IEEE P802.11  
Wireless LANs

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| UHR SG November December 2022 teleconference minutes | | | | |
| Date: 2022-12-05 | | | | |
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|  |  |  |  |  |

Abstract

This document contains the minutes for UHR SG November December 2022 teleconference.

Revision history:

* Rev0: add the minutes for teleconference call on Dec. 5th.

Abbreviations:

* A: Answer
* C: Comment

# 1st Conf. Call: Sep 26 Monday (10:00–12:00 ET)

* The Chair, Laurent Cariou (Intel), calls the meeting to order.
* IEEE 802 and 802.11 IPR policy and procedure
  + Patent Policy: Ways to inform IEEE:
    - Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
    - Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
    - Speak up now and respond to this Call for Potentially Essential Patents

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair. **Nobody speaks/writes up**.

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    - IEEE SA’s copyright policy is described in [Clause 7](https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7) of the IEEE SA Standards Board Bylaws and [Clause 6.1](https://standards.ieee.org/about/policies/opman/sect6.html) of the IEEE SA Standards Board Operations Manual;
    - Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy

**Copyright Policy was presented.**

* + **Patent, Participation, Copyright and policy related subclause:** Please refer to Patent And Procedures
* Attendance reminder.
  + Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
  + Please record your attendance during the conference call by using the IMAT system:
    - 1) login to [imat](https://imat.ieee.org/attendance), 2) select “802.11 Telecons (<Month>)” entry, 3) select “C/LM/WG802.11 Attendance” entry, 4) click “<UHR SG > conference call that you are attending.
  + If you are unable to record your attendance contact Laurent Cariou ([laurent.cariou@intel.com](mailto:laurent.cariou@intel.com)) and Ross Jian Yu ([ross.yujian@huawei.com](mailto:ross.yujian@huawei.com)) for assistance
  + Please ensure that the following information is listed correctly when joining the call:
    - "[voter status] First Name Last Name (Affiliation)"
* Agenda
  + Chair reviews proposed agenda found in [11-22-2089r](https://mentor.ieee.org/802.11/dcn/22/11-22-2089-00-0uhr-uhr-sg-november-december-2022-teleconference-agendas.docx)0
  + Discussion:
    - None
  + Agenda approved with unanimous consent.
* Announcements:
  + None
* Submissions

Technical: M-AP

* + [11-22/1899r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1899-00-0uhr-multi-ap-operation-for-low-latency-traffic-delivery-follow-up.pptx) Multi-AP Operation for Low Latency Traffic Delivery - Follow up Liuming Lu (OPPO)
    - C: A general question, you mention some of the signaling may be over the backhaul. Are we going to define something in the .11 spec?
    - A: I think maybe some interface needs to be defined for the backhaul.
  + [11-22/1895r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1895-00-0uhr-thoughts-on-m-ap-coordination-principles.pptx) Thoughts on M-AP Coordination Principles Arik Klein (Huawei)
    - C: slide 6, the definition of the sharing AP is the AP who gains the TXOP. I am curious who the decision maker is for the long term?
    - A: We didn’t tell it here. We will show it in the future. There is long term info needs to be decided. We need different discussion. Once it is done, before the each of the coordinated transmission starts, those parameters of short term may be changed.
    - C: If you have backhaul, the coordination can happen in a quite large space.
    - A: There is still discussion on backhaul. We focus on the part related with WLAN. We want to avoid the relay.
    - C: We understand AP can talk to each other. I see a lot of opportunities there. We could see wireless, hybrid wireless, and pure wire.
    - C: We only mention multi-AP coordination. We don’t mention the trigger requirement to do that. The non-AP STA may oberserve info that the AP may not observe, may need to collect some info.
    - A: There can be. We want to mention here is there are people talking there is coordination within TXOP, the long term coordination mode. We don’t give any further details.
* 11-22/1821r0 and 11-22/1822r0 are deferred upon request.

General views and band support

* + [11-22/1924r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1924-00-0uhr-thoughts-on-uhr-features.pptx) Thoughts on UHR Features Xiaofei Wang (InterDigital)
    - C: slide 6, what do you mean by coordinated multi-link and coordinated handover?
    - A: It depends on how the coordination is setup. For example, multiple MLDs, negotiate on some specific link. For coordinated handover, a STA or an MLD, try to handover, could be ML transfer. Make connection before break scenario.
    - A: the coordination on ML is still not clear to me. We could discuss offline.
    - C: For multi-AP coordination when multiple APs are from the same adiministrive or not, we may need different solutions.
    - A: We should also consider to have some coorperation between different vendors. For mmwave, the question is here we need to analyze the pros and cons.
    - C: the reliability you mention is very high. To get the number of 9s, you need a very high level coordination.
    - A: that is the good point.
    - C: slide 10, what do you mean by multi-amendment aggregation?
    - A: Integration of multiple amendements, for example sensing, here is power saving for another aspect. If we design A-PPDU, we could levearage 11ba design.
    - C: The 8 9s, why it has to be 8 9s?
    - A: This is more detailed discussed in WNG contribution. Can share it to you.
* The chair reviewed the agenda, propose to continue with 11-1820r1 and 11-22/1841r0. The agenda is approved with no objections.
  + [11-22/1820r1](https://mentor.ieee.org/802.11/dcn/22/11-22-1820-01-0uhr-bf-feedback-with-the-optimal-svd.pptx) BF Feedback with the Optimal SVD Aiguo Yan (Zeku)
    - C: For TxBF, it is implemantion specific. The smaller Ng, in order to choose D?
    - A: We want to have the reconstruct SNR as big as possible.
    - C: do you propose smaller Ng?
    - A: The D is only needed to calculate SNR optimistically. BFer does not need to know this D.

* + [11-22/1841r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1841-00-0uhr-follow-up-on-the-low-power-listening.pptx) Follow up on the low power listening Xiaogang Chen (ZEKU)
    - C: Slide 4, is that true the time spends on different colors are different? Or the same?
    - A: 24 hours on the smart phone. The time on sleep is 6%. The listening is 35%. I am curious on the power consumption. How efficient the power has been used.
* Adjourned at 11:57 ET

# Appendix

* + Attendee List for 1st Conf. Call: Dec. 5th Monday (10:00–12:00 ET)

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| UHR | 12/5 | Aboulmagd, Osama | Huawei Technologies Co., Ltd |
| UHR | 12/5 | Ajami, Abdel Karim | Qualcomm Technologies, Inc |
| UHR | 12/5 | Amalladinne, Vamsi | Qualcomm Incorporated |
| UHR | 12/5 | Ansley, Carol | Cox Communications Inc. |
| UHR | 12/5 | Asai, Yusuke | NTT |
| UHR | 12/5 | B, Hari Ram | NXP Semiconductors |
| UHR | 12/5 | baron, stephane | Canon Research Centre France |
| UHR | 12/5 | Baykas, Tuncer | Ofinno |
| UHR | 12/5 | Bluschke, Andreas | Representing myself |
| UHR | 12/5 | Bredewoud, Albert | Broadcom Corporation |
| UHR | 12/5 | Cao, Rui | NXP Semiconductors |
| UHR | 12/5 | Carney, William | Sony Group Corporation |
| UHR | 12/5 | Chen, You-Wei | MediaTek Inc. |
| UHR | 12/5 | CHENG, yajun | Xiaomi Communications Co., Ltd. |
| UHR | 12/5 | CHERIAN, GEORGE | Qualcomm Incorporated |
| UHR | 12/5 | Chng, Shi Baw | BAWMAN LLC |
| UHR | 12/5 | Cho, Hangyu | LG ELECTRONICS |
| UHR | 12/5 | Choi, Jinsoo | LG ELECTRONICS |
| UHR | 12/5 | Chu, Liwen | NXP Semiconductors |
| UHR | 12/5 | CHUN, JINYOUNG | LG ELECTRONICS |
| UHR | 12/5 | Chung, Chulho | SAMSUNG |
| UHR | 12/5 | Coffey, John | Realtek Semiconductor Corp. |
| UHR | 12/5 | Erkucuk, Serhat | Ofinno |
| UHR | 12/5 | Fan, Shuang | ZTE Corporation |
| UHR | 12/5 | Fang, Yonggang | MediaTek Inc. |
| UHR | 12/5 | Fischer, Matthew | Broadcom Corporation |
| UHR | 12/5 | Fujimori, Yuki | Canon Research Centre France |
| UHR | 12/5 | Gidvani, Ravi | SAMSUNG ELECTRONICS |
| UHR | 12/5 | Gu, Xiangxin | Unisoc |
| UHR | 12/5 | GUIGNARD, Romain | Canon Research Centre France |
| UHR | 12/5 | Gupta, Binita | Meta Platforms, Inc. |
| UHR | 12/5 | Gupta, Raghvendra | Broadcom Corporation |
| UHR | 12/5 | Hedayat, Ahmadreza | Apple Inc. |
| UHR | 12/5 | Hernandez, Marco | National Institute of Information and Communications Technology (NICT) |
| UHR | 12/5 | Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) |
| UHR | 12/5 | Ho, Duncan | Qualcomm Incorporated |
| UHR | 12/5 | Hu, Chunyu | Facebook |
| UHR | 12/5 | Hu, Shengquan | MediaTek Inc. |
| UHR | 12/5 | Huang, Lei | Huawei International Pte Ltd |
| UHR | 12/5 | Huang, Po-Kai | Intel |
| UHR | 12/5 | Huq, Kazi Mohammed Saidul | Ofinno |
| UHR | 12/5 | Ik, Jang | Gachon University |
| UHR | 12/5 | Jang, Insun | LG ELECTRONICS |
| UHR | 12/5 | Kain, Carl | USDOT; Noblis, Inc. |
| UHR | 12/5 | Kakani, Naveen | Qualcomm Incorporated |
| UHR | 12/5 | kamath, Manoj | Broadcom Corporation |
| UHR | 12/5 | Kandala, Srinivas | SAMSUNG |
| UHR | 12/5 | Kasher, Assaf | Qualcomm Incorporated |
| UHR | 12/5 | Kim, Jeongki | Ofinno |
| UHR | 12/5 | Kim, Myeong-Jin | SAMSUNG |
| UHR | 12/5 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| UHR | 12/5 | Klein, Arik | Huawei Technologies Co., Ltd |
| UHR | 12/5 | Lalam, Massinissa | SAGEMCOM SAS |
| UHR | 12/5 | Lanante, Leonardo | Ofinno |
| UHR | 12/5 | Li, Yunbo | Huawei Technologies Co., Ltd |
| UHR | 12/5 | Lin, Zinan | InterDigital, Inc. |
| UHR | 12/5 | Liu, Jianhan | MediaTek Inc. |
| UHR | 12/5 | Lorgeoux, Mikael | Canon Research Centre France |
| UHR | 12/5 | Lou, Hanqing | InterDigital, Inc. |
| UHR | 12/5 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| UHR | 12/5 | Ma, Yunsi | HiSilicon (Shanghai) Technologies Co., LTD. |
| UHR | 12/5 | MAO, ZHI | Huawei Technologies Co., Ltd |
| UHR | 12/5 | Martinez Vazquez, Marcos | MaxLinear Corp |
| UHR | 12/5 | Max, Sebastian | Ericsson AB |
| UHR | 12/5 | Montreuil, Leo | Broadcom Corporation |
| UHR | 12/5 | Nezou, Patrice | Canon Research Centre France |
| UHR | 12/5 | Pandey, Sheetal | ZAF Energy |
| UHR | 12/5 | Park, Minyoung | Intel |
| UHR | 12/5 | Patil, Abhishek | Qualcomm Incorporated |
| UHR | 12/5 | Petrick, Albert | InterDigital, Inc. |
| UHR | 12/5 | Pettersson, Charlie | Ericsson AB |
| UHR | 12/5 | Qi, Yue | Samsung Research America |
| UHR | 12/5 | Quan, Yingqiao | Unisoc |
| UHR | 12/5 | Ratnam, Vishnu | Samsung Research America |
| UHR | 12/5 | Redlich, Oded | Huawei Technologies Co., Ltd |
| UHR | 12/5 | Ryu, Kiseon | NXP Semiconductors |
| UHR | 12/5 | Schelstraete, Sigurd | MaxLinear |
| UHR | 12/5 | Serizawa, Kazunobu | Advanced Telecommunications Research Institute International (ATR) |
| UHR | 12/5 | Sherlock, Ian | Texas Instruments Inc. |
| UHR | 12/5 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| UHR | 12/5 | Smith, Luther | Cable Television Laboratories Inc. (CableLabs) |
| UHR | 12/5 | Son, Ju-Hyung | WILUS Inc. |
| UHR | 12/5 | Sun, Bo | Sanechips |
| UHR | 12/5 | Tadahal, Shivkumar | Broadcom Corporation |
| UHR | 12/5 | Tanaka, Yusuke | Sony Group Corporation |
| UHR | 12/5 | Taori, Rakesh | Infineon Technologies |
| UHR | 12/5 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| UHR | 12/5 | Tsujimaru, Yuki | Canon Inc. |
| UHR | 12/5 | Val, Inaki | MaxLinear, Inc. |
| UHR | 12/5 | Varshney, Prabodh | Nokia |
| UHR | 12/5 | Verma, Sindhu | Broadcom Corporation |
| UHR | 12/5 | Vermani, Sameer | Qualcomm Incorporated |
| UHR | 12/5 | VIGER, Pascal | Canon Research Centre France |
| UHR | 12/5 | Wang, Qi | Apple, Inc. |
| UHR | 12/5 | Wang, Xiaofei | InterDigital, Inc. |
| UHR | 12/5 | Yamada, Ryota | SHARP CORPORATION |
| UHR | 12/5 | Yan, Aiguo | Zeku |
| UHR | 12/5 | Yang, Jay | Nokia |
| UHR | 12/5 | YANG, RUI | InterDigital, Inc. |
| UHR | 12/5 | Yang, Steve TS | MediaTek Inc. |
| UHR | 12/5 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| UHR | 12/5 | Yee, James | MediaTek Inc. |
| UHR | 12/5 | Yi, Yongjiang | Spreadtrum Communication USA, Inc |
| UHR | 12/5 | Yu, Jian | Huawei Technologies Co., Ltd |
| UHR | 12/5 | Zhang, Jiayi | Ofinno |