IEEE P802.11  
Wireless LANs

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| Minutes 802.11bn PHY ad hoc – Jan to March conference calls | | | | |
| Date: 2024-01-29 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Tianyu Wu | Apple |  |  | tianyu@apple.com |

Abstract

This document contains the PHY ad hoc meeting minutes for TGbn teleconferences held between January and March 2024:

* January 29, 2024

**Monday January 29th, 2024 19:00 – 21:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, MaxLinear) calls the meeting to order at 19:00 ET.
2. The Chair follows the agenda in 11-24/201r4.
3. The Chair goes through the IPR policy and asks if anyone is aware of any potentially essential patents. **Nobody speaks up.**
4. The Chair goes through the Copyright policy.
5. The Chair reminds everyone to report their attendance by using IMAT system and by sending an e-mail to the Co-chair, Tianyu Wu (Apple), Dongguk Lim (LGE) or the Chair himself if unable to record attendance via IMAT system.
6. Agenda

* + [24/0041](https://mentor.ieee.org/802.11/dcn/24/11-24-0041-09-00bn-dpwifi-matlab-validation.pptx) DPWiFi MATLAB Validation Carlos Rios
  + [24/0078](https://mentor.ieee.org/802.11/dcn/24/11-24-0078-00-00bn-a-dru-design-approach-for-20-mhz.pptx) A dRU Design Approach for 20 MHz Thomas Handte
  + [24/0107](https://mentor.ieee.org/802.11/dcn/24/11-24-0107-00-00bn-phy-layer-interference-mitigation-for-improved-reliability.pptx) PHY Layer Interference Mitigation for Improved Reliability Shimi Shilo
  + [24/0176](https://mentor.ieee.org/802.11/dcn/24/11-24-0176-01-00bn-unequal-modulation-over-spatial-streams.pptx) Unequal Modulation over Spatial Streams Hao Song

**Attendance**

The following people registered their attendance through IMAT:

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbn (PHY) | 1/29 | Aio, Kosuke | Sony Corporation |
| TGbn (PHY) | 1/29 | Anwyl, Gary | MediaTek Inc. |
| TGbn (PHY) | 1/29 | Batra, Anuj | Apple, Inc. |
| TGbn (PHY) | 1/29 | Chen, You-Wei | MediaTek Inc. |
| TGbn (PHY) | 1/29 | Cho, Hangyu | LG ELECTRONICS |
| TGbn (PHY) | 1/29 | Choi, Jinsoo | LG ELECTRONICS |
| TGbn (PHY) | 1/29 | feng, Shuling | Mediatek Inc |
| TGbn (PHY) | 1/29 | Gao, Ning | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbn (PHY) | 1/29 | Handte, Thomas | Sony Corporation |
| TGbn (PHY) | 1/29 | Hart, Brian | Cisco Systems, Inc. |
| TGbn (PHY) | 1/29 | Hu, Shengquan | Mediatek Inc |
| TGbn (PHY) | 1/29 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbn (PHY) | 1/29 | Kim, Youhan | Qualcomm Technologies, Inc. |
| TGbn (PHY) | 1/29 | Li, Jialing | Qualcomm Technologies, Inc |
| TGbn (PHY) | 1/29 | Li, Yapu | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbn (PHY) | 1/29 | Lim, Yeon Geun | Newracom Inc. |
| TGbn (PHY) | 1/29 | Minotani, Jun | Panasonic Corporation |
| TGbn (PHY) | 1/29 | Namboodiri, Vamadevan | SAMSUNG ELECTRONICS |
| TGbn (PHY) | 1/29 | Norouzi, Sara | Huawei Technologies Canada; Huawei Technologies Co., Ltd |
| TGbn (PHY) | 1/29 | Park, Eunsung | LG ELECTRONICS |
| TGbn (PHY) | 1/29 | Ratnam, Vishnu | Samsung Research America |
| TGbn (PHY) | 1/29 | Rezk, Meriam | Qualcomm Technologies, Inc |
| TGbn (PHY) | 1/29 | Rios, Carlos | Terabit Wireless Internet LLC |
| TGbn (PHY) | 1/29 | Schelstraete, Sigurd | MaxLinear |
| TGbn (PHY) | 1/29 | Song, Hao | Intel Cor |
| TGbn (PHY) | 1/29 | Tian, Bin | Qualcomm Incorporated |
| TGbn (PHY) | 1/29 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbn (PHY) | 1/29 | Wang, Ying | InterDigital, Inc. |
| TGbn (PHY) | 1/29 | Wei, Dong | NXP Semiconductors |
| TGbn (PHY) | 1/29 | Wu, Chao-Yi | SAMSUNG ELECTRONICS |
| TGbn (PHY) | 1/29 | Wu, Kanke | Apple Inc |
| TGbn (PHY) | 1/29 | Wu, Tianyu | Apple, Inc. |
| TGbn (PHY) | 1/29 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbn (PHY) | 1/29 | Yi, Yongjiang | Spreadtrum Communication USA, Inc |
| TGbn (PHY) | 1/29 | Zhang, Jiayi | Ofinno |
| TGbn (PHY) | 1/29 | Zhang, Yan | Apple Inc |
| TGbn (PHY) | 1/29 | Zhou, Lei | H3C Technologies Co., Limited |

**Submissions**

1. **24/0041r11 DPWiFi MATLAB Validation – Carlos Rios (Terabit Wireless Internet)**

Discussions:

C: Some clarification discussions.

No SP.

1. **24/0078r1 A dRU Design Approach for 20 MHz – Thomas Handte (Sony)**

Discussions:

C: Slide 10: How can we use 2x LTF for DRU?

A: Explained the tones for LTF. Need more offline discussion.

C: It’s hard to interpolation the channel estimation. I think 4xLTF should be used for DRU. Do you prefer to design new pilot tones or reuse existing pilot tones?

A: Likely need to define new pilot tones.

C: Slide 7: When define 52-tone dRU from original 106 tone DRU, there should be two remaining tones, only see one in this slide. Need to clarify.

No SP.

1. **24/0107r0 PHY Layer Interference Mitigation for Improved Reliability – Shimi Shilo (Huawei)**

Discussions:

C: Did you simulation the impact of impairments which lead to channel change?

A: We didn’t include impairments in the simulation but it’s our next step. I don’t think the impairments will change the conclusion.

C: Can the algorithm handle the case with new interference coming in the middle?

A: Rx should be able to handle the strong interference signals.

C: Can you provide some more details on IM pilots such as whether you are using same DTM.

A: We use existing DTM.

C: Can you give some complexity analysis.

A: Should not have significant complexity.

No SP.

1. **24/0176r1 Unequal Modulation over Spatial Streams – Hao Song (Intel)**

Discussions:

C: Slide 7: On simulation setup, what is the criteria you choose the best MCS combination?

A: Exhaustive search MCS combinations with highest throughput.

C: Have you verified other cases such as 2x2? Will unequal MCS gives gain?

A: We did run some simulation, but we need double check to confirm. There will be gain as long as the singular values has large enough difference.

C: What about UEQM with existing MCSs vs UEQM with optimal MCS?

A: Didn’t investigate that for 2x2 case.

**Adjourn**

The meeting is adjourned at 21:00 ET.