IEEE P802.11  
Wireless LANs

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| TGbe 2020 November to January teleconference minutes | | | | |
| Date: 2020-11-05 | | | | |
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Abstract

This document contains the minutes for November 2020 to January 2021 TGbe teleconferences.

Revisions:

* Rev0: First revision of the document. Added reference to teleconference calls 2nd of November. Added minutes to teleconference call 4th of November.

# Monday 02 November, 19:00 – 21:00 ET

Split PHY and MAC.

* PHY: <https://mentor.ieee.org/802.11/dcn/20/11-20-1767-00-00be-minutes-for-tgbe-phy-ad-hoc-cc-nov-2020-to-jan-2021.docx>
* MAC: <https://mentor.ieee.org/802.11/dcn/20/11-20-1765-00-00be-minutes-for-tgbe-mac-ad-hoc-teleconferences-in-nov-2020-and-jan-2021.docx>

# Wednesday 04 November, 9:00 – 11:00 ET

**Introduction**

1. The Chair, Alfred Asterjadhi (Qualcomm), calls the meeting to order at 9:00 ET. The Chair notifies that the agenda is in 1617r7.
2. IEEE 802 and 802.11 IPR policy and procedure. If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group please speak up now. Nobody speaks/writes up.
3. The Chair goes through **Patent, Participation and policy related subclause.**
4. Attendance reminder.

* Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
* Please record your attendance during the conference call by using the IMAT system:
  + 1) login to [imat](https://imat.ieee.org/attendance), 2) select “802.11 Telecons (<Month>)” entry, 3) select “C/LM/WG802.11 Attendance” entry, 4) click “TGbe <MAC/PHY/Joint> conference call that you are attending.
* If you are unable to record the attendance via [IMAT](https://imat.ieee.org/attendance) then please send an e-mail to Dennis Sundman ([dennis.sundman@ericsson.com](mailto:dennis.sundman@ericsson.com)) and Alfred Asterjadhi ([aasterja@qti.qualcomm.com](mailto:aasterja@qti.qualcomm.com))
* Please ensure that the following information is listed correctly when joining the call:
  + "[voter status] First Name Last Name (Affiliation)"

1. Agenda approved with unanimous consent.
2. Announcements:
3. Technical Submissions**-Sounding**
   1. [**1436r5**](https://mentor.ieee.org/802.11/dcn/20/11-20-1436-05-00be-ndpa-and-mimo-control-field-design-for-eht.pptx)**, “NDPA and MIMO Control Field Design for EHT” – Sameer Vermani**

**Summary:** The authors provide explicit design proposals for how to extend NDPA and MIMO control fields for EHT.

**Discussion:**

C: It looks like 7 bits are enough for the BW indication, but you mention 9 bits.

A: Some people seem to prefer a bitmap rather than a table, and in that case 9 bits are required.

C: Regarding the MIMO Control Field, have you thought about the single vs multi-AP case for this field?

A: No. I would think the reserved bits should suffice.

C: From slide 6, what is the special information?

A: I have nothing particular in mind, but when everything is filled up, we are left with only 2 bytes.

C: On slide 7, you suggest to indicate multi-AP and single-AP sounding.

A: I don’t want to go into detailed designs. If certain information needs to be indicated, it should be possible to convey it here. You could use the special STA Info Version field.

**SP2:**

Do you agree the design of STA Info field as shown below

* Partial BW Info field (naming is TBD) can be 7-9 bits [the figure will be modified accordingly if the field size is different from 9 bits]
* Size of codebook size may increase, and the location of the Nc and Codebook Size fields are TBD



**Result:** Yes/No/Abstain/No-answer: 97/27/62/158.

**SP 3:**

Do you agree with the EHT MIMO Control Field Design shown below?



* Size of codebook information may increase
* Reserved bits (number and location) may change
* Sounding Dialogue Token and Feedback Segment related bits are TBD
* Partial BW Info field (naming is TBD) can be 7-9 bits [the figure will be modified accordingly if the field size is different from 9 bits]

**Result:** Yes/No/Abstain/No-answer: 113/6/70/156

* 1. [**1643r1**](https://mentor.ieee.org/802.11/dcn/20/11-20-1643-01-00be-implicit-sounding-performance.pptx)**, “Implicit Sounding Performance” – Oren Kedem**

**Summary:** The authors have performed MU-MIMO tests in lab with focus on channel aging and calibration error. Channel aging is not much of an issue in the static case, however in the far and near movement scenario the EVM shows a drop. Whey claim that when calibration error is equal or smaller than -30dB, implicit sounding has better performance than explicit sounding. Explicit and implicit sounding performance becomes similar when sounding interval increases. The authors believe it is not hard to obtain -30dB calibration error.

1. Motions (concentrated within the second 60 mins of the call). [841r33](https://mentor.ieee.org/802.11/dcn/20/11-20-0841-33-00be-tgbe-motions-list-for-teleconferences.pptx) Motions list for teleconferences
   1. **Move to approve TGbe minutes of teleconferences listed below:**
      * Teleconferences Sept-Nov: <https://mentor.ieee.org/802.11/dcn/20/11-20-1496-08-00be-sep-nov-tgbe-teleconference-minutes.docx>

**Move:** Michael Montemurro, **Second:** Bin Tian

**Discussion: No discussion.**

**Result: Approved with unanimous consent.**

* 1. **Motion 137**

Move to add to the 11be SFD, candidate specification text in [11-20/566r86](https://mentor.ieee.org/802.11/dcn/20/11-20-0566-86-00be-compendium-of-straw-polls-and-potential-changes-to-the-specification-framework-document.docx) that is identified with the following tags:

* + SP244, SP245, SP246, SP247, SP248, SP249, SP250, SP251, SP252, SP253,
  + SP254, SP255, SP256, SP257, SP258, SP259, SP262, SP263,
  + SP264, SP265, SP266, SP267, SP268, SP269, SP270, SP271, SP272, SP273,
  + SP274, SP275, SP276, SP277, SP278, SP279, SP280, SP281, SP282, SP283,
  + SP284, SP285, SP286, SP287, SP288, SP289, SP290, SP291, SP292, SP293,
  + SP294, SP295.

**Move:** Stephen McCann, **Second:** Subir Das

**Discussion:** No discussion.

**Result:** Approved with unanimous consent.

Note: These are all candidate SFD texts highlighted in yellow that have NOT received a request for further discussion

* 1. **Motion 138**

Move to accept changes to the TGbe draft as specified in the following documents:

* + [1650r1](https://mentor.ieee.org/802.11/dcn/20/11-20-1650-00-00be-proposed-tbd-fix-for-mld-association-sa-query.docx)

**Move:** Po-Kai Huang, **Second:** Rojan Chitrakar

**Discussion:** No discussion.

**Result:** Approved with unanimous consent.

Note: These are all proposed draft texts (PDTs) that obtained ≥ 75% support during the straw poll phase and that have NOT received a request for further discussion

* 1. **Motion 139**

Move to add to the 11be SFD, candidate specification text in [11-20/566r63](https://mentor.ieee.org/802.11/dcn/20/11-20-0566-63-00be-compendium-of-straw-polls-and-potential-changes-to-the-specification-framework-document.docx) that is identified with the following tag:

* + SP175

**Move:** Ron Porat, **Second:** Bin Tian

**Discussion:** No discussion.

**Result:** Approved with unanimous consent.

*SP175: Do you agree to the proposed RU table as attached on slide 5 of 1138r4?*

*[20/1138r4 (Large M-RU Table, Ron Porat, Broadcom), SP#3, Y/N/A: 30/9/8]*

* 1. **Motion 140**

Move to change the paragraph below in 36.3.18.3 of TGbe D0.1 as follows:

* Transmit center frequency and the symbol clock frequency for all transmit antennas and frequency segments shall be derived from the same reference oscillator. The symbol clock frequency and transmit center frequency tolerance shall be ±20 ppm in the 5 GHz and 6 GHz bands and ±25 ppm in the 2.4 GHz band. EHT TB PPDU format is subject to additional requirements as defined in 36.3.14 (Non-HT duplicate transmission)

**Move:** Wook Bong Lee, **Second:** Ross Jian Yu

**Discussion:** No discussion.

**Result:** Approved with unanimous consent.

*SP: Do you agree to change from +-2 ppm to +-25 ppm for 2.4 GHz band transmit center frequency tolerance? Note that it is a typo in section 36.3.18.3. Please refer 11-20/1252r2.*

*(SP result: Approved with unanimous consent)*

* 1. **Motion 141**

Move to add to the 11be SFD, the following text:

* + The allowed values of maximum NLTF receive capability for single-user transmission are 4, 8, and 16.
    - Note: The value of maximum NLTF=16 is available in R2
  + The allowed values of maximum NLTF receive capability for multiple-user transmission are 4, 8, and 16.
    - Note 1: This capability is for both OFDMA and non-OFDMA MU-MIMO transmission.
    - Note 2: The value of maximum NLTF=16 is available in R2

**Move:** Rui Cao, **Second:** Junghoon Suh

**Discussion:** No discussion.

**Result:** Approved with unanimous consent.

Note 1: These are all candidate SFD texts highlighted in yellow that have received a request for further discussion

Note 2: SP results are SP260: 34Y,2N,17A and SP261: 38Y, 2N, 15A: see next slide for SP content

1. **Amending agenda. To continue the sounding SPs is 1436r5.**
2. [**1436r5**](https://mentor.ieee.org/802.11/dcn/20/11-20-1436-05-00be-ndpa-and-mimo-control-field-design-for-eht.pptx)**, “NDPA and MIMO Control Field Design for EHT” – Sameer Vermani**

**SP4**

Do you agree that the U-SIG in NDP will carry the puncturing information for the entire PPDU BW?

* + Same 5 bit field as other non-OFDMA PPDUs

**Discussion:** No discussion.

**Result:** Yes/No/Abstain/No-answer: 107/2/53/179

**SP5**

Do you agree with the following two rules

* + - NDPA shall not request feedback on a 242RU that is signaled as punctured in the U-SIG of the NDP that follows it
    - MIMO Control Field’s Partial BW Info field (naming TBD) will be the same as the one in NDPA

**Discussion:** No discussion.

**Result:** Yes/No/Abstain/No-answer: 121/2/45/174

1. **AoB: None.**
2. **Recess at 10:57.**