IEEE P802.11  
Wireless LANs

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| IEEE 802.11bf – Teleconference Minutes April 2021 | | | | |
| Date: 2021-04-06 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Leif Wilhelmsson | Ericsson AB | Mobilvägen 1, 22632 Lund, Sweden | +46-706-216956 | [leif.r.wilhelmsson@ericsson.com](mailto:leif.r.wilhelmsson@ericsson.com) |

Abstract

This document contains minutes for the TG 802.11bf teleconferences in April 2021.

Rev 0: Minutes for TG 802.11bf teleconference on 6th of April.

Rev 1: Motion 15 corrected.

**Tuesday, April 6, 2021, 10:00-12:00 pm (ET)**

**Meeting Agenda:**

The meeting agenda is shown below, and published in the agenda document: <https://mentor.ieee.org/802.11/dcn/21/11-21-0502-05-00bf-tgbf-meeting-agenda-2021-03-04.pptx>

1. Call the meeting to order
2. Patent policy and logistics
3. TGbf Timeline
4. Call for contribution
5. Teleconference Times
6. Presentation of submissions
7. Any other business?
8. Adjourn
9. The chair, Tony Xiao Han, calls the meeting to order at 10:00am (about 35 persons are on the call after a few minutes of the meeting).
10. The chair goes through “Meeting Protocol, Attendance, Voting & Documentation Status” (slide 4), “Participants have a duty to inform the IEEE” (slide 6), and “Ways to inform IEEE” (slide 7).

The chair makes a Call for Potentially Essential Patents. No potentially essential patents reported, and no questions asked.

The chair goes through “Other Guideline for IEEE WG meeting” (slide 8), “Patent-related information” (slide 9), “ IEEE SA Copyright Policy” (slides 10 and 11), “Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct” (slide 12), “Participants in the IEEE-SA “individual process” shall act independently of others, including employers”(slide 12), and “IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints” (slide 14), and “Required notices” (slide 15).

The chair goes through the agenda (slide 21) and asks if there are and questions or comments on the agenda. Solomon Trainin explains that his contribution is related to Motion 16 and askes to run Motion 16 after his presentation. Chair askes the mover for Motion 16 if this is OK. The mover agrees to this.

The chair asks if there is any objection to approve the agenda. No objection from the group so the agenda is approved.

1. The Chair presents the TGf timeline (slide 22).
2. The Chair presents slide 23, Call for contributions.
3. The Chair presents the teleconference times (slide 24).
4. Presentations:

**Technical motion (Motion 15)**

**Motion:** Move to add the following to 11bf SFD:

A sensing session is composed of one or more of the following phases: setup phase, measurement phase, reporting phase, and termination phase.

* In the setup phase, a sensing session is established, and operational parameters associated with the sensing session are determined and may be exchanged between STAs.
* In the measurement phase, sensing measurements are performed.
* In the reporting phase, sensing measurement results are reported.
* In the termination phase, STAs stop performing measurements and terminate the sensing session.

**Move:** Cheng Chen

**Second:** Rajat Pushkarna

**Result**: Y/N/A: 24/1/5, motion passes

Note: The related document is 20/1851r4.

**11-21/0407r3, “Multi-Band WiFi Fusion for WLAN Sensing”, Pu (Perry) Wang (MERL):**

This contribution was presented in the last teleconference, but was not fully discussed.

**Straw Poll 1:**

* Do you agree that the mid-grained beam measurements (e.g., beam SNRs) at 60 GHz as one type of sensing measurements for WLAN Sensing?

**Y/N/A: 18/4/16**

Q: Is this the same as beam SNR as already available in 11ad?

A: Yes, the purpose is to reuse but for sensing applications.

Q: Just a comment. The text is fine for a SP, but if you plan to motion this, things must be well defined. Right now there is some ambiguity I believe.

**Straw Poll 2:**

* Do you agree that the fused WiFi measurements across multiple operating frequency bands as a valid type of sensing measurements or sensing results?

**The SP is deferred.**

Q: Do you believe that the standard should specify the algorithms for the fusion?

A: The idea is to modify PHY and MAC as little as possible and just standardize what really is needed. Basically, we believe we need to standardize the different steps that are needed, but not the algorithms themselves.

Q: Currently it is not clear to me what you mean by fusion. Is it just to combine measurements in more than one band?

A: I agree, maybe we need to define it a bit better.

**11-21/0391r0 “Minizing Impact as a Design Goal”, Chris Beg (Cognitive Systems):**

The presentation is about enabling full use of the flexibility in 802.11 MAC/PHY to minimize system impact. Features introduced by 11bf should minimize network impact.

Q: Do you think this should be part of 11bf or described/standardized somewhere else where higher layers are discussed?

A: 11bf should allow for the flexibility such that suitable decisions can be made at the application layer.

**Straw Poll 1:**

* Do you agree that the TGbf functional requirements document should include “minimizing the impact of sensing functionality on the 802.11 data network performance” as a design goal?

**Y/N/A: 16/18/12**

Q: I believe this is very interesting, but I also believe we need to be more specific with what is meant by minimizing the impact, etc.

**Motion 16:**

Move to add the following to 11bf SFD:

More than one sensing responder may participate in the measurement phase and reporting phase.

Move: Sang Km

Second: Rajat Pushkarna

Result: Y/N/A: 35/0/5, motion passes

Note: Related document 21/0145r5

**Motion 17:**

Move to add the following to 11bf SFD:

11bf shall define an optional negotiation process in the sensing setup phase for a sensing initiator and sensing responder(s) to exchange and agree on operational parameters associated with a sensing session.

Move: Cheng Chen

Second: Jinsoo Choi

Result: Motion passes by unanimous consent

Note: Related document 21/0370r1

**11-21/0419r0, “Sensing Measurement sequence of 11bf”, Dongguk Lim (LGE):**

The contribution is concerned with the protocol for supporting sensing by multiple STAs.

Before the discussion of the contribution is finalized, the Chair announces that we are out of time. We will contine the discussion in the next conference call.

1. The Chair asks if there is any other business. No response from the group.
2. The meeting is adjourned without objection at 12:01 pm (ET).

**List of Attendees:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbf | 4/6 | Aboulmagd, Osama | Huawei Technologies Co., Ltd |
| TGbf | 4/6 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbf | 4/6 | Aygul, Mehmet | VESTEL; IMU |
| TGbf | 4/6 | Bahn, Christy | IEEE STAFF |
| TGbf | 4/6 | Beg, Chris | Cognitive Systems Corp. |
| TGbf | 4/6 | Bredewoud, Albert | Broadcom Corporation |
| TGbf | 4/6 | Chayat, Naftali | Vayyar Imaging |
| TGbf | 4/6 | Chen, Cheng | Intel Corporation |
| TGbf | 4/6 | Choi, Jinsoo | LG ELECTRONICS |
| TGbf | 4/6 | da Silva, Claudio | Intel Corporation |
| TGbf | 4/6 | Dong, Xiandong | Xiaomi Inc. |
| TGbf | 4/6 | Du, Rui | Huawei Technologies Co., Ltd |
| TGbf | 4/6 | feng, Shuling | MediaTek Inc. |
| TGbf | 4/6 | HAN, Xiao | Huawei Technologies Co., Ltd |
| TGbf | 4/6 | Haskou, Abdullah | InterDigital, Inc. |
| TGbf | 4/6 | Jang, Insun | LG ELECTRONICS |
| TGbf | 4/6 | Kadampot, Ishaque Ashar | Qualcomm Incorporated |
| TGbf | 4/6 | Kain, Carl | USDOT; Noblis |
| TGbf | 4/6 | katla, satyanarayana | InterDigital, Inc. |
| TGbf | 4/6 | Kessler, Thomas | Deutsche Telekom AG |
| TGbf | 4/6 | Kim, Sang Gook | LG ELECTRONICS |
| TGbf | 4/6 | Kwon, Young Hoon | NXP Semiconductors |
| TGbf | 4/6 | Lim, Dong Guk | LG ELECTRONICS |
| TGbf | 4/6 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbf | 4/6 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbf | 4/6 | Mirfakhraei, Khashayar | IEEE member / Self Employed |
| TGbf | 4/6 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbf | 4/6 | Ozbakis, Basak | Vestel Electronics Corp. |
| TGbf | 4/6 | PESIN, ANTHONY | InterDigital, Inc. |
| TGbf | 4/6 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbf | 4/6 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbf | 4/6 | Restuccia, Francesco | Northeastern University |
| TGbf | 4/6 | Sahin, Onur | InterDigital, Inc. |
| TGbf | 4/6 | Sosack, Robert | Molex Incorporated |
| TGbf | 4/6 | Stanley, Dorothy | Hewlett Packard Enterprise |
| TGbf | 4/6 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbf | 4/6 | Sun, Bo | ZTE Corporation |
| TGbf | 4/6 | Sun, Yingxiang | Huawei Technologies Co., Ltd |
| TGbf | 4/6 | Teran, Jesus Gutierrez | IHP GmbH |
| TGbf | 4/6 | Trainin, Solomon | Qualcomm Incorporated |
| TGbf | 4/6 | Tsai, Tsung-Han | MediaTek Inc. |
| TGbf | 4/6 | Wang, Chao Chun | MediaTek Inc. |
| TGbf | 4/6 | Wilhelmsson, Leif | Ericsson AB |
| TGbf | 4/6 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbf | 4/6 | Yee, James | MediaTek Inc. |
| TGbf | 4/6 | Zeng, Ruochen | NXP Semiconductors |
| TGbf | 4/6 | Zhang, Meihong | Huawei Technologies Co., Ltd |