Minutes IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGbh Meeting Minutes, February 8, 2022  Randomized and Changing MAC addresses (RCM) | | | | |
| Date: 2022-11-01 | | | | |
| Author(s): | | | | |
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Abstract

This document contains the minutes of the IEEE 802.11bh telecom Interim meeting February 8, 2022.

Note: Highlighted text are action items.

Q- proceeds a question asked at the meeting

A- proceeds an answer

C- proceeds a comment

**Meeting Feb 8, 2022 9.00 to 11.00 am ET**

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

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

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

**Secretary: Graham Smith (SRT Wireless)**

**Editor: Carol Ansley (Cox)**

**The teleconference was called to order by Chair 9.03 hrs. EDT,**

Agenda slide deck 11-22/0290r0

1. **Policies and procedures were presented by the chair. (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)
* Issues Tracking updates/status: [11-21/0332r29](https://mentor.ieee.org/802.11/dcn/21/11-21-0332-29-00bh-issues-tracking.docx)
* Contributions:
  + [11-22/0157r0](https://mentor.ieee.org/802.11/dcn/22/11-22-0157-00-00bh-mac-address-designation-maad.pptx): MAC address designation (partially reviewed Jan 21)
  + [11-22/0158r2](https://mentor.ieee.org/802.11/dcn/22/11-22-0158-02-00bh-sta-generated-device-id.docx): STA generated device ID
  + [11-22/0187r0](https://mentor.ieee.org/802.11/dcn/22/11-22-0187-00-00bh-network-generated-device-id.docx): Network generated device ID
* Evaluation of proposed solutions
* Discussion on way forward on solutions/contributions
* Review of Issues Tracking uncovered items (margin comments, etc.)
* Next meetings: Feb 17 19:00 ET, Feb 22 9:00 ET, Mar 3 19:00 ET

Any comments? Any objections to agenda? - None

Agenda accepted.

Chair noted that the timeline is still off track but hopefully D0.1 for March 2022.

1. **Contributions**

Chair asked how to go forward with evaluation of the contributions. Also review if we have covered all the issues in the Tracking document.

Chair asked if 22/0157 MAAD MAC needed

C – STA generated case, AP assigned case, is it up to client to use.

A - STA starts it by sending request. STA can choose not to use it. Not sure why this might happen. STA would not send request.

C – What differences with the STA ID scheme.

A – STA ID does not need packet exchange. But needs controls on the STA ID, duplications, for example. STA could have a dual identity.

C – Action frame, not needed for first exchange. Think about a scheme not needing an action frame to send request. More automatic. Only use request for exceptional case.

A – STA could use a IE in Association Request but then 3rd party knows scheme in use.

**STA Generated Device ID 22/0158r2**, presented by Jouni Malinen.

Added TTL and changes from online comments. Presenter looked at the updates and changes.

C – TTL we have this parameter, some have it, some don’t, if it changing say I give 24 hours but in middle of association, what happens? Expiring is not a specific time? Should it be more like “at end of association” or something like that.

C - Is TTL a one-time value that cannot be extended.

A – Send once at the association. Added a note to make sure it cannot expire during ESS association.

C – TTL could be out of scope, but the ID query scheme using action frames could be used to change TTL but that may be out of scope.

**Network generated Device ID 22/0187r0** presented by Jouni Malinen.

Similar to 22/0158 but replaces to replace STA generated ID with a network one and follows design as per 22/0154.

C – The Blob is it important how that is generated? Does it mean something? Need text on AP side on how to generate it?

A – Could be helpful to indicate how to generate it. Include an informative example?

C – Lot of choices for the blob, and could mimic FILS. For FT we used frame formats to handle over the Air and over the DS styles. Don’t think we have that problem here.

A – Not sure accurate for FT. Opaque blob use by AP and copied by the STA.

Q – How to compare the two options, STA or network generated?

A – For STA is somewhat simpler. STA can decide if used between ESSs. On network removes the need for STA to think about generating IDs. STA side somewhat more complexity as ID changes all the time. But at similar levels. Do not have strong views which is better. Need to look at Uses Cases maybe.

Q – Still confused, is the blob encrypted? Is it standardized?

A - Not required to be standardized. Blob is encrypted in 4way HS. Not needed to be separately encrypted but is simply opaque data. Blob could be encrypted and we could have an informative example.

1. **Evaluation of solutions**

Chair – How to compare these solutions across the requirements?

Chair showed slide 16 with all the proposals. How do we select?

Can we combine?

Can we adopt more than one?

Open question to the TG.

C - Difficult to make recommendations. Combining? technically yes but do not really like coming up with alternative ways, prefer one way. Prefer select small number, one ideally. Look at key requirements?

C – Basically three groupings. Transport during association or post association, then creating ID – where? encrypted or not? Decisions could then par the list down.

Chair – Cut evaluation down to three points?

Message exchange(s)

During association

Post association

ID generation

Network

STA

Use Cases covered.

***Chair captured on screen, a list of Main Considerations during the following discussion.***

C – Each proposal is a simple selection of these points.

C - Maybe comes down to network or STA generated? Maybe have one of each?

C – Could first of all look at traffic flow message exchange and use that as a cut. Do we want this at association or post?

C – Least traffic the better?

C – A robust action frame is post association, a 4-way HS is not.

C – Multiple cases for “association”, FILS, FT regular 4-way, etc. simple term does not cover all the cases. Can we simplify. What is main difference? Design something completely new? Use protocols we have? How much “new” design?

C – Does AP need this identifier before network/services? Can it be changed during association? Number of message exchanges?

Chair opined that presenters need to come up with a simple presentation to state to group why their scheme meets these criteria. Not just what is does but why it should be used. Attempt to get some consensus.

Chair - Think about this, come to next meeting prepared. Spread decisions over a couple of meetings as next meeting is evening (US) time.

C – Maybe a two slide presentation, outline, advantages and discussion.

Chair – Does anyone think they need more information, or could compare against these criteria and would need more information.

C – Helpful would be a table of Use Cases and columns for each proposal – fully covered, partly covered etc.

Chair – Table 1 in the Issues document.

C – Do not remember all details of all proposals, especially the simple ones. Not easy to remember details of every proposal.

C – Remember that Use Case 4.2 was almost deemed sufficient. “Identifying same device when it comes back assuming an RSN network”.

C – Spoof AP and Spoof STA considerations?

Chair- Suggest we need straw polls and discussions to down select against these points at the next meetings. Open to suggestions. Will look at Issue Tracking document to check if areas not covered by existing solutions.

Any more business? None

**Out of agenda**

**Meeting adjoined at 10.59 am ET.**

**Attendance**

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| Breakout | Timestamp | Name | Affiliation |
| TGbh | 2/8 | Andersdotter, Amelia | Sky UK group |
| TGbh | 2/8 | Ansley, Carol | Cox Communications Inc. |
| TGbh | 2/8 | baron, stephane | Canon Research Centre France |
| TGbh | 2/8 | Halasz, David | Morse Micro |
| TGbh | 2/8 | Hamilton, Mark | Ruckus/CommScope |
| TGbh | 2/8 | Huang, Po-Kai | Intel Corporation |
| TGbh | 2/8 | Kneckt, Jarkko | Apple, Inc. |
| TGbh | 2/8 | Kumari, Warren | Google |
| TGbh | 2/8 | Lu, Liuming | Guangdong OPPO Mobile Telecommunications Corp.,Ltd |
| TGbh | 2/8 | Malinen, Jouni | Qualcomm Incorporated |
| TGbh | 2/8 | Orr, Stephen | Cisco Systems, Inc. |
| TGbh | 2/8 | Smith, Graham | SRT Wireless |
| TGbh | 2/8 | Smith, Luther | CableLabs |
| TGbh | 2/8 | Torab Jahromi, Payam | Facebook |
| TGbh | 2/8 | Yee, Peter | NSA-CSD |