Minutes IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGbh Plenary Meeting Minutes, July 14-19, 2024  Randomized and Changing MAC addresses (RCM) | | | | |
| Date: 2024-08-09 | | | | |
| Author(s): | | | | |
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Abstract

This document contains the minutes of the IEEE 802.11bh plenary meeting of July 14-19, 2024.

Note: Highlighted text are action items.

Q- proceeds a question asked at the meeting

A- proceeds an answer

C- proceeds a comment

**Meeting July 15th, 2024, 1:30 p.m. to 3:30 p.m. EDT**

**Chair: Mark Hamilton (Ruckus/CommScope)**

**Vice Chair: Peter Yee (NSA-CSD/AKAYLA)**

**Vice Chair: Stephen Orr (Cisco)**

**Secretary: Jay Yang (ZTE)/Peter Yee**

**Editor: Carol Ansley (Cox Communications)**

**The mixed-mode meeting was called to order by the Chair at 1:34 p.m. EDT.**

Agenda slide deck [11-24/0987r03](https://mentor.ieee.org/802.11/dcn/24/11-24-0987-03-00bh-agenda-tgbh-2024-july-session.pptx)

1. **Policies and procedures were presented by Chair Mark Hamilton. (Slides 4 to 15)**

There were no patent declarations.

Copyright policy slides were presented (Slides 10 and 11)

1. **Agenda:**

* **Attendance, noises/recording, meeting protocol**
* **Policies, duty to inform, participation rules**
* **Organization topics:**
  + July session meetings: Monday, 13:30-15:30; Tuesday, 13:30-15:30 and 19:30-21:30; Thursday 10:30-12:30 and 13:30-15:30
  + Approve May Interim and May/June teleconference and ad hoc minutes (next slide)
  + Timeline reminder (slide 18)
  + Motions record: [11-22/0651r47](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-47-00bh-tgbh-motions-list.pptx)
* **Comment Resolution – SA recirc**
  + Comment resolution document: [11-24/1262r1](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-01-00bh-p802-11bh-sa-recirc1-comments.xlsx)
  + Review and disposition of SA recirc LB comments (slide 19)

The agenda was approved with unanimous consent.

1. **Approval of Minutes**

The minutes of the May interim session ([11-24/0913r0](https://mentor.ieee.org/802.11/dcn/24/11-24-0913-00-00bh-minutes-tgbh-interim-meeting-may-2024.docx)) were approved by unanimous consent as were the minutes of the May 28th ([11-24/0979r01](https://mentor.ieee.org/802.11/dcn/24/11-24-0979-01-00bh-802-11bh-telecon-minutes-may-28-2024.docx)) and June 4th ([11-24/0980r01](https://mentor.ieee.org/802.11/dcn/24/11-24-0980-01-00bh-802-11bh-telecon-minutes-june-4-2024.docx)) teleconferences along with the June ad hoc session ([11-24/1078r00](https://mentor.ieee.org/802.11/dcn/24/11-24-1078-00-00bh-minutes-tgbh-adhoc-meeting-june-2024.docx)).

1. **Timeline reminder**

We remain on track to finish up by September 2024.

1. **Comment Resolution**

The comments (and their resolutions as developed) can be found in [11-24/1262r01](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-01-00bh-p802-11bh-sa-recirc1-comments.xlsx).

1. **Dealing with IEEE 802.11bh and IEEE 802.11be text collisions**

Jay Yang presented [11-24/1185r00](https://mentor.ieee.org/802.11/dcn/24/11-24-1185-00-00bh-some-thoughts-on-the-text-conlision-between-11bh-and-11be.pptx) [ignore the errant DCN of 1076 in his slides], which discusses “Some thoughts some thought on the text collision between 11bh and 11be draft”.” This responds to CID 4003. He points out some potential collisions between IEEE 802.11bh and IEEE 802.11be based on the ordering of the two amendments, giving samples of text where there are collisions. He suggests that there are two ways forward. One is having the editors directly cover the conflicts. This might lead to the loss of some ideas from IEEE 802.11bh. The other approach is coordination, which will require greater technical efforts.

C: We can’t reject any technical comments because someone will else be dealing with that area in a different group. We will have to go through comments one at a time if they are valid comments for 11bh. If there are resolutions that are compatible with 11be, that’s fine. But we can’t rule out comments because 11be may deal with the topic or change the resolution.

C: 11be’s quote of our text as their baseline hasn’t kept up with our latest drafts. So, we may need to coordinate with their editor to get them up to date. This doesn’t seem to be a technical issue, but it’s not quite editorial either.

Q: Why can’t we just tell 11be that they need to apply their changes to the latest 11bh text?

C: The sample collision couldn’t be against our text. They can ask us for help. We are their baseline. They have not been asking us for assistance, such as merging D5.0 into their text. We made a lot of change in D5.0. I have sympathy for them, but they have to suck it up. 11bh will be amendment 1 to IEEE 802.11-2024. 11be will be amendment 2. They can complain at tomorrow morning’s editors meeting. But they must conform their document to our amendment. That’s what amendment ordering means. There shouldn’t be a dance of two groups having to arrange things. They can ask for changes, but we don’t have make them.

Q: Do we need the editors to work together?

A: Yes. Plus, Jay has supplied a contribution on how 11bh could work with MLO. But it remains the 11be editor’s (Edward Au) job to keep up with 11bh.

C: The changes between D4.0 and D5.0 are available to Edward as a redline. And when we create D6.0, they’ll have to deal with that as well. Hopefully, that’s a smaller set of changes.

C: Let’s discuss this further during the editors meeting.

C: 11-24/1316 as shown on slide 6 is not an 11be document. [That should be 11-24/1006.] I don’t see any issues for today. Let’s see what happens in the editors meeting. All is going according to the normal process of changing baselines. We should ignore the issue and move on with our own comments.

C: Procedurally, let the 11bh and 11be editors work together and let us know if there are any issues.

1. **Miscellaneous CIDs**

Yang then offered [11-24/1271r00](https://mentor.ieee.org/802.11/dcn/24/11-24-1271-00-00bh-cr-for-recirc-cids-misc.docx), which covers CIDs 4046, 4061, 4112, and 4113. He suggested rejecting CID 4046, which the group was amenable to. Yang would revise the proposed resolution to 4061, inserting “by an AP in an ESS” instead of deleting “by an ESS”. A suggestion from the floor would change that to resolution to “by an AP or APs in an ESS” to cover the case of the assignment of the device ID and PASN ID by different APs as a PASN ID is consumed by an interaction. But another suggestion would be to delete “and a PASN ID” as superfluous and therefore obviate the issue given in the comment. The resolution will be a combination of inserting “by any AP in an ESS” and deleting “and a PASN ID”. Yang proposes rejecting CID 4112 because there are already rules to apply when maintaining the same device ID. This was agreed. CID 4113 would like to add a requirement to have the non-AP STA delete its device ID after receiving Device ID status equals 1 from the AP. This is done to free up that device ID value. Yang would prefer to change the “may” language in the two sentences to “shall” in order to require that a new device ID and PASN ID be provided. There might need to be some explanation of an AP answering “not recognized” but also not providing a new identifier. Certainly, it can’t be expected that all APs in an ESS will be able to recognize a device ID at any point in time. Yang will attempt to generate resolution text for this CID and bring it back at a later time.

1. **Comment Database Review**

Mark Hamilton displayed [11-24/1262r02](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-02-00bh-p802-11bh-sa-recirc1-comments.xlsx), with the CIDs that need further discussion. The group started at CID 4002 because Okan Mutgan (Nokia) will be handling CIDs 4000 and 4001. CID 4002 could probably be rejected because there’s no need to provide a device ID and a PASN ID in the “recognized” case.

C: This is clause 9, so this language doesn’t belong here. And this seems to apply only to FILS. I don’t understand why PASN ID is handled differently in this case alone. This should be handled in clause 12.

Jouni Malinen will attempt to provide responsive language that covers both this comment and the larger question of “shall” vs. “may”. Overall, the comment is likely to be rejected.

CID 4008 questions the calculation of the maximum amount of padding generated in AF.2 (Generation of opaque device identifiers). The proposed change is wrong because a KDE takes up an additional 4 octets. Some value between 64 and 220 would probably suffice, with the exact value not all that important. Dan Harkins’ presentation ([11-24/1026r00](https://mentor.ieee.org/802.11/dcn/24/11-24-1026-00-00bh-resolution-of-padding-cids.docx)) during the ad hoc meeting gave a calculated value of 231, which was incorporated into D5.0. The right base number for the calculation of the padding is 250 (not 248), so the maximum padding would be 233 (not 231). A revised resolution based on those numbers will be drawn up by Mark Hamilton.

CID 4009 looks at restriction of the maximum length of a device ID. The suggested resolution doesn’t give exact text or location for that text to enforce a maximum. Adding the restriction into 12.2.13.1 (Device ID) seems like the most logically location. PASN ID will need a similar restriction (on page 38, line 12). For both, the suggested 240 octets will be used. On page 35, line 19, a similar restriction of the Measurement ID is also needed along with a minimum length. Hamilton will also formalize the language around those values.

**The meeting was recessed at 3:29 p.m. EDT.**

**Meeting July 16th, 2024, 1:30 p.m. to 3:30 p.m. EDT**

**Chair: Mark Hamilton (Ruckus/CommScope)**

**Vice Chair: Peter Yee (NSA-CSD/AKAYLA)**

**Vice Chair: Stephen Orr (Cisco)**

**Secretary: Jay Yang (ZTE)/Peter Yee**

**Editor: Carol Ansley (Cox Communications)**

**The mixed-mode meeting was called to order by the Chair at 1:32 p.m. EDT.**

Agenda slide deck [11-24/0987r06](https://mentor.ieee.org/802.11/dcn/24/11-24-0987-06-00bh-agenda-tgbh-2024-july-session.pptx)

1. **Policies and procedures were presented by Chair Mark Hamilton. (Slides 4 to 15)**

There were no patent declarations.

Copyright policy slides were presented (Slides 10 and 11)

1. **Agenda:**

* **Attendance, noises/recording, meeting protocol**
* **Policies, duty to inform, participation rules**
* **Organization topics:**
  + July session meetings: Monday, 13:30-15:30; Tuesday, 13:30-15:30 and 19:30-21:30; Thursday 10:30-12:30 and 13:30-15:30
  + Timeline reminder (slide 18)
  + Motions record: [11-22/0651r47](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-47-00bh-tgbh-motions-list.pptx)
* **Comment Resolution – SA recirc**
  + Comment resolution document: [11-24/1262r3](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-03-00bh-p802-11bh-sa-recirc1-comments.xlsx)
  + Review and disposition of SA recirc LB comments (slide 19)

The agenda was approved with unanimous consent.

1. **Comment resolution status**

The current state of the comment resolution spreadsheet is found in [11-24/1262r03](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-03-00bh-p802-11bh-sa-recirc1-comments.xlsx).

1. **AP rules on providing device ID and PASN ID**

Jouni Malinen presented [11-24/1301r00](https://mentor.ieee.org/802.11/dcn/24/11-24-1301-00-00bh-ap-rules-on-providing-device-id-and-pasn-id.docx), which discusses when an AP provides a device ID and a PASN ID to a STA. The document has a section that summarizes the three cases he has identified in Draft 5.0. They are based on whether the STA provides a device ID and whether the STA was recognized (either by device ID or by PASN ID) if one was provided. The assumption for all three cases is that the STA and the AP both have device ID capability. Yan Li (ZTE) has a presentation ([11-24/1294r00](https://mentor.ieee.org/802.11/dcn/24/11-24-1294-00-00bh-cr-for-recirc-cid4002.docm)) dealing with CID 4002 that also affects the text that Malinen is discussing. There are some uses of the verbs “shall” and “may” that are conflicting or confusing. No decision will be taken during this time slot since Li is not available to join the discussion. This contribution will also be of interest when discussing CID 4113.

1. **Editorial comment resolutions**

Carol Ansley offered resolutions for the editorial and some general comments, as given in [11-24/1299r00](https://mentor.ieee.org/802.11/dcn/24/11-24-1299-00-00bh-editorial-cid-resolution.xlsx). These are CIDs 4004, 4005, 4007, 4010, 4031, 4036, 4038, 4066, 4058, 4059, 4019, 4022, 4023, 4042, 4053, 4065, 4048, 4100, and 4105. She only went over the “interesting” comments. Ansley would reject CID 4042 (removal of hyphens), CID 4005 (“hash” capitalization), and CID 4066 (“see” pointers). CID 4040 is revised slightly from the commenter’s suggestion to use “equal to” instead of “of”. Another suggestion is “that is equal to 1”, but Ansley prefers the shorter form. CID 4108’s resolution will remove the note about the KDE selectors not being ANA managed because this has changed recently, and they are now managed by the ANA. CID 4102’s resolution is revised to use “mechanism” to describe device ID and IRM, along with noting that both can be used concurrently. CID 4049 will be deferred because Yan Li has a contribution that addresses it. In any case, the page number should be 25 not 23 as given in the comment database. CID 4096 is rejected because there is no such subclause. CID 4012 is also rejected because the numbers in question are not ANA managed. CID 4024’s resolution will be revised not to use the field name in the notes column, as this was confusing. CID 4051 will be changed from rejected to revised along the line of CID 4108’s resolution. Ansley will verify whether the ANA assigns values for each of the three items. Robert Stacey (Intel, as manager of the ANA database) will align that database against Draft 5.0. CID 4106 deals with confusing uses of “element” vs. “subelement”, especially as there are elements and subelements with the same name. CID 4106 will be revised to accept the requested changes and make a related fix on page 38, line 18. Perhaps the doubled-up names should be renamed to prevent further confusion. The editor will take a crack at this. CID 4054 needs to be revised because the reference given by the commenter should not be used, but the element/subelement fix should be. CID 4026 will be resolved by using “opaque identifier”. CID 4084 is accepted – these are only uses of “status field” that don’t have a name before them. Ansley has posted the revised resolution set as [11-24/1299r01](https://mentor.ieee.org/802.11/dcn/24/11-24-1299-01-00bh-editorial-cid-resolution.xlsx).

1. **Review of the comment resolution database**

Hamilton displayed [11-24/1262r03](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-03-00bh-p802-11bh-sa-recirc1-comments.xlsx). He went through CIDs he would like to hear more feedback on. For CIDs 4008 and 4009, the commenter asked that the resolutions be revisited due to faulty arithmetic. This could be resolved by deleting the arithmetic and just picking a number. After much discussion, that number (the maximum device ID length) will now be 233 (octets). This will also apply to Measurement IDs. Dan Harkins (HPE) will propose the wording for a note to replace the existing derivation arithmetic.

**The meeting was recessed at 3:32 p.m. EDT.**

**Meeting July 16th, 2024, 7:30 p.m. to 9:30 p.m. EDT**

**Chair: Mark Hamilton (Ruckus/CommScope)**

**Vice Chair: Peter Yee (NSA-CSD/AKAYLA)**

**Vice Chair: Stephen Orr (Cisco)**

**Secretary: Jay Yang (ZTE)/Peter Yee**

**Editor: Carol Ansley (Cox Communications)**

**The mixed-mode meeting was called to order by the Chair at 7:32 p.m. EDT.**

Agenda slide deck [11-24/0987r07](https://mentor.ieee.org/802.11/dcn/24/11-24-0987-07-00bh-agenda-tgbh-2024-july-session.pptx)

1. **Policies and procedures were presented by Chair Mark Hamilton. (Slides 4 to 15)**

There were no patent declarations.

Copyright policy slides were presented (Slides 10 and 11)

1. **Agenda:**

* **Attendance, noises/recording, meeting protocol**
* **Policies, duty to inform, participation rules**
* **Organization topics:**
  + July session meetings: Monday, 13:30-15:30; Tuesday, 13:30-15:30 and 19:30-21:30; Thursday 10:30-12:30 and 13:30-15:30
  + Timeline reminder (slide 18)
  + Motions record: [11-22/0651r47](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-47-00bh-tgbh-motions-list.pptx)
* **Comment Resolution – SA recirc**
  + Comment resolution document: [11-24/1262r3](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-03-00bh-p802-11bh-sa-recirc1-comments.xlsx)
  + Review and disposition of SA recirc LB comments (slide 19)

1. **CID 4003**

Based on a discussion between the IEEE 802.11be and IEEE 802.11bh editors, the IEEE 802.11be editor will chase the IEEE 802.11bh baseline by updating IEEE 802.11be based off of the latest IEEE 802.11bh draft. Therefore, CID 4003 is rejected as there is no further effort needed in TGbh.

1. **Miscellaneous CIDs**

Jay Yang returned to the remaining CIDs in [11-24/1271r02](https://mentor.ieee.org/802.11/dcn/24/11-24-1271-02-00bh-cr-for-recirc-cids-misc.docx). For CID 4113, he has revised text for what the AP returns in the case of not recognizing a STA. A zero-length Device ID field indicates that the same Device ID is retained. Otherwise, a new Device ID is sent. In both cases, a new PASN ID is provided by the AP. The other change is if an AP does not recognize a device, then it shall provide a new PASN ID (and Device ID). Previously this was a “may provide”. The handling of the not recognized case drew a lengthy discussion. It also brought up the difference between not-recognized and initial-connection. The former is “may provide” while the latter is “shall provide” a Device ID/PASN ID pair. After much discussion, the group leaned in the direction of the AP “may provide” the pair in both the initial connection and not recognized use cases. Work will be done offline to provide suitable language.

1. **CRs for CIDs 4000 and 4001**

Okan Mutgan (Nokia) offered [11-24/1274r01](https://mentor.ieee.org/802.11/dcn/24/11-24-1274-01-00bh-sa-cr-for-some-cids.docx). These have to do with the figures in Annex AG. CID 4000 notes that for FILS mode 1 and 2 operations, the association response cannot be enciphered until after EAP exchange and 4-way handshake, meaning that a device ID and PASN ID carried in the association response could not be enciphered. For mode 3 (public key with PFS), the EAP exchange and 4-way handshake are not performed, and the association response can be encrypted. It was pointed out that there are no known implementations of FILS mode 3, so using that as a solution to the comment doesn’t seem terribly useful.

CID 4001 indicates that the text and figures for FILS don’t actually match how FILS works.

The group discussed the best way to change the figures. Mutgan will upload the result as [11-24/1274r02](https://mentor.ieee.org/802.11/dcn/24/11-24-1274-02-00bh-sa-cr-for-some-cids.docx).

1. **Resolution of Padding CIDs**

In response to the discussion during the PM1 time slot, Dan Harkins drew up [11-24/1026r01](https://mentor.ieee.org/802.11/dcn/24/11-24-1026-01-00bh-resolution-of-padding-cids.docx). This gives the explanation for the 233-octet limit on the non-padded, non-tweaked device ID. The tweak can be large, however, so there could be other considerations. After discussion, Harkins will post [11-24/1026r02](https://mentor.ieee.org/802.11/dcn/24/11-24-1026-02-00bh-resolution-of-padding-cids.docx) with the agreed upon version of the resolutions to CIDs 4008 and 4009.

**The meeting was recessed at 9:29 p.m. EDT.**

**Meeting July 18th, 2024, 10:30 a.m. to 12:30 p.m. EDT**

**Chair: Mark Hamilton (Ruckus/CommScope)**

**Vice Chair: Peter Yee (NSA-CSD/AKAYLA)**

**Vice Chair: Stephen Orr (Cisco)**

**Secretary: Jay Yang (ZTE)/Peter Yee**

**Editor: Carol Ansley (Cox Communications)**

**The mixed-mode meeting was called to order by the Chair at 10:32 a.m. EDT.**

Agenda slide deck [11-24/0987r08](https://mentor.ieee.org/802.11/dcn/24/11-24-0987-08-00bh-agenda-tgbh-2024-july-session.pptx)

1. **Policies and procedures were presented by Chair Mark Hamilton. (Slides 4 to 15)**

There were no patent declarations.

Copyright policy slides were presented (Slides 10 and 11)

1. **Agenda:**

* **Attendance, noises/recording, meeting protocol**
* **Policies, duty to inform, participation rules**
* **Organization topics:**
  + July session meetings: Monday, 13:30-15:30; Tuesday, 13:30-15:30 and 19:30-21:30; Thursday 10:30-12:30 and 13:30-15:30
  + Timeline reminder (slide 18)
  + Motions record: [11-22/0651r48](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-48-00bh-tgbh-motions-list.pptx)
* **Comment Resolution – SA recirc**
  + Comment resolution document: [11-24/1262r4](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-04-00bh-p802-11bh-sa-recirc1-comments.xlsx)
  + Review and disposition of SA recirc LB comments (slide 19)

The agenda was approved by unanimous consent.

1. **AP rules on providing device ID and PASN ID**

Jouni Malinen presented [11-24/1301r03](https://mentor.ieee.org/802.11/dcn/24/11-24-1301-03-00bh-ap-rules-on-providing-device-id-and-pasn-id.docx). This reflects the previous agreements on use of “may” language along with a new corner case for “Not Applicable” regarding the AP providing a PASN ID when the request did not contain one.

For CID 4002, an addition is made to Table 9-417d for “Not Applicable”. The crucial changes are in subclause 12.2.13, where “shall” is changed to “may” for whether the AP is to provide a device ID. PASN IDs are only provided if dot11PASNActivated is true. A note is added to explain why “may” makes sense. How device IDs and PASN IDs are handled is detailed for three cases: using FILS authentication, using PASN authentication, and using neither of those two.

Malinen also fixed some MLME primitives to correct where PASN ID is supplied.

For CID 4113, he suggests rejecting the comment. This is because one AP in an ESS not recognizing a STA does not imply that all APs in the ESS cannot recognize the STA. The group was amenable to this disposition.

Finally, for CID 4049, he offers an update to the PASN ID notes in Table 9-65.

Malinen took input and will make minor revisions to his changes, which will be reflected in [11-24/1301r04](https://mentor.ieee.org/802.11/dcn/24/11-24-1301-04-00bh-ap-rules-on-providing-device-id-and-pasn-id.docx), to be approved later during this session.

1. **Proposed Resolution for CIDs – 4106, 4054, 4055 – subelement, element**

This document ([11-24/1316r01](https://mentor.ieee.org/802.11/dcn/24/11-24-1316-01-00bh-proposed-resolution-for-cids-4106-4054-4055-subelement-element.docx)) attempts to resolve CIDs 4106 4054, and 4055. The problem is that there are two different definitions for PASN ID element. For the encrypted forms, rather than using “subelement” (a term that will probably be removed in future versions of IEEE 802.11), he suggests renaming the IDs as follows: “Device ID element” to “Robust Device ID element” and so on for “IRM element” and “PASN ID element”. This renaming will incur resultant changes to Malinen’s [11-24/1301r04](https://mentor.ieee.org/802.11/dcn/24/11-24-1301-04-00bh-ap-rules-on-providing-device-id-and-pasn-id.docx) along with touching multiple places in the current draft. Malinen will also check his own document to ensure that “Robust” naming is used in all places where the element is transmitted in the second or third PASN frame, where the encryption is implicit. The group seems to favor this approach.

1. **TGbh SA Ballot 2 Technical CIDs**

Graham Smith (SR Technology) offered [11-24/1315r01](https://mentor.ieee.org/802.11/dcn/24/11-24-1315-01-00bh-sa-ballot-2-technical-cids.docx) to resolve CIDs 4011, 4013, 4014 4018, 4020, 4023, 4029, 4030, 4034, 4035, 4039, 4043, 4044, 4045, 4047,4054, 4055, 4060, 4062, 4063, 4064, 4067,4068, 4069,4070, 4073, 4085, 4086, 4087, 4088, 4089, 4090, 4091, 4092, 4093, 4101, 4111, and 4114.

For CID 4011, he proposes accepting the change from “distinct ESSs” to “multiple ESSs”. For CID 4013, he proposes rejecting the comment, to which no one objected. CID 4014 is rejected for being redundant. CID 4018 is overtaken by the changes in [11-24/1316r02](https://mentor.ieee.org/802.11/dcn/24/11-24-1316-02-00bh-proposed-resolution-for-cids-4106-4054-4055-subelement-element.docx). CID 4020 and 4023 are accepted. CID 4029 is rejected because the Measurement ID doesn’t have an independent length field necessary to make it extensible and there seems little need for the added complexity of making the field extensible. Smith proposes rejecting CID 4030 because the coupling between FILS and device ID are already explained in clause 12, so there’s no need to add that rationale in clause 9. CID 4034 is accepted. CID 4035 is accepted in revised form to define dot11IRMActivated in parallel style to dot11DeviceIDActivated. CID 4039 is accepted in revised form, but the resolution will be impacted by the resolutions in [11-24/1316r02](https://mentor.ieee.org/802.11/dcn/24/11-24-1316-02-00bh-proposed-resolution-for-cids-4106-4054-4055-subelement-element.docx). This comment is being revisited by Smith after having already been in a document Carol Ansley submitted. In her document, the resolution was to accept the proposed change. CID 4043 is accepted to correct the lack of the word “state” following “shared identity”. CID 4044’s resolution is revised to remove redundant text by joining the sentence with the following sentence.

**The meeting was recessed at 12:29 p.m. EDT.**

**Meeting July 18th, 2024, 1:30 p.m. to 3:30 p.m. EDT**

**Chair: Mark Hamilton (Ruckus/CommScope)**

**Vice Chair: Peter Yee (NSA-CSD/AKAYLA)**

**Vice Chair: Stephen Orr (Cisco)**

**Secretary: Jay Yang (ZTE)/Peter Yee**

**Editor: Carol Ansley (Cox Communications)**

**The mixed-mode meeting was called to order by the Chair at 1:30 p.m. EDT.**

Agenda slide deck [11-24/0987r09](https://mentor.ieee.org/802.11/dcn/24/11-24-0987-09-00bh-agenda-tgbh-2024-july-session.pptx)

1. **Policies and procedures were presented by Chair Mark Hamilton. (Slides 4 to 15)**

There were no patent declarations.

Copyright policy slides were presented (Slides 10 and 11)

1. **Agenda:**

* **Attendance, noises/recording, meeting protocol**
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* **Policies, duty to inform, participation rules**
* **Organization topics:**
  + July session meetings: Monday, 13:30-15:30; Tuesday, 13:30-15:30 and 19:30-21:30; Thursday 10:30-12:30 and 13:30-15:30
  + Timeline reminder (slide 18)
  + Motions record: [11-22/0651r49](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-49-00bh-tgbh-motions-list.pptx)
* **Comment resolution document:** [**11-24/1262r4**](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-04-00bh-p802-11bh-sa-recirc1-comments.xlsx)
* **Review and disposition of SA recirc LB comments (slide 19)**
* **Motions (see Motions deck, Motions X, Y, Z)**
* **Teleconference plan (next slide)**
* **Planning for Sept (following slide)**

The agenda was approved by unanimous consent.

1. **AP rules on providing device ID and PASN ID**

Jouni Malinen introduced the changes the group had asked him to make in his revised [11-24/1301r04](https://mentor.ieee.org/802.11/dcn/24/11-24-1301-04-00bh-ap-rules-on-providing-device-id-and-pasn-id.docx). The group agreed that the document reflected their expectations.

1. **TGbh SA Ballot 2 Technical CIDs**

Smith picked up with his comment resolutions offered in the updated [11-24/1315r02](https://mentor.ieee.org/802.11/dcn/24/11-24-1315-02-00bh-sa-ballot-2-technical-cids.docx) starting at CID 4045, which is similarly to CID 4044. CID 4047 asks for consistency in the definitions rather than using all of ESS, network, or APs in an ESS for the same concept, which he does for network and ESS. CID 4054 is accepted. CID 4055 is editor instructions. Smith believes that CID 4060 is overtaken by the work Malinen has done in [11-24/1301r04](https://mentor.ieee.org/802.11/dcn/24/11-24-1301-04-00bh-ap-rules-on-providing-device-id-and-pasn-id.docx), which Malinen will verify. (Malinen provided text for the resolution.) CID 4062 is accepted. CID 4063 is resolved by taking the commenter’s resolution for CID 4064, which is itself accepted. CID 4067 is accepted to change “is false” to “is not true”, a subtle distinction meant to cover cases where older implementations do not even support the MIB variable. CID 4068 correctly changes “Extended Capabilities” to “Extended RSN Capabilities field”. CID 4069 is accepted to remove some redundancy. CID 4070 is rejected because the comment does not identify a problem with the draft. In any case, the text cited is correct for the working of AEAD ciphers. For CID 4073, Smith suggests deleting FILS twice in the sentence to resolve the comment. CID 4085 is revised to change “AP/ESS” to “ESS” in five places in Annex AG. CID 4086 is to be revised with a pointer to suitable text in [11-24/1301r04](https://mentor.ieee.org/802.11/dcn/24/11-24-1301-04-00bh-ap-rules-on-providing-device-id-and-pasn-id.docx) (the “Proposed changes – separate” section). CID 4087’s resolution is the same as CID 4086’s. CID 4088 is rejected, which the commenter agreed with. CID 4089 is accepted, as is CID 4090, which is already covered by CID 4067. CID 4091 is accepted. CID 4092 is rejected because the commenter withdrew the comment. CID 4093 is rejected because the PASN ID is not transient per se – it just gets replaced upon authentication. CID 4101 is accepted without objection. CID 4111 is rejected because the reference in the sentence contains the requested note, at least conceptually. CID 4114 is rejected because although not defined in clause 3.2, “shared identity state” is defined in 12.2.13. Smith will post his revised resolutions as [11-24/1315r03](https://mentor.ieee.org/802.11/dcn/24/11-24-1315-03-00bh-sa-ballot-2-technical-cids.docx).

1. **Support field comments**

Robert Stacey (Intel) spoke to changes he is proposing for CIDs 4032, 4033, and 4052, as given [11-24/1326r00](https://mentor.ieee.org/802.11/dcn/24/11-24-1326-00-00bh-sa-ballot-2-support-field-comments.xlsx). CID 4032 asks that lingering uses of “IRM Active field” be changed to “IRM Support field”. Stacey found these in Annex AG at 59.04, 59.05, 60.09, 60.12, 61.13, 61.15, 63.04, and 63.06 (page#.line# format). CID 4033 similarly deals with lingering “Device ID Active field” that is now called “Device ID Support field” found at 54.37, 54.39, 55.53, 55.54, 57.08, 57.11, and 63.04. CID 4052 shows a preference to the term “active” over “support”. But because “support” is used in the behavioral text in subclauses 12.2.3.1 and 12.2.3.2, it would make sense to use that term in subclause 9.4.2.240, although there wasn’t unanimous approval for this change.

1. **Revisiting Proposed Resolution for CIDs – 4106, 4054, 4055 – subelement, element**

Joseph Levy (InterDigital) showed his work on the now revised [11-24/1316r02](https://mentor.ieee.org/802.11/dcn/24/11-24-1316-02-00bh-proposed-resolution-for-cids-4106-4054-4055-subelement-element.docx). This corrects a typo and changes the name of the subelements to the Robust forms in the second and third PASN frames. The CID resolutions will be changed to “Revised” with a pointer to the body of the document for the specific changes. This path is amenable to the group and the updates are reflected in [11-24/1316r03](https://mentor.ieee.org/802.11/dcn/24/11-24-1316-03-00bh-proposed-resolution-for-cids-4106-4054-4055-subelement-element.docx).

1. **CID 4006**

CID 4006 is rejected as out of IEEE 802.11bh’s scopes.

1. **Motions**

[11-24/1262r06](https://mentor.ieee.org/802.11/dcn/24/11-24-1262-06-00bh-p802-11bh-sa-recirc1-comments.xlsx) contains all of the resolutions, now all marked ready for motion.

The motions deck is now [11-22/0651r50](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-50-00bh-tgbh-motions-list.pptx).

Motion #43 reads ‘Approve comment resolutions for all of the comments received from first SA recirculation ballot on P802.11bh D5.0, per the resolutions recorded in 11-24/1262r6, and incorporate the changes in the latest TGbh draft.’ It was moved by Jouni Malinen and seconded by Jerome Henry. The vote on this motion was 8/0/0 (Y/N/A), so the motion passed.

By agreement, the duration of the time slot was extended by 10 minutes.

Motion #44 reads ‘Having approved comment resolutions for all of the comments received from first SA recirculation ballot on P802.11bh D5.0, as contained in 11-24/1262r6,

Instruct the editor to prepare P802.11bh D6.0 incorporating those changes, and

Approve a 10 day SA 2nd Recirculation Ballot asking the question “Should P802.11bh D6.0 be forwarded to RevCom?”’ It was moved by Carol Ansley and seconded by Luther Smith (CableLabs). The vote on this motion was 8/0/0, so the motion passed.

Motion #45 reads ‘Approve document 11-24/1317r0 as the report to the IEEE 802 Executive Committee (EC) on the requirements for conditional approval to forward P802.11bh D6.0 to RevCom, and

Request the IEEE 802 EC to conditionally approve forwarding P802.11bh D6.0 to RevCom.

With license granted to the TG chair to update the “unsatisfied comments” aspects off-line, following the posting of the final resolutions spreadsheet.’ It was moved by Jerome Henry and seconded by Jouni Malinen. The vote on the motion was 8/0/1, so the motion passed.

1. **Timeline**

A report will be made to the EC requesting conditional approval to proceed to REVCOM on 19 July. The SA ballot recirculation on Draft 6.0 will run from 29 July through 9 August. The ballot comment notification will take place on 14 August. The deadline to post to REVCOM is 18 September.

**The meeting was adjourned at 3:40 p.m. EDT.**