IEEE P802.11  
Wireless LANs

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| Draft Liaison response to WBA regarding P802.11bh | | | | |
| Date: 2023-11-16 | | | | |
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Abstract

Draft liaison statement to WBA in response to incoming liaisons relevant to P802.11bh activities.

**Instructions for the preparation of a Liaison Communication from 802.11**

1. Prepare a submission for consideration by a subgroup of 802.11 using this template.
2. Insert the proposed text of the liaison replacing ‘[Content]’ below.
3. The secretary of the IEEE-SA standards board is copied on communications to government bodies (including the ITU) as described in the LMSC OM “Communications with government bodies”, and for statements to external bodies, per 5.1.3 of the IEEE-SA Standards Board Operations Manual, <http://standards.ieee.org/develop/policies/opman/sb_om.pdf> .”Statements to external bodies”.
4. Insert any discussion or rationale replacing ‘[Discussion and/or rationale can go here]’ below.
5. Prior to approval by the working group, post a clean version with all changes accepted
6. After approval by the working group, the WG chair will post a revision with the ‘[Discussion and/or rationale can go here]’ section deleted and the details related to approval filled in. This enables the WG chair to provide a link to the content of the liaison absent any content not intended for the recipients.

[Discussion and/or rationale can go here]

IEEE 802.11 WLAN Working Group  
DRAFT Liaison Communication

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| Source: | IEEE 802.11 Working Group[[1]](#footnote-1) | |
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| From: | Dorothy Stanley | Chair, IEEE 802.11 WLAN Working Group [dorothy.stanley@hpe.com](mailto:dorothy.stanley@hpe.com) |
|  |  |  |
| Subject: | Liaison communication reply to WBA regarding P802.11bh activities on randomized and changing MAC addresses | |
| Approval: | Approved by the IEEE 802.11 Working Group at IEEE 802.11 plenary meeting, Honolulu, HI, 11/16/2023 | |

Dear WBA members,

Thank you for the liaisons sent to us over the last couple years:

* Liaison Statement to IEEE 802.11 [1]
* Wi-Fi Identification Scope [2]
* Liaison Statement to IEEE 802.11 [3]
* Wi-Fi Devices Identification [4]

This is a follow on to our previous communiction providing an update on the activity within IEEE 802.11 (project P802.11bh), the mechanisms being proposed in P802.11bh Draft 1.0 and whether those mechanisms are applicable to the the use cases and scenarios described in your liaisons.

The P802.11bh D1.0, "Randomized and Changing MAC Addresses" amendment is under development and defines two mechanisms; Device ID and Identifiable Random MAC address (IRM) that enable private device identification of IEEE 802.11 STAs that use a randomized or changing MAC address.

Device ID:

An AP may provide an identifier to a non-AP STA and the non-AP STA may opt-in to providing that identifier to any AP in the same ESS to allow the network to recognize the same non-AP STA when it returns to the ESS even if it changes its MAC address. Exchanges of this identifier information are protected from third parties to limit the tracking capability to the APs in an ESS.

Identifiable Random MAC Address (IRM):

A non-AP STA may provide a random MAC address to an AP either when it associates or when it performs PASN authentication. The non-AP STA may then use that IRM MAC address as its Transmitted Address (TA) when it returns to that ESS or AP such that the non-AP STA may be identified pre-association.

Both of the mechanisms are independently optional. Either or both mechanisms may be supported by the non-AP STA and by the network.

Eleven (11) use cases were defined in the WBA Wi-Fi Devices Identification document, the working group has identified eight (8) that are considered to be in scope of IEEE P802.11bh:

1. For private home network access restrictions / privileges (including parental controls, per-device or per-user QoS) For Pay-per-Use networks - identification of complementary and paid-up users or devices
2. IP Address allocation in private, public and enterprise networks
3. Private home network device diagnostics and performance monitoring Enterprise network or device diagnostics and performance monitoring
4. Private home networks and enterprise networks band steering with multi-ESS networks (e.g., split-SSID installations)
5. Hospitality and venue network access with varying service levels
6. Pay-per-Use network access
7. Operators’ public networks block devices that have expired or invalidated credentials and rapidly and repeatedly reattempt to connect
8. Networks, typically using 802.1X, that use the device MAC to tie devices to certificates for certificate enrolment.

The following three (3) use cases were determined to be out of scope of IEEE P802.11bh:

1. Network blocks devices due to abusive behavior or upon lawful demand
2. Passpoint networks record the acceptance of T&Cs on the AAA
3. Any network operator responding to requests for communications records, lawful interception, and other law enforcement purposes

We have attached a copy of P802.11bh D1.0 for your review. It is also available in the “IEEE Store”, here: <https://standards.ieee.org/search/?q=802.11>. We welcome your comments on our draft, preferably prior to our next meeting in January 15th-19th 2024. We would also appreciate any considerations you have for how the mechanisms defined in the draft map to the concerns raised in your liaisons to us.

Future meeting dates:

See: <http://www.ieee802.org/11/Meetings/Meeting_Plan.html> for Future meeting dates of the IEEE 802.11 Working Group]

References

[1] “Liaison Statement to IEEE 802.11”, WBA Wi-Fi Devices Identification Group, 04/14/2023, <https://mentor.ieee.org/802.11/dcn/21/11-21-0703-00-0000-2021-april-liaison-from-wba.docx>

[2], “Wi-Fi Identification Scope, In a post MAC Randomization Era”, WBA Testing & Interoperability Work Group, April 2021

[3] “Liaison Statement to IEEE 802.11”, WBA Wi-Fi Devices Identification Group, 02/23/2022, <https://mentor.ieee.org/802.11/dcn/22/11-22-0668-00-0000-liaison-statement-from-wba-re-wi-fi-devices-identification-group.pdf>

[4] “Wi-Fi Devices Identification, A Way Through MAC Randomization”, WBA Wi-Fi Devices Identification, March 2022

Sincerely,

Dorothy Stanley

Chair, IEEE 802.11 WLAN Working Group

1. This document represents the views of the IEEE 802.11 Working Group,and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802. [↑](#footnote-ref-1)