IEEE P802.11  
Wireless LANs

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| 11bi D1.0 Resolution of CIDs 256, 759 | | | | |
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Abstract

This submission addresses the comments with CID: 256, 759

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Modified based on discussion at Madrid meeting
* Rev 2: Modified based on discussion at Madrid meeting

***Editing instructions formatted like this are intended to be copied into the TGbi D1.2 Draft. (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents). TGbi Editor: Editing instructions preceded by “TGbi Editor” are instructions to the TGbi editor to modify existing material in the TGbi draft. As a result of adopting the changes, the TGbi editor will execute the instructions rather than copy them to the TGbi Draft.***

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| **CID** | **Clause** | **P.L.** | **Comment** | **Proposed Change** | **Resolution** |
| 256 | 10.71.6.5 | 96.28 | Lack of assigned AID values should not cause a STA disassociation. A CPE or BPE STA has valid MAC Address and SN/PN anonymized fields. The STA may request new AID values and operation in associated state 4 may continue normally. | Please allow a non-AP MLD to request new AID values, if the non-AP MLD has run out of AID values. The AP should be encouraged to avoid disassocation and enable reliable service for the STAs. | REVISE  Editor, please implement changes tagged (#256) in document 25/1290r2 |
| 759 | 10.71.7 | 94.1 | If a CPE non-AP MLD has no available AID during an epoch the AP MLD shall disassociate the CPE non-AP MLD. This is a quite abrupt way to handle the AID exhaustion, leading to disconnections and poor user experience. | Design a mechanism for a STA to request a new AID list when it's exhausted (e.g., when waking up from a long sleep) without the need to go through disassociation and fresh new association. | REVISE  Editor, please implement changes tagged (#759) in document 25/1290r2 |

*Please note that the above Clause, Page and Line number for CID 256 do not match the draft D1.0 available on the server.*

***Proposal:***

**TGbi Editor: *Instruction: Modify the clause 10.71.7 as shown below***

* Frame anonymization and AID

Upon advertisement of EDP groups (as defined in 10.71.2.2 (EDP group operations)), the CPE AP MLD shall include an AID Storage Size field in the EDP element it transmits.(#594)

A CPE non-AP MLD shall include an AID Storage Size field in the EDP element of each(#358) (Re)Association Request frame and EDP Epoch(#859) Request frame it transmits.(#595)

If the AID Storage Size field indicated by the CPE non-AP MLD is lower than that(#596) indicated by the CPE AP MLD, then the CPE AP shall transmit an EDP Response frame with FAILURE\_AID\_STORAGE\_TOO\_SMALL in the Status field to indicate that the non-AP MLD is not allowed to join in the EDP group.(#597)

A CPE AP MLD generates a list of AIDs that an associated CPE non-AP MLD shall use in the subsequent epochs. While generating the list of AIDs, the AP MLD shall apply the rules in 35.3.5.1 (ML (re)setup procedure) and ensure that, at any point of time, each non-AP MLD is assigned an unique AID value.(#360)

The AID list size (indicated by the Number of Epochs field in Figure 9-1074du (AID List Value field) shall be smaller than(#823) or equal to the value of AID Storage Size provided by the CPE non-AP MLD.

The CPE AP MLD shall include the AID List element in the (Re)Association Response frame.

The CPE non-AP MLD shall use the AID field in the (Re)Association Response for any communication in the EDP epoch where the (Re)Association Response is received.(#762)

For subsequent AID assignments, the(#762) CPE AP MLD shall transmit(#762) an(#875) AID Assignment frame to the non-AP MLD with the AID List element that contains(#824) the AID values.(#557) If the AID assignment operation has been successful, the CPE non-AP MLD and the CPE AP shall use the AIDs in the AID List element for any communications, starting from the epoch indicated in the(#599) Start Epoch field(#133), for the number of epochs indicated(#599) in the Number Of Epochs(#133) field.

A receiving CPE non-AP MLD, that has not been able to store every AID of the AID list shall respond(#600) with an AID Assignment Response frame. The Status Code field in the AID Assignment Response frame shall be set according to the result of the AID assignment operation as follows:(#557)

* Status Code SUCCESS\_AID\_LIST\_PARTIALLY\_STORED indicates that the AID assignment operation has been successful but only the initial part of the AID list has been stored by the CPE non-AP MLD. In this case, the CPE non-AP MLD shall include the Number Of Stored AIDs field and set it to the number of the stored AID values.
* Status Code FAILURE\_AID\_LIST\_NOT\_STORED indicates that the AID assignment operation has failed. The non-AP MLD has not stored any AID in the AID list.

NOTE 1—A CPE non-AP MLD that successfully stores the AID list is not required to respond with an AID Assignment Response frame.

(#132)Before the end of all the epochs indicated in the Number of Epochs field(#133), the CPE AP MLD shall generate a new list of AID values and send a new AID Assignment frame with the new AID List element to the non-AP CPE MLD.

The CPE AP MLD may(#96) generate a new AID list(#603) and send a new AID Assignment frame with the new AID List element to the non-AP CPE MLD.(#827, #97)

If the Start Epoch(#133) field of the AID List element(#604) indicates an epoch for which an AID has been already assigned, the AIDs in the AID list(#603) shall override the previously assigned AIDs beginning from the epoch number value indicated by the received Start Epoch(#133) field of the AID List element. The AID value indicated in the AID field of the (Re)Association Response shall not be overridden.(#762)

Upon AID assignment failure(#605), the CPE AP MLD may repeat the AID assignment operation. Upon subsequent failures, the CPE AP MLD may request the CPE non-AP MLD to join a different EDP group.

~~If a CPE non-AP MLD has no available AID for the(#606) next epoch, the CPE non-AP MLD should(#607, #608) operate with the rest of the FA parameter set and send an AID Assignment Response frame with Status Code set to NO\_ASSIGNED\_AID to request the AP a new AID value assignment(#606). If the CPE AP MLD receives such a frame, the AP MLD shall assign AIDs for the coming epochs to the non-AP MLD and send an AID Assignment frame to it.(#609) .~~(#256, #759)

~~If a CPE non-AP MLD has no available AID during an epoch, due to repeated(#610) failures in AID as-signment operations, the AP MLD shall disassociate the CPE non-AP MLD.~~(#256, #759)

When the CPE non-AP MLD has no available AID for the current or the next EDP epoch, it should request a new AID list to stay associated with the current CPE AP MLD by transmitting an AID Assignment Response Action frame using the Status Code NO\_ASSIGNED\_AID. (#256, #759)

After the CPE non-AP MLD has transmitted the AID Assignment Response Action frame, the non-AP MLD shall set at least one STA to active mode and stay awake until it receives the AID list. (#256, #759)

The CPE AP MLD shall assign new AIDs for the coming EDP epochs and respond transmitting them in an AID Assignment frame. The CPE AP MLD shall not send any data frames to the CPE non-AP MLD not having a valid AID. (#256, #759)

The CPE non-AP MLD not having any AID assigned for the current EDP epoch shall not transmit to the current CPE AP MLD frames other than:

1. AID Assignment Response Action frame
2. Disassociation frame
3. Deauthentication frame
4. Control frames

The CPE AP MLD should disassociate the CPE non-AP MLD using the Status Code NO\_ASSIGNED\_AID, on receiving a protected individually addressed frame not specified in the previous list from a CPE non-AP MLD not having an AID assigned for the current EDP epoch. (#256, #759)