IEEE P802.11
Wireless LANs

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| IEEE 802.11bd April 2021 TC meeting minutes  |
| Date: 2021-04-13 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
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Abstract

This document includes minutes of all IEEE 802.11bd teleconferences on April 13th, 20th and 27th.

Version Tracking:

R0: April 13th, 20th and 27th teleconference meetings minutes

# Tuesday 13 April 2021 @ 10:00-12:00 am ET

## Opening (IEEE 802.11-21/0595r0)

* 1. Call to order 10:03 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 14-17)
	8. Chair introduced the task group leadership (slide 18)

## Agenda (IEEE 802. 11-21/0595r0)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/21/11-21-0595-00-00bd-tgbd-teleconference-agenda-for-apr-2021.pptx. (slide 20):
		+ 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 20)
		+ Presentations and discussion (Call for submission)
			- SP for 11-21/0439r1, 11-21-0439-00-00bd--D1.0 comment resolution subclause 31.2.1, Liwen Chu (NXP)
			- SP for 11-21/0442r1, 11bd D1.0 comment resolution 9.2.4.7.1, Liwen Chu (NXP)
			- SP for 11-21/0018r1, comment-resolution-for-data-field, Rui Cao (NXP)
			- 11-21/0317r0, LB251 ranging comments resolution, Bahar Sadeghi (Intel)
			- 11-21/0171r0, Resolutions Clause 6.3.126 comments for LB-251, Joseph Levy (InterDigital)
		+ Next teleconference on Apr 20th
		+ Adjourn
	2. Agenda was approved without objection

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

* 1. Do you agree on the comment resolution to the following 12 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0439r1?
		+ CID 1020, 1131, 1132, 1135, 1182, 1416, 1419, 1421,1435, 1483, and 1484 and 1751.
		+ 9Y/0N/1A

## SP for 11-21/0442r1, 11bd D1.0 comment resolution 9.2.4.7.1, Liwen Chu (NXP)

* 1. Do you agree on the comment resolution to the following 7 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0439r1?
		+ CID 1404, 1511, 1554, 1555, 1556, 1750, and 1148.
		+ 9Y/0N/1A

## SP for 11-21/0018r1, comment-resolution-for-data-field, Rui Cao (NXP)

* 1. Do you agree on the comment resolution to the following 15 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0018r1?
		+ CID 1087, 1163, 1465, 1581, 1582, 1583, 1584, 1585, 1675, 1780, 1829, 1830, 1831, 1832, and 1835.
		+ 9Y/0N/1A

## 11-21/0317r1, LB251 ranging comments resolution, Bahar Sadeghi (Intel)

* 1. PASN is removed from OCB in updated version.
	2. A question was asked if all changes in 0321r5 are included in this document. The presenter answered that she will check it offline before SP the 4 CIDs in 0317r1.

## Editor update on remaining CIDs

* 1. Total 194 CIDs remaining, 166 technical CIDs, 23 editorial CIDs and 5 general CIDs remaining.

## 11-21/0172r0, Resolutions Clause 6.3.126 comments for LB-251, Joseph Levy (InterDigital)

* 1. CID 1399, 1215: A comment was made on the typo of clause 63 should be clause 6.3. Another comment was made to modify editor instruction so that it is clear to editor. Another comment was made that the clause number may not be correct, and it should be 6.3.126.2.4 instead of 6.3.126.2.3.
	2. CID 1400: no discussion.
	3. CID 1241: A comment was made that request primitive can be more specific, i.e., adding the word all before queued MSDUs belonging to a specified access category, to eliminate the confusion. A question was asked if there is timing issue after the request was issued and new MSDUs are coming into the queue. The presenter answered that new MSDUs should not be admitted into the queue before the request was confirmed.
	4. CID 1242: A comment was made that the text “from a higher layer perspective” is problematic. The presenter answered that the higher layer entity in this context is 1609, not application layer. Further comment was made that the rejection text should replace the MSDU with the MSDUs in the specified AC queue. A comment was made that it will be helpful to point it out that this part of the text are the results of liaison information exchanged between 11bd and 1609 WG.
	5. CID 1398: no discussion.
	6. CID 1749: A question was asked about bridge port. The presenter answered that it means a single data stream from 1609.

## Closing

* 1. Any other business
		+ None
	2. Chair announced the next TGbd teleconference will be on April 20th at 10:00 am ET
	3. Chair adjourned the teleconference at 11:47 am ET

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| An, Song-Haur | INDEPENDENT |
| Cao, Rui | NXP Semiconductors |
| Joh, Hanjin | 802.11bd |
| Oh, Hyun Seo | ETRI |
| 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 |
| Roy, Richard | Self Employed |
| Sand, Stephan | DLR |
| Sosack, Robert | Molex Incorporated |
| Liwen, Chu | NXP Semiconductors |
| Motozuka, Hiroyuki | Panasonic Corporation |

# Tuesday 20 April 2021 @ 10:00-12:00 am ET

## Opening (IEEE 802.11-21/0595r1)

* 1. Call to order 10:03 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 14-17)
	8. Chair introduced the task group leadership (slide 24)

## Agenda (IEEE 802. 11-21/0595r1)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/21/11-21-0595-01-00bd-tgbd-teleconference-agenda-for-apr-2021.pptx. (slide 26):
		+ 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 26)
		+ Presentations and discussion (Call for submission)
			- SP for 11-21/0317r2, LB251 ranging comments resolution, Bahar Sadeghi (Intel)
			- SP for 11-21/0171r2, Resolutions Clause 6.3.126 comments for LB-251, Joseph Levy (InterDigital)
			- 11-21/0697r0, 11bd D1.0 comment resolution 5.4, Liwen Chu (NXP)
			- 11-21/0173r0, Resolutions Clause B4 comments for LB-251, Joseph Levy (InterDigital)
			- SP for 11-21/0173r0, Resolutions Clause B4 comments for LB-251, Joseph Levy (InterDigital)
		+ Next teleconference on Apr 27th
		+ Adjourn
	2. Agenda was approved without objection

## SP for 11-21/0317r2, LB251 ranging comments resolution, Bahar Sadeghi (Intel)

* 1. Do you agree on the comment resolution to the following 4 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0317r1?
		+ CID 1072, 1166, 1248, and 1071.
		+ 9Y/0N/0A

## SP for 11-21/0171r2, Resolutions Clause 6.3.126 comments for LB-251, Joseph Levy (InterDigital)

* 1. Do you agree on the comment resolution to the following 7 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0172r1?
		+ CID 1215, 1241, 1242, 1400, 1398, 1399, and 1749.
		+ 10Y/0N/0A

## 11-21/0697r0, 11bd D1.0 comment resolution 5.4, Liwen Chu (NXP)

* 1. CID 1108, 1126, 1212,: No discussions
	2. CID 1213: A comment was made that the CBP measurement period 100ms is too short to do STA count. It will be helpful to 1s as the interval for STA count period. The presenter answered that it is not good to have separate measurement period of STA count/Capability Percentage and CBP. The commentor said that CBP measurement is mainly for solving congestion purpose, while STA count measurement is mainly for STA communications, which may require a longer period. The presenter said that we only have on primitive to describe both. The commentor said his vision is that CBP measurement will appear in each report while STA count may or may not appear in each report. The presenter replied that we can indicate whether STA count is valid or not in each report to reflect the idea. Two measurement periods are preferred. Defer due to no conclusions for the resolutions.
	3. CID 1317,1490: A comment was made that Radio environment measurement is reported to another STA so that two STAs can agree on the frame format. STA will record the MIBs and report to upper layer. However this is local information which is not so useful, hence the resolution is to delete the text. The commentor answered that it is true that this is only local information, but it is info across layers, upper layer will use it for congestions and traffic control , which is very import. The presenter asked how to define the behavior for this capability, it is shall or may capability. The comment answered that STA shall have the capability of reporting it, but upper layer may or may not request it. Defer due to no conclusions for the resolutions.
	4. CID 1372,1373: No discussions.
	5. CID 1395: A comment was made that rejection reason can say that comment is wrong regarding CCA indicates the channel is busy when STA is transmitting.
	6. CID 1397: No discussions.
	7. CID 1744,1746,1841: No discussions

## 11-21/0173r1, Resolutions Clause B.4 comments for LB-251, Joseph Levy (InterDigital)

* 1. CID 1333, 1334: No discussions
	2. CID 1458: A question was asked about the double redundancy. The presenter answered that 20MHz mask is already defined, and it is the same spectral mask. After checking me spec, the presenter replied that the spectral masks are not the same. Hence there is no double redundancy.

## SP for 11-21/0173r1, Resolutions Clause B.4 comments for LB-251, Joseph Levy (InterDigital)

* 1. Do you agree on the spec text modification to IEEE P802.11bd D1.0 as proposed under “Additional Clause B issues” as in 11-21/0173r1?
		+ 8Y/0N/0A

## 11-21/0171r2, Resolutions Clause 31.2.3 comments for LB-251, Joseph Levy (InterDigital)

* 1. CID 1429 update: A comment was made that “AS, the intended” does not read as a sentence. The presenter removed “,”. A commentor made that the wording of “STA can receive” needs to be revised. The presenter replied that this wording change will not address this comments. A comment was made that “that the STA can receive” needs to be removed, and cross reference needs to be checked.
	2. CID 1228 update: A comment was made to replace “The NGV STA has a specified … configuration” with “An NGV STAs shall have the following block ack configurations”

## Closing

* 1. Any other business
		+ None
	2. Chair announced the next TGbd teleconference will be on April 27th at 10:00 am ET
	3. Chair adjourned the teleconference at 12:00 pm ET

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| An, Song-Haur | INDEPENDENT |
| Edelmayer, Andras | Commsignia |
| Kain, Carl | USDoT |
| Sun, Bo | ZTE Corporation |
| Sadeghi, Bahareh | Intel Corporation |
| Kenney, John | TOYOTA infoTechnology Center U.S.A |
| Petrick, Albert | InterDigital, Inc. |
| Levy, Joseph | InterDigial, Inc. |
| Yan, Zhang | NXP Semiconductors |
| Roy, Richard | Self Employed |
| Sand, Stephan | DLR |
| Stanley, Dorothy | Hewlett Packard Enterprise |
| Liwen, Chu | NXP Semiconductors |
| Motozuka, Hiroyuki | Panasonic Corporation |

# Tuesday 27 April 2021 @ 10:00-12:00 am ET

## Opening (IEEE 802.11-21/0595r3)

* 1. Call to order 10:03 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 14-17)
	8. Chair introduced the task group leadership (slide 31)

## Agenda (IEEE 802. 11-21/0595r3)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/21/11-21-0595-03-00bd-tgbd-teleconference-agenda-for-apr-2021.pptx. (slide 33):
		+ 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 33)
		+ Presentations and discussion (Call for submission)
			- SP for 11-21/0697r1, 11bd D1.0 comment resolution 5.4, Liwen Chu (NXP)
		+ 11-21/0083r6, LB251 CR for 11bd D1.0 Clause 4, Stephan Sand (DLR)
		+ SP for 11-21/0083r6, LB251 CR for 11bd D1.0 Clause 4, Stephan Sand (DLR)
		+ 11-21/0559r0, Comment Resolution for Miscellaneous Topics, Rui Cao (NXP)
		+ 11-21/0736r0, comment resolution for CAD, Rui Cao (NXP)
		+ Next teleconference on May 11th
		+ Adjourn
	2. Agenda was approved without objection

## SP for 11-21/0697r1, 11bd D1.0 comment resolution 5.4, Liwen Chu (NXP)

* 1. Do you agree on the comment resolution to the following 10 CIDs and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0697r1?
		+ CID 1108, 1126, 1212, 1372, 1373, 1395, 1397, 1744, 1746 and 1481.
		+ 8Y/0N/1A

## 11-21/0083r6, LB251 CR for 11bd D1.0 Clause 4, Stephan Sand (DLR)

* 1. Updated CID 1608 to align with the proposed FTM text in 11-20/317r2 LB251 ranging comments resolution.

## SP for 11-21/0083r6, LB251 CR for 11bd D1.0 Clause 4, Stephan Sand (DLR)

* 1. Do you agree on the comment resolution to CID 1608 and proposed spec text modification to IEEE P802.11bd D1.0 as in 11-21/0697r1?
		+ 8Y/0N/0A

## 11-21/0559r0, Comment Resolution for Miscellaneous Topics, Rui Cao (NXP)

* 1. CID 1518, 1431, 1156, 1761, 1762, 1628, 1247, 1112, 1454: No discussions.
	2. CID 1454: A question was asked if the only difference between class C and C2 is the 0dBr range. The presenter answered that transmit mask for C2 is shaper.
	3. CID 1762: A question was asked if it is possible a group cast MPDU and a unit cast MPDU addressed to different STAs within one PPDU. Joseph answered that it is possible to aggregate such a PPDU. Another member pointed it out that it is not possible to aggregate such a PPDU. All MPDUs within an A-MPDU only one RA either broadcast, group cast or unicast. The commentor suggested to change the resolution text to “For an A-MPDU containing only group addressed MPDUs”.

## 11-21/0736r0, comment resolution for CAD, Rui Cao (NXP)

* 1. CID 1724, 1725, 1710, 1695: No discussion.
	2. CID 1519: A comment was made to change the rejection reason to “No current action is requested by the commentor based on the suggested change”.
	3. CID 1175: A commentor expressed his desire to add U-NI-4 to reflect new spectrum allocation change. The presenter answered that the addition may affect preamble detection. The commentor asked if we can take 11ac 20MHz to operate OCB. The presenter answered that it will require MAC changes he is not sure how to do that. Another comment was made that it will be very useful to define OCB for unlicensed bands. Another comment was made that OCB does not require security association cycle, should be able to use it in unlicensed bands. The presenter added rejection reason “11ac/ax do not prohibit OCB operation in any unlicensed bands. No specific definition needed in 11bd draft. 11bd only define for 5.9GHz and 60 GHz bands”. A question was asked if we should address the issue now instead of deferring it since it will come back once FCC makes the ruling. The presenter answered that we can address it once FCC ruling is official.
	4. CID 1697: A comment was made that we can just refer 802.11REVmd Table E-4 for Global operation classes, and Table E-6 for operating classes in China for 60 GHz channels.

## Closing

* 1. Any other business
		+ None
	2. Chair announced the next TGbd teleconference will be on May 11th at 9:00 am ET
	3. Chair adjourned the teleconference at 12:01 pm ET

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| An, Song-Haur | INDEPENDENT |
| Bahn,Christy | IEEE STAFF |
| Sun, Bo | ZTE Corporation |
| Kenney, John | TOYOTA infoTechnology Center U.S.A |
| Petrick, Albert | InterDigital, Inc. |
| Levy, Joseph | InterDigial, Inc. |
| Yan, Zhang | NXP Semiconductors |
| Roy, Richard | Self Employed |
| Sand, Stephan | DLR |
| Rui, Cao | NXP Semiconductors |