IEEE P802.11
Wireless LANs

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| IEEE 802.11bd March 2021 TC meeting minutes  |
| Date: 2021-03-02 |
| Author(s): |
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Abstract

This document includes minutes of all IEEE 802.11bd teleconferences on from March 2nd, March 23rd, and March 30th.

Version Tracking:

R0: March 2nd , 23rd, and 30th teleconference meetings minutes

# Tuesday 2 March 2021 @ 9:00-11:00 am ET

## Opening (IEEE 802.11-21/0207r1)

* 1. Call to order 9:03 am ET
	2. Chair instructed members to record attendance in IMAT.
	3. Chair introduced the patent policy and meeting rules (slides 2-6).
	4. No response to the call for patents.
	5. Chair introduced IEEE-SA COPYRIGHT POLICY (slides 7-9)
	6. Chair reviewed other Guidelines for IEEE WG Meetings (slides 10-13)
	7. Chair reviewed current Teleconference plan, TGbd Documents Update, and current TGbd Timeline (slides 14-18)
	8. Chair introduced the task group leadership (slide 19)

## Agenda (IEEE 802. 11-21/0207r1)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/21/11-21-0207-01-00bd-tgbd-teleconference-agenda-for-mar-2021. (slide 21):
		+ Call meeting to order and remind the group to record attendance on imat.ieee.org
		+ IEEE-SA IPR policies and meeting rules
		+ Approval of agenda (slide 21)
		+ Presentations and discussion (Call for submission)
			- SP for 11-20/1939r3, Resolution Clause 3 comments for LB-251, Joseph Levy (InterDigital)
			- Comment resolution progress update, Bahar Sadeghi (Intel)
			- 11-21/0097r0, D1.0 title comments resolution, Bahar Sadeghi (Intel)
			- 11-21/0107r0, LB251 general comments resolution, Bahar Sadeghi (Intel)
			- 11-21/0108r0, LB251 Clause 31.1 comments resolution, Bahar Sadeghi (Intel)
			- 11-21/0109r0, LB251 Clause 32.1 comments resolution, Bahar Sadeghi (Intel)
			- 11-21/0110r0, LB251 Annex C3 comments resolution, Bahar Sadeghi (Intel)
		+ Next teleconference on Mar 9th (IEEE 802.11 plenary week)
		+ Adjourn
	2. Agenda was approved without objection

## SP for 11-20/1939r3, Resolution Clause 3 comments for LB-251, Joseph Levy (InterDigital)

* 1. Do you agree on the comment resolution to the following 28 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-20/1939r3?
		+ - CID 1009, 1010, 1073, 1074, 1011, 1138, 1139, 1197, 1240, 1250, 1255, 1258, 1378, 1380, 1381, 1382, 1383, 1384, 1385, 1439, 1507, 1508, 1516, 1689, 1732, 1733, 1734 and 1735.
		+ 8Y/1N/2A

## Comment resolution progress update, Bahar Sadeghi (Intel)

* 1. Total number of LB 251 comments: 846 (T: 465, E: 347, G: 34), and unresolved comments: 345 (T: 292, E: 30 and G: 23). The latest updates is in document DCN 11-20/1887r5 https://mentor.ieee.org/802.11/dcn/20/11-20-1887-05-00bd-tgbd-lb251-comments.xlsx.

## 11-21/0097r0, D1.0 title comments resolution, Bahar Sadeghi (Intel)

* 1. CID 1346, 1691, 1514, 1251, 1782, 1515 discussion: PAR title will not be changed, but amendment title will be changed to be consistent with PAR title. This resolution is decided by the group, which is SPed in 11-21/0054/r1.

## 11-21/0107r0, LB251 general comments resolution, Bahar Sadeghi (Intel)

* 1. CID 1136, 1137, 1237, 1236, 1602, 1601, 1283, 1008, 1358, 1362, 1661 discussions: No discussions.
	2. CID 1165 discussion: A comment was made that it is not outside the scope to define PPDU modes that are compatible with other 20MHz 802.11 PHY layers operating in the 5GHz band although it is not included in the PAR. The presenter answered that it can be further discussed if more people are interested. Another comment was made that what is the difference between this proposed mode than the existing mechanisms for OCB operation. An further question was made whether we can take advantage of the NGV enhancements/capabilities in Clause 31 and 32 such as midamble for this purpose. A comment was made that he is going to present OCB operation in UNII 4 in WNG meeting, and looking forward to have some discussions next week. A member suggested to remove “out of scope” from the reason of rejection.
	3. CID 1455 discussion: A comment was made that if the corresponding text is spectral mask, it should be changed to spectral mask for transmit power class C2.
	4. CID 1070 discussion: A comment was made that there is no harm to put the shall statement “dot11OCBActivated shall be set to True for NGV STAs”. A comment was made to add sentence on top of coex section: NGV STA shall have dot11NGVActivated and dot11OCBActivated set to TRUE. A comment was made that NGV STA still have the capabilities even though dot11NGVActivated and dot11OCBActivated are not set to TRUE, only when these two values are set to TRUE, NGV STA can have the features in Clause 31 and 32.

## 11-21/0108r0, LB251 Clause 31.1 comments resolution, Bahar Sadeghi (Intel)

* 1. CID 1019, 1845 discussion: No discussions.

## 11-21/0109r0, LB251 Clause 32.1 comments resolution, Bahar Sadeghi (Intel)

* 1. CID 1363, 1157, 1076, 1524, 1078, 1026, 1085, 1028, 1523, 1783, 1249, 1474, 1473, 1525, 1526, 1793, 1792, 1802, 1805 discussions: No discussions.
	2. CID 1764 discussions: A comment was made that the resolution shall be consistent with the previous decision we made for 20MHz CBW operation. The presenter answered that we had discussions on this topic, but there is no final decisions yet. But she has the impressions that more members voted to make it optional feature.
	3. CID 1471 discussions: A comment was made that it does not imply it is mandatory for the STA to support all features in Clause 17. Another comment was made that adding 10MHz PPDU support to make it clear that only 10MHz PPDU preamble is compatible with Clause 17 features.
	4. CID 1077 discussions: A comment was made that C2 mask is mandatory when 20MHz NGV PPDU is supported, hence it is conditional mandatory. It is not clear whether to list as mandatory or optional.

## 11-21/0110r0, LB251 Annex C3 comments resolution, Bahar Sadeghi (Intel)

* 1. CID 1453, 1452, 1450, 1449, 1134, 1451, 1459 discussions: No discussions.

## Closing

* 1. Any other business
		+ None
	2. Chair announced the next TGbd teleconference will be on March 9th at 9:00 am ET
	3. Chair adjourned the teleconference at 10:57 am ET

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| Bahn, Christy | IEEE STAFF |
| Cao, Rui | NXP Semiconductors |
| Kim, Youn-Kwan | Sync Techno |
| Edelmayer, Andras | Commsignia |
| Sun, Bo | ZTE Corporation |
| Sadeghi, Bahareh | Intel Corporation |
| Kenney, John | TOYOTA infoTechnology Center U.S.A |
| Levy, Joseph | InterDigial, Inc. |
| Rosdahl, Jon | Qualcomm Technologies, Inc |
| Yan, Zhang | NXP Semiconductors |
| Montemurro, Michael | Huawei Technologies Co. Ltd |
| McCann, Stephen | Huawei Technologies Co. Ltd |
| Motozuka, Hiroyuki | Panasonic Corporation |

# Tuesday 23 March 2021 @ 10:00-11:59 am ET

## Opening (IEEE 802.11-21/0207r6)

* 1. Call to order 9:03 am ET
	2. Chair instructed members to record attendance in IMAT.
	3. Chair introduced the patent policy and meeting rules (slides 2-6).
	4. No response to the call for patents.
	5. Chair introduced IEEE-SA COPYRIGHT POLICY (slides 7-9)
	6. Chair reviewed other Guidelines for IEEE WG Meetings (slides 10-13)
	7. Chair reviewed current Teleconference plan, TGbd Documents Update, and current TGbd Timeline (slides 14-16)
	8. Chair introduced the task group leadership (slide 49)

## Agenda (IEEE 802. 11-21/0207r6)

* 1. Chair presented the agenda https://mentor.ieee.org/802.11/dcn/21/11-21-0207-06-00bd-tgbd-teleconference-agenda-for-mar-2021.pptx. (slide 51):
		+ Call meeting to order and remind the group to record attendance on imat.ieee.org
		+ IEEE-SA IPR policies and meeting rules
		+ Approval of agenda (slide 51)
		+ Presentations and discussion (Call for submission)
			- 11-21/0083r4, LB251 Comment Resolution for 11bd D1.0 Clause 4 General description, Stephan Sand (DLR)
			- 11-21/0420r1, 11bd-d1-0-comment-resolution-5-2-3-2, Liwen Chu (NXP)
			- 11-21/0017, Comment Resolution for Overview of the PPDU encoding process, Rui Cao (NXP)
		+ Next teleconference on Mar 30th
		+ Adjourn
	2. Agenda was approved without objection

## 11-21/0083r4, LB251 Comment Resolution for 11bd D1.0 Clause 4 General description, Stephan Sand (DLR)

* 1. CID 1017, 1095, 1510, 1607: no discussions
	2. CID 1737, 1738: A comment was made that the CID should be rejected instead of revised since there is no modifications made to the spec text and commentor has no suggested changes. The presenter changed the resolution accordingly.
	3. CID 1202: A question was asked if Non-TB ranging capability is only for non-NGV PPDU or for both non-NGV PPDU and NGV PPDU. The presenter confirmed that the capability is only for non-NGV PPDU.
	4. CID 1608: still waiting for the outcome of the ongoing ranging discussions.
	5. CID 1609: A comment was made that the suggested changes from the commentor is not normative using “maybe”. The presenter showed his resolution to the comment and the text is ok.

## 11-21/0420r1, 11bd-d1-0-comment-resolution-5-2-3-2, Liwen Chu (NXP)

* 1. CID 1204: A comment was made that 1609 prefer to define some primitives in 802.11 for all OCB operations even if it is not NGV. The presenter agreed the comment and accepted the suggested changes to the spec text.
	2. CID 1270: The presenter asked opinions from members. A member agreed with the presenter for his reasons of reject.
	3. CID 1272, 1369, 1550, 1839: No discussion.
	4. CID 1273: A comment was made that the comment should be either accept or revised since the suggested changes for CID 1204 is accepted.

## 11-21/0017, Comment Resolution for Overview of the PPDU encoding process, Rui Cao (NXP)

* 1. CID 1576, 1654, 1806, 1807, 1808, 1809, 1810, 1079, 1769: No discussions. The resolutions to some CIDs should be revised instead of accept since the presenter made modifications to the spec text.

## Closing

* 1. Any other business
		+ None
	2. Chair announced the next TGbd teleconference will be on March 30th at 10:00 am ET
	3. Chair adjourned the teleconference at 11:07 am ET

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| An, Song-Haur | Independent |
| Kain, Carl | USDoT |
| Chu, Liwen | NXP Semiconductor |
| Edelmayer, Andras | Commsignia |
| Sun, Bo | ZTE Corporation |
| Kenney, John | TOYOTA infoTechnology Center U.S.A |
| Petrick, Albert | InterDigial, Inc. |
| Sand, Stephan | German Aerospace Center (DLR) |
| Yan, Zhang | NXP |
| Cao, Rui | NXP |
| Motozuka, Hiroyuki | Panasonic Corporation |
| Moran, Ashley | IEEE-SA |

# Tuesday 30 March 2021 @ 10:00-11:59 am ET

## Opening (IEEE 802.11-21/0207r8)

* 1. Call to order 9:03 am ET
	2. Chair instructed members to record attendance in IMAT.
	3. Chair introduced the patent policy and meeting rules (slides 2-6).
	4. No response to the call for patents.
	5. Chair introduced IEEE-SA COPYRIGHT POLICY (slides 7-9)
	6. Chair reviewed other Guidelines for IEEE WG Meetings (slides 10-13)
	7. Chair reviewed current Teleconference plan, TGbd Documents Update, and current TGbd Timeline (slides 14-16)
	8. Chair introduced the task group leadership (slide 52)

## Agenda (IEEE 802. 11-21/0207r8)

* 1. Chair presented the agenda https://mentor.ieee.org/802.11/dcn/21/11-21-0207-08-00bd-tgbd-teleconference-agenda-for-mar-2021.pptx. (slide 54):
		+ Call meeting to order and remind the group to record attendance on imat.ieee.org
		+ IEEE-SA IPR policies and meeting rules
		+ Approval of agenda (slide 54)
		+ Presentations and discussion (Call for submission)
			- SP for 11-21/0083r5, LB251 Comment Resolution for 11bd D1.0 Clause 4 General description, Stephan Sand (DLR)
			- SP for 11-21/0420r1, 11bd-d1-0-comment-resolution-5-2-3-2, Liwen Chu (NXP)
			- SP for 11-21/0017r1, Comment Resolution for Overview of the PPDU encoding process, Rui Cao (NXP)
			- 11-20/0439r1, 11-21-0439-00-00bd--D1.0 comment resolution subclause 31.2.1, Liwen Chu (NXP)
			- 11-21/0442r0, 11bd D1.0 comment resolution 9.2.4.7.1, Liwen Chu (NXP)
			- 11-21/0018r0, comment-resolution-for-data-field, Rui Cao (NXP)
		+ Next teleconference on Apr 6th
		+ Adjourn
	2. Agenda was approved without objection

## SP for 11-21/0083r5, LB251 Comment Resolution for 11bd D1.0 Clause 4 General description, Stephan Sand (DLR)

* 1. Do you agree on the comment resolution to following 21 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0083r5?
		+ CID 1001, 1013, 1014, 1015, 1017, 1095, 1101, 1140, 1181, 1200, 1202, 1268, 1269, 1347, 1509, 1510, 1606, 1607, 1609, 1737, and 1738
		+ 7Y/0N/1A

## SP for 11-21/0420r1, 11bd-d1-0-comment-resolution-5-2-3-2, Liwen Chu (NXP)

* 1. Do you agree on the comment resolution to following 7 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0420r1?
		+ CID 1204, 1270, 1272, 1273, 1369, 1550, and 1839
		+ 8Y/0N/0A

## SP for 11-21/0017r1, Comment Resolution for Overview of the PPDU encoding process, Rui Cao (NXP)

* 1. Do you agree on the comment resolution to following 9 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0017r1?
		+ CID 1079, 1576, 1654, 1769, 1806, 1807, 1808, 1809, and 1810
		+ 8Y/0N/0A

## 11-20/0439r1, 11-21-0439-00-00bd--D1.0 comment resolution subclause 31.2.1, Liwen Chu (NXP)

* 1. CID 1020, 1131, 1132, 1135, 1182, 1416, 1419, 1421, 1435, 1483, 1484, 1485,1751: No discussions.
	2. CID 1167: A comment was made that the fairness means STAs are using the same channel access parameters. The presenter answered that EDCA backoff parameter mechanism already guarantees the same channel access parameters.

## 11-20/0442r0, 11bd D1.0 comment resolution 9.2.4.7.1, Liwen Chu (NXP)

* 1. CID 1401: A comment was made that the maximal PSDU size is about 10ms instead of 5ms, which is resolved in another comment resolution. The presenter agreed to modify the resolution based on the new maximal PSDU size.
	2. CID 1404, 1511, 1554, 1555,1556,1750, 1148: No discussions.

## 11-21/0018r0, comment-resolution-for-data-field, Rui Cao (NXP)

* 1. CID 1581, 1163, 1465,1780,1831, 1583, 1585,1832,1584,1087,1835,1675: No discussion.
	2. CID 1582: A comment was made that 11n/11ac/11ax has the option of using BCC when LDPC puncturing causes catastrophic performance degradation, while 11bd does not have the fallback option of using BCC. The presenter answered that in the real field, the performance is not solely relying on encoder, rate adaption by dropping rate can avoid the issue. The commentor said that he can accept the option of fallback of using 11p transmission with BCC when such scenario occurs.

## Closing

* 1. Any other business
		+ None
	2. Chair announced the next TGbd teleconference will be on Apr 6th at 10:00 am ET
	3. Chair adjourned the teleconference at 11:30 am ET

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| An, Song-Haur | Independent |
| Kain, Carl | USDoT |
| Chu, Liwen | NXP Semiconductor |
| Ghosh, Chittabrata | Facebook, Inc. |
| Edelmayer, Andras | Commsignia |
| Sun, Bo | ZTE Corporation |
| Kenney, John | TOYOTA infoTechnology Center U.S.A |
| Orlando, Christian | IEEE |
| Petrick, Albert | InterDigial, Inc. |
| Sand, Stephan | German Aerospace Center (DLR) |
| Yan, Zhang | NXP |
| Cao, Rui | NXP |
| Sosack, Robert | Molex Incorporated |
| Rosdahl, Jon | Qualcomm Technologies, Inc. |