IEEE P802.11  
Wireless LANs

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| CID Resolutions IRM - 2 | | | | |
| Date: 2023 - August | | | | |
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Abstract

Proposed resolutions on D1.0 related to IRM scheme.

107, 129, 192, 195, 200, 201, 203, 260, 266

Rev 1 Remove 236, 237

Rev 2 edits, ready for discussion.

Rev 3 Meeting 10/24/2023

Rev 4 editing on CID 107

Rev 5 further editing CID 107

Rev 6 Resolved CIDs 107 and 195. Also added proposal for CID 103

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| CID | Page | Line | Comment | Proposed | Resolution |
| 107 | 32 | 39 | The sentences in this paragraph look to be out of order in terms of the negotiation. I would assume that the AP would advertised Device ID/IRM in the RSNXE. The STA would discover the capability, and then include the elements in the (re-)association reque | Replace the cited paragraph with the following: "An AP advertises support for IRM by setting the IRM Active field to 1 in the Extended RSN Capabilities field of the RSNXE in Beacon, and Probe Response frames. A non-AP STA indicates activation of IRM for a particular ESS by setting the IRM Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE)) in (Re)Association Request frames or the first PASN frame (when using PASN) sent to any AP in the ESS. An AP indicates activation of IRM by setting the IRM Active field to 1 in the Extended RSN Capabilities field in (Re)Association Response, or in the second PASN frame (when using PASN)." | CID 103’s resolution has very similar text to CID 107, and CID 103’s resolution has already been motioned and also applied to CIDs 244 and 72.  However, in order to align the text for device ID and IRM, it is proposed to amend the resolution for CIDs 103, 244 and 72 as follows:  REVISED  Incorporate the text for CIDs 107, in this document  ALSO  Incorporate the text for CIDs 103, 244, 72 in this document  (See end of this document). |
| 129 | 33 | 32 | ANQP information is exchanged using elements and not frames. I think reference to GAS would be better than ANQP. There's also a missing article. | Change "e.g., ANQP frame" to "e.g., a GAS frame" | ACCEPT |
| 192 | 32 | 47 | "during the RSN association" -- RSN is implicit. Also "during" is not clear | Change to "at association" | REVISE  Change to “during association” |
| 195 | 32 | 62 | "an identifier for use with that AP/ESS" -- well, which is it -- does it have ESS scope or just AP scope? | Clarify | REVISE  Incorporate the text for CID 195 in this document.  (see end of document)  Shorter sentence seems to be preferred |
| 200 | 33 | 27 | "direct or broadcast probing" -- these terms are not defined | Change to "active scanning" | ACCEPT |
| 201 | 33 | 30 | "within range of the WM" -- the WM covers the entire universe so is necessarily within range | Change to "within the BSA" or "within range of the AP" | REVISE  Change to  “within the extended service area” |
| 203 | 33 | 35 | "State 1 and State 2" -- presumably this is referring to the auth/assoc/security state, but this is not clear | Give xref to 11.3 | REVISE  After “In State 1 and State 2” Add “ (see 11.3.1 State Variables)”  Note: CID 28 changed the text of this Note, but this intro is untouched. |
| 260 | 33 | 22 | The term "returning non-AP STA" is not defined or explained. | Delete "returning". | ACCEPT |
| 266 | ~~42~~33 | 36 | Note 3 call out "to ensure good STA privacy". Not sure what "good STA privacy" implies. Should consider changing "good" to "optimal" | As commented | REVISE  Replace  “To ensure good STA privacy”  With  “To enhance STA privacy” |

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CID 107

“At 32.39, replace the cited paragraph”

“A non-AP STA indicates activation of IRM for a particular ESS by setting the IRM Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE) in (Re)Association Request frames sent to any AP in the ESS. An AP indicates activation of IRM by setting the IRM Active field to 1 in the Extended RSN Capabilities field in Beacon, (Re)Association Response, and Probe Response frames. All APs in each ESS shall set this field to the same value.”

with:

"An AP advertises support for IRM by setting the IRM Active field to 1 in the Extended RSN Capabilities field of the RSNXE in Beacon, and Probe Response frames. A non-AP STA indicates activation of IRM for a particular ESS by setting the IRM Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE)) in (Re)Association Request frames or the first PASN frame (when using PASN) sent to any AP in the ESS. An AP indicates activation of IRM by setting the IRM Active field to 1 in the Extended RSN Capabilities field in (Re)Association Response, or in the second PASN frame (when using PASN). All APs in each ESS shall set these fields to the same value. "

*NOTE: Last sentence is subject of CID108*

TG wanted to make text align with the Device ID text as per CID 103.

**CID 103 in 1316r14 for Device ID .**

“An AP that has dot11DeviceIDActivated equal to true advertises activation of the device ID mechanism by setting the Device ID Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE)) in Beacon and Probe Response frames. A non-AP STA that has dot11DeviceIDActivated equal to true, indicates activation of the device ID mechanism by setting the Device ID Active field to 1 in the Extended RSN Capabilities field in (Re)Association Request frames or the first PASN frame (when using PASN) sent to any AP in an ESS that has dot11DeviceIDActivated equal to true and that receives a (Re)Association Request frame or the first PASN frame(when using PASN) that includes an Extended RSN Capabilities field with the Device ID Active field equal to 1 shall do one of the following:

- include an Extended RSN Capabilities element in the (Re)Association Response frame with the Device ID Active field set to 1.

- include an Extended RSN Capabilities element in the Second PASN frame(when using PASN) with the Device ID Active field set to 1.

The Device ID mechanism depends on all APs in the ESS being configured with dot11DeviceIDActivated set to true.”

**COMMENT:**

The second sentence is too long and very difficult to parse, especially with the two options. It needs re-wording. Jay indicated that his original text was different, and I reflect that below.

**Suggested changes**

“An AP that has dot11DeviceIDActivated equal to true advertises activation of the device ID mechanism by setting the Device ID Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE)) in Beacon and Probe Response frames. A non-AP STA that has dot11DeviceIDActivated equal to true, indicates activation of the device ID mechanism by setting the Device ID Active field to 1 in the Extended RSN Capabilities field in (Re)Association Request frames or the first PASN frame ~~(when using PASN)~~ sent to any AP in an ESS that has dot11DeviceIDActivated equal to true. An AP that has dot11DeviceIDActivated equal to true and that receives a (Re)Association Request frame or the first PASN frame~~(when using PASN)~~ that includes an Extended RSN Capabilities field with the Device ID Active field equal to 1 shall do one of the following:

- include an Extended RSN Capabilities element in the (Re)Association Response frame with the Device ID Active field set to 1.

- include an Extended RSN Capabilities element in the ~~S~~second PASN frame~~(when using PASN)~~ with the Device ID Active field set to 1.

The Device ID mechanism depends on all APs in the ESS being configured with dot11DeviceIDActivated set to true.

*ALTERNATIVE last sentence (as proposed by Mike M):*

“Activation of the device ID mechanism needs to be advertised by all APs in an ESS in Beacons and Probe Response frames.”

**On Reflector, Mike M (CID 107 commentor) suggested separating into paras for easier reading.**

**Using this edited text, but substituting for IRM.**

**After discussions and editing 10/31/2023, the TG proposed the following resolution:**

**CIDs 107**

**REVISED**

**TGbh editor: please eplace**

“A non-AP STA indicates activation of IRM for a particular ESS by setting the IRM Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE) in (Re)Association Request frames sent to any AP in the ESS. An AP indicates activation of IRM by setting the IRM Active field to 1 in the Extended RSN Capabilities field in Beacon, (Re)Association Response, and Probe Response frames. All APs in each ESS shall set this field to the same value.”

“An AP that has dot11IRMActivated equal to true advertises support of the IRM mechanism by setting the IRM Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE)) in Beacon and Probe Response frames.

**With**

“A non-AP STA that has dot11IRMActivated equal to true, indicates activation of the IRM mechanism by setting the IRM Active field to 1 in the Extended RSN Capabilities field in (Re)Association Request frames or the first PASN frame sent to any AP in an ESS that has dot11IRMActivated equal to true.

An AP that has dot11IRMActivated equal to true and that receives a (Re)Association Request frame or the first PASN frame that includes an Extended RSN Capabilities field with the IRM Active field equal to 1 shall do one of the following:

- include an Extended RSN Capabilities element in the (Re)Association Response frame with the IRM Active field set to 1.

- include an Extended RSN Capabilities element in the second PASN frame with the IRM Active field set to 1.

Correct operation of the IRM mechanism depends on all APs in the ESS being configured with dot11IRMActivated set to true. Support of the IRM mechanism needs to be advertised by all APs in an ESS in Beacons and Probe Response frames.”

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**In order to align the text for device ID and IRM, the TG proposed to amend the resolutions for CID 103, 244 and 72 as follows:**

**CID 103, 244, 72**

**Amended**

**REVISED**

**TGbh editor: please replace:**

“A non-AP STA indicates activation of device ID for a particular ESS by setting the Device ID Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE)) in (Re)Association Request frames or the first PASN frame (when using PASN) sent to any AP in the ESS. An AP indicates activation of Device ID by setting the Device ID Active field to 1 in the Extended RSN Capabilities field in Beacon, (Re)Association Response, and Probe Response frames, or in the second PASN frame (when using PASN). All APs in a given ESS shall set this field to the same value.”

**With**

“An AP that has dot11DeviceIDActivated equal to true advertises support of the device ID mechanism by setting the Device ID Active field to 1 in the Extended RSN Capabilities field (see 9.4.2.241 (RSNXE)) in Beacon and Probe Response frames.

A non-AP STA that has dot11DeviceIDActivated equal to true, indicates activation of the device ID mechanism by setting the Device ID Active field to 1 in the Extended RSN Capabilities field in (Re)Association Request frames or the first PASN frame sent to any AP in an ESS that has dot11DeviceIDActivated equal to true.

An AP that has dot11DeviceIDActivated equal to true and that receives a (Re)Association Request frame or the first PASN frame that includes an Extended RSN Capabilities field with the Device ID Active field equal to 1 shall do one of the following:

- include an Extended RSN Capabilities element in the (Re)Association Response frame with the Device ID Active field set to 1.

- include an Extended RSN Capabilities element in the second PASN frame with the Device ID Active field set to 1.

Correct operation of the device mechanism depends on all APs in the ESS being configured with dot11DeviceIDActivated set to true. Support of the Device ID mechanism needs to be advertised by all APs in an ESS in Beacons and Probe Response frames.”

CID 195

“well, which is it -- does it have ESS scope or just AP scope?”

**REVISE**

**Replace**

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.

**With**

The non-AP STA should store the newly allocated IRM as an identifier for itself for use with the AP(s) in the ESS, and the AP(s) should store that IRM as an identifier for that non-AP STA.