IEEE P802.11
Wireless LANs

|  |
| --- |
| Minutes for TGbe MAC Ad-Hoc teleconferences in July to September 2021  |
| Date: 2021-07-21 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Jeongki Kim | Ofinno |  |  | jeongki.kim.ieee@gmail.com |
| Liwen Chu | NXP |  |  | liwen.chu@nxp.com |
|  |  |  |  |  |

Abstract

This document contains the meeting minutes for the TGbe MAC ad hoc teleconferences in July to September 2021.

Revisions:

* Rev0: Added the minute from the telephone conference held on July 21.
* Rev1: Added the minute from the telephone conference held on July 22.
* Rev2: Added the minute from the telephone conference held on July 26.
* Rev3: Added the minute from the telephone conference held on July 29.
* Rev4: Added the minute from the telephone conference held on August 9.
* Rev5: Added the minute from the telephone conference held on August 12.
* Rev6: Added the minute from the telephone conference held on August 16.

### Wendsday 21 July 2021, 10:00 – 12:00 ET (TGbe MAC ad hoc conference call)

Chairman: Liwen Chu (NXP)

Secretary: Jeongki Kim (Ofinno)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Liwen, NXP) calls the meeting to order at 10:05am EDT. The Chair introduces himself and the Secretary.
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) 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 11-21/1090r6. 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) | 7/21 | Aboulmagd, Osama | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/21 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 7/21 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 7/21 | Bluschke, Andreas | Signify |
| TGbe (MAC) | 7/21 | Bravo, Daniel | Intel Corporation |
| TGbe (MAC) | 7/21 | Bredewoud, Albert | Broadcom Corporation |
| TGbe (MAC) | 7/21 | CHERIAN, GEORGE | Qualcomm Incorporated |
| TGbe (MAC) | 7/21 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/21 | Choi, Jinsoo | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | CHUN, JINYOUNG | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 7/21 | Das, Subir | Perspecta Labs Inc |
| TGbe (MAC) | 7/21 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 7/21 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 7/21 | Galati Giordano, Lorenzo | Nokia |
| TGbe (MAC) | 7/21 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 7/21 | Handte, Thomas | Sony Corporation |
| TGbe (MAC) | 7/21 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 7/21 | Hu, Chunyu | Facebook |
| TGbe (MAC) | 7/21 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 7/21 | Ibrahim, Ahmed | Samsung Research America |
| TGbe (MAC) | 7/21 | Jang, Insun | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | Joh, Hanjin | KT Corp. |
| TGbe (MAC) | 7/21 | Kain, Carl | USDoT; Noblis, Inc. |
| TGbe (MAC) | 7/21 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 7/21 | Kedem, Oren | MaxLinear |
| TGbe (MAC) | 7/21 | Khorov, Evgeny | IITP RAS |
| TGbe (MAC) | 7/21 | Kim, Jeongki | Ofinno |
| TGbe (MAC) | 7/21 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | Kim, Sanghyun | WILUS Inc |
| TGbe (MAC) | 7/21 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (MAC) | 7/21 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 7/21 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/21 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 7/21 | Lalam, Massinissa | SAGEMCOM BROADBAND SAS |
| TGbe (MAC) | 7/21 | Lee, Hong Won | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 7/21 | Li, Yunbo | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/21 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | lim, taesung | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | Liu, Yong | Apple, Inc. |
| TGbe (MAC) | 7/21 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 7/21 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 7/21 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 7/21 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 7/21 | LU, Yuxin | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/21 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 7/21 | Martinez Vazquez, Marcos | MaxLinear Corp; MAXLINEAR INC |
| TGbe (MAC) | 7/21 | Max, Sebastian | Ericsson AB |
| TGbe (MAC) | 7/21 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/21 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/21 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 7/21 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 7/21 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 7/21 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 7/21 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 7/21 | PANG, KUN | Honor Device Co.,Ltd. |
| TGbe (MAC) | 7/21 | Park, Eunsung | LG ELECTRONICS |
| TGbe (MAC) | 7/21 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 7/21 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 7/21 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/21 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 7/21 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 7/21 | Ryu, Kiseon | Ofinno |
| TGbe (MAC) | 7/21 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 7/21 | Stanley, Dorothy | Hewlett Packard Enterprise |
| TGbe (MAC) | 7/21 | Sun, Bo | ZTE Corporation |
| TGbe (MAC) | 7/21 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 7/21 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 7/21 | Tsodik, Genadiy | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/21 | Verenzuela, Daniel | Sony Corporation |
| TGbe (MAC) | 7/21 | Verma, Lochan | Apple, Inc. |
| TGbe (MAC) | 7/21 | VIGER, Pascal | Canon Research Centre France |
| TGbe (MAC) | 7/21 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 7/21 | Wang, Huizhao | Quantenna Communications, Inc. |
| TGbe (MAC) | 7/21 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 7/21 | Wentink, Menzo | Qualcomm Incorporated |
| TGbe (MAC) | 7/21 | Wu, Changqiang | TP-Link Corporation Limited |
| TGbe (MAC) | 7/21 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 7/21 | Yang, Jay | Nokia |
| TGbe (MAC) | 7/21 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 7/21 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 7/21 | yi, yongjiang | Spreadtrum Communication USA Inc. |

 **Submissions**

1. [1085r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1085-00-00be-cc36-resolution-for-cids-related-to-ml-element-part-1.docx) Resolution for CIDs related to ML element – Part 1 Gaurang Naik

Summary: The author goes through the CR for ML element.

Discussion:

C: 5743, could you defer this?

A:This is related to basic variant ML element.

C: It does not mention the specific subclause. Maybe we can further check it with laurent.

A: There is a CID related to it. This is not related to that issue.

C: Regarding the non-transmitted ID case, the transmitting Link Info does not reflect it.

A: It makes sense. We may change it to Reporting Info instead of it. Ok, I’ll defer CID 6704.

There are many people in the queue.

1. [1087r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1087-00-00be-cc36-resolution-for-cids-in-clause-35-3-2.docx) Resolution for CIDs in Clause 35.3.2 Gaurang Naik

Discussion:

C: Regarding changing the probe resposne to request, do you change it in all parts? Enough ?

C: Go to ML probe request/response definition.

A: I defered all CIDs related to it.

1. [1172r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1172-00-00be-cc36-resolution-for-cids-related-to-mlo-power-save.docx) Resolution for CIDs related to MLO Power-save Abhishek Patil

Discussion:

C: frame exchange (DL/UL), do we need to change it in whole spec?

A: Ok, any objection to remove DL/UL in the text?

The DL/UL is removed in proposed text.

C: The doze state STA may not receive the Beacon in the diagram.

A: AP sends the Beacon at TBTT regardless of the STA’s power saving state.

C: PM=0, 1 is set by non-AP STA. Those should not be general. Who is originator of PM?

A: Texts already mentioned it. I’m fine. I’ll fix it.

C: You can differentiate it to DL/UL frame in the figure.

A: Ok, I’ll go to Rojan’s suggestion.

C: Regarding MLD max idle period management, you can remove the condition and keep the may.

3 CIDs (7061, 6134, 4387) were defered.

**SP: Do you agree to incorporate the proposed draft text in 11-21/1172r2 to the latest Tgbe Draft to resolve the following comments?**

* 4465, 6210, 6300, 5259, 4466, 5260, 8342, 7725, 6211, 4386, 4467, 6302, 7415, 6301, 7416, 6212, 4067, 4388, 7417, 4114, 6735, 4468, 7419

**No objection.**

**The chair asked whether there is any other business before adjourning the call. Nobody spoke.**

**The meeting was adjourned at 11:55 ET.**

### Thursday 22 July 2021, 10:00 – 12:00 ET (TGbe MAC ad hoc conference call)

Chairman: Liwen Chu (NXP)

Secretary: Jeongki Kim (Ofinno)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Liwen, NXP) calls the meeting to order at 10:03am EDT. The Chair introduces himself and the Secretary.
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) 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 11-21/1090r8. 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) | 7/22 | AbidRabbu, Shaima' | Istanbul Medipol University; Vestel |
| TGbe (MAC) | 7/22 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 7/22 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 7/22 | Avallone, Stefano | University of Napoli |
| TGbe (MAC) | 7/22 | B, Hari Ram | NXP Semiconductors |
| TGbe (MAC) | 7/22 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 7/22 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 7/22 | Barr, David | MaxLinear |
| TGbe (MAC) | 7/22 | Bredewoud, Albert | Broadcom Corporation |
| TGbe (MAC) | 7/22 | CHAN, YEE | Facebook |
| TGbe (MAC) | 7/22 | Chemrov, Kirill | IITP RAS |
| TGbe (MAC) | 7/22 | CHERIAN, GEORGE | Qualcomm Incorporated |
| TGbe (MAC) | 7/22 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/22 | Choi, Jinsoo | LG ELECTRONICS |
| TGbe (MAC) | 7/22 | Chu, Liwen | NXP Semiconductors |
| TGbe (MAC) | 7/22 | Chung, Chulho | SAMSUNG |
| TGbe (MAC) | 7/22 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 7/22 | Das, Subir | Perspecta Labs Inc |
| TGbe (MAC) | 7/22 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 7/22 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 7/22 | Fischer, Matthew | Broadcom Corporation |
| TGbe (MAC) | 7/22 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 7/22 | GUIGNARD, Romain | Canon Research Centre France |
| TGbe (MAC) | 7/22 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 7/22 | Han, Jonghun | SAMSUNG |
| TGbe (MAC) | 7/22 | Han, Zhiqiang | ZTE Corporation |
| TGbe (MAC) | 7/22 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 7/22 | Hsu, Chien-Fang | MediaTek Inc. |
| TGbe (MAC) | 7/22 | Hu, Chunyu | Facebook |
| TGbe (MAC) | 7/22 | Jang, Insun | LG ELECTRONICS |
| TGbe (MAC) | 7/22 | Kakani, Naveen | Qualcomm Incorporated |
| TGbe (MAC) | 7/22 | Kim, Jeongki | Ofinno |
| TGbe (MAC) | 7/22 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 7/22 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 7/22 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/22 | Kneckt, Jarkko | Apple, Inc. |
| TGbe (MAC) | 7/22 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 7/22 | Lalam, Massinissa | SAGEMCOM BROADBAND SAS |
| TGbe (MAC) | 7/22 | Lee, Nancy | Signify |
| TGbe (MAC) | 7/22 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 7/22 | Li, Yunbo | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/22 | Lin, Zinan | InterDigital, Inc. |
| TGbe (MAC) | 7/22 | Lorgeoux, Mikael | Canon Research Centre France |
| TGbe (MAC) | 7/22 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 7/22 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 7/22 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 7/22 | Lumbatis, Kurt | CommScope, Inc. |
| TGbe (MAC) | 7/22 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 7/22 | Max, Sebastian | Ericsson AB |
| TGbe (MAC) | 7/22 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/22 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/22 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 7/22 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 7/22 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 7/22 | Palayur, Saju | Maxlinear Inc |
| TGbe (MAC) | 7/22 | PANG, KUN | Honor Device Co.,Ltd. |
| TGbe (MAC) | 7/22 | Park, Eunsung | LG ELECTRONICS |
| TGbe (MAC) | 7/22 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 7/22 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/22 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 7/22 | Ryu, Kiseon | Ofinno |
| TGbe (MAC) | 7/22 | Satrasala, Rajeshwari | NXP Semiconductors |
| TGbe (MAC) | 7/22 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 7/22 | Sun, Bo | ZTE Corporation |
| TGbe (MAC) | 7/22 | Sun, Yanjun | Qualcomm Incorporated |
| TGbe (MAC) | 7/22 | Verenzuela, Daniel | Sony Corporation |
| TGbe (MAC) | 7/22 | VIGER, Pascal | Canon Research Centre France |
| TGbe (MAC) | 7/22 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 7/22 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 7/22 | Wei, Dong | NXP Semiconductors |
| TGbe (MAC) | 7/22 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 7/22 | Yang, Jay | Nokia |
| TGbe (MAC) | 7/22 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 7/22 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 7/22 | yi, yongjiang | Spreadtrum Communication USA Inc. |
| TGbe (MAC) | 7/22 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

 **Submissions**

1. [1211r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1211-00-00be-cc-36-cr-for-ft.docx) CC 36 CR for FT Po-Kai Huang [20’]

Discussion:

C: Basic variant ML element, association frame, beacon, etc. Does it contain all elements or inheritance? Is that described somewhere?

A: I don’t think. Authentication request contains MLD address at least.

C: The baseline text of MLO is slightly different.

A: This is mentioning the managment frame format.

C: 7452 could be included in this document.

C: What about RSN support?

A: This is in the baseline?

1. [1207r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1207-00-00be-cc36-resolution-for-cids-for-35-3-4-1.docx) CC36 resolution for CIDs for 35.3.4.1 Laurent Cariou [25’]

Discussion:

C: the last bullet is not related to the other three bullet. We can keep three bullets.

C: There is arguement on SSID stuff. We should have clear texts whether they are the same or not. How about timestamp, etc.?

A: I can defer this.

1. [1208r3](https://mentor.ieee.org/802.11/dcn/21/11-21-1208-01-00be-cc36-resolution-for-cids-for-35-3-4-2.docx) CC36 resolution for CIDs for 35.3.4.2 Laurent Cariou [25’]

Discussion:

C: Regarding changing affiliated to to affiliated with, you need to check other subclause indicated in the CID 6196.

A: Ok.

1. [228r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0228-02-00be-legacy-addressing-in-mlo.pptx) Legacy Addressing in MLO Rojan Chitrakar [SP-10’]

Discussion:

C: This is just checking the concept of it. Not the motion.

A: Yes. I’m drafting it.

C: The router knows the MLD MAC address?

A: AP MLD knows non-AP MLD MAC address. AP MLD considers non-AP MLD.

228r3

SP1-1:

* **Do you support the following proxy ARP service in R1?**
	+ If an AP MLD supports Proxy ARP service (as described in IEEE 802.11-2020, Clause 11.21.14), then all APs affiliated with the AP MLD shall set the Proxy ARP field to 1 in the Extended Capabilities element.
	+ An AP MLD that supports Proxy ARP service shall implement the requirements defined in Clause 11.21.14 except that when an ARP Request or Neighbor Solicitation message is received by the AP MLD with a target IP address that corresponds to an associated non-AP MLD, the AP MLD shall respond on behalf of the non-AP MLD with an ARP Response or a Neighbor Advertisement message carrying the MLD MAC Address of the non-AP MLD.
* Y/N/A:29/0/41
1. [1938r8](https://mentor.ieee.org/802.11/dcn/20/11-20-1938-08-00be-tb-su-ppdu-and-tb-p2p-ppdu-consideration.pptx) TB SU PPDU and TB P2P PPDU Consideration Jay Yang [SP-10’]
* **SP1: Do you support that 11be defines a mechanism for an AP to allocate one or more portions of its obtained TXOP to multiple associated STAs via a single MU RTS TXS frame under the Triggered TXOP sharing procedure in R2?**

C: One or more portions. Do you mean multiple time portions in TXOPs?

A: Yes.

C: How signal the multiple portions in a single frame?

C: Are you assuming multiple portions using a single frame or each portion per a single frame?

A: I assume a single frame for multiple portions.

C: You need to consider hidden node cases carefully.

A: any suggestion? Removing more?

C: portions is not clear. You mean time portion? How will exactily work for that?

A: Let’s offline discussion.

C: I have submitted the proposal for subchannel selectivity by using MU-RTS/CTS. You try to sharing the frequency resource for multiple devices. For SST devices.

**The chair asked whether there is any other business before adjourning the call. Nobody spoke.**

**The meeting was adjourned at 11:59 ET.**

**Monday 26 July 2021, 19:00 – 21:00pm ET (TGbe MAC ad hoc conference call)**

Chairman: Liwen Chu (NXP)

Secretary: Jeongki Kim (Ofinno)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Liwen, NXP) calls the meeting to order at 19:02am EDT. The Chair introduces himself and the Secretary.
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) 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 11-21/1090r11. 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) | 7/26 | Adachi, Tomoko | TOSHIBA Corporation |
| TGbe (MAC) | 7/26 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 7/26 | Akhmetov, Dmitry | Intel Corporation |
| TGbe (MAC) | 7/26 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 7/26 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 7/26 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/26 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 7/26 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 7/26 | Fischer, Matthew | Broadcom Corporation |
| TGbe (MAC) | 7/26 | Ghosh, Chittabrata | Facebook, Inc. |
| TGbe (MAC) | 7/26 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 7/26 | Han, Jonghun | SAMSUNG |
| TGbe (MAC) | 7/26 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 7/26 | Hu, Chunyu | Facebook |
| TGbe (MAC) | 7/26 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 7/26 | Kain, Carl | USDoT; Noblis, Inc. |
| TGbe (MAC) | 7/26 | Kim, Jeongki | Ofinno |
| TGbe (MAC) | 7/26 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 7/26 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 7/26 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/26 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 7/26 | Lee, Nancy | Signify |
| TGbe (MAC) | 7/26 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 7/26 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 7/26 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 7/26 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 7/26 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 7/26 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 7/26 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 7/26 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 7/26 | PANG, KUN | Honor Device Co.,Ltd. |
| TGbe (MAC) | 7/26 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 7/26 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 7/26 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 7/26 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/26 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbe (MAC) | 7/26 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 7/26 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 7/26 | Ryu, Kiseon | Ofinno |
| TGbe (MAC) | 7/26 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 7/26 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 7/26 | Tanaka, Yusuke | Sony Group Corporation |
| TGbe (MAC) | 7/26 | Thompson, Tom | IEEE STAFF |
| TGbe (MAC) | 7/26 | VIGER, Pascal | Canon Research Centre France |
| TGbe (MAC) | 7/26 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 7/26 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 7/26 | Wang, Sean | Shanghai Longsailing Semiconductor Co. Ltd. |
| TGbe (MAC) | 7/26 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 7/26 | Yang, Jay | Nokia |
| TGbe (MAC) | 7/26 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 7/26 | Yee, James | MediaTek Inc. |

 **Submissions**

1. [**1085r**](https://mentor.ieee.org/802.11/dcn/21/11-21-1085-02-00be-cc36-resolution-for-cids-related-to-ml-element-part-1.docx)**3 Resolution for CIDs related to ML element – Part 1 Gaurang Naik [SP-53C 10’]**

**Discussion:**

C: NSTR Indication bitmap, this table is describing the length of the bitmap. It’s complex. Why do yo combine this with the complete profile subfiled? We can discuss it to make it simpler. There is one CID to be discussed. I’m considering it as well.

A: I did not make any technical change of each subfield (e.g., the complete profile subfield).

C: There are tagged #1, #2, #3. It makes confusing. Remove them.

A: Ok, I can do it.

1. [**1087r**](https://mentor.ieee.org/802.11/dcn/21/11-21-1087-03-00be-cc36-resolution-for-cids-in-clause-35-3-2.docx)**4 Resolution for CIDs in Clause 35.3.2 Gaurang Naik [SP-53C 10’]**

**Discussion:**

C: regarding what you remove the shall, why? Is in 35? Then it’s ok

C: Regarding the basic variant probe response. Those are defered?

A: Yes

C: 8225, this inheritance is to reduce the frame body. There is another thing for this. We should replace this with the baseline.

A: Ok, I will defer the CID 8225.

C: This text is already in the spec.

C: 4249, the STA shall include all elements. Why you include all element?

A: This is complete profile.

C: I understand. What is the meaning of all?

A: all that constitute the partial profile.

C: Confusing. Can you remove all in the text?

A: If you have concerns on only all, I’m fine with removing all because it can also resolve it.

**SP: Do you agree to the resolutions provided in doc 11-21/1087r5 for the following CIDs for inclusion in the latest 11be draft?**7715, 6864, 7716, 7365, 5736, 5738, 5737, 4246, 7717, 5390, 4108, 4361, 5600, 5801, 5913, 6221, 6566, 6870, 8223, 8330, 7805, 5391, 4035, 6567, 4377, 6534, 7811, 7847, 8224, 5045, 5601, 6222, 6395, 6872, 7059, 7718, 6568, 4362, 5250, 5966, 7514, 6570, 6396, 6569, 5046, 6878, 5047, 7395, 5739, 6397, 4249

No objection.

1. [**1172r3**](https://mentor.ieee.org/802.11/dcn/21/11-21-1172-03-00be-cc36-resolution-for-cids-related-to-mlo-power-save.docx) **Resolution for CIDs related to MLO Power-save Abhishek Patil [SP-2C 5’]**

**SP: Do you agree to the resolutions provided in doc 11-21/1172r3 for the following CIDs for inclusion in the latest 11be draft?**6134, 4387

No objection

1. [**1175r2**](https://mentor.ieee.org/802.11/dcn/21/11-21-1175-01-00be-cc36-resolution-for-cids-related-to-ml-advertisement-part-1.docx) **Res. for CIDs related to ML advertisement - Part 1 Abhishek Patil [6C 20’]**

C: I agree with the common info length subfield. Do we need the text related to it?

A: there is the similar of RNR element in baseline. This is for the forward compatibility.

C: Length value include the length of STA Info length. Why not adding it to last?

A: It’s whole length.

C: Regarding the Ming’s comment, I prefer the may than is expected to.

**SP: Do you agree to the resolutions provided in doc 11-21/1175r3 for the following CIDs for inclusion in the latest 11be draft?**5043, 4013, 4015, 5044,

No objection

1. [**1203r0**](https://mentor.ieee.org/802.11/dcn/21/11-21-1203-00-00be-cc36-cr-35-3-15-4-capability-signaling.docx) **CC36 CR 35.3.15.4 Capability Signaling Yunbo Li [36C 30’]**

C: I just mention the multi-radio MLD. In the resolution, the indicated subclause mentions only multi-radio non-AP MLD not multi-radio MLD. Can you change it in the resolution?

**The chair asked whether there is any other business before adjourning the call. Nobody spoke.**

**The meeting was adjourned at 12:00 ET.**

### Monday 29 July 2021, 10:00 – 12:00 ET (TGbe MAC ad hoc conference call)

Chairman: Liwen Chu (NXP)

Secretary: Jeongki Kim (Ofinno)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Liwen, NXP) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary.
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) 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 11-21/1090r14. 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) | 7/29 | AbidRabbu, Shaima' | Istanbul Medipol University; Vestel |
| TGbe (MAC) | 7/29 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 7/29 | Amalladinne, Vamsi | Qualcomm Incorporated |
| TGbe (MAC) | 7/29 | B, Hari Ram | NXP Semiconductors |
| TGbe (MAC) | 7/29 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 7/29 | Bahn, Christy | IEEE STAFF |
| TGbe (MAC) | 7/29 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 7/29 | Barr, David | MaxLinear |
| TGbe (MAC) | 7/29 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 7/29 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/29 | Chung, Chulho | SAMSUNG |
| TGbe (MAC) | 7/29 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 7/29 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 7/29 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 7/29 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 7/29 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 7/29 | Harkins, Daniel | Hewlett Packard Enterprise |
| TGbe (MAC) | 7/29 | Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) |
| TGbe (MAC) | 7/29 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 7/29 | Ibrahim, Ahmed | Samsung Research America |
| TGbe (MAC) | 7/29 | Kamel, Mahmoud | InterDigital, Inc. |
| TGbe (MAC) | 7/29 | Khorov, Evgeny | IITP RAS |
| TGbe (MAC) | 7/29 | Kim, Jeongki | Ofinno |
| TGbe (MAC) | 7/29 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 7/29 | Kim, Youhan | Qualcomm Incorporated |
| TGbe (MAC) | 7/29 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 7/29 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/29 | Kneckt, Jarkko | Apple, Inc. |
| TGbe (MAC) | 7/29 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 7/29 | Koundourakis, Michail | Samsung Cambridge Solution Centre |
| TGbe (MAC) | 7/29 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 7/29 | Levy, Joseph | InterDigital, Inc. |
| TGbe (MAC) | 7/29 | Li, Yunbo | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/29 | Lin, Zinan | InterDigital, Inc. |
| TGbe (MAC) | 7/29 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 7/29 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 7/29 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 7/29 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 7/29 | Martinez Vazquez, Marcos | MaxLinear Corp; MAXLINEAR INC |
| TGbe (MAC) | 7/29 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 7/29 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 7/29 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 7/29 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 7/29 | Ozbakis, Basak | VESTEL |
| TGbe (MAC) | 7/29 | PANG, KUN | Honor Device Co.,Ltd. |
| TGbe (MAC) | 7/29 | Park, Eunsung | LG ELECTRONICS |
| TGbe (MAC) | 7/29 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 7/29 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 7/29 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 7/29 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 7/29 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 7/29 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 7/29 | Ryu, Kiseon | Ofinno |
| TGbe (MAC) | 7/29 | Satrasala, Rajeshwari | NXP Semiconductors |
| TGbe (MAC) | 7/29 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 7/29 | Sosack, Robert | Molex Incorporated |
| TGbe (MAC) | 7/29 | Sun, Bo | ZTE Corporation |
| TGbe (MAC) | 7/29 | Sun, Yanjun | Qualcomm Incorporated |
| TGbe (MAC) | 7/29 | Torab Jahromi, Payam | Facebook |
| TGbe (MAC) | 7/29 | Verenzuela, Daniel | Sony Corporation |
| TGbe (MAC) | 7/29 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 7/29 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 7/29 | Wang, Sean | Shanghai Longsailing Semiconductor Co. Ltd. |
| TGbe (MAC) | 7/29 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 7/29 | Yang, Jay | Nokia |
| TGbe (MAC) | 7/29 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 7/29 | yi, yongjiang | Spreadtrum Communication USA Inc. |
| TGbe (MAC) | 7/29 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

 **Submissions**

1. **Errata Corrige on CIDs listed for the SP on** [**1175r4**](https://mentor.ieee.org/802.11/dcn/21/11-21-1175-04-00be-cc36-resolution-for-cids-related-to-ml-advertisement-part-1.docx) **Abhishek Patil [SP 5’]**

**The author goes through the update of the document . Fixing error in r3 (4015->4018)**

**SP: Do you agree to the resolutions provided in doc 11-21/1175r4 for the following CIDs for inclusion in the latest 11be draft?**5043, 4013, 4018, 5044

**No objection**

1. [**1085r6**](https://mentor.ieee.org/802.11/dcn/21/11-21-1085-04-00be-cc36-resolution-for-cids-related-to-ml-element-part-1.docx) **Resolution for CIDs related to ML element–Part 1 Gaurang Naik [SP-53C 10’]**

**Discussion:**

C: I don’t see any change in one of highlight changes (optional present). What did you do there?

A: I don’t make track change there.

**SP: Do you agree to the resolutions provided in doc 11-21/1085r6 for the following CIDs for inclusion in the latest 11be draft?**7566, 7439, 4100, 6865, 4106, 5742, 4814, 5743, 6235, 4815, 4810, 8280, 7568, 4816, 7569, 6869, 8281, 6387, 6015, 6705, 6868, 5126, 6236, 7702, 5829, 7577, 5830, 7579, 7581, 5831, 5128, 6880, 6867, 5129, 7511, 8286, 8287, 8288, 4017, 4366, 5130, 5389, 6223, 7340, 4818, 6755, 6366, 8289, 6390, 6575, 7351, 8170, 4735

**No objection**

1. [**1180r2**](https://mentor.ieee.org/802.11/dcn/21/11-21-1180-02-00be-cc36-cr-for-5386.docx) **CC36 CR for 5386 Jay Yang [1C 10’]**

**Discussion:**

C: 2020, is there any terminologes for mobile AP?

A: No.

**SP: Do you agree to the resolutions provided in doc 11-21/1180r2 for the following CIDs for inclusion in the latest 11be draft?5386**

**No objection**

1. [**1206r1**](https://mentor.ieee.org/802.11/dcn/21/11-21-1206-00-00be-cc36-cr-9-4-2-295b-2-mld-capabilities-field.docx) **CC36 CR 9.4.2.295b.2 MLD Capabilities field Yunbo Li [11C 20’]**

**Discussion:**

C: Fix error (Aps => APs)

C: why do we need to separate the AP MLD from non-AP MLD?

C: you can change the MLD to non-AP MLD in the encoding part.

C: can we defer 4014?

C: 6599, I agree with this comment.

A: Soft AP is defined and can use that field.

C: either STA or AP is general. So, not non-AP MLD , it should be MLD. That part is general and applies to both AP and STA.

A: I understand. Do you have any problem on this resolution? (No) Either way works.

C: Regarding the Frequency separation For STR field, For an EHT AP, set to 0. Is it reserved or any condition for it?

A: We can make it reserved.

C: Ok, makes sense. It’s just reserved (not set to 0)

C: Is that for EHT STA or MLD?

A: Ok, I can change it to MLD.

R2 is approved with no objection but there is error in r2. After fixing the error, r3 is approved as follows.

**SP: Do you agree to the resolutions provided in doc 11-21/1206r3 for the following CIDs for inclusion in the latest 11be draft?**

**4365, 5746, 6599, 6388, 4266, 8284, 7040, 7582, 8283, 8285**

**No objection**

1. [**1132r1**](https://mentor.ieee.org/802.11/dcn/21/11-21-1132-00-00be-cc-36-cr-for-35-3-3.docx) **CC 36 CR for 35.3.3 Po-Kai Huang [25C 30’]**

**Discussion:**

C: Is there any new thing from baseline (i.e., delta)?

A: No delta. Then, do we go to baseline? Just mentioning for group addressed thing.

C: I need more time because there are many things. Which is the baseline or not.

A: Only difference is AP MLD,

C: is that for both data and management?

A: a3 and a4 are for data and a3 is for management. Do you wanna defer?

C: I wanna have a little bit more time.

C: There is no need of bandwidth signaling for group addressed frame.

C: CF-End, we need more discussion.

A: I can defer this part.

**SP: Do you agree to the resolutions provided in doc 11-21/1132r2 for the following CIDs for inclusion in the latest 11be draft?**

6183, 5155, 4250, 5142, 5192, 5209, 5238, 5449, 6537, 6538, 6617, 7454, 7668, 7721, 7882, 8229, 8332,

**No objection**

1. [**1223r2**](https://mentor.ieee.org/802.11/dcn/21/11-21-1223-00-00be-cr-for-wnm-sleep-mode.docx) **CR for WNM Sleep Mode Rajat Pushkarna [5C 10’]**

**C: If you’re accept, then please reflect it in the text (a -> the)**

**A: ok**

**SP: Do you agree to the resolutions provided in the document 11-21/1223r3 for the following CIDs: 4128, 4129, 5781, 6178, 6179 for inclusion in the latest 11be draft?**

**No objection**

1. [**1197r1**](https://mentor.ieee.org/802.11/dcn/21/11-21-1197-00-00be-cc36-resolution-for-cids-related-to-nsep-part1.docx) **Resolution for CIDs related to NSEP-Part1 Subir Das [38C 30’]**

Presented but not finished. No discussion due to lack of time.

**The chair asked whether there is any other business before adjourning the call. Nobody spoke.**

**The meeting was adjourned at 12:00 ET.**

### Monday 9 Agust 2021, 19:00 – 21:00 ET (TGbe MAC ad hoc conference call)

Chairman: Liwen Chu (NXP)

Secretary: Jeongki Kim (Ofinno)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Liwen, NXP) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary.
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) 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 11-21/1090r15. 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) | 8/9 | Adachi, Tomoko | TOSHIBA Corporation |
| TGbe (MAC) | 8/9 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 8/9 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 8/9 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 8/9 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 8/9 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 8/9 | Chemrov, Kirill | IITP RAS |
| TGbe (MAC) | 8/9 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 8/9 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 8/9 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 8/9 | Fang, Yonggang | Mediatek |
| TGbe (MAC) | 8/9 | Fischer, Matthew | Broadcom Corporation |
| TGbe (MAC) | 8/9 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 8/9 | Haasz, Jodi | IEEE Standards Association (IEEE-SA) |
| TGbe (MAC) | 8/9 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 8/9 | Hamilton, Mark | Ruckus/CommScope |
| TGbe (MAC) | 8/9 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 8/9 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 8/9 | Kim, Jeongki | Ofinno |
| TGbe (MAC) | 8/9 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 8/9 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 8/9 | Kim, Sanghyun | WILUS Inc |
| TGbe (MAC) | 8/9 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 8/9 | Kneckt, Jarkko | Apple, Inc. |
| TGbe (MAC) | 8/9 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 8/9 | Levy, Joseph | InterDigital, Inc. |
| TGbe (MAC) | 8/9 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 8/9 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 8/9 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 8/9 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 8/9 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 8/9 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 8/9 | NANDAGOPALAN, SAI SHANKAR | Infineon Technologies |
| TGbe (MAC) | 8/9 | Nayak, Peshal | Samsung Research America |
| TGbe (MAC) | 8/9 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 8/9 | Palayur, Saju | Maxlinear Inc |
| TGbe (MAC) | 8/9 | PANG, KUN | Honor Device Co.,Ltd. |
| TGbe (MAC) | 8/9 | Park, Minyoung | Intel Corporation |
| TGbe (MAC) | 8/9 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 8/9 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 8/9 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 8/9 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbe (MAC) | 8/9 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbe (MAC) | 8/9 | Ryu, Kiseon | Ofinno |
| TGbe (MAC) | 8/9 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 8/9 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 8/9 | Sun, Yanjun | Qualcomm Incorporated |
| TGbe (MAC) | 8/9 | Wang, Chao Chun | MediaTek Inc. |
| TGbe (MAC) | 8/9 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 8/9 | Wang, Sean | Shanghai Longsailing Semiconductor Co. Ltd. |
| TGbe (MAC) | 8/9 | Wullert, John | Perspecta Labs |
| TGbe (MAC) | 8/9 | Yang, Jay | Nokia |
| TGbe (MAC) | 8/9 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 8/9 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 8/9 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

**Technical Submissions:**

1. [1211r](https://mentor.ieee.org/802.11/dcn/21/11-21-1211-01-00be-cc-36-cr-for-ft.docx)4 CC 36 CR for FT Po-Kai Huang [SP-1C 10’]

Summary: The author goes through the updates in the document. E.g., delete Non-RSN and use FTR rather than AP and AP MLD.

SP: Do you support to accept the resolution in 11-21/1211r4 for the following CIDs? 5070, 7452, 6228

No objection

1. [1206r](https://mentor.ieee.org/802.11/dcn/21/11-21-1203-00-00be-cc36-cr-35-3-15-4-capability-signaling.docx)4 CC36 CR 35.3.15.4 Capability Signaling Yunbo Li [Q-36C 10’]

Discussion:

C: Last page, MLD capability, is that for STA or MLD capabillity?

A: D1.0 is for AP capapbility. It is for both sides (AP and STA) which are updated based on the both CIDs(4266, 8284).

C: Those are AP MLD and STA MLD.

C: You did not mention max number of sim links for soft Aps.

A: Generally AP includes the soft Aps.

SP: Do you support to accept the resolution in 11-21/1206r4 for the following CID? 4014

No objection

1. [1197r2](https://mentor.ieee.org/802.11/dcn/21/11-21-1197-00-00be-cc36-resolution-for-cids-related-to-nsep-part1.docx) Resolution for CIDs related to NSEP-Part1 Subir Das [38C 30’]

Discussion:

C: 5859, there is typo. for page/line , clause.

C: Page 17, how does the AP MLD know the cpability of non-AP MLD? Which particular links is for NSEP?

A: They could be negotiated. Other can be possible.

C: There is not CID info for note. Page 12. 6622

C: 7525, it should be revised instead of accepted. There was another comment.

A: Ok.

C: If you are accept, you should not provide editor instruction.

C: Regarding text of EDCA parameter set, there are two comments. One is optionally present....,

C: End of clause 4, NSEP is applied individually for each link. This is MLD level feature.

A: EDCA parameters could be per lnk basis.

C: Not sure whether EDCA is applied to one link or same for all.

A: Every link receive each parameter.

A: I can remove 5597 and 6622

C: There are a couple of CIDs related to po-kai’s thing.

SP: Do you support to accept the resolution in 11-21/1197r2 for the following CID?4132, 5285, 6480, 6162, 7518, 6163, 6164, 5151, 6482, 7519, 7520, 7521, 6481, 4133, 5579, 7549, 7550, 5587, 5868, 5859, 7548, 4299, 4007, 4153, 5592, 6663, 6239, 7355, 5593, 7525, 4820, 5595, 7055, 7709

No objection

1. [287r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0287-01-00be-cc34-cr-emlsr-part2.docx) EMLSR part 2 Minyoung Park [8C 25’]

Discussion:

C: Regarding the wait time, there is PIFS timer.

C: The first paragraph on page 8, the last sentence. They are monitoring the links?

C: Other AP can transmit a frame to other STA in the same MLD?

A: Yes possible.

C: The frames in the middle TXOP can cover more than the next PPDUs. You need to check the texts for setting duration feild in the baseline. This does not follow the baseline.

C: You need to clarify which texts can cover which diagram.

C: What about legacy STAs in case 4? Need to check any issue of it.

A: We don’t have to consider the legacy STAs. Both are EHT STAs. Please let me know if you have any issue on it.

**The chair asked whether there is any other business before adjourning the call. Nobody spe**

**akes.**

**The meeting was adjourned at 21:00 ET.**

### Thursday 12 Agust 2021, 10:00 – 12:00 ET (TGbe MAC ad hoc conference call)

Chairman: Liwen Chu (NXP)

Secretary: Jeongki Kim (Ofinno)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Liwen, NXP) calls the meeting to order at 10:02am EDT. The Chair introduces himself and the Secretary.
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) 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 11-21/1090r18. 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) | 8/12 | AbidRabbu, Shaima' | Istanbul Medipol University; Vestel |
| TGbe (MAC) | 8/12 | Aboulmagd, Osama | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 8/12 | Ajami, Abdel Karim | Qualcomm Incorporated |
| TGbe (MAC) | 8/12 | Asterjadhi, Alfred | Qualcomm Incorporated |
| TGbe (MAC) | 8/12 | Baek, SunHee | LG ELECTRONICS |
| TGbe (MAC) | 8/12 | Bahn, Christy | IEEE STAFF |
| TGbe (MAC) | 8/12 | Bankov, Dmitry | IITP RAS |
| TGbe (MAC) | 8/12 | baron, stephane | Canon Research Centre France |
| TGbe (MAC) | 8/12 | Barr, David | MaxLinear |
| TGbe (MAC) | 8/12 | Carney, William | Sony Group Corporation |
| TGbe (MAC) | 8/12 | Chemrov, Kirill | IITP RAS |
| TGbe (MAC) | 8/12 | CHERIAN, GEORGE | Qualcomm Incorporated |
| TGbe (MAC) | 8/12 | Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 8/12 | Ciochina, Dana | Sony Corporation |
| TGbe (MAC) | 8/12 | Coffey, John | Realtek Semiconductor Corp. |
| TGbe (MAC) | 8/12 | Das, Subir | Perspecta Labs Inc |
| TGbe (MAC) | 8/12 | de Vegt, Rolf | Qualcomm Incorporated |
| TGbe (MAC) | 8/12 | Dong, Xiandong | Xiaomi Inc. |
| TGbe (MAC) | 8/12 | Gu, Xiangxin | Unisoc |
| TGbe (MAC) | 8/12 | Haider, Muhammad Kumail | Facebook |
| TGbe (MAC) | 8/12 | Han, Zhiqiang | ZTE Corporation |
| TGbe (MAC) | 8/12 | Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) |
| TGbe (MAC) | 8/12 | Ho, Duncan | Qualcomm Incorporated |
| TGbe (MAC) | 8/12 | Hu, Chunyu | Facebook |
| TGbe (MAC) | 8/12 | Huang, Po-Kai | Intel Corporation |
| TGbe (MAC) | 8/12 | Khorov, Evgeny | IITP RAS |
| TGbe (MAC) | 8/12 | Kim, Jeongki | Ofinno |
| TGbe (MAC) | 8/12 | kim, namyeong | LG ELECTRONICS |
| TGbe (MAC) | 8/12 | Kim, Sang Gook | LG ELECTRONICS |
| TGbe (MAC) | 8/12 | Kim, Sanghyun | WILUS Inc |
| TGbe (MAC) | 8/12 | Kim, Youn-Kwan | Sync Techno |
| TGbe (MAC) | 8/12 | Kishida, Akira | Nippon Telegraph and Telephone Corporation (NTT) |
| TGbe (MAC) | 8/12 | Klein, Arik | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 8/12 | Ko, Geonjung | WILUS Inc. |
| TGbe (MAC) | 8/12 | Koundourakis, Michail | Samsung Cambridge Solution Centre |
| TGbe (MAC) | 8/12 | Lee, Nancy | Signify |
| TGbe (MAC) | 8/12 | Levitsky, Ilya | IITP RAS |
| TGbe (MAC) | 8/12 | Lim, Dong Guk | LG ELECTRONICS |
| TGbe (MAC) | 8/12 | Lou, Hanqing | InterDigital, Inc. |
| TGbe (MAC) | 8/12 | Lu, kaiying | MediaTek Inc. |
| TGbe (MAC) | 8/12 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbe (MAC) | 8/12 | LU, Yuxin | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 8/12 | Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| TGbe (MAC) | 8/12 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbe (MAC) | 8/12 | Memisoglu, Ebubekir | Istanbul Medipol University; Vestel |
| TGbe (MAC) | 8/12 | Naik, Gaurang | Qualcomm Incorporated |
| TGbe (MAC) | 8/12 | Ng, Boon Loong | Samsung Research America |
| TGbe (MAC) | 8/12 | Ouchi, Masatomo | Canon |
| TGbe (MAC) | 8/12 | PANG, KUN | Honor Device Co.,Ltd. |
| TGbe (MAC) | 8/12 | Park, Eunsung | LG ELECTRONICS |
| TGbe (MAC) | 8/12 | Park, Minyoung | Intel Corporation |
| TGbe (MAC) | 8/12 | Patil, Abhishek | Qualcomm Incorporated |
| TGbe (MAC) | 8/12 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbe (MAC) | 8/12 | Petrick, Albert | InterDigital, Inc. |
| TGbe (MAC) | 8/12 | Pushkarna, Rajat | Panasonic Asia Pacific Pte Ltd. |
| TGbe (MAC) | 8/12 | Raissinia, Alireza | Qualcomm Incorporated |
| TGbe (MAC) | 8/12 | Ratnam, Vishnu | Samsung Research America |
| TGbe (MAC) | 8/12 | Shafin, Rubayet | Samsung Research America |
| TGbe (MAC) | 8/12 | Sun, Bo | ZTE Corporation |
| TGbe (MAC) | 8/12 | Sun, Li-Hsiang | Sony Corporation |
| TGbe (MAC) | 8/12 | Verenzuela, Daniel | Sony Corporation |
| TGbe (MAC) | 8/12 | Wang, Lei | Futurewei Technologies |
| TGbe (MAC) | 8/12 | Wang, Sean | Shanghai Longsailing Semiconductor Co. Ltd. |
| TGbe (MAC) | 8/12 | Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| TGbe (MAC) | 8/12 | Yee, James | MediaTek Inc. |
| TGbe (MAC) | 8/12 | yi, yongjiang | Spreadtrum Communication USA Inc. |
| TGbe (MAC) | 8/12 | Zhou, Pei | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |

**Technical Submissions:**

1. [1203r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1203-00-00be-cc36-cr-35-3-15-4-capability-signaling.docx) CC36 CR 35.3.15.4 Capability Signaling Yunbo Li [Q&A-36C 10’]

Discussion:

C: Do you wanna delete this note?

A: Is it still keep this note?

C: I wanna keep the note.

C: Why do you remove multi-link setup subclause?

A: Do you want to check it more? I already check it

C: I wanna defer two CIDs.

A: Ok

**SP: Do you support to accept the resolution in 11-21/1203r1 for the following CIDs?**4116, 4076, 5764, 6312, 4403, 8248, 6856, 6857, 6983, 6313, 7342, 6137, 7343, 7630, 7728, 4404, 6858, 4830, 7623, 7624, 7625, 7626, 4831, 6959, 6314, 8206, 5304, 6769, 4931, 6770, 7627, 7856, 7628, 4474

No objection

1. [1224r3](https://mentor.ieee.org/802.11/dcn/21/11-21-1224-00-00be-cc-36-cr-for-restricted-twt-setup.docx) CR for Restricted TWT Setup M. K. Haider [5C 25’]

Discussion:

C: If the STA indicates several CIDs (3, 5, ..), what does the AP do?

C: AP can change the TID bitmap? Right? You assume that the STA has better knowlege about that. But I don’t think so in some cases.

C: How does the AP decide the quiet element inclusion? It should be negotiated.

1. [1147r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1147-00-00be-cc36-cr-35-6-restricted-twt-announcement.docx) CR-35.6 Restricted TWT Announcement Chunyu Hu [8C 25’]

Discussion:

C: How do you associate broadcast TWT ID?

A: It does not need to know ID.

C: It can be achived by the existing broadcast TWT. Why do you propose this instead of the existing thing?

A: There is the difference between them. SP info bitmap can also provide things that could not be achieved by the original twt element. TWT element is restricted to carry those information.

1. [1115r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1115-00-00be-cc36-cr-35-6-traffic-prioritization-during-restricted-twt-sps.pptx) CR-35.6 Traffic Prioritization During R-TWT SPs Chunyu Hu [16C-Tech 25’]

C: allowing both latency sensitive and latency tolerant traffic in rTWT? Right? Slide 10

A: slide 4, yes right. I prefer to prioritizing than restricting.

A: If we don’t allow it in AP, it would be wated in resource efficiency.

C: It’s not fair with other STA that is not scheduled STAs.

A: If there are two users, AP want to transmit DL to two.

**The chair asked whether there is any other business before adjourning the call. Nobody spe**

**akes.**

**The meeting was adjourned at 12:00 ET.**

### Monday 16 Agust 2021, 19:00 – 21:00 ET (TGbe MAC ad hoc conference call)

Chairman: Liwen Chu (NXP)

Secretary: Jeongki Kim (Ofinno)

This meeting took place using a webex session.

**Introduction**

1. The Chair (Liwen, NXP) calls the meeting to order at 19:02am EDT. The Chair introduces himself and the Secretary.
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) 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 11-21/1090r20. Several changes are made per the comment. The modified agenda was approved.

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

**Technical Submissions:**

1. [1132r](https://mentor.ieee.org/802.11/dcn/21/11-21-1132-02-00be-cc-36-cr-for-35-3-3.docx)4 CC 36 CR for 35.3.3 Po-Kai Huang [8C 15’]

Discussion:

C: if allowed in the end,

A: if the group addressed is allowed, just for clarification. We are not introducing new stuff.

C: This mode is transmission.

A: Yes

C: We can add the text of group addressed management frame later if there is discussion on the CID 7849. Can finalize after the discussion is done.

A: This is obvious one. Maybe close it.

C: Similar to alfred.

C: Can you defer 5658?

A: Not debatable.

A: I can defer 7849.

SP: Do you support to accept the resolution in 11-21/1132r4 for the following CIDs?5602, 8227, 8228, 8230, 5658, 5969, 6185

31/8/29

1. [1209r3](https://mentor.ieee.org/802.11/dcn/21/11-21-1209-01-00be-cc-36-cr-for-eht-om.docx) CR for EHT OM Po-Kai Huang [38C 30’]

Discussion

C: RxNSS, encoding, greater than 80MHz BW does not follow this table?

A: bigger than 80 follows the ax fomula.

C: Table title, what about indicating that this is below 80MHz?

A: This is just encoding. It does not need it.

1. [1263r1](https://mentor.ieee.org/802.11/dcn/21/11-21-1263-00-00be-cc36-resolution-for-cids-related-to-mbssid.docx) Resolution for CIDs related to MBSSID Gaurang Naik [6C 10’]

Discussion: None.

SP: Do you agree to the resolutions provided in doc 11-21/1263r1 for the following CIDs for inclusion in the latest 11be draft?6169, 4307, 4196, 4308, 6175, 6330

No objection

1. [1221r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1221-00-00be-cc36-cr-for-ml-ie-usage-for-ml-setup-part-1.docx) CR for ML IE Usage for ML Setup - Part 1 Insun Jang [37C 30’]

Discussion:

C: The comment mentions the association response frame but you indicates a probe request. But there may be text for probe response.

C: How does the link ID obtained during discovery?

A: You can refer this reference.

C: The first sentence is for request but the second is for response. You need to clarify it in the text.

C: What about link which is transmitted in response? In that case the status is success or failure for part info instead of complete?

A: In D1.1, there is a description. However, the note could be fine for me.

C: Yes, it should be clear.

C: If you are not clear for the previous text, you need to modify the previous text instead of adding note.

**The chair asked whether there is any other business before adjourning the call. Nobody spe**

**akes.**

**The meeting was adjourned at 21:00 ET.**