IEEE P802.11  
Wireless LANs

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| TGbe July to September 2021 teleconference minutes | | | | |
| Date: 2021-08-04 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Dennis Sundman | Ericsson |  |  | dennis.sundman@ericsson.com |
| Matthew Fischer | Broadcom |  |  |  |

Abstract

This document contains the minutes for July to September 2021 TGbe teleconferences.

Revisions:

* Rev0: First revision of the document.
* Rev1:
  + Includes minutes from 11th conf call, held on August 11 at 10:00 EDT
    - Minutes taken by Matthew Fischer
* Rev2: Added minutes for 14th and 17th conf call. Also added references to minutes 12-13th and 15-16th conference calls.
* Rev3: Participation July 28th. Added minutes to the the 20th conference call. Added references to calls 18-19.
* Rev4: Added minutes to the 22nd conference call. Added references to 21st conference call.
* Rev5: Added participation list to the joint meeting 8th of September. Added references to the 23rd conf. call. Updated references.

# 5th Conf. Call: July 21 (10:00–12:00 ET)

Only MAC.

* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 6th Conf. Call: July 22 (10:00–12:00 ET)

Only MAC.

* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 7th Conf. Call: July 26 (10:00–12:00 ET)

Split PHY and MAC.

* PHY: <https://mentor.ieee.org/802.11/dcn/21/11-21-1324-01-00be-minutes-for-tgbe-phy-ad-hoc-cc-july-2021-to-sept-2021.docx>
* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 8th Conf. Call: July 28 (10:00–12:00 ET)

1. The Chair, Alfred Asterjadhi (Qualcomm), calls the meeting to order at 10:02 ET. The Chair notifies that the agenda is in [1090r13](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-13-00be-july-sept-tgbe-teleconference-agenda.docx).
2. IEEE 802 and 802.11 IPR policy and procedure
   1. Patent Policy: Ways to inform IEEE:
      * Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents. **Nobody speaks/writes up**.

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

* 1. The Chair reviews: Copyright Policy: Participants are advised that
     + IEEE SA’s copyright policy is described in [Clause 7](https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7) of the IEEE SA Standards Board Bylaws and [Clause 6.1](https://standards.ieee.org/about/policies/opman/sect6.html) of the IEEE SA Standards Board Operations Manual;
     + Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy
  2. The Chair reviews: Patent, Participation, Copyright and policy related subclause: Please refer to *Patent And Procedures* in [1090r13](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-13-00be-july-sept-tgbe-teleconference-agenda.docx).

1. Attendance reminder.

* Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
* Please record your attendance during the conference call by using the IMAT system:
  + 1) login to [imat](https://imat.ieee.org/attendance), 2) select “802.11 Telecons (<Month>)” entry, 3) select “C/LM/WG802.11 Attendance” entry, 4) click “TGbe <MAC/PHY/Joint> conference call that you are attending.
* If you are unable to record the attendance via [IMAT](https://imat.ieee.org/attendance) then please send an e-mail to Dennis Sundman ([dennis.sundman@ericsson.com](mailto:dennis.sundman@ericsson.com)) and Alfred Asterjadhi ([aasterja@qti.qualcomm.com](mailto:aasterja@qti.qualcomm.com))
* Please ensure that the following information is listed correctly when joining the call: "[voter status] First Name Last Name (Affiliation)"
  + AbidRabbu, Shaima' Istanbul Medipol University; Vestel
  + Aboulmagd, Osama Huawei Technologies Co., Ltd
  + Ahmad, Tufail Koc University, vestel
  + Al Falujah, Iyad ON Semiconductor
  + Amalladinne, Vamsi Qualcomm Incorporated
  + An, Song-Haur INDEPENDENT
  + Ansley, Carol Cox Communications Inc.
  + Asterjadhi, Alfred Qualcomm Incorporated
  + Au, Kwok Shum Huawei Technologies Co., Ltd
  + B, Hari Ram NXP Semiconductors
  + Baek, SunHee LG ELECTRONICS
  + Bankov, Dmitry IITP RAS
  + Barr, David MaxLinear
  + Cao, Rui NXP Semiconductors
  + Carney, William Sony Group Corporation
  + CHAN, YEE Facebook
  + CHERIAN, GEORGE Qualcomm Incorporated
  + Chitrakar, Rojan Panasonic Asia Pacific Pte Ltd.
  + CHUN, JINYOUNG LG ELECTRONICS
  + Chung, Chulho SAMSUNG
  + Coffey, John Realtek Semiconductor Corp.
  + Ding, Yanyi Panasonic Corporation
  + Dong, Xiandong Xiaomi Inc.
  + Duan, Ruchen SAMSUNG
  + Erceg, Vinko Broadcom Corporation
  + feng, Shuling MediaTek Inc.
  + Ghaderipoor, Alireza MediaTek Inc.
  + Gu, Xiangxin Unisoc
  + Hart, Brian Cisco Systems, Inc.
  + Hervieu, Lili Cable Television Laboratories Inc. (CableLabs)
  + Ho, Duncan Qualcomm Incorporated
  + Hu, Chunyu Facebook
  + Hu, Shengquan MediaTek Inc.
  + Huang, Lei Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Huang, Po-Kai Intel Corporation
  + Kamel, Mahmoud InterDigital, Inc.
  + Kedem, Oren MaxLinear
  + Khorov, Evgeny IITP RAS
  + Kim, Jeongki Ofinno
  + Kim, Sang Gook LG ELECTRONICS
  + Kim, Sanghyun WILUS Inc
  + Kishida, Akira Nippon Telegraph and Telephone Corporation (NTT)
  + Klein, Arik Huawei Technologies Co., Ltd
  + Ko, Geonjung WILUS Inc.
  + Lee, Richard R Lee Associates
  + Lee, Wookbong SAMSUNG
  + Levy, Joseph InterDigital, Inc.
  + Li, Jialing Qualcomm Technologies, Inc.
  + liu, baosheng longsailing
  + Lou, Hanqing InterDigital, Inc.
  + Lu, kaiying MediaTek Inc.
  + Lu, Liuming Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Lumbatis, Kurt CommScope, Inc.
  + Luo, Chaoming Beijing OPPO telecommunications corp., ltd.
  + Ma, Li MediaTek Inc.
  + Martinez Vazquez, Marcos MaxLinear Corp; MAXLINEAR INC
  + Max, Sebastian Ericsson AB
  + McCann, Stephen Huawei Technologies Co., Ltd
  + Memisoglu, Ebubekir Istanbul Medipol University; Vestel
  + Montemurro, Michael Huawei Technologies Co., Ltd
  + Naik, Gaurang Qualcomm Incorporated
  + NANDAGOPALAN, SAI SHANKAR Infineon Technologies
  + Nayak, Peshal Samsung Research America
  + noh, yujin Senscomm
  + Ozbakis, Basak VESTEL
  + Palayur, Saju Maxlinear Inc
  + PANG, KUN Honor Device Co.,Ltd.
  + Pare, Thomas MediaTek Inc.
  + Park, Eunsung LG ELECTRONICS
  + Patil, Abhishek Qualcomm Incorporated
  + Petrick, Albert InterDigital, Inc.
  + Pushkarna, Rajat Panasonic Asia Pacific Pte Ltd.
  + Ratnam, Vishnu Samsung Research America
  + Rosdahl, Jon Qualcomm Technologies, Inc.
  + Ryu, Kiseon Ofinno
  + Satrasala, Rajeshwari NXP Semiconductors
  + Shilo, Shimi Huawei Technologies Co., Ltd
  + Solaija, Muhammad Sohaib Istanbul Medipol University; Vestel
  + SUH, JUNG HOON Huawei Technologies Co., Ltd
  + Sun, Bo ZTE Corporation
  + Sun, Li-Hsiang Sony Corporation
  + Sun, Yanjun Qualcomm Incorporated
  + Sundman, Dennis Ericsson AB
  + Tian, Bin Qualcomm Incorporated
  + Tsodik, Genadiy Huawei Technologies Co., Ltd
  + Tsujimaru, Yuki Canon Inc.
  + Van Zelst, Allert Qualcomm Incorporated
  + Verenzuela, Daniel Sony Corporation
  + VIGER, Pascal Canon Research Centre France
  + Wang, Chao Chun MediaTek Inc.
  + Wang, Huizhao Quantenna Communications, Inc.
  + Wang, Lei Futurewei Technologies
  + Wang, Sean Shanghai Longsailing Semiconductor Co. Ltd.
  + Wei, Dong NXP Semiconductors
  + Wu, Kanke Qualcomm Incorporated
  + Wullert, John Perspecta Labs
  + Xin, Yan Huawei Technologies Co., Ltd
  + Yang, Jay Nokia
  + YANG, RUI InterDigital, Inc.
  + Yano, Kazuto Advanced Telecommunications Research Institute International (ATR)
  + Yee, James MediaTek Inc.
  + yi, yongjiang Spreadtrum Communication USA Inc.
  + Yoon, Jeonghwan LG ELECTRONICS
  + Yu, Jian Huawei Technologies Co., Ltd
  + ZEGRAR, Salah Eddine Istanbul Medipol University; Vestel
  + Zhang, Yan NXP Semiconductors
  + Zhou, Pei Guangdong OPPO Mobile Telecommunications Corp.,Ltd

1. Agenda.

Discussion:

C: Can you remove 1247.

C: 1233 is r3.

Agenda approved with unanimous consent.

1. Technical submissions: CRs
   1. [1103r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1103-00-00be-cc36-cr-on-9-4-1-67a-d-d101-part1.doc) CR on 9.4.1.67a-d part1 Genadiy Tsodik [8C 15’]

Genadiy reviews the CIDs. Some live updates.

SP:

Do you agree to the resolution of the following CIDs as proposed in 1103r1?

* + - 4331, 4594, 4889, 4890, 4891, 4892, 5025, 5397.

Discussion: None.

Result: Supported with no objection from the group.

* 1. [1169r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1169-01-00be-cc36-cr-for-he-variant-user-info-field.docx) CR for HE Variant User Info Field Mengshi Hu [9C 15’]

Mengshi reviews the CIDs. Some live updates.

SP:

Do you agree to the resolution of the following CIDs as proposed in 1169r2?

* + - 4324, 4344, 4345, 4346, 7899, 7900, 7901, 7903.

Note: Changes in r2 are same as r1 except that the note to editor is replaced with instructions to editor and the shall not disappears from the proposed note.

Discussion: None.

Result: Straw poll supported with no objection from the group.

* 1. [1105r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1105-00-00be-cc36-cr-on-9-3-1-19-d101.doc) CR on 9.3.1.19 NDP Announcement frame form. Genadiy Tsodik [5C 20’]

Genediy reviews the CIDs. Some live updates.

* 1. [1233r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1233-00-00be-cc36-cr-on-9-3-1-22-1-1.docx) CC on 9.3.1.22.1.1 Lei Huang [6C 10’]

Lei reviews the CIDs. Some live updates.

SP: Do you agree to the resolution of the following CIDs as proposed in 1233r3?

* + - 4501, 4808, 5791, 6689, 6690, 6691.

Discussion: No discussion.

Result: Straw poll supported with no objection from the group.

1. Technical submissions.
   1. [1672r2](https://mentor.ieee.org/802.11/dcn/20/11-20-1672-02-00be-ul-beamforming-for-tb-ppdus.pptx) UL Beamforming for TB PPDUs Shimi Shilo [Q&A-15’]

Shimi summarizes the presentation.

Discussion:

C: What does the SNR in 16 correspond to in this figure?

A: These are simulations for UL MU-MIMO. These are not fixed SNR. But average SNR per STA is the same.

1. AoB: None.
2. Adjourned at 12:00.

# 9th Conf. Call: July 29 (10:00–12:00 ET)

Only MAC.

* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 10th Conf. Call: August 09 (19:00–21:00 ET)

Split PHY and MAC.

* PHY: <https://mentor.ieee.org/802.11/dcn/21/11-21-1324-01-00be-minutes-for-tgbe-phy-ad-hoc-cc-july-2021-to-sept-2021.docx>
* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 11th Conf. Call: August 11 (10:00–12:00 ET)

1. The Chair, Alfred Asterjadhi (Qualcomm), introduces himself and calls the meeting to order at 10:00 ET.
   1. The Chair informs the attendees that the agenda for the meeting is found in [1090r17](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-17-00be-july-sept-tgbe-teleconference-agenda.docx).
   2. The Chair notes that the secretary, Dennis Sundman, is not present at the meeting and therefore, for this meeting, minutes will be taken by Vice Chair Matthew Fischer (Broadcom)
      * Matthew Fischer indicates his presence and readiness to record minutes
2. IEEE 802 and 802.11 IPR policy and procedure
   1. Patent Policy: Ways to inform IEEE:
      * Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents.

Per these rules, the Chair verbally requests that:

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

No one responds.

* 1. The Chair reviews the Copyright Policy by stating that meeting Participants are advised that:
     + IEEE SA’s copyright policy is described in [Clause 7](https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7) of the IEEE SA Standards Board Bylaws and [Clause 6.1](https://standards.ieee.org/about/policies/opman/sect6.html) of the IEEE SA Standards Board Operations Manual;
     + Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy
  2. The Chair reviews: Patent, Participation, Copyright and policy related subclause: Please refer to *Patent And Procedures* in [1090r17](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-17-00be-july-sept-tgbe-teleconference-agenda.docx).

1. Attendance reminder.

* Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
* Please record your attendance during the conference call by using the IMAT system:
  + 1) login to [imat](https://imat.ieee.org/attendance), 2) select “802.11 Telecons (<Month>)” entry, 3) select “C/LM/WG802.11 Attendance” entry, 4) click “TGbe <MAC/PHY/Joint> conference call that you are attending.
* If you are unable to record the attendance via [IMAT](https://imat.ieee.org/attendance) then please send an e-mail to Dennis Sundman ([dennis.sundman@ericsson.com](mailto:dennis.sundman@ericsson.com)) and Alfred Asterjadhi ([aasterja@qti.qualcomm.com](mailto:aasterja@qti.qualcomm.com)) and Matthew Fischer [matthew.fischer@broadcom.com](mailto:matthew.fischer@broadcom.com)
* Please ensure that the following information is listed correctly when joining the call: "[voter status] First Name Last Name (Affiliation)"
  + AbidRabbu, Shaima' Istanbul Medipol University; Vestel
  + Aboulmagd, Osama Huawei Technologies Co., Ltd
  + Ajami, Abdel Karim Qualcomm Incorporated
  + Al Falujah, Iyad ON Semiconductor
  + An, Song-Haur INDEPENDENT
  + Anwyl, Gary MediaTek Inc.
  + Asterjadhi, Alfred Qualcomm Incorporated
  + B, Hari Ram NXP Semiconductors
  + Baek, SunHee LG ELECTRONICS
  + Bahn, Christy IEEE STAFF
  + baron, stephane Canon Research Centre France
  + Barr, David MaxLinear
  + Boldy, David Broadcom Corporation
  + Carney, William Sony Group Corporation
  + CHAN, YEE Facebook
  + Chemrov, Kirill IITP RAS
  + Cheng, Paul MediaTek Inc.
  + CHERIAN, GEORGE Qualcomm Incorporated
  + Chitrakar, Rojan Panasonic Asia Pacific Pte Ltd.
  + Chu, Liwen NXP Semiconductors
  + CHUN, JINYOUNG LG ELECTRONICS
  + Ciochina, Dana Sony Corporation
  + Coffey, John Realtek Semiconductor Corp.
  + Das, Subir Perspecta Labs Inc
  + Dong, Xiandong Xiaomi Inc.
  + Duan, Ruchen SAMSUNG
  + Fang, Yonggang Mediatek
  + Gan, Ming Huawei Technologies Co., Ltd
  + Ghaderipoor, Alireza MediaTek Inc.
  + Gu, Xiangxin Unisoc
  + Han, Jonghun SAMSUNG
  + Han, Zhiqiang ZTE Corporation
  + Hart, Brian Cisco Systems, Inc.
  + Ho, Duncan Qualcomm Incorporated
  + Hu, Chunyu Facebook
  + Hu, Shengquan MediaTek Inc.
  + Huang, Lei Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Huang, Po-Kai Intel Corporation
  + Ibrahim, Ahmed Samsung Research America
  + Jang, Insun LG ELECTRONICS
  + Kain, Carl USDoT; Noblis, Inc.
  + Kamel, Mahmoud InterDigital, Inc.
  + Kim, Jeongki Ofinno
  + Kim, Myeong-Jin SAMSUNG
  + kim, namyeong LG ELECTRONICS
  + Kim, Sang Gook LG ELECTRONICS
  + Kim, Sanghyun WILUS Inc
  + Kim, Youhan Qualcomm Incorporated
  + Kishida, Akira Nippon Telegraph and Telephone Corporation (NTT)
  + Klein, Arik Huawei Technologies Co., Ltd
  + Ko, Geonjung WILUS Inc.
  + Koundourakis, Michail Samsung Cambridge Solution Centre
  + Lalam, Massinissa SAGEMCOM BROADBAND SAS
  + Lee, Nancy Signify
  + Levitsky, Ilya IITP RAS
  + Levy, Joseph InterDigital, Inc.
  + Li, Jialing Qualcomm Technologies, Inc.
  + Lim, Dong Guk LG ELECTRONICS
  + Lin, Zinan InterDigital, Inc.
  + Liu, Der-Zheng Realtek Semiconductor Corp.
  + Liu, Jianhan MediaTek Inc.
  + Lou, Hanqing InterDigital, Inc.
  + Lu, kaiying MediaTek Inc.
  + Lu, Liuming Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Luo, Chaoming Beijing OPPO telecommunications corp., ltd.
  + Martinez Vazquez, Marcos MaxLinear Corp; MAXLINEAR INC
  + Max, Sebastian Ericsson AB
  + McCann, Stephen Huawei Technologies Co., Ltd
  + Memisoglu, Ebubekir Istanbul Medipol University; Vestel
  + Montemurro, Michael Huawei Technologies Co., Ltd
  + Naik, Gaurang Qualcomm Incorporated
  + Nezou, Patrice Canon Research Centre France
  + Ng, Boon Loong Samsung Research America
  + noh, yujin Senscomm
  + Palayur, Saju Maxlinear Inc
  + PANG, KUN Honor Device Co.,Ltd.
  + Park, Eunsung LG ELECTRONICS
  + Park, Minyoung Intel Corporation
  + Patil, Abhishek Qualcomm Incorporated
  + Patwardhan, Gaurav Hewlett Packard Enterprise
  + Petrick, Albert InterDigital, Inc.
  + Pushkarna, Rajat Panasonic Asia Pacific Pte Ltd.
  + Ratnam, Vishnu Samsung Research America
  + Rosdahl, Jon Qualcomm Technologies, Inc.
  + Salman, Hanadi Istanbul Medipol University; VESTEL
  + Schelstraete, Sigurd MaxLinear
  + Sethi, Ankit NXP Semiconductors
  + Shafin, Rubayet Samsung Research America
  + Shilo, Shimi Huawei Technologies Co., Ltd
  + Stanley, Dorothy Hewlett Packard Enterprise
  + SUH, JUNG HOON Huawei Technologies Co., Ltd
  + Sun, Bo ZTE Corporation
  + Sun, Li-Hsiang Sony Corporation
  + Sun, Yanjun Qualcomm Incorporated
  + THOUMY, Francois Canon
  + Tian, Bin Qualcomm Incorporated
  + Tsodik, Genadiy Huawei Technologies Co., Ltd
  + Tsujimaru, Yuki Canon Inc.
  + Varshney, Prabodh Nokia
  + Verenzuela, Daniel Sony Corporation
  + Wang, Chao Chun MediaTek Inc.
  + Wang, Huizhao Quantenna Communications, Inc.
  + Wang, Lei Futurewei Technologies
  + Wang, Sean Shanghai Longsailing Semiconductor Co. Ltd.
  + Wei, Dong NXP Semiconductors
  + Wu, Kanke Qualcomm Incorporated
  + Wu, Tianyu Apple, Inc.
  + Xin, Yan Huawei Technologies Co., Ltd
  + Yang, Jay Nokia
  + YANG, RUI InterDigital, Inc.
  + Yang, Steve TS MediaTek Inc.
  + Yano, Kazuto Advanced Telecommunications Research Institute International (ATR)
  + Yee, James MediaTek Inc.
  + yi, yongjiang Spreadtrum Communication USA Inc.
  + Yu, Jian Huawei Technologies Co., Ltd
  + Zhang, Yan NXP Semiconductors
  + Zhou, Pei Guangdong OPPO Mobile Telecommunications Corp.,Ltd

1. Agenda: (gray items removed, pink items added, from original agenda proposed in [1090r17](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-17-00be-july-sept-tgbe-teleconference-agenda.docx))
   1. Motions: [1982r34](https://mentor.ieee.org/802.11/dcn/20/11-20-1982-34-00be-tgbe-motions-list-for-teleconferences-part-2.pptx)
   2. Technical Submissions**: CRs**
      * [1105r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1105-02-00be-cc36-cr-on-9-3-1-19-d101.doc) CC36 CR on 9.3.1.19-d101 (NDPAframe format) Genadiy Tsodik [SP-5C 15’]
      * [1059r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1059-00-00be-comment-resolution-for-cc37.docx) Comment Resolution for CC37 Sigurd Schelstraete [57C 40’]
      * [706r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0706-04-00be-tgbe-coexistence-assessment-document.docx) TGbe Coexistence Assessment Document Sigurd Schelstraete [0C 15’]
      * 1281r0 cc36-cr-for-cids-in-clause-35-5-2 Zinan Lin [21C 25’]
      * [1243r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1243-00-00be-cc36-cr-for-cid-6841-6842-6843.docx) CR for CID 6841 6842 6843 Zinan Lin [3C 15’]
      * [1250r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1250-00-00be-d1-0-cr-for-section-35-5.docx) CR for Section 35.5 Wook Bong Lee [4C 15’]
      * [1237r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1237-00-00be-d1-0-cr-for-section-9-2-5-2-and-9-3-1-19.docx) CR for Section 9.2.5.2 and 9.3.1.19 Wook Bong Lee [32C 30’]
   3. Technical Submissions:
      * [1672r2](https://mentor.ieee.org/802.11/dcn/20/11-20-1672-02-00be-ul-beamforming-for-tb-ppdus.pptx) UL Beamforming for TB PPDUs Shimi Shilo [SP-10’]
   4. AoB:

Discussion:

C: Please remove the contributions from Wookbong (1250r0, 1237r0), as he is unable to attend

Agenda approved with unanimous consent.

1. Motions, see [1982r34](https://mentor.ieee.org/802.11/dcn/20/11-20-1982-34-00be-tgbe-motions-list-for-teleconferences-part-2.pptx)
   1. Motion 226
      * Chair describes the contents of the motion
      * Moved by Edward Au
      * Seconded by Abhishek Patel
      * Discussion
        + None
      * Vote
        + Chair asks for objection to approval by unanimous consent
        + No objection, motion is approved
   2. Motion 227
      * Chair describes the contents of the motion
      * Moved by Edward Au
      * Seconded by Rajat Pushkarna
      * Discussion
        + None
      * Vote
        + Chair asks for objection to approval by unanimous consent
        + No objection, motion is approved
   3. Motion 228
      * Chair describes the contents of the motion
      * Moved by Stephen McCann
      * Seconded by Bin Tian
      * Discussion
        + None
      * Vote
        + Chair asks for objection to approval by unanimous consent
        + No objection, motion is approved
   4. Motion 229
      * Chair describes the contents of the motion
      * Moved by Michael Montemurro
      * Seconded by Bin Tian
      * Discussion
        + None
      * Vote
        + Chair asks for objection to approval by unanimous consent
        + No objection, motion is approved
   5. Motion 230
      * Chair describes the contents of the motion
      * Moved by Edward Au
      * Seconded by Lei Huang
      * Discussion
        + None
      * Vote
        + Chair asks for objection to approval by unanimous consent
        + No objection, motion is approved
2. Technical submissions: CRs
3. [1105r4](https://mentor.ieee.org/802.11/dcn/21/11-21-1105-04-00be-cc36-cr-on-9-3-1-19-d101.doc) CC36 CR on 9.3.1.19-d101 (NDPAframe format) Genadiy Tsodik

Presenter notes that r1 had been reviewed in a previous meeting. Presenter reviews changes from the previously presented version.

Discussion:

Q: this uses the last encoding value for the NDPA type, how does this allow for any future variants to be defined?

A: that’s a question for the group, this document is not changing that aspect

Q: all sounding FB in one TXOP, so token is not needed, could use token to indicate a different sounding purpose, e.g. EHT v future variants

A: you’re proposing a means to provide for future variants?

Q: Yes

Q: propose to remove VHT/HE Ranging in the first paragraph

A: agree

Changes based on comments create a revision r5

SP:

Do you agree to the resolution of the following CIDs as proposed in [1105r5](https://mentor.ieee.org/802.11/dcn/21/11-21-1105-05-00be-cc36-cr-on-9-3-1-19-d101.doc)?

* + - 4146, 8262, 4148, 5083, 5084, 6005, 5787

Result: Supported with no objection from the group.

1. [1059r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1059-00-00be-comment-resolution-for-cc37.docx) Comment Resolution for CC37 Sigurd Schelstraete

These are comments on the Coexistence Assessment document

Presenter reviews the document

Document edited during the discussion to r1

Discussion:

No questions

SP:

Do you agree to the resolution of the following CIDs of CC37 as proposed in [1059r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1059-01-00be-comment-resolution-for-cc37.docx)?- Editorial: 6, 26, 27, 35, 38, 39, 51, 52, 53- Out of Scope: 10, 11, 12, 13, 14, 15, 16, 17, 18- References: 5, 19, 20, 21, 28, 31, 54, 55, 56- Naming: 29, 32, 34, 36, 37, 41, 42, 43, 44, 45, 47, 48, 49, 50- Remaining: 1, 2, 3, 4, 7, 8, 9, 22, 23, 24, 25, 30, 33, 40, 46, 57

Discussion on the straw poll?

None

Result: Straw poll supported with no objection from the group.

1. [1281r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1281-00-00be-cc36-cr-for-cids-in-clause-35-5-2.docx) cc36-cr-for-cids-in-clause-35-5-2 Zinan Lin

Presenter reviews the document

Document edited during the discussion to r1

Discussion:

SP deferred to allow time to review r1

1. [1289r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1289-00-00be-cc-36-cr-for-9-6-34-2.docx) cc-36-cr-for-9-6-34-2 Xiangxin Gu

Presenter reviews the document

Discussion:

None.

SP:

Do you agree to the resolution of the following CIDs as proposed in [1289r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1289-00-00be-cc-36-cr-for-9-6-34-2.docx)?

* + - 6078, 7744

Result: Supported with no objection from the group.

1. Technical submissions (not CID resolution)
   1. [1672r2](https://mentor.ieee.org/802.11/dcn/20/11-20-1672-02-00be-ul-beamforming-for-tb-ppdus.pptx) UL Beamforming for TB PPDUs Shimi Shilo

Presenter reviews the document

Topic: TXBF for UL Trigger based MU is difficult, proposal to make it simpler

Discussion:

None.

SP:

Do you support to include a protocol which enables beamforming for triggered PPDUs in 11be?

Note: this is a Rel 2 feature

Y/N/A = 41/23/22

Presenter requests that people with questions please communicate those to the presenter.

1. AoB:
   1. Zinan proposes running SP on [1281r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1281-01-00be-cc36-cr-for-cids-in-clause-35-5-2.docx)
      * Chair proposes a modification to the agenda to add a review of [1281r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1281-01-00be-cc36-cr-for-cids-in-clause-35-5-2.docx) and to run an SP based on that document
        + No objection to a modification to the agenda

Chair and presenter review [1281r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1281-01-00be-cc36-cr-for-cids-in-clause-35-5-2.docx)

SP:

Do you agree to the resolution of the following CIDs as proposed in [1281r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1281-01-00be-cc36-cr-for-cids-in-clause-35-5-2.docx)?

* + - 6838, 6839, 6840, 6841, 6842, 6843, 6844, 6845, 6846, 6847
    - 6848, 6849, 6850, 6851, 7923, 7924, 8364, 8365, 8366, 8367
    - 8368

Result: Supported with no objection from the group.

* 1. Chair again asks if there is any other business
     + None noted

1. Adjourned at 11:58.

# 12th Conf. Call: August 12 (10:00–12:00 ET)

Only MAC.

* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 13th Conf. Call: August 16 (19:00–21:00 ET)

Split PHY and MAC.

* PHY: <https://mentor.ieee.org/802.11/dcn/21/11-21-1324-01-00be-minutes-for-tgbe-phy-ad-hoc-cc-july-2021-to-sept-2021.docx>
* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 14th Conf. Call: August 18 (10:00–12:00 ET)

1. The Chair, Alfred Asterjadhi (Qualcomm), calls the meeting to order at 10:01 ET. The Chair notifies that the agenda is in [1090r22](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-22-00be-july-sept-tgbe-teleconference-agenda.docx).
2. IEEE 802 and 802.11 IPR policy and procedure
3. Patent Policy: Ways to inform IEEE:
   * + Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
     + Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
     + Speak up now and respond to this Call for Potentially Essential Patents. **Nobody speaks/writes up**.

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

1. The Chair reviews: Copyright Policy: Participants are advised that
   * + IEEE SA’s copyright policy is described in [Clause 7](https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7) of the IEEE SA Standards Board Bylaws and [Clause 6.1](https://standards.ieee.org/about/policies/opman/sect6.html) of the IEEE SA Standards Board Operations Manual;
     + Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy
2. The Chair reviews: Patent, Participation, Copyright and policy related subclause: Please refer to *Patent And Procedures* in [1090r22](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-22-00be-july-sept-tgbe-teleconference-agenda.docx).
3. Attendance reminder.

* Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
* Please record your attendance during the conference call by using the IMAT system:
  + 1) login to [imat](https://imat.ieee.org/attendance), 2) select “802.11 Telecons (<Month>)” entry, 3) select “C/LM/WG802.11 Attendance” entry, 4) click “TGbe <MAC/PHY/Joint> conference call that you are attending.
* If you are unable to record the attendance via [IMAT](https://imat.ieee.org/attendance) then please send an e-mail to Dennis Sundman ([dennis.sundman@ericsson.com](mailto:dennis.sundman@ericsson.com)) and Alfred Asterjadhi ([aasterja@qti.qualcomm.com](mailto:aasterja@qti.qualcomm.com))
* Please ensure that the following information is listed correctly when joining the call: "[voter status] First Name Last Name (Affiliation)"
  + Aboulmagd, Osama Huawei Technologies Co., Ltd
  + Ajami, Abdel Karim Qualcomm Incorporated
  + Al Falujah, Iyad ON Semiconductor
  + An, Song-Haur INDEPENDENT
  + Ansley, Carol Cox Communications Inc.
  + Asterjadhi, Alfred Qualcomm Incorporated
  + Au, Kwok Shum Huawei Technologies Co., Ltd
  + B, Hari Ram NXP Semiconductors
  + Bankov, Dmitry IITP RAS
  + baron, stephane Canon Research Centre France
  + Barr, David MaxLinear
  + Bluschke, Andreas Signify
  + Chemrov, Kirill IITP RAS
  + Choi, Jinsoo LG ELECTRONICS
  + CHUN, JINYOUNG LG ELECTRONICS
  + Chung, Chulho SAMSUNG
  + Ciochina, Dana Sony Corporation
  + Coffey, John Realtek Semiconductor Corp.
  + de Vegt, Rolf Qualcomm Incorporated
  + Dong, Xiandong Xiaomi Inc.
  + Duan, Ruchen SAMSUNG
  + Erceg, Vinko Broadcom Corporation
  + Fang, Yonggang Mediatek
  + feng, Shuling MediaTek Inc.
  + Fischer, Matthew Broadcom Corporation
  + Gao, Ning Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Gu, Xiangxin Unisoc
  + GUIGNARD, Romain Canon Research Centre France
  + Han, Jonghun SAMSUNG
  + Hervieu, Lili Cable Television Laboratories Inc. (CableLabs)
  + Ho, Duncan Qualcomm Incorporated
  + Hsieh, Hung-Tao MediaTek Inc.
  + Hu, Shengquan MediaTek Inc.
  + Huang, Po-Kai Intel Corporation
  + Ibrahim, Ahmed Samsung Research America
  + Kakani, Naveen Qualcomm Incorporated
  + Kamel, Mahmoud InterDigital, Inc.
  + Khorov, Evgeny IITP RAS
  + Kim, Jeongki Ofinno
  + Kim, Myeong-Jin SAMSUNG
  + kim, namyeong LG ELECTRONICS
  + Kim, Sang Gook LG ELECTRONICS
  + Kim, Sanghyun WILUS Inc
  + Kim, Youhan Qualcomm Incorporated
  + Kishida, Akira Nippon Telegraph and Telephone Corporation (NTT)
  + Klein, Arik Huawei Technologies Co., Ltd
  + Ko, Geonjung WILUS Inc.
  + Koundourakis, Michail Samsung Cambridge Solution Centre
  + Lee, Hong Won LG ELECTRONICS
  + Lee, Nancy Signify
  + Levitsky, Ilya IITP RAS
  + Levy, Joseph InterDigital, Inc.
  + Li, Jialing Qualcomm Technologies, Inc.
  + Li, Yapu Guangdong OPPO Communications Co. LTD
  + Li, Yunbo Huawei Technologies Co., Ltd
  + Lim, Dong Guk LG ELECTRONICS
  + liu, baosheng longsailing
  + Liu, Der-Zheng Realtek Semiconductor Corp.
  + Lorgeoux, Mikael Canon Research Centre France
  + Lou, Hanqing InterDigital, Inc.
  + Lu, kaiying MediaTek Inc.
  + Lu, Liuming Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Lumbatis, Kurt CommScope, Inc.
  + Luo, Chaoming Beijing OPPO telecommunications corp., ltd.
  + Martinez Vazquez, Marcos MaxLinear Corp; MAXLINEAR INC
  + Max, Sebastian Ericsson AB
  + McCann, Stephen Huawei Technologies Co., Ltd
  + Nayak, Peshal Samsung Research America
  + Nezou, Patrice Canon Research Centre France
  + Ng, Boon Loong Samsung Research America
  + noh, yujin Senscomm
  + Ouchi, Masatomo Canon
  + Ozbakis, Basak VESTEL
  + PANG, KUN Honor Device Co.,Ltd.
  + Pare, Thomas MediaTek Inc.
  + Park, Eunsung LG ELECTRONICS
  + Patwardhan, Gaurav Hewlett Packard Enterprise
  + Pushkarna, Rajat Panasonic Asia Pacific Pte Ltd.
  + Ratnam, Vishnu Samsung Research America
  + Schelstraete, Sigurd MaxLinear
  + Sevin, Julien Canon Research Centre France
  + Shilo, Shimi Huawei Technologies Co., Ltd
  + Stanley, Dorothy Hewlett Packard Enterprise
  + SUH, JUNG HOON Huawei Technologies Co., Ltd
  + Sun, Bo ZTE Corporation
  + Sun, Yanjun Qualcomm Incorporated
  + Sundman, Dennis Ericsson
  + Van Zelst, Allert Qualcomm Incorporated
  + Varshney, Prabodh Nokia
  + Wang, Chao Chun MediaTek Inc.
  + Wang, Hao Tencent
  + Wang, Huizhao Quantenna Communications, Inc.
  + Wang, Lei Futurewei Technologies
  + Wang, Sean Shanghai Longsailing Semiconductor Co. Ltd.
  + Wei, Dong NXP Semiconductors
  + Wu, Kanke Qualcomm Incorporated
  + Wu, Tianyu Apple, Inc.
  + Yang, Steve TS MediaTek Inc.
  + Yano, Kazuto Advanced Telecommunications Research Institute International (ATR)
  + Yee, James MediaTek Inc.
  + yi, yongjiang Spreadtrum Communication USA Inc.
  + Yoon, Jeonghwan LG ELECTRONICS
  + Yu, Jian Huawei Technologies Co., Ltd
  + Zhang, Yan NXP Semiconductors
  + Zhou, Pei Guangdong OPPO Mobile Telecommunications Corp.,Ltd

1. Announcements: No announcements.
2. Agenda. The chair asks for comments on the agenda.
   1. C: The last two CRs, can you change them to r1?
   2. C: No motions today, is that correct? – Yes

Agenda approved with unanimous consent.

1. Technical Submissions**: CRs**
   1. [1250r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1250-00-00be-d1-0-cr-for-section-35-5.docx) CR for Section 35.5 Wook Bong Lee [4C 10’]

Wook Bong goes through his CRs.

SP: Do you agree to the resolution of the following CIDs as in [1250r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1250-00-00be-d1-0-cr-for-section-35-5.docx):

* + - 7081, 7933, 7934, 7935

Supported with no objection from the group.

* 1. [1237r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1237-01-00be-d1-0-cr-for-section-9-2-5-2-and-9-3-1-19.docx) CR for Section 9.2.5.2 and 9.3.1.19 Wook Bong Lee [32C 30’]

Wook Bong goes through his CRs. Some live updates.

SP: Do you agree to the resolution of the following CIDs as proposed in [1237r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1237-02-00be-d1-0-cr-for-section-9-2-5-2-and-9-3-1-19.docx)

* + - 5537, 5393, 6006, 5506, 8079, 6931, 7918, 5788, 4806, 5314
    - 5538, 5789, 8080, 5790, 6007, 6008, 7473, 6009, 4871
    - 7389, 7390, 3595, 7022, 7921, 8157, 4126, 5396
    - 8303

Straw poll supported with no objection from the group.

* 1. [1104r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1104-01-00be-cc36-cr-on-9-4-1-67a-d-d101-part2.doc) CR-on-9.4.1.67a-d-d101-part2 Genadiy Tsodik [10C 15’]

Genadiy goes through the CRs. Some live comments and updates.

SP: Do you agree to the resolution of the following CIDs as proposed in [1104r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1104-02-00be-d1-0-cr-for-section-9-2-5-2-and-9-3-1-19.docx).

* + - 5085, 5398, 5676, 6083, 6084, 6085, 6086, 6087, 6088, 6089.

Straw poll supported with no objection from the group.

* 1. [1299r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1299-01-00be-cc36-cr-bqr-for-320mhz.docx) CC36 CR BQR for 320MHz Yunbo Li [3C 15’]

Yunbo goes through the CRs. Some live updates. Particularly some discussion regarding what should be in R1 and what should go into R2.

SP: Do you agree to the following:

The followings apply for BQR Control subfields in A-Control subfield in R1.

* When there are two BQR control subfields in A-Control subfield, the 1st BQR Control is used to indicate the primary 160 MHz, the 2nd BQR Control is used to indicate the secondary 160 MHz.
* When there is one BQR control subfield in A-Control subfield, the BQR Control is used to indicate the primary 160 MHz.

Result: Y/N/A/No-answer: 34/23/27/45.

1. AoB: Out of time.
2. Meeting adjourned at 12:04.

# 15th Conf. Call: August 19 (10:00–12:00 ET)

Only MAC.

* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 16th Conf. Call: August 23 (19:00–21:00 ET)

Split PHY and MAC.

* PHY: <https://mentor.ieee.org/802.11/dcn/21/11-21-1324-01-00be-minutes-for-tgbe-phy-ad-hoc-cc-july-2021-to-sept-2021.docx>
* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 17th Conf. Call: August 25 (10:00–12:00 ET)

1. The Chair, Alfred Asterjadhi (Qualcomm), calls the meeting to order at 10:01 ET. The Chair notifies that the agenda is in [1090r27](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-27-00be-july-sept-tgbe-teleconference-agenda.docx).
2. IEEE 802 and 802.11 IPR policy and procedure
3. Patent Policy: Ways to inform IEEE:
   * + Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
     + Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
     + Speak up now and respond to this Call for Potentially Essential Patents. **Nobody speaks/writes up**.

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

1. The Chair reviews: Copyright Policy: Participants are advised that
   * + IEEE SA’s copyright policy is described in [Clause 7](https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7) of the IEEE SA Standards Board Bylaws and [Clause 6.1](https://standards.ieee.org/about/policies/opman/sect6.html) of the IEEE SA Standards Board Operations Manual;
     + Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy
2. The Chair reviews: Patent, Participation, Copyright and policy related subclause: Please refer to *Patent And Procedures* in [1090r22](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-22-00be-july-sept-tgbe-teleconference-agenda.docx).
3. Attendance reminder.

* Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
* Please record your attendance during the conference call by using the IMAT system:
  + 1) login to [imat](https://imat.ieee.org/attendance), 2) select “802.11 Telecons (<Month>)” entry, 3) select “C/LM/WG802.11 Attendance” entry, 4) click “TGbe <MAC/PHY/Joint> conference call that you are attending.
* If you are unable to record the attendance via [IMAT](https://imat.ieee.org/attendance) then please send an e-mail to Dennis Sundman ([dennis.sundman@ericsson.com](mailto:dennis.sundman@ericsson.com)) and Alfred Asterjadhi ([aasterja@qti.qualcomm.com](mailto:aasterja@qti.qualcomm.com))
* Please ensure that the following information is listed correctly when joining the call: "[voter status] First Name Last Name (Affiliation)"
  + Ahmad, Tufail Koc University, vestel
  + Ajami, Abdel Karim Qualcomm Incorporated
  + Akhmetov, Dmitry Intel Corporation
  + Al Falujah, Iyad ON Semiconductor
  + An, Song-Haur INDEPENDENT
  + Ansley, Carol Cox Communications Inc.
  + Asterjadhi, Alfred Qualcomm Incorporated
  + Au, Kwok Shum Huawei Technologies Co., Ltd
  + Aygul, Mehmet Vestel
  + B, Hari Ram NXP Semiconductors
  + Baek, SunHee LG ELECTRONICS
  + Bahn, Christy IEEE STAFF
  + Bankov, Dmitry IITP RAS
  + baron, stephane Canon Research Centre France
  + Barr, David MaxLinear
  + Chemrov, Kirill IITP RAS
  + Cheng, Paul MediaTek Inc.
  + CHERIAN, GEORGE Qualcomm Incorporated
  + Chitrakar, Rojan Panasonic Asia Pacific Pte Ltd.
  + Choi, Jinsoo LG ELECTRONICS
  + Chu, Liwen NXP Semiconductors
  + CHUN, JINYOUNG LG ELECTRONICS
  + Chung, Chulho SAMSUNG
  + Ciochina, Dana Sony Corporation
  + de Vegt, Rolf Qualcomm Incorporated
  + Dong, Xiandong Xiaomi Inc.
  + Duan, Ruchen SAMSUNG
  + Erceg, Vinko Broadcom Corporation
  + Fang, Yonggang Mediatek
  + feng, Shuling MediaTek Inc.
  + Fischer, Matthew Broadcom Corporation
  + Gao, Ning Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Gu, Xiangxin Unisoc
  + Han, Zhiqiang ZTE Corporation
  + Handte, Thomas Sony Corporation
  + Hervieu, Lili Cable Television Laboratories Inc. (CableLabs)
  + Ho, Duncan Qualcomm Incorporated
  + Hsieh, Hung-Tao MediaTek Inc.
  + Hu, Chunyu Facebook
  + Huang, Lei Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Huang, Po-Kai Intel Corporation
  + Ibrahim, Ahmed Samsung Research America
  + Joh, Hanjin KT Corp.
  + Kakani, Naveen Qualcomm Incorporated
  + Khorov, Evgeny IITP RAS
  + Kim, Myeong-Jin SAMSUNG
  + kim, namyeong LG ELECTRONICS
  + Kim, Sang Gook LG ELECTRONICS
  + Kim, Sanghyun WILUS Inc
  + Kim, Youhan Qualcomm Incorporated
  + Kishida, Akira Nippon Telegraph and Telephone Corporation (NTT)
  + Klein, Arik Huawei Technologies Co., Ltd
  + Ko, Geonjung WILUS Inc.
  + Koundourakis, Michail Samsung Cambridge Solution Centre
  + Lee, Hong Won LG ELECTRONICS
  + Lee, Wookbong SAMSUNG
  + Levitsky, Ilya IITP RAS
  + Levy, Joseph InterDigital, Inc.
  + Li, Jialing Qualcomm Technologies, Inc.
  + Li, Yapu Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Lim, Dong Guk LG ELECTRONICS
  + liu, baosheng longsailing
  + Liu, Jianhan MediaTek Inc.
  + Lorgeoux, Mikael Canon Research Centre France
  + Lou, Hanqing InterDigital, Inc.
  + Lu, Liuming Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Lumbatis, Kurt CommScope, Inc.
  + Luo, Chaoming Beijing OPPO telecommunications corp., ltd.
  + Martinez Vazquez, Marcos MaxLinear Corp; MAXLINEAR INC
  + McCann, Stephen Huawei Technologies Co., Ltd
  + Memisoglu, Ebubekir Istanbul Medipol University; Vestel
  + Montemurro, Michael Huawei Technologies Co., Ltd
  + Nayak, Peshal Samsung Research America
  + Nezou, Patrice Canon Research Centre France
  + Ng, Boon Loong Samsung Research America
  + noh, yujin Senscomm
  + Ozbakis, Basak VESTEL
  + Palayur, Saju Maxlinear Inc
  + PANG, KUN Honor Device Co.,Ltd.
  + Park, Eunsung LG ELECTRONICS
  + Park, Minyoung Intel Corporation
  + Patil, Abhishek Qualcomm Incorporated
  + Patwardhan, Gaurav Hewlett Packard Enterprise
  + Pushkarna, Rajat Panasonic Asia Pacific Pte Ltd.
  + Ratnam, Vishnu Samsung Research America
  + Salman, Hanadi Istanbul Medipol University; VESTEL
  + Schelstraete, Sigurd MaxLinear
  + Sethi, Ankit NXP Semiconductors
  + Sevin, Julien Canon Research Centre France
  + Shafin, Rubayet Samsung Research America
  + Shilo, Shimi Huawei Technologies Co., Ltd
  + Sosack, Robert Molex Incorporated
  + Stacey, Robert Intel Corporation
  + Sun, Bo ZTE Corporation
  + Sun, Li-Hsiang Sony Corporation
  + Sun, Yanjun Qualcomm Incorporated
  + Sundman, Dennis Ericsson AB
  + Tian, Bin Qualcomm Incorporated
  + Tsodik, Genadiy Huawei Technologies Co., Ltd
  + Tsujimaru, Yuki Canon Inc.
  + Van Zelst, Allert Qualcomm Incorporated
  + Vermani, Sameer Qualcomm Incorporated
  + VIGER, Pascal Canon Research Centre France
  + Wang, Huizhao Quantenna Communications, Inc.
  + Wang, Lei Futurewei Technologies
  + Wang, Sean Shanghai Longsailing Semiconductor Co. Ltd.
  + Wu, Tianyu Apple, Inc.
  + Wullert, John Perspecta Labs
  + Yang, Jay Nokia
  + Yang, Steve TS MediaTek Inc.
  + Yano, Kazuto Advanced Telecommunications Research Institute International (ATR)
  + Yee, James MediaTek Inc.
  + yi, yongjiang Spreadtrum Communication USA Inc.
  + Yoo, Homin LG ELECTRONICS
  + Yu, Jian Huawei Technologies Co., Ltd
  + Zhang, Yan NXP Semiconductors

1. Announcements:
   1. CC36 Monthly Progress Report. Alfred shows the current status. It looks fine, although MAC comments are slightly behind a linear projected progress.
2. Ageanda.
   1. Can you update 1333 to r1?
   2. Agenda approved with unanimous consent.
3. Motions. Document: [Download (ieee.org)](https://mentor.ieee.org/802.11/dcn/20/11-20-1982-36-00be-tgbe-motions-list-for-teleconferences-part-2.pptx)
   1. **Motion 231 (PHY-1)**

Move to approve resolutions to the CIDs:

* 4639, 4955, 4956, 5020, 5021, 5097, 6094, 6148, 6149, 6444, 6816, 6817, 6837, 7257, 7258, 7259, 7260, 7261, 7262, 7315, 7743, 8142 in [1159r3](https://mentor.ieee.org/802.11/dcn/21/11-21-1159-03-00be-cr-phy-txmask.docx) *[22 CIDs]*
* 5406, 7157 in [1093r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1093-02-00be-cc36-cr-for-36-3-2-3-null-subcarriers.docx) *[2 CIDs]*
* 4500, 4623 in [1094r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1094-00-00be-cc36-cr-for-annex-c.docx) *[2 CIDs]*
* 5483, 4952 in [1182r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1182-00-00be-cc36-cr-on-spatial-configuration-subfield-part2.doc) *[2 CIDs]*
* 4951, 5423, 5424, 5425, 5426, 5427, 5482, 7003, 7221, 7222, 7223, 7224, 7225, 7226, 8122, 8123, 8124, 8125 in [1150r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1150-01-00be-cc36-cr-on-36-3-12-8-5.doc) *[18 CIDs]*

and incorporate the text changes into the latest TGbe draft.

Move: Edward Au Second: Xiaogang Chen

Discussion: None

Result: Approved with unanimous consent

* 1. **Motion 232 (PHY-2)**

Move to approve resolutions to the CIDs:

* 6440, 6441, 4671, 4857, 4858, 5422, 5480, 8119, 8120 in [1149r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1149-00-00be-cc36-cr-on-36-3-12-8-4.doc) *[9 CIDs]*
* 6142, 6143, 7255 in [1170r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1170-02-00be-cc36-cr-for-transmit-requirements-for-ppdus-sent-in-response-to-a-triggering-frame.docx) *[3 CIDs]*

and incorporate the text changes into the latest TGbe draft.

Move: Ross Jian Yu Second: Rui Yang

Discussion: None

Result: Approved with unanimous consent

* 1. **Motion 233 (MAC-1)**

Move to approve resolutions to the CIDs:

* 5070, 7452, 6228 in [1211r4](https://mentor.ieee.org/802.11/dcn/21/11-21-1211-04-00be-cc-36-cr-for-ft.docx) *[3 CIDs]*
* 4014 in [1206r4](https://mentor.ieee.org/802.11/dcn/21/11-21-1206-04-00be-cc36-cr-9-4-2-295b-2-mld-capabilities-field.docx) *[1 CID]*
* 4132, 5285, 6480, 6162, 7518, 6163, 6164, 5151, 6482, 7519, 7520, 7521, 6481, 4133, 5579, 7549, 7550, 5587, 5868, 5859, 7548, 4299, 4007, 4153, 5592, 6663, 6239, 7355, 5593, 7525, 4820, 5595, 7055, 7709 in [1197r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1197-02-00be-cc36-resolution-for-cids-related-to-nsep-part1.docx) *[34 CIDs]*
* 4116, 4076, 5764, 6312, 4403, 8248, 6856, 6857, 6983, 6313, 7342, 6137, 7343, 7630, 7728, 4404, 6858, 4830, 7623, 7624, 7625, 7626, 4831, 6959, 6314, 8206, 5304, 6769, 4931, 6770, ~~7627, 7856~~, 7628, 4474 in [1203r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1203-01-00be-cc36-cr-35-3-15-4-capability-signaling.docx) *[32 CIDs]*
* 7627, 7856 in [1203r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1203-02-00be-cc36-cr-35-3-15-4-capability-signaling.docx) *[2 CIDs]*

and incorporate the text changes into the latest TGbe draft.

Move: George Cherian Second: John Wullert

Discussion: No discussion

Result: Approved with unanimous consent

* 1. **Motion 234 (Joint-1)**

Move to approve resolutions to the CIDs:

* 4146, 8262, 4148, 5083, 5084, 6005, 5787 in [1105r5](https://mentor.ieee.org/802.11/dcn/21/11-21-1105-05-00be-cc36-cr-on-9-3-1-19-d101.doc) *[7 CIDs]*
* 6838, 6839, 6840, 6841, 6842, 6843, 6844, 6845, 6846, 6847, 6848, 6849, 6850, 6851, 7923, 7924, 8364, 8365, 8366, 8367, 8368 in [1281r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1281-01-00be-cc36-cr-for-cids-in-clause-35-5-2.docx) *[21 CIDs]*
* 6078, 7444 in [1289r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1289-00-00be-cc-36-cr-for-9-6-34-2.docx) *[2 CIDs]*

and incorporate the text changes into the latest TGbe draft.

Move: Yunbo Li Second: Po-Kai Huang

Discussion: No discussion

Result: Approved with unanimous consent.

* 1. **Motion 235 (CAD CR)**

Move to approve resolutions to the CIDs of CC37 listed below:

* 6, 26, 27, 35, 38, 39, 51, 52, 53, 10, 11, 12, 13, 14, 15,
* 16, 17, 18, 5, 19, 20, 21, 28, 31, 54, 55, 56, 29, 32, 34,
* 36, 37, 41, 42, 43, 44, 45, 47, 48, 49, 50, 1, 2, 3, 4,
* 7, 8, 9, 22, 23, 24, 25, 30, 33, 40, 46, 57 in [1059r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1059-01-00be-comment-resolution-for-cc37.docx) *[57 CIDs]*

Move: Sigurd Schelstraete Second: Mike Montemurro

Discussion: No discussion

Result: Approved with unanimous consent

1. Technical Submissions**: CRs**
   1. [1301r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1301-00-00be-cc36-cr-for-cid-4584.docx) CR for CID 4584 Mengshi Hu [1C 10’]

Mengshi goes through the document. Some discussion during the presentation.

SP: Do you agree to the resolution of the following CIDs as proposed in [1301r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1301-01-00be-cc36-cr-for-cid-4584.docx).

* + - 4584

Discussion: No discussion

Result: Straw poll supported with no objection from the group.

* 1. [1282r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1282-01-00be-cr-trigger-frame-ra-ru.docx) CR Trigger frame RA-RU Yanjun Sun [9C 30’]

Yanjun goes through the document. Some updates during the presentation.

SP: Do you agree to the resolution of the following CIDs as proposed in [1282r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1282-02-00be-cr-trigger-frame-ra-ru.docx).

* + - 5901, 4201, 5936, 6056, 5201, 5109, 5118, 6514.

Discussion: No discussion

Result: Straw poll supported with no objection from the group.

* 1. [1333r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1333-01-00be-cr-trigger-frame-common-info-field-format.docx) CR Trigger frame Common Info field format Yanjun Sun [46C 35’]

Yanjun goes through the document. Some discussion during the presentation.

Running out of time before any conclusion is reached.

1. AoB: No other business.
2. Adjourn at 12:00.

# 18th Conf. Call: August 26 (10:00–12:00 ET)

Only MAC.

* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 19th Conf. Call: August 30 (19:00–21:00 ET)

Split PHY and MAC.

* PHY: <https://mentor.ieee.org/802.11/dcn/21/11-21-1324-01-00be-minutes-for-tgbe-phy-ad-hoc-cc-july-2021-to-sept-2021.docx>
* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 20th Conf. Call: September 1 (10:00–12:00 ET)

1. The Chair, Alfred Asterjadhi (Qualcomm), calls the meeting to order at 10:01 ET. The Chair notifies that the agenda is in [1090r30](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-30-00be-july-sept-tgbe-teleconference-agenda.docx).
2. IEEE 802 and 802.11 IPR policy and procedure
3. Patent Policy: Ways to inform IEEE:
   * + Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
     + Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
     + Speak up now and respond to this Call for Potentially Essential Patents. **Nobody speaks/writes up**.

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

1. The Chair reviews: Copyright Policy: Participants are advised that
   * + IEEE SA’s copyright policy is described in [Clause 7](https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7) of the IEEE SA Standards Board Bylaws and [Clause 6.1](https://standards.ieee.org/about/policies/opman/sect6.html) of the IEEE SA Standards Board Operations Manual;
     + Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy
2. The Chair reviews: Patent, Participation, Copyright and policy related subclause: Please refer to *Patent And Procedures* in [1090r30](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-30-00be-july-sept-tgbe-teleconference-agenda.docx).
3. Attendance reminder.

* Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
* Please record your attendance during the conference call by using the IMAT system:
  + 1) login to [imat](https://imat.ieee.org/attendance), 2) select “802.11 Telecons (<Month>)” entry, 3) select “C/LM/WG802.11 Attendance” entry, 4) click “TGbe <MAC/PHY/Joint> conference call that you are attending.
* If you are unable to record the attendance via [IMAT](https://imat.ieee.org/attendance) then please send an e-mail to Dennis Sundman ([dennis.sundman@ericsson.com](mailto:dennis.sundman@ericsson.com)) and Alfred Asterjadhi ([aasterja@qti.qualcomm.com](mailto:aasterja@qti.qualcomm.com))
* Please ensure that the following information is listed correctly when joining the call: "[voter status] First Name Last Name (Affiliation)"
  + AbidRabbu, Shaima' Istanbul Medipol University; Vestel
  + Abouelseoud, Mohamed Sony Corporation
  + Aio, Kosuke Sony Corporation
  + Ajami, Abdel Karim Qualcomm Incorporated
  + Akhmetov, Dmitry Intel Corporation
  + Asterjadhi, Alfred Qualcomm Incorporated
  + Au, Kwok Shum Huawei Technologies Co., Ltd
  + Baek, SunHee LG ELECTRONICS
  + Bankov, Dmitry IITP RAS
  + Barr, David MaxLinear
  + Bredewoud, Albert Broadcom Corporation
  + Carney, William Sony Group Corporation
  + Chemrov, Kirill IITP RAS
  + Cheng, Po-Yuen MediaTek Inc.
  + Chitrakar, Rojan Panasonic Asia Pacific Pte Ltd.
  + Choi, Jinsoo LG ELECTRONICS
  + Chu, Liwen NXP Semiconductors
  + CHUN, JINYOUNG LG ELECTRONICS
  + Chung, Chulho SAMSUNG
  + Ciochina, Dana Sony Corporation
  + Coffey, John Realtek Semiconductor Corp.
  + Das, Subir Perspecta Labs Inc
  + Dong, Xiandong Xiaomi Inc.
  + Fang, Yonggang Mediatek
  + feng, Shuling MediaTek Inc.
  + Gu, Xiangxin Unisoc
  + Haider, Muhammad Kumail Facebook
  + Han, Jonghun SAMSUNG
  + Handte, Thomas Sony Corporation
  + Hervieu, Lili Cable Television Laboratories Inc. (CableLabs)
  + Ho, Duncan Qualcomm Incorporated
  + Hsieh, Hung-Tao MediaTek Inc.
  + Huang, Lei Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Huang, Po-Kai Intel Corporation
  + Ibrahim, Ahmed Samsung Research America
  + Jeon, Eunsung SAMSUNG ELECTRONICS
  + Joh, Hanjin KT Corp.
  + Kamel, Mahmoud InterDigital, Inc.
  + Khorov, Evgeny IITP RAS
  + kim, namyeong LG ELECTRONICS
  + Kim, Yongho Korea National University of Transportation
  + Kim, Youhan Qualcomm Incorporated
  + Kishida, Akira Nippon Telegraph and Telephone Corporation (NTT)
  + Klein, Arik Huawei Technologies Co., Ltd
  + Ko, Geonjung WILUS Inc.
  + Koundourakis, Michail Samsung Cambridge Solution Centre
  + Lee, Hong Won LG ELECTRONICS
  + Levitsky, Ilya IITP RAS
  + Li, Jialing Qualcomm Technologies, Inc.
  + Li, Yapu Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Lim, Dong Guk LG ELECTRONICS
  + Liu, Der-Zheng Realtek Semiconductor Corp.
  + Liu, Jianhan MediaTek Inc.
  + Liu, Yong Apple, Inc.
  + Lorgeoux, Mikael Canon Research Centre France
  + Lou, Hanqing InterDigital, Inc.
  + Lu, kaiying MediaTek Inc.
  + Lu, Liuming Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Luo, Chaoming Beijing OPPO telecommunications corp., ltd.
  + Ma, Li MediaTek Inc.
  + Martinez Vazquez, Marcos MaxLinear Corp; MAXLINEAR INC
  + McCann, Stephen Huawei Technologies Co., Ltd
  + Mehrnoush, Morteza Facebook
  + Memisoglu, Ebubekir Istanbul Medipol University; Vestel
  + Montemurro, Michael Huawei Technologies Co., Ltd
  + Moon, Juseong Korea National University of Transportation
  + Nayak, Peshal Samsung Research America
  + Nezou, Patrice Canon Research Centre France
  + Ng, Boon Loong Samsung Research America
  + Ouchi, Masatomo Canon
  + Ozbakis, Basak VESTEL
  + Palayur, Saju Maxlinear Inc
  + PANG, KUN Honor Device Co.,Ltd.
  + Park, Eunsung LG ELECTRONICS
  + Park, Minyoung Intel Corporation
  + Patil, Abhishek Qualcomm Incorporated
  + Patwardhan, Gaurav Hewlett Packard Enterprise
  + Pushkarna, Rajat Panasonic Asia Pacific Pte Ltd.
  + Ratnam, Vishnu Samsung Research America
  + Redlich, Oded Huawei Technologies Co., Ltd
  + Rosdahl, Jon Qualcomm Technologies, Inc.
  + Salman, Hanadi Istanbul Medipol University; VESTEL
  + Schelstraete, Sigurd MaxLinear
  + Sethi, Ankit NXP Semiconductors
  + Shafin, Rubayet Samsung Research America
  + Shilo, Shimi Huawei Technologies Co., Ltd
  + Srivatsa, Veena 802.11be project/Task Group/study group
  + SUH, JUNG HOON Huawei Technologies Co., Ltd
  + Sun, Bo ZTE Corporation
  + Sun, Yanjun Qualcomm Incorporated
  + Sundman, Dennis Ericsson AB
  + THOUMY, Francois Canon
  + Tian, Bin Qualcomm Incorporated
  + Torab Jahromi, Payam Facebook
  + Tsodik, Genadiy Huawei Technologies Co., Ltd
  + Varshney, Prabodh Nokia
  + VIGER, Pascal Canon Research Centre France
  + Vonbank, Michael DapTechnology B.V.
  + Wang, Chao Chun MediaTek Inc.
  + Wang, Huizhao Quantenna Communications, Inc.
  + Wang, Lei Futurewei Technologies
  + Wei, Dong NXP Semiconductors
  + Wu, Kanke Qualcomm Incorporated
  + Wu, Tianyu Apple, Inc.
  + Wullert, John Perspecta Labs
  + Xin, Yan Huawei Technologies Co., Ltd
  + Yang, Jay Nokia
  + Yang, Steve TS MediaTek Inc.
  + Yano, Kazuto Advanced Telecommunications Research Institute International (ATR)
  + Yee, James MediaTek Inc.
  + yi, yongjiang Spreadtrum Communication USA Inc.
  + Yu, Jian Huawei Technologies Co., Ltd
  + Zhang, Yan NXP Semiconductors

1. Announcements: None.
2. Agenda.
   1. C: Can we defer 445r0 until next call. 🡪 deferred.
   2. C: Can you change 1333 to r4. 🡪 Ok.
   3. Agenda approved with unanimous consent.
3. Future Telco Plan discussion.
   1. Some typos updates to the plan presented by Alfred.
4. Technical submissions CRs
   1. [1333r4](https://mentor.ieee.org/802.11/dcn/21/11-21-1333-04-00be-cr-trigger-frame-common-info-field-format.docx) CR Trigger frame Common Info field format Yanjun Sun [46C SP-10’]

Yanjun summarizes the updates. Some discussion.

SP:

Do you agree to the resolution of the following CIDs as proposed in 1333r4?

* + - 4807, 5200, 5539, 4104, 4502, 4809, 5792, 5793, 7789, 8055, 8158, 4873, 6692, 6693, 8069, 8159, 4961, 7474, 4503, 7023, 4321, 4096, 4320, 7790, 5439, 7795, 6145, 5366, 5199, 5366, 7796, 8068, 4874, 5114, 5794, 4872, 4962, 6487, 5116, 4327, 8160

Discussion: No discussion.

Result: Straw poll supported with no objection from the group.

* 1. [1237r3](https://mentor.ieee.org/802.11/dcn/21/11-21-1237-03-00be-d1-0-cr-for-section-9-2-5-2-and-9-3-1-19.docx) CR for Section 9.2.5.2 and 9.3.1.19 Wook Bong Lee [6C SP-10’]

Wook Bong goes through the document. Some live updates to the document.

SP: Do you agree to the resolution of the following CIDs as proposed in 1237r4?

* + - 4144, 5394, 4150, 4143, 5393, 5537

Discussion: No discussion

Result: Straw poll supported with no objection from the group.

* 1. [1352r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1352-02-00be-cc36-cr-bw-indication-for-non-ht-duplicated-frames.docx) CC36 CR BW indication 4 non-HT dup. frames Yunbo Li [33C 30’]

Yunbo summarizes the document. Some discussion back and forth.

Any SP deferred.

1. AoB: No other business.
2. Adjourned at 11:59.

# 21st Conf. Call: September 02 (10:00–12:00 ET)

Only MAC.

* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>

# 22nd Conf. Call: September 8 (10:00–12:00 ET)

1. The Chair, Alfred Asterjadhi (Qualcomm), calls the meeting to order at 10:01 ET. The Chair notifies that the agenda is in [1090r31](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-31-00be-july-sept-tgbe-teleconference-agenda.docx).
2. IEEE 802 and 802.11 IPR policy and procedure
3. Patent Policy: Ways to inform IEEE:
   * + Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
     + Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
     + Speak up now and respond to this Call for Potentially Essential Patents. **Nobody speaks/writes up**.

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

1. The Chair reviews: Copyright Policy: Participants are advised that
   * + IEEE SA’s copyright policy is described in [Clause 7](https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7) of the IEEE SA Standards Board Bylaws and [Clause 6.1](https://standards.ieee.org/about/policies/opman/sect6.html) of the IEEE SA Standards Board Operations Manual;
     + Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy
2. The Chair reviews: Patent, Participation, Copyright and policy related subclause: Please refer to *Patent And Procedures* in [1090r31](https://mentor.ieee.org/802.11/dcn/21/11-21-1090-31-00be-july-sept-tgbe-teleconference-agenda.docx).
3. Attendance reminder.

* Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
* Please record your attendance during the conference call by using the IMAT system:
  + 1) login to [imat](https://imat.ieee.org/attendance), 2) select “802.11 Telecons (<Month>)” entry, 3) select “C/LM/WG802.11 Attendance” entry, 4) click “TGbe <MAC/PHY/Joint> conference call that you are attending.
* If you are unable to record the attendance via [IMAT](https://imat.ieee.org/attendance) then please send an e-mail to Dennis Sundman ([dennis.sundman@ericsson.com](mailto:dennis.sundman@ericsson.com)) and Alfred Asterjadhi ([aasterja@qti.qualcomm.com](mailto:aasterja@qti.qualcomm.com))
* Please ensure that the following information is listed correctly when joining the call: "[voter status] First Name Last Name (Affiliation)"
  + AbidRabbu, Shaima' Istanbul Medipol University; Vestel
  + Abouelseoud, Mohamed Sony Corporation
  + Aboulmagd, Osama Huawei Technologies Co., Ltd
  + Ahmad, Tufail Koc University, vestel
  + Aio, Kosuke Sony Corporation
  + Ajami, Abdel Karim Qualcomm Incorporated
  + Al Falujah, Iyad ON Semiconductor
  + An, Song-Haur INDEPENDENT
  + Asterjadhi, Alfred Qualcomm Incorporated
  + Au, Kwok Shum Huawei Technologies Co., Ltd
  + Aygul, Mehmet Vestel
  + B, Hari Ram NXP Semiconductors
  + Baek, SunHee LG ELECTRONICS
  + Bankov, Dmitry IITP RAS
  + Barr, David MaxLinear
  + Boldy, David Broadcom Corporation
  + Bredewoud, Albert Broadcom Corporation
  + CHAN, YEE Facebook
  + Chemrov, Kirill IITP RAS
  + Chitrakar, Rojan Panasonic Asia Pacific Pte Ltd.
  + Choi, Jinsoo LG ELECTRONICS
  + CHUN, JINYOUNG LG ELECTRONICS
  + Chung, Chulho SAMSUNG
  + Ciochina, Dana Sony Corporation
  + Coffey, John Realtek Semiconductor Corp.
  + Das, Subir Perspecta Labs Inc
  + Dong, Xiandong Xiaomi Inc.
  + Duan, Ruchen SAMSUNG
  + Fang, Yonggang Mediatek
  + feng, Shuling MediaTek Inc.
  + Fischer, Matthew Broadcom Corporation
  + Ghaderipoor, Alireza MediaTek Inc.
  + Gu, Xiangxin Unisoc
  + Handte, Thomas Sony Corporation
  + Hart, Brian Cisco Systems, Inc.
  + Ho, Duncan Qualcomm Incorporated
  + Hsieh, Hung-Tao MediaTek Inc.
  + Hu, Shengquan MediaTek Inc.
  + Huang, Lei Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Huang, Po-Kai Intel Corporation
  + Jang, Insun LG ELECTRONICS
  + Joh, Hanjin KT Corp.
  + Kamel, Mahmoud InterDigital, Inc.
  + Khorov, Evgeny IITP RAS
  + Kim, Jeongki Ofinno
  + Kim, Myeong-Jin SAMSUNG
  + kim, namyeong LG ELECTRONICS
  + Kim, Sang Gook LG ELECTRONICS
  + Kim, Yongho Korea National University of Transportation
  + Kishida, Akira Nippon Telegraph and Telephone Corporation (NTT)
  + Ko, Geonjung WILUS Inc.
  + Koundourakis, Michail Samsung Cambridge Solution Centre
  + Lansford, James Qualcomm Incorporated
  + Lee, Wookbong SAMSUNG
  + Levitsky, Ilya IITP RAS
  + Li, Jialing Qualcomm Technologies, Inc.
  + Li, Yapu Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + Li, Yunbo Huawei Technologies Co., Ltd
  + Lim, Dong Guk LG ELECTRONICS
  + Lin, Zinan InterDigital, Inc.
  + liu, baosheng longsailing
  + Liu, Der-Zheng Realtek Semiconductor Corp.
  + Lorgeoux, Mikael Canon Research Centre France
  + Lou, Hanqing InterDigital, Inc.
  + Lu, kaiying MediaTek Inc.
  + Lu, Liuming Guangdong OPPO Mobile Telecommunications Corp.,Ltd
  + LU, Yuxin Huawei Technologies Co., Ltd
  + Luo, Chaoming Beijing OPPO telecommunications corp., ltd.
  + Ma, Li MediaTek Inc.
  + Max, Sebastian Ericsson AB
  + Mehrnoush, Morteza Facebook
  + Memisoglu, Ebubekir Istanbul Medipol University; Vestel
  + Montemurro, Michael Huawei Technologies Co., Ltd
  + Moon, Juseong Korea National University of Transportation
  + Naik, Gaurang Qualcomm Incorporated
  + Nayak, Peshal Samsung Research America
  + Nezou, Patrice Canon Research Centre France
  + Ng, Boon Loong Samsung Research America
  + noh, yujin Senscomm
  + Ozbakis, Basak VESTEL
  + PANG, KUN Honor Device Co.,Ltd.
  + Pare, Thomas MediaTek Inc.
  + Park, Minyoung Intel Corporation
  + Patil, Abhishek Qualcomm Incorporated
  + Patwardhan, Gaurav Hewlett Packard Enterprise
  + Petrick, Albert InterDigital, Inc.
  + Pushkarna, Rajat Panasonic Asia Pacific Pte Ltd.
  + Rafique, Saira Istanbul Medipol University ; VESTEL
  + Ratnam, Vishnu Samsung Research America
  + Rosdahl, Jon Qualcomm Technologies, Inc.
  + Salman, Hanadi Istanbul Medipol University; VESTEL
  + Schelstraete, Sigurd MaxLinear
  + Sethi, Ankit NXP Semiconductors
  + Sevin, Julien Canon Research Centre France
  + Shafin, Rubayet Samsung Research America
  + Solaija, Muhammad Sohaib Istanbul Medipol University; Vestel
  + Srivatsa, Veena Synaptics
  + Stacey, Robert Intel Corporation
  + Stanley, Dorothy Hewlett Packard Enterprise
  + SUH, JUNG HOON Huawei Technologies Co., Ltd
  + Sun, Bo ZTE Corporation
  + Sun, Li-Hsiang Sony Corporation
  + Tanaka, Yusuke Sony Group Corporation
  + THOUMY, Francois Canon
  + Tian, Bin Qualcomm Incorporated
  + Torab Jahromi, Payam Facebook
  + Tsujimaru, Yuki Canon Inc.
  + Varshney, Prabodh Nokia
  + Wang, Chao Chun MediaTek Inc.
  + Wang, Hao Tencent
  + Wang, Huizhao Quantenna Communications, Inc.
  + Wang, Lei Futurewei Technologies
  + Wei, Dong NXP Semiconductors
  + Wu, Kanke Qualcomm Incorporated
  + Wu, Tianyu Apple, Inc.
  + Wullert, John Perspecta Labs
  + Yang, Steve TS MediaTek Inc.
  + Yano, Kazuto Advanced Telecommunications Research Institute International (ATR)
  + Yee, James MediaTek Inc.
  + yi, yongjiang Spreadtrum Communication USA Inc.
  + Zhang, Yan NXP Semiconductors

1. Agenda.
   1. C: Can you update the revision 1388 to r2.
   2. C: Can we change 1046 to r2.

Agenda approved with unanimous consent.

1. Future Telco Plan.
   1. Nothing in particular.
2. Technical Submissions**: CRs**
   * [1352r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1352-02-00be-cc36-cr-bw-indication-for-non-ht-duplicated-frames.docx) CC36 CR BW indication 4 non-HT dup. frames Yunbo Li [33C-SP 10’]

Continuation from previous joint meeting where this presentation did not finish.

SP: Do you agree to the resolutions in [1352r3](https://mentor.ieee.org/802.11/dcn/21/11-21-1352-03-00be-cc36-cr-bw-indication-for-non-ht-duplicated-frames.docx) for the following CIDs:

* + - 4124, 5695, 7379, 7440, 7837, 7838, 7839, 7840, 8066, 8258, 6004, 6003, 4145, 7681, 5697, 8259, 8260, 8261, 7377, 5696, 7878, 7387, 7388, 4893, 5548, 5549, 5233, 5550, 5551, 5553, 4975, 5552, 5554

Discussion: No discussion.

Result: Straw poll supported with no objection from the group.

* + [1351r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1351-01-00be-cc36-cr-for-4-3-15c-eht-sta.docx) CC36 CR for 4.3.15c EHT STA Yanyi Ding [4C 15’]

Yanyi goes through the document.

SP: Do you agree to the resolutions in [1351r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1351-01-00be-cc36-cr-for-4-3-15c-eht-sta.docx) for the following CIDs:

* + - 6188, 6158, 6114, 4127.

Discussion: No discussion.

Result: Straw poll supported with no objection from the group.

* + [1388r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1388-01-00be-cc36-cr-for-cid-4897-5495-and-6799.docx) CR for CID 4897, 5495, and 6799 Zinan Lin [3C 15’]

Zinan goes through the document. Some live updates.

SP: Do you agree to the resolutions in [1388r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1388-02-00be-cc36-cr-for-cid-4897-5495-and-6799.docx) for the following CIDs:

* + - 4897, 5495, 6799.

Discussion: No discussion.

Result: Straw poll supported with no objection from the group.

* + [1449r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1449-00-00be-cr-trigger-frame-common-info-part2.docx) CR Trigger frame Common Info Part 2 Yanjun Sun [35C 35’]

Yanjun goes through the document. Some discussion and questions.

SP: Do you agree to the resolutions in [1449r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1449-01-00be-cr-trigger-frame-common-info-part2.docx) for the following CIDs:

* + - 7481, 8072, 4878, 5543, 7895, 7797, 7409, 4504, 5507, 4319, 5508, 4505, 5657, 5509, 6146, 7024, 7798, 8070, 4964, 5540, 4965, 7025, 7683, 8071, 5440, 4966, 5541, 5795, 4877, 5542, 4340, 4341, 5115, 7794, 7350

Discussion: No discussion.

Result: Supported with no objection from the group.

1. Technical Submissions:
   * [445r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0445-01-00be-information-sharing-and-exchange-for-multi-ap-coordination.pptx) Information Sharing and Exchange for MAP Hanadi Salman [30’]

Summary: The authors have reviewed several contributions and propose some thoughts on required information elements for MAP.

Discussion:

C: For the SPs is this intended for R1 or R2?

A: R2.

C: I think it is too early to decide on the aspects in SP1 and SP2.

C: For the SP1. Do you expect to have a multi-option SP? I think maybe it’s a bit too early to go into these options. For some of these options I have no idea what to answer. I think this SP is just confusing. I recommend we begin with a discussion on what we need. Some of these options I’m not sure they make sense.

C: What information should be exchanged in the backhaul?

A: For example the BW of the link. So an shared AP can know this.

C: We have discussed coordinated OFDMA, FDMA, etc. You need to define what information needs to be shared among the different schemes. Some things are clearly missing, for example the Data which needs to be shared. SP1 simply does not make any sense in the current state.

A: I agree there are more things that need to be added. We can add Data.

C: I don’t encourage you to run this SP, since I don’t know what to answer. But if you want to run it, can you add somewhere “This is not for the SFD” some where.

A: Ok.

C: Do you have the intention to run this SP now so I can allocate time?

A: Intention is to run it.

C: What about instantaneous information?

A: Not added.

C: Can we add an h) with Other information?

SP1:

**Which of these information elements should be shared amongst the coordinating nodes for multi-AP coordination?**

1. AP coordination capabilities
2. User related information (application requirements etc.)
3. Backhaul/fronthaul
4. Channel state information (CSI)/link quality indication (RSSI, SNR…)
5. Coordination hypothesis (scheme and muting/power etc.)
6. Benefit of each hypothesis
7. Scheduling Information (RU allocation etc.)
8. Other information
9. Abstain

Result:

a) 33/166 ( 20%)

b) 27/166 ( 16%)

c) 19/166 ( 11%)

d) 29/166 ( 17%)

e) 20/166 ( 12%)

f) 14/166 (  8%)

g) 32/166 ( 19%)

h) 18/166 ( 11%)

i) 55/166 ( 33%)

No-answer: 78/166 ( 47%)

1. AoB: No other business.
2. Adjourned at 11:58.

# 23rd Conf. Call: September 9 (10:00–12:00 ET)

Only MAC.

* MAC: <https://mentor.ieee.org/802.11/dcn/21/11-21-1262-12-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-july-to-september-2021.docx>