IEEE P802.11  
Wireless LANs

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| Minutes for TGbe MAC Ad-Hoc teleconferences in May and July 2023 | | | | |
| Date: 2023-05-31 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Liwen Chu | NXP |  |  |  |
| Jeongki Kim | Ofinno |  |  |  |
|  |  |  |  |  |

Abstract

This document contains the meeting minutes for the TGbe MAC ad hoc teleconferences held in May 2023 and July 2023.

Revisions:

* Rev0:
  + Added the minutes from the telephone conferences held on May 31,
  + Added the minutes from the telephone conferences held on June 08,
  + Added the minutes from the telephone conferences held on June 12,
  + Added the minutes from the telephone conferences held on June 14,
* Rev1:
  + Added the minutes from the telephone conferences held on June 26,

**Wednesday 31 May 2023, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Ofinno)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Ofinno) calls the meeting to order at 07:02pm 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](mailto:liwen.chu@nxp.com)) and Jeongki Kim ([jeongki.kim.ieee@gmail.com](mailto:jeongki.kim.ieee@gmail.com))

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Breakout | | Timestamp | | Name | | Affiliation | |
| TGbe (MAC) | | 5/31 | | Adhikari, Shubhodeep | | Broadcom Corporation | |
| TGbe (MAC) | | 5/31 | | Ajami, Abdel Karim | | Qualcomm Technologies, Inc | |
| TGbe (MAC) | | 5/31 | | Asterjadhi, Alfred | | Qualcomm Incorporated | |
| TGbe (MAC) | | 5/31 | | baron, stephane | | Canon Research Centre France | |
| TGbe (MAC) | | 5/31 | | Bredewoud, Albert | | Broadcom Corporation | |
| TGbe (MAC) | | 5/31 | | Carney, William | | Sony Group Corporation | |
| TGbe (MAC) | | 5/31 | | CHENG, yajun | | Xiaomi Communications Co., Ltd. | |
| TGbe (MAC) | | 5/31 | | Das, Subir | | Peraton Labs | |
| TGbe (MAC) | | 5/31 | | Dong, Xiandong | | Xiaomi Communications Co., Ltd. | |
| TGbe (MAC) | | 5/31 | | Erkucuk, Serhat | | Ofinno | |
| TGbe (MAC) | | 5/31 | | Fan, Shuang | | Sanechips Technology Co., Ltd. | |
| TGbe (MAC) | | 5/31 | | Fujimori, Yuki | | Canon Research Centre France | |
| TGbe (MAC) | | 5/31 | | Gu, Xiangxin | | Unisoc | |
| TGbe (MAC) | | 5/31 | | Haider, Muhammad Kumail | | Meta Platforms Inc. | |
| TGbe (MAC) | | 5/31 | | Handte, Thomas | | Sony Corporation | |
| TGbe (MAC) | | 5/31 | | Ho, Duncan | | Qualcomm Incorporated | |
| TGbe (MAC) | | 5/31 | | Huang, Po-Kai | | Intel | |
| TGbe (MAC) | | 5/31 | | Jang, Insun | | LG ELECTRONICS | |
| TGbe (MAC) | | 5/31 | | Kim, Sang Gook | | LG ELECTRONICS | |
| TGbe (MAC) | | 5/31 | | Kim, Sanghyun | | WILUS Inc | |
| TGbe (MAC) | | 5/31 | | Kipness, Michael | | IEEE Standards Association (IEEE SA) | |
| TGbe (MAC) | | 5/31 | | Klein, Arik | | Huawei Technologies Co., Ltd | |
| TGbe (MAC) | | 5/31 | | Kuo, Chih-Chun | | MediaTek Inc. | |
| TGbe (MAC) | | 5/31 | | Levy, Joseph | | InterDigital, Inc. | |
| TGbe (MAC) | | 5/31 | | Li, Weiyi | | Spreadtrum | |
| TGbe (MAC) | | 5/31 | | Lim, Dong Guk | | LG ELECTRONICS | |
| TGbe (MAC) | | 5/31 | | Lorgeoux, Mikael | | Canon Research Centre France | |
| TGbe (MAC) | | 5/31 | | Lu, Liuming | | Guangdong OPPO Mobile Telecommunications Corp.,Ltd | |
| TGbe (MAC) | | 5/31 | | McCann, Stephen | | Huawei Technologies Co., Ltd | |
| TGbe (MAC) | | 5/31 | | Monajemi, Pooya | | Apple Inc. | |
| TGbe (MAC) | | 5/31 | | Montemurro, Michael | | Huawei Technologies Co., Ltd | |
| TGbe (MAC) | | 5/31 | | Naik, Gaurang | | Qualcomm Technologies, Inc | |
| TGbe (MAC) | | 5/31 | | Nayak, Peshal | | Samsung Research America | |
| TGbe (MAC) | | 5/31 | | Ng, Boon Loong | | Samsung Research America | |
| TGbe (MAC) | | 5/31 | | Palayur, Saju | | Maxlinear Inc | |
| TGbe (MAC) | | 5/31 | | Park, Minyoung | | Intel | |
| TGbe (MAC) | | 5/31 | | Patwardhan, Gaurav | | Hewlett Packard Enterprise | |
| TGbe (MAC) | | 5/31 | | Qi, Yue | | Samsung Research America | |
| TGbe (MAC) | | 5/31 | | Quan, Yingqiao | | Unisoc | |
| TGbe (MAC) | | 5/31 | | Ratnam, Vishnu | | Samsung Research America | |
| TGbe (MAC) | | 5/31 | | RISON, Mark | | Samsung Cambridge Solution Centre | |
| TGbe (MAC) | | 5/31 | | Shafin, Rubayet | | Samsung Research America | |
| TGbe (MAC) | | 5/31 | | Shirakawa, Atsushi | | SHARP CORPORATION | |
| TGbe (MAC) | | 5/31 | | Verenzuela, Daniel | | Sony Corporation | |
| TGbe (MAC) | | 5/31 | | Wang, Qi | | Apple, Inc. | |
| TGbe (MAC) | | 5/31 | | Wullert, John | | Peraton Labs | |
| TGbe (MAC) | | 5/31 | | Xia, Qing | | Sony Corporation | |
| TGbe (MAC) | | 5/31 | | Yang, Jay | | ZTE Corporation | |
| TGbe (MAC) | | 5/31 | | Yang, Jimmy | | Moxa Inc. | |
| TGbe (MAC) | | 5/31 | | Yano, Kazuto | | Advanced Telecommunications Research Institute International (ATR) | |
| TGbe (MAC) | | 5/31 | | Yee, James | | MediaTek Inc. | |
| TGbe (MAC) | | 5/31 | | Yi, Yongjiang | | Spreadtrum Communication USA, Inc | |
| TGbe (MAC) | | 5/31 | | Yong, Su Khiong | | Apple, Inc. | |
| TGbe (MAC) | | 5/31 | | Yoon, Yelin | | LG ELECTRONICS | |
| TGbe (MAC) | | 5/31 | | Zhao, Yue | | Huawei Technologies Co., Ltd | |
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1. The Chair reminds that the agenda can be found in 11-23/0918r0. The Chair asks for the comments about the agenda. 266 was changed to R2, 678 was changed with 3 CIDs. The updated agenda is approved.

* Technical Submissions:
  1. [678r5](https://mentor.ieee.org/802.11/dcn/23/11-23-0678-04-00be-cr-for-miscellaneous-cids.docx) CR for miscellaneous CIDs Po-Kai Huang [SP 3C**]**

Discussion:

C: the note is informative. Do you have related normative text?

A: 35.3.5.4 covers it.

C: you should add ”otherwise” case.

A: ok.

C: in the first sentence, you don’t need to say ””

C: please defer CID about ”as soon as practical”

A: ok

SP: Do you support to accept the resolution in 11-23/678r4 for the following CID?

15516

C: please defer the SP for more checking.

A: ok.

SP deferred

* 1. [588r4](https://mentor.ieee.org/802.11/dcn/23/11-23-0588-03-00be-lb271-cr-for-cids-in-35-3-7-1-1.docx) CR for CIDs in 35.3.7.1.1 Laurent Cariou [SP XC**]**

Discussion:

C: 16296. The note should do the similar change.

A: ok.

C: it is better to make is related to primitive.

A: will do offline discussion.

C: confuse with the the discussion. The text is not hat the comenter asked.

C: is there any change to the current text?

A: they are almost same.

C: the baseline allows a non-AP that doesnt support T2LM to do multi-link setup with an AP MLD that doesn't support T2LM. Option 1 doesn't allow this anymore.

SP: Do you support to accept the resolution of Option 1 in 11-23/588r5 for the following CIDs?

15053, 15404, 16484, 17333

16Y, 19N, 24A

C: 17332. Can you send BA with a TID in a link that is not mapped to the link?

A: you can’t directly send BA.

C: currently all TIDs are mapped to all the links. What you proposed will not happen.

A: kind agree with you. But TID-to-link mapping mode 3 may be added.

C: agree with the resolution.

C: MPDU covers MMPDU. ”MPDU and/or MMPDU” is not right.

SP: Do you support to accept the resolution in 11-23/588r5 for the following CIDs?

15018 18130 15020

No Objection

* 1. [787r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0787-00-00be-lb271-cr-for-cid-16309.docx) CR for CID 16309 Juseong Moon [1C**]**

Discussion:

C: this is a restricted condition.

A: if the text is not added, the non-AP MLD may not be able to receive the group-addressed frames.

C: some implementation of a non-AP MLD can receive the group-addressed frames when doing the listening operation.

C: it is non-AP MLD’s decision to switch radio after DTIM Beacon. It is better to let non-AP MLD to decide. The ”shall” can’t be in a note.

SP deferred

* 1. [788r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0788-00-00be-lb271-cr-for-cid-16333-and-16340.docx) CR for CID 16333 and 16340 Juseong Moon [1C**]**

Discussion:

C: in your figure, what about the alligned R-TWT SPs.

A: the initial control frame needs to be used.

C: why do you use link(s)? It should be a single link.

A: agree.

C: the figure changes the EMLSR frame exhcange rules. It is not a good idea to do such change at this stage.

A: this change is not complicated.

C: all the frames can be transmitted in one TXOP.

A: the frames in different ACs can’t be transmitted in one TXOP.

**Thursday 08 June 2023, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Ofinno)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Ofinno) calls the meeting to order at 07:02pm 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](mailto:liwen.chu@nxp.com)) and Jeongki Kim ([jeongki.kim.ieee@gmail.com](mailto:jeongki.kim.ieee@gmail.com))

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

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 6/8 | Adhikari, Shubhodeep | Broadcom Corporation |
| TGbe (MAC) | 6/8 | Ajami, Abdel Karim | Qualcomm Technologies, Inc |
| TGbe (MAC) | 6/8 | CHENG, yajun | Xiaomi Communications Co., Ltd. |
| TGbe (MAC) | 6/8 | Erkucuk, Serhat | Ofinno |
| TGbe (MAC) | 6/8 | Fan, Shuang | Sanechips Technology Co., Ltd. |
| TGbe (MAC) | 6/8 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 6/8 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 6/8 | GUIGNARD, Romain | Canon Research Centre France |
| TGbe (MAC) | 6/8 | Gupta, Binita | Meta Platforms, Inc. |
| TGbe (MAC) | 6/8 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 6/8 | Jang, Insun | LG ELECTRONICS |
| TGbe (MAC) | 6/8 | Kim, Geon Hwan | LG ELECTRONICS |
| TGbe (MAC) | 6/8 | Kim, Jeongki | Ofinno |
| TGbe (MAC) | 6/8 | Kim, Youhan | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 6/8 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/8 | Lalitte, Vanessa | IEEE SA |
| TGbe (MAC) | 6/8 | Li, Weiyi | Spreadtrum |
| TGbe (MAC) | 6/8 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 6/8 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 6/8 | Monajemi, Pooya | Apple Inc. |
| TGbe (MAC) | 6/8 | Naik, Gaurang | Qualcomm Technologies, Inc |
| TGbe (MAC) | 6/8 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 6/8 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 6/8 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 6/8 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 6/8 | Qi, Yue | Samsung Research America |
| TGbe (MAC) | 6/8 | Quan, Yingqiao | Spreadtrum |
| TGbe (MAC) | 6/8 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 6/8 | Ryu, Kiseon | NXP Semiconductors |
| TGbe (MAC) | 6/8 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 6/8 | Wullert, John | Peraton Labs |
| TGbe (MAC) | 6/8 | Xia, Qing | Sony Corporation |
| TGbe (MAC) | 6/8 | Yamada, Ryota | SHARP CORPORATION |
| TGbe (MAC) | 6/8 | Yang, Jimmy | Moxa Inc. |
| TGbe (MAC) | 6/8 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 6/8 | Yi, Yongjiang | Spreadtrum Communication USA, Inc |
| TGbe (MAC) | 6/8 | Yoon, Yelin | LG ELECTRONICS |
| TGbe (MAC) | 6/8 | Zhao, Yue | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/8 | Zhou, Lei | H3C Technologies Co., Limited |

1. The Chair reminds that the agenda can be found in 11-23/0918r3. The Chair asks for the comments about the agenda. Per the requests, 947 was the first contribution in the last 30 minues category, 788r0 was added. The updated agenda is approved.

* Technical Submissions:
  1. [590r4](https://mentor.ieee.org/802.11/dcn/23/11-23-0590-04-00be-lb271-cr-for-cids-in-35-3-7-1-x.docx) CR for CIDs in 35.3.7.1.x Laurent Cariou [SP XC**]**

Discussion:

C: Broadcast membership 🡪 broadcast TWT membership

A: ok.

C: membership🡪schedule

C: schedule is better

A: ok.

SP: Do you support to accept the resolution in 11-23/590r5 for the following CIDs?

17336 18260 16006

No Objection

* 1. [627r6](https://mentor.ieee.org/802.11/dcn/23/11-23-0627-04-00be-lb271-cr-for-subclause-35-3-1.docx) CR for subclause 35.3.1 Ming Gan [SP only 3C**]**

Discussion:

C: generally ok. Some affiliated APs may disabled and reenabled, deleted and added back. The text should exclude the cases.

A: will update the text.

C: disabling case should be fine.

C: ok with only deleting case.

SP: Do you support to accept the resolution in 11-23/627r7 for the following CIDs?

**16742, 18279 and 15177**

No Objection

* 1. [743r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0743-00-00be-lb271-resolution-for-comments-assigned-to-abhi-part-6.docx) Resolution for comments assigned to Abhi - Part 6 Abhishek Patil [10C**]**

Discussion:

C: CID 17616, ”except” part should include FT frame.

A: ok.

C: please defer it for further checking

A: ok.

SP: Do you support to accept the resolution in 11-23/743r0 for the following CIDs?

**17593 17649 17657 17626 17663 17666 15541**

No Objection

* 1. [466r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0466-01-00be-lb271-cr-for-9-3-3.docx) CR for 9.3.3 Gaurang Naik [8C**]**

Discussion:

C:17480. We need the definition. Please move it to the other subclause if possible.

C: We have the definition in the other places.

C: Please defer 17480.

A: ok

SP: Do you support to accept the resolution in 11-23/466r1 for the following CIDs?

**17474, 17475, 17476, 17477, 17478, 17479, 17481**

No Objection

* 1. [813r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0813-00-00be-lb271-cr-for-35-3-7-1-7-part-iii.docx) cr-for-35.3.7.1.7-Part-III Jason Y. Guo [8C**]**

Discussion:

C: 18146, what is the purpose of the changes?

A: the AP MLD enable more links than what the non-AP MLD negotiates.

C: has doubt about the change.

A: see my previous reply.

C: the non-AP MLD can use power save to disable the addtional link.

C: you need call it out what happens when the AP MLD enable more links than what the non-AP MLD negotiates.

A: ok.

C: please defer the 18146 and the other similar CIDs for the offline discussion.

A: ok.

Unfinished document

* 1. [947r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0947-00-00be-cr-for-17559.docx) CR for 17559 Po-Kai Huang [1C**]**

Discussion:

C: when was this change added?

A: may be at the stage of D2.0.

C: know this change. What is the problem?

A: the baseline interprets the BW based on VHT. The change in 11be interprets the BW based on HE. HE and VHT have the different interpretions.

SP: Do you support to accept the resolution in 11-23/947r1 for the following CIDs?

17559

No Objection

* 1. [266r2](https://mentor.ieee.org/802.11/dcn/23/11-23-0266-01-00be-emlsr-link-change-with-ap-mld-s-link-enablement-disablement-operation.docx) EMLSR link change with AP MLD's link enablement/disablement operation Juseong Moon [1C**]**

Discussion:

C: SMPS also has initial frame and is silimar to EMLSR operation. EMLSR allows 20MHz initial control frame and >20MHz BW for the following frame exchanges to save power. Don’t understand why you made such change.

A: SMPS allows any frame to be the initial frame.

SP: Do you support to accept the resolution in 11-23/ for the following CIDs?

**No time for SP**

**Monday 12 June 2023, 07:00pm – 09:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Ofinno)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Ofinno) calls the meeting to order at 07:02pm 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.
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   * Please record your attendance during the conference call by using the IMAT system:
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   * 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](mailto:liwen.chu@nxp.com)) and Jeongki Kim ([jeongki.kim.ieee@gmail.com](mailto:jeongki.kim.ieee@gmail.com))

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

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 6/12 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 6/12 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 6/12 | Cha, Dongju | LG ELECTRONICS |
| TGbe (MAC) | 6/12 | CHENG, yajun | Xiaomi Communications Co., Ltd. |
| TGbe (MAC) | 6/12 | Dong, Xiandong | Xiaomi Communications Co., Ltd. |
| TGbe (MAC) | 6/12 | Erkucuk, Serhat | Ofinno |
| TGbe (MAC) | 6/12 | Fan, Shuang | Sanechips Technology Co., Ltd. |
| TGbe (MAC) | 6/12 | Fischer, Matthew | Broadcom Corporation |
| TGbe (MAC) | 6/12 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 6/12 | Haider, Muhammad Kumail | Meta Platforms Inc. |
| TGbe (MAC) | 6/12 | Hamilton, Mark | Ruckus/CommScope |
| TGbe (MAC) | 6/12 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 6/12 | Jang, Insun | LG ELECTRONICS |
| TGbe (MAC) | 6/12 | Kim, Geon Hwan | LG ELECTRONICS |
| TGbe (MAC) | 6/12 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 6/12 | Kim, Sanghyun | WILUS Inc |
| TGbe (MAC) | 6/12 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/12 | Li, Weiyi | Spreadtrum |
| TGbe (MAC) | 6/12 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 6/12 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 6/12 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 6/12 | Monajemi, Pooya | Apple Inc. |
| TGbe (MAC) | 6/12 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/12 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 6/12 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 6/12 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 6/12 | Quan, Yingqiao | Spreadtrum |
| TGbe (MAC) | 6/12 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 6/12 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 6/12 | Ryu, Kiseon | NXP Semiconductors |
| TGbe (MAC) | 6/12 | Sato, Takuhiro | SHARP CORPORATION |
| TGbe (MAC) | 6/12 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 6/12 | Taori, Rakesh | Infineon Technologies |
| TGbe (MAC) | 6/12 | Yang, Jimmy | Moxa Inc. |
| TGbe (MAC) | 6/12 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 6/12 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 6/12 | Yi, Yongjiang | Spreadtrum Communication USA, Inc |
| TGbe (MAC) | 6/12 | Yoon, Yelin | LG ELECTRONICS |
| TGbe (MAC) | 6/12 | Zhao, Yue | Huawei Technologies Co., Ltd |

1. The Chair reminded that the agenda can be found in 11-23/0918r4. The Chair asked for the comments about the agenda. No feedback was received. The agenda was approved.

* Technical Submissions:
  1. [395r4](https://mentor.ieee.org/802.11/dcn/23/11-23-0395-04-00be-cr-for-35-3-19.docx) CR for 35.3.19 Kaiying Lu [SP 1C**]**

Discussion:

C: the first senence in the note is not clear.

A: We can clarify it in the following comment resolution.

SP: Do you support to accept the resolution in 11-23/395r4 for the following CID?

15626

No Objection

* 1. [638r3](https://mentor.ieee.org/802.11/dcn/23/11-23-0638-03-00be-lb271-cr-for-subclause-35-3-15-part-1.docx) CR for Subclause 35.3.15-Part 1 Ming Gan [SP 4C**]**

Discussion:

C: ” shall” should not be used since the baseline subclause is referred.

A: ok.

C: ”many” don’t make sense to me since group-addressed frames are transmitted in link level, not through AL MLD SAP. It is legacy AP’s behavior.

C: I am ok with this since this subclause was the result discussed in Arch group and 11be. The sequence number of group-addressed data frames are at AP MLD level.

C: is the second bullet about TWT coverred by the baseline.

A: yes.

C: ”shall” should be used since the other places don’t mention that each AP needs to do...

C: subclause 11 mentions that ”an AP do...”. This implies each AP affiliated with an AP MLD.

C: it seems the first is a exception.

A: ok.

.

SP: Do you support to accept the resolution in 11-23/638r4 for the following CIDs?

15412 17363 15413 16845

No Objection

* 1. [366r6](https://mentor.ieee.org/802.11/dcn/23/11-23-0366-05-00be-lb271-cr-35-3-18-part-2.docx) CR 35.3.18 part 2 Liwen Chu [SP 5C**]**

Discussion:

C: Please defer the subclause 9 related change for Minyoung to double check.

A: ok.

SP: Do you support to accept the resolution in 11-23/366r7 for the following CIDs?

16559

No Objection

* 1. [738r5](https://mentor.ieee.org/802.11/dcn/23/11-23-0738-05-00be-lb271-cr-for-clause-35-3-7-4-2-part-2.docx) CR for Clause 35.3.7.4.2 - Part 2 Arik Klein [SP 1C**]**

Discussion:

C: editiorial. Change ”all” to ”each”.

A: what is the difference?

C: ”all...STA” is not right.

A: ok.

C: 16023. The second bullet implies that some non-AP MLD doesn’t support BTM. Is this the intention?

A: the bullst is about non-AP MLD STA.

C: you can remove the first bullet.

A: the comment 16021 asks the question that is clarified by the first bullet.

.

SP: Do you support to accept the resolution in 11-23/ for the following CIDs?

SP deferred

* 1. [788r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0788-00-00be-lb271-cr-for-cid-16333-and-16340.docx) CR for CID 16333 and 16340 Juseong Moon [1C Q&A**]**

Discussion:

C: agree with the comments in the previous teleconference. It seems the text tries to do some optimization. Actually it may hurt the power save.

C: same comment as the previous commenter.

A: will defer the CID.

SP: Do you support to accept the resolution in 11-23/788r0 for the following CIDs?

16333

No Objection

* 1. [266r2](https://mentor.ieee.org/802.11/dcn/23/11-23-0266-02-00be-emlsr-link-change-with-ap-mld-s-link-enablement-disablement-operation.docx) EMLSR link change with AP MLD's link enablement/disablement operation Juseong Moon [1C Q&A**]**

Discussion:

C: If you want to use dynamic SM pwoer save, you can simply disable EMLSR.

C: agree with tthe previous comment.

.

SP: Do you support to accept the resolution in 11-23/ for the following CIDs?

SP deferred

* 1. [763r2](https://mentor.ieee.org/802.11/dcn/23/11-23-0763-02-00be-lb271-cr-of-nstr-status-update.docx) cr-of-nstr-status-update Yunbo Li [3C**]**

Discussion:

C: first paragraph. Change ”set... equal to true” to ”set ... to true”.

A: ok.

C: wonder whether we need this proposal or not? With the reconfiguration, you can delete a link and add the link back again.

A: What you propose needs a lot of change.

C: no what I proposed is already allowed by the spec.

C: first line page 5, change ”...subfield set to 4...” to ”...subfield is set to 4...”.

SP: Do you support to accept the resolution in 11-23/ for the following CIDs?

SP deferred

Adjourned 9:02pm.

**Wendesdayday 14 June 2023, 10:00am – 12:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Ofinno)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Ofinno) calls the meeting to order at 07:02pm 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](mailto:liwen.chu@nxp.com)) and Jeongki Kim ([jeongki.kim.ieee@gmail.com](mailto:jeongki.kim.ieee@gmail.com))

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

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |
| TGbe (MAC) | 6/14 | Aboulmagd, Osama | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/14 | Ajami, Abdel Karim | Qualcomm Technologies, Inc |
| TGbe (MAC) | 6/14 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 6/14 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 6/14 | Cha, Dongju | LG ELECTRONICS |
| TGbe (MAC) | 6/14 | CHENG, yajun | Xiaomi Communications Co., Ltd. |
| TGbe (MAC) | 6/14 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 6/14 | Das, Subir | Peraton Labs |
| TGbe (MAC) | 6/14 | Erkucuk, Serhat | Ofinno |
| TGbe (MAC) | 6/14 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 6/14 | Fischer, Matthew | Broadcom Corporation |
| TGbe (MAC) | 6/14 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 6/14 | Gupta, Binita | Meta Platforms, Inc. |
| TGbe (MAC) | 6/14 | Haider, Muhammad Kumail | Meta Platforms Inc. |
| TGbe (MAC) | 6/14 | Handte, Thomas | Sony Corporation |
| TGbe (MAC) | 6/14 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 6/14 | Kim, Geon Hwan | LG ELECTRONICS |
| TGbe (MAC) | 6/14 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 6/14 | Kim, Youhan | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 6/14 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/14 | Li, Weiyi | Spreadtrum |
| TGbe (MAC) | 6/14 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 6/14 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 6/14 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 6/14 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 6/14 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 6/14 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 6/14 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 6/14 | Nezou, Patrice | Canon Research Centre France |
| TGbe (MAC) | 6/14 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 6/14 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 6/14 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 6/14 | Qi, Yue | Samsung Research America |
| TGbe (MAC) | 6/14 | Quan, Yingqiao | Spreadtrum |
| TGbe (MAC) | 6/14 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 6/14 | RISON, Mark | Samsung Cambridge Solution Centre |
| TGbe (MAC) | 6/14 | Ryu, Kiseon | NXP Semiconductors |
| TGbe (MAC) | 6/14 | Seo, Sangho | Broadcom Corporation |
| TGbe (MAC) | 6/14 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 6/14 | Taori, Rakesh | Infineon Technologies |
| TGbe (MAC) | 6/14 | Wang, Qi | Apple, Inc. |
| TGbe (MAC) | 6/14 | Yamada, Ryota | SHARP CORPORATION |
| TGbe (MAC) | 6/14 | Yang, Jay | Nokia |
| TGbe (MAC) | 6/14 | Yang, Jimmy | Moxa Inc. |
| TGbe (MAC) | 6/14 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 6/14 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 6/14 | Yi, Yongjiang | Spreadtrum Communication USA, Inc |
| TGbe (MAC) | 6/14 | Yoon, Yelin | LG ELECTRONICS |
| TGbe (MAC) | 6/14 | Zhao, Yue | Huawei Technologies Co., Ltd |

1. The Chair reminded that the agenda can be found in 11-23/0918r4. The Chair asked for the comments about the agenda. 763 was deferred, 738 was added per the requets. The updated agenda was approved.

* Technical Submissions:
  1. 738r6

Discussion:

No

SP: Do you support to accept the resolution in 11-23/738r6 for the following CIDs?

16021

No Objection

* 1. [813r2](https://mentor.ieee.org/802.11/dcn/23/11-23-0813-00-00be-lb271-cr-for-35-3-7-1-7-part-iii.docx) cr-for-35.3.7.1.7-Part-III Jason Y. Guo [8C**]**

Discussion:

C: please change ”Mapping C” to ”mapping C”.

A: ok.

C: trouble by the problem. Sometimes we need to tolerate the accuracy. Why don’t we signal the rounding up.

A: disabling a link still has some problem if rounding up is selected.

C: disabling means round down, enabling means round up.

C: agree with the previous comments. We can add a note to describe the count down and up per the previous comment.

A: can do offline discussion to discuss the potential issues.

C: agree with adding a note.

C: 18145. You can change subclause 9 only.

SP: Do you support to accept the resolution in 11-23/813r2 for the following CID?

16504

No Objection

* 1. [847r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0847-00-00be-lb271-crs-for-35-8-5-r-twt-channel-access-rules.docx) CRs for 35.8.5 R-TWT channel access rules Chunyu Hu [36C**]**

Discussion:

C: 16176. The rejection reason needs to add more thing, e.g. the previous SP results.

A: ok.

C: 17087. Change co-hosted BSSIDs to co-hosted BSSID(s).

A: ok.

C: 17089. ”may” should be ”shall”.

C: the text gives one way to guarantee the delivery of frames of RTWT TIDs.

C: then the text should be changed to a note.

A: ok.

C: 15834. NSTR should be link pair.

A: ok.

C: 15935. It seems we add more requirement to AP MLD side. Please defer it.

A: ok.

C: ” outside of any onotransmitted BSSID profile” is not typically used. ”outside of Multiple BSSID element” is better.

A: ok.

C:16068. the change may not be in line with ML Probe Response.

A: this doesn’t talk ML Probe Response.

C: In ML Probe Response, the only exception that is not caaied in Multiple BSSID element is Basic Multi-link element. The proposed text change has no issue.

Unfished document

* 1. [958r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0958-00-00be-comment-resolution-for-cid-18247.docx) Comment Resolution for CID 18247 Li-Hsiang Sun [1C**]**

Discussion:

C: when Ack is transmitted, you don’t know whether a new MU RTS TXS exists or not.

A: a STA that receices an Ack in non-HT PPDU will set bacis BAV. This setting will have the influence to the following TXOP sharing in the same TXOP.

C: the xt should be changed to ”if an AP intends....”

A: ok.

C: the Duration will not be more than the allocated time.

A: what you mentioned is only applied to mode 2.

C: but the PPDU format will change time being used for the responding Ack.

A: can do some offline discusion.

C: need more time for understanding the issue.

SP deferred

* 1. [847r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0847-00-00be-lb271-crs-for-35-8-5-r-twt-channel-access-rules.docx) CRs for 35.8.5 R-TWT channel access rules Chunyu Hu [36C**]**

Discussion:

No .

SP: Do you support to accept the resolution in 11-23/847r1 for the following CIDs?

15233, 16176, 16699, 17085, 16068, 17087, 17088, 15607, 17089, 16069, 16119, 15236, 15237, 15736, 17091, 16622,

No Objection

* 1. [821r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0821-00-00be-lb271-cr-power-management-accross-links.docx) CR-power-management-accross-links Xiangxin Gu [1C**]**

Unfished document

Adjourned 12:00pm.

**Monday 26 June 2023, 07:00pm – 09:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Jeongki Kim (Ofinno)

Secretary: Liwen Chu (NXP)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Jeongki, Ofinno) calls the meeting to order at 07:02pm 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](mailto:liwen.chu@nxp.com)) and Jeongki Kim ([jeongki.kim.ieee@gmail.com](mailto:jeongki.kim.ieee@gmail.com))

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

|  |  |  |  |
| --- | --- | --- | --- |
| Breakout | Timestamp | Name | Affiliation |

1. The Chair reminded that the agenda can be found in 11-23/0918r12. The Chair asked for the comments about the agenda. 357 was deferred per the request. The updated agenda was approved.

* Technical Submissions:
  1. [821r2](https://mentor.ieee.org/802.11/dcn/23/11-23-0821-02-00be-lb271-cr-power-management-accross-links.docx) CR-power-management-accross-links Xiangxin Gu [1C SP 10’**]**

Discussion:

No discussion

For the SP, option 4 was added per the request, and the author went through option A and option B per the request.

**SP: Which option do you select to resolve CID 16312 and 16334?**

1. Option A
2. Option B
3. Both option A and option B
4. No change to the Spec

0/2/2/36

Based on the SP result, the two CIDs in 11-23/821r2 will be rejected

* 1. [678r7](https://mentor.ieee.org/802.11/dcn/23/11-23-0678-06-00be-cr-for-miscellaneous-cids.docx) CR for miscellaneous CIDs Po-Kai Huang [3C SP 10’**]**

Discussion:

C: first CID. The current text may not cover the whole cases.

A: I have another CID open.

SP: Do you support to accept the resolution in 11-23/687r7 for the following CIDs?

16421, 16002, 15516

No Objection

* 1. [1055r0](https://mentor.ieee.org/802.11/dcn/23/11-23-1055-00-00be-cr-for-cid-15491-and-16242.docx) CR for CID 15491 and 16242 Po-Kai Huang [2C 10’**]**

Discussion:

None

SP: Do you support to accept the resolution in 11-23/ for the following CIDs?

15491, 16242

No Objection

* 1. [1061r0](https://mentor.ieee.org/802.11/dcn/23/11-23-1061-00-00be-lb271-cr-for-cid-16773.docx) CR for CID 16773 Sanghyun Kim [1C 10’**]**

Discussion:

C: non-TB should not be removed.

A: during the allocated time, TB PPDU can’t be transmitted.

C: this deleting may raise more comments in the future.

A: ok.

SP: Do you support to accept the resolution in 11-23/1061r1 for the following CIDs?

16733

No Objection

* 1. [1060r0](https://mentor.ieee.org/802.11/dcn/23/11-23-1060-00-00be-lb271-cr-for-cid-16118.docx) CR for CID 16118 Sanghyun Kim [1C 10’**]**

Discussion:

C: try to understand why we do this. If you know the end of the TXOP, SIFS+ timeslot+ RxStartDelay is not needed.

A: if we add the rule about end of TXOP, it is ok.

C: please defer the CID.

A: ok.

C: agree with the previous comment. The behavior is related to the TXOP holder. The TXOP ending is clear to the TXOP holder.

C: EMLSR text is tricky. Agree with the author.

SP: Do you support to accept the resolution in 11-23/1060r1 for the following CIDs?

SP deferred

* 1. [296r9](https://mentor.ieee.org/802.11/dcn/23/11-23-0296-06-00be-lb271-cids-assigned-to-abhi-part-1.docx) LB271: CIDs assigned to Abhi - Part 1 Abhishek Patil [8C SP 10’**]**

Discussion:

C: 16012, for second bullet. Does it cover the case without TID-to-link mapping?

A: what you mentioned is coverred by the first bullet.

C: 18092. Does an AP MLD send the same value to all the non-AP MLDs?

A: yes.

C: is it in Beacon only?

A: It is in Beacon, Probe Response etc.

C: if it is in Association Response, the different values can be tranmsitted to the different non-AP MLDs.

C: because this is sent in the beacon, whatever was sent in the assoc resp would almost immediately be superseded by the beacon contents.

C: don’t understand the purpose.

A: it gives the soft choice to the non-AP MLDs when the AP MLD have more links and requires the non-AP MLDs to use less links.

C: try to understand the purpose. Non-AP MLD can use the power save mode to use less links. What is the consequence for this mechanism?

A: this is not about the power management. It is a recommendation.

C: is this limitation a dynamic parameter?

A: the operation is very infrequent.

C: it may be useful to have different restriction for different non-AP MLDs.

A: this contribution uses the same value to all the non-AP MLDs.

SP: Do you support to accept the resolution in 11-23/296r10 for the following CIDs?

18114 17551 15161

No Objection

* 1. [330r5](https://mentor.ieee.org/802.11/dcn/23/11-23-0330-05-00be-resolution-of-epcs-related-cids-in-clause-35-16-lb271.docx) Res. of EPCS-Related CIDs in Clause 35.16 John Wullert [5C SP 10**]**

Discussion:

C: 15435. Do you agree that EPCS can be enabled before the autnerization?

A: No.

C: so you shouldn’t say ”generally agree with the commenter”.

A: ok.

C: 15426. You do not need to mention that the selection mechanism is implementation issue. Every thing not menioned in the spec is an implementation issue.

C: what does ”higher priority” mean?

C: you may use higher EDCA priority.

C: change to higher EDCA-based priority access.

C: you may just remove the note and reject the comment.

A: ok, will delete the note.

C: 15442. You don’t need to mention implementaiton issue every time.

A: ok by deleting the related text.

SP: Do you support to accept the resolution in 11-23/330r6 for the following CIDs?

15425, 15426, 15427, 15429, 15442

No Objection

Adjourned 09:00pm.