IEEE P802.11  
Wireless LANs

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| Minutes 802.11 be PHY ad hoc Telephone Conference,  July to September, 2022 | | | | |
| Date: 2022-08-15 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Tianyu Wu | Apple |  |  | tianyu@apple.com |

Abstract

This document contains the PHY ad hoc meeting minutes for TGbe teleconferences held on:

* Aug 01, 2022
* Aug 15, 2022

**Monday Aug 1st, 2022 19:00 – 22:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, MaxLinear) calls the meeting to order at 19:00 ET.
2. The Chair follows the agenda in 11-22/1161r5.
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) or the Chair himself if unable to record attendance via IMAT system.
6. Announcements:
7. Technical Submissions**: CRs**
   * [1148r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1148-00-00be-cr-on-cid12154.docx) LB266-CR-on-CID12154 Lin Yang [1C]
   * [1086r1](https://mentor.ieee.org/802.11/dcn/22/11-22-1086-01-00be-lb266-cr-in-36-3-12-8-2.doc) LB266 CR in 36.3.12.8.2 Ross Jian Yu [7C]
   * [1163r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1163-00-00be-11be-lb266-cr-for-clause-36-3-14-packet-extension.docx) CR for clause 36.3.14 Packet Extension Yan Zhang [6C]
   * [1164r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1164-00-00be-11be-lb266-cr-for-clause-36-3-11-mathematical-description-of-signals.docx) CR for 36.3.11 Mathematical description of signals Yan Zhang [7C]
   * [1169r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1169-00-00be-lb266-cr-on-cid-12138-12139-12140.docx) LB266-CR-on-CID 12138-12139-12140 Yapu Li [3C]
   * [1130r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1130-00-00be-lb266-cr-in-36-3-12-8-3.doc) LB 266 CR in 36.3.12.8.3 Ross Jian Yu [22C]
   * [1197r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1197-00-00be-lb266-cr-in-36-3-12-8-5.doc) LB266 CR in 36.3.12.8.5 Ross Jian Yu [12C]
   * [1215r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1215-00-00be-lb266-cr-on-cid-10754-10757.docx) LB266-CR-on-CID 10754-10757 Yapu Li [2C]
   * [1100r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1100-00-00be-d2-0-comment-resolution-on-u-sig-part-3.docx) Comment Resolution on U-SIG Part 3 Alice Chen [5C]
   * [1226r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1226-00-00be-lb266-cr-for-equations-in-36-3-12-9-eht-stf.docx) CR for Equations in 36.3.12.9 EHT-STF Eunsung Park [2C]
   * [1227r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1227-00-00be-lb266-cr-for-36-3-2-3-null-subcarriers.docx) CR for 36.3.2.3 Null Subcarriers Eunsung Park [1C]

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (PHY) | 8/1 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 8/1 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 8/1 | Huq, Kazi Mohammed Saidul | Ofinno |
| TGbe (PHY) | 8/1 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 8/1 | Lanante, Leonardo | Ofinno |
| TGbe (PHY) | 8/1 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 8/1 | Li, Yapu | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 8/1 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 8/1 | Redlich, Oded | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 8/1 | Schelstraete, Sigurd | MaxLinear |
| TGbe (PHY) | 8/1 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 8/1 | Song, Hao | Intel Corporation |
| TGbe (PHY) | 8/1 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 8/1 | Varshney, Prabodh | Nokia |
| TGbe (PHY) | 8/1 | Vermani, Sameer | Qualcomm Incorporated |
| TGbe (PHY) | 8/1 | Wei, Dong | NXP Semiconductors |
| TGbe (PHY) | 8/1 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 8/1 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 8/1 | Yi, Yongjiang | Spreadtrum Communication USA, Inc |
| TGbe (PHY) | 8/1 | Zaman, Malia | IEEE Standards Association (IEEE-SA) |
| TGbe (PHY) | 8/1 | Zhang, Yan | NXP Semiconductors |

**CR Contributions**

1. **11-22-1148r0 CR on CID12154** **–** Lin Yang (Qualcomm)

SP#1:

Do you agree to the proposed resolution of the following CID as in 11-22/1148r0?

* CID 12154

No objection

1. **11-22-1086r1 LB266 CR in 36.3.12.8.2** **–** Ross Jian Yu (Huawei)

**Discussion**

C: Discussions on CID10746 on understanding of the added sentence.

C: Proposed some simpler text for better understanding.

A: Revised the sentence.

C: Discussion on whether allow different signaling to save some overhead. Such as 9 26 tone RU on lower 80MHz with 9 users and signal 242 tone RU with 0 user field.

C: The problem with the example is the pilot will be different from the actual case. Some user may want to use the pilots, so keep the same RU/MRU size and placement will help.

C: Add some further clarification that the only different for different 80MHz is the number of the user fields.

A: Maybe keep the text simpler without additional text in this round.

A: Update to r2.

SP#2:

Do you agree to the proposed resolution of the following CIDs as in 11-22/1086r2?

* CIDs 10746, 10747, 10748, 11694, 12848, 13568, 13569

No objection

1. **11-22-1163r0 11be LB266 CR for clause 36.3.14 Packet Extension** **–** Yan Zhang (NXP)

**Discussion**

C: Should we first have a SP on not supporting more than 8SS in 11be?

C: In SFD, it’s still 16SS. Seem change to 8 is never SP.

A: We don’t mention >8SS in R1.

C: We have reserved bits to signal >8SS in many places such as U-SIG, EHT-SIG etc. Do we need to change those fields? Maybe we should make a decision not to change any of these fields.

C: Agree not to change any fields. We have 2 options: 1. Run a SP in PHY group that 11be max SS is 8 and no change to any fields. Or 2. we just do any change in spec based on 8 and if future someone want to add 16, we modify the spec later.

C: We can first run SP on the CR document and then run SP on >8SS.

SP#3:

Do you agree to the proposed resolution of the following CIDs as in 11-22/1163r0?

* CIDs 10840, 11297, 12028, 12151, 12207, 12297

No objection

SP#4:

Do you agree that 802.11be shall not define operation with more than 8 spatial streams and that the format of all subfields related to spatial streams shall remain unchanged (i.e. no changing the number of bits)?

Y/N/A: 22/4/5

1. **11-22-1164r2 11be LB266 CR for clause 36.3.11 Mathematical description of signals** **–** Yan Zhang (NXP)

**Discussion**

C: Some comments on resolution to CID 12130 to simply the spec text.

A: Agree to revise the resolution for this CID. Will fix this part later.

A: Update to r3.

SP#6:

Do you agree to the proposed resolution of the following CIDs as in 11-22/1164r4?

* CIDs 10742, 10829, 12130, 12148, 12149, 13952, 13953

No objection

1. **11-22-1169r0 LB266 CR on CID 12138, 12139, 12140 –** Yapu Li (Oppo)

**Discussion**

C: Do we use HE Sounding NDP or HE Sounding PPDU?

A: We use HE Sounding NDP. And we use both terms.

SP#5:

Do you agree to the proposed resolution of the following CIDs as in 11-22/1169r0?

* CIDs 12138, 12139, 12140

No objection

1. **11-22-1130r1 LB266 CR in 36.3.12.8.3 –** Ross Jian Yu (Huawei)

**Discussion**

C: Some comments on CID10180.

A: Update to r2.

SP#7:

Do you agree to the proposed resolution of the following CIDs as contained in 11-22/1130r2?

* CIDs 10000, 10177, 10180, 10749, 10831, 10939, 11287, 11359, 11360, 11361, 11695, 11969, 11970, 12189, 12190, 12191, 12203, 12868, 13570, 13571, 13572, 13573

No objection

**Adjourn**

The meeting is adjourned at 22:00 ET

**Monday Aug 15th, 2022 19:00 – 22:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, MaxLinear) calls the meeting to order at 19:00 ET.
2. The Chair follows the agenda in 11-22/1161r11.
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) or the Chair himself if unable to record attendance via IMAT system.
6. Announcements:
7. Technical Submissions**: CRs**
   * [1197r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1197-00-00be-lb266-cr-in-36-3-12-8-5.doc) LB266 CR in 36.3.12.8.5 Ross Jian Yu [12C]
   * [1215r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1215-00-00be-lb266-cr-on-cid-10754-10757.docx) LB266-CR-on-CID 10754-10757 Yapu Li [2C]
   * [1100r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1100-00-00be-d2-0-comment-resolution-on-u-sig-part-3.docx) Comment Resolution on U-SIG Part 3 Alice Chen [5C]
   * [1226r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1226-00-00be-lb266-cr-for-equations-in-36-3-12-9-eht-stf.docx) CR for Equations in 36.3.12.9 EHT-STF Eunsung Park [2C]
   * [1227r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1227-00-00be-lb266-cr-for-36-3-2-3-null-subcarriers.docx) CR for 36.3.2.3 Null Subcarriers Eunsung Park [1C]
   * [1208r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1208-00-00be-cr-on-cid-11358.doc) CR on CID 11358 Ross Jian Yu [1C]
   * [1135r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1135-00-00be-lb266-cr-in-36-3-12-8-4.doc) CR in 36.3.12.8.4 Ross Jian Yu [5C]
   * [1241r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1241-00-00be-lb266-cr-on-cid-11298.docx) LB266 CR on CID 11298 Shimi Shilo [1C]
   * [1288r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1288-00-00be-lb266-cr-for-cid-11341.docx) CR for CID 11341 Eunsung Park [1C]
   * [1289r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1289-00-00be-lb266-cr-for-36-3-2-6-ru-and-mru-restrictions-for-20-mhz-operation.docx) CR for 36.3.2.6 RU & MRU restrictions for 20 MHz op. Eunsung Park [2C]
   * [1293r0](https://mentor.ieee.org/802.11/dcn/22/11-22-1293-00-00be-lb266-cr-for-clause-36-3-12-3.docx) CR-for-clause 36.3.12.3 Dongguk Lim [3C]

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (PHY) | 8/15 | Bahn, Christy | IEEE STAFF |
| TGbe (PHY) | 8/15 | Barr, David | MaxLinear |
| TGbe (PHY) | 8/15 | Cao, Rui | NXP Semiconductors |
| TGbe (PHY) | 8/15 | Chen, You-Wei | MediaTek Inc. |
| TGbe (PHY) | 8/15 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 8/15 | Erkucuk, Serhat | Ofinno |
| TGbe (PHY) | 8/15 | Hart, Brian | Cisco Systems, Inc. |
| TGbe (PHY) | 8/15 | Jung, Insik | LG ELECTRONICS |
| TGbe (PHY) | 8/15 | Lanante, Leonardo | Ofinno |
| TGbe (PHY) | 8/15 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 8/15 | Li, Yapu | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 8/15 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 8/15 | Redlich, Oded | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 8/15 | Sato, Takuhiro | SHARP CORPORATION |
| TGbe (PHY) | 8/15 | Schelstraete, Sigurd | MaxLinear |
| TGbe (PHY) | 8/15 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 8/15 | Song, Hao | Intel Corporation |
| TGbe (PHY) | 8/15 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 8/15 | Varshney, Prabodh | Nokia |
| TGbe (PHY) | 8/15 | Wei, Dong | NXP Semiconductors |
| TGbe (PHY) | 8/15 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 8/15 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 8/15 | Yi, Yongjiang | Spreadtrum Communication USA, Inc |
| TGbe (PHY) | 8/15 | Zhang, Jiayi | Ofinno |
| TGbe (PHY) | 8/15 | Zhang, Yan | NXP Semiconductors |

**CR Contributions**

1. **11-22-1197r0 LB266 CR in 36.3.12.8.5** **–** Ross Jian Yu (Huawei)

**Discussion**

C: Do we still need to define “dot11EHTBaseLineFeaturesImplementedOnly” since we don’t have r2 PHY feature.

A: We can consider this in a separate discussion.

SP#1:

Do you agree to the proposed resolution of the following CIDs as proposed in 11-22/1197r0?

* CID 10751, 10752, 10753, 11192, 11193, 11194, 11195, 11219, 11363, 12568, 13575, 13576

No objection

1. **11-22-1215r0 LB266 CR on CID 10754-10757** **–** Yapu Li (Oppo)

SP#2:

Do you agree to the proposed resolution of the following CIDs as proposed in 11-22/1215r0?

* CIDs 10754, 10757

No objection

1. **11-22-1100r0 D2.0 CR on U-SIG Part 3** **–** Alice Chen (Qualcomm)

**Discussion**

C: On CID 13988, request to have more thinking on defining PHY\_VER\_GT\_0.

A: Can change to some name that indicating this is not defining a new PPDU format. To emphasis this is for forward compatibility.

C: Some editorial comment.

A: Take out CID 13988 for further discussion and update to r1.

SP#3:

Do you agree to the proposed resolution of the following CIDs as proposed in 11-22/1100r1?

* CIDs 10744, 11211, 12069, 12847

No objection

Note: CID 13988 deferred.

1. **11-22-1226r0 CR for Equations in 36.3.12.9 EHT-STF –** Eunsung Park (LGE)

SP#4:

Do you agree to the proposed resolution of the following CIDs as proposed in 11-22/1226r0?

* CIDs 11208, 12022

No objection

1. **11-22-1227r0 CR for 36.3.2.3 Null Subcarriers –** Eunsung Park (LGE)

SP#5:

Do you agree to the proposed resolution of the following CID as proposed in 11-22/1227r0?

* CID 11340

No objection

1. **11-22-1208r0 CR on CID 11358 –** Ross Jian Yu (Huawei)

SP#6:

Do you agree to the proposed resolution of the following CID as proposed in 11-22/1208r0?

* CID 11358

No objection

1. **11-22-1135r0 CR in 36.3.12.8.4 –** Ross Jian Yu (Huawei)

**Discussion**

Some minor change and update to r1.

SP#7:

Do you agree to the proposed resolution of the following CIDs as proposed in 11-22/1135r1?

* CIDs 10723, 10750, 11288, 12192, 13574

No objection

1. **11-22-1241r0 LB266 CR on CID 11298 –** Shimi Shilo (Huawei)

SP#8:

Do you agree to the proposed resolution of the following CID as proposed in 11-22/1241r0?

* CID 11298

No objection

1. **11-22-1288r0 CR for CID 11341 –** Eunsung Park (LGE)

**Discussion**

C: Some comments on name of the subclause titles.

A: Revised and update to r1.

SP#9:

Do you agree to the proposed resolution of the following CID as proposed in 11-22/1288r1?

* CID 11341

No objection

1. **11-22-1289r0 CR for 36.3.2.6 RU & MRU restrictions for 20MHz op. –** Eunsung Park (LGE)

SP#10:

Do you agree to the proposed resolution of the following CIDs as proposed in 11-22/1289r0?

* CIDs 12515, 12516

No objection

1. **11-22-1293r1 CR for clause 36.3.12.3 –** Dongguk Lim (LGE)

**Discussion**

C: For CID 12018, it should be number of L-LTF tones, not the L-STF.

A: Change the resolution to reject and update to r2.

SP#11:

Do you agree to the proposed resolution of the following CIDs as proposed in 11-22/1293r2?

* CIDs 10377, 10734, 12018

No objection

**Adjourn**

The meeting is adjourned at 21:40 ET