IEEE P802.11  
Wireless LANs

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| LB 203 partial AID comment resolution | | | | |
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Abstract

This submission proposes comment resolutions of MAC comments from TGah Draft 2.0.

* CIDs: 4168, 3777, 3776, 3558, 3945, 4169, 3312 (7 CIDs)

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 TGah Draft. This introduction is not part of the adopted material.

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

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

| **CID** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
| 4168 | Yongho Seok | 249.00 | 9.19a | The Multiple BSSID set is supported in the 802.11ah.The BSSID(i) value corresponds to the ith BSSID in the multiple BSSID set (see 8.4.2.45).But, the partial AID equation in 9.19a is not clear on the case of the multiple BSSID set. | Modify the Table 9-9b of the sub-clause 9.19a as the following:(dec(BSSID[39:47])mod(29-1))+1, Single BSSID(dec(BSSID(i)[39:47])mod(29-1))+1, Multiple BSSIDs(dec(AID[0:8])+2^5╬dec(BSSID[44:47] XOR BSSID[40:43]))mod 2^6, Single BSSID(dec(AID[0:8])+2^5╬dec(BSSID(i)[44:47] XOR BSSID(i)[40:43]))mod 2^6, Multiple BSSIDs | Revised-  I agree in principle.  The multiple BSSID set defines two different BSSIDs, a transmitted BSSID and a nontransmitted BSSID. And, it has the following properties.  **10.11.14 Multiple BSSID Set**  A Multiple BSSID Set is characterized as follows:  — Members of the set have the same 48-n MSBs in their BSSIDs.  **10.1.3.7 Beacon reception**  The STA, when associated with a BSS corresponding to a nontransmitted BSSID, shall discard all Data and Management frames that use the transmitted BSSID as the transmit address, except for Beacon, Probe Response, and TIM broadcast frames.  TGah editor to make changes shown in 11-14/1048r1 under the heading for CID 4168. |
| 3777 | Liwen Chu | 250.00 | 9.19a | "...to a group of STAs with a common Multicast AID and a common BSSID"When a PPDU is sent to a group of STAs with a common BSSID, it is not clear what is used for AID in 9-8b. | Remove "and a common BSSID".Change "A frame that is not a Control frame that is addressed to an AP" to "A frame that is not a Control frame that is addressed to an AP or a frame that is sent by an AP to a group of STAs with a common BSSID" | Revised-  When a PPDU is sent to a group of STAs with a common Multicast AID and a common BSSID, its partial AID is set to a value of 9-15a and 9-15b.  Othewise, the partial AID is set to 0.  But, I agree that the wording is not clear.  TGah editor to make changes shown in 11-14/1048r1 under the heading for CID 3777 and 3776. |
| 3776 | Liwen Chu | 250.00 | 9.19a | "...to a group of STAs with a common Multicast AID and a common BSSID"When a PPDU is sent to a group of STAs with a common BSSID, it is not clear what is used for AID in 9-8b. | Remove "and a common BSSID".Change "A frame that is addressed to an AP" to "A frame that is addressed to an AP or a frame that is sent by an AP to a group of STAs with a common BSSID" | Revised-  When a PPDU is sent to a group of STAs with a common Multicast AID and a common BSSID, its partial AID is set to a value of 9-15a and 9015b.  Othewise, the partial AID is set to 0.  But, I agree that the wording is not clear.  TGah editor to make changes shown in 11-14/1048r1 under the heading for CID 3777 and 3776. |
| 3558 | Graham Smith | 251.00 | 9.19a | "As an example of the PARTIAL\_AID setting, consider the case of a BSS with BSSID 00-21-6A-AC-53-52 that has as a member a non-AP S1G STA assigned AID 5. In an NDP frame sent by the non-AP S1G STA to the S1G AP, the PARTIAL\_AID is equal to 165. In an NDP frame sent by the S1G AP to the non-AP S1G STA associated with that S1G AP, the PARTIAL\_AID is equal to 229." For the life of me I have failed miserably to arrive at these answers. I can only conclude that the definition of "dec(A[b:c]) is just not well defined. I had trouble finding a definition for 'dec' that made sense. Would you please provide the steps for these examples so as to put me out of my misery? | Would you please provide the steps for these examples so as to put me out of my misery? | Rejected-  The example of the PARTIAL\_AID is almost same with the IEEE 802.11ac.  Because the PARTIAL\_AID was originally introduced by the IEEE 802.11ac. If it is hard to understand this equation, it is reasonable to ask the detailed explanation to REVmc. |
| 3945 | Mitsuru Iwaoka | 251.00 | 9.19a | According to Table 7-4 of P802.11mc D2.5, the PHYCONFIG\_VECTOR does not include a parameter PARTIAL\_AID\_LIST.\* This comments relates to other comments to subclause 10.41 and 24.3.19. | 1) Change the 5th paragraph of 9.19a (P251L23) as follows;---An S1G STA shall include the values computed in Table 9-9a (Settings for the TXVECTOR parameter PARTIAL\_AID for NDP frames) and Table 9-9b (Settings for the TXVECTOR parameter PARTIAL\_AID for non-1 MHz PPDUs and non-NDP frames) in the PHYCONFIG\_VECTOR parameter PARTIAL\_AID\_LIST\_GID00 for frames addressed to an AP and PARTIAL\_AID\_LIST\_GID63 for frames addressed to non-AP STAs.2) Modify the last sentence of Value column of the PARTIAL\_AID\_LIST\_GID00 row and the PARTIAL\_AID\_LIST\_GID63 row of Table 7-4 as follows;---The settings of the PARTIAL\_AID are specified in 9.19 (Group ID and partial AID in VHTPPDUs) for a VHT STA and in 9.19a (Group ID, partial AID, Uplink Indication and COLOR in S1G PPDUs) for an S1G STA. | Revised-  Agree in principle.  TGah editor to make changes shown in 11-14/1048r1 under the heading for CID 3945. |
| 4169 | Yongho Seok | 252.00 | 9.19a | "An AP transmitting an S1G PPDU that is not a 1 MHz PPDU and is not an NDP frame and that is addressed to a STA that is associated with that AP shall set the TXVECTOR parameter COLOR to a value of its choosing within the range 0 to 7 and shall maintain that value for the duration of the existence of the BSS."When an AP operates with the mutiple BSSID set, the usage of the COLOR bit is not clear.Because the multiple BSSID set represents the multiple virtual APs, all COLOR bit of the multiple BSSID set should be same. | Clarify the usage of the COLOR bit in the multiple BSSID set as the following:"An AP transmitting an S1G PPDU that is not a 1 MHz PPDU and is not an NDP frame and that is addressed to a STA that is associated with that AP shall set the TXVECTOR parameter COLOR to a value of its choosing within the range 0 to 7 and shall maintain that value for the duration of the existence of the BSS. The AP which is a member of a Multiple BSSID Set shall set the TXVECTOR parameter COLOR for each different BSSID(i) to a same value." | Revised-  Agree in principle.  The multiple BSSID set supports a virtual AP. So, a PPDU transmission from only single BSSID within the multiple BSSIDs is allowed.  TGah editor to make changes on Page 252 Line 11-14 as the following:  "An AP transmitting an S1G PPDU that is not a 1 MHz PPDU and is not an NDP frame and that is addressed to a STA that is associated with that AP shall set the TXVECTOR parameter COLOR to a value of its choosing within the range 0 to 7 and shall maintain that value for the duration of the existence of the BSS. The AP which is a member of a Multiple BSSID Set shall set the TXVECTOR parameter COLOR for each different BSSID(i) to a same value." |
| 3312 | Alfred Asterjadhi | 252.00 | 9.19a | The value of the COLOR field has to be the same not only for PPDUs transmitted to associated STAs but also for PPDUs transmitted to non-associated STAs and groupcasted to multiple STAs. Remove " and that is addressed to a STA that is associated with that AP". Also the description of how a non-AP STA sets the value of this COLOR field in the S1G Capabilities element is missing so needs to be added. | As in comment. | Revised-  Agree in principle.  TGah editor to make changes shown in 11-14/1048r1 under the heading for CID 3312. |

**Propose:**

Revised for CID 4168, 3776, 3777, 3945, 3312, per discussion and editing instructions in 11-14/1048r1.

***TGah editor: Chage this subclause (9.20a) as follows:*** *(CID 4168)*

In Table 9-9a (Settings for the TXVECTOR parameter PARTIAL\_AID for NDP frames) and Table 9-9b (Settings for the TXVECTOR parameter PARTIAL\_AID for non-1 MHz PPDUs and non-NDP frames):

—AID[b:c] represents bits b to c inclusive of the AID of the recipient STA for an individually-addressed frame with bit 0 being the first transmitted, and represents bits b to c inclusive of the Multicast AID of the recipient STAs for a group-addressed frame with bit 0 being the first transmitted.

—BSSID[b:c] represents bits b to c inclusive of the BSSID, with bit 0 being the Individual/Group bit. In this representation, the Individual/Group bit is BSSID[0] and BSSID[47] is the last transmitted bit.

NOTE— When a STA for which dot11MultiBSSIDActivated is true is associated with ith BSSID of an AP, the BSSID means the value of BSSID(i).

***TGah editor: Chage this subclause (9.20a) as follows:*** *(CID 3776, 3777)*

A STA transmitting an S1G PPDU carrying one or more group addressed MPDUs that share a single, common Multicast AID value shall set the TXVECTOR parameter PARTIAL\_AID according to Table 9-9a (Settings for the TXVECTOR parameter PARTIAL\_AID for NDP frames) and Table 9-9b (Settings for the TXVECTOR parameter PARTIAL\_AID for non-1 MHz PPDUs and non-NDP frames). A STA transmitting an S1G PPDU carrying one or more group addressed MPDUs that do not share a ~~single,~~ common Multicast AID and a common BSSID ~~value~~ or that is transmitting an S1G NDP intended for multiple recipients shall set the TXVECTOR parameter PARTIAL\_AID to 0. The intended recipient of an S1G NDP is defined in 9.34.7 (Transmission of an S1G NDP Sounding Frame).

***TGah editor: Change this subclause (9.20a) as follows:*** *(CID 3945)*

An S1G STA shall include the values computed in Table 9-9a (Settings for the TXVECTOR parameter PARTIAL\_AID for NDP frames) in the PHYCONFIG\_VECTOR parameter PARTIAL\_AID\_LIST\_GID00 and PARTIAL\_AID\_LIST\_GID63.

***TGah editor: Change this subclause (7.3.4.4) as follows:*** *(CID 3945)*

**7.3.4.4 Vector descriptions**

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| * Vector descriptions | | |
| Parameter | Associated vector | Value |
| PARTIAL\_AID\_LIST\_GID00 | PHYCONFIG\_VECTOR | For a non-S1G STA, ~~I~~includes the list of partial AIDs, of which the STA is an intended recipient, associated with group ID 0. The settings of the PARTIAL\_AID are specified in 9.20 (Group ID and partial AID in VHT PPDUs)).  For an S1G STA, include the list of partial AIDs, of which the S1G STA is an intended recipient, in which a frame is addressed to an AP. The settings of the PARTIAL\_AID are specified in 9.20 (Group ID, partial AID, Uplink Indication and COLOR in S1G PPDUs). |
| PARTIAL\_AID\_LIST\_GID63 | PHYCONFIG\_VECTOR | For a non- S1G STA, ~~I~~includes the list of partial AIDs, of which the STA is an intended recipient, associated with group ID 63. The settings of the PARTIAL\_AID are specified in 9.20a (Group ID and partial AID in VHT PPDUs)).  For an S1G STA, include the list of partial AIDs, of which the S1G STA is an intended recipient, in which a frame is addressed to a non-AP STA. The settings of the PARTIAL\_AID are specified in 9.20 (Group ID, partial AID, Uplink Indication and COLOR in S1G PPDUs). |

***TGah editor: Chage this subclause (9.20a) as follows:*** *(CID 3312)*

The TXVECTOR parameter COLOR is used to assist a receiving STA in identifying the BSS from which a reception originates so that the receiving STA can reduce power consumption by terminating the reception process in the case when the reception is not from the BSS with which the STA is associated. A STA transmitting an S1G PPDU that is not a 1 MHz PPDU and is not an NDP frame and that is addressed to an AP need not include the TXVECTOR parameter COLOR in the TXVECTOR. A STA transmitting an S1G PPDU that is not a 1 MHz PPDU and is not an NDP frame and that is sent by a DLS or TDLS STA in a direct path to a DLS or TDLS peer STA shall set the TXVECTOR parameter COLOR to the value of the COLOR parameter, if present, from the RXVECTOR of the most recently received frame from its associated AP or from the DO of the IBSS of which it is a member that contained a COLOR parameter. An AP transmitting an S1G PPDU that is not a 1 MHz PPDU and is not an NDP frame ~~and that is addressed to a STA that is associated with that AP~~ shall set the TXVECTOR parameter COLOR to a value of its choosing within the range 0 to 7 and shall maintain that value for the duration of the existence of the BSS. The AP which is a member of a Multiple BSSID Set shall set the TXVECTOR parameter COLOR for each different BSSID(i) to a same value.

An AP shall include the value within the range 0 to 7 that it is using for the TXVECTOR parameter COLOR in non-1MHz, non-NDP frames in the COLOR field of the S1G Capabilities Info field of the S1G Capabilities element in all frames that contain that element. The COLOR field of the S1G Capabilities Info field of the S1G Capabilities element in all frames transmitted from a non-AP STA is reserved.

***TGah editor: Chage this subclause (8.4.2.170k.2) as follows:*** *(CID 3312)*

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| COLOR | Indicates the value that is used for the TXVECTOR parameter COLOR in frames transmitted by members of this BSS, as described in 9.20a (Group ID, partial AID, Uplink Indication and COLOR in S1G PPDUs)(#3287). | Set to a~~A~~n unsigned integer in the range 0 to 7 if sent by an AP.  Otherwise reserved. |