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| CR for CIDs in subclause 12.2.12.1 |
| Date: 2024-1-10 |
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Abstract

This submission proposes resolutions for the following CIDs:

R0: initial the draft

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGbh D1.0 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbh D1.0 Draft. (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbh Editor: Editing instructions preceded by “TGbh Editor” are instructions to the TGbh editor to modify existing material in the TGbh draft. As a result of adopting the changes, the TGbh editor will execute the instructions rather than copy them to the TGbh Draft.***

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| **CID** | **Page/Line** | **Comment** | **Proposed Change** | **Resolution** |
| 282 | 30/33 | If a device ID is allocated by the AP, then how can the non-AP STA also provide the device ID? The word 'provide' is unclear here because on line 18 it is decribed that the AP 'provide' an identifier. Does it mean that the non-AP STA indicate the device ID allocated by the AP? | Please clarify | **Rejected--**The commenter ask question rather than figure out any issue.Answer:The general procedure is that AP/ESS allocates a device ID to the STA during the association. When the STA leaves the AP/ESS and come back and intends to be recognized as a return STA by the ESS, the STA will provide the allocated device ID to the ESS in the next associating procedure. |
| 72 | 30/38 | The description of "...advertises support of the device ID mechanism..." is incomplete. | Suggest to change "An AP that has dot11DeviceIDActivated equal to true advertises support of the device ID mechanism..." to ""An AP that has dot11DeviceIDActivated equal to true shall advertise support of the device ID mechanism..." | **Rejected--**The commenter suggest to change “advertises ” to “shall advertise”, seems unnecessary. |
| 121 | 30/45 | "sent to any AP in an ESS that has dot11DeviceIDActivated equal to true" -- a STA cannot directly observe an AP's MIB | Reword in terms of OTA signalling | **Revised--**Agree in principle.Change “sent to any AP in an ESS that has dot11DeviceIDActivated equal to true” to “sent to any AP in an ESS that advertises support of the device ID mechanism” |
| 123 | 31/1 | "A STA shall not send a frame containing a device ID element to any STA unless the receiving STA sets the Device ID Active field to 1 in the Extended RSN Capabilities field." -- this prevents e.g. associating without first scanning | Delete the cited text | **Rejected--**The time interval between discovery and association procedure can be quiet long.e.g. the STA found and record the AP’s information three days ago, and the STA may send the association frame after back to the same place without scanning. Logically, before the association, the STA still need to find the AP first. And thus, this current logic is correct. |
| 238 | 31/1 | why can't a STA send an AP an element it doesn't know about? | Remove this restriction. | **Rejected--**The Device ID is used by the STA to identify itself according to current definition. It’s unreasonable that STA provides it’s Device ID for identification without knowing whether the AP support it or not. This paragraph can avoid such concern. |
| 124 | 31/4 | Aren't these two paras duplicating the second-to-last-two paras on the previous page? | Delete the paras in question on the previous page, since here it's clearer and more complete | **Rejected--**The para in P30L49 talks the Device ID flag setting in RSNE field in certain frame, while the para in P31L5 talks Device ID element and Device ID KDE carrying in certain frame, and thus the two para don’t duplicate with each other. |
| 73 | 31/5 | The description is unclear as a non-AP STA may have no Device ID configured. For example the STA starts to associate with the AP for the first time so that no Device ID has been configured. Need to add the condition. | Suggest to change "A non-AP STA shall provide a device ID when required by the procedures described below:" to ""If A non-AP STA has a device ID configured, then it shall provide a device ID when required by the procedures described below:" | **Accepted--** |
| 37 | 31/19 | "A non-AP STA may delete a stored device ID at any point in time for implementation-specific reasons (for example, configuration changes have lost the device ID, or sufficient time has passed since the last association to the ESS)." Do we reaaaly need to say this? We don't want the STA to do this, or the AP for that matter. I would delete. | Delete cited text | **Revised--**The resolution is same to CID240 |
| 240 | 31/19 | does the AP need to retain all device IDs? Only the STA gets the privilege of deleting them for any reason? Doesn't sound right. | remove "non-AP". Any STA can delete a device ID. We have this whole "not recognized" device ID stuff to handle it. | **Accepted--** |
| 126 | 31/20 | "sufficient time has passed" -- sufficient for what/whom? | Change to "a certain amount of time has passed" | **Accepted-**- |
| 40 | 31/29 | " receives a non-AP STA Identity frame". What is this? I assume it is a Device ID? | Change cited text to "receives a Device ID from a non-AP STA" | **See the proposed resolution under the table** |
| 128 | 31/29 | "Identity frame" -- no such frame | Refer to a frame that exists | **Revised--**the resolution is same to CID40 |
| 129 | 31/29 | "from a non-AP STA withdot11DeviceIDActivated equal to true" -- can't access another STA's MIB | Refer to over-the-air signalling. Also add space after "with" | **Revised--**the resolution is same to CID40 |
| 226 | 31/29 | This following paragraph has some issues:When an AP with dot11DeviceIDActivated equal to true receives a non-AP STA Identity frame from a non-AP STA withdot11DeviceIDActivated equal to true and the received device ID is recognized, the AP shall perform one of the following actions:1) With the Device ID field not present (indicating the current device ID is maintained) and set the Device ID Status field of the Device ID KDE or Device ID element to 0 to indicate that the AP recognizes the non-AP STA in the appropriate frame.2) Assign a new device ID value in the Device ID field and set the Device ID Status field of the Device ID KDE or Device ID element to 0 in the appropriate frame. | 1- Delete "non-AP STA Identity frame" because there is such definition as Identity Frame.2- Clarify "appropriate frame" in 1) and 2) | **Revised--**Item 1: the resolution is same to CID40Item 2: the appropriate frame refer to the frame defined in P31L12. |
| 50 | 31/30 | It makes sense that to allow Device ID to be used across all APs in an ESS. However for that solution to function properly there needs to be an assumption that somehow, all AP's can recognize the Device ID for a STA | In order for an AP in an ESS to "recognize" a device ID, there needs to be a a mechanism to distribute or provide centralized query of the the device ID. The mechanism can be beyond the scope of the standard, but the behavior should be captured somewhere. | **Revised--**Agree in principle.Add the following sentence at the end of the paragraph in L24P31 “The synchronization for Device ID assignment across all the APs in an ESS is outside the scope of this standard. ” |
| 41 | 31/32 | "With the Device ID field not present (indicating the current device ID is maintained) and set theDevice ID Status field of the Device ID KDE or Device ID element to 0 to indicate that the AP recognizes the non-AP STA in the appropriate frame." Reads awkward. Needs re-ordering | Replace cited text with "Set theDevice ID Status field of the Device ID KDE or Device ID element to 0 to indicate that the AP recognizes the non-AP STA and set the Device ID field to zero length (indicating the current device ID is maintained)." | **Accepted--** |
| 130 | 31/32 | "With the Device ID field not present (indicating [...]) and set [...]" -- sentence doesn't make sense | As it says in the comment | **Revised--**The resolution is same to CID41 |
| 132 | 31/39 | "When an AP with dot11DeviceIDActivated equal to true receives a first PASN frame containing a device IDwhich is recognized, the AP shall assign a new device ID value to the non-AP STA, via setting a new device ID in the Device ID field with the Device ID Status field of the Device ID element set to 0 to indicate that the AP recognizes the non-AP STA in the second PASN frame." -- wonky wording | Change to "When an AP with dot11DeviceIDActivated equal to true receives a first PASN frame containing a device IDthat it recognizes, the AP shall assign a new device ID value to the non-AP STA and include this new device ID in a Device ID element in the second PASN frame, setting the Device ID Status field of the Device ID element to 0 to indicate Recognized." | **Accepted--** |
| 42 | 31/40 | "When an AP with dot11DeviceIDActivated equal to true receives a first PASN frame containing a device ID which is recognized, the AP shall assign a new device ID value to the non-AP STA, via setting a new device ID in the Device ID field with the Device ID Status field of the Device ID element set to 0 to indicate that the AP recognizes the non-AP STA in the second PASN frame." Long sentence and loses itself in the latter stages. | Replace cited text with "When an AP with dot11DeviceIDActivated equal to true receives a first PASN frame containing a device ID which is recognized, the AP shall assign a new device ID value to the non-AP STA. In the Device ID element in the second PASN frame, the Device ID Status field is set to 0 to indicate that the AP recognizes the non-AP STA, and a new device ID is included in the Device ID field." | **Accepted--** |
| 59 | 31/41 | "the AP shall assign a new device ID value to the non-AP STA". PASN requires that the device ID is changed every association. I am uneasy that calling this "device ID" is misleading. Device ID is meant to be more of a permanent identity, say maybe an identity that means something. If the STA then uses PASN then the "permanent "device ID would be overwritten. If PASN is only used for APs used in FTM and never associates to those APs then this is OK. If, however, the APs are also, say, part of a network as well and the STA may connect as a customer, say, then this may coause a problem. In teh radio measurment case, the temporary "device ID" was given another name "measurement ID', why not use the same term for PASN, or maybe a different term "PASN ID"?? | Please discuss to see if there is agreement to change the name of the ID used with PASN. If so, then commenter would be willing to prepare the edits. | **Need more discussion** |
| 43 | 31/45 | "When a non-AP STA receives a frame that contains a Device ID Status field in the Device ID KDE or Device ID element equal to 0 it may proceed with the assumption that the shared identity state with the AP or ESS (as per the concepts of 12.2.10) is now bound to the TA field in the Association Request frame most recently transmitted by the non-AP STA." I don't really know what this means. I thought the idea of device ID was to seperate the MAC address from the identity, i.e, nothing to do with the TA. Unless someone can explain the usefulness of this sentence, I would delete it. | Delete cited sentence | Assign to Mark |
| 227 | 31/46 | This paragraph explains that if the device ID is recognized, there is a shared state; however, this paragraph only applies to association (because of mentioning Association Request). PASN does not have Association request so PASN case is not covered. | Change the paragraph as follows to cover PASN case too:When a non-AP STA receives a frame that contains a Device ID Status field in the Device ID KDE or Device ID element equal to 0 it may proceed with the assumption that the shared identity state with the AP or ESS (as per the concepts of 12.2.10) is now bound to the TA field in the Association Request frame or Authentication frame most recently transmitted by the non-AP STA. | **Revised--**Agree in principle.Replace “in the Association Request frame most recently transmitted by the non-AP STA”With “in the Association Request frame or the first PASN frame most recently transmitted by the non-AP STA” |
| 241 | 31/46 | what is the non-AP STA supposed to do with this binding? | Either explain what the non-AP STA does with this binding or remove this paragraph. | Assign to Mark |
| 131 | 31 | There are 4x references to "shared identity state" but this state is not defined | As it says in the comment | Assign to Mark |
| 255 | 32/23 | In addition to no "Device ID" (the protocol element), there is no "device ID" (the concept), yet, for the initial connection in Figure 12-0a. | In the label on the left of "AP-1" line, change "No Device ID" to "No device ID" (lower-case 'd'). | **Note: The proposed resolution is under the table** |
| 142 | 32/54 | "(including nothing if the device ID is encrypted)" is confusing because in the example at least DIDs are always encrypted | As it says in the comment | **Rejected-**-In the example, DID in the first PASN frame is sent over the air, in order to enhance the security, DID should be encrypted by anything solution including AnnexAD solution. |
| 140 | 32 | What happens if an AP assigns a new DID (e.g. devID2 in the example) but the STA doesn't rx it for whatever reason. Then next time the STA will use the old DID but the new AP won't recognise it | Recommend the AP remember the previous DID too. Hm, but by then the previous DID has been sent unencrypted, so not sure this is safe | **Rejected-**-If the STA lost the latest DID for any reason, it will go with unrecognized procedure,see the procedure in L51P31 |
| 169 | 35/18 | "The Device ID field contains a device ID as defined in 9.4.2.311 (Device ID element)." -- sadly, 9.4.2.311 doesn't define what a device ID is | Use a more suitable xref | **Revised--**Agree in principle.Device ID is defined in subclause 3.2,but it’s unnecessary to cited the default definition subclause.Change “The Device ID field contains a device ID as defined in 9.4.2.311 (Device ID element)” to “The Device ID field contains a device ID “ |
| 177 | 38/14 | "-- If dot11DeviceIDActivated is true, including a Device ID element containing a device identifier as defined in 9.4.2.311 (Device ID element)" -- not consistent with the previous wording | Append ", if required per the procedure in 12.2.12.1 (Device ID mechanism)" | **Accepted--** |
| 133 | 46 | "may proceed with the assumption that the shared identity state with the AP or ESS (as per the concepts of 12.2.10) is now bound to the TA field in the Association Request frame" -- it is not clear what the implications/consequences of this assumption are | As it says in the comment | Assign to Mark |
| 134 |  | Some locations talk of "Device ID element or Device ID KDE" but some only mention of the options, e.g. "When an AP with dot11DeviceIDActivated equal to true receives a first PASN frame containing a device IDwhich is recognized, the AP shall assign a new device ID value to the non-AP STA, via setting a new device ID in the Device ID field with the Device ID Status field of the Device ID element set to 0 to indicate that the AP recognizes the non-AP STA in the second PASN frame." | Shouldn't they all mention both? | **Rejected-**-Clarification:Device ID element is carried in the association in FILS mode and PASN frame, and DID KDE is carried in EAPOL-Key frame. When a sentence only cover the PASN case, it’s enough to mention DID element only.  |

**CID 40**

Revised--

 Replace “

When an AP with dot11DeviceIDActivated equal to true receives a non-AP STA Identity frame from a non

AP STA withdot11DeviceIDActivated equal to true and the received device ID is recognized,

“

With “

When an AP with dot11DeviceIDActivated equal to true receives a frame containing device ID from a non

AP STA, and the received device ID is recognized,

”

**CID 255**

**Revised--**

**Replace the figure of** 12-0a **with the following, the original Visio is attached below.**

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