IEEE P802.11
Wireless LANs

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| IEEE 802.11bd October 2021 Teleconference minutes  |
| Date: 2021-10-12 |
| Author(s): |
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Abstract

This document includes minutes of all IEEE 802.11bd teleconferences on October 12th , 19th, 26th and November 2nd.

Version Tracking:

R0: October 12th , 19th, 26th and November 2nd teleconference meetings minutes

# Tuesday 12 October 2021 @ 10:00-11:59 am ET

## Opening (IEEE 802.11-21/1622r1)

* 1. Call to order 10:00 am ET
	2. Chair instructed members to record attendance in IMAT.
	3. Chair introduced the patent policy and meeting rules (slides 2-8).
	4. No response to the call for patents.
	5. Chair introduced IEEE-SA COPYRIGHT POLICY (slides 9-11)
	6. Chair reviewed other Guidelines for IEEE WG Meetings (slides 12-14)
	7. Chair reviewed current Teleconference plan, TGbd Documents Update, and current TGbd Timeline (slides 15-17)
	8. Chair introduced the task group leadership (slide 19)

## Agenda (IEEE 802. 11-21/1622r1)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/21/11-21-1622-01-00bd-tgbd-teleconference-agenda-for-oct-2021. (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)
		+ SPs
			- 11-21/1530r1, d2-0-cr-for-receive-specification, Rui Cao (NXP)
		+ Presentations and discussion
			- Editor comment resolution update, Yujin Noh (Senscomm)
			- 11-21/1669r1, lb254-cr-clause-36-2, Bo Sun (ZTE)
			- 11-21/1434r0, Some clause B4 comment resolutions for LB-254, Joseph Levy (InterDigital)
			- 11-21/1435r0, Some clause 31.2 and clause 31.2.1 comment resolutions for LB-254, Joseph Levy (InterDigital)
		+ ITU-T CITS liaison discussion (11-21/1564r0)
		+ Next teleconference on Oct 19th
		+ Adjourn
	2. Agenda was approved without objection

## SP for 11-21/1530r1, d2-0-cr-for-receive-specification, Rui Cao (NXP)

* 1. Do you agree on the comment resolution to following 15 CIDs and proposed modification to IEEE P802.11bd D2.0 as in 11-21/1530r1?
		+ CID 2199, 2272, 2273, 2274, 2110, 2275, 2276, 2201, 2278, 2011, 2202, 2279, 2280, 2112, 2113
		+ Y/N/A: No objection

## Editor comment update, Yujin Noh (Senscomm)

* 1. CID 2212, 2213, 2215: The editor asked whether it is correct to change MA to MLME. It will be discussed in the next week when members resolving those CIDs can join the discussions.

## 11-21/1669r1, lb254-cr-clause-36-2, Bo Sun (ZTE)

* 1. CID 2084, 2157, 2085, 2086, 2087, 2159, 2088, 2026, 2174, 2175, 2092, 2177, 2093, 2063, 2227, 2178, 2027, 2028, 2122: No discussions.

## 11-21/1434r0, Some clause B4 comment resolutions for LB-254, Joseph Levy (InterDigital)

* 1. CID 2204: A question was asked whether NGV1.0 should be NGV1 as in 11ac. The presenter answered that it should be NGV1.1, and the items following it need to be renumbered to be consistent. A note was made for the Editor. Another question was asked if we need another top entry, e.g. NGV2 for MCS or NGV4 Spectrum mask. The presenter answered that there is no such request. The commentor suggested the presenter to check 11ac document. The presenter made the corresponding changes.
	2. CID 2206, 2207: No discussions.
	3. CID 2208: A question was asked about class C2 power level. It was answered that there is C2 for spectrum class, but not C2 power level.
	4. CID 2209: A question was asked whether there should be comma between 15, and Nss =1.

## 11-21/1435r1, Some clause 31.2 and clause 31.2.1 comment resolutions for LB-254, Joseph Levy (InterDigital)

* 1. CID 2061: This CID will be discussed offline with Hiroyuki Motozuka.
	2. CID 2264, 2265: No discussions.

## ITU-T CITS liaison discussion (11-21/1564r0)

* 1. Chair gave an update on the liaison documents.

## Closing

* 1. Any other business
		+ None
	2. Chair adjourned the teleconference at 11:59 am ET.
	3. Next TC will be on Oct 19th

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| An, Song-Haur | Independent |
| Perez, Dan | IEEE STAFF |
| Sun, Bo | ZTE Corporation |
| Noh, Yujin | Senscomm |
| Kenney, John | TOYOTA Motor North America |
| Levy, Joseph | InterDigital, Inc. |
| Yan, Zhang | NXP Semiconductors |
| Motozuka, Hiroyuki | Panasonic Corporation |
| Oyama, Satoshi | Association of Radio Industries and Business (ARIB) |
| Sand Stephan | German Aerospace Center (DLR) |
| Sosack, Robert | Molex Incorporated |
| Srivatsa, Veena | Synaptics Incorporated |

# Tuesday 19 October 2021 @ 10:00-11:59 am ET

## Opening (IEEE 802.11-21/1622r2)

* 1. Call to order 10:00 am ET
	2. Chair instructed members to record attendance in IMAT.
	3. Chair introduced the patent policy and meeting rules (slides 2-8).
	4. No response to the call for patents.
	5. Chair introduced IEEE-SA COPYRIGHT POLICY (slides 9-11)
	6. Chair reviewed other Guidelines for IEEE WG Meetings (slides 12-14)
	7. Chair reviewed current Teleconference plan, TGbd Documents Update, and current TGbd Timeline (slides 15-17)
	8. Chair introduced the task group leadership (slide 22)

## Agenda (IEEE 802. 11-21/1622r2)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/21/11-21-1622-02-00bd-tgbd-teleconference-agenda-for-oct-2021. (slide 23)
		+ 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 23)
		+ SPs
			- 11-21/1669r1, lb254-cr-clause-36-2, Bo Sun (ZTE)
			- 11-21/1434r1, Some clause B4 comment resolutions for LB-254, Joseph Levy (InterDigital)
			- 11-21/1435, Some clause 31.2 and clause 31.2.1 comment resolutions for LB-254, Joseph Levy (InterDigital)
		+ Presentations and discussion
			- Discussion of NGV PPDU duration/Maximum NGV MPDU issue
		+ ITU-T CITS liaison discussion (11-21/1564r0) [continue]
		+ Next teleconference on Oct 22nd
		+ Adjourn
	2. Agenda was approved without objection

## SP for 11-21/1669r1, lb254-cr-clause-36-2, Bo Sun (ZTE)

* 1. Do you agree on the comment resolution to following 20 CIDs and proposed modification to IEEE P802.11bd D2.0 as in 11-21/1669r1?
		+ CID 2026, 2027, 2028, 2063, 2084, 2085, 2086, 2087, 2088, 2092, 2093, 2122, 2157, 2158, 2159, 2174, 2175, 2177, 2178, and 2227
		+ Y/N/A: No objection, 15 attendees in the meeting at the time of SP

## SP for 11-21/1434r1, Some clause B4 comment resolutions for LB-254, Joseph Levy (InterDigital)

* 1. Do you agree on the comment resolution to following 5 CIDs and proposed modification to IEEE P802.11bd D2.0 as in 11-21/1434r1?
		+ CID 2206, 2207, 2208, 2209, and 2210
		+ Y/N/A: No objection, 15 attendees in the meeting at the time of SP

## SP for 11-21/1435r1, Some clause 31.2 and clause 31.2.1 comment resolutions for LB-254, Joseph Levy (InterDigital)

* 1. Do you agree on the comment resolution to following 2 CIDs and proposed modification to IEEE P802.11bd D2.0 as in 11-21/1435r1?
		+ CID 2264 and 2265
		+ Y/N/A: No objection, 15 attendees in the meeting at the time of SP

## Discussion of NGV PPDU duration/Maximum NGV MPDU issue

* 1. Maximum MPDU size is specified in 802.11 spec to limit the packet duration occupying the wireless medium. But there are other regulatory limitations which is shorter than the maximum duration specified in the spec. The maximum MPDU size is calculated based on the lowest MCS and the maximum duration which is allowed for occupying the medium. Two options are suggested in Joseph levy’s email.
		+ 1) use the specified 10.968ms max PPDU duration, for all requirement/description. This will hide the actual requirements if the actual max PPDU is smaller. This will also include a note for the cases that regulatory domains require a shorter duration.
		+ 2) Allow the requirements/descriptions to be based on the actual max PPDU duration of the device (as required by regulations and the device capability). This approach will need to specify the maximum MPDU size as a function of the max PPDU.
	2. A comment was made that only one table of maximum MPDU size is needed with a note that max PPDU duration is used to calculate the table.
	3. SP for the direction of solving the issue: Approach 1/Approach 2/Abstain: 5/0/5

## ITU-T CITS liaison discussion (11-21/1564r0)

* 1. TGbd Chair gave an update to the group on the liaison documents. The Chair will update the documents based on the current TGbd status and send to WG Chair.

## Closing

* 1. Any other business
		+ None
	2. Chair adjourned the teleconference at 11:01 am ET.
	3. Next TC will be on Oct 22nd

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| An, Song-Haur | Independent |
| Rui, Cao | NXP Semiconductor |
| Liwen, Chu | NXP Semiconductor |
| Sun, Bo | ZTE Corporation |
| Noh, Yujin | Senscomm |
| Kenney, John | TOYOTA Motor North America |
| Levy, Joseph | InterDigital, Inc. |
| Yan, Zhang | NXP Semiconductors |
| Levesque, Chris | Qorvo |
| Oyama, Satoshi | Association of Radio Industries and Business (ARIB) |
| Unterhuber, Paul | German Aerospace Center (DLR) |
| Patrick, Albert | InterDigital, Inc |
| Rosdahl, Jon | Qualcomm Technologies, Inc |
| Sen Coffey | Realtek |
| Stephan Sand | German Aerospace Center (DLR) |
| Halise Turkmen | Vestel |
| Bill Carney | Sony Group Corporation |
| Rajat Pushkarna | Panasonic |
| Jonathan Segev | Intel corporation |
| Marcos Martinez | Maxlinear |
| James, Yee | MUS |
| Christy, Bahn | IEEE SA |

# Tuesday 26 October 2021 @ 10:00-11:59 am ET

## Opening (IEEE 802.11-21/1622r3)

* 1. Call to order 10:00 am ET
	2. Chair instructed members to record attendance in IMAT.
	3. Chair introduced the patent policy and meeting rules (slides 2-8).
	4. No response to the call for patents.
	5. Chair introduced IEEE-SA COPYRIGHT POLICY (slides 9-11)
	6. Chair reviewed other Guidelines for IEEE WG Meetings (slides 12-14)
	7. Chair reviewed current Teleconference plan, TGbd Documents Update, and current TGbd Timeline (slides 15-17)
	8. Chair introduced the task group leadership (slide 30)

## Agenda (IEEE 802. 11-21/1622r3)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/21/11-21-1622-03-00bd-tgbd-teleconference-agenda-for-oct-2021. (slide 31)
		+ 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 31)
		+ Presentations and discussion
			- Comment resolution for CID 2277, Yujin Noh (Senscomm)
			- 11-21/1721r1, lb254 comment resolution for 11bd d2.0 clause 31.4 and 31.5, Stephan Sand (DLR)
			- 11-21/1722r0, lb254 comment resolution for 11bd d2.0 clause 4, Stephan Sand (DLR)
			- 11-21/1669r2, lb254-cr-clause-36-2, Bo Sun (ZTE)
		+ Next teleconference on Nov 2nd
		+ Adjourn
	2. Agenda was approved without objection
	3. Any other business?
		+ - 11-21/1372r2, Clause 31.2.3 comment resolution for LB 254, Joseph Levy (InterDigital)

## Comment resolution for CID 2277, Yujin Noh (Senscomm)

* 1. CID 2277: A comment was made that it is better to copy the resolution for CID 2278 to CID 2277 since it is a duplicate of CID 2278, with a note that it is also a duplicate of CID 2272.

## 11-21/1721r1, lb254 comment resolution for 11bd d2.0 clause 31.4 and 31.5, Stephan Sand (DLR)

* 1. CID 2165, 2167, 2168: No discussion.

## 11-21/1722r0, lb254 comment resolution for 11bd d2.0 clause 4, Stephan Sand (DLR)

* 1. CID 2064, 2023, 2282: A question was asked to clarify what “similar” means in the resolution for CID 2064. The presenter answered that similar referrers terms similar to “BPSK modulation with dual-carrier modulation (DCM)”.
	2. CID 2219, 2052, 2022, 2077, 2054: No discussions.
	3. CID 2220: Editor asked if the changes are appropriate since the text are not the original text from TGbd draft. The presenter showed that the changes are the original text from TGbd draft.
	4. CID 2127, 2129: No discussions.
	5. CID 2239: A comment was made that it is against IEEE style guide to use “-” to connect same-channel. It should be two words instead. Another comment was made that it is not against IEEE style guide since it is connecting two words, not connecting prefix with a word.
	6. CID 2221, 2222: A comment was made to change resolution from Accepted to Revised since the proposed change is not accurate. It is Additional NGV STA MAC features instead of Additional MAC features. A comment was made that it should be main MAC features since the subclause does not list all the features, but only the main features. And all other dot11 specs use the language main MAC features. The presenter answered that the main MAC features are already listed before this paragraph, and asked whether we should use the wording additional main MAC features or just additional MAC features. The commentor answered that the list does not include all MAC features, so the list only includes main MAC features. The commentor suggested to remove the mandatory 10MHz OCB support from the additional main MAC feature since it is covered by 11p (Non-NGV) STA MAC feature, and the additional main MAC feature entirely. Optional support for 20MHz OCB communication can be moved to main MAC features part. CID 2221 resolution will be modified accordingly.
	7. CID 2079, 2055, 2080: No discussions.

## 11-21/1669r2, lb254-cr-clause-36-2, Bo Sun (ZTE)

* 1. CID 2163, 2176: No discussions.

## 11-21/1372r2, Clause 31.2.3 comment resolution for LB 254, Joseph Levy (InterDigital)

* 1. CID 2001, 2002, 2161, 2162: No discussions.

## Closing

* 1. Any other business
		+ None
	2. Chair adjourned the teleconference at 11:39 am ET.
	3. Next TC will be on Nov 2nd

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| An, Song-Haur | Independent |
| Rui, Cao | NXP Semiconductor |
| Liwen, Chu | NXP Semiconductor |
| Sun, Bo | ZTE Corporation |
| Noh, Yujin | Senscomm |
| Kenney, John | TOYOTA Motor North America |
| Levy, Joseph | InterDigital, Inc. |
| Yan, Zhang | NXP Semiconductors |
| Motozuka, Hiroyuki | Panasonic Corporation |
| Unterhuber, Paul | German Aerospace Center (DLR) |
| Stephan Sand | German Aerospace Center (DLR) |
| Christy, Bahn | IEEE SA |
| Oyama, Satoshi | ARIB |

# Tuesday 2 November 2021 @ 10:00-11:59 am ET

## Opening (IEEE 802.11-21/1623r1)

* 1. Call to order 10:00 am ET
	2. Chair instructed members to record attendance in IMAT.
	3. Chair introduced the patent policy and meeting rules (slides 2-8).
	4. No response to the call for patents.
	5. Chair introduced IEEE-SA COPYRIGHT POLICY (slides 9-11)
	6. Chair reviewed other Guidelines for IEEE WG Meetings (slides 12-14)
	7. Chair reviewed current Teleconference plan, TGbd Documents Update, and current TGbd Timeline (slides 15-17)
	8. Chair introduced the task group leadership (slide 19)

## Agenda (IEEE 802. 11-21/1623r1)

* 1. Chair presented the agenda: https://mentor.ieee.org/802.11/dcn/21/11-21-1623-01-00bd-tgbd-teleconference-agenda-for-nov-2021. (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)
		+ SPs
			- 11-21/1721r1, lb254 comment resolution for 11bd d2.0 clause 31.4 and 31.5, Stephan Sand (DLR)
			- 11-21/1722r1, lb254 comment resolution for 11bd d2.0 clause 4, Stephan Sand (DLR)
			- 11-21/1669r2, lb254-cr-clause-36-2, Bo Sun (ZTE)
			- 11-21/1372r3, Clause 31.2.3 comment resolution for LB 254, Joseph Levy (InterDigital)
		+ Comment resolution update
		+ Presentations and discussion
			- Call for submission
		+ Next teleconference on Nov 9th
		+ Adjourn
	2. Agenda was approved without objection
	3. Any other business?

## SP for 11-21/1721r1, lb254 comment resolution for 11bd d2.0 clause 31.4 and 31.5, Stephan Sand (DLR)

* 1. Do you agree on the comment resolution to following 3 CIDs and proposed modification to IEEE P802.11bd D2.0 as in 11-21/1721r1?
		+ CID # 2165, 2167 and 2168
		+ Y/N/A: No objection (13 participants in the call during the SP)

## SP for 11-21/1722r1, lb254 comment resolution for 11bd d2.0 clause 4, Stephan Sand (DLR)

* 1. Do you agree on the comment resolution to following 17 CIDs and proposed modification to IEEE P802.11bd D2.0 as in 11-21/1722r1?
		+ CID # 2022, 2023, 2052, 2054, 2055, 2064, 2077, 2079, 2080, 2127, 2129, 2219, 2220, 2221, 2222, 2239, and 2282
		+ Y/N/A: No objection (13 participants in the call during the SP)

## SP for 11-21/1669r2, lb254-cr-clause-36-2, Bo Sun (ZTE)

* 1. Do you agree on the comment resolution to following 2 CIDs and proposed modification to IEEE P802.11bd D2.1 as in 11-21/1669r2?
		+ CID # 2163 and 2176
		+ Y/N/A: No objection (13 participants in the call during the SP)

## SP for 11-21/1372r3, Clause 31.2.3 comment resolution for LB 254, Joseph Levy (InterDigital)

* 1. Do you agree on the comment resolution to following 4 CIDs and proposed modification to IEEE P802.11bd D2.1 as in 11-21/1372r3?
		+ CID # 2001, 2002, 2161 and 2162
		+ Y/N/A: No objection (13 participants in the call during the SP)

## Comment resolution update for LB 254, Yujin (Senscomm)

* + - There are 30 comments left to be resolved, and 78 comments are ready for motion.

## Closing

* 1. Any other business
		+ None
	2. Chair adjourned the teleconference at 10:45 am ET.
	3. Next TC will be on Nov 9th

**Attendance from IMAT**

| **Name** | **Affiliation** |
| --- | --- |
| Rui, Cao | NXP Semiconductor |
| Sun, Bo | ZTE Corporation |
| Noh, Yujin | Senscomm |
| Kenney, John | TOYOTA Motor North America |
| Levy, Joseph | InterDigital, Inc. |
| Yan, Zhang | NXP Semiconductors |
| Motozuka, Hiroyuki | Panasonic Corporation |
| Edelmayer, Andras | Commsignia |
| Stephan Sand | German Aerospace Center (DLR) |
| Christy, Bahn | IEEE SA |
| Oyama, Satoshi | ARIB |
| Kain, Carl | USDOT |
| Petrick, Albert | InterDigital, Inc |