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| Proposed spec texts for AID handling during transition period |
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Abstract

This submission proposes spec text to address the overlap of AIDs during the transition period.

Revision History:

* Rev 0: Initial version of the document

***Discussion:***

During the transition period from one epoch to the next, an AP MLD and associated non-AP MLD(s) may have buffered traffic that references an old AID while transitioning to a new AID.

The AP MLD has knowledge of which AIDs may be problematic during the transition field.

This submission proposes text to direct the AP MLD to use its knowledge to avoid the use of AID 11 messaging or to only use the AIDs from the new FA parameter set during the transition period if any AIDs are duplicated between the two epochs’ FA parameters.

It also directs the AP MLD to use an additional marker bit in an available element in any messages that may be needed for affiliated non-AP STAs with buffered traffic.

The texts are taken from TGbeD7.0 and REVmeD7.0.

This document is intended to be used with 24/796r1.

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

**9.3.1.5.2 Non-BDT variant of the PS-Poll frame format**

***Modify the paragraph as shown.***

The Duration/ID field contains the AID value assigned to the STA transmitting the frame by the AP in the (Re)Association Response frame that established that STA’s current association, with the two MSBs set to 1. If the STA is an EDP non-AP MLD affiliated STA, the AID shall belong to current FA parameter set, e.g. to the new FA parameter set during an EDP Transition period.

**9.3.1.8.6 Multi-STA BlockAck variant**

***Modify the 5th paragraph as follows:***

The Multi-STA BlockAck frame is supported if either UL MU or multi-TID A-MPDU operation is supported and acknowledges MPDUs carried in an HE TB PPDU or multi-STA multi-TID, multi-STA single-TID, or single-STA multi-TID A-MPDUs.

An HE AP that sends a Multi-STA BlockAck frame where the Per AID TID Info fields are addressed to more than one STA sets the RA field to the broadcast address. An HE AP that sends a Multi-STA BlockAck frame where the Per AID TID Info fields are all addressed to a single recipient STA and that is sent in response to an HE TB PPDU sets the RA field of the Multi-STA BlockAck frame to either the address of the recipient STA or to the broadcast address. An HE AP that sends a Multi-STA BlockAck frame where the Per AID TID Info fields are all addressed to a single recipient STA and that is not sent in response to an HE TB PPDU sets the RA field of the Multi-STA BlockAck frame to the address of the recipient STA.

A non-AP HE STA sets the RA field to the TA field of the soliciting frame or to the address of the recipient STA whose Data or Management frames are acknowledged.

During an EDP transition period, the most significant bit of the TID\_INFO subfield of the BA Control field is set to 1 if the AIDs in the AID TID Info subfield are from the previous EDP epoch. The MSB is set to 0 if the AIDs in the AID TID Info subfield are from the current EDP epoch.

Otherwise, the ~~The~~ TID\_INFO subfield of the BA Control field of the Multi-STA BlockAck frame is reserved.

NOTE—A Multi-STA BlockAck frame can only contain AIDs for EDP non-AP MLDs from a single set of FA parameters.

**9.3.1.22.3 Special User Info field**

***Modify Figure 9-90d as shown. Add the subsequent text after the 11th paragraph.***

The format of the Special User Info field is defined in Figure 9-90d (Special User Info field format).



 B37 B38

 1 2 variable

Reserved

Trigger Dependent User Info

~~Reserved~~

Transition Active

During an EDP transition period, the Transition Active subfield of the BA Control field is set to 1 if the AIDs in the AID TID Info subfield are from the FA parameters of the previous EDP epoch. The Transition Active subfield is set to 0 if the AIDs in the AID TID Info subfield are from the current EDP epoch.

NOTE—A Trigger frame can only contain AIDs for EDP non-AP MLDs from a single set of FA parameters.

**9.4.2.328 AID Bitmap element**

**Optional text if positive indication is needed in the AIP Bitmap element that a transition period is in progress.**

The Bitmap Control field is defined in Figure 9-1074bh (Bitmap Control field of the AID Bitmap element).



~~Reserved~~

Transition Active

The Transition Active subfield is set to 1 by EDP AP MLDs when the AID bitmap contains AID values from the previous EDP epoch. It is set to 0 otherwise.

The Bitmap Offset subfield is a bitmap index and is used in the definition of the Partial AID Bitmap field.

**35.7.3 Rules for EHT sounding protocol sequences**

***Add the following paragraph after the 14th paragraph. (surrounding paragraphs shown for clarity)***

When an EHT beamformer is an AP and EHT beamformees are non-AP STAs, the EHT beamformer that transmits an EHT NDP Announcement frame to one or more EHT beamformees shall set the AID11 subfield to the 11 LSBs of the AID of each EHT beamformee.

An EHT beamformer that is an EDP AP MLD shall not initiate a new EHT sounding sequence that may continue into an EDP epoch transition period.

An EHT NDP Announcement frame shall not include multiple STA Info fields that have the same value in the AID11 subfield.

**35.3.7.4 Link recommendation**

***Add the following paragraph after the 5th paragraph. (surrounding paragraphs shown for clarity)***

An AP affiliated with an AP MLD may schedule for transmission a Link Recommendation frame to provide link recommendation for a set of non-AP MLDs as follows:

—The bit corresponding to the AID of a non-AP MLD shall be set to 1 in the Partial AID Bitmap subfield of the AID Bitmap element in the Link Recommendation frame if the AP intends to provide a link recommendation for this non-AP MLD.

—The Multi-Link Traffic Indication element includes Per-Link Traffic Indication Bitmap *n* subfield(s), in the Per-Link Traffic Indication List field, which correspond(s) to the AID(s) of the non-AP MLD(s), starting from the bit number *k* of the Partial AID Bitmap subfield of the AID Bitmap element carried in the Link Recommendation frame. The AID Offset subfield of the Multi-Link Traffic Indication Control field of the Multi-Link Traffic Indication element contains the value *k*. The order of the Per-Link Traffic Indication Bitmap *n* subfield(s) follows the order of the bits that are set to 1 in the Partial AID Bitmap subfield of the AID Bitmap element carried in the Link Recommendation frame that corresponds to the AID(s) of the non-AP MLD(s). The bit position *i* of the Per-Link Traffic Indication Bitmap *n* subfield in the Multi-Link Traffic Indication element that corresponds to the link with the Link ID subfield equal to *i* on which a non-AP STA affiliated with the non-AP MLD is operating shall be set to 1 to indicate to the non-AP MLD that it should exchange frames on this link both in DL and UL, while following the TTLM rules defined in 35.3.7.2.1 (General).

—A link shall not be recommended by the AP MLD for a non-AP MLD if the link is disabled for the non-AP MLD (see 35.3.7.2.1 (General)).

—The Address 1 field of the Link Recommendation frame shall be set to the broadcast address.

—A Link Recommendation frame shall not be sent during an EDP transition period.

NOTE—One or more links can be recommended by the AP MLD to a non-AP MLD.

**35.3.12.4 Traffic indication**

***Modify the 8th paragraph as shown.***

The Multi-Link Traffic Indication element includes Per-Link Traffic Indication Bitmap *n* subfield(s) in the Per-Link Traffic Indication List field. The Per-Link Traffic Indication Bitmap *n* subfield(s) corresponds to the AID(s) of the non-AP MLD(s) or non-MLD non-AP STA(s), and the first Per-Link Traffic Indication Bitmap *n* subfield corresponds to the non-AP MLD whose AID value is contained in the AID Offset subfield of the Multi-Link Traffic Indication Control field of the Multi-Link Traffic Indication element. The order of the Per-Link Traffic Indication Bitmap *n* subfields follows the order of the bits that are set to 1 in the Partial Virtual Bitmap subfield of the TIM element and corresponds to the AIDs of the non-AP MLDs or non-MLD non-AP STAs. If the transmission occurs during an EDP transition period, the Per-Link Traffic Indication Bitmap *n* subfield(s) shall use AIDs for the EDP non-AP MLDs from the new FA parameter set.