IEEE P802.11
Wireless LANs

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| Minutes 802.11 be PHY ad hoc Telephone Conferences, Mar 2021 - May 2021 |
| Date: 2021-04-15 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Tianyu Wu | Apple |  |  | tianyu@apple.com |
| Alfred Asterjadhi | Qualcomm |  |  |  |
| Xiaogang Chen | Intel |  |  |  |

Abstract

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

* Mar 17, 2021
* Mar 18, 2021
* Mar 22, 2021
* Mar 25, 2021
* Mar 29, 2021
* April 8, 2021
* April 12, 2021
* April 15, 2021
* April 19, 2021

**Wednesday Mar 17th, 2021 10:00 – 12:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, Quantenna/ON Semiconductor) calls the meeting to order at 10:00 AM ET.
2. The Chair follows the agenda in 11-21/385r8.
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. Discussions on the agenda.

Technical Submissions: **Comment Resolutions**

* + [350r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0350-02-00be-eht-sig-cr-d03-annex-z.doc) EHT-SIG-CR-d03-annex z Ross Jian Yu [2 CIDs]
	+ [371r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0371-00-00be-cr-on-ppdu-encoding.docx) CR on PPDU Encoding Youhan Kim [6 CIDs]
	+ [354r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0354-01-00be-u-sig-comment-resolution-part-3.docx) U-SIG Comment Resolution Part 3 Alice Chen [54 CIDs]
	+ [384r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0384-00-00be-comment-resolutions-for-clause-36-3-13-packet-extension.docx) CRs for clause 36.3.13 Packet extension Yan Zhang [1 CID]
	+ [360r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0360-02-00be-crs-on-cids-related-to-clause-36-1-1.docx) CRs on CIDs related to Clause 36.1.1 Kanke Wu [26 CIDs]
	+ [331r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0331-00-00be-d03-cr-on-eht-phy-introduction.docx) D03 CR on EHT PHY Introduction Bin Tian [27 CIDs]
	+ [310r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0310-00-00be-cr-for-36-3-2-4-and-36-3-12-9-pilot-subcarriers.docx) cr-for-36-3-2-4-and-36-3-12-9-pilot subcarriers Jinyoung Chun [5 CIDs]
	+ [312r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0312-00-00be-cr-for-clause-36-3-11-8-2.docx) CR for clause 36.3.11.8.2 Dongguk Lim [31 CIDs]
	+ [415r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0415-00-00be-comment-resolutions-for-clause-36-3-11-10-eht-ltf.doc) CRs for Clause 36.3.11.10 EHT LTF Chenchen LIU [19 CIDs]
	+ [416r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0416-00-00be-comment-resolutions-for-clause-36-3-12-2-scrambler.doc) CRs for Clause 36.3.12.2 Scrambler Chenchen LIU [11 CIDs]
	+ [424r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0424-01-00be-cr-for-36-3-22-and-annex-e.doc) cr for 36.3.22 and Annex E Ruchen Duan [2 CIDs]
	+ [417r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0417-00-00be-cr-for-clause-36-3-2-3-subcarriers-and-resource-allocation-for-multiple-rus.doc) CR for 36.3.2.3 Subcarriers and resource allocation for multiple RUs Myeongjin Kim [40 CIDs]
	+ [443r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0443-00-00be-segment-parser-cr-on-p802-11be-d0-3-part1.doc) Segment Parser CR on P802.11be D0.3-part1 Bo Gong [10 CIDs]
	+ [464r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0464-00-00be-eht-sig-cr-d03-part-6.doc) EHT-SIG-CR-d03-part-6 Ross Jian Yu [4 CIDs]
	+ [477r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0477-00-00be-comment-resolution-for-non-ht-duplicate-transmission.docx) comment-resolution-for-non-ht-dup-transmission Rui Cao [6 CIDs]
	+ [482r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0482-00-00be-comment-resolution-for-ofdm-modulation.docx) comment-resolution-for-ofdm-modulation Rui Cao [1 CID]
	+ [401r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0401-00-00be-cr-for-cid-1253-and-1306.docx) CR for CID 1253 and 1306 Eunsung Park [2 CIDs]

Technical Submissions: **Proposed Draft Text (PDTs) for fixings TBDs**

* + [468r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0468-00-00be-pdt-supported-eht-mcs-and-nss-set-field.docx) PDT Supported EHT MCS and Nss Set Field Steve Shellhammer
	+ [470r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0470-00-00be-pdt-additional-eht-phy-capability-signaling.docx) PDT Additional PHY Capability Signaling Steve Shellhammer

Technical Submissions:

* + [392r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0392-00-00be-pe-for-4k-qam.pptx) PE for 4K QAM Ron Porat

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 3/17 | Anwyl, Gary | MediaTek Inc. |
| TGbe (PHY) | 3/17 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/17 | B, Hari Ram | NXP Semiconductors |
| TGbe (PHY) | 3/17 | Chen, Alice | Qualcomm Incorporated |
| TGbe (PHY) | 3/17 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 3/17 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 3/17 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 3/17 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 3/17 | Hart, Brian | Cisco Systems, Inc. |
| TGbe (PHY) | 3/17 | Hsieh, Hung-Tao | MediaTek Inc. |
| TGbe (PHY) | 3/17 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 3/17 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (PHY) | 3/17 | Jeon, Eunsung | SAMSUNG ELECTRONICS |
| TGbe (PHY) | 3/17 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 3/17 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 3/17 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 3/17 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 3/17 | lim, taesung | LG ELECTRONICS |
| TGbe (PHY) | 3/17 | Ma, Li | MediaTek Inc. |
| TGbe (PHY) | 3/17 | Memisoglu, Ebubekir | Istanbul Medipol University; Vestel |
| TGbe (PHY) | 3/17 | Montreuil, Leo | Broadcom Corporation |
| TGbe (PHY) | 3/17 | Ozbakis, Basak | VESTEL |
| TGbe (PHY) | 3/17 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 3/17 | Schelstraete, Sigurd | ON Semiconductor |
| TGbe (PHY) | 3/17 | Sethi, Ankit | NXP Semiconductors |
| TGbe (PHY) | 3/17 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 3/17 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/17 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/17 | Sun, Bo | ZTE Corporation |
| TGbe (PHY) | 3/17 | Tian, Bin | Qualcomm Incorporated |
| TGbe (PHY) | 3/17 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 3/17 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 3/17 | YANG, RUI | InterDigital, Inc. |
| TGbe (PHY) | 3/17 | Yang, Steve TS | MediaTek Inc. |
| TGbe (PHY) | 3/17 | Yoo, Homin | LG ELECTRONICS |
| TGbe (PHY) | 3/17 | Yu, Jian | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/17 | Zhang, Yan | NXP Semiconductors |

**CR contributions**

1. **11-21-350r2 – EHT-SIG-CR-d03-annex z –** Ross Jian Yu (Huawei)

**Discussions on SP:**

C: Can you also include example for 320MHz?

A: I can add later.

SP#1: Do you agree to accept the proposed CR in 11-21/350r2 for the following CIDs?

* CID 3055, 3063

 No objection to the SP.

1. **11-21-371r0 – CR on PPDU Encoding –** Youhan Kim (Qualcomm)

**Discussions on SP:**

C: 20, 40Mhz is “within a frequency subblock” or “have one frequency subblock”?

A: We didn’t mention since 20,40 only have one subblock but they also have one frequency subblock.

C: Can we change frequency subblock to frequency segment?

A: We mixed use of frequency subblock and segment in 11ax. We need to fix it. In ax, we have 160MHz is one segment but two subblocks, so I think subblock is more precise.

C: I have a number of CIDs dealing with this topic. I can handle it.

A: Ok, I can defer this to you. I will take out CID 2763 in my SP.

SP#2: Do you agree to accept the proposed CR in 11-21/371r0 for the following CIDs?

* CID 1556, 3280, ~~2763,~~ 3281, 3282, 3283
* Note: CID 2763 needs further discussion.

 No objection to the SP.

1. **11-21-354r1 – U-SIG Comment Resolution Part 3 –** Alice Chen (Qualcomm)

**Discussions on SP:**

C: When we use 320-1 and 320-2, we need to define it.

A: Agree. But it is not a right place to define them in U-SIG. It’s better in channel numbering section.

A: I will defer 2727, 3175.

C: Channelization or channel number could be better place. I will try to resolve there.

C: For 2727 and 3175, you can just refer to those sections.

C: Page 13, do we define EHT SU transmission? Maybe we should define EHT SU. We only have EHT MU PPDU and EHT NDP PPDU.

A: EHT SU transmission is widely used in the spec. Better to define the terminology for EHT SU transmission.

C: Page 19: Do we allow 1 recipient for OFDMA?

A: Depends on whether we count unallocated users. It can be an OFDMA with 106+26 allocated and RU106 unallocated. This is OFDMA transmission with 1 recipient.

C: There will be multiple user field in this case right?

A: Yes.

C: It will be clearer to say >1 use fields. Some user field can have AID 2046.

C: May need further discussion.

**Adjourn**

The meeting is adjourned at 12:00 PM ET

**Thursday Mar 18th, 2021 10:00 – 12:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, Quantenna/ON Semiconductor) calls the meeting to order at 10:00 AM ET.
2. The Chair follows the agenda in 11-21/385r9.
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. Discussions on the agenda.

Technical Submissions: **Pending SPs**

* + [354r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0354-01-00be-u-sig-comment-resolution-part-3.docx) U-SIG Comment Resolution Part 3 Alice Chen [54 CIDs]

Technical Submissions: **Proposed Draft Text (PDTs) for fixings TBDs**

* + [468r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0468-00-00be-pdt-supported-eht-mcs-and-nss-set-field.docx) PDT Supported EHT MCS and Nss Set Field Steve Shellhammer
	+ [470r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0470-00-00be-pdt-additional-eht-phy-capability-signaling.docx) PDT Additional PHY Capability Signaling Steve Shellhammer

Technical Submissions: **Comment Resolutions**

* + [384r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0384-00-00be-comment-resolutions-for-clause-36-3-13-packet-extension.docx) CRs for clause 36.3.13 Packet extension Yan Zhang [1 CID]
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	+ [310r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0310-00-00be-cr-for-36-3-2-4-and-36-3-12-9-pilot-subcarriers.docx) cr-for-36-3-2-4-and-36-3-12-9-pilot subcarriers Jinyoung Chun [5 CIDs]
	+ [312r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0312-00-00be-cr-for-clause-36-3-11-8-2.docx) CR for clause 36.3.11.8.2 Dongguk Lim [31 CIDs]
	+ [415r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0415-00-00be-comment-resolutions-for-clause-36-3-11-10-eht-ltf.doc) CRs for Clause 36.3.11.10 EHT LTF Chenchen LIU [19 CIDs]
	+ [416r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0416-00-00be-comment-resolutions-for-clause-36-3-12-2-scrambler.doc) CRs for Clause 36.3.12.2 Scrambler Chenchen LIU [11 CIDs]
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	+ [401r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0401-00-00be-cr-for-cid-1253-and-1306.docx) CR for CID 1253 and 1306 Eunsung Park [2 CIDs]
	+ [489r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0489-01-00be-cr-on-cid-1279.docx) CR on CID 1279 Xin Yan

Technical Submissions:

* + [392r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0392-00-00be-pe-for-4k-qam.pptx) PE for 4K QAM Ron Porat

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 3/18 | Choi, Jinsoo | LG ELECTRONICS |
| TGbe (PHY) | 3/18 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 3/18 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 3/18 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 3/18 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 3/18 | Handte, Thomas | Sony Corporation |
| TGbe (PHY) | 3/18 | Hsieh, Hung-Tao | MediaTek Inc. |
| TGbe (PHY) | 3/18 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 3/18 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (PHY) | 3/18 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 3/18 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 3/18 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 3/18 | Lansford, James | Qualcomm Incorporated |
| TGbe (PHY) | 3/18 | Lee, Hong Won | LG ELECTRONICS |
| TGbe (PHY) | 3/18 | Lee, Wookbong | SAMSUNG |
| TGbe (PHY) | 3/18 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 3/18 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 3/18 | Lin, Zinan | InterDigital, Inc. |
| TGbe (PHY) | 3/18 | Liu, Der-Zheng | Realtek Semiconductor Corp. |
| TGbe (PHY) | 3/18 | Liu, Jianhan | MediaTek Inc. |
| TGbe (PHY) | 3/18 | Montreuil, Leo | Broadcom Corporation |
| TGbe (PHY) | 3/18 | Ozbakis, Basak | VESTEL |
| TGbe (PHY) | 3/18 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 3/18 | Rai, Kapil | Qualcomm Incorporated |
| TGbe (PHY) | 3/18 | Redlich, Oded | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/18 | Schelstraete, Sigurd | ON Semiconductor |
| TGbe (PHY) | 3/18 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 3/18 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/18 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/18 | Sun, Bo | ZTE Corporation |
| TGbe (PHY) | 3/18 | Tian, Bin | Qualcomm Incorporated |
| TGbe (PHY) | 3/18 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/18 | Ungan, Tolgay | endiio GmbH |
| TGbe (PHY) | 3/18 | Verenzuela, Daniel | Sony Corporation |
| TGbe (PHY) | 3/18 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 3/18 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 3/18 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/18 | Yang, Steve TS | MediaTek Inc. |
| TGbe (PHY) | 3/18 | yi, yongjiang | Futurewei Technologies |
| TGbe (PHY) | 3/18 | Yoo, Homin | LG ELECTRONICS |
| TGbe (PHY) | 3/18 | Yu, Jian | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/18 | Zhang, Yan | NXP Semiconductors |

**Pending SPs**

1. **11-21-354r2 – U-SIG Comment Resolution Part 3 –** Alice Chen (Qualcomm)

**Discussions:**

C: Change “can be” to “is” in page 11.

C: “user fields” should be “User fields” in page 17.

C: “N/A” for NDP 🡪 0 for NDP.

C: “Transmitters in UL” 🡪 “Transmitters in TB PPDU”

CR-SP#1: Do you agree to accept the proposed CR in 11-21/354r3 for the following CIDs?

* CID:

1357, 1358, 1359, 1361, 1362, 1364, 1365, 1366, 1367, 1368, 1562, 1613, 1614, 1615, 1620, 1621, 2176, 2177, 2178, 2399, 2400, 2401, 2402, 2628, 2629, 2630, 2631, 2750, 2793, 2795, 2797, 2802, 2803, 2932, 2933, 2948, 3001, 3002, 3003, 3046, 3048, 3176, 3177, 3179, 3180, 3181, 3182, 3187, 3287, 3288, 3290, 3291

 No objections

**PDT contributions**

1. **11-21-468r0 – PDT Supported EHT MCS and Nss Set Field –** Steve Shellhammer (Qualcomm)

**Discussions:**

C: For text related to OM Control subfield, let’s wait until MAC have decision on it.

C: The reserved value in table 9-T2 indicates an Max Nss >8.

A: Updated the text.

SP#3: Do you agree to include the proposed text in 11-21/468r1 in the next version of the 11be draft?

 No objections

1. **11-21-470r1 – PDT Additional PHY Capability Signaling –** Steve Shellhammer (Qualcomm)

**Discussions:**

C: Change “Max Nc” to 4 bits for future use.

C: Maybe put a reserved bit next to “Max Nc” field. If change to 4 bits, then we need another table.

C: It will be consistent to use 4 bits.

SP#4: Do you agree to include the proposed text in 11-21/470r2 in the next version of the 11be draft?

 No objections

**CR contributions**

1. **11-21-384r0 – CRs for clause 36.3.13 Packet extension** **–** Yan Zhang (NXP)

**Discussions:**

C: Instead of adding in EHT PHY characteristics, should refer to the 11ax table 27-54.

CR-SP#2: Do you agree to the resolution of the following CID as proposed in 11-21/384r2?

* CID 2674

 No objections

1. **11-21-360r3 – CRs on CIDs related to Clause 36.1.1 –** Kanke Wu (Qualcomm)

**Discussions:**

Will update and bring back for SP.

1. **11-21-331r1 – D03 CR on EHT PHY Introduction –** Bin Tian (Qualcomm)

**Discussions:**

C: Fix some typo and update to r2.

C: What does punctured sounding operation mean? Does it mean the whole sounding procedure or just punctured NDP?

A: This is PHY introduction part, only have high level feature. This includes everything related to punctured sounding.

**Adjourn**

The meeting is adjourned at 12:00 PM ET

**Monday Mar 22nd, 2021 19:00 – 22:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, Quantenna/ON Semiconductor) calls the meeting to order at 19:00 PM ET.
2. The Chair follows the agenda in 11-21/385r10.
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. Discussions on the agenda.

Technical Submissions: **Comment Resolutions**

* + [360r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0360-04-00be-crs-on-cids-related-to-clause-36-1-1.docx) CRs on CIDs related to Clause 36.1.1 Kanke Wu [26 CIDs-SP]
	+ [331r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0331-01-00be-d03-cr-on-eht-phy-introduction.docx) D03 CR on EHT PHY Introduction Bin Tian [27 CIDs-cont.]
	+ [489r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0489-01-00be-cr-on-cid-1279.docx) CR on CID 1279 Yan Xin [1 CID]
	+ SP on CID 2763 in 11-21/371
	+ [310r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0310-00-00be-cr-for-36-3-2-4-and-36-3-12-9-pilot-subcarriers.docx) cr-for-36-3-2-4-and-36-3-12-9-pilot subcarriers Jinyoung Chun [6 CIDs]
	+ [312r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0312-01-00be-cr-for-clause-36-3-11-8-2.docx) CR for clause 36.3.11.8.2 Dongguk Lim [26 CIDs]
	+ [415r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0415-01-00be-comment-resolutions-for-clause-36-3-11-10-eht-ltf.doc) CRs for Clause 36.3.11.10 EHT LTF Chenchen LIU [19 CIDs]
	+ [416r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0416-01-00be-comment-resolutions-for-clause-36-3-12-2-scrambler.doc) CRs for Clause 36.3.12.2 Scrambler Chenchen LIU [11 CIDs]
	+ [424r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0424-03-00be-cr-for-36-3-22-and-annex-e.doc) cr for 36.3.22 and Annex E Ruchen Duan [2 CIDs]
	+ [417r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0417-00-00be-cr-for-clause-36-3-2-3-subcarriers-and-resource-allocation-for-multiple-rus.doc) CR for 36.3.2.3 Subcarriers and resource allocation for multiple RUs Myeongjin Kim [50 CIDs]
	+ [443r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0443-00-00be-segment-parser-cr-on-p802-11be-d0-3-part1.doc) Segment Parser CR on P802.11be D0.3-part1 Bo Gong [10 CIDs]
	+ [464r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0464-00-00be-eht-sig-cr-d03-part-6.doc) EHT-SIG-CR-d03-part-6 Ross Jian Yu [4 CIDs]
	+ [477r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0477-00-00be-comment-resolution-for-non-ht-duplicate-transmission.docx) comment-resolution-for-non-ht-dup-transmission Rui Cao [6 CIDs]
	+ [482r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0482-00-00be-comment-resolution-for-ofdm-modulation.docx) comment-resolution-for-ofdm-modulation Rui Cao [1 CID]
	+ [401r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0401-00-00be-cr-for-cid-1253-and-1306.docx) CR for CID 1253 and 1306 Eunsung Park [2 CIDs]

Technical Submissions:

* + [392r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0392-00-00be-pe-for-4k-qam.pptx) PE for 4K QAM Ron Porat

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 3/22 | An, Song-Haur | INDEPENDENT |
| TGbe (PHY) | 3/22 | Anwyl, Gary | MediaTek Inc. |
| TGbe (PHY) | 3/22 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/22 | B, Hari Ram | NXP Semiconductors |
| TGbe (PHY) | 3/22 | Cao, Rui | NXP Semiconductors |
| TGbe (PHY) | 3/22 | Choi, Jinsoo | LG ELECTRONICS |
| TGbe (PHY) | 3/22 | Choo, Seungho | Senscomm Semiconductor Co., Ltd. |
| TGbe (PHY) | 3/22 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 3/22 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (PHY) | 3/22 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 3/22 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 3/22 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 3/22 | Grandhe, Niranjan | NXP Semiconductors |
| TGbe (PHY) | 3/22 | Haasz, Jodi | IEEE Standards Association (IEEE-SA) |
| TGbe (PHY) | 3/22 | Hart, Brian | Cisco Systems, Inc. |
| TGbe (PHY) | 3/22 | Hsieh, Hung-Tao | MediaTek Inc. |
| TGbe (PHY) | 3/22 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 3/22 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (PHY) | 3/22 | jiang, feng | Apple Inc. |
| TGbe (PHY) | 3/22 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 3/22 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 3/22 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 3/22 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 3/22 | Liu, Jianhan | MediaTek Inc. |
| TGbe (PHY) | 3/22 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (PHY) | 3/22 | Ma, Li | MediaTek Inc. |
| TGbe (PHY) | 3/22 | Minotani, Jun | Panasonic Corporation |
| TGbe (PHY) | 3/22 | Mirfakhraei, Khashayar | Cisco Systems, Inc. |
| TGbe (PHY) | 3/22 | Nakano, Takayuki | Panasonic Corporation |
| TGbe (PHY) | 3/22 | Nam, Junyoung | Qualcomm Incorporated |
| TGbe (PHY) | 3/22 | Pare, Thomas | MediaTek Inc. |
| TGbe (PHY) | 3/22 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 3/22 | porat, ron | Broadcom Corporation |
| TGbe (PHY) | 3/22 | Puducheri, Srinath | Broadcom Corporation |
| TGbe (PHY) | 3/22 | Redlich, Oded | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/22 | Schelstraete, Sigurd | ON Semiconductor |
| TGbe (PHY) | 3/22 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 3/22 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/22 | Sun, Bo | ZTE Corporation |
| TGbe (PHY) | 3/22 | Tian, Bin | Qualcomm Incorporated |
| TGbe (PHY) | 3/22 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/22 | Varshney, Prabodh | Nokia |
| TGbe (PHY) | 3/22 | Vermani, Sameer | Qualcomm Incorporated |
| TGbe (PHY) | 3/22 | Wu, Chung | TP-Link Corporation Limited |
| TGbe (PHY) | 3/22 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 3/22 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 3/22 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/22 | Yang, Steve TS | MediaTek Inc. |
| TGbe (PHY) | 3/22 | Young, Christopher | Broadcom Corporation |
| TGbe (PHY) | 3/22 | Yu, Jian | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/22 | Zhang, Yan | NXP Semiconductors |

**CR contributions**

1. **11-21-360r4 – CRs on CIDs related to Clause 36.1.1 –** Kanke Wu (Qualcomm)

**Discussions:**

C: For CID 1982 and 1983, the resolution should be changed from “REJECTED” to “REVISED”.

A: Revised and updated to r5.

CR-SP#1: Do you agree to the resolution of the following CIDs as proposed in 11-21/360r5?

* CIDs:

1239 2676 1517 1603 1263 1264 3261 1266 1980 3087 2983 3088 3262 1982 1983 3089 3090 3091 1267 3092 3093 3263 3264 3265 3266 2987

 No objection

1. **11-21-331r3** – **D03 CR on EHT PHY Introduction** –Bin Tian (Qualcomm)

**Discussions:**

C: Change “utilizating” to “utilizing”

C: Some other editorial change.

A: Revised and updated to r4.

CR-SP#2: Do you agree to the resolution of the following CIDs as proposed in 11-21/331r4?

* CIDs:

1082,1268,1981,2254,2773,1270,1269,1518,1604,2668, 3160, 3161,1261, 1262, 1271, 1273, 1519, 2722, 2986, 2989, 1605, 2988, 1272, 2774, 2775, 2776, 2942

 No objection

1. **11-21-489r1** – **CR on CID 1279** –Yan Xin (Huawei)

**Discussions:**

C: I will be leaning to opt 1 against opt 2.

A: I am ok for either option.

C: What about subblocks <80MHz?

A: We can first figure out how to identify contiguous segment and 80MHz subblock, then we can work on subblock<80MHz.

A: I don’t see the need to separate them.

C: I don’t want to change the name of segment parser which used for a long time. Changing that may confusing people.

C: Opt 1 is the compromised option without changing “segment parser” to “subblock parser”.

C: Frequency subblock can be 20,40,80 MHz. Change to “up to 80MHz”.

A: Add Option 1a as compromised option and include all the comments.

SP#1: Do you agree that:

Use “frequency subblock” for up to 80 MHz and use “frequency segment” for a contiguous spectrum.

Potential Actions:

1.Search for the terms of up to 80 MHz segment and frequency segment which are used to represent up to 80 MHz in the P802.11be draft and replace all of them with up to 80 MHz frequency subblock.

2.Keep segment parser unchanged.

 Yes/No/Abs: 29/2/13

1. **11-21-371r1** – **CR on Overview of the PPDU Encoding Process** –Youhan Kim (Qualcomm)

**Discussions:**

C: There are places we don’t mention the size of the frequency subblock. What is the understanding of the size for this case?

A: If not mentioning the size it refers to all the possible sizes.

CR-SP#3: Do you agree to the resolution of the following CIDs as proposed in 11-21/371r1?

* CID 2763

 No objection

1. **11-21-310r1** – **cr-for-36-3-2-4-and-36-3-12-9-pilot subcarriers** –Jinyoung Chun (LGE)

**Discussions:**

C: A few editorial comments.

C: Update the reference document name and re-SP it.

CR-SP#4: Do you agree to the resolution of the following CIDs as proposed in 11-21/310r2?

* CIDs: 1251, 1590, 1591, 1996, 3042, 2606

 No objection

1. **11-21-312r2** – **cr for clause 36.3.11.8.2** –Dongguk Lim (LGE)

**Discussions:**

C: Some editorial comments.

A: Revised and update to r3.

C: Clarify that for full BW MIMO, EHT-SIG per 80MHz will carry same contents.

CR-SP#5: Do you agree to the resolution of the following CIDs as proposed in 11-21/312r3?

* CIDs: 1379, 1380, 1381, 1383, 1384, 1386, 1390, 1391, 1393, 1993, 1994, 2172, 2173, 2174, 2670, 2681, 2732, 2733, 2806, 2807, 2808, 3159, 3050, 3051, 3052, and 3053

 No objection

1. **11-21-415r1** – **CR for clause 36.3.11.10 EHT LTF** –Chenchen Liu (Huawei)

**Discussions:**

C: 1569 is comment for EHT MU PPDU and 1570 is comment for EHT TB PPDU. The CR seems only resolved 1569. Please check whether it correctly resolve CID 1570.

A: Will check and keep 1570 TBD for now.

C: 2675 need some further discussion and make it TBD now.

C: For 2939 on extra LTF, we can make OFDMA and non-OFDMA the same.

A: I can make 2939 TBD for now.

C: Some editorial change.

CR-SP#6: Do you agree to the resolution of the following CIDs as proposed in 11-21/415r2?

* CIDs: 1413, 1568, 1569, ~~1570,~~ 1584, 1630, 1979, 1998, 1999, 2000, 2001, 2230, 2663, ~~2675,~~ 2816, 2938, ~~2939,~~ 3068, 3075
* Note: CIDs 1570, 2675, 2939 need further discussion.

 No objection

**Adjourn**

The meeting is adjourned at 22:00 PM ET

**Thursday Mar 25th, 2021 10:00 – 12:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, Quantenna/ON Semiconductor) calls the meeting to order at 10:00 AM ET.
2. The Chair follows the agenda in 11-21/385r13.
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. Discussions on the agenda.

Technical Submissions:

* + [392r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0392-00-00be-pe-for-4k-qam.pptx) PE for 4K QAM Ron Porat

Technical Submissions: **Comment Resolutions**

* + [531r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0531-00-00be-nltf-for-ul-tb-ppdu.pptx) NLTF for UL TB PPDU Rui Cao
	+ [522r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0522-00-00be-d0-3-remaining-crs-on-eht-ltf-of-tb-ppdu.doc) D0.3 Remaining CRs on EHT-LTF of TB PPDU Chenchen Liu [3 CIDs]
	+ [416r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0416-01-00be-comment-resolutions-for-clause-36-3-12-2-scrambler.doc) CRs for Clause 36.3.12.2 Scrambler Chenchen LIU [11 CIDs]
	+ [424r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0424-03-00be-cr-for-36-3-22-and-annex-e.doc) cr for 36.3.22 and Annex E Ruchen Duan [2 CIDs]
	+ [417r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0417-01-00be-cr-for-clause-36-3-2-3-subcarriers-and-resource-allocation-for-multiple-rus.doc) CR for 36.3.2.3 Subcarriers and resource allocation for multiple RUs Myeongjin Kim [51 CIDs]
	+ [443r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0443-01-00be-segment-parser-cr-on-p802-11be-d0-3-part1.doc) Segment Parser CR on P802.11be D0.3-part1 Bo Gong [10 CIDs]
	+ [464r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0464-00-00be-eht-sig-cr-d03-part-6.doc) EHT-SIG-CR-d03-part-6 Ross Jian Yu [4 CIDs]
	+ [477r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0477-00-00be-comment-resolution-for-non-ht-duplicate-transmission.docx) comment-resolution-for-non-ht-dup-transmission Rui Cao [6 CIDs]
	+ [482r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0482-00-00be-comment-resolution-for-ofdm-modulation.docx) comment-resolution-for-ofdm-modulation Rui Cao [1 CID]
	+ [401r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0401-00-00be-cr-for-cid-1253-and-1306.docx) CR for CID 1253 and 1306 Eunsung Park [2 CIDs]
	+ [496r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0496-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-1.docx) Prop. Res. to Cl. 36 editorial comments - Part 1 Edward Au [30 CIDs]
	+ [497r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0497-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-2.docx) Prop. Res. to Cl. 36 editorial comments - Part 2 Edward Au [40 CIDs]
	+ [503r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0503-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-3.docx) Prop. Res. to Cl. 36 editorial comments - Part 3 Edward Au [34 CIDs]
	+ [516r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0516-00-00be-cr-for-cid-1307-1554.docx) CR for CID 1307 1554 Junghoon Suh [2 CIDs]
	+ [517r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0517-00-00be-cr-for-cid-1329-2788-3279.docx) CR for CID 1329 2788 3279 Junghoon Suh [3 CIDs]
	+ [507r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0507-00-00be-eht-sig-cr-d03-part-7.doc) EHT-SIG-CR-d03-part-7 Ross Jian Yu [3 CIDs]
	+ [495r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0495-01-00be-u-sig-comment-resolution-part-4.docx) U-SIG Comment Resolution Part 4 Alice Chen

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 3/25 | Anwyl, Gary | MediaTek Inc. |
| TGbe (PHY) | 3/25 | B, Hari Ram | NXP Semiconductors |
| TGbe (PHY) | 3/25 | Choi, Jinsoo | LG ELECTRONICS |
| TGbe (PHY) | 3/25 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 3/25 | Dogukan, Ali | Vestel |
| TGbe (PHY) | 3/25 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 3/25 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 3/25 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 3/25 | Gong, Bo | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/25 | Hart, Brian | Cisco Systems, Inc. |
| TGbe (PHY) | 3/25 | Hsieh, Hung-Tao | MediaTek Inc. |
| TGbe (PHY) | 3/25 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 3/25 | Jeon, Eunsung | SAMSUNG ELECTRONICS |
| TGbe (PHY) | 3/25 | jiang, feng | Apple Inc. |
| TGbe (PHY) | 3/25 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 3/25 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 3/25 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 3/25 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 3/25 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 3/25 | Lin, Zinan | InterDigital, Inc. |
| TGbe (PHY) | 3/25 | LIU, CHENCHEN | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/25 | Liu, Der-Zheng | Realtek Semiconductor Corp. |
| TGbe (PHY) | 3/25 | Liu, Jianhan | MediaTek Inc. |
| TGbe (PHY) | 3/25 | Ma, Li | MediaTek Inc. |
| TGbe (PHY) | 3/25 | Memisoglu, Ebubekir | Istanbul Medipol University; Vestel |
| TGbe (PHY) | 3/25 | Mirfakhraei, Khashayar | Cisco Systems, Inc. |
| TGbe (PHY) | 3/25 | Ozbakis, Basak | VESTEL |
| TGbe (PHY) | 3/25 | OZDEN ZENGIN, OZLEM | Vestel |
| TGbe (PHY) | 3/25 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 3/25 | Schelstraete, Sigurd | ON Semiconductor |
| TGbe (PHY) | 3/25 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 3/25 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/25 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/25 | Sun, Bo | ZTE Corporation |
| TGbe (PHY) | 3/25 | Tian, Bin | Qualcomm Incorporated |
| TGbe (PHY) | 3/25 | Verenzuela, Daniel | Sony Corporation |
| TGbe (PHY) | 3/25 | Vermani, Sameer | Qualcomm Incorporated |
| TGbe (PHY) | 3/25 | Ward, Lisa | Rohde & Schwarz |
| TGbe (PHY) | 3/25 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 3/25 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 3/25 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/25 | Yang, Steve TS | MediaTek Inc. |
| TGbe (PHY) | 3/25 | Yu, Jian | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/25 | ZEGRAR, Salah Eddine | Istanbul Medipol University; Vestel |
| TGbe (PHY) | 3/25 | Zhang, Yan | NXP Semiconductors |

**Technical contributions**

**1. 11-21-392r0 – PE for 4K QAM –** Ron Porat (Broadcom)

**Discussions:**

C: For 11ax, is it using 0us PE for small size RU?

A: Yes.

C: 11ax seems unclear since there are sentences conflict with each other. It says the common Nominal packet padding indicate same PPE threshold for all the RU sizes. But for small size RUs, it says PE is 0.

SP#1:

* Do you support that for 4K QAM over small RU?
	+ Propose to use RU242 nominal packet padding if “EHT PPE Thresholds present = 1”
	+ Use EHT Common Nominal Packet Padding if “EHT PPE Thresholds present = 0”

 Yes/No/Abs: 26/1/13

**CR contributions**

1. **11-21-531r0 – NLTF for UL TB PPDU –** Rui Cao (NXP)

**Discussions:**

C: non-OFDMA UL TB PPDU is UL MU-MIMO mode right?

A: Yes.

C: For TB PPDU triggering 1 STA, is it a non-OFDMA?

SP#2:

* **Do you agree that EHT allows AP to trigger UL TB PPDU in non-OFDMA mode with Number of EHT-LTF to be larger than total Nss?**

 Yes/No/Abs: 34/1/7

1. **11-21-522r0** – **D0.3 Remaining CRs on EHT-LTF of TB PPDU** –Chenchen Liu (Huawei)

**Discussions:**

C: The version you presented is different from the r0 on the server.

A: Yes. I updated to R1 and use the text in the SP passed in 531r0.

CR-SP#1: Do you agree to the resolution of the following CIDs as proposed in 11-21/522r1?

* CIDs: 2939, 2675, 1570

 No objection

1. **11-21-416r1** – **EHT scrambler CR on P802.11be D0.3** –Chenchen Liu (Huawei)

**Discussions:**

C: In 11ax, there are sentence explaining that the output bit of service field after scrambling for CTS frames should be the same. See PP344 Ln33 of 11ax D8.0.

A: If the service field is identical and the scrambler seed is identical, then it will be identical.

C: This is in the MAC session, and MAC don’t have access to the scrambling, only have the access to the Tx Vector that is the reason we choose that text in 11ax.

A: Change to Reject for CID 1572.

C: Add another explanation for this CID: The CTS is transmitted in non-HT format and there are only 7 scrambler initialization bits for non-HT PPDU.

C: For CID 1588, it need reassign. It’s not a resolution. Make this CID TBD and remove the resolution.

C: CID 3070: Discussions on whether the scrambler initialization bits are output first followed by the scrambled bits.

C: AP need to make sure that the first 7 bits of the scrambler output are not all 0. Since this will be the input of the scrambling initialization for the CTS.

C: The first 11 bits scrambler output should be the 11 initialization bits. The original figure is correct.

C: Rather than "initial state" maybe use "selection of scrambling sequence" which works whatever initialization scheme is used

Will update the contribution and bring back for SP.

**Adjourn**

The meeting is adjourned at 12:00 PM ET

**Monday Mar 29th, 2021 19:00 – 22:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, Quantenna/ON Semiconductor) calls the meeting to order at 19:00 PM ET.
2. The Chair follows the agenda in 11-21/385r15.
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. Discussions on the agenda.

Technical Submissions: **Pending SPs**

* + [416r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0416-03-00be-comment-resolutions-for-clause-36-3-12-2-scrambler.doc) Comment Resolutions for Clause 36.3.12.2 Scrambler Chenchen Liu

Technical Submissions: **Comment Resolutions**

* + [424r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0424-03-00be-cr-for-36-3-22-and-annex-e.doc) cr for 36.3.22 and Annex E Ruchen Duan [2 CIDs]
	+ [417r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0417-02-00be-cr-for-clause-36-3-2-3-subcarriers-and-resource-allocation-for-multiple-rus.doc) CR for 36.3.2.3 Subcarriers and resource allocation for multiple RUs Myeongjin Kim [51 CIDs]
	+ [443r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0443-01-00be-segment-parser-cr-on-p802-11be-d0-3-part1.doc) Segment Parser CR on P802.11be D0.3-part1 Bo Gong [10 CIDs]
	+ [464r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0464-00-00be-eht-sig-cr-d03-part-6.doc) EHT-SIG-CR-d03-part-6 Ross Jian Yu [4 CIDs]
	+ [477r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0477-00-00be-comment-resolution-for-non-ht-duplicate-transmission.docx) comment-resolution-for-non-ht-dup-transmission Rui Cao [6 CIDs]
	+ [482r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0482-00-00be-comment-resolution-for-ofdm-modulation.docx) comment-resolution-for-ofdm-modulation Rui Cao [1 CID]
	+ [401r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0401-00-00be-cr-for-cid-1253-and-1306.docx) CR for CID 1253 and 1306 Eunsung Park [2 CIDs]
	+ [496r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0496-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-1.docx) Prop. Res. to Cl. 36 editorial comments - Part 1 Edward Au [30 CIDs]
	+ [497r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0497-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-2.docx) Prop. Res. to Cl. 36 editorial comments - Part 2 Edward Au [40 CIDs]
	+ [503r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0503-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-3.docx) Prop. Res. to Cl. 36 editorial comments - Part 3 Edward Au [34 CIDs]
	+ [516r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0516-00-00be-cr-for-cid-1307-1554.docx) CR for CID 1307 1554 Junghoon Suh [2 CIDs]
	+ [517r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0517-00-00be-cr-for-cid-1329-2788-3279.docx) CR for CID 1329 2788 3279 Junghoon Suh [3 CIDs]
	+ [507r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0507-00-00be-eht-sig-cr-d03-part-7.doc) EHT-SIG-CR-d03-part-7 Ross Jian Yu [3 CIDs]
	+ [495r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0495-01-00be-u-sig-comment-resolution-part-4.docx) U-SIG Comment Resolution Part 4 Alice Chen [15 CIDs]
	+ [520r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0520-00-00be-d0-3-cr-for-construction-of-eht-data-field.doc) D0.3 CR for Construction of EHT Data field Mengshi Hu [10 CIDs]
	+ [295r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0295-01-00be-cr-for-clause-36-3-11-5.docx) CR for clause 36.3.11.5 Dongguk Lim [7 CIDs]
	+ [551r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0551-00-00be-cr-for-cid-1606.docx) CR for CID 1606 Eunsung Park [1 CID]
	+ [566r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0556-00-00be-cr-phy-txrxprocedure-txblock.docx) CR\_PHY\_TxRxProcedure\_TxBlock Xiaogang Chen [13 CIDs]

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 3/29 | Anwyl, Gary | MediaTek Inc. |
| TGbe (PHY) | 3/29 | B, Hari Ram | NXP Semiconductors |
| TGbe (PHY) | 3/29 | Cao, Rui | NXP Semiconductors |
| TGbe (PHY) | 3/29 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 3/29 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 3/29 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 3/29 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 3/29 | Grandhe, Niranjan | NXP Semiconductors |
| TGbe (PHY) | 3/29 | Hart, Brian | Cisco Systems, Inc. |
| TGbe (PHY) | 3/29 | Hsieh, Hung-Tao | MediaTek Inc. |
| TGbe (PHY) | 3/29 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 3/29 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (PHY) | 3/29 | Jeon, Eunsung | SAMSUNG ELECTRONICS |
| TGbe (PHY) | 3/29 | jiang, feng | Apple Inc. |
| TGbe (PHY) | 3/29 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 3/29 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 3/29 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 3/29 | Lee, Wookbong | SAMSUNG |
| TGbe (PHY) | 3/29 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 3/29 | Lin, Zinan | InterDigital, Inc. |
| TGbe (PHY) | 3/29 | LIU, CHENCHEN | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/29 | Liu, Jianhan | MediaTek Inc. |
| TGbe (PHY) | 3/29 | Ma, Li | MediaTek Inc. |
| TGbe (PHY) | 3/29 | Minotani, Jun | Panasonic Corporation |
| TGbe (PHY) | 3/29 | Nakano, Takayuki | Panasonic Corporation |
| TGbe (PHY) | 3/29 | Pare, Thomas | MediaTek Inc. |
| TGbe (PHY) | 3/29 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 3/29 | Puducheri, Srinath | Broadcom Corporation |
| TGbe (PHY) | 3/29 | Schelstraete, Sigurd | ON Semiconductor |
| TGbe (PHY) | 3/29 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 3/29 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/29 | Tian, Bin | Qualcomm Incorporated |
| TGbe (PHY) | 3/29 | Varshney, Prabodh | Nokia |
| TGbe (PHY) | 3/29 | Vermani, Sameer | Qualcomm Incorporated |
| TGbe (PHY) | 3/29 | Wang, Yi-Hsiu | Zeku |
| TGbe (PHY) | 3/29 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 3/29 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 3/29 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 3/29 | YANG, RUI | InterDigital, Inc. |
| TGbe (PHY) | 3/29 | Yang, Steve TS | MediaTek Inc. |
| TGbe (PHY) | 3/29 | yi, yongjiang | Futurewei Technologies |
| TGbe (PHY) | 3/29 | Zhang, Yan | NXP Semiconductors |

**Pending CP SPs:**

1. **11-21-416r3** – **EHT scrambler CR on P802.11be D0.3** –Chenchen Liu (Huawei)

CR-SP#1: Do you agree to the resolution of the following CIDs as proposed in 11-21/416r3?

* CIDs: 1571, 1572, 3070, 2666, 3407, 2659, 1971, 2026, 2412, 2664, 3069, 2665, 3071

 No objection

**CR contributions**

1. **11-21-424r3 – CR for 36.3.22 and Annex E –** Ruchen Duan (Samsung)

**Discussions:**

C: Some Editorial comments.

A: Update in R4.

CR-SP#2: Do you agree to the resolution of the following CIDs as proposed in 11-21/424r4?

* CIDs: 1577, 1956

 No objection

1. **11-21-417r2** – **CR for 36.3.2.3 Subcarriers and resource allocation for multiple RUs** –Myeongjin Kim (Samsung)

**Discussions:**

C: Is the MRUs such as 484+242 optional to AP?

A: The motion only mandate support for non-AP STA.

C: I think AP also need to be capable to transmit these MRUs.

A: We need more discussion on CID1249. Will defer this CID.

C: CID1250, change “operating channel width” to “supported bandwidth”.

C: For CID1250, this sentence is not necessary to me. Change to reject.

A: Need more offline discussion and defer CID 1250.

C: Revise the resolution to CID 1290.

C: CID 1962 and 3275 also need some further discussions.

CR-SP#3: Do you agree to the resolution of the following CIDs as proposed in 11-21/417r3?

* CIDs: 1245, 1247, ~~1249~~, ~~1250~~, 1290, 1293, 1294, 1295, 1299, 1609, ~~1962~~, 1988, 1989, 1990, 1991, 2393, 2394, 2395, 2396, 2397, 2398, 2785, 2786, 2787, 2927, 2928, 2929, 2930, 2931, 3041, 3098, 3154, 3166, 3269, 3270, 3271, 3272, 3273, 3274, ~~3275~~, 1296, 1297, 1298, 2693, 2695, 2696, 2697, 2784, 2946, 3079, 2605
* CIDs 1249, 1250, 1962, 3275 need further discussion.

 No objection

1. **11-21-443r1** – **Segment Parser CR on D0.3 Part 1** –Bo Gong (Huawei)

**Discussions:**

CR-SP#4: Do you agree to the resolution of the following CIDs as proposed in 11-21/443r1?

* CIDs: 1587, 2442, 2443, 2672, 2673, 2817, 2951, 2952, 2953 and 3072.

 No objection

1. **11-21-464r1** – **EHT -SIG CR on D0.3 Part 6** –Ross Jian Yu (Huawei)

**Discussions:**

C: CID 3189, the original text is not wrong. This new text using 4 values to indicate 3 BW seems more confusing.

A: Revise the resolutions to clarify.

CR-SP#5: Do you agree to the resolution of the following CIDs as proposed in 11-21/464r2?

* CIDs: 1410, 3189, 3190, 3191, 2643

 No objection

1. **11-21-477r1** – **CR for section 36.3.14 (Non-HT duplicate transmission)** –Rui Cao (NXP)

**Discussions:**

C: Why is NTx needed in equation in page 3 (36-84)?

A: This is needed for normalization same as preamble portion. NTx is there for preamble but missing for data part in non-HT transmission.

A: NTx is also missing in 11ax and 11ac. May need to submit comment to REVme.

CR-SP#6: Do you agree to the resolution of the following CIDs as proposed in 11-21/477r1?

* CIDs: 1573, 1574, 1575, 1576, 3074, 3118

 No objection

1. **11-21-482r1** – **CR for section 36.3.12.10 (OFDM Modulation)** –Rui Cao (NXP)

**Discussions:**

C: K\_r is the set of pilots, right? Minimum value is the minimum of the tone index?

A: Yes.

CR-SP#7: Do you agree to the resolution of the following CIDs as proposed in 11-21/482r1?

* CID: 3117

 No objection

1. **11-21-401r0** – **CR for CID 1253 and 1306** –Eunsung Park (LGE)

**Discussions:**

C: In 35.4.xx, suggest revising the text to avoid double negative statement. “shall not” to “shall”.

C: Suggest removing the second sentence.

A: Update to r1.

CR-SP#8: Do you agree to the resolution of the following CIDs as proposed in 11-21/401r1?

* CID: 1253, 1306

 No objection

1. **11-21-516r0** – **CR for CID 1307 and 1554** –Junghoon Suh (Huawei)

**Discussions:**

C: Change “EHT STA” to “EHT non-AP STA”

C: “For transmissions” 🡪 “For EHT MU PPDU”

A: Update the text to r1.

CR-SP#9: Do you agree to the resolution of the following CIDs as proposed in 11-21/516r1?

* CID: 1307, 1554

 No objection

1. **11-21-517r0** – **CR for CID 1329, 2788 and 3279** –Junghoon Suh (Huawei)

**Discussions:**

C: “EHT AP non-OFDMA UL MU-MIMO” is a bit strange. Make some editorial change.

A: Updated to r1.

C: MIMO system only have one antenna connector. We should be cautious to use antenna connector.

C: Antenna port seems clear. The comment is complaining using of antennas. Change antenna to antenna port is ok.

Need some offline discussion. Will continue discussion in next call.

**Adjourn**

The meeting is adjourned at 22:00 PM ET

**Thursday April 8th, 2021 10:00 – 12:00 ET**

**Introduction**

1. The Chair (Tianyu Wu, Apple) calls the meeting to order at 10:00 PM ET.
2. Minutes for the call are taken by Alfred Asterjadhi (Qualcomm Inc.)
3. The Chair follows the agenda in 11-21/385r19.
4. The Chair goes through the IPR policy and asks if anyone is aware of any potentially essential patents. Nobody speaks up.
5. The Chair goes through the Copyright policy.
6. The Chair reminds everyone to report their attendance by using IMAT system and by sending an e-mail to Tianyu Wu (Apple) if unable to record attendance via IMAT system.
7. Announcements:
8. Discussions on the agenda.

Technical Submissions: **PDT for fixing TBDs**

* + [157r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0157-01-00be-pdt-effect-of-ch-bandwidth-parameter-on-ppdu-format.docx) PDT-Effect of CH\_BANDWIDTH parameter on PPDU format Yujin Noh
	+ [528r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0528-00-00be-pdt-phy-clause-3-2-definitions-updates.docx) PDT-PHY-Clause 3.2 definitions updates Dongguk Lim

Technical Submissions: **Comment Resolutions**

* + [517r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0517-00-00be-cr-for-cid-1329-2788-3279.docx) CR for CID 1329 2788 3279 Junghoon Suh [3 CIDs]
	+ [507r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0507-00-00be-eht-sig-cr-d03-part-7.doc) EHT-SIG-CR-d03-part-7 Ross Jian Yu [3 CIDs]
	+ [495r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0495-01-00be-u-sig-comment-resolution-part-4.docx) U-SIG Comment Resolution Part 4 Alice Chen [15 CIDs]
	+ [520r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0520-00-00be-d0-3-cr-for-construction-of-eht-data-field.doc) D0.3 CR for Construction of EHT Data field Mengshi Hu [10 CIDs]
	+ [295r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0295-01-00be-cr-for-clause-36-3-11-5.docx) CR for clause 36.3.11.5 Dongguk Lim [7 CIDs]
	+ [551r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0551-01-00be-cr-for-cid-1606.docx) CR for CID 1606 Eunsung Park [1 CID]
	+ [566r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0556-00-00be-cr-phy-txrxprocedure-txblock.docx) CR\_PHY\_TxRxProcedure\_TxBlock Xiaogang Chen [13 CIDs]
	+ [542r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0542-00-00be-segment-parser-cr-on-p802-11be-d0-3-part2.docx) Segment Parser CR on P802.11be D0.3-p2 Bo Gong [2 CIDs]
	+ [543r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0543-00-00be-segment-parser-cr-on-p802-11be-d0-3-part3.docx) Segment Parser CR on P802.11be D0.3-p3 Bo Gong [2 CIDs]
	+ [567r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0567-00-00be-d0-3-cr-for-section-36-3-11-2.docx) D0.3 CR for Section 36.3.11.2 Wook Bong Lee[1 CID]
	+ [540r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0540-02-00be-comment-resolutions-on-10-cids-related-to-clause-36-1-1.docx) CR on 10 CIDs related to Clause 36.1.1 Kanke Wu [10 CIDs]
	+ [584r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0584-00-00be-cr-to-36-2-5-effect-of-ch-bandwidth-parameter-on-ppdu-format.docx) CR to 36.2.5 Yujin Noh [1 CID]
	+ [585r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0585-00-00be-cr-to-36-5-parameters-for-eht-mcss.docx) CR to 36.5 Parameters for EHT-MCSs Yujin Noh [4 CIDs]
	+ [591r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0591-00-00be-cr-for-eht-sig-cc-part-2.docx) CR for EHT-SIG CC part 2 Dongguk Lim [4 CIDs]

Editorial CR Submissions:

* + [496r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0496-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-1.docx) Prop. Res. to Cl. 36 editorial comments - Part 1 Edward Au [30 CIDs]
	+ [497r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0497-01-00be-proposed-resolution-to-clause-36-editorial-comments-part-2.docx) Prop. Res. to Cl. 36 editorial comments - Part 2 Edward Au [40 CIDs]
	+ [503r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0503-01-00be-proposed-resolution-to-clause-36-editorial-comments-part-3.docx) Prop. Res. to Cl. 36 editorial comments - Part 3 Edward Au [34 CIDs]

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 4/8 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/8 | B, Hari Ram | NXP Semiconductors |
| TGbe (PHY) | 4/8 | Cao, Rui | NXP Semiconductors |
| TGbe (PHY) | 4/8 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 4/8 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 4/8 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 4/8 | Gao, Zhigang | Cisco Systems, Inc. |
| TGbe (PHY) | 4/8 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 4/8 | Hart, Brian | Cisco Systems, Inc. |
| TGbe (PHY) | 4/8 | Hsieh, Hung-Tao | MediaTek Inc. |
| TGbe (PHY) | 4/8 | Hu, Mengshi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/8 | Ibrahim, Ahmed | [NV] Ahmed Ibrahim, Samsung Research America |
| TGbe (PHY) | 4/8 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (PHY) | 4/8 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 4/8 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 4/8 | Lansford, James | Qualcomm Incorporated |
| TGbe (PHY) | 4/8 | Lee, Wookbong | SAMSUNG |
| TGbe (PHY) | 4/8 | Leng, Shiyang | Samsung Research America |
| TGbe (PHY) | 4/8 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 4/8 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 4/8 | Lin, Zinan | InterDigital, Inc. |
| TGbe (PHY) | 4/8 | Liu, Jianhan | MediaTek Inc. |
| TGbe (PHY) | 4/8 | Lopez, Miguel | Ericsson AB |
| TGbe (PHY) | 4/8 | Ma, Li | MediaTek Inc. |
| TGbe (PHY) | 4/8 | noh, yujin | Newracom Inc. |
| TGbe (PHY) | 4/8 | Ozpoyraz, Burak | Vestel |
| TGbe (PHY) | 4/8 | Pare, Thomas | MediaTek Inc. |
| TGbe (PHY) | 4/8 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 4/8 | Ratnam, Vishnu | Samsung Research America |
| TGbe (PHY) | 4/8 | Redlich, Oded | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/8 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 4/8 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/8 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/8 | Sun, Bo | ZTE Corporation |
| TGbe (PHY) | 4/8 | Sundman, Dennis | Ericsson AB |
| TGbe (PHY) | 4/8 | Tian, Bin | Qualcomm Incorporated |
| TGbe (PHY) | 4/8 | Vermani, Sameer | Qualcomm Incorporated |
| TGbe (PHY) | 4/8 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 4/8 | Yang, Steve TS | MediaTek Inc. |
| TGbe (PHY) | 4/8 | yi, yongjiang | Futurewei Technologies |
| TGbe (PHY) | 4/8 | Yoo, Homin | LG ELECTRONICS |
| TGbe (PHY) | 4/8 | Yu, Jian | Huawei Technologies Co., Ltd |

**PDT for fixing TBDs:**

1. **11-21-157r1** – **PDT-Effect of CH\_BANDWIDTH parameter on PPDU format** –Yujin Noh (Senscomm)
	1. Chair asks if there is any discussions.
	2. Q: Some questions about the PPDU formats in the Table.
	3. Presenter explains the different cases.

SP#1: Do you agree to include the proposed text in 11-21/157r2 in the next version of the 11be draft?

No discussion.

No objection

1. **11-21-528r0** – **PDT-PHY-Clause 3.2 definitions updates** –Dongguk Lim (LGE)
	1. Chair asks if there is any discussions.
	2. No discussions.

SP#2: Do you agree to include the proposed text in 11-21/528r0 in the next version of the 11be draft?

No discussion.

No objection

**CR contributions**

1. **11-21-517r0 – CR for CID 1329 2788 3279 –** Junghoon Suh (Huawei)

**Discussions:**

C: For CID 1329, the terminology should be antenna or antenna port or physical antenna or antenna connector?

C: Antenna port is a logical concept.

C: There is no clear definition for antenna connector.

C: Suggest removing the green text and determine the terminology later. Use physical antenna port for now.

C: Need to improve REVme definitions for different terms related to antenna port.

Members generally agree that there is a need for a clear definition of Antenna Connector.

SP#3: Do you agree to the resolution of the following CIDs as proposed in 11-21/517r1?

* CIDs: 1329, 2788, 3279

No discussion

No objection.

1. **11-21-507r0** – **EHT-SIG-CR-d03-part-7** –Ross Jian Yu (Huawei)

**Discussions:**

C: STA ID 2046 can’t be used for RU242 and above, so can’t be used for a MU-MIMO allocation. Change the resolution to reject for CID 2645.

A: Updated the resolution.

SP#4: Do you agree to the resolution of the following CIDs as proposed in 11-21/507r1?

* CIDs: 2198, 2644, 2645

No discussion

No objection

1. **11-21-495r2** – **U-SIG Comment Resolution Part 4** –Alice Chen (Qualcomm)

**Discussions:**

C: Why Spatial Reuse 2 is set to same as SR1 in 2.4GHz band with 40MHz bandwidth?

A: Since there is no fixed 40Mhz channelization in 2.4GHz and other STA don’t know which 40.

C: Discussions on the terminology for 20MHz subband. Should we use sub band or subblock?

A: 80MHz subblock is clear. For 20MHz and 40MHz PPDU, we can say it’s a 20MHz or 40MHz subblock. For this field in U-SIG, it’s a little bit different context. We can leave it for later decision.

C: 20/40MHz sub band is in REVmd as well.

SP#5: Do you agree to the resolution of the following CIDs as proposed in 11-21/495r3?

* CIDs: 1352, 1372, 1373, 1563, 1617, 1618, 1619, 1951, 2627, 2634, 2706, 2727, 2801, 2949, 3175

No discussion.

 No objection

1. **11-21-520r0** – **D0.3 CR for Construction of EHT Data field** –Mengshi Hu (Huawei)

**Discussions:**

SP#6: Do you agree to the resolution of the following CIDs as proposed in 11-21/520r0?

* CIDs: 1610, 1644, 1947, 2994, 2995, 2996, 2997, 2998, 2999, 3284

No discussion.

 No objection

1. **11-21-295r2** – **CR for clause 36.3.11.5** –Dongguk Lim (LGE)

**Discussions:**

C: D0.4 pp324 ln 3, it uses L\_DATARATE in TXVECTOR. However, L\_DATARATE is not in TXVECTOR of clause 36.

A: Change to accepted for CID 1345.

C: L\_DATARATE is also not in TXVECTOR in 11ax.

A: Need to submit a comment to REVme as well.

C: Suggest changing to Revised since more content is needed.

A: Will defer CID 1345.

SP#7: Do you agree to the resolution of the following CIDs as proposed in 11-21/295r3?

* CIDs: ~~1345,~~ 2641, 2688, 1342, 2689, 3103, and 3084.
* CID1345 is deferred.

No discussion.

 No objection

**Adjourn**

The meeting is adjourned at 12:00 PM ET

**Monday April 12th, 2021 19:00 – 22:00 ET**

**Introduction**

1. The Chair (Tianyu Wu, Apple) calls the meeting to order at 19:00 PM ET.
2. Minutes for the call are taken by Xiaogang Chen (Intel)
3. The Chair follows the agenda in 11-21/385r21.
4. The Chair goes through the IPR policy and asks if anyone is aware of any potentially essential patents. Nobody speaks up.
5. The Chair goes through the Copyright policy.
6. The Chair reminds everyone to report their attendance by using IMAT system and by sending an e-mail to Tianyu Wu (Apple) if unable to record attendance via IMAT system.
7. Announcements:
8. Discussions on the agenda.

Technical Submissions: **PDT for fixing TBDs**

* + [639r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0639-00-00be-proposed-resolution-of-remaining-tbds-in-36-3-19-4-4-and-36-3-20-3.docx) PDT for Remaining TBDs in 36.3.19.4.4 and 36.3.20.3 Wook Bong Lee
	+ [649r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0649-00-00be-pdt-on-phase-rotation-for-320-mhz-pre-eht-transmission-and-non-ht-duplicate-transmission.docx) PDT on Phase Rotation for 320 MHz Pre-EHT transmission and Non-HT duplicate transmission Chenchen LIU
	+ 157r2 PDT-Effect of CH\_BANDWIDTH parameter on PPDU format Yujin Noh

Technical Submissions: **Comment Resolutions**

* + [551r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0551-01-00be-cr-for-cid-1606.docx) CR for CID 1606 Eunsung Park [1 CID]
	+ [556r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0556-00-00be-cr-phy-txrxprocedure-txblock.docx) CR\_PHY\_TxRxProcedure\_TxBlock Xiaogang Chen [13 CIDs]
	+ [542r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0542-00-00be-segment-parser-cr-on-p802-11be-d0-3-part2.docx) Segment Parser CR on P802.11be D0.3-p2 Bo Gong [2 CIDs]
	+ [543r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0543-00-00be-segment-parser-cr-on-p802-11be-d0-3-part3.docx) Segment Parser CR on P802.11be D0.3-p3 Bo Gong [2 CIDs]
	+ [567r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0567-00-00be-d0-3-cr-for-section-36-3-11-2.docx) D0.3 CR for Section 36.3.11.2 Wook Bong Lee[1 CID]
	+ [540r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0540-02-00be-comment-resolutions-on-10-cids-related-to-clause-36-1-1.docx) CR on 10 CIDs related to Clause 36.1.1 Kanke Wu [10 CIDs]
	+ [584r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0584-00-00be-cr-to-36-2-5-effect-of-ch-bandwidth-parameter-on-ppdu-format.docx) CR to 36.2.5 Yujin Noh [1 CID]
	+ [585r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0585-00-00be-cr-to-36-5-parameters-for-eht-mcss.docx) CR to 36.5 Parameters for EHT-MCSs Yujin Noh [4 CIDs]
	+ [591r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0591-00-00be-cr-for-eht-sig-cc-part-2.docx) CR for EHT-SIG CC part 2 Dongguk Lim [4 CIDs]
	+ [634r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0634-01-00be-d0-3-cr-for-cid-1652-1954-and-2765.doc) D0.3 CR for CID 1652, 1954 and 2765 Mengshi Hu [3 CIDs]
	+ [629r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0629-00-00be-resolutions-for-comments-on-36-3-2-1-part-1.docx) Resolutions-for-comments-on-36.3.2.1-part 1 Yan Xin [9 CIDs]
	+ [298r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0298-02-00be-cr-on-p802-11be-d0-3-clause-36-3-11-8-5-eht-sig.doc) CR on D0.3 clause 36.3.11.8.5 (EHT-SIG) Oded Redlich [13 CIDs]
	+ [304r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0304-00-00be-cr-on-p802-11be-d0-3-preamble-puncturing-clause.doc) CR on D0.3 preamble puncturing claus Oded Redlich [5 CIDs]
	+ [566r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0566-00-00be-comment-resolutions-for-clause-36-3-12-3-coding-part-ii.docx) CR for Clause 36.3.12.3 Coding Part II Yan Zhang [5 CIDs]

Editorial CR Submissions:

* + [496r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0496-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-1.docx) Prop. Res. to Cl. 36 editorial comments - Part 1 Edward Au [30 CIDs]
	+ [497r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0497-01-00be-proposed-resolution-to-clause-36-editorial-comments-part-2.docx) Prop. Res. to Cl. 36 editorial comments - Part 2 Edward Au [40 CIDs]
	+ [503r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0503-01-00be-proposed-resolution-to-clause-36-editorial-comments-part-3.docx) Prop. Res. to Cl. 36 editorial comments - Part 3 Edward Au [34 CIDs]

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 4/12 | An, Song-Haur | INDEPENDENT |
| TGbe (PHY) | 4/12 | Anwyl, Gary | MediaTek Inc. |
| TGbe (PHY) | 4/12 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/12 | B, Hari Ram | NXP Semiconductors |
| TGbe (PHY) | 4/12 | Cao, Rui | NXP Semiconductors |
| TGbe (PHY) | 4/12 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 4/12 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (PHY) | 4/12 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 4/12 | Gao, Zhigang | Cisco Systems, Inc. |
| TGbe (PHY) | 4/12 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 4/12 | Gong, Bo | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/12 | Hart, Brian | Cisco Systems, Inc. |
| TGbe (PHY) | 4/12 | Hsieh, Hung-Tao | MediaTek Inc. |
| TGbe (PHY) | 4/12 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 4/12 | Ibrahim, Ahmed | [NV] Ahmed Ibrahim, Samsung Research America |
| TGbe (PHY) | 4/12 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (PHY) | 4/12 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 4/12 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 4/12 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 4/12 | Lee, Wookbong | SAMSUNG |
| TGbe (PHY) | 4/12 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 4/12 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 4/12 | Liu, Jianhan | MediaTek Inc. |
| TGbe (PHY) | 4/12 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (PHY) | 4/12 | Ma, Li | MediaTek Inc. |
| TGbe (PHY) | 4/12 | Minotani, Jun | Panasonic Corporation |
| TGbe (PHY) | 4/12 | Montreuil, Leo | Broadcom Corporation |
| TGbe (PHY) | 4/12 | Nam, Junyoung | Qualcomm Incorporated |
| TGbe (PHY) | 4/12 | noh, yujin | Newracom Inc. |
| TGbe (PHY) | 4/12 | Orlando, Christian | IEEE STAFF |
| TGbe (PHY) | 4/12 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 4/12 | porat, ron | Broadcom Corporation |
| TGbe (PHY) | 4/12 | Puducheri, Srinath | Broadcom Corporation |
| TGbe (PHY) | 4/12 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 4/12 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/12 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/12 | Sun, Bo | ZTE Corporation |
| TGbe (PHY) | 4/12 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/12 | Varshney, Prabodh | Nokia |
| TGbe (PHY) | 4/12 | Vermani, Sameer | Qualcomm Incorporated |
| TGbe (PHY) | 4/12 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 4/12 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 4/12 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/12 | YANG, RUI | InterDigital, Inc. |
| TGbe (PHY) | 4/12 | Yang, Steve TS | MediaTek Inc. |
| TGbe (PHY) | 4/12 | yi, yongjiang | Futurewei Technologies |
| TGbe (PHY) | 4/12 | Young, Christopher | Broadcom Corporation |
| TGbe (PHY) | 4/12 | Yu, Jian | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/12 | Zhang, Yan | NXP Semiconductors |

**PDT for fixing TBDs:**

1. **11-21-639r1** – **PDT for Remaining TBDs in 36.3.19.4.4 and 36.3.20.3** –Wook Bong Lee (Samsung)

**Discussions:**

C: Some clarification questions to help understanding the 3 options.

C: The unused tone EVM proposed in change #3 need more discussion.

C: The outer part of unused EVM seems fine but the hole between two RUs has different options.

SP#1: Do you agree to include the proposed change #1 #2 and #4 in 11-21/639r1 in the next version of the 11be draft?

No discussion.

No objection

1. **11-21-649r0** – **PDT on Phase Rotation for 320 MHz Pre-EHT transmission and Non-HT duplicate transmission** –Chenchen Liu (Huawei)

**Discussions:**

C: If any 80MHz can multiply by 1 or -1, why need to propose the sequence?

A: This is the recommended one, but people can still use other.

C: Then it seems not a recommended sequence to me.

C: Suggest changing the last sentence which is not very clear.

C: Reorganize the content of this section: firstly introduce the rule of constructing the sequence of 320MHz phase rotation, then use the two sequence of 36-12 as examples.

Will have offline discussion to clean up the text and bring back in next meeting.

**CR contributions**

1. **11-21-551r1 – CR for CID 1606 –** Eunsung Park (LGE)

**Discussions:**

C: Some question to clarify the understanding of the text. No change to the CR.

SP#2: Do you agree to the resolution of the following CIDs as proposed in 11-21/551r1?

* CID: 1606

No discussion

No objection.

1. **11-21-556r1** – **CR\_PHY\_TxRxProcedure\_TxBlock** –Xiaogang Chen (Intel)

**Discussions:**

C: On 1312: For some DCM case, there are 1 bit padding needed. This is missing from the blocks.

A: We can add some text in the subclause to clarify instead of adding a box in the figure.

C: Make Post-FEC PHY padding block larger and include the DCM padding also in this block.

A: I can add a note in the text or diagram.

C: This extra 1-bit padding is just for special case.

A: Reject 1312 for now and we can discussion more in the future.

C: The 1 bit in L-SIG is usually called parity bit.

A: Keep it as CRC for now and update in the next round.

SP#3: Do you agree to the resolution of the following CIDs as proposed in 11-21/556r2?

* CIDs: 1280, 1312, 1314, 1555, 1594, 1945, 1946, 1965, 1966, 3100, 3101, 3196, 3197

No discussion

No objection

1. **11-21-542r0** – **Segment Parser CR on D0.3-p2** –Bo Gong (Huawei)

**Discussions:**

C: Some Editorial change to the document.

A: Update to r1.

SP#4: Do you agree to the resolution of the following CIDs as proposed in 11-21/542r1?

* CIDs: 1411, 1953

No discussion.

 No objection

1. **11-21-543r0** – **Segment Parser CR on D0.3-p3** –Bo Gong (Huawei)

**Discussions:**

C: A number of editorial comments.

A: Revised according to the comments and update to r1.

C: Segment deparser shall cover all RU/MRU sizes. It is not only for DCM case.

C: Segment deparser are different for DCM case and non-DCM case. Need to check whether this text is for DCM or non-DCM case.

C: N\_sd\_i should be “SD” or “sd”?

C: Need some more time to check the equation details.

Defer to next meeting to allow people double check.

1. **11-21-567r0** – **D0.3 CR for Section 36.3.11.2** –Wook Bong Lee (Samsung)

**Discussions:**

C: Option 2 is better.

A: Remove option 1 in the resolution and update to r1.

SP#5: Do you agree to the resolution of the following CID as proposed in 11-21/567r1?

* CID: 3045

No discussion.

 No objection

1. **11-21-540r2** – **CR on 10 CIDs related to Clause 36.1.1** –Kanke Wu (Qualcomm)

**Discussions:**

C: Need better reject reason for the last CID for later LBs.

A: This is acceptable for now and will prepare better reason in future LBs.

SP#6: Do you agree to the resolution of the following CIDs as proposed in 11-21/540r2?

* CIDs: 1241, 2617, 2618, 2619, 2620, 2677, 2678, 2679, 2680, 3039

No discussion.

 No objection

1. **11-21-591r0** – **CR for EHT-SIG CC part 2** –Dongguk Lim (LGE)

**Discussions:**

C: What is the proposed change?

A: There is no change since it’s already done in D0.4.

C: The resolution should be Rejected since no change.

C: According to the tutorial, when the comment is correct but the change was already made by earlier contribution, the resolution should still be revised but note to the editor should be no change.

SP#7: Do you agree to the resolution of the following CIDs as proposed in 11-21/591r0?

* CIDs: 1386, 2733, 2807, 3051

No discussion.

 No objection

**Adjourn**

The meeting is adjourned at 22:00 PM ET

**Thursday April 15th, 2021 10:00 – 12:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, Maxlinear) calls the meeting to order at 10:00 AM ET.
2. Minutes for the call are taken by Tianyu Wu(Apple)
3. The Chair follows the agenda in 11-21/385r23.
4. The Chair goes through the IPR policy and asks if anyone is aware of any potentially essential patents. Nobody speaks up.
5. The Chair goes through the Copyright policy.
6. 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.
7. Announcements:
8. Discussions on the agenda.

Technical Submissions: **PDT for fixing TBDs**

* + [157r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0157-02-00be-pdt-effect-of-ch-bandwidth-parameter-on-ppdu-format.docx) PDT-Effect of CH\_BANDWIDTH parameter on PPDU format Yujin Noh
	+ [649r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0649-00-00be-pdt-on-phase-rotation-for-320-mhz-pre-eht-transmission-and-non-ht-duplicate-transmission.docx) PDT on Phase Rotation for 320 MHz Pre-EHT transmission and Non-HT duplicate transmission Chenchen LIU [SP]
	+ [659r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0659-00-00be-resolution-for-tbd-in-ofdm-modulation.docx) Resolution for TBD in OFDM modulation Rui Cao

Editorial CR Submissions:

* + [496r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0496-00-00be-proposed-resolution-to-clause-36-editorial-comments-part-1.docx) Prop. Res. to Cl. 36 editorial comments - Part 1 Edward Au [30 CIDs]
	+ [497r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0497-01-00be-proposed-resolution-to-clause-36-editorial-comments-part-2.docx) Prop. Res. to Cl. 36 editorial comments - Part 2 Edward Au [40 CIDs]
	+ [503r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0503-01-00be-proposed-resolution-to-clause-36-editorial-comments-part-3.docx) Prop. Res. to Cl. 36 editorial comments - Part 3 Edward Au [34 CIDs]

Technical Submissions: **Comment Resolutions**

* + [543r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0543-01-00be-segment-parser-cr-on-p802-11be-d0-3-part3.docx) Segment Parser CR on P802.11be D0.3-p3 Bo Gong [2 CIDs-SP]
	+ [584r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0584-00-00be-cr-to-36-2-5-effect-of-ch-bandwidth-parameter-on-ppdu-format.docx) CR to 36.2.5 Yujin Noh [1 CID]
	+ [585r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0585-00-00be-cr-to-36-5-parameters-for-eht-mcss.docx) CR to 36.5 Parameters for EHT-MCSs Yujin Noh [4 CIDs]
	+ [634r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0634-01-00be-d0-3-cr-for-cid-1652-1954-and-2765.doc) D0.3 CR for CID 1652, 1954 and 2765 Mengshi Hu [3 CIDs]
	+ [629r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0629-00-00be-resolutions-for-comments-on-36-3-2-1-part-1.docx) Resolutions-for-comments-on-36.3.2.1-part 1 Yan Xin [9 CIDs]
	+ [298r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0298-02-00be-cr-on-p802-11be-d0-3-clause-36-3-11-8-5-eht-sig.doc) CR on D0.3 clause 36.3.11.8.5 (EHT-SIG) Oded Redlich [13 CIDs]
	+ [304r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0304-00-00be-cr-on-p802-11be-d0-3-preamble-puncturing-clause.doc) CR on D0.3 preamble puncturing claus Oded Redlich [5 CIDs]
	+ [566r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0566-00-00be-comment-resolutions-for-clause-36-3-12-3-coding-part-ii.docx) CR for Clause 36.3.12.3 Coding Part II Yan Zhang [5 CIDs]

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 4/15 | Anwyl, Gary | MediaTek Inc. |
| TGbe (PHY) | 4/15 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/15 | Bahn, Christy | IEEE STAFF |
| TGbe (PHY) | 4/15 | Barr, David | MaxLinear |
| TGbe (PHY) | 4/15 | Choi, Jinsoo | LG ELECTRONICS |
| TGbe (PHY) | 4/15 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 4/15 | Duan, Ruchen | SAMSUNG |
| TGbe (PHY) | 4/15 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 4/15 | Gao, Zhigang | Cisco Systems, Inc. |
| TGbe (PHY) | 4/15 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 4/15 | Gong, Bo | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/15 | Hart, Brian | Cisco Systems, Inc. |
| TGbe (PHY) | 4/15 | Hsieh, Hung-Tao | MediaTek Inc. |
| TGbe (PHY) | 4/15 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 4/15 | Ibrahim, Ahmed | [NV] Ahmed Ibrahim, Samsung Research America |
| TGbe (PHY) | 4/15 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (PHY) | 4/15 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 4/15 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 4/15 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 4/15 | Lansford, James | Qualcomm Incorporated |
| TGbe (PHY) | 4/15 | Lee, Wookbong | SAMSUNG |
| TGbe (PHY) | 4/15 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 4/15 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 4/15 | LIU, CHENCHEN | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/15 | Liu, Der-Zheng | Realtek Semiconductor Corp. |
| TGbe (PHY) | 4/15 | Memisoglu, Ebubekir | Istanbul Medipol University; Vestel |
| TGbe (PHY) | 4/15 | Montreuil, Leo | Broadcom Corporation |
| TGbe (PHY) | 4/15 | Ng, Boon Loong | Samsung Research America |
| TGbe (PHY) | 4/15 | noh, yujin | Senscomm |
| TGbe (PHY) | 4/15 | OZDEN ZENGIN, OZLEM | Vestel |
| TGbe (PHY) | 4/15 | Pare, Thomas | MediaTek Inc. |
| TGbe (PHY) | 4/15 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 4/15 | Redlich, Oded | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/15 | Schelstraete, Sigurd | ON Semiconductor |
| TGbe (PHY) | 4/15 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 4/15 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/15 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/15 | Tian, Bin | Qualcomm Incorporated |
| TGbe (PHY) | 4/15 | Turkmen, Halise | Istanbul Medipol University; Vestel |
| TGbe (PHY) | 4/15 | Van Zelst, Allert | Qualcomm Incorporated |
| TGbe (PHY) | 4/15 | Verenzuela, Daniel | Sony Corporation |
| TGbe (PHY) | 4/15 | Vermani, Sameer | Qualcomm Incorporated |
| TGbe (PHY) | 4/15 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 4/15 | YANG, RUI | InterDigital, Inc. |
| TGbe (PHY) | 4/15 | Yang, Steve TS | MediaTek Inc. |

**PDT for fixing TBDs:**

1. **11-21-157r4** – **PDT Effect of CH\_BANDWIDTH parameter on PPDU format** –Yujin Noh (Senscomm)

**Discussions:**

No discussion.

SP#1: Do you agree to accept the proposed draft text in 11-21/157r4 for inclusion in the next draft of 802.11be?

No discussion.

No objection

1. **11-21-649r1** – **PDT on Phase Rotation for 320 MHz Pre-EHT transmission and Non-HT duplicate transmission** –Chenchen Liu (Huawei)

**Discussions:**

C: For the 2 examples, just keep\phi\_1 \phi\_2 \phi\_3 or keep the phase rotation for entire 8 segments.

A: Will keep the phase rotation for all 8 segments in the examples.

C: Some editorial comments.

A: Update to r2.

C: Suggest giving a range for \phi\_1 \phi\_2 \phi\_3 such as +1/-1.

A: Already specified in later part.

C: Comment to delete the example equations and just keep \phi\_1 \phi\_2 \phi\_3.

A: Easier for people to read with the equations.

SP#3: Do you agree to accept the proposed draft text in 11-21/649r2 for inclusion in the next draft of 802.11be?

No discussion.

No objection

1. **11-21-659r0** – **Resolution for TBD in OFDM modulation** –Rui Cao (NXP)

**Discussions:**

No Discussion.

SP#2: Do you agree to accept the proposed draft text in 11-21/659r0 for inclusion in the next draft of 802.11be?

No discussion.

No objection

**Editorial CR contributions**

1. **11-21-496r0 – Prop. Res. to Cl. 36 editorial comments - Part 1** **–** Edward Au (Huawei)

**Discussions:**

C: Author made some editorial change and update to r1.

SP#5: Do you agree to the resolutions of the following CIDs as proposed in 11-21/496r1?

* CIDs: 1265, 2687, 2943, 1608, 1961, 2621, 1958, 1959, 2766, 2780, 1284, 2359, 1291, 2926, 1292, 3099, 2024, 2025, 2694, 1246, 1248, 1300, 1301, 1303, 1316, 1319, 1318, 1334, 1338, 1346.

No discussion

No objection.

1. **11-21-497r1** – **Prop. Res. to Cl. 36 editorial comments - Part 2** –Edward Au (Huawei)

**Discussions:**

No discussions.

SP#6: Do you agree to the resolutions of the following CIDs as proposed in 11-21/497r1?

* CIDs: 1333, 2624, 2625, 2667, 2772, 2220, 3119, 1997, 1589, 2954, 2658, 2757, 1388, 2616, 2441, 2709, 3112, 3111, 2735, 2737, 2736, 1405, 2809, 1392, 2734, 2771, 2770, 1363, 1374, 1375, 1376, 1382, 1385, 1389, 1401, 1404, 2360, 1643, 2614.

No discussion

No objection

1. **11-21-503r1** – **Prop. Res. to Cl. 36 editorial comments - Part 3** –Edward Au (Huawei)

**Discussions:**

No discussions.

SP#7: Do you agree to the resolutions of the following CIDs as proposed in 11-21/503r1?

* CIDs: 1313, 1315, 1310, 1348, 1387, 1399, 2699, 2767, 2660, 2947, 3167, 2639, 3082, 3083, 2640, 3085, 2768, 2626, 2725, 2726, 3174, 3178, 2769, 1255, 3080, 1409, 3104, 2650, 2651, 2692, 2702, 2703

No discussion.

 No objection

**CR contributions**

1. **11-21-543r2 – Segment Parser CR on P802.11be D0.3-p3 –** Bo Gong (Huawei)

**Discussions:**

C: Questions on (xx-xx2). Lower l start from 0, seems not correct.

A: l=0 case is specially handled in following text.

C: What is SD\_q? should it be SD,q? \_q is not for index.

A: This is used in other places in existing spec.

SP#4: Do you agree to the resolutions of the following CIDs as proposed in 11-21/543r2?

* CID: 2993, 1588

No discussion

No objection.

1. **11-21-584r0** – **CR to 36.2.5** –Yujin Noh (Senscomm)

**Discussions:**

No discussion.

SP#8: Do you agree to the resolution of the following CID as proposed in 11-21/584r0?

* CIDs: 1541

No discussion

No objection

1. **11-21-585r1** – **CR to 36.5 Parameters for EHT-MCSs** –Yujin Noh (Senscomm)

**Discussions:**

No discussion.

SP#9: Do you agree to the resolution of the following CID as proposed in 11-21/585r1?

* CIDs: 1995, 2844, 2845 and 2846.

No discussion

No objection

1. **11-21-634r1** – **D0.3 CR for CID 1652, 1954 and 2765** –Mengshi Hu (Huawei)

**Discussions:**

C: The author made some editorial change during the presentation and update to r2.

C: Request to defer CID 1652 to check with MAC side.

A: Will defer CID 1652.

C: Why not use the reserved value in Default PE Duration field instead of defining a new field?

A: The field is also used by HE STAs.

C: Why use 3 bits to indicate 4 values?

A: There are 5 values.

C: Better not introduce more TBDs.

SP#10: Do you agree to the resolutions of the following CIDs as proposed in 11-21/634r2?

* CIDs: 1954, 2765.
* Note: CID 1652 need further discussion.

No discussion

No objection

1. **11-21-629r0** – **Resolutions for comments on Subclause 36.3.2.1 – part 1** –Yan Xin (Huawei)

**Discussions:**

C: Some editorial change and update to r1.

SP#11: Do you agree to the resolutions of the following CIDs as proposed in 11-21/629r1?

* CIDs: 1242, 1281, 1282, 1283, 2690, 2691, 2944, 2945, 3163.

No discussion

No objection

**Adjourn**

The meeting is adjourned at 12:00 PM ET

**Monday April 19th, 2021 19:00 – 22:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, Maxlinear) calls the meeting to order at 19:00 AM ET.
2. Minutes for the call are taken by Tianyu Wu(Apple)
3. The Chair follows the agenda in 11-21/385r26.
4. The Chair goes through the IPR policy and asks if anyone is aware of any potentially essential patents. Nobody speaks up.
5. The Chair goes through the Copyright policy.
6. 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.
7. Announcements:
8. Discussions on the agenda.

Technical Submissions: **Pending SPs**

* + [639r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0639-02-00be-proposed-resolution-of-remaining-tbds-in-36-3-19-4-4-and-36-3-20-3.docx)Proposed Resolution of Remaining TBDs in 36.3.19.4.4 and 36.3.20.3 [SP on Part 3] Wook Bong Lee

Technical Submissions: **PDT for fixing TBDs**

* + [679r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0679-00-00be-pdt-for-phy-mib-variable-related-to-242ru-support-in-annex-c.docx) PDT for PHY MIB Variable Related to 242RU Support in Annex C Eunsung Park
	+ [678r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0678-00-00be-resolution-for-tbd-in-ldpc-tone-mapper.docx) Resolution for TBD in LDPC Tone Mapper Jianhan Liu [1 CID/1TBD]
	+ [680r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0680-00-00be-text-change-for-usage-of-1x-eht-ltf.docx) Text change for usage of 1x EHT-LTF Jianhan Liu
	+ [653r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0653-00-00be-solutions-for-tbds-in-packet-extension.docx) Solutions for TBDs in Packet extension Yan Zhang
	+ [685r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0685-00-00be-pdt-eht-ppe-thresholds-field-update.docx) PDT- EHT PPE Thresholds Field Update Mengshi Hu
	+ [686r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0686-00-00be-pdt-nominal-packet-padding-values-selection-rules-update-tbd.docx) PDT- Nominal Packet Padding Values Selection Rules Update TB Mengshi Hu
	+ [635r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0635-00-00be-cr-d0-3-clause-36-2.docx) cr-d0-3-clause-36-2 Bo Sun [31 CIDs/77TBDs]
	+ [636r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0636-00-00be-cr-d0-3-clause-36-2-misc.docx) cr-d0-3-clause-36-2-misc Bo Sun [5 CIDs/18TBDs]

Technical Submissions: **Comment Resolutions**

* + [489r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0489-02-00be-cr-on-cid-1279.docx) CR on CID 1279 Yan Xin [1 CID]
	+ [298r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0298-02-00be-cr-on-p802-11be-d0-3-clause-36-3-11-8-5-eht-sig.doc) CR on D0.3 clause 36.3.11.8.5 (EHT-SIG) Oded Redlich [13 CIDs]
	+ [304r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0304-00-00be-cr-on-p802-11be-d0-3-preamble-puncturing-clause.doc) CR on D0.3 preamble puncturing claus Oded Redlich [5 CIDs]
	+ [566r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0566-00-00be-comment-resolutions-for-clause-36-3-12-3-coding-part-ii.docx) CR for Clause 36.3.12.3 Coding Part II Yan Zhang [5 CIDs]
	+ [675r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0675-00-00be-resolutions-for-comments-on-36-3-2-1-part-2.docx) Resolutions-for-comments-on-36.3.2.1-part 2 Shimi Shilo [10 CIDs]
	+ [677r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0677-00-00be-cr-for-cid-1347-and-1948.docx) CR for CID 1347 and 1948 Dongguk Lim [2 CIDs]

Technical Submissions:

* + [618r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0618-01-00be-evm-and-sfo-sto.pptx) EVM and SFO/STO Brian Hart

**Attendance**

The following people recorded their attendance for this call:

|  |  |  |  |
| --- | --- | --- | --- |
| TGbe (PHY) | 4/19 | An, Song-Haur | INDEPENDENT |
| TGbe (PHY) | 4/19 | Anwyl, Gary | MediaTek Inc. |
| TGbe (PHY) | 4/19 | B, Hari Ram | NXP Semiconductors |
| TGbe (PHY) | 4/19 | Baik, Eugene | Qualcomm Incorporated |
| TGbe (PHY) | 4/19 | Barr, David | MaxLinear |
| TGbe (PHY) | 4/19 | Cao, Rui | NXP Semiconductors |
| TGbe (PHY) | 4/19 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (PHY) | 4/19 | Dogukan, Ali | Vestel |
| TGbe (PHY) | 4/19 | feng, Shuling | MediaTek Inc. |
| TGbe (PHY) | 4/19 | Ghaderipoor, Alireza | MediaTek Inc. |
| TGbe (PHY) | 4/19 | Gong, Bo | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/19 | Huang, Lei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (PHY) | 4/19 | Ibrahim, Ahmed | [NV] Ahmed Ibrahim, Samsung Research America |
| TGbe (PHY) | 4/19 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (PHY) | 4/19 | jiang, feng | Apple Inc. |
| TGbe (PHY) | 4/19 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (PHY) | 4/19 | Kim, Myeong-Jin | SAMSUNG |
| TGbe (PHY) | 4/19 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (PHY) | 4/19 | Lee, Wookbong | SAMSUNG |
| TGbe (PHY) | 4/19 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (PHY) | 4/19 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (PHY) | 4/19 | Lin, Zinan | InterDigital, Inc. |
| TGbe (PHY) | 4/19 | Liu, Jianhan | MediaTek Inc. |
| TGbe (PHY) | 4/19 | Ma, Li | MediaTek Inc. |
| TGbe (PHY) | 4/19 | Minotani, Jun | Panasonic Corporation |
| TGbe (PHY) | 4/19 | Montreuil, Leo | Broadcom Corporation |
| TGbe (PHY) | 4/19 | Nam, Junyoung | Qualcomm Incorporated |
| TGbe (PHY) | 4/19 | Park, Eunsung | LG ELECTRONICS |
| TGbe (PHY) | 4/19 | Puducheri, Srinath | Broadcom Corporation |
| TGbe (PHY) | 4/19 | Redlich, Oded | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/19 | Schelstraete, Sigurd | ON Semiconductor |
| TGbe (PHY) | 4/19 | Shellhammer, Stephen | Qualcomm Incorporated |
| TGbe (PHY) | 4/19 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/19 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/19 | Sun, Bo | ZTE Corporation |
| TGbe (PHY) | 4/19 | Tian, Bin | Qualcomm Incorporated |
| TGbe (PHY) | 4/19 | Tian, Tao | Unisoc Comm. |
| TGbe (PHY) | 4/19 | Varshney, Prabodh | Nokia |
| TGbe (PHY) | 4/19 | Vermani, Sameer | Qualcomm Incorporated |
| TGbe (PHY) | 4/19 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (PHY) | 4/19 | Wu, Tianyu | Apple, Inc. |
| TGbe (PHY) | 4/19 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/19 | YANG, RUI | InterDigital, Inc. |
| TGbe (PHY) | 4/19 | Yang, Steve TS | MediaTek Inc. |
| TGbe (PHY) | 4/19 | Yu, Jian | Huawei Technologies Co., Ltd |
| TGbe (PHY) | 4/19 | ZEGRAR, Salah Eddine | Istanbul Medipol University; Vestel |

**Pending SPs:**

1. **11-21-639r2** – **Proposed Resolution of Remaining TBDs in 36.3.19.4.4 and 36.3.20.3** –Wook Bong Lee (Samsung)

**Discussions:**

C: Suggested some editorial change.

A: Revised and update to r3.

C: Based on SP results, remove option 1 and make instruction to editor for option 2.

A: Update to R4.

SP#1: Which option do you prefer in 639r3 for change #3?

No discussion.

Opt1/Opt2/A: 6/24/14

SP#2: Do you agree to accept the proposed text in 639r4 for inclusion in the next draft of 802.11be?

No discussion.

Y/N/A: 27/1/0

Including 3 Yes votes from bridge.

**PDT for fixing TBDs:**

1. **11-21-679r0** – **PDT for PHY MIB Variable Related to 242RU Support in Annex C** –Eunsung Park (LGE)

**Discussions:**

No discussion.

SP#3: Do you agree to accept the proposed draft text in 11-21/679r0 for inclusion in the next draft of 802.11be?

No discussion.

No objection

1. **11-21-678r0** – **Resolution for TBD in LDPC tone mapper** –Jianhan Liu (MTK)

**Discussions:**

No discussion.

SP#4: Do you agree to the proposed resolution to CID 1972 as proposed in 11-21/678r0?

No discussion.

No objection

1. **11-21-680r0** – **Text change for usage of 1x EHT-LTF** –Jianhan Liu (MTK)

**Discussions:**

C: Hurting performance in what sense?

A: In ax time, there are results showing for SU transmission, 1x LTF has worse performance comparing to 2xLTF.

A: We define 1x LTF for UL MU-MIMO just because difficulty in CFO estimation. For SU transmission with long data, PER performance with 1x LTF is not as good as 2x LTF.

C: 1xLTF still has its benefit. I don’t think we need to have the restriction.

A: We disallow 1xLTF for DL SU transmission and UL SU is same case and we should limit use of 1x LTF same as for DL SU.

A: This is a recommendation for the AP to use better choice for the LTFs

C: Suggest deleting the “Note”. Change STAs to users.

A: Revised and update to R1.

C: For 1 user in TB PPDU, can 1x LTF still be used?

A: Yes. It’s transparent to STA. If AP trigger only one STA with 1xLTF, STA will respond with 1xLTF since the STA don’t know how many STAs are triggered.

C: Prefer to keep the “Note”.

A: Fine with me.

SP#5: Do you agree to accept the proposed draft text in 11-21/680r1 for inclusion in the next draft of 802.11be?

No discussion.

Y/N/Abs: 22/8/11

1. **11-21-653r1** – **Solutions for TBDs in Packet extension** –Yan Zhang (NXP)

**Discussions:**

C: This is a Rx capability to me but seems to be Tx capability from your explanation.

A: This is AP’s decision based on Rx’s capability.

C: For 11ax, power boost is introduced to allow different power allocation among different users. This proposed text is aligned with 11ax.

C: r is index of user not RU right?

A: Not necessarily, r is RU index and u is user index.

SP#6: Do you agree to accept the proposed draft text in 11-21/653r1 for inclusion in the next draft of 802.11be?

No discussion.

No objection

1. **11-21-685r0** – **PDT- EHT PPE Thresholds Field Update** –Mengshi Hu (Huawei)

**Discussions:**

C: What do you mean by “always need to set to 0”?

A: Means STA tells AP no matter what RU is allocated, AP can use the nominal packet padding.

C: Suggest some text revise on this sentence.

A: Revised and update to r1.

SP#7: Do you agree to accept the proposed draft text in 11-21/685r1 for inclusion in the next draft of 802.11be?

No discussion.

No objection

1. **11-21-635r0** – **cr-d0-3-clause-36-2 –** Bo Sun (ZTE)

**Discussions:**

C: Does the INACTIVE\_SUBCHANNELS come from trigger frame? Should not have EHT\_TB

A: Revised and update to r1.

C: Need to double check the definition for L\_LENGTH field.

C: L\_LENGTH need special treatment for trigger frame, need to add 2. Do we use L\_LENGTH directly or use the value from TXVECTOR and add 2?

C: Change “calculated” to “copied” or “obtained”.

A: Revise “L\_LENGTH” follow the commenters’ suggestion.

C: CBW320-1, CBW320-2 should be just CBW320. Non-HT duplicate don’t differentiate CBW320-1 and 2.

C: For EHT\_MU and EHT\_TB PPDU, also should just have CBW320.

C: MAC should indicate PHY -1, -2 for 320Mhz?

A: MAC don’t have the knowledge of which 320MHz since 320MHz-1 and -2 are defined in PHY.

C: PHY also don’t have the information.

A: PHY does based on the center frequency.

C: So PHY need to figure out which 320MHz channel by itself? That’s not super clear to me.

The group agree to keep 320-1 and 320-2 for now for EHT packets and have further discussion later. For non-HT PPDU, only keep 320 and remove -1,-2.

C: NUM\_SS should be 8 for r1, not 16. For all other places we define max NSS as 8.

A: Ok.

Will update the document and bring back in next meeting.

**Adjourn**

The meeting is adjourned at 22:00 PM ET