Minutes IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGbh Teleconference Minutes, September 5th, 2023  Randomized and Changing MAC addresses (RCM) | | | | |
| Date: 2023-09-05 | | | | |
| Author(s): | | | | |
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Abstract

This document contains the minutes of the IEEE 802.11bh teleconference of September 5th, 2023.

Note: Highlighted text are action items.

Q- proceeds a question asked at the meeting

A- proceeds an answer

C- proceeds a comment

**Meeting September 5th, 2023, 9:30 a.m. to 11:30 a.m. EDT**

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

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

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

**Secretary: Peter Yee**

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

**The teleconference was called to order by the Chair at 9:33 a.m. EDT.**

Agenda slide deck [11-23/1462r01](https://mentor.ieee.org/802.11/dcn/23/11-23-1462-00-00bh-agenda-tgbh-2023-sep-5.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:**
  + Timeline reminder (slide 16)
  + Motions record: [11-22/0651r23](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-23-00bh-tgbh-motions-list.pptx)
* **Comment Resolution**
  + Tracking document: [11-23/1152r17](https://mentor.ieee.org/802.11/dcn/23/11-23-1152-17-00bh-ieee-802-11bh-lb274-comments.xlsx)
  + Comment topics list (slide 17)
  + Comment resolution queue (slide 18)
* **Discussion on response to WBA liaisons (due Sept):** [**11-21/0703r0**](https://mentor.ieee.org/802.11/dcn/21/11-21-0703-00-0000-2021-april-liaison-from-wba.docx)**,** [**11-21/1141r0**](https://mentor.ieee.org/802.11/dcn/21/11-21-1141-00-00bh-excerpts-of-wba-document-wi-fi-id-scope.pptx)**,** [**11-22/0668r0**](https://mentor.ieee.org/802.11/dcn/22/11-22-0668-00-0000-liaison-statement-from-wba-re-wi-fi-devices-identification-group.pdf)**,** [**11-22/0653r0**](https://mentor.ieee.org/802.11/dcn/22/11-22-0653-00-0000-2022-march-wba-whitepaper-re-device-identification.pdf)
  + [11-23/0888r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0888-00-00bh-wba-liaison-discussion.pptx) Stephen Orr

The agenda, as amended with comment resolution submission updates, was approved with unanimous consent.

1. **Timeline Review**

Chair reviewed agenda

Comment Resolution Queue

1. **When is an ID fixed 11-23/1453r1 (Harkins)**

Covered 12.2.10 Requirements for support of MAC and privacy enhancements.

C: The network is asking the STA to do something so this would be transactional. We need to clarify what is transactional exchange.

A: The Beacon request is a transactional exchange.

C: Once it does (the STA) associates – it is with the ESS not the AP.

C: Higher layer mappings are done by the ESS. Without the knowledge and state information – mobility within the ESS would not be possible. The state of the STA is somehow known at the ESS level (even for measurement) and must maintain the same MAC address.

C: If a STA can use any MAC address – is it a problem?? If its not a problem why are we worried about it?

C: Member still had questions on the definition of a transactional exchange.

**Straw Poll 1:**

A probe made in response to a Beacon Request is not a transactional exchange per Std IEEE 802.11-2020 section 12.2.10 and the STA can use a MAC to probe that differs from the MAC it received the Beacon Request on?

Y: 10

N: 3

A: 3

C: Have we looked at anything .11bf is doing with its “weird” exchanges? They have some pretty bizarre frame exchanges and we may want to look into it.

Chair: May be an interesting topic for another presentation.

Q: Is the Device ID Opaque?

A: Yes that is the implication. Because the authentication frame is not encrypted.

C: 4-Way HS is too late for this to happen because the STA has already been Authenticated– the submission will show that the Device ID has to be used in other frames.

C: We shouldn’t mix and match device-ID to the PMK

C: We made these two separate mechanisms (pre-assoc and historic) that we could use in place of the MAC address to enable higher order applications to use from association to association of a device. This ID is targeted at Higher Layers and moving it to a lower layer is not ok.

A: I think Device ID is useless unless we do this. If we pass this in the 4WHS it is pointless.

C: If we move this to Auth phase – the device is identifying itself to an AP that it is not going associate to. It is still too early – we don’t know if this is a rogue AP.

A: The Opaque ID is useless to a rogue AP.

C: If we could include this into the SAE message it may be a safer place to do this. Device ID and SAE ID should be kept as two separate things.

C: Two concerns:

1. Technical difficulty in putting this into an Auth frame that could be addressed in a submission.
2. Are there use cases?

C: Slide 7 – how is the AP/ESS going to handle one Device ID with three separate MAC addresses?

**Straw Poll 2**

The Device ID shall be added to 802.11 authentication frames to facilitate identification when an 802.11 state machine enters State 2.

Y: 8

N: 8

A: 4

1. **cr-for-CIDs-relevant-to-device-ID--part 1**

Jay covered CIDs in [11-23/1316r6](https://mentor.ieee.org/802.11/dcn/23/11-23-1316-06-00bh-cr-for-cids-relevant-to-device-id-part-1.docx)

C: Lots of changes in the document – original text is more clear.

C: A lot of the references for FILS and PASN have been removed.

C: You have added in MLD – our current baseline does not include 11be as a baseline spec, therefore we should not include MLD/MLO requirements into this.

A: 11be is already in the market – based on our last discussion we included to add MLO into the draft.

C: current specification does not align with the market – therefore 11bh will not be available until after 11be is complete. This is a longer time than anticipated.

Chair: Process level issue – agree with concerns, however 11bh is following 11be. We need to decide next week – current schedule shows that 11bh is ahead of 11be

C: CID 133 is pretty straightforward – should be a minor modification.

A: not a small change if you look at all the comments

Chair – we are going to have to defer these. Handle these CIDs separately and make the minor modifications. See if that works. Need to give people more time to digest and have the MLD discussion.

Q: Confused with the term: frame with Device-ID or does this have to be a frame that has to have a Device-ID present?

A: This is just a general term

Q: CID 248, 246,174: For non-MLO…and does not have a saved device id  
This is really an “or” instead of an and

A: Text edited in doc live

**Meeting adjourned at 11:30 a.m. EDT**

**Attendance**

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| Breakout | Timestamp | Name | Affiliation |
| TGbh | 9/5 | Hamilton, Mark | Ruckus/CommScope |
| TGbh | 9/5 | Harkins, Daniel | Hewlett Packard Enterprise (Aruba Networks) |
| TGbh | 9/5 | Henry, Jerome | Cisco Systems, Inc. |
| TGbh | 9/5 | Kain, Carl | USDoT; Noblis Inc. |
| TGbh | 9/5 | Lumbatis, Kurt | CommScope, Inc. |
| TGbh | 9/5 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbh | 9/5 | Mutgan, Okan | Nokia |
| TGbh | 9/5 | Orr, Stephen | Cisco Systems, Inc. |
| TGbh | 9/5 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| TGbh | 9/5 | Sam, Harvey | Broadcom Corporation |
| TGbh | 9/5 | Sevin, Julien | Canon Research Centre France |
| TGbh | 9/5 | Smith, Graham | SRT Wireless |
| TGbh | 9/5 | Smith, Luther | Cable Television Laboratories Inc. (CableLabs) |
| TGbh | 9/5 | Thakore, Darshak | Cable Television Laboratories Inc. (CableLabs) |
| TGbh | 9/5 | Yang, Jay | Nokia |
| TGbh | 9/5 | Yee, Peter | NSA-CSD |