IEEE P802.11
Wireless LANs

|  |
| --- |
| CID Resolutions IRM - 1  |
| Date: 2023 - July |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Jerome Henry | Cisco Systems | RTP NC USA |  | jerhenry@cisco.com |

Abstract

Proposed resolutions on D1.0 related to IRM comment 28.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CID | Page | Line | Comment | Proposed | Resolution |
| 28 | 33 | 36 | The second sentence in Note3 is same meaning to NOTE1, suggest delete the dupliccated sentence. | delete the second sentence in NOTE 3. | REVISEEditor, please delete note 1, renumber note 2 as note 1, note 3 as note 2, and modify note 3 as identified below. |

**CID 28:**

12.2.11.2

**ORIGINAL:**

The non-AP STA should store the newly allocated IRM MAC address as an identifier for use with that AP/ESS and the AP/ESS should store that IRM MAC address as an identifier for that non-AP STA. The non-AP STA then may use that allocated IRM MAC address as its TA when it next associates or uses PASN to preassociate with that same AP or another AP in the same ESS. In so doing, the AP/ESS will identify the non-AP STA.

NOTE 1—Allocating a new IRM MAC during each association or PASN preassociation ensures that the non-AP STA will use a different TA for the next association or PASN preassociation, and hence that non-AP STA is unidentifiable to a third party.

When a non-AP STA that advertises support for IRM associates to an AP that advertises support for IRM, the AP shall include an IRM KDE in message 3 of the 4-way handshake or, when using FILS authentication, including an IRM element in the Association Response frame. If the AP recognizes the IRM MAC address, the IRM Status field of the IRM KDE or IRM element is set to 1 and the IRM field is reserved. If the AP does not recognize the IRM MAC address, the IRM Status field of the IRM KDE or IRM element is set to 0 and the IRM field is reserved. The non-AP STA, on receipt of an IRM Status field of value 1 may either continue to associate to the AP or disassociate.

NOTE 2—In the case of an initial association to an AP/ESS, the AP will indicate that the non-AP STA is not recognized, but the non-AP STA would ignore that.

An IRM MAC address is a 48-bit address that is constructed from the locally administered address space (see 12.2.10). A non-AP STA should generate the IRM MAC addresses on a random basis such that a returning non-AP STA cannot be identified by a third party from the TA it is using.

When a non-AP STA sends an Authentication Request using an IRM MAC address as the TA to the AP that was allocated that address, then that AP can identify the non-AP STA before association is started or completed. A non-AP STA may use that address for direct or broadcast probing for an AP or ESS that was allocated that address, such that the AP may identify the non-AP STA and note that that particular non-AP STA is within range of the WM, but only if the non-AP STA wants to be identifiable at that time. A non-AP STA that has allocated an IRM MAC address to an AP/ESS, may use that address in a public action frame (e.g., ANQP frame) such that the AP/ESS may identify the non-AP STA, if that non-AP STA had previously associated or used PASN to preassociate with that AP/ESS.

NOTE 3—In State 1 and State 2, the IRM MAC address is recommended to be used only in authentication and (re)association frames. To ensure good STA privacy, a non-AP STA is recommended to change its IRM MAC Address in every 4-way handshake.

**PROPOSED (Note only)**~~NOTE 1—Allocating a new IRM MAC during each association or PASN preassociation ensures that the non-AP STA will use a different TA for the next association or PASN preassociation, and hence that non-AP STA is unidentifiable to a third party.~~

…/…

NOTE ~~2~~1 -

…/…

NOTE ~~3~~2—In State 1 and State 2, the IRM MAC address is recommended to be used only in authentication and (re)association frames, respectively. To ensure good STA privacy, a non-AP STA is recommended to change its IRM MAC Address in ~~every 4-way handshake~~ each association or PASN preassociation.