Minutes IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGbh Meeting Minutes, January 31, 2023  Randomized and Changing MAC addresses (RCM) | | | | |
| Date: 2023-01-31 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Stephen Orr | Cisco | Wallkill, NY |  | sorr@cisco.com |
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Abstract

This document contains the minutes of the IEEE 802.11bh telecon meeting of January 31, 2023.

Note: Highlighted text are action items.

Q- proceeds a question asked at the meeting

A- proceeds an answer

C- proceeds a comment

**Meeting January 31, 2023 9:30 a.m. to 11:30 a.m. ET**

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

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

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

**Secretary: Peter Yee**

**Editor: Carol Ansley (Cox)**

**The teleconference was called to order by Vice Chair Peter Yee at 9:33 a.m. EST.**

Agenda slide deck [11-23/0160r00](https://mentor.ieee.org/802.11/dcn/23/11-23-0160-00-00bh-agenda-tgbh-2023-jan-31.pptx)

1. **Policies and procedures were presented by the Vice Chair Peter Yee. (Slides 4 to 14)**

There were no Patent declarations.

Copyright policy slides were presented (Slides 10 and 11)

1. **Agenda:**

* **Attendance, noises/recording, meeting protocol reminders**
* **Policies, duty to inform, participation rules**
* **Organization topics (see Backup slides)**
  + Timeline reminder (slide 24)
  + Teleconference plan, going forward (slide 17)
* **Issues Tracking:** [**11-21/0332r37**](https://mentor.ieee.org/802.11/dcn/21/11-21-0332-37-00bh-issues-tracking.docx)
* **Results of Comment Collection on D0.2:** [**11-22/0973r13**](https://mentor.ieee.org/802.11/dcn/22/11-22-0973-13-00bh-cc41-comments-against-d0-2.xlsx)
* **Motions record:** [**11-22/0651r9**](https://mentor.ieee.org/802.11/dcn/22/11-22-0651-09-00bh-tgbh-motions-list.pptx)
* **Contributions (slide 16)**
* **WBA liaison response**

Any comments? [None]

Any objections to agenda? [None]

1. **Straw poll discussion (slide 17)**

*Adopt non-encrypted ID in IE scheme*

C: Do we want to run a straw poll on this?

C: There was interest expressed in supporting the pre-assoc use cases in the Baltimore meeting. This is the last mechanism we have for supporting pre-assoc mechanism for TGbh.

C: This was proposed at the last meeting to address that the group wanted to do something for pre-assoc however all things previously proposed did not have enough support. Chair captured the scheme.

C: There was a suggestion to run a strawpoll “would you vote for any of the following schemes.” If there was a yes – then you could vote on simple vs those that required computation.

C: There is a particular style of vote that we could do to eliminate some of the schemes (Chicago style)

C: Is everyone voting for just their one scheme?

V-Chair – let’s run Strawpoll number 5 and see the outcome

C: Regarding straw poll 5 – the Station does not have the power to opt-in or opt-out. If the opt-in happens pre-assoc this could work, if not the identifier is assigned after the fact.

C: Disagree – this is opt-in on all levels. The STA always has the choice on whether to use it or not.

C: When you connect to a network, you get back an identifier. Is the STA going to provide a pop up that the user has the option to opt-in. When is the bit set – per network? How do I inform the user that the network is providing and ID. Preference to opt-out by default and then opt-in when the users wants to. Prefer the ID be station generated.

C: Leaning toward the STA generated ID. We already have Device ID – then I have two IDs with this one changing. They are not complementary. This one is a throw away ID. If you are going to do this – do I need device ID as well? Not keen on having an ID in an Information Element. If we have this extra 12 octet IE, it is getting very close to a fingerprint vs IRM which is a random MAC, it is way less obvious.

C: When you talk about fingerprinting pre-assoc, the ID provided in an assoc request – unless I have a mechanism to identify that the AP is part of the ESS, I am giving someone my fingerprint. If we want to do this unencrypted then we need to verify the AP beforehand. Because this is in the clear – anyone can listen and discover the ID. If it is encrypted and the AP is validated – pre-assoc is dangerous.

C: From a technical point of view, it will work, but it looks like a PMK-ID. The STA should only return the ID once if it is unencrypted to prevent fingerprinting.

V-Chair: This does not have to be a finished solution for this strawpoll.

C: We need to create a mechanism to all the user the ability to select opt-in/out, but we have to think about protecting data. We have to allow the user to protect their identity accordingly – they need to feel comfortable and knowledgeable about what is happening. We are basically creating a cookie and not informing the user what it is used for.

V-Chair: Is that something the L2 entity (AP) can convey?

C: We need to be careful while the network may not know what the ID is used for – but the network must inform the user.

V-Chair: That exists at a layer above HTTP – it is a regulatory function at a higher layer. At the Data Link layer – it doesn’t specify GDPR pop-ups.

C: Do we want users to have that experience for wireless? If we start adding layers on top to make it annoying, they will not treat Wi-Fi the same way.

C: Everything said applies to Device ID. We already have agreed to do Device ID.

C: All the device has to do is not support this. The operator of the AP does not have to support this.

V-Chair: Can’t the STA just assert that it supports the bit – then discard the ID?

C: Its an annoyance – and could fundamentally change the way people interact with Wi-Fi. Do we want enable this – hopefully not.

V-Chair – inclined to run the strawpoll without trying to solve for the user-experience (pop up etc). the strawpoll is “Is this general concept acceptable with details to be worked out later.”

**Straw Poll – Adopt non-encrypted ID in IE Scheme?**

**Y (2) 11%**

**N (12) 63%**

**A (2) 11%**

**No Answer (3) 16%**

***No support for using a non-encrypted ID.***

C: Pre-Assoc Identification – either we support it or don’t. That approach is not good. To move forward – we can have a solution that is flexible on “pre-assoc or not”

V-Chair: None of this is mandatory. We have asked vendors if they want pre-assoc use cases addressed by TGbh and the answer has been yes.

C: When you look at these schemes – if it support pre-assoc or not you can support it or not. Otherwise we reject these schemes if they ONLY work on pre-assoc or post assoc.

C: We should run a straw poll on the pre-assoc use cases.

**Straw Poll – Do you want 11bh to have a scheme or schemes that support pre-association use cases?**

**Y(12) 55%**

**N (9) 41%**

**A (1) 5%**

**NA (0)**

**Small margin of support for pre-assoc use cases.**

C: Not an overwhelming majority. Something needs to be done to convince the No’s

C: Lets get what we have in the draft ready. That way we can have the post-assoc cases ready to go. Then we can come back to pre-assoc use case if needed.

C: Does Device ID meet our PAR? If we are going to go back to the WBA and WFA that this is our solution it would not be acceptable. Draft 0.2 does not satisfy the PAR. It does something – not everything and it doesn’t answer the PAR.

**Meeting adjoined at 10:54 a.m. EST.**

**Attendance**

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| Breakout | Timestamp | Name | Affiliation |
| TGbh | 1/31 | Ansley, Carol | Cox Communications Inc. |
| TGbh | 1/31 | baron, stephane | Canon Research Centre France |
| TGbh | 1/31 | DeLaOlivaDelgado, Antonio | InterDigital, Inc. |
| TGbh | 1/31 | Halasz, David | Morse Micro |
| TGbh | 1/31 | Hedayat, Ahmadreza | Apple Inc. |
| TGbh | 1/31 | Henry, Jerome | Cisco Systems, Inc. |
| TGbh | 1/31 | McCann, Stephen | Huawei Technologies Co., Ltd |
| TGbh | 1/31 | Mutgan, Okan | Nokia |
| TGbh | 1/31 | Nezou, Patrice | Canon Research Centre France |
| TGbh | 1/31 | Orr, Stephen | Cisco Systems, Inc. |
| TGbh | 1/31 | Petrick, Albert | InterDigital |
| TGbh | 1/31 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGbh | 1/31 | Sam, Harvey | Broadcom Corporation |
| TGbh | 1/31 | Sevin, Julien | Canon Research Centre France |
| TGbh | 1/31 | Smith, Graham | SRT Wireless |
| TGbh | 1/31 | Smith, Luther | Cable Television Laboratories Inc. (CableLabs) |
| TGbh | 1/31 | Yee, Peter | NSA-CSD |
| TGbh | 1/31 | Zhou, Lei | H3C Technologies Co., Limited |