IEEE P802.11
Wireless LANs

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| Minutes for TGbe MAC Ad-Hoc teleconferences in May and July 2021 |
| Date: 2021-05-19 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Liwen Chu | NXP |  |  |  |
| Jeongki Kim | Self |  |  |  |
|  |  |  |  |  |

Abstract

This document contains the meeting minutes for the TGbe MAC ad hoc teleconferences held in May 2021 and July 2021.

Revisions:

* Rev0: Added the minutes from the telephone conferences held on May 19.
* Rev1: Added the minutes from the telephone conferences held on May 20 and attendance list of May 19.
* Rev2: Added the minutes from the telephone conferences held on May 24
* Rev3: Added the minutes from the telephone conferences held on May 27
* Rev4: Added the minutes from the telephone conferences held on June 03
* Rev5: Added the minutes from the telephone conferences held on June 07
* Rev6: Added the minutes from the telephone conferences held on June 10
* Rev7: Added the minutes from the telephone conferences held on June 17
* Rev8: Added the minutes from the telephone conferences held on June 21
* Rev9: Added the minutes from the telephone conferences held on June 24
* Rev10: Added the minutes from the telephone conferences held on June 28
* Rev11: Added the minutes from the telephone conferences held on July 8

**Wednesday 19 May 2021, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r4. Several changes are made per the comment. The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 5/19 | Abushattal, Abdelrahman | Istanbul Medipol university ;Vestel |
| TGbe (MAC) | 5/19 | Akhmetov, Dmitry | Intel Corporation |
| TGbe (MAC) | 5/19 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 5/19 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 5/19 | Banerjea, Raja | Qualcomm Incorporated |
| TGbe (MAC) | 5/19 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 5/19 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 5/19 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 5/19 | CHAN, YEE | Facebook |
| TGbe (MAC) | 5/19 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 5/19 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (MAC) | 5/19 | Das, Subir | Perspecta Labs Inc |
| TGbe (MAC) | 5/19 | Derham, Thomas | Broadcom Corporation |
| TGbe (MAC) | 5/19 | Dong, mingjie | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 5/19 | Erceg, Vinko | Broadcom Corporation |
| TGbe (MAC) | 5/19 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 5/19 | Fischer, Matthew | Broadcom Corporation |
| TGbe (MAC) | 5/19 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 5/19 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 5/19 | Han, Zhiqiang | ZTE Corporation |
| TGbe (MAC) | 5/19 | Handte, Thomas | Sony Corporation |
| TGbe (MAC) | 5/19 | Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) |
| TGbe (MAC) | 5/19 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 5/19 | Hu, Chunyu | Facebook |
| TGbe (MAC) | 5/19 | Ibrahim, Ahmed | [NV] Ahmed Ibrahim, Samsung Research America |
| TGbe (MAC) | 5/19 | Inohiza, Hirohiko | Canon |
| TGbe (MAC) | 5/19 | JONES, JEFFRUM | Qorvo |
| TGbe (MAC) | 5/19 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 5/19 | kamath, Manoj | Broadcom Corporation |
| TGbe (MAC) | 5/19 | Kandala, Srinivas | SAMSUNG |
| TGbe (MAC) | 5/19 | Khorov, Evgeny | IITP RAS |
| TGbe (MAC) | 5/19 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 5/19 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 5/19 | Kim, Sanghyun | WILUS Inc |
| TGbe (MAC) | 5/19 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (MAC) | 5/19 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Klimakov, Andrey | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 5/19 | Koundourakis, Michail | Samsung Cambridge Solution Centre |
| TGbe (MAC) | 5/19 | Kwon, Young Hoon | NXP Semiconductors |
| TGbe (MAC) | 5/19 | Lalam, Massinissa | SAGEMCOM BROADBAND SAS |
| TGbe (MAC) | 5/19 | Leng, Shiyang | Samsung Research America |
| TGbe (MAC) | 5/19 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 5/19 | Levy, Joseph | InterDigital, Inc. |
| TGbe (MAC) | 5/19 | Li, Yiqing | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 5/19 | Liu, Yong | Apple, Inc. |
| TGbe (MAC) | 5/19 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 5/19 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 5/19 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 5/19 | LU, Yuxin | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Lumbatis, Kurt | CommScope, Inc. |
| TGbe (MAC) | 5/19 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 5/19 | Max, Sebastian | Ericsson AB |
| TGbe (MAC) | 5/19 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Montreuil, Leo | Broadcom Corporation |
| TGbe (MAC) | 5/19 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 5/19 | Nezou, Patrice | Canon Research Centre France |
| TGbe (MAC) | 5/19 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 5/19 | Park, Eunsung | LG ELECTRONICS |
| TGbe (MAC) | 5/19 | Park, Minyoung | Intel Corporation |
| TGbe (MAC) | 5/19 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 5/19 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 5/19 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 5/19 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 5/19 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 5/19 | Roy, Richard | self |
| TGbe (MAC) | 5/19 | Salman, Hanadi | Istanbul Medipol University; VESTEL |
| TGbe (MAC) | 5/19 | Sevin, Julien | Canon Research Centre France |
| TGbe (MAC) | 5/19 | Stanley, Dorothy | Hewlett Packard Enterprise |
| TGbe (MAC) | 5/19 | Sun, Bo | ZTE Corporation |
| TGbe (MAC) | 5/19 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 5/19 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Verma, Sindhu | Broadcom Corporation |
| TGbe (MAC) | 5/19 | VIGER, Pascal | Canon Research Centre France |
| TGbe (MAC) | 5/19 | Wang, Huizhao | Quantenna Communications, Inc. |
| TGbe (MAC) | 5/19 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 5/19 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 5/19 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 5/19 | yi, yongjiang | Futurewei Technologies |
| TGbe (MAC) | 5/19 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 5/19 | Zhou, Yifan | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/19 | Zuo, Xin | Tencent |
| TGbe (MAC) | 5/19 | Rubayet Shafin | Samsung Research America |

 **Submissions**

1. [80r7](https://mentor.ieee.org/802.11/dcn/21/11-21-0080-07-00be-twt-for-mld.docx) TWT for MLD Ming Gan [SP 10’]

Ming goes through the changes of the new version. Several questions are raised.

Discussion:

C: why same link bitmap in TWT request and response?

A: the TWT negotiation just negotiates the start time etc for simplifing the procedure.

C: link ID bitmap is new. How link ID bitmap is established?

A: link ID bitmap is not new. Examples about how to use it exist in the document.

C: the figure should clarify that the TWT agreements in different links should be indepent and link specific.

A: agree.

C: a clean version should be uploaded.

A: will upload a clean version.

SP:

* Do you agree to incorporate the proposed changes in 11-21/80r8 to the latest TGbe draft?

60Y, 14N, 32A.

1. [462r9](https://mentor.ieee.org/802.11/dcn/21/11-21-0462-09-00be-pdt-mac-restricted-twt-tbds-crs-part1.docx) PDT-MAC-Restricted-TWT-TBDs-CRs-Part1 Chunyu Hu [SP 10’]

Chunyu announced no changes since the last meeting.

SP

**Do you support to incorporate the proposed draft text in this document 11-21/462r9, to the latest TGbe Draft?**

No objection

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1. 514r9 CC34 Comment Resolution for Sync PPDU start time Dmitry Akhmetov [SP]

Dmity goes through the changes of the new version

Discussion:

C: Please highlight the changes.

A: the Tx time difference of 4us instead of slot time is added.

C: P14, bullet and number exist. Editor may be confused.

A: I can remove the dish.

C: this may create higher collision.

C: If you go with 4 us, collision may happen.

A: PIFS recovery already has same issue. This should be fine.

SP

Do you support to incorporate the changes proposed by the following CIDs in 11/0514r10:1439, 1501, 1502, 1509, 1510, 1511, 1512, 1514, 1757, 1772, 1797, 2211, 2142, 2434, 2435, 2718, 2740, 2741, 3141, 3142, 3143, 3145, 3205, 3323, 3399, 1507, 1703, 3398.

53Y, 4N, 41A

1. [696r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0696-00-00be-pdt-mac-spec-text-for-motion-150-sp-372.docx) PDT-MAC-spec-text-for-motion-150\_SP-372 Abhishek Patil [15’]

Discussion:

C: AP of AP MLD will support legacy STAs. The legacy fragmentation should be supported in this case.

C: Why is the baseline feature disallowed?

A: fragmentation is not good in MLD.

C: it is better to provide simulation result.

C: change ”fragmentation” to ”non-dynamic fragmentation”.

A: ok.

SP

**Do you support to incorporate the proposed changes in 11-21/696r2, to the latest TGbe draft?**

65Y, 9N, 31A

1. [228r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0228-01-00be-legacy-addressing-in-mlo.pptx) Legacy Addressing in MLO Rojan Chitrakar [30’

The auther goes through the slides that discussed the MLO addressing issues from a legacy STA’s perspectives.

Discussion:

C: the affiliated AP does the proxy for the legacy STAs. B1 change may have some issue and need to check further.

A: I use B0.

C: It is even worse.

C: I agree that the affiliated AP does the proxy for the legacy STAs. It is not clear that how ARP/PARP works.

A: AP MLD will be the bridge.

The SP was deferred

1. [240r6](https://mentor.ieee.org/802.11/dcn/21/11-21-0240-06-00be-cc34-resolution-for-cids-related-to-tdls-handling.docx) CC34 resolution for CIDs related to TDLS handling Abhishek Patil [30’]

The author goes through the document.

The SP was deferred

The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 12:00pm

**Thursday 20 May 2021, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:09am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r7. Several changes are made per the comment (author change, removing 11-21/141). The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**

 **Submissions**

1. [481r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0481-04-00be-resolutions-for-cc34-cids-for-channel-switching-quieting.docx) Res. for CC34 CIDs 4 channel switching quieting Laurent Cariou [SP-10’]

Laurent goes through the changes of the new version. Several questions are raised about Quiet Count field. The clarification is to follow baseline. The answer from TG chair about CID list of SP are that the CIDs addressed by the document will be internally recorded.

SP:

* Do you agree with the proposed changes in doc 481r5 corresponding to CIDs:2324 2600 1693 3254 1073 1074 1203 1428 1429 1430 1431 1658 1694 1754 2191 2197 2749 2874 2875 2911 2912 3320

No objection.

1. [340r6](https://mentor.ieee.org/802.11/dcn/21/11-21-0340-06-00be-cr-for-cid-1977.docx) CR for CID 1977 Dibakar Das [SP-10’]

The author goes through the changes of the new version.

C: The relationship between the Capability and the related baseline capabilty can be addressed in the future

A: ok

C: why do you add the new status code?

A: the code is about TSPEC.

C: do you mean AP can suggest TSPEC?

A: yes.

C: question about the support bit in MLD level. The text shows the feature is link level.

A: no, it is in MLD level.

SP was deferred.

1. [552r5](https://mentor.ieee.org/802.11/dcn/21/11-21-0552-05-00be-cr-txop-return-for-triggered-su.docx) CR TXOP Return for Triggered SU Yunbo Li [SP-10’]

The author goes through the changes of the new version.

C: The TXOP early termination for P2P case may have some issue.

A: The termination of P2P has no issue. STA notifies the termination.

C: The termination signaling should be defined in R2. This can make the procedure simple. We can define flexible solution in R2.

A: defining this in R2 may create inter-op issue.

C: CAS control in 11ax has signaling for various functionalities.

C: Do you think to use opposite value of TXOP Sharing Termination?

The author has some audio issues. The chair asks the author to do offline discussion.

1. [240r6](https://mentor.ieee.org/802.11/dcn/21/11-21-0240-06-00be-cc34-resolution-for-cids-related-to-tdls-handling.docx) CC34 resolution for CIDs related to TDLS handling Abhishek Patil [Q&A 10’]

The author makes the summary of TDLS with single link where at least one side is non-AP MLD.

C: generally ok. The issue is in security part. The TPK handshake should include AP MLD when both sides are non-AP MLD. I provide the editor comment in the chat window.

A: Would like to hear other member’s opinion.

C: the value of From/To DS in TDLS Discovery Response frame seems not right.

A: agree and change them from 1 to 0.

C: one solution could be AP MLD handle the situation where non-AP MLD is TDLS peer.

A: the TDLS setup is data frame. With the method proposed in the document, the AP MLD’s processing is simpler.

 There are several people in the queue while there is not time for them to ask questions. The chair asked the author to do offline discussion.

1. [255r5](https://mentor.ieee.org/802.11/dcn/21/11-21-0255-05-00be-cc34-resolution-for-cids-related-to-mbssid.docx) CC34 resolution for CIDs related to MBSSID Abhishek Patil [30’]

The author goes through the changes.

C: the multiple BSSID informaiton will be in RNR. Right?

A: RNR will not include the information of multiple BSSID number. Can do offline discussion about it.

SP:

Do you support the resolutions proposed to the following CIDs in doc 11-21/0255r6 and the changes proposed to address the issues described in discussion items B & C?

1096, 2275, 1095, 2292, 2540, 1819

No objection

1. [498r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0498-01-00be-cr-for-cids-related-to-str-operation.docx) CR for CIDs related to STR Operation Insun Jang [30’]

The author goes through the changes.

C: the STA/AP in STR definition should be affiliated MLD.

A: agree.

C: There is another document related to STR definition. You can harmonize your diefinition with that document.

C: change STR defition to ”STR is not NSTR”.

A: ok will check it.

There are some debate about whether baseline allows a definition to refer to another definition. The conclusion is that the baseline allows it.

There are some debate about ”except”. The chair asked the ppeople to do offline discussion about it.

 The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 12:00pm

**Monday 24 May 2021, 19:00pm – 21:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r4. Several changes are made per the comment. The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 5/24 | Abouelseoud, Mohamed | Sony Corporation |
| TGbe (MAC) | 5/24 | Adachi, Tomoko | TOSHIBA Corporation |
| TGbe (MAC) | 5/24 | Akhmetov, Dmitry | Intel Corporation |
| TGbe (MAC) | 5/24 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/24 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 5/24 | Bravo, Daniel | Intel Corporation |
| TGbe (MAC) | 5/24 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 5/24 | CHAN, YEE | Facebook |
| TGbe (MAC) | 5/24 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 5/24 | Chu, Liwen | NXP Semiconductors |
| TGbe (MAC) | 5/24 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (MAC) | 5/24 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 5/24 | Das, Subir | Perspecta Labs Inc |
| TGbe (MAC) | 5/24 | de Vegt, Rolf | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 5/24 | Erceg, Vinko | Broadcom Corporation |
| TGbe (MAC) | 5/24 | Fischer, Matthew | Broadcom Corporation |
| TGbe (MAC) | 5/24 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 5/24 | Hamilton, Mark | Ruckus/CommScope |
| TGbe (MAC) | 5/24 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 5/24 | Ibrahim, Ahmed | [NV] Ahmed Ibrahim, Samsung Research America |
| TGbe (MAC) | 5/24 | Jang, Insun | LG ELECTRONICS |
| TGbe (MAC) | 5/24 | Jung, hyojin | Hyundai Motor Company |
| TGbe (MAC) | 5/24 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | Khorov, Evgeny | IITP RAS |
| TGbe (MAC) | 5/24 | Kim, Jeongki | Self |
| TGbe (MAC) | 5/24 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 5/24 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 5/24 | Kwon, Young Hoon | NXP Semiconductors |
| TGbe (MAC) | 5/24 | Leng, Shiyang | Samsung Research America |
| TGbe (MAC) | 5/24 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 5/24 | Levy, Joseph | InterDigital, Inc. |
| TGbe (MAC) | 5/24 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 5/24 | lim, taesung | LG ELECTRONICS |
| TGbe (MAC) | 5/24 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 5/24 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 5/24 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 5/24 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 5/24 | Mehrnoush, Morteza | Facebook |
| TGbe (MAC) | 5/24 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 5/24 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 5/24 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 5/24 | Palayur, Saju | Maxlinear Inc |
| TGbe (MAC) | 5/24 | Park, Eunsung | LG ELECTRONICS |
| TGbe (MAC) | 5/24 | Park, Minyoung | Intel Corporation |
| TGbe (MAC) | 5/24 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 5/24 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 5/24 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | Roder, Patricia | IEEE STAFF |
| TGbe (MAC) | 5/24 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 5/24 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 5/24 | Sun, Bo | ZTE Corporation |
| TGbe (MAC) | 5/24 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 5/24 | Sun, Yanjun | Qualcomm Incorporated |
| TGbe (MAC) | 5/24 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 5/24 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 5/24 | Wang, Hao | Tencent |
| TGbe (MAC) | 5/24 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 5/24 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 5/24 | Yang, Jay | Nokia |
| TGbe (MAC) | 5/24 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 5/24 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 5/24 | yi, yongjiang | Futurewei Technologies |
| TGbe (MAC) | 5/24 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

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**Submissions**

1. [774r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0774-05-00be-cc34-resolution-for-cids-related-to-emlmr-part-2.docx) cc34 resolution for CIDs related to EMLMR - Part 2 Young H. Kwon [SP-10’]

The auther goes through the changes of the new version.

C: I am not sure that VHT/HE Nss MCS support can be acquired per your rules.

A: Do you have the cases that the rules don’t work?

C: eack link can have different capabilities.

A: the group agreed that this is MLD level capability.

C: the Tx Nss MCS are removed.

A: The Tx is still included.

SP was deferred.

1. [340r8](https://mentor.ieee.org/802.11/dcn/21/11-21-0340-08-00be-cr-for-cid-1977.docx) CR for CID 1977 Dibakar Das [SP-10’]

The author goes through the changes of the new version.

C: traffic information in SCS should be used for AP and STA also.

A: the group has no agreement that EHT AP not affiliated with MLD, STA no affiliated with MLD exists.

C: AP’s behavior is up to the implementation in one part, in another part the reserving resource is mentioned. They should be in lined.

A: the text is from baseline. To removing the inconsistency, the resource reservation will be removed.

C: the defintion of Minimum Service Interval and the Maximum Service Interval fields in TSPEC should be defined in TSPEC subclause.

A: can remove it.

SP:

Do you support the changes in doc 11-21/0340r10 for resolving the CID1977?

30Y, 20N, 33A

1. [481r5](https://mentor.ieee.org/802.11/dcn/21/11-21-0481-05-00be-resolutions-for-cc34-cids-for-channel-switching-quieting.docx) Reso. for CC34 CIDs for channel switching quieting Laurent Cariou [SP-5’]

The author goes through the changes of the new version.

SP:

Do you agree with the proposed changes in doc 481r5 corresponding to CIDs:2132 2166

No objection.

1. [390r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0390-01-00be-cr-for-35-3-5.docx) CR for 35.3.5 Po-Kai Huang [30’]

The author goes through the changes of the new version.

C: the location of Status should be defined.

A: it is defined in another contribution (in the STA Profile field).

SP:

Do you support the changes provided in 11-21-390r2 for the following CIDs?1053, 1784, 1785, 3252, 1055, 2251, 2316, 2317, 3243, 1443, 1677, 1711, 1812, 2477, 2088, 2377, 2424, 3251, 3025, 1783, 2127, 2899, 2475, 2593, 1805

 No objection

1. [1897r4](https://mentor.ieee.org/802.11/dcn/20/11-20-1897-04-00be-obss-edca-parameter-sets-for-rta.pptx) OBSS EDCA Parameter Sets for RTA Evgeny Khorov [SP-10’]

The author goes through the changes of the new version.

Discussion for SP1

C: is SP1 for R1/R2 or just collect the information?

A: this can be for either R1 or R2.

C: similar to the previous comment.

C: It may better to do separate SP for different parameters, and run SP for parameters within one BSS

SP was deferred.

1. [1938r5](https://mentor.ieee.org/802.11/dcn/20/11-20-1938-05-00be-tb-su-ppdu-and-tb-p2p-ppdu-consideration.pptx) TB SU PPDU and TB P2P PPDU Consideration Jay Yang [SP-10’]

The author goes through the changes of the new version.

Discussion of SP1

C: some part is not clear. I assume the SP want to apply to multiple portions of a TXOP.

A: can add single.

C: do you use a new frame?

A: it is not a new frame (will reuse TXOP sharing MU-RTS).

C: What is the meaning of ”multiple peer-to-peer links”?

A: it means for multiple users.

C: it is quiet complicated.

Updated SP 1 per the discussion:

**Do you support that 11be defines a mechanism for an AP to transmit a frame(TXOP sharing MU-RTS) that allocates a single portion of its obtained TXOP for multiple users in R2?**

**28Y, 24N, 29A**

1. [395r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0395-01-00be-tspec-request.pptx) TSPEC Request Peshal Nayak [30’]

The author goes through the presentation.

Discussion:

C: what does a STA do if the STA receives the request?

A: STA can do some decision for power save, TWT negotiation etc.

C: similar comment that the AP can decide the TWT schedule already.

A: burst type, traffic type will be useful for the STAs. STAs can do further optimization with these information.

C: Are you saying that AP know the traffic pattern but the STAs don’t know the traffic pattern?

A: yes, e.g. DL traffic pattern.

C: how does the AP know the downlink traffic pattern?

A: this is general concept.

C: AP is in MAC, PHY level. The traffic pattern should be from peer server.

A: the information could be from MAC level.

SP:

* **Do you agree to add the following to 11be R1:**
	+ The non-AP STA or non-AP MLD may send a TSPEC request IE to the AP or AP MLD to request for the DL traffic characteristic of a traffic flow
	+ Upon receiving the TSPEC request IE, the AP or AP MLD can send the requested information using the TSPEC element(s) or its variant (e.g. TSPEC-lite) to the non-AP STA or non-AP MLD

10Y, 43N, 29A

1. . [480r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0480-01-00be-resolutions-for-cc34-cids-for-more-data-usage.docx) Resolutions for CC34 CIDs for More Data usage Laurent Cariou [30’]

The author goes through the presentation.

The SP is derferred

The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 20:59pm

**Thursday 27 May 2021, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:09am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r9. Several changes are made per the comment (author change, removing 11-21/141). The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 5/27 | Abushattal, Abdelrahman | Istanbul Medipol university ;Vestel |
| TGbe (MAC) | 5/27 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 5/27 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 5/27 | Bredewoud, Albert | Broadcom Corporation |
| TGbe (MAC) | 5/27 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 5/27 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 5/27 | Choi, Jinsoo | LG ELECTRONICS |
| TGbe (MAC) | 5/27 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 5/27 | Das, Subir | Perspecta Labs Inc |
| TGbe (MAC) | 5/27 | Derham, Thomas | Broadcom Corporation |
| TGbe (MAC) | 5/27 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 5/27 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 5/27 | Fischer, Matthew | Broadcom Corporation |
| TGbe (MAC) | 5/27 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 5/27 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 5/27 | Han, Zhiqiang | ZTE Corporation |
| TGbe (MAC) | 5/27 | Handte, Thomas | Sony Corporation |
| TGbe (MAC) | 5/27 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 5/27 | Hu, Chunyu | Facebook |
| TGbe (MAC) | 5/27 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 5/27 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 5/27 | Kim, Jeongki | Self |
| TGbe (MAC) | 5/27 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 5/27 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 5/27 | Kim, Sanghyun | WILUS Inc |
| TGbe (MAC) | 5/27 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/27 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 5/27 | Kwon, Young Hoon | NXP Semiconductors |
| TGbe (MAC) | 5/27 | Lee, Hong Won | LG ELECTRONICS |
| TGbe (MAC) | 5/27 | Leng, Shiyang | Samsung Research America |
| TGbe (MAC) | 5/27 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 5/27 | Liu, Der-Zheng | Realtek Semiconductor Corp. |
| TGbe (MAC) | 5/27 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 5/27 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 5/27 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 5/27 | LU, Yuxin | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/27 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 5/27 | Max, Sebastian | Ericsson AB |
| TGbe (MAC) | 5/27 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/27 | Mehrnoush, Morteza | Facebook |
| TGbe (MAC) | 5/27 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 5/27 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 5/27 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 5/27 | Nezou, Patrice | Canon Research Centre France |
| TGbe (MAC) | 5/27 | Palayur, Saju | Maxlinear Inc |
| TGbe (MAC) | 5/27 | Park, Minyoung | Intel Corporation |
| TGbe (MAC) | 5/27 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 5/27 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 5/27 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 5/27 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbe (MAC) | 5/27 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 5/27 | Sevin, Julien | Canon Research Centre France |
| TGbe (MAC) | 5/27 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 5/27 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 5/27 | Tsujimaru, Yuki | Canon Inc. |
| TGbe (MAC) | 5/27 | Verenzuela, Daniel | Sony Corporation |
| TGbe (MAC) | 5/27 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 5/27 | Wentink, Menzo | Qualcomm Incorporated |
| TGbe (MAC) | 5/27 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 5/27 | Yang, Jay | Nokia |
| TGbe (MAC) | 5/27 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 5/27 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

 **Submissions**

1. [480r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0480-01-00be-resolutions-for-cc34-cids-for-more-data-usage.docx) Resolutions for CC34 CIDs for More Data usage Laurent Cariou [Q&A/SP-10’]

Laurent annoucnes no change.

C: P4, 9.2.4.8, green text, DL should be added.

A: ok

C: HE STA is mentioned in 11.2,3.7.

A: it can be deleted.

C: QoS + CF Ack is not needed.

A: Agreed

SP deferred

1. [499r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0499-00-00be-cr-for-cids-related-to-ml-ie-usage-for-multi-link-setup.docx) CR 4 CIDs related to ML IE Usage for Multi-link Setup Insun Jang [30’]

The author goes through the changes.

C: comment about ”removing ön the link that is working on.”: It should be removed. More clarification should be added, e.g. desires to use after association.

A: want to listen the other opinion.

C: EML Capabilitiy should be optional.

C: main thing should be deciding one of option 1 and option 2 to go ahead.

A: agree.

SP deferred

1. [526r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0526-00-00be-resolution-for-cid-2469.docx) Resolution for CID 2469 Gaurang Naik [30’]

The author goes through the changes.

C: you just do name change, right?

A: yes. Some other corresponding text change are made also.

C: stall two octet?

A: it is 4 bits.

C: don’t prefer to change the name. AP cooordinaiton may need AP ID. Already discuss this for two years by using Link ID.

C: link ID is used for many places, TID to link mapping, identifying STAs of non-AP MLD, TDLS between two non-AP MLDs etc.

SP1:

Do you agree to replace the field Link ID with AP ID in the 11be draft?

22Y, 52N, 18A

1. [557r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0557-00-00be-cc34-resolution-for-cids-related-to-emlmr-part-1.docx) Res. for CIDs related to EMLMR – Part 1 Young H. Kwon [20’]

The author goes through the changes.

C: frame exchange may not be clear, e.g. TXOP includes multiple frame exchanges.

A: ok.

C: what is enabled state?

A: after association, eMLMR can be used.

C: it may be better to use explicit indication.

A: will consider it.

C: don’t want explicit indication since it complicates the protocol.

C: there is no power save rules for eMLMR in 35.3.6.

A: no new rules are needed.

C: eMLMR applies to all links?

A: this needs further discussion.

SP deferred

1. [493r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0493-00-00be-cr-for-cid-2849.docx) CR for CID 2849 Yiqing Li [10’]

The author goes through the changes.

SP:

Do you support the changes proposed in doc 11-21/0493r1 for CID 2849?

No objection

1. [386r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0386-01-00be-cc34-resolution-for-cid-1038.docx) CC34 resolution for CID 1038 Abhishek Patil [30’]

The author goes through the changes.

C: existing element carries such information. Those IEs can be used.

A: investigating it. The overhead of using those IEs is high.

C: Agree with the previous comment. Also the other links have different antenna characteristics. The other links’ path loss is difficult to estimate.

A: There are methods to do path loss estimation of other links.

SP deferred

The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 11:59am

**Thursday 3 June 2021, 19:00pm – 21:00pm ET (TGbe MAC ad hoc conference call)**

Ad-hoc Chair, Liwen Chu, calls meeting to order at 10:02AM ET.

Secretary for today’s call is Alfred.

Chair goes over patent policy and calls for Potentially essential patents.

Nobody spoke up.

Chair goes over other guidelines.

Chair goes over the IEEE SA Copyright Policy.

Chair asks if there is any requests for modification to proposed agenda

Laurent Cariou asks to defer 480r1.

Insun asks to add two deferred SPs, 498r3 and 499r4.

Agenda is approved (based on 785R12 with the additions above.). Agenda with these changes will appear in 785r13.

**Recorded attendance through Imat and e-mail:**



**Dibakar goes over 340r11**

Author provides a brief overview of the changes with respect to the previous version, which includes an update to the definition of the service period, and moved the capability indication from ML element to the EHT Capabilities element.

SP: Do you support the changes provided in 11-21/340r11 for CID 1977?

No discussion.

**Result: No objection.**

**Yunbo goes over 552r6**

Author provides a brief overview of the changes with respect to the previous version, and discusses the comments that he has received.

Do you support the changes provided in 11-21/552r6?

Discussion: Some questions for the p2p case, concerns on reinventing existing mechanisms, and define this procedure for R2.

**Result: 29Y, 27N, 34A.**

**Insun goes over 498r3**

Author provides an update of the doc. During the discussion members focused on the use of “may” in accessing the WM and suggested “shall” and also questioned what reasons are to be listed as exceptions. Some edits on the screen occurred based on the discussions and the feedback. It will be r4.

SP #1: Do you support the changes in 11-21/498r4 identified by the following CIDs?

- 1083, 1175, 1215, 1433, 1660, 1698, 1699, 1794, 1821, 2116, 2138, 2553, 2748, 3409

Discussion: No discussion.

**Result: No objection.**

**Insun goes over 499r4**

Author provides an overview of the changes that occurred with respect to the previous time the document was presented. Essentially removed option 1 from the doc since most members preferred option 2. Other changes were presented accordingly providing a background for each of these changes.

SP is deferred since more members were on the queue for questions.

**Jason goes over 538r3**

Author goes over the document. Some discussions on the use of EHT non-AP STA vs non-AP EHT STA. Some changes are made on the fly. Member mentions that will review the document in detail offline and provide feedback in a few days. Author will wait for the feedback. SP can be ran next time.

**Jason goes over 544r0**

Author goes over the document. Minor discussions inline with the proposed changes.

SP #1: Do you support the changes in 11-21/544r0 identified by the following CIDs?

- 1809 and 2368

Discussion: no discussion.

**Result: No objection.**

**Po-Kai goes over 423r1**

**Some discussion about the applicability of mesh to MLD. And unrelated discussions on the new editorial style-guide compliance of the changes.**

SP1: Do you support the changes provided in 11-21-0423r1 for the following CIDs?

2277, 2278, 3241, 2078, 1665, 2080, 2077, 2079, 2076, 2081

Result: 25Y, 9N, 36A

SP2: Do you support the changes provided in 11-21-0423r1 for the following CIDs?

2277, 2278, 3241, 2078, 2080, 2077, 2079, 2076, 2081

Discussion: What changed? Removed CID 1665, and author gives an overview of the changes that would not be applicable.

**Result: No objection.**

Members asks if 510 is moved from the agenda. Chair mentions that he missed it. Asks members if there is any objection to go over 510r4. No objections were heard.

**John goes over 510r4**

Author goes over the comments and resulting proposed changes.

Comments mentioning of the reason as to why the scope is limited to MLD only, i.e., why not an EHT STA itself. Author mentions that there is a motion that mandates MLD to EHT devices.

SP is deferred. Will follow up offline to see if we need to solve these EHT STA vs MLD issues.

**Matt goes over 530r4**

Author provides an overview of the comments and the changes. We ran out of time for questions. Will resume next time.

Meeting is adjourned at 12:00 ET.

**Monday 07 June 2021, 19:00pm – 21:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r14. Several changes are made per the comment. The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**



**Submissions**

1. [480r5](https://mentor.ieee.org/802.11/dcn/21/11-21-0480-01-00be-resolutions-for-cc34-cids-for-more-data-usage.docx) Resolutions for CC34 CIDs for More Data usage Laurent Cariou [SP-10’]

The auther goes through the changes of the new version.

C: why exclude measurement mmpdu?

A: measurement mmpdu for a link can’t be tunneled and transmitted in other links.

C: the related subclause is not finalized.

A: it is clear what kind of frame are buffered and indicated.

C: TDLS of two MLDs, does More Data indication change?

A: R1 will not deal with TDLS of two MLDs.

C: in the last paragraph another STA that sends PS Poll may get nothing since the More Data indication is for a TID that is nto mapped to the link of the another STA.

A: can add a note later.

SP: Do you agree with the resolution changes in document 480r5 corresponding to CIDs 1195 1444 1882 2516 3379 1497 1001?

35Y, 6N, 30A

1. [530r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0530-04-00be-cr-nstr-link-pair-definition.docx) CR-NSTR-link-pair-definition Matthew Fischer [Q&A+SP-15’]

The auther goes through the changes of the new version.

C: doesn’t agree with the link definition. Link is related to GLK and is in 802.1 level.

C: mesh’s link is different from 11be also.

A: can do the further discussion about 11be link.

C: see the reason for WM interface. But it is not clear whether one definition can address all the issues. You can use both of them for different cases, peer to peer case and form one MLD point of view.

A: can do further discussion.

C: agree with the previous comment. More changes may be required, e.g. ”STR over a pair of links” may also need to be changed.

C: For my comment, my intention is to use ”STA link”.

SP deferred

1. [500r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0500-03-00be-cr-for-35-3-2-3.docx) CR for 35.3.2.3 Namyeong Kim [20’]

The auther goes through the changes of the new version.

C: if non-AP MLD sends ML Probe Reqeust, can AP MLD send Probe Response to reject the request?

A: don’t quite undertand the question, can do offline discussion.

C: 35.3.4.2 covers most of them.

A: example is added to clarify it.

C: you may refer to 35.3.4.2 to simplify the text or move the figure to 35.3.4.2.

A: can do offline discussion.

C: the reporting STA may include Request element or not. The behavior should be clarified.

C: agree with the previous comment that 35.3.2 covers most of them. The name of Complete Profile is good enough.

SP deferred

1. [501r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0501-01-00be-cr-for-35-3-8.docx) CR for 35.3.8 Namyeong Kim [20’]

The auther goes through the changes of the new version.

C: there is no difference between unsolicited Probe Response and Beacon.

A: unsolicited Probe Response includes the critical update of other APs.

C: But Beacon can do same thing.

C: similar comment.

C: AP MLD has three links. If the critical update is in link1, where is the unsolicited probe response is tranmitted?

A: the unsolcited probe response can be transmitted in any link.

SP deferred

1. [577r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0577-01-00be-cr-mld-architecture.docx) CR-MLD-architecture Duncan Ho [30’]

The auther goes through the changes of the new version.

C: Figure 5-3, why integrity protection is before Packet Numeber assignament.

C: same as baseline.

C: this may be from TKIP. Will do some offline work.

SP deferred

The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 20:59pm

**Thursdayday 10 June 2021, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r15. Several changes are made per the comment (defer 537). The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**



**Submissions**

1. [619r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0619-00-00be-cr-tspec.docx) CR TSPEC Duncan Ho [20’]

The auther goes through the changes of the new version.

C: TWT setup is used by broadcast TWT and individual TWT. Is the change used by individual TWT?

A: the inclusion of TSPEC is optional.

C: ”of” should be changed to ”or”.

C:will TSPEC be carried in TWT setup frame, not in Beacon?

A: only want to include TSPEC in TWT setup frame.

C: The scheduling AP’s behavior should be defined, whether TSPEC can be changed, whether some of TSPECs in request can e rejected.

SP deferred

1. [434r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0434-00-00be-cr-for-11-3-4.docx) CR for 11.3.4 Po-Kai Huang [20’]

The auther goes through the changes of the new version.

C: reword ”to STA afiliated with...” to ”through STA afiliated with...”

A: ok

C: ”to” is better.

C: is authentication at MLD level.

A: yes.

SP:

Do you agree to support the resolution provided in 11-21/434r1 for the following CIDs?

1165, 1664, 1666, 2082, 2083, 2084, 2279, 2280, 2825, 2881, 2882, 2883, 3364

The chair asked whether there is objection to the SP?

C: Still track the resolved comments at this stage that D1.0 comments are collected?

A: The editor will track the CIDs internlly.

C: the rejected comments shouldn’t be included. It is not fair for the commenter since they are not discussed.

C: from editor: the resoultions of comments that are motioned will be incorporated in the future draft and will be labelled by the CIDs. This is not letter ballot. If the commenters are not satisfied, the commenters can resubmitted the comments.

C: the ones that are not discussed should be removed from the list, e.g. the CIDs except 1664, 2825, 2883.

A: ok.

The updated SP:

Do you agree to support the resolution provided in 11-21/434r1 for the following CIDs?

1664, 2825, 2883

No objection

1. [622r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0622-00-00be-tbd-and-cr-for-critical-update-for-non-ap-sta.docx) TBD and CR for critical update for non-AP STA Ming Gan [15’]

The auther go through the two mechanisms to retrieve updated info if there is BSS parameter update and ask the feedback of them.

C: for multi-radio device and single radio device have different rules. Why don’t we have uniform rules?

A: would like to have unified rules to receive Beacon frames only.

C: it should be up to STA to decide which way to go. Method based on Beacon reception may have some latency issue.

C: prefered unified rules for single radio and multi radio devices. The SP can be done for the rules.

SP deferred

1. [300r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0300-01-00be-crs-for-d0-3-group-key-handshake-cids.docx) CRs for D0.3 Group key handshake CIDs Rojan Chitrakar [20’]

The auther goes through the changes of the new version.

C: Your changes are based on each link has its own GTK. The group is debating MLD level vs link level GTK.

A: know the debate. The contribution is based the text in draft 1.0.

C: what is ”available links”?

A: I can change it to ”enabled links”.

C: still not clear to me.

C: it is ”may”. The text is good.

1. [672r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0672-00-00be-cr-for-restricted-twt-sp.docx) CR for Restricted TWT SP Sunhee Baek [20’]

The auther goes through the changes of the new version.

C: how do other STAs know the extension of the restricted TWT SP?

C: agree wtih previous comments.

C: restricted TWT follows broadcast TWT. Some STAs can’t obtain the medium access right and other STA can obtain the medium access right. How to deal with such case.

A: can do offline discussion.

C: the TWT SP should be long enough. The existing rules should be used.

The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 11:59am

**Thursdayday 17 June 2021, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r17. Several changes are made per the comment (reordering, adding 467). The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 6/17 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 6/17 | Banerjea, Raja | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 6/17 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 6/17 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 6/17 | CHAN, YEE | Facebook |
| TGbe (MAC) | 6/17 | Cheng, Paul | MediaTek Inc. |
| TGbe (MAC) | 6/17 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 6/17 | Chung, Chulho | SAMSUNG |
| TGbe (MAC) | 6/17 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 6/17 | Erceg, Vinko | Broadcom Corporation |
| TGbe (MAC) | 6/17 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 6/17 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 6/17 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 6/17 | Handte, Thomas | Sony Corporation |
| TGbe (MAC) | 6/17 | Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) |
| TGbe (MAC) | 6/17 | Hsu, Chien-Fang | MediaTek Inc. |
| TGbe (MAC) | 6/17 | Hu, Chunyu | Facebook |
| TGbe (MAC) | 6/17 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 6/17 | Jiang, Jinjing | Apple, Inc. |
| TGbe (MAC) | 6/17 | Kain, Carl | USDoT; Noblis, Inc. |
| TGbe (MAC) | 6/17 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 6/17 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 6/17 | Kim, Sanghyun | WILUS Inc |
| TGbe (MAC) | 6/17 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 6/17 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/17 | Kneckt, Jarkko | Apple, Inc. |
| TGbe (MAC) | 6/17 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 6/17 | Kwon, Young Hoon | NXP Semiconductors |
| TGbe (MAC) | 6/17 | Lee, Richard | R Lee Associates |
| TGbe (MAC) | 6/17 | Leng, Shiyang | Samsung Research America |
| TGbe (MAC) | 6/17 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 6/17 | Levy, Joseph | InterDigital, Inc. |
| TGbe (MAC) | 6/17 | Liu, Yong | Apple, Inc. |
| TGbe (MAC) | 6/17 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 6/17 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 6/17 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 6/17 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 6/17 | LU, Yuxin | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/17 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 6/17 | Martinez Vazquez, Marcos | MaxLinear Corp |
| TGbe (MAC) | 6/17 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/17 | Monajemi, Pooya | Cisco Systems, Inc. |
| TGbe (MAC) | 6/17 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/17 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 6/17 | Nezou, Patrice | Canon Research Centre France |
| TGbe (MAC) | 6/17 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 6/17 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 6/17 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 6/17 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 6/17 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 6/17 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 6/17 | Seok, Yongho | MediaTek Inc. |
| TGbe (MAC) | 6/17 | Sevin, Julien | Canon Research Centre France |
| TGbe (MAC) | 6/17 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 6/17 | Stacey, Robert | Intel Corporation |
| TGbe (MAC) | 6/17 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 6/17 | Sun, Yanjun | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 6/17 | Tsujimaru, Yuki | Canon Inc. |
| TGbe (MAC) | 6/17 | Venkatesan, Ganesh | Intel Corporation |
| TGbe (MAC) | 6/17 | Verenzuela, Daniel | Sony Corporation |
| TGbe (MAC) | 6/17 | Verma, Lochan | Apple, Inc. |
| TGbe (MAC) | 6/17 | VIGER, Pascal | Canon Research Centre France |
| TGbe (MAC) | 6/17 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 6/17 | Wang, Hao | Tencent |
| TGbe (MAC) | 6/17 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 6/17 | Wang, Qi | Apple, Inc. |
| TGbe (MAC) | 6/17 | Wentink, Menzo | Qualcomm Incorporated |
| TGbe (MAC) | 6/17 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 6/17 | Yang, Jay | Nokia |
| TGbe (MAC) | 6/17 | Yang, Steve TS | MediaTek Inc. |
| TGbe (MAC) | 6/17 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 6/17 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 6/17 | yi, yongjiang | Spreadtrum Communication USA Inc. |
| TGbe (MAC) | 6/17 | Yong, Su Khiong | Apple, Inc. |

**Submissions**

1. [300r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0300-03-00be-crs-for-d0-3-group-key-handshake-cids.docx) CRs for D0.3 Group key handshake CIDs Rojan Chitrakar

The auther goes through the changes of the new version.

SP: Do you agree to incorporate the changes proposed in IEEE 802.11-21/0300r3 to the latest 11be draft for CIDs 1028, 2505, 2594?

41Y, 14N, 21A

1. 467r1 CR for 35.3.4.3 Multi-link element usage Ming Gan

The auther goes through the changes of the new version.

C: Do you mean that if address 1 matches the AP of other links, the AP will respond?

A: yes.

C: concern about the changes. This touches the rules about how the addresses in MAC header are used.

A: the change provides similar behavior as multiple BSSID. Normal Probe Request instead of multi link Probe Request can be used.

C: same comment as the previous one.

1. [671r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0671-01-00be-cr-10-3-2-9-cts-procedure-nstr-limited.docx) CR-10-3-2-9-CTS-procedure-NSTR-limited Matthew Fischer

The auther goes through the changes of the new version.

C: don’t like ”may”. The following is better ”shall respond unless it interupts the reception of other channel”.

A: This is what the propsoed text is saying.

There is no time for the commenters in the queues. The SP is deferred.

1. [534r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0534-03-00be-cr-ml-reconfiguration.docx) CR ML Reconfiguration Payam Torab

The auther goes through the proposal.

C: deleting link is not done through handshake?

A: client side deleting is dons through handshake. AP’s side deleting is done through notification.

C: STAS in doze state may not be able to receive the notification.

A: we can address this in the future since it should be minor thing.

SP: Do you agree to incorporate the changes proposed in IEEE 802.11-21/0534r4 to the latest TGbe draft?

44Y, 40N, 18A

1. [633r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0633-01-00be-cr-for-capability-information-field-related-cids.docx) CR for Capability Information field Related CIDs Yiqing Li

The auther goes through the proposal.

SP: Do you agree to incorporate the changes proposed in IEEE 802.11-21/0534r4 to the lastest 11be draft for the following CIDs?

1013, 1237, 1900, 2510, 2848, 3012

No objection

The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 11:53am

**Monday 21 June 2021, 19:00pm – 21:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 19:02am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r19. Several changes are made per the comments (285 deferred, version changes). The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 6/21 | Adachi, Tomoko | TOSHIBA Corporation |
| TGbe (MAC) | 6/21 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | Akhmetov, Dmitry | Intel Corporation |
| TGbe (MAC) | 6/21 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 6/21 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 6/21 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 6/21 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 6/21 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (MAC) | 6/21 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 6/21 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 6/21 | Erceg, Vinko | Broadcom Corporation |
| TGbe (MAC) | 6/21 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 6/21 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 6/21 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 6/21 | Hamilton, Mark | Ruckus/CommScope |
| TGbe (MAC) | 6/21 | Han, Zhiqiang | ZTE Corporation |
| TGbe (MAC) | 6/21 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 6/21 | Ibrahim, Ahmed | Samsung Research America |
| TGbe (MAC) | 6/21 | Jung, hyojin | Hyundai Motor Company |
| TGbe (MAC) | 6/21 | Kain, Carl | USDoT; Noblis, Inc. |
| TGbe (MAC) | 6/21 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 6/21 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 6/21 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 6/21 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/21 | Kneckt, Jarkko | Apple, Inc. |
| TGbe (MAC) | 6/21 | Leng, Shiyang | Samsung Research America |
| TGbe (MAC) | 6/21 | Levy, Joseph | InterDigital, Inc. |
| TGbe (MAC) | 6/21 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 6/21 | Lin, Zinan | InterDigital, Inc. |
| TGbe (MAC) | 6/21 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 6/21 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 6/21 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 6/21 | LU, Yuxin | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/21 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 6/21 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/21 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 6/21 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 6/21 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 6/21 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 6/21 | Palayur, Saju | Maxlinear Inc |
| TGbe (MAC) | 6/21 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 6/21 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 6/21 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 6/21 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 6/21 | Sambasivan, Sam | AT&T |
| TGbe (MAC) | 6/21 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 6/21 | Strauch, Paul | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 6/21 | Sun, Yanjun | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 6/21 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 6/21 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 6/21 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (MAC) | 6/21 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 6/21 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 6/21 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 6/21 | yi, yongjiang | Spreadtrum Communication USA Inc. |
| TGbe (MAC) | 6/21 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

**Submissions**

1. [594r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0594-00-00be-cr-for-cids-related-to-sta-mac-address-of-non-ap-mld.docx) CR Related to STA MAC Address of Non-AP MLD Guogang Huang

The auther goes through the changes of the new version.

C: unique MAC addresse for each link was approved long time ago. There are some security concerns, e.g. management frame related.

A: management frame can use MLD address to do encryption/decryption.

C: This was not motioned.

C: not clear by single MAC address mode enabled and complete profile.

A: we can talk it offline.

C: for the first comment, don’t see any security issue.

C: when two links have overlapped channels, same MAC addresses will create issues.

A: the spec disallows such setting.

1. [650r5](https://mentor.ieee.org/802.11/dcn/21/11-21-0650-05-00be-cc34-resolution-for-cids-related-to-mlo-discovery.docx) CC34 resolution for CIDs related to MLO Discovery Abhishek Patil

The auther goes through the changes of the new version.

C: frame sequence in title of subclause should be changed to frame exchanges

A: ok

C: can ML Probe Request be unicast?

A: unicast is allowed (directed means it).

C: change ””directed” to ”addressed”.

1. [569r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0569-01-00be-cr-for-cid-3017.docx) CR for CID 3017 Xiaofei WANG

The auther goes through the changes of the new version.

C: would like to check whether there are cases that Basic Bariant ML IE always include MLD MAC address. It is better to defer the SP.

A: I checked it is the case. Can defer the SP to next meeting.

1. [435r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0435-00-00be-cr-for-11-3-5.docx) CR for 11.3.5 Po-Kai Huang

The auther goes through the changes of the new version.

C: in MLO it is the STA/AP to transmit frames. The spec should go this way.

A: agreed. The updated text follows the direction.

C: change ”he” to ”the”.

A: ok.

C: not all links include basic HT/VHT MCS set.

A: ok add if present.

SP: Do you support the proposed change in 11-21-435r2 435r3 for the following CIDs?- 1851, 1810, 2894, 1211, 1166, 1025, 2896, 1848, 1849, 2897, 1847

37Y, 5N, 22A

1. [1938r7](https://mentor.ieee.org/802.11/dcn/20/11-20-1938-07-00be-tb-su-ppdu-and-tb-p2p-ppdu-consideration.pptx) TB SU PPDU and TB P2P PPDU Consideration Jay Yang

The author goes through the new SP text.

C: using multiple MU-RTS TXS frames already can do it.

A: the SP assumes one MU-RTS TXS frame.

C: Does ”a portion” mean same duration for multiple STAs?

A: the exact meaning can be decided later.

SP: **Do you support that 11be defines a mechanism for an AP to allocate a portion of its obtained TXOP for multiple associated STAs via Triggered TXOP sharing procedure in R2?**

27Y, 24N, 26A

1. [394r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0394-01-00be-broadcast-twt-for-mlds.pptx) Broadcast TWT for MLDs Rubayet Shafin

The auther goes through the slides.

C: it seems the alligned broadcast TWT already supported per the current spec. If an AP MLD wants it, the AP can do it.

C: similar comment.

The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 20:59pm

**Thursdayday 24 June 2021, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r20. Several changes are made per the comment (revision changes, removing 792, may add another item if having time). The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 6/24 | AbidRabbu, Shaima' | Istanbul Medipol University; Vestel |
| TGbe (MAC) | 6/24 | Ahmad, Tufail | Koc University |
| TGbe (MAC) | 6/24 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 6/24 | Akhmetov, Dmitry | Intel Corporation |
| TGbe (MAC) | 6/24 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | B, Hari Ram | NXP Semiconductors |
| TGbe (MAC) | 6/24 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 6/24 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 6/24 | Barr, David | MaxLinear |
| TGbe (MAC) | 6/24 | Ben Arie, Yaron | toga networks(a huawei company) |
| TGbe (MAC) | 6/24 | Bredewoud, Albert | Broadcom Corporation |
| TGbe (MAC) | 6/24 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 6/24 | Cheng, Paul | MediaTek Inc. |
| TGbe (MAC) | 6/24 | CHERIAN, GEORGE | Qualcomm Incorporated |
| TGbe (MAC) | 6/24 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 6/24 | Choi, Jinsoo | LG ELECTRONICS |
| TGbe (MAC) | 6/24 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 6/24 | Das, Subir | Perspecta Labs Inc |
| TGbe (MAC) | 6/24 | Derham, Thomas | Broadcom Corporation |
| TGbe (MAC) | 6/24 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 6/24 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 6/24 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 6/24 | Han, Jonghun | SAMSUNG |
| TGbe (MAC) | 6/24 | Han, Zhiqiang | ZTE Corporation |
| TGbe (MAC) | 6/24 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 6/24 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 6/24 | Ibrahim, Ahmed | Samsung Research America |
| TGbe (MAC) | 6/24 | Jamalabdollahi, Mohsen | Cisco Systems, Inc. |
| TGbe (MAC) | 6/24 | Jang, Insun | LG ELECTRONICS |
| TGbe (MAC) | 6/24 | JONES, JEFFRUM | Qorvo |
| TGbe (MAC) | 6/24 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 6/24 | Khorov, Evgeny | IITP RAS |
| TGbe (MAC) | 6/24 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 6/24 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 6/24 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (MAC) | 6/24 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 6/24 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | Kneckt, Jarkko | Apple, Inc. |
| TGbe (MAC) | 6/24 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 6/24 | Lalam, Massinissa | SAGEMCOM BROADBAND SAS |
| TGbe (MAC) | 6/24 | Lee, Hong Won | LG ELECTRONICS |
| TGbe (MAC) | 6/24 | Leng, Shiyang | Samsung Research America |
| TGbe (MAC) | 6/24 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 6/24 | Levy, Joseph | InterDigital, Inc. |
| TGbe (MAC) | 6/24 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 6/24 | Liu, Yong | Apple, Inc. |
| TGbe (MAC) | 6/24 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 6/24 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 6/24 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 6/24 | Martinez Vazquez, Marcos | MaxLinear Corp; MAXLINEAR INC |
| TGbe (MAC) | 6/24 | Max, Sebastian | Ericsson AB |
| TGbe (MAC) | 6/24 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | MELZER, Ezer | Toga Networks, a Huawei company |
| TGbe (MAC) | 6/24 | Monajemi, Pooya | Cisco Systems, Inc. |
| TGbe (MAC) | 6/24 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 6/24 | Nakano, Takayuki | Panasonic Corporation |
| TGbe (MAC) | 6/24 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 6/24 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 6/24 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 6/24 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 6/24 | Ozbakis, Basak | VESTEL |
| TGbe (MAC) | 6/24 | Park, Eunsung | LG ELECTRONICS |
| TGbe (MAC) | 6/24 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 6/24 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 6/24 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 6/24 | Redlich, Oded | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | REICH, MOR | Togan Networks, a Huawei Company |
| TGbe (MAC) | 6/24 | Ryu, Kiseon | Ofinno |
| TGbe (MAC) | 6/24 | Sambasivan, Sam | AT&T |
| TGbe (MAC) | 6/24 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 6/24 | Shilo, Shimi | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | Sun, Bo | ZTE Corporation |
| TGbe (MAC) | 6/24 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 6/24 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 6/24 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | Urabe, Yoshio | Panasonic Corporation |
| TGbe (MAC) | 6/24 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 6/24 | Wang, Hao | Tencent |
| TGbe (MAC) | 6/24 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 6/24 | Wang, Qi | Apple, Inc. |
| TGbe (MAC) | 6/24 | Xin, Yan | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 6/24 | yi, yongjiang | Spreadtrum Communication USA Inc. |
| TGbe (MAC) | 6/24 | Yong, Su Khiong | Apple, Inc. |
| TGbe (MAC) | 6/24 | Yu, Jian | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/24 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

**Submissions**

1. [534r5](https://mentor.ieee.org/802.11/dcn/21/11-21-0534-05-00be-cr-ml-reconfiguration.docx) CR ML Reconfiguration Payam Torab

The auther goes through the changes of the new version and emphisizes that the SP will be high level SP.

C: the text only allows adding/removing AP. Why do we need to announe the adding AP? The adding could be done through RNR.

A: there is comment about it in the document.

C: removing AP may contradict with AP MLD defintion.

A: this should be minor issue and be addressed later.

C: fine with high level SP.

SP: Do you support tht an AP MLD can add affiliated APs at any time and defining procedures to remove affiliated APS from AP LD in R1?

71Y, 15N, 22A

1. [300r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0300-03-00be-crs-for-d0-3-group-key-handshake-cids.docx) CRs for D0.3 Group key handshake CIDs Rojan Chitrakar

The auther announces no change compared with document being presented before.

SP: Do you agree to incorporate the changes proposed in IEEE 802.11-21/0300r3 to the lastest 11be draft for CIDs 1028, 2505, 2594?

No objection

1. [510r5](https://mentor.ieee.org/802.11/dcn/21/11-21-0510-04-00be-cr-for-clauses-3-1-and-4-5-11a-on-nsep.docx) CR for Clauses 3.1 and 4.5.11a on NSEP Subir Das

The auther announces no change for the be draft text compared with document being presented before. However the dicussion point is added.

C: not sure the difference between this version and previous version.

A: no change in the text. Only the discussion point.

SP: Do you support to incorporate the changes proposed by the following CIDs in 510/r5:1110, 1112, 1721, 1722, 1820, 2257, 2258, 2264, 2265, 2266, 2274, 3345

No objection

1. [700r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0700-00-00be-cr-for-4-5-3.docx) CR for 4.5.3 Po-Kai Huang

The auther goes through the changes of the new version.

C: ML-transition is not required to be defined.

A: Are you ok with the change and have issue wth ML-transition?

C: need more time to review it.

The author want to run the SP and agree that he will continue to improve the text.

SP: Do you support the proposed change in 11-21-0700r1 for the following CIDs?- 2236, 2235, 1000, 2118, 2238, 2263, 3006, 2900, 1762, 3415, 2091

No objection

1. [740r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0740-00-00be-tbd-and-cr-for-group-addressed-frames.docx) TBD and CR for group addressed frames Ming Gan

The auther goes through the changes of the new version.

C: link ID based method that starts from 0 makes sense.

A: should be ok.

C: the link ID is not continuous.

C: the buffered group-addressed frame indication should be added at the end of the TIM to decrese TIM overhead.

C: agree with the previous comment.

1. [523r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0523-01-00be-cr-for-35-3-5-4-multi-link-setup-ie-usage.docx) CR for 35.3.5.4 Multi-link Setup - IE usage Jason Y. Guo

The auther goes through the changes of the new version.

C: want to make sure that the deleted text is in other place.

A: yes.

SP: Do you support the changes proposed in 11-21/0523r2 for the following CIDs?1194 1714 2318 3253

The members want to double check that the deleted text is moved to other places. The SP is deferred.

1. [741r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0741-03-00be-cr-for-cid-2162-and-2163.docx) CR for CID 2162 and 2163 Ming Gan

This is deferred per the author’s request.

1. [788r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0788-00-00be-tgbe-cc34-cids-2476-3133.docx) TGbe CC34 CIDS 2476 3133 Michael Montemurro

The auther goes through the changes of the document.

C: agree that most text is in clause 12. Can you add ”see clause 12”.

A: ok.

C: ”respectively” at the end of the proposed change should be rmoved.

A: ok.

SP: Instruct the editor to update the latest TGbe draft with the changes shown in document 11-21/788r1, which address CIDs 2476 and 3133 from CC-34.

No objection

1. [523r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0523-01-00be-cr-for-35-3-5-4-multi-link-setup-ie-usage.docx) CR for 35.3.5.4 Multi-link Setup - IE usage Jason Y. Guo

The auther goes through the changes of the new version.

SP: Do you support the changes proposed in 11-21/0523r3 for the following CIDs?1194 1714 2318 3253

No objection

1. [877r0](https://mentor.ieee.org/802.11/dcn/21/11-21-0877-00-00be-proposed-draft-text-for-transmit-stream-category-measurement.docx) pdt-for-transmit-stream-category-measurement Guogang Huang

The auther goes through the changes of the document.

C: Does this address some comments?

A: no.

C: the relationship of low latency with SCSID is not clear.

A: multiple streams could have same TID. AP needs to know such info.

C: this is general issue.

C: SCSID is not carried in frames. The method to do the measurement per SCS needs to do more investication.

C: the SCS based mesurement needs more prosessing power.

C: it is good to provide tools for STA to report the SCS measurement. This is good direction.

The chair asked whether there are any other businesses before adjourning the meeting. No response was received.

The teleconference was adjourned at 11:59am

**Monday 28 June 2021, 19:00pm – 21:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 19:02pm EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r23. Several changes are made per the comments (571r1, 650r7 being deferred, 569r2 being added, version changes). The modified agenda was approved.

**Recorded attendance through Imat and e-mail:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 6/28 | Adachi, Tomoko | TOSHIBA Corporation |
| TGbe (MAC) | 6/28 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 6/28 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 6/28 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 6/28 | Bravo, Daniel | Intel Corporation |
| TGbe (MAC) | 6/28 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 6/28 | CHAN, YEE | Facebook |
| TGbe (MAC) | 6/28 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 6/28 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 6/28 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 6/28 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 6/28 | Ghosh, Chittabrata | Facebook, Inc. |
| TGbe (MAC) | 6/28 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 6/28 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 6/28 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 6/28 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 6/28 | Jang, Insun | LG ELECTRONICS |
| TGbe (MAC) | 6/28 | Jung, hyojin | Hyundai Motor Company |
| TGbe (MAC) | 6/28 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 6/28 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 6/28 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 6/28 | Kim, Sanghyun | WILUS Inc |
| TGbe (MAC) | 6/28 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 6/28 | Kneckt, Jarkko | Apple, Inc. |
| TGbe (MAC) | 6/28 | Levy, Joseph | InterDigital, Inc. |
| TGbe (MAC) | 6/28 | Li, Yunbo | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/28 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 6/28 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 6/28 | Lumbatis, Kurt | CommScope, Inc. |
| TGbe (MAC) | 6/28 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 6/28 | Mehrnoush, Morteza | Facebook |
| TGbe (MAC) | 6/28 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 6/28 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 6/28 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 6/28 | Palayur, Saju | Maxlinear Inc |
| TGbe (MAC) | 6/28 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 6/28 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 6/28 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 6/28 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 6/28 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbe (MAC) | 6/28 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 6/28 | Ryu, Kiseon | Ofinno |
| TGbe (MAC) | 6/28 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 6/28 | Tanaka, Yusuke | Sony Group Corporation |
| TGbe (MAC) | 6/28 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 6/28 | VIGER, Pascal | Canon Research Centre France |
| TGbe (MAC) | 6/28 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 6/28 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 6/28 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 6/28 | Yang, Jay | Nokia |
| TGbe (MAC) | 6/28 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 6/28 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 6/28 | yi, yongjiang | Spreadtrum Communication USA Inc. |
| TGbe (MAC) | 6/28 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

**CC36 Comment Assignment – MAC Tab–Guidelines Overview**

1. [1018r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1018-00-00be-ieee-802-11be-cc36-comments.xlsx) IEEE 802.11be CC36 comments Alfred

The auther goes over the guideline for the comment resolution of CC36 in 11-20/98r7.

1, POC confirm the particalar subclauses. Other members sends email to reflector to request the CIDs. POC coordinates the resolutions of relatd subclauses.

2, C: more time shoud be given for the deadline. A: the deadline is for preparing the version to be discussed this Wendesday. Further requests can be sent later.

3, C: the comments should be equally separated among people. A: we can take this in account.

4, C: email tag can identify the subclauses instead of CIDs in the subclauses.

**Submissions**

1. [499r6](https://mentor.ieee.org/802.11/dcn/21/11-21-0499-06-00be-cr-for-cids-related-to-ml-ie-usage-for-multi-link-setup.docx) CR 4 CIDs related to ML IE Usage 4 Multi-link Setup Insun Jang

The auther goes through the changes of the new version.

C: for 3220, what is the action of AP MLD?

A: AP MLD shall transmit the Association Response frame.

C: what you described should be added.

A: the sentence was already included.

C: Why shall EML be included in page 10?

A: 11be D1.0 mentions it this way.

SP: Do you support to incorporate the changes proposed by the following CIDs in 11-21/499r6?

1056, 1057, 1730, 1747, 1789, 2319, 2348, 2966, 3153, 3220, 2125, 2479

37Y, 2N, 28A

1. [500r5](https://mentor.ieee.org/802.11/dcn/21/11-21-0500-04-00be-cr-for-35-3-2-3.docx) CR for 35.3.2.3 Namyeong Kim

The auther goes through the changes of the new version.

SP: Do you support to incorporate the changes proposed by the following CID in 11-21/500r5?

2416

No objection

1. [577r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0577-03-00be-cr-mld-architecture.docx) CR-MLD-architecture Duncan Ho

The auther goes through the changes of the new version.

C: regarding the addition of TID to link mapping in the figure, do you have TID to link mapping text?

A: yes.

C: SN/PN for GTK etc. May be in MLD high MAC function.

A: Ok.

C: You can remove ” Group addressed data frames delivery”

A: ok, will hear from other members.

C: PN is clear. PN should not be rmeoved.

A: ok.

SP is done for r5 per the discusison

SP: Do you agree to the resolution provided in doc 11-21/0577r5 for CID 2239, 2720, 3410, and 3417?

36Y, 5N, 21A

1. [757r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0757-03-00be-pdt-nstr-capability-update.docx) PDT NSTR capability update Yunbo Li

The auther goes through the changes of the new version.

C: capability information never changes based on the BSS operation.

A: what is your suggestion? It is dfficult to find place for such operation.

C: can provide the suggestion after discussing when and at what condition this NSTR capability change.

A: ok.

C: similar comment.

1. 569r2 CR for CID 3017 Xiaofei Wang

The auther goes through document and announces no changes compared with last Thursday’s presentation.

C: for Probe variant, do you think the similar changes should be applied?

A: need to do further check.

SP: Do you support to incorporate the changes proposed by the following CID in 11-21/569r2?

 3017

No objection

1. [720r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0720-00-00be-cc34-resolution-for-cids-related-to-critical-updates.docx) CC34 resolution for CIDs related to critical updates Namyeong Kim

The auther goes through the changes of the new version.

C: AP CSN element exists in baseline. Why don’t you use it?

A: we change the name in 11be draft.

The chair asks whether there are any other businesses before adjourning the meeting. No response is received.

The teleconference is adjourned at 20:59pm

**Thursday 08 July 2021, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Self)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Self) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary, Liwen (NXP)
2. The Chair goes through the 802 and 802.11 IPR policy and procedures and asks if there is anyone that is aware of any potentially essential patents.
	1. Nobody responds.
3. The Chair goes through the IEEE copyright policy.
4. The Chair recommends using IMAT for recording the attendance.
	* Please record your attendance during the conference call by using the IMAT system:
		1. 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 Liwen Chu (liwen.chu@nxp.com) and Jeongki Kim (jeongki.kim.ieee@gmail.com)
5. The Chair asked whether there is comment about agenda in 11-21/785r28. 1965, 283 are deferred per the request, 792 is changed to r2. The modified agenda is approved.

**Recorded attendance through Imat and e-mail:**

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 7/8 | AbidRabbu, Shaima' | Istanbul Medipol University; Vestel |
| TGbe (MAC) | 7/8 | Abouelseoud, Mohamed | Sony Corporation |
| TGbe (MAC) | 7/8 | Aboulmagd, Osama | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/8 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | Amalladinne, Vamsi | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/8 | Avallone, Stefano | University of Napoli |
| TGbe (MAC) | 7/8 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 7/8 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 7/8 | Bravo, Daniel | Intel Corporation |
| TGbe (MAC) | 7/8 | Bredewoud, Albert | Broadcom Corporation |
| TGbe (MAC) | 7/8 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 7/8 | Chemrov, Kirill | IITP RAS |
| TGbe (MAC) | 7/8 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/8 | Chu, Liwen | NXP Semiconductors |
| TGbe (MAC) | 7/8 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 7/8 | Das, Subir | Perspecta Labs Inc |
| TGbe (MAC) | 7/8 | de Vegt, Rolf | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 7/8 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 7/8 | Ghosh, Chittabrata | Facebook, Inc. |
| TGbe (MAC) | 7/8 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 7/8 | GUIGNARD, Romain | Canon Research Centre France |
| TGbe (MAC) | 7/8 | Han, Jonghun | SAMSUNG |
| TGbe (MAC) | 7/8 | Han, Zhiqiang | ZTE Corporation |
| TGbe (MAC) | 7/8 | Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) |
| TGbe (MAC) | 7/8 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 7/8 | Ibrahim, Ahmed | Samsung Research America |
| TGbe (MAC) | 7/8 | Jang, Insun | LG ELECTRONICS |
| TGbe (MAC) | 7/8 | Kedem, Oren | MaxLinear |
| TGbe (MAC) | 7/8 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 7/8 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 7/8 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 7/8 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/8 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 7/8 | Lalam, Massinissa | SAGEMCOM BROADBAND SAS |
| TGbe (MAC) | 7/8 | Li, Jialing | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 7/8 | Li, Yiqing | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/8 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 7/8 | Liu, Der-Zheng | Realtek Semiconductor Corp. |
| TGbe (MAC) | 7/8 | Liu, Yong | Apple, Inc. |
| TGbe (MAC) | 7/8 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 7/8 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 7/8 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 7/8 | Martinez Vazquez, Marcos | MaxLinear Corp; MAXLINEAR INC |
| TGbe (MAC) | 7/8 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/8 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/8 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 7/8 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 7/8 | Nezou, Patrice | Canon Research Centre France |
| TGbe (MAC) | 7/8 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 7/8 | Ozbakis, Basak | VESTEL |
| TGbe (MAC) | 7/8 | Palayur, Saju | Maxlinear Inc |
| TGbe (MAC) | 7/8 | PANG, KUN | Honor Device Co.,Ltd. |
| TGbe (MAC) | 7/8 | Pang, Kun | Honor Device Co., Ltd. |
| TGbe (MAC) | 7/8 | Park, Eunsung | LG ELECTRONICS |
| TGbe (MAC) | 7/8 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 7/8 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/8 | Rege, Kiran | Perspecta Labs |
| TGbe (MAC) | 7/8 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 7/8 | Ryu, Kiseon | Ofinno |
| TGbe (MAC) | 7/8 | Sevin, Julien | Canon Research Centre France |
| TGbe (MAC) | 7/8 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 7/8 | Solaija, Muhammad Sohaib | Istanbul Medipol University; Vestel |
| TGbe (MAC) | 7/8 | Sosack, Robert | Molex Incorporated |
| TGbe (MAC) | 7/8 | SUH, JUNG HOON | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/8 | Sun, Bo | ZTE Corporation |
| TGbe (MAC) | 7/8 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 7/8 | Sun, Yanjun | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 7/8 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/8 | Tsujimaru, Yuki | Canon Inc. |
| TGbe (MAC) | 7/8 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 7/8 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 7/8 | Wu, Kanke | Qualcomm Incorporated |
| TGbe (MAC) | 7/8 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 7/8 | Yang, Jay | Nokia |
| TGbe (MAC) | 7/8 | yi, yongjiang | Spreadtrum Communication USA Inc. |
| TGbe (MAC) | 7/8 | Zhou, Yifan | Huawei Technologies Co., Ltd |

**Submissions**

1. [240r6](https://mentor.ieee.org/802.11/dcn/21/11-21-0240-06-00be-cc34-resolution-for-cids-related-to-tdls-handling.docx) CC34 resolution for CIDs related to TDLS handling Abhishek Patil

The auther goes through the changes of the new version.

C: agree that the issue should be solved. Do you want to address the TDLS between two MLDs?

A: it can be done in R2.

C: Agree that TDLS between two MLDs is R2 feature. Have concern about the note **35.3.xx.2.**

A: it is place holder for group discussion.

C: the note is trying to address the security issue with the propsoed single link TDLS solution. It is R1 issue.

SP: Do you support incorporating the changes proposed in doc 11-21/0240r8 into the next TGbe draft?

36Y, 43N, 21A

1. [386r4](https://mentor.ieee.org/802.11/dcn/21/11-21-0386-03-00be-cc34-resolution-for-cid-1038.docx) CC34 resolution for CID 1038 Abhishek Patil

The auther goes through the changes of the new version.

C: non-AP MLD may select AP MLD based on multiple factors. The ”for example” sentence should be removed.

A: it is an example. How about adding ”amongst other factors”?

C: don’t think it can solve the issue.

C: have concern about the solution. Want to know the method to estimate the path loss of other links.

A: many methods can be used.

C: this should be discussed in joint meeting.

SP: **Which option and corresponding changes, as proposed in doc 11-21/0386r4, do you support as a resolution to CID 1038?**

Option 1: Provide TxPower difference (if nonzero), in an optional (1-octet) subfield carried in the STA Info field of the per-STA profile (carrying complete information) corresponding to a reported AP, in an ML probe response

Option 2: Provide Txpower information in a (4-octet) TPC Report element corresponding to each AP of the AP MLD. For the reporting AP, the element is carried in the frame body of an ML probe response. For a reported AP, the element is carried in the STA Profile field of the per-STA profile subelement

Option 3: abstain

26 O1, 19 O2, 59 O3

1. [537r1](https://mentor.ieee.org/802.11/dcn/21/11-21-0537-00-00be-cr-ssid-settings.docx) CR-SSID-settings Duncan Ho

The auther goes through the proposal.

C: Why does SSID need to be same for all APs?

A: it is related to security.

SP: Do you agree to the resolution provided in doc 11-21/0537r1 for the following CIDs?

1058, 1580, 1674, 2168, 2506

30Y, 36N, 28A

1. [619r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0619-01-00be-cr-tspec.docx) CR TSPEC Duncan Ho

The auther goes through the changes of the new version.

C: how do you match delivery ratio to packet loss?

A: delivery ratio consider delay etc. You don’t need to match them.

C: TSPEC has not been implemented widely and not useful. It should be in R2.

A: SCS is in D1.0. SCS will include TSPEC.

1. [826r3](https://mentor.ieee.org/802.11/dcn/21/11-21-0826-03-00be-pdt-for-error-recovery-of-nstr-mld.docx) PDT for error recovery of NSTR MLD Yunbo Li

The auther goes through the changes of the new version.

C: IFS that is larger than SIFS and less than PIFS is not be defined.

A: do you have the name for it?

C: have some concern to define such IFS.

C: if possible please defer it to next week.

A: ok.

1. [285r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0285-00-00be-cc34-resolution-for-cids-related-to-mlo-ba-procedure.docx) CC34 res. for CIDs related to MLO BA Procedure Abhishek Patil

The auther goes through the document.

C: ADDBA response should be transmitted in the same link as ADDBA request.

A: they can be in different links.

C: this (managment frame in any link) should be general rules and should not repeated for each such manaement frame.

A: the group can clarify which management frame can be transmitted in any link.

The chair asks whether there are any other businesses before adjourning the meeting. No response is received.

The teleconference is adjourned at 11:59am