IEEE P802.11  
Wireless LANs

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| Minutes 802.11 be PHY ad hoc Telephone Conferences,  Mar 2021 - May 2021 | | | | |
| Date: 2021-03-29 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Tianyu Wu | Apple |  |  | tianyu@apple.com |

Abstract

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

* Mar 17, 2021
* Mar 18, 2021
* Mar 22, 2021
* Mar 25, 2021
* Mar 29, 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]
  + [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]
  + [331r1](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]
  + [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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  + [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]
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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