one mmWave AP STA” after defining the mmWave AP/Non-AP STA terminology.
4. A: I agree with this suggestion. Let’s continue discussing to define the appropriate terminologies step by step.
5. Q: In slide 7, I’m not opposed to including the minimum information in the mmWave beacon as described in SP3, but I suggest not using the term “beacon”. It is questionable whether using mmWave beacon for discovery and probing in the mmWave band is the reasonable approach. Instead, the mmWave Beacon (or a very light new frame) should ideally contain only essential information such as BSS color, partial TSF, and sector identifier. In SP2, I suggest specifying that beacons shall not be transmitted, and in SP3, let’s propose a very light new frame with minimal content. As aresult, I suggest to develop TGbq designs that perfoms all discovery, probing, association, ML setup, and authentication in the sub-7 GHz band, and to focus on data transmission in the mmWave band.
6. A:I agree. The statement in SP2 that mmWave beacons will not include sub-7 GHz link-related information in the basic multi-link element is too vague and could also be interpreted as defining mmWavee beacon anyway. Therefore, I will combine SP2 and SP3 and continue the discussion later. Additionally, I expect other members to submit pros and cons regarding the mmWave beacon design, as well as related contribution on this topic, and we can revisit this after discussing those submissions in the September F2F meeting.
7. Q: In slide 5, what is the reason for limiting the number of mmWave links to one? Shouldn’t it be considered that AP MLD can still support more than one mmWave links? Considering the future extensibility, wouldn’t it be beneficial for AP MLD to support more than one mmWave links from a load balancing perspective?
8. A: Although SP1 is described to have only one mmWave link, this was my previous thought, and my perspective has since changed. I now question whether there should be a limt on the number of mmWave links in the specification, so I brought this up as open discussion point. I now think that there should be no limit on the number of links in the specification, and the appropriate number can be determined based on needs during commercialization. If no one in the group feels the need to impose a limit, this discussion can be simply be withdrawn.
9. Q: When defining terms like ‘IMMW AP MLD’ in SP1, shouldn’t they be defined based on capability rather than operating aspects? Is it appropriate to refer to it as IMMW AP MLD when the IMMW AP is disabled or in Power Save Mode (e.g., during low traffic requirements at night)?
10. A: According to my intention, IMMW AP MLD is a name to a physical device, capable of supporting links operating in the mmWave band as defined in TGbq. Therefore, even if it is disabled at a specific time, it can still be called IMMW AP MLD. As you pointed out, using the term ‘operating’ as described in SP1 could lead to incorrect interpretations. Thus I agree with your point and I will reconsider the precise terminology.

**Closing formalities**

1. Chair reminded all to record their attendance in IMAT.

**Adjourn**

1. The chair announced that the call was adjourned at 11:00am EDT.

**List of Attendees**