IEEE P802.11
Wireless LANs

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| Dec 2024-March2025 conference call minutes |
| Date: 2025-03-08 |
| Author(s): |
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Abstract

This document contains TGbk Dec 2024-March2025 telecon meeting minutes

## TGbk – December 3, 2024

* 1. Called to order by TGbk Chair, Jonathan Segev (Intel) at 10:01 AM PST.
	2. Agenda Doc. [**IEEE 802.11-1638/r4**](https://mentor.ieee.org/802.11/dcn/24/11-24-1638-04-00bk-tgbk-nov-meeting-agenda.pptx)
	3. Review Patent Policy and logistics
		1. Chair reviewed policy guidelines for the members
		2. Suggested members to sign-in to Attendance server (IMAT)
		3. Chair reminded audience of the IEEE-SA Patent Policy, duty to inform and logistics. Chair called for any potentially essential patents, no one stepped forward.
		4. Chair reminded audience of the about other guidelines for IEEE meetings, antitrust and competition laws
		5. Chair reminded audience of the IEEE SA copyright policy.
		6. Chair reminded audience of the IEEE code of ethics, IEEE-SA standards Bylaws regarding fair & equitable consideration of all viewpoints and reviewed WG participation as an individual professional. – no clarification requested.
		7. Second attendance reminder
	4. Agenda for this slot (slide 37):
		1. Conduct comment resolutions
			1. 11-24-1935 - CR SA ballot II (Christian Berger)
			2. 11-24-1921 - Comment Resolution Spatial Reuse (Christian Berger)
			3. 11-24-1964 - CR initial SA Ballot (Stephan Sand)
		2. Review telecon times
		3. Review submission pipeline.
		4. Agenda approved.
	5. Christian Berger presented 11-24-1935r3
		1. Title: CR SA ballot II
		2. C: the note in both TB Ranging and NTB Ranging sections seems fine as it is since its just clarifying some behavior defined in detail elsewhere.
		3. R: there is text that has normative behavior that RSID usage follows AID usage.
		4. Author will work offline to work on the Note
	6. Christian Berger presented 11-24-1921
		1. Title: Comment Resolution Spatial Reuse
		2. Author asked group if SR is useful for short Triger frames ? what if the TB PPDU sets its differently than in TF
		3. R: the focus was not to do reuse for NDP to avoid interference. If we try to match in Trigger, it can create backward incompatibility
	7. Stephan Sand presented 11-24-1964
		1. Title: Comment Resolution initial SA Ballot 11bk D3.0
		2. C: clarify what was changed.
		3. As part of resolution for I-69 discovered there is a need to delete a specific line in REVme D7.0.
		4. Christian asked to champion this contribution in next call due to Stephan’s unavailability
	8. Jonathan Segev presented 11-24-1986r0
		1. Title: P802.11bk SA1 CRs
	9. Scheduled telecons
	10. AoB
	11. Adjourned

## TGbk – December 5, 2024

* 1. Called to order by TGbk Chair, Jonathan Segev (Intel) at 10:00 AM PST.
	2. Agenda Doc. [**IEEE 802.11-1638/r6**](https://mentor.ieee.org/802.11/dcn/24/11-24-1638-06-00bk-tgbk-nov-meeting-agenda.pptx)
	3. Review Patent Policy and logistics
	4. Review Patent Policy and logistics
		1. Chair reviewed policy guidelines for the members
		2. Suggested members to sign-in to Attendance server (IMAT)
		3. Chair reminded audience of the IEEE-SA Patent Policy, duty to inform and logistics. Chair called for any potentially essential patents, no one stepped forward.
		4. Chair reminded audience of the about other guidelines for IEEE meetings, antitrust and competition laws
		5. Chair reminded audience of the IEEE SA copyright policy.
		6. Chair reminded audience of the IEEE code of ethics, IEEE-SA standards Bylaws regarding fair & equitable consideration of all viewpoints and reviewed WG participation as an individual professional. – no clarification requested.
		7. Second attendance reminder
	5. Agenda for this slot (slide 43):
		1. Conduct comment resolutions
			1. 11-24-1986 - SA1 CRs (Jonathan Segev)
			2. 11-24-2039- SA comment resolution I-1 (Ali Raissinia)
			3. 11-24-1964 - CR initial SA Ballot (Stephan Sand)
			4. 11-24-1921 - Comment Resolution Spatial Reuse (Christian Berger)
			5. 11-24-1935 - CR SA ballot II (Christian Berger)
		2. Review telecon times
		3. Review submission pipeline.
		4. Agenda approved.
	6. Roy Jonathan Segev presented 11-24-1986r0
		1. Title: P802.11bk SA1 CRs
		2. C: question on backward compatibility. Doesn’t Quiet channel mechanism actually change?
		3. R: channel quiet mechanism is not related to TPE. Want to clarify adding TPE is not removing need of beacon.
		4. R: Does ISTA and RSTA need to declare capability to have this element included?
		5. C: for backward compatibility, we can either re-negotiate or let AP terminate and during renegotiation include TPE for all STAs.
		6. C: can we specify its for 11bk STAs only?
		7. C: don’t see it as backward compatibility issue.
		8. R: the issue is: if a STA sees an IFTM aggregated with LMR that contains no info it can use (i.e., don’t understand the TPE), this might lead to misbehavior.
		9. C: What if ranging parameters are included in the FTM and the params are same as last session?
		10. R: it will terminate. The q though is whether the legacy ISTA will renegotiate since it just sees the RSTA ending the session.
		11. C: Note that the problem is not for just 320 MHz STAs but for general 6 GHz operation.
		12. **Straw poll**

**For resolution of CID I-43,I-44 we prefer:**

**O1) Removing support for TPE in the FTM/IFTM.**

**O2) Add a capability bit in the IFTMR/IFTM for support of TPE in aggregated FTM w/ LMR.**

**O3) limit to 320MHz operation.**

**O4) Include in the IFTM for all STAs, and terminate session if TPE changes.**

 **O5) Abstain/no opinion.**

C: why not add an option saying this element should be same as info in beacon.

R: did not include it because not seeking info for it

Results: **O1: 0, O2: 2, O3: 0, O4: 1, O5: 3**

* + 1. C: For the EMLSR related CID, seems like we are clarifying the spec but not allow some efficient operation with MLO
		2. R: adding MLD support may be too late.
		3. C: we can do multiple FTM session: one in each link.
		4. R: the MLME interface for FTM seems to disallow multiple FTM session within same MLD on different links. In 11az days, the group did not have interest in using ranging with multiple bands.
		5. More clarification that LMR is defined on per link.
		6. **Strawpoll**

**For resolution of CID I-10, we prefer:**

**O1) Support independent FTM sessions from single multi band device to a multi band AP on different channels (MLME modification) in associated and unassociated.**

**O2) Make FTM an MLD operation for associated operation e.g. including MLD channel access, just like the data path.**

**O3) Abstain (for now).**

 Results: **O1: 4, O2: 0, O3: 2**

* + 1. Regarding I-37, two minor comments but commenter is fine with rejection.
	1. Ali Raissinia presented 11-24-2039
		1. Title: SA comment resolution for CID I-1
		2. Clarify that the intent is to do negotiation cross-link but limit measurement exchanges on the specific link
		3. C: need to discuss with the preceding presentation’s discussion.
	2. Review scheduled telecon
	3. Adjourned at 11:58 AM

## TGbk – December 12, 2024

* 1. Called to order by TGbk Chair, Jonathan Segev (Intel) at 10:00 AM PST.
	2. Agenda Doc. [**IEEE 802.11-1638/r7**](https://mentor.ieee.org/802.11/dcn/24/11-24-1638-07-00bk-tgbk-nov-meeting-agenda.pptx)
	3. Review Patent Policy and logistics
	4. Review Patent Policy and logistics
		1. Chair reviewed policy guidelines for the members
		2. Suggested members to sign-in to Attendance server (IMAT) and that there may be motions during this call.
		3. Chair reminded audience of the IEEE-SA Patent Policy, duty to inform and logistics. Chair called for any potentially essential patents, no one stepped forward.
		4. Chair reminded audience of the about other guidelines for IEEE meetings, antitrust and competition laws
		5. Chair reminded audience of the IEEE SA copyright policy.
		6. Chair reminded audience of the IEEE code of ethics, IEEE-SA standards Bylaws regarding fair & equitable consideration of all viewpoints and reviewed WG participation as an individual professional. – no clarification requested.
		7. Second attendance reminder
	5. Agenda for this slot (slide 51):
		1. Conduct comment resolutions
			1. 11-24-1964 - CR initial SA Ballot (Stephan Sand)
			2. 11-24-2039- SA comment resolution I-1 (Ali Raissinia)
			3. 11-24-1921 - Comment Resolution Spatial Reuse (Christian Berger)
			4. 11-24-1935 - CR SA ballot II (Christian Berger)
			5. 11-24-2083 - Proposed resolution to I-70 (Qi Wang)
		2. Review telecon times
		3. Review submission pipeline.
		4. Agenda approved.
	6. Motion ran for 11-24-1964

Motion (202412-01):

Move to adopt the resolutions depicted by document 11-24-1964r1 for CIDs I-61, I-68, I-69 (3 CIDs total), instruct the technical editor to incorporate it in the P802.11bk draft and grant the editor editorial license.

Moved: Christian Berger

Seconded: Ali Raissinia

Result (Y/N/A): motion passes (unanimous)

* 1. Ali Raissinia presented 11-24-2039
		1. Title: SA comment resolution for CID I-1
		2. C: the list shown in page 3 may be superseded by some text elsewhere. Also, one could set multiple bits in the bitmap to setup FTM on multiple links.
		3. R: baseline says one can only set one bit. We first need to check if current 11be text doesn’t prevent us to do multiple FTM sessions on different links of an MLD. Note we don’t support MLD level ranging; here, we are only talking about negotiation being allowed on different links.
		4. C: FTM Request frame also acts as a trigger for FTM.
		5. R: since FTMR is used for measurement, it can be only sent on that link.
		6. C: not finding much gain in just negotiating cross-link. Also, since there is comment about whether addressing this fall in scope of 11be or 11bk, this should be in scope of REVm. Prefer to reject this CID
		7. C: specifying changes that lead to distinguishing FTMR for negotiation and measurement will change REVmc implementation.
		8. No conclusion. Author recommended to start an offline discussion
	2. Christian Berger presented 11-24-1921
		1. Title: Comment Resolution Spatial Reuse
		2. C: if we add “or to PSR\_Disallow” this makes the check weaker since “PSR\_Disallow” will still allow OBSS PD based SR
		3. R: does it matter if the packet is short anyway
		4. C: its still possible to do OBSS PD based SR. prefer to disallow both.
		5. R: since in 11az, unlike in typical TF, the UL SR field is not required to be set to set to same value as the TB PPDU, wont third party STAs likely to do SR on TF ?
		6. C: third party STAs will likely use SIG-A
		7. More discussion on how this works for legacy implementations.
		8. C: specifying changes that lead to distinguishing FTMR for
	3. Christian Berger presented 11-24-1935
		1. Title: CR SA ballot II
		2. Group discussed if AID value set to 2045 is sufficient to address cases of NDP-A sent in an EHT MU PPDU.
	4. Review telecon schedules
	5. Adjourned at 11:56 AM

## TGbk – December 17, 2024

* 1. Called to order by TGbk Chair, Jonathan Segev (Intel) at 10:00 AM PST.
	2. Agenda Doc. [**IEEE 802.11-1638/r8**](https://mentor.ieee.org/802.11/dcn/24/11-24-1638-08-00bk-tgbk-nov-meeting-agenda.pptx)
	3. Review Patent Policy and logistics
	4. Review Patent Policy and logistics
		1. Chair reviewed policy guidelines for the members
		2. Suggested members to sign-in to Attendance server (IMAT)
		3. Chair reminded audience of the IEEE-SA Patent Policy, duty to inform and logistics. Chair called for any potentially essential patents, no one stepped forward.
		4. Chair reminded audience of the about other guidelines for IEEE meetings, antitrust and competition laws
		5. Chair reminded audience of the IEEE SA copyright policy.
		6. Chair reminded audience of the IEEE code of ethics, IEEE-SA standards Bylaws regarding fair & equitable consideration of all viewpoints and reviewed WG participation as an individual professional. – no clarification requested.
		7. Second attendance reminder
	5. Agenda for this slot (slide 57):
		1. Request to withdraw CID I-74
		2. Comment resolution
			1. 11-24-2083 - Proposed resolution to I-70 (Qi Wang)
			2. 11-24-2039- SA comment resolution I-1 (Ali Raissinia)
			3. 11-24-1921 - Comment Resolution Spatial Reuse (Christian Berger)
			4. 11-24-1935 - CR SA ballot II (Christian Berger)
		3. Review Telecon times
		4. Review submission pipeline
	6. **I-74 CR**

**Motion** (202412-02):

Move to resolve comment I-74 with following resolution: “Rejected. The commenter has withdrawn the comment.”

Moved: Mark Hamilton.

Seconded: Christian Berger.

Result (Y/N/A): motion passes (unanimous).

* 1. Qi Wang presented 11-24-2083r0
		1. Title: Proposed Resolutions to 11bk Initial SA Ballot CID i-70
		2. C: some suggestion to change the instruction to editor to meet SA ballot requirements.
		3. **Motion** (202412-03):

Move to adopt the resolution depicted by document 11-24-2083r1 for CID I-70, (1 CID total), instruct the technical editor to incorporate it in the P802.11bk draft and grant the editor editorial license.

Moved: Qi Wang

Seconded: Ali Raissinia

Result (Y/N/A): motion passes (unanimous)

* 1. Ali Raissinia presented 11-24-2039
		1. Title: SA comment resolution for CID I-1
		2. C: fine to reject but we still need to clarify the interpretation for standards without making drastic changes to 11bk.
		3. R: prefer to reject
		4. Group worked on a informative rejection reason.
		5. **Motion** (202412-04):

Move to adopt the resolution depicted by document 11-24-2039r3 for CID I-1, (1 CID total), instruct the technical editor to incorporate it in the P802.11bk draft and grant the editor editorial license.

Moved: Ali Raissinia

Seconded: Christian Berger

Result (Y/N/A): motion passes (unanimous)

* 1. Christian Berger presented 11-24-1935
		1. Title: CR SA ballot II
		2. **Motion** (202412-05):

Move to adopt the resolution depicted by document 11-24-1935r4 for CIDs I-13, I-14, I-16, I-18, I-19, and I-40 (6 CIDs total), instruct the technical editor to incorporate it in the P802.11bk draft and grant the editor editorial license.

Moved: Christian Berger

Seconded: Ali Raissinia

Result (Y/N/A): motion passes (unanimous)

* 1. Christian Berger presented 11-24-1921r5
		1. Title: Title: Comment Resolution Spatial Reuse
		2. C: for CID #I-2, instead say “should be set to same value”.
		3. C: at least need a recommended language (e.g., through a note and “should”)
		4. Motion (202412-06):

Move to adopt the resolution depicted by document 11-24-1921r6 for CIDs I-2, I-3, and I-35, (3 CIDs total), instruct the technical editor to incorporate it in the P802.11bk draft and grant the editor editorial license.

Moved: Christian Berger

Seconded: Ali Raissinia

Result (Y/N/A): motion passes (unanimous)

* 1. C: How many other technical CIDs are left ?
	2. R: 15. Lets figure it out offline.
	3. Scheduled telecons
	4. Reviewed submission pipeline:
		1. new submissions sought
		2. some clarification on the status of the remaining technical CIDs
	5. AoB
	6. Adjpourned at 11:26 AM PST.
	7. Attendance:

          Timestamp                Name                    Affiliation
Breakout
TGbk      12/17/2024           Want, Roy                         Google
TGbk      12/17/2024            Wang, Qi                      Apple Inc
TGbk      12/17/2024       feng, Shuling                  MediaTek Inc.
TGbk      12/17/2024        Das, Dibakar              Intel Corporation
TGbk      12/17/2024   Berger, Christian             NXP Semiconductors
TGbk      12/17/2024      Hamilton, Mark               Ruckus/CommScope
TGbk      12/17/2024       Sand, Stephan  German Aerospace Center (DLR)

1. TGbk      12/17/2024  Raissinia, Alireza          Qualcomm Incorporated

## TGbk – January 9, 2024

* 1. Called to order by TGbk Chair, Jonathan Segev (Intel) at 10:00 AM PST.
	2. Agenda Doc. [**IEEE 802.11-1638/r11**](https://mentor.ieee.org/802.11/dcn/24/11-24-1638-11-00bk-tgbk-nov-meeting-agenda.pptx)
	3. Review Patent Policy and logistics
	4. Review Patent Policy and logistics
		1. Chair reviewed policy guidelines for the members
		2. Suggested members to sign-in to Attendance server (IMAT)
		3. Chair reminded audience of the IEEE-SA Patent Policy, duty to inform and logistics. Chair called for any potentially essential patents, no one stepped forward.
		4. Chair reminded audience of the about other guidelines for IEEE meetings, antitrust and competition laws
		5. Chair reminded audience of the IEEE SA copyright policy.
		6. Chair reminded audience of the IEEE code of ethics, IEEE-SA standards Bylaws regarding fair & equitable consideration of all viewpoints and reviewed WG participation as an individual professional. – no clarification requested.
		7. Second attendance reminder
	5. Agenda for this slot (slide 51):
		1. Comment resolution
			1. 11-24-1986 - SA1 CRs (Jonathan Segev)
			2. 11-25-049 - SA I CR I45, I57 (Roy Want)
		2. Consider SA ballot recirculation
		3. Review Telecon times
		4. Review submission pipeline
		5. Agenda approved.
	6. Jonathan Segev presented 11-24-1986
		1. Title: SA1 CRs
		2. C: change the name of the field “Secure RTT measurement/TPE-Update capable” -> “EDMG Secure RTT measurement/Non-EDMG TPE-Update capable”
		3. R: instead made changes to normative text to clarify the usage of this field.
		4. C: the text in clause 11 is in TB negotiation section (11.21.6.3.3) and needs to copied for EDCA based ranging section (11.21.6.3.2).
		5. C: clarification on whether the TPE element is included in FTM frame for REVmc ranging.
		6. R: yes
		7. C: need to add “and to 0, otherwise” cases.
		8. C: are the FTMR, FTM frames allowed to include LinkID info ? There are parts in text where it seems they can include this.
		9. R: address this after recirc
		10. **Motion** (202501-01):

Move to adopt the resolution depicted by document 11-24-1986r3 for CIDs I-43, I-44, I-10, I-37 (4 CIDs total), instruct the technical editor to incorporate it in the P802.11bk draft and grant the editor editorial license.

Moved: Ali Raissinia

Seconded: Christian Berger

Result (Y/N/A): motion passes (unanimous)

* 1. Roy Want presented 11-25-049.
		1. Title: Comment Resolution i45 and i57
		2. **Motion** (202501-02):

Move to adopt the resolution depicted by document 11-25-049r1 for CIDs I-45, I-57 (2 CIDs total), instruct the technical editor to incorporate it in the P802.11bk draft and grant the editor editorial license.

Moved: Roy Want

Seconded: Ali Raissinia

Result (Y/N/A): motion passes (unanimous)

* 1. **SA Recirculation**

**Motion** (202501-03):

Having approved comment resolutions for all of the comments received from SA #1 on TGbk D3.0 as contained in documents 11-24-1920r3, 11-24-1986r3 and 11-25-049r1 .

* Instruct the editor to prepare TGbk D4.0 incorporating these resolutions and,
* Approve a 15 day Sponsor Recirculation Ballot asking the question “Should TGbk D4.0 be forwarded to RevCom?”

**Moved:** Roy Want

**Second:** Christian Berger

**Results (Y/N/A):** 7/0/0 motion passes.

* 1. Scheduled telecon
	2. C: will there be 11bk meeting in Kobe ?
	3. R: no.
	4. Adjpourned

## TGbk – February 13, 2025

* 1. Jonathan reviewed the policy guidelines for the members and called the meeting to order using submission [11-25/243r0](https://mentor.ieee.org/802.11/dcn/25/11-25-0243-00-00bk-tgbk-feb-march-telecon.pptx)
	2. Suggested members to sign-in to Attendance server (IMAT) with the link shown on the slide
	3. Everyone has asked to register
	4. Reviewed on IEEE SA Copyright policy
	5. Reviewed Participant behavior in IEEE-SA guidelines
	6. Reviewed IEEE-SA individual process
	7. Reviewed IEEE-SA standard activities
	8. No one  brought up any potential patent that might impact the standard
	9. Agenda setting
		1. Call meeting to order and reviewed all policies
		2. No motions in this meeting
		3. Review 1st SAB recirculation results
		4. Conduct 1st SAB comment assignments
		5. Review of technical comments in today’s call
	10. Roy went over submitted comments on 1st SAB recirculation, 11-25-0242r0; 8 editorials,13 technical comments were submitted
		1. 96% approval with 4 disapproved with MBS comments
	11. Ali went over the technical comment associated with the TPE update and several behaviors were discussed;
		1. add the Disabled Puncture pattern as a new field in LMR together with counter as to when the change is planned to occur
		2. Send termination frame aggregated with R2I LMR
		3. Christian suggested to make the behavior the same for TPE and puncture pattern update, hence terminate them both
		4. Send R2I LMR with new TPE/Puncture pattern together with Termination frame
		5. Finally Jonathan suggested in response to Qi’s comment to just send R2I LMR with new TPE/Puncture pattern and add normative text for the unassociated to look for beacon to learn about the actual time of change and if need be renegotiate
		6. Further brainstorming session might be needed before the comment is fully resolved.
	12. Adjourned
	13. Attendance:

 Timestamp                Name            Affiliation
Breakout
TGbk      02/13/2025   Berger, Christian     NXP Semiconductors
TGbk      02/13/2025       feng, Shuling          MediaTek Inc.
TGbk      02/13/2025  Raissinia, Alireza  Qualcomm Incorporated
TGbk      02/13/2025     Segev, Jonathan      Intel Corporation
TGbk      02/13/2025            Wang, Qi              Apple Inc

## TGbk – March 4, 2025

* 1. Jonathan reviewed the policy guidelines for the members and called the meeting to order using submission 11-25/243r2
	2. Suggested members to sign-in to Attendance server (IMAT) with the link shown on the slide
	3. Everyone has asked to register
	4. Reviewed on IEEE SA Copyright policy- chair asked and no one brought up an issue
	5. Reviewed Participant behavior in IEEE-SA guidelines- chair asked and no one brought up an issue
	6. Reviewed IEEE-SA individual process
	7. Chair asked and no one brought up any potential patent that might impact the standard
	8. Agenda setting
		1. Call meeting to order and reviewed all policies
		2. Jonathan discussed the next steps- we need to have an unchanged draft to the EC, which is likely to be in July. For that to happen the project needs to complete in March, which seems doable. Once we approve, we can submit to EC as conditional approval during the IEEE week. They will be a motion during the TG meeting in Atlanta which then be submitted to the WG
		3. Christian presented CR document 262r1 covering CIDs related to the TPE update. His contribution attempts to include TPE element in the IFTM and only when update occurs in the FTM frame. Some of the members were not aligned with the idea and wanted the original text where the TPE is included in all FTM frames. A SP was taken

**For TPE inclusion mechanism in the EDCA based FTM we prefer the following mechanism:**

**O1: Include in all FTM frames of the session.**

**O2: Include only the IFTM frame and additional FTM frames if there’s a change to the TPE.**

**O3: Abstain.**

**Results: O1: 4 O2: 4 O3: 0**

* + 1. Ali presented the CR document 291 covering CIDs associated with the Puncture Pattern update where the resolution suggest inclusion of the Puncture Pattern Element in all R2I LMR sent to an unassociated ISA operating in 320MHz band. The SP was taken

**We prefer to support the mechanism described in the resolutions to 5 CIDs detailed in 11-25-291, i.e. include it for every R2I LMR frame sent to unassociated ISTA.**

**Y: 5, N: 3, A: 0**

It was suggested that members need to get aligned before Monday meeting in Atlanta for Motion on this topic so that we can move forward.

* 1. Next Ad-hoc call is March 18th.
	2. Attendance:

 Timestamp                Name            Affiliation
Breakout
TGbk      03/04/2025     Segev, Jonathan      Intel Corporation
TGbk      03/04/2025           Want, Roy                 Google
TGbk      03/04/2025            Wang, Qi              Apple Inc
TGbk      03/04/2025  Raissinia, Alireza  Qualcomm Incorporated
TGbk      03/04/2025       feng, Shuling          MediaTek Inc.
TGbk      03/04/2025          Wu, Tianyu             Apple Inc.
TGbk      03/04/2025   Berger, Christian     NXP Semiconductors