IEEE P802.11
Wireless LANs

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| Minutes 802.11 be PHY ad hoc – March Plenary meetings  |
| Date: 2023-03-15 |
| Author(s): |
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Abstract

This document contains the PHY ad hoc meeting minutes for TGbe teleconferences held on:

* March 14 AM2, 2023
* March 14 PM2, 2023
* March 15 PM2, 2023

**Tuesday March 14th, 2023 10:30 – 12:30 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, MaxLinear) calls the meeting to order at 10:30ET.
2. The Chair follows the agenda in 11-23/0191r4.
3. Reminder for registration for the plenary meeting.
4. The Chair goes through the IPR policy and asks if anyone is aware of any potentially essential patents. **Nobody speaks up.**
5. The Chair goes through the Copyright policy.
6. The Chair reminds everyone to report their attendance by using IMAT system and by sending an e-mail to the Co-chair, Tianyu Wu (Apple) or the Chair himself if unable to record attendance via IMAT system.
7. Discussions on the agenda.
	* [321r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0321-00-00be-lb271-cr-for-36-6.doc) LB271 CR for 36.6 (2 comments) Ross Jian Yu [2 ]
	* [319r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0319-00-00be-lb271-cr-for-eht-sig-part-1.doc) LB271 CR for EHT-SIG Part 1 (16 comments) Ross Jian Yu [16]
	* [318r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0318-00-00be-lb271-cr-for-cid-15000.doc) LB271 CR for CID 15000 (1 comment) Ross Jian Yu [1 ]
	* [311r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0311-00-00be-lb-271-cr-for-36-3-18.docx) TGbe LB 271:  CR for 36.3.18 Rui Yang [3 ]
	* [320r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0320-00-00be-lb271-cr-for-36-3-12-9-eht-stf.docx) LB271 CR for 36.3.12.9 EHT-STF Eunsung Park [2 ]
	* [339r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0339-00-00be-lb271-cr-for36-3-12-5-l-sig.docx) LB271 CR for36.3.12.5 L-SIG Dongguk Lim [1 ]
	* [345r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0345-00-00be-lb271-cr-for-36-1-4-ppdu-formats.docx) LB271 CR for 36.1.4 PPDU formats Dongguk Lim [1 ]
	* [326r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0326-00-00be-lb271-cr-on-subclause-36-3-6-transmitter-block-diagram.docx) LB271 CR on subclause 36.3.6 Transmitter block diagram Yapu Li [4 ]
	* [338r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0338-00-00be-lb271-comment-resolution-on-u-sig-part-1.docx) LB271 Comment Resolution on U-SIG Part 1 Alice Chen [5 ]
	* [341r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0341-00-00be-lb271-cr-on-subclause-36-3-12-2-cyclic-shift.docx) LB271 CR on subclause 36.3.12.2 Cyclic shift Yapu Li [3 ]
	* [342r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0342-00-00be-lb271-cr-on-subclause-36-4-eht-plme.docx) LB271 CR on subclause 36.4 EHT PLME Yapu Li [2 ]
	* [349r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0349-00-00be-lb271-comment-resolution-on-u-sig-part-2.docx) LB271 Comment Resolution on U-SIG Part 2 Alice Chen [7 ]
	* [332r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0332-00-00be-lb271-cr-for-cid-16359.docx) LB271 CR for CID 16359 Shimi Shilo [1 ]
	* [333r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0333-01-00be-lb271-crs-for-36-3-2.docx) LB271 CRs for 36.3.2 Yan Xin [3 ]
	* [331r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0331-00-00be-lb271-cr-for-section-36-3-17.doc) LB271 CR for section 36.3.17 Genadiy Tsodik[3 ]
	* [346r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0346-01-00be-lb271-comment-resolution-for-cid-15071.docx) LB271 Comment Resolution for CID 15071 Insik Jung [1 ]

**CR contributions**

1. **0321r1 LB271 CR for 36.6 – Ross Jian Yu (Huawei)**

Discussions:

C: Discussions on EHT-MCS 15, whether keep 3.3 or change to 3.25.

A: Keep 3.3 with 1 digit to align with other parts.

SP#1: Do you agree to the resolution of the following CIDs as proposed in 11-23/0321r1?

* CID 17802, 17803

No objection

1. **0319r0 LB271 CR for EHT-SIG Part 1 – Ross Jian Yu (Huawei)**

Discussions:

No discussion.

SP#2: Do you agree to the resolution of the following CIDs as proposed in 11-23/0319r1?

* CID 15222, 15223, 15254, 15255, 15713, 16268, 16269, 16270, 17211, 17212, 17240, 17241, 17242, 17243, 17244, 17926

No objection

1. **0318r0 LB271 CR for CID 15000** **– Ross Jian Yu (Huawei)**

Discussions:

C: This seems not related to 11be. Suggest rejecting and resolve in REVme.

A: This text is first added in 11be. So better to resolve in TGbe.

SP#3: Do you agree to the resolution of the following CID as proposed in 11-23/0318r0?

* CID 15000

No objection

1. **0311r0 TGbe LB 271:  CR for 36.3.18 – Rui Yang (Interdigital)**

Discussions:

C: Some editorial comments.

SP#4: Do you agree to the resolution of the following CIDs as proposed in 11-23/0311r0?

* CID 15261, 16265, 16358

No objection

1. **0320r0 LB271 CR for 36.3.12.9 EHT-STF – Eunsung Park (LGE)**

Discussions:

C: Is “Accepted” good resolution for CID 17213? Is original proposed solution clear to editor?

A: Should be clear enough.

SP#5: Do you agree to the resolution of the following CIDs as proposed in 11-23/0320r0?

* CID 15719, 17213

No objection

1. **0339r0 LB271 CR for36.3.12.5 L-SIG – Dongguk Lim (LGE)**

Discussions:

C: It’s safe to keep the sentence explicitly saying these tones are BPSK modulated. Are there any other places using values of 1, -1 to represent BPSK?

A: Prefer this resolution to simplify the spec text.

SP#6: Do you agree to the resolution of the following CID as proposed in 11-23/0339r0?

* CID 17202

No objection

1. **0345r0 LB271 CR for 36.1.4 PPDU formats – Dongguk Lim (LGE)**

Discussions:

No discussion.

SP#7: Do you agree to the resolution of the following CID as proposed in 11-23/0345r0?

* CID 15324

No objection

1. **0326r0 LB271 CR on subclause 36.3.6 Transmitter block diagram – Yapu Li (OPPO)**

Discussions:

No discussion.

SP#8: Do you agree to the resolution of the following CIDs as proposed in 11-23/0326r0?

* CID 15718, 17924, 17925, 15723

No objection

1. **0338r0 LB271 Comment Resolution on U-SIG Part 1 – Alice Chen (Qualcomm)**

Discussions:

C: CID 16357, change “instruction to editor” to “Note to editor”. For “Accepted” resolution, there should have no instruction to the editor.

A: Change and revised to r1.

SP#9: Do you agree to the resolution of the following CIDs as proposed in 11-23/0338r1?

* CID 16356, 16357, 17208, 17209, 17210

No objection

1. **0341r0 LB271 CR on subclause 36.3.12.2 Cyclic shift – Yapu Li (OPPO)**

Discussions:

No discussion.

SP#10: Do you agree to the resolution of the following CIDs as proposed in 11-23/0341r0?

* CID 17931, 17932, 15262

No objection

1. **0342r0 LB271 CR on subclause 36.4 EHT PLME – Yapu Li (OPPO)**

Discussions:

No discussion.

SP#11: Do you agree to the resolution of the following CIDs as proposed in 11-23/0342r0?

* CID 15715, 16267

No objection

1. **0349r0 LB271 Comment Resolution on U-SIG Part 2 – Alice Chen (Qualcomm)**

Discussions:

C: For CID 17203, the resolution says for clause 36 onwards without limits on the PHY version, what about the clauses after all PHY versions used up?

A: There are same language for version independent fields in different places. We can keep it as is for now.

C: Some editorial changes and revised to r1.

SP#12: Do you agree to the resolution of the following CIDs as proposed in 11-23/0349r1?

* CID 15278, 15772, 16349, 16355, 17203, 17204, 17933

No objection

1. **0332r0 LB271 CR for CID 16359 – Shimi Shilo (Huawei)**

Discussions:

No Discussion.

SP#13: Do you agree to the resolution of the following CID as proposed in 11-23/0332r0?

* CID 16359

No objection

1. **0333r1 LB271 CRs for 36.3.2 – Yan Xin (Huawei)**

Discussions:

C: Some clarification questions. No change to the resolution.

C: Some editorial change to CID 18327

C: CID 17928: Delete non-AP in Note 1.

A: Make the change accordingly and update to r2.

SP#14: Do you agree to the resolution of the following CIDs as proposed in 11-23/0333r2?

* CID 18327, 17928, 16634

No objection

1. **0331r0 LB271 CRs for 36.3.2 – Genadiy Tsodik (Huawei)**

Discussions:

C: Editorial comment on CID 17152.

A: Revised and update to r1.

SP#15: Do you agree to the resolution of the following CIDs as proposed in 11-23/0331r1?

* CID 15469, 17149, 17152

No objection

1. **0346r0 LB271 Comment Resolution for CID 15071 – Insik Jung (LGE)**

Discussions:

C: Some editorial comment.

C: RU/MRU need to revise.

C: Need some more discussions on the resolution.

SP deferred for more discussions.

**Recess**

The meeting is Recessed at 12:30 PM ET.

**Tuesday March 14th, 2023 16:00 – 18:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, MaxLinear) calls the meeting to order at 16:00 ET.
2. The Chair follows the agenda in 11-23/0191r6.
3. Reminder for registration for the plenary meeting.
4. The Chair goes through the IPR policy and asks if anyone is aware of any potentially essential patents. **Nobody speaks up.**
5. The Chair goes through the Copyright policy.
6. The Chair reminds everyone to report their attendance by using IMAT system and by sending an e-mail to the Co-chair, Tianyu Wu (Apple) or the Chair himself if unable to record attendance via IMAT system.
7. Discussions on the agenda.
	1. [346r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0346-01-00be-lb271-comment-resolution-for-cid-15071.docx) LB271 Comment Resolution for CID 15071 Insik Jung [1 ]
	2. [347r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0347-00-00be-lb271-comment-resolution-for-cid-16635.docx) LB271 Comment Resolution for CID 16635 Insik Jung [1 ]
	3. [369r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0369-00-00be-lb271-cr-for-36-3-16-transmit-requirements.docx) CR for 36.3.16 Transmit Requirements (3 CIDs) Mengshi Hu [3 ]
	4. [396r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0396-01-00be-phy-comment-resolution-for-mu-mimo.docx) PHY Comment Resolution for MU-MIMO Vamsi Amalladinne [4 ]
	5. [422r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0422-00-00be-11be-lb271-cr-for-clause-36-3-11-mathematical-description-of-signals.docx) CR for Clause 36.3.11 Mathematical description of signals Yan Zhang [8 ]
	6. [427r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0427-00-00be-11be-lb271-cr-for-clause-36-3-13-3-coding.docx) CR for clause 36.3.13.3 Coding Yan Zhang [2 ]
	7. [359r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0359-00-00be-lb271-cr-on-36-3-12-10.docx) LB271 CR on 36.3.12.10 Jinyoung Chun [10]
	8. [446r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0446-00-00be-lb271-comment-resolution-on-u-sig-part-3.docx) LB271 Comment Resolution on U-SIG Part 3 Alice Chen [8 ]
	9. [429r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0429-01-00be-lb271-comment-resolution-on-36-1-1-eht-phy-introduction-section.docx) LB271 comment resolution on 36.1.1 EHT PHY Introduction section

Kanke Wu [33]

* 1. [451r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0451-01-00be-lb271-comment-resolution-on-36-1-1-eht-phy-introduction-section-2.docx) LB271 Comment Resolution on 36.1.1 EHT PHY Introduction section-2

Kanke Wu [12]

* 1. [434r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0434-00-00be-lb271-cr-for-p802-11be-d3-0-section-36-3-12-11.doc) LB271 - CR for P802.11be D3.0 Section 36.3.12.11 Oded Redlich [5 ]

**CR contributions**

1. **0347r0 LB271 Comment Resolution for CID 16635 – Insik Jung (LGE)**

Discussions:

No discussion.

SP#1: Do you agree to the resolution of the following CID as proposed in 11-23/0347r0?

* CID 16635

No objection

1. **0369r0 CR for 36.3.16 Transmit Requirements – Mengshi Hu (Huawei)**

Discussions:

No discussion.

SP#2: Do you agree to the resolution of the following CIDs as proposed in 11-23/0369r0?

* CID 17160, 17226, 17927

No objection

1. **0396r1 PHY Comment Resolution for MU-MIMO – Vamsi Amalladinne (Qualcomm)**

Discussions:

No discussion

SP#3: Do you agree to the resolution of the following CID as proposed in 11-23/0396r1?

* CID 16454, 17194, 17195, 18332

No objection

1. **0422r0 CR for Clause 36.3.11 Mathematical description of signals – Yan Zhang (NXP)**

Discussions:

C: Some clarification discussions.

SP#4: Do you agree to the resolution of the following CIDs as proposed in 11-23/0422r0?

* CID 15054, 15221, 15771, 16636, 17198,17199,17200,17201

No objection

1. **0427r0 CR for clause 36.3.13.3 Coding – Yan Zhang (NXP)**

Discussions:

No discussion.

SP#5: Do you agree to the resolution of the following CIDs as proposed in 11-23/0427r0?

* CID 17224,17225

No objection

1. **0359r0 LB271 CR on 36.3.12.10 – Jinyoung Chun (LGE)**

Discussions:

C: Some editorial comments on CID 17218

A: Revised and update to r1.

SP#6: Do you agree to the resolution of the following CIDs as proposed in 11-23/0359r1?

* CID 17214, 17215, 17216, 17217, 17218, 17219, 15259, 17220, 15260, 17221

No objection

1. **0446r1 LB271 Comment Resolution on U-SIG Part 3 – Alice Chen (Qualcomm)**

Discussions:

C: CID 16637: Discussions on receiver behavior for invalid combinations of some fields.

A: We can add some clarification sentences in the spec. Will defer this CID.

C: CID 16638: Add 40Mhz case.

A: Agree and revised.

C: CID 16640: This resolution added mandatory requirement to combine the U-SIG symbols. Don’t want to change the requirements on receiver behavior.

A: This requirement is already in the spec.

A: Will defer this CID for more discussion.

SP#7: Do you agree to the resolution of the following CIDs as proposed in 11-23/0446r1?

* CID 15773, 16638, 16639, 17205, 17206, 17207

No objection

Note: CID 16637 and CID 16640 are deferred.

1. **0429r1 LB271 comment resolution on 36.1.1 EHT PHY Introduction section – Kanke Wu (Qualcomm)**

Discussions:

C: Multiple CIDs with sentence “not a 20 MHz-only non-AP STA with 20 MHz-Only Limited Capabilities Support subfield equal to 1.” is confusing.

A: We mean Not (20MHz only non-AP STA with the capability field set to 1). But we can find some better language here.

C: Some editorial comments on typo.

C: CID 16627: Suggest change spec text for BCC part.

A: Will defer this CID.

C: CID 15312, 15313, 15314: Discussion on “with a total number of spatial streams across all users of at least 4”. Not accurate here.

A: Will find better language and continue discussion tomorrow.

The meeting is Recessed at 18:00 PM ET.

**Wednesday March 15th, 2023 16:00 – 18:00 ET**

**Introduction**

1. The Chair (Sigurd Schelstraete, MaxLinear) calls the meeting to order at 16:00 ET.
2. The Chair follows the agenda in 11-23/0191r9.
3. Reminder for registration for the plenary meeting.
4. The Chair goes through the IPR policy and asks if anyone is aware of any potentially essential patents. **Nobody speaks up.**
5. The Chair goes through the Copyright policy.
6. The Chair reminds everyone to report their attendance by using IMAT system and by sending an e-mail to the Co-chair, Tianyu Wu (Apple) or the Chair himself if unable to record attendance via IMAT system.
7. Discussions on the agenda.
	1. [429r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0429-01-00be-lb271-comment-resolution-on-36-1-1-eht-phy-introduction-section.docx) LB271 comment resolution on 36.1.1 EHT PHY Introduction section

Kanke Wu [33]

* 1. [346r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0346-01-00be-lb271-comment-resolution-for-cid-15071.docx) LB271 Comment Resolution for CID 15071 Insik Jung [1 ]
	2. [451r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0451-01-00be-lb271-comment-resolution-on-36-1-1-eht-phy-introduction-section-2.docx) LB271 Comment Resolution on 36.1.1 EHT PHY Introduction section-2

Kanke Wu [12]

* 1. [434r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0434-00-00be-lb271-cr-for-p802-11be-d3-0-section-36-3-12-11.doc) LB271 - CR for P802.11be D3.0 Section 36.3.12.11 Oded Redlich [5]
	2. [472r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0472-00-00be-lb271-cr-for-36-3-13-data-field.docx) LB271 CR for 36.3.13 Data Field Mengshi Hu [5]

**CR contributions**

1. **0429r1 271 comment resolution on 36.1.1 EHT PHY Introduction section – Kanke Wu (Qualcomm)**

Discussions:

C: Some editorial change and update to r2.

SP#1: Do you agree to the resolution of the following CIDs as proposed in 11-23/0429r2?

* CID 17175, 16626, 16628, 17176, 16629, 16161, 16627, 15303, 15304, 15021, 15306, 15307, 15308, 15311, 15070, 18324, 18325, 18326, 16350, 16351, 15310, 17236, 15312, 15313, 15314, 15316, 15317, 15318, 17804, 15322, 15454, 17177, 15232

No objection

1. **0451r1 271 comment resolution on 36.1.1 EHT PHY Introduction section-2 – Kanke Wu (Qualcomm)**

Discussions:

C: CID 16630: Clarified that the change is talking about SST on S80. SST in S160 is still not supported.

SP#2: Do you agree to the resolution of the following CIDs as proposed in 11-23/0451r2?

* CID 15301, 16353, 16354, 15302, 15305, 15315, 15309, 15319, 15320, 15321, 16630, 16162

No objection

1. **0346r2 LB271 Comment Resolution for CID 15071** **– Insik Jung (LGE)**

Discussions:

No discussion.

SP#3: Do you agree to the resolution of the following CID as proposed in 11-23/0346r2?

* CID 15071

No objection

1. **0434r1 LB271 - CR for P802.11be D3.0 Section 36.3.12.11 – Oded Redlich (Huawei)**

Discussions:

C: Clarification questions. No change to the CR contribution.

SP#4: Do you agree to the resolution of the following CIDs as proposed in 11-23/0434r1?

* CID 15720, 16347, 16362, 17222, 17919

No objection

1. **0472r0 LB271 CR for 36.3.13 Data Field** **– Mengshi Hu (Huawei)**

Discussions:

C: CID 15468: Change the resolution to revised to add instructions to editor to make it clearer.

C: CID 16645: Suggest changing the resolution to add i=1 instead of remove i.

C: CID 15282 and 17223: Some editorial comments.

A: Revised accordingly and update to r1.

SP#5: Do you agree to the resolution of the following CIDs as proposed in 11-23/0472r1?

* CID 15281, 15282, 15468, 16645, 17223

No objection

**Adjourn**

The meeting is adjourned at 17:15 ET.