IEEE P802.11  
Wireless LANs

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| IEEE 802.11bf – Teleconference Minutes July-September 2022 | | | | |
| Date: 2022-07-25 | | | | |
| Author(s): | | | | |
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| Sang Kim | LGE |  |  |  |

Abstract

This document contains minutes for the TG 802.11bf teleconferences in July-September 2022.

Rev 0: Minutes for TG 802.11bf teleconferences on the19th and 21st of July 2022.

Rev 1: Minutes for TG 802.11bf teleconferences on the 26th and 28th of July 2022 added.

**Tuesday, July 19, 2022, 10:00 am-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/22/11-22-1154-00-00bf-tgbf-meeting-agenda-2022-07-teleconference-part-2.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 Han, calls the meeting to order at 10:00 am ET (about 35 persons are on the call after 10 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 meetings” (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 13), 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 16) and asks if there are any questions or comments on the agenda.

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

1. The Chair presents the TGbf timeline (slide 17) and introduces a straw poll on time line (slide 18). He opens the floor for question and comment on timeline. The following questions and comments are noted:

C: After 2 months of comment resolution, around 10% of technical comments are resolved. It is unrealistic to assume that we resolve all technical comments by September. Even D2.0 or D0.2 by November may be hard to achieve. We may need more time until January. 11be also started comment resolution and that will impact our progress when it comes to comment resolution. Please provide more inputs.

C: It is reasonable to delay at least one month. We received around 1000 comments, many of them are technical. Some folks are busy due to vacation, 11be comment resolution, etc. It is better to delay.

C: Delay to November seems good, but January is not since January is 6 months’ away from now.

Q: Is there absolute time to change the timeline?

A: Timeline can be changed quickly. One day notice is enough.

C (Chair): No need to hurry. We will see the progress through August and decide.

C: Delay is needed. 2 months’ delay seems reasonable. Editor mentioned D0.x version for another round of comment resolution, but it seems not beneficial.

Q: How many comments are relatively easy and hard?

A: It is not easy to answer because they are mixed.

C: Timeline is less important and more important is when we get done.

Q: We should focus on resolving comments, especially TBD comments. Does the Editor have a plan to generate tables that show who needs to resolve which comments?

A: We already have a document in the server. Since we resolved around 10% of comments, it is better to specify TTT, not person assigned.

C (Chair): Will work with Editor to provide guidance or action. Will contact PoC to check what types of CIDs are easy or controversial and check if help is needed.

C: Relaxing a deadline will incur opposite effect. Assignees may feel they have more time to resolve. PoC needs to contact TTT members to ask when CIDs assigned can be resolved. Based on this information, we can estimate the required time and then change the timeline.

Chair stated that it is not the right time to decide and we will see the progress through August. The editor will prepare 1 or 2 slides to speed up. Offline discussion will follow.

1. The Chair presents slide 19, Call for contributions.
2. The Chair presents the teleconference times (slides 20 and 21). For September meeting, we are still waiting for confirmation on Tuesday PM2 slot. Monday PM1 is requested in case we have not 4 time slots. If Tuesday PM2 is confirmed, then we will have 5 sessions in September meeting.
3. Presentations:

**11-22/1158r1, “Sensing Measurement Report Type for sub-7 GHz WLAN sensing”, Junghoon Suh (Huawei):** This contribution proposes to have the CSI proposed be the only Sensing Measurement Report Type for sub-7GHz in TGbf. Introduction of another report type will require another round of long discussion.

Q: If only one type of report is considered, then we don’t need to signal.

A: Signaling needs further discussion.

C: A few bits are required for future extension.

A: We can consider during the discussion for actual frame format.

C: Currently mandatory format is supported. It is noted that there are a few limitations. For example, the compression for Ng = 8 in 160 MHz is not great. Other format is suitable for other application.

A: We did a lot of discussion on feedback types. This is the best we can now. Other issues can be raised during PDT writing. The presenter does not object to place a more subfield for future extension.

C: Temporary agreement on harmonized feedback type. For SP1, do you want to limit our future addition? What do you have in your mind, 1, 2, or 3?

A: We can discuss further in the next round of TGbf.

C: WLAN sensing has been around a decade in R&D. CSI can be utilized in a wide range of applications. If we limit the report type to CSI only, we enable to support a wide range of applications. Agree that we can always make optimization, but it will take a longer time.

C: If we support only CSI report, then we need to think whether a threshold-based reporting should be in the draft.

A: The threshold-based reporting is based on the CSI feedback. Contents of threshold-based feedback is still CSI.

C: It is better to run SP2 first.

A: SP#1 can be skipped and let’s directly go to SP#2.

Straw Poll 2: Do you agree that the measurement report type in the PDT Formatting of CSI 22/1020 is the only one defined for the sub-7 GHz WLAN sensing, TGbf ?

- Signaling of CSI Feedback type is for further discussion

Result: Y/N/A: 23/3/8

11-22/0980r0, “CC40 CR for CIDs 52, 365 and 449”, Rui Du (Huawei): This submission contains the proposed comment resolutions for the CIDs 52, 365, 449.

CID 365: No discussion.

CID 449 and 52:

C: When several responders transmit at the same time, they will interfere with each other. Thus, a false detection and miss direction estimation will incur. It may not work in many cases.

A: It is assumed that directional antennas with very narrow beams. It should work. Transmission could also be sequential. Further offline discussion will follow.

C: Sensing PPDU and monostatic PPDU are not defined. “The sensing responders will go through the Num TX Beams Per Intance beams to transmit and receive the sensing PPDUs” needs to be changed to normative text.

C: Some minor editorial comments are provided.

The presenter will go through all suggestion, modify the contribution, and then bring back the updated contribution.

1. Chair noted that no more contribution in the queue. If at least 2 requests for presentation are not received by Wednesday, then the call on Thursday will be cancelled.
2. Chair asks if there is AoB.
3. The meeting is adjourned without objection at 11:38 am ET.

**List of Attendees:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbf | 7/19 | Aboulmagd, Osama | Huawei Technologies Co., Ltd |
| TGbf | 7/19 | Aygul, Mehmet | VESTEL; IMU |
| TGbf | 7/19 | Beg, Chris | Cognitive Systems Corp. |
| TGbf | 7/19 | Chng, Shi Baw | BAWMAN LLC |
| TGbf | 7/19 | Du, Rui | Huawei Technologies Co., Ltd |
| TGbf | 7/19 | feng, Shuling | MediaTek Inc. |
| TGbf | 7/19 | Kim, Sang Gook | LG ELECTRONICS |
| TGbf | 7/19 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbf | 7/19 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbf | 7/19 | narengerile, narengerile | Huawei Technologies Co., Ltd |
| TGbf | 7/19 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbf | 7/19 | Sosack, Robert | Molex Incorporated |
| TGbf | 7/19 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbf | 7/19 | Tsai, Tsung-Han | MediaTek Inc. |
| TGbf | 7/19 | Wei, Dong | NXP Semiconductors |
| TGbf | 7/19 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbf | 7/19 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

**Thursday, July 21, 2022, 11:00 pm-01:00 am (ET)**

**Meeting Agenda:**

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<https://mentor.ieee.org/802.11/dcn/22/11-22-1154-02-00bf-tgbf-meeting-agenda-2022-07-teleconference-part-2.pptx>

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3. TGbf Timeline
4. Call for contribution
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6. Presentation of submissions
7. Any other business
8. Adjourn
9. The Chair, Tony Han, calls the meeting to order at 11:00 pm ET (about 27 persons are on the call after 10 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 meetings” (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 13), 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 17) and asks if there are any questions or comments on the agenda.

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

1. The Chair presents the TGbf timeline (slides 18). The Chair stated that the SP of timeline will be discussed at the beginning of August. The Editor also stated that for D1.0, we need to address all the comments and TBDs in the draft.
2. The Chair presents slide 20, Call for contributions.
3. The Chair presents the teleconference times (slide 21). The Chair is working with WG vice chair to confirm 5 sessions in September Interim meeting.
4. Presentations:

**11-22/1168r2, “Resolutions for CIDs Related to Measurement Setup ID and Termination: Part 1”, Pei Zhou (OPPO):** This submission proposes resolutions for CIDs 11, 46, 75, 76, 77, 80, 260, 261, 378, 492, 515 and 518. The text used as reference is 802.11bf D0.1.

Q: We need to get rid of TBDs and now is the time. Measurement Setup ID of 8 bits is initially suggested. We can update later if necessary. Please don’t reject CIDs 75, 76, and 77.

C: 8 bits seems reasonable.

C: It appears that it is already 8 bits in DMG. It doesn’t need to be the same, but 8 bits is reasonable. Actual numbers in NDPA and Trigger frames can be negotiated.

C: Rejection is not correct resolution when TBD exists. Not to decide the solution now. Anyway we need solution.

A: It will be updated to a new revision through offline discussion.

CIDs 260, 261, and 378 are the same and will be updated based on the offline discussion.

Q: For CIDs 80 and 492, the same issues are in the number of frames, e.g., SBP Request/Response frames, etc. Agree with the resolution. Please go to find other TBD places and do the same thing.

A: Will go through the text with commenter (Editor).

Q: Measurement Setup ID is not greater than 5 bits. Please do not resolve the comment as “rejected”.

Q: Any suggestion on the number of bits?

A: Just make 5 bits. Let’s do offline work.

Q: Motion 100 is deferred, but it is not clear which contents are already in Motion 100 and which ones are new. In addition, Motion 100 is denoted in the figure. We can still use 1 octet of Measurement Setup ID in other frame(s) and designate the rest of the bits as reserved if 5 bits is needed.

Q: Do we agree 5 bits in other document?

A: 5 bits is temporary and can be changed in the future. We can consider 5 bits as upper bound.

C: Place “upper bound” beside 5 bits.

The Chair stated that another presentation request is needed when the update is available.

**11-22/1170r0, “Resolutions for CIDs Related to Measurement Setup ID and Termination: Part 2”, Pei Zhou (OPPO):** This submission proposes resolutions for CIDs 132, 138, 139, 184, 275 and 634. The text used as reference is 802.11bf D0.1.

No question/comment is noted for CID 184.

For CID 275, the following discussions were noted:

Q: Don’t understand the rejection as a resolution. A sensing responder is unaware that it is involved in SBP procedure, and it can terminate a sensing measurement any time, therefore a sensing responder terminated a MS may trigger SBP procedure termination is possible.

If the sensing responder is the SBP initiator, and it send the sensing setup termination frame with a MSID which is involve in the SBP case, how we handle this situation?

C: In that case, it only terminates its own participation in the SBP procedure. It does not necessarily mean it has to terminate the whole SBP. If it wants to terminate the SBP, it will send an SBP termination rather than a measurement setup termination.

Q: If the number of the sensing responders is not fulfilled the requirement of the SBP request frame, how is the following behavior?

C: Again, let's separate the SBP termination with the sensing measurement setup termination.

Q: The normal TB is involved in the SBP case, how separate?

Q: Why do we have to mix these two together?

C: I don't like to mix the two too, but the reality is the SBP case includes the normal TB.

C: We could reuse the SBP termination text: An SBP procedure may be terminated at any time by either the SBP initiator or the SBP responder by transmittingan SBP Termination frame.

C: Support rejection. It is AP’s decision whether to terminate or not.

C: What the commenter wants is already in the Spec.

The Chair asked continued offline discussion.

For CID 634, “vice versa” will cause a lot of confusion in the future.

For CID 138 and 139,

C: This is overview section and two sentences related to CIDs 138 and 139 do not carry much information. Delete now and bring clarification text through offline discussion.

The Chair asked continued offline discussion.

**11-22/0829r3, “11bf D0.1 CR for CID 1, 589, 647”, Ning Gao (OPPO):** This submission proposes resolutions for the following 3 CIDs for 11bf D0.1 Comment Collection: CIDs - 1, 589, 647.

This contribution was presented two weeks ago and nothing is changed for CID 1 and 647, but modification is done for CID 589.

No question/comment is raised.

**Straw poll was taken to approve the resolutions in 11-22/0829r3.**

**Result:** Approved by unanimous consent. Motion will be requested to the Chair.

1. The chair asks if there is AoB. No response from the group. The Chair will cancel next Monday’s call due to the lack of contribution requests. Monday slot will be used for ad hoc discussion on SBP-related issues.
2. The meeting is adjourned without objection at 12:31am ET.

**List of Attendees:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbf | 7/21 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbf | 7/21 | Chng, Shi Baw | BAWMAN LLC |
| TGbf | 7/21 | Dong, Xiandong | Xiaomi Inc. |
| TGbf | 7/21 | Du, Rui | Huawei Technologies Co., Ltd |
| TGbf | 7/21 | feng, Shuling | MediaTek Inc. |
| TGbf | 7/21 | Gao, Ning | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbf | 7/21 | Kim, Sang Gook | LG ELECTRONICS |
| TGbf | 7/21 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbf | 7/21 | narengerile, narengerile | Huawei Technologies Co., Ltd |
| TGbf | 7/21 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbf | 7/21 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbf | 7/21 | Wei, Dong | NXP Semiconductors |
| TGbf | 7/21 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbf | 7/21 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbf | 7/21 | Zhang, Jiayi | Ofinno |
| TGbf | 7/21 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

**Tuesday, July 26, 2022, 10:00 am-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/22/11-22-1154-04-00bf-tgbf-meeting-agenda-2022-07-teleconference-part-2.pptx>

1. Call the meeting to order
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7. Any other business
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9. The Chair, Tony Han, calls the meeting to order at 10:00 am ET (about 30 persons are on the call after 10 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 meetings” (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 13), 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 18) and asks if there are any questions or comments on the agenda. Contribution number 11-22/0882r0 was requested to be deferred and presented in the next call.

The Chair asks if there is any objection to approve the modified agenda. No objection from the group so the agenda is approved. By now two motion requests were received and the Chair stated that he will wait for more requests. Motions will be processed around two weeks later.

1. The Chair presents the TGbf timeline (slides 19). The Chair stated that the guidance is ready by Editor, we can discuss the timeline again.
2. The Chair presents slide 21, Call for contributions.
3. The Chair presents the teleconference times (slide 22). 5 sessions in September interim meeting are now secured. 4 PM2 sessions from Monday to Thursday and 1 additional session on Monday PM1.
4. Presentations:

**11-22/1175r0, “Comment Resolution for SBP CIDs”, Anirudha Sahoo (NIST):** This document resolves comment with CID 110, 177, 239, 317, 770.

CID 110. No question/comment was noted.

CID 177:

C: Resolution cannot be “rejected”, but should be “revised”.

C: We already have two status codes and ideally it is not good to introduce another one. It is better to use one of those already defined if possible.

CID 239: No question/comment was noted.

CID 317:

C: SBP procedure is one of sensing procedures, thus it seems to be placed under WLAN sensing procedure, not in separate sub-clause.

A: WLAN sensing and SBP sensing procedures are somewhat independent. WLAN sensing procedure can be without SBP procedure. DMG sensing has its own sub-clause.

C: We need to clarify sub-clause 11.21.18 is for sub-7 GHz.

A: Similar comment was submitted and is considered in other comment resolution.

Decision: Keep current structure and editorial discussion will come later.

CID 770: No question/comment was noted.

One or two major changes are needed and the plan is to have offline discussion with TTT members and to come back.

**11-22/1176r1, “Comment Resolution for Termination CIDs”, Anirudha Sahoo (NIST):** This document resolves comment with CID 221, 265, 911.

CID 221:

C: Sensing Termination frame is an Action frame that carries 3 fields and one of them is Dialog Token. Unless changed to management frame, we shouldn’t modify it.

A: Almost half of Action frames carries no Dialog Token.

C: In Public Action frame sub-clause 9.6.7, not all of them has Dialog Token.

C: Enough precedencies without Dialog Token are already there.

C: It is fine without Dialog Token.

CID 265:

C: Resolution should be “rejected.

A: Since Dialog Token is removed, the resolution should be “revised”.

CID 911:

C: This is similar to CID 634 that is assigned to other assignee (Pei Zhou) and probably just assign it to him.

C: We have to remove CID that depends on other document. Please send an e-mail to Pei Zhou for him to take over or copy Pei’s resolution when this document is revised.

C: Editor can simply change the assignee of this CID to Pei Zhou in comment assignment sheet.

C: Pei Zhou stated that this CID is already included in 1130.

Plan is to bring another revision with CID 911 removed. It is stated that CID 911 is just removed from the straw poll text and run the straw poll.

The Chair asked if there was any objection to approve the two CIDs, 221 and 265. No objection was raised. The revised document with two CIDs will be uploaded.

**11-22/1020r2, “PDT Formatting of CSI”, Steve Shellhammer (Qualcomm):** This document provides proposed draft text for IEEE 802.11bf D0.2.

C: Description and use of In,g is confusing. 2 bits of In,g seems good to avoid the confusion.

A: Offline discussion is needed.

C: It is preferred not to specify values Nb=10 and Ng=4.

A: It is fine to delete them.

C: In Eq. D, the order of index should be changed from (r, t, k) to (t, r, k).

A: It is good to catch.

C: In Table B, Reserved field with 0 or 4 bits seems odd. Original wording of “padding” is better to use.

A: No objection to use word “padding”. It is changed to padding.

C: When Bandwidth of 4 bits are defined in Table A, we can use 1 bit of In,g.

C: It doesn’t matter 1 or 2 bit. The text should be written clearly.

C: 2 bits make a decoding easier.

C: Use of “when” and “if” is not still clear.

A: The Editor provided the following:

Here is what we discussed in 22/0931r2:- Use “if” if the condition might occur (is not certain to occur).- Use “when” if the condition is certain to occur.- Almost always (in the 802.11 spec) the condition is not certain to occur and so “if” is appropriate. Certain things in 802.11 are pretty certain to occur (such as regular receipt of a beacon), but most things are not. “When” is currently overused in the .11 spec.

C: Why would you need the description of the smallest/largest size of CSI, and the equation of that?

A: Some people asked the description, but either way is fine.

C: In Eq. A, K should be changed to Nsc and it is defined as the number of sub-carriers.

A: This is correct.

C: Just add one column in the table below motion 97 text in the 1st page.

C: Equation for CSI size is useful, but the text is informative and more than necessary. Place “note” and reallocate the 1st paragraph explaining CSI size.

A: Agreed.

C: In page 6, replace CSI to 0.

C: Do we need Eq. A?

A: We don’t know whether it is needed or not. People’s opinion will be asked by e-mail.

Offline discussion will follow.

The Editor stated that guidance to proceed will be discussed on Thursday call. Use figures available in member’s area to address the comments if they are subject to comment resolution. We have two options from now on: D0.1 and D0.2. D0.2 is easier to work because it contains all the resolved comments. Make sure page numbers and line numbers referred to D0.1 or D0.2.

1. The chair asks if there is AoB. The chair announces that if there are no additional requests for presentations, he intends to cancel the meeting on Thursday. No response from the group.
2. The meeting is adjourned without objection at 11:58am ET.

**List of Attendees:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbf | 7/26 | Aygul, Mehmet | VESTEL; IMU |
| TGbf | 7/26 | CHENG, yajun | Xiaomi Communications Co., Ltd. |
| TGbf | 7/26 | da Silva, Claudio | Meta Platforms, Inc. |
| TGbf | 7/26 | Dong, Xiandong | Xiaomi Inc. |
| TGbf | 7/26 | Du, Rui | Huawei Technologies Co., Ltd |
| TGbf | 7/26 | feng, Shuling | MediaTek Inc. |
| TGbf | 7/26 | HAN, Xiao | Huawei Technologies Co., Ltd |
| TGbf | 7/26 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbf | 7/26 | Huq, Kazi Mohammed Saidul | Ofinno |
| TGbf | 7/26 | Kim, Sang Gook | LG ELECTRONICS |
| TGbf | 7/26 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbf | 7/26 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbf | 7/26 | narengerile, narengerile | Huawei Technologies Co., Ltd |
| TGbf | 7/26 | Ozbakis, Basak | Vestel Electronics Corp. |
| TGbf | 7/26 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbf | 7/26 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbf | 7/26 | Ryu, Kiseon | NXP Semiconductors |
| TGbf | 7/26 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbf | 7/26 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbf | 7/26 | Trainin, Solomon | Qualcomm Incorporated |
| TGbf | 7/26 | Tsai, Tsung-Han | MediaTek Inc. |
| TGbf | 7/26 | Wang, Chao Chun | MediaTek Inc. |
| TGbf | 7/26 | Wang, Hao | Tencent |
| TGbf | 7/26 | Wei, Dong | NXP Semiconductors |
| TGbf | 7/26 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbf | 7/26 | Zhang, Jiayi | Ofinno |
| TGbf | 7/26 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

**Thursday, July 28, 2022, 11:00 pm-01:00 am (ET)**

**Meeting Agenda:**

The meeting agenda is shown below, and published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/22/11-22-1154-05-00bf-tgbf-meeting-agenda-2022-07-teleconference-part-2.pptx>

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The Chair goes through the agenda (slide 19) and asks if there are any questions or comments on the agenda.

The Chair asks if there is any objection to approve the modified agenda. It was stated that the same contribution request is listed twice and the agenda is revised. No objection from the group so the agenda is approved.

1. The Chair presents the TGbf timeline (slides 20). The Chair stated that the SP of timeline will be discussed at the beginning of August.
2. The Chair presents slide 22, Call for contributions.
3. The Chair presents the teleconference times (slide 23). The next call will be next Monday (08/01) and 5 sessions in September interim meeting is now secured.
4. Presentations:

**11-22/1214r0, “Comment Resolution (D0.1) Status Update and Recommendations”, Claudio da Silva (Meta Platforms Inc):** This submission reviews current status on comment resolutions and recommends what to do to meet the timeline for November D1.0 publication.

Current Status: By July closing, we have approved 25% of the comments submitted to CC40.

* Progress on technical and general comments has been slower: 93 out of 646 (14.4%)
* Progress of non-DMG sub-clauses has been even slower: 9 out of 522 (1.7%).
* We have very good number of volunteers, but small resolution is achieved for sub-7 GHz technical comments.

Timeline:

* Given 511 sub-7 GHz technical comments and to publish D1.0 in November, it may be useful to set a short-term goal of addressing 300 of such comments by the end of September interim meeting (7 weeks from now).
* Even for January 2023 publication, it would still need ~ 200 of sub-7 GHz technical comments to be resolved by the end of September.

Suggestions:

* PoCs should work with group so that at least 50% of its comments is resolved by the end of September interim meeting.
* Use straw polls as a tool to reach consensus and focus on the draft text, not on the SFD.

Q: Question was raised on the process to adopt a new functionality. How to handle a new contribution with new sequences of procedure, protocol, and so on. It is quite disruptive to add new sequences of procedure and protocol.

A: Agree that is it disruptive. Bring it to a task group and seek an agreement. Straw poll is a useful tool to handle this situation. Another way is to bring it to SFD.

The Chair stated that PoCs and assignees need to estimate the number of CIDs that can be resolved by the end of September interim plenary and send the estimates to the Editor, if possible.

The Chair and Editor will work offline how to handle new functionality and bring another guideline.

The Chair stated that another presentation request is needed when the update is available.

**11-22/882r1, “CR Document Resolving CIDs related to Immediate and Delayed Feedback Support”, Rajat Pushkarna (Panasonic Corp):** This submission proposes resolutions of comments received from TGbf comment collection 40 (TGbf Draft 0.1): CIDs: 376, 552 and 577 (3 CIDs).

CID 376 and 552: Resolution is “rejected” with the following reason:

* Support for Immediate or Delayed feedback is device dependent and should be exchanged as capabilities.

C: The use of Capabilities field in Extended Capabilities element is a concern. Decision on which feedback method is dynamic depending on the applications. It also depends on many factors. One example is timing requirement for immediate feedback.

C: Immediate feedback will depend on many factors such as STA capability, timing requirement, responder, application, and use case too. Agree that at the beginning phase, negotiation is needed. It strongly depends on use cases. In addition, 1 bit of capability may be sufficient or not.

C: Every STA should support delayed feedback as default.

A: Immediate feedback is dependent on application and device.

The Chair asked for continued offline discussion.

**11-22/1934r8, “Discussion on Session Setup”, Chaoming Luo (OPPO):** This contribution discusses more about the detail of session setup procedure and frame formats. It proposes to remove Sensing Session, correspondingly Sensing Session Setup and Sensing Session Termination phases are removed.

C: For SP 1, slide 9 should be slide 10. Motion 15 already passed defined sensing session setup and termination. Is your intention to change the motion?

A: Slide 10 is correct. When writing a PDT, anything can be proposed. If group agrees, then it can be changed. SP 3 is proposed because it is hard to write what are in session setup and termination frames.

C: It is confusing the name of T2 timer.

A: The name of T2 timer is changed from inactivity timer to activity timer.

Straw poll 1 was run.

Result: Approved by unanimous consent.

C: In SP 2, UID is changed to USID.

A: Correct.

C: In 2nd bullet, add “within frame exchange timeout T1” after U-STA.

A: Done.

Straw poll 2 was run.

Result: Approved by unanimous consent.

Straw poll 3 is deferred to have more offline discussion with other assignees working on session setup and termination.

C: In SP 4, change non-AP STA’s to non-AP U-STA’s.

A: Done.

Q: Are sensing capabilities once defined, then will they be delivered in these frames?

A: Correct.

Straw poll 4 was run.

Result: Approved by unanimous consent.

Q: What does it mean AP “invites”?

A: AP does not specify U-STA. Any STA can receive unicast frame.

C: It is confusing that “1 bit” fits into an Information element.

A: 1 bit + 7 reserved bits. It is not decided which element carries this information.

C: Comment was raised on 1 bit invitation in Probe Response.

A: Without this, overhead will occur.

Straw poll 5 was run.

Result: Approved by unanimous consent.

The plan is to prepare the PDT based on straw polls 1, 2, 4, and 5.

**11-22/0976r2, “CC40 CR for Topic Threshold – Part 1”, Mengshi Hu (Huawei Technologies):** This submission contains the proposed comment resolutions for the following 10 CIDs in the Topic “Threshold” shown in 22/0820 IEEE 802.11bf CC40 comments.

Due to technical difficulty and the lack of time, the presentation is postponed to the next conference call.

1. The chair asks if there is AoB. No response from the group. The Chair stated that the next call will be on Monday (08/01).
2. The meeting is adjourned without objection at 12:55am ET.

**List of Attendees:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbf | 7/28 | CHENG, yajun | Xiaomi Communications Co., Ltd. |
| TGbf | 7/28 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbf | 7/28 | Dash, Debashis | Apple Inc. |
| TGbf | 7/28 | da Silva, Claudio | Meta Platforms, Inc. |
| TGbf | 7/28 | Dong, Xiandong | Xiaomi Inc. |
| TGbf | 7/28 | Du, Rui | Huawei Technologies Co., Ltd |
| TGbf | 7/28 | feng, Shuling | MediaTek Inc. |
| TGbf | 7/28 | Gao, Ning | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbf | 7/28 | Kim, Sang Gook | LG ELECTRONICS |
| TGbf | 7/28 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbf | 7/28 | narengerile, narengerile | Huawei Technologies Co., Ltd |
| TGbf | 7/28 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbf | 7/28 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbf | 7/28 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbf | 7/28 | Wei, Dong | NXP Semiconductors |
| TGbf | 7/28 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbf | 7/28 | Zhang, Jiayi | Ofinno |
| TGbf | 7/28 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |