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Wireless LANs

Proposed resolution for comments related to Multiple BSSID set

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Author(s):				
Name	**Affiliation**	**Address**	**Phone**	**email**
Abhishek Patil	Qualcomm Inc.			appatil@qti.qualcomm.com
Alfred Asterjadhi	Qualcomm Inc.			aasterja@qti.qualcomm.com
George Cherian	Qualcomm Inc.			gcherian@qti.qualcomm.com
Raja Banerjea	Qualcomm Inc.			rajab@qca.qualcomm.com

Abstract

This submission proposes resolutions for multiple comments related to TGax D1.0 with the following CIDs (31):

- 3060, 3061, 9444, 5175, 3062, 3071, 5708, 5709, 5710, 9709, 5711, 7177, 3072, 4817, 3136, 9821, 3075, 7552, 7972, 8533, 5455, 7163, 7164, 9378, 7165, 7841, 7169, 9379, 7146, 8280, 8292

Revisions:

- Rev 0: Initial version of the document.
- Rev 1: Revised based on offline feedback.
  - Moved the rules for STA selection for multi-BSS trigger before the rules for setting the TA field in the trigger frame.
  - Revised text for rules related to setting the TA field for single or multi-BSS case.

SAMSUNG 1011

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

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

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

CID	Commenter	Section	Pg / Ln	Comment	Proposed Change	Resolution
3060	Abhishek Patil	27.4.1	158.11	Current sentence is convoluted. Simplify it.	Change sentence to: "If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS set to 1 from a STA, then the HE AP shall not send a Multi-STA Block Ack frame to the STA if the frame is destined for STAs associated with more than one AP that are part of the same multiple BSSID set."	Revised Agree with the comment. The sentence is updated to correctly capture the desired meaning. TGax editor please make the changes as shown in 11-17/0230r1
9444	Xiaofei Wang	27.4.1	158.11	The sentence "If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS set to 1 from a STA, then the HE AP shall not send a Multi-STA Block Ack frame whose destination STAs associate with more than one APs to the STA." is not clear and very confusing; not sure which normative behavior it is describing.	Please clarify and rephrase the sentence so that it is clear which normative behavior it is describing.	Revised Agree with the comment. The sentence is updated to correctly capture the desired meaning. TGax editor please make the changes as shown in 11-17/0230r1
5175	Dorothy Stanley	27.4.1	158.15	I don't think a STA associates with a BSSID. Change "An HE non-AP STA that is associated with a nontransmitted BSSID" should be "An HE non-AP STA that is associated with BSS with a nontransmitted BSSID". Then fix the end of the sentence as well, change to "whose RA is set either to the (nontransmitted) BSSID of the BSS it is associated with"	as in comment	Revised Agree with the comment. Updated text to indicate STA is associated with an AP that corresponds to nontransmitted BSSID and the RA set to (nontransmitted) BSSID of the BSS. TGax editor please make the changes as shown in 11-17/0230r1
3062	Abhishek Patil	27.4.1	158.17	The condition in following sentence is not complete: "An HE non-AP STA that is associated with a nontransmitted BSSID and has indicated support for receiving Control frames with TA set to the Transmitted BSSID (Rx Control Frame To MultiBSS set to 1 in HE Capabilities element).."	Suggest to modify as follows: "An HE non-AP STA that is associated with a nontransmitted BSSID and has indicated support for receiving Control frames receives Control frames from a multi-BSS AP with TA set to the Transmitted BSSID (Rx Control Frame To MultiBSS set to 1 in HE Capabilities element).."	Revised Agree with the comment The sentence is updated to correctly capture the desired meaning. TGax editor please make the changes as shown in 11-17/0230r1
3072	Abhishek Patil	27.5.2.2.2	165.60	Current sentence is convoluted. Simplify it.	Change sentence to: "If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS field equal to 1 from a STA, then the HE AP shall not send the Trigger frame to the STA if the frame is destined for STAs associated with more than one AP that are part of the same multiple BSSID set."	Revised Agree with the comment. The sentence is updated to correctly capture the desired meaning. Also moved the sentence before the paragraph that describes the rules for setting the TA field of the Trigger frame. TGax editor please make the changes as shown in 11-17/0230r1
4817	Alfred Asterjadhi	27.5.2.2.2	165.60	confusing construction of the sentence "If an HE AP does not receive an HE Capabilities element with the Rx Control	Reword the sentence	Revised Agree with the comment. The sentence is updated to correctly capture the desired

				Frame To MultiBSS field equal to 1 from a STA, the HE AP shall not send a Trigger frame whose destination STAs associate with more than one APs to the STA."		meaning. Also moved the sentence before the paragraph that describes the rules for setting the TA field of the Trigger frame. TGax editor please make the changes as shown in 11-17/0230r1
5708	Guoqing Li	27.5.2.2.2	165.47	Why both false and true conditions are in the sentence? I think only this sentence is for the case when dot11MultiBSSIDactivated is false.	remove "when dot11MultiBSSIDactivated is false"	Revised Agree with the comment. The bullet is confusing because it captures the true and false case. However, the true case had an exception that the trigger frame was meant for a single BSS (although the AP was a member of a multiple BSSID set). Revised the entire paragraph to simplify the sentence and clarify the case of Trigger frame directed to STAs from multiple BSSs or single BSS (even when dot11MultiBSSIDActivated is set to true). TGax editor please make the changes as shown in 11-17/0230r1
3071	Abhishek Patil	27.5.2.2.2	165.50	Incorrect field reference. Also, the sentence needs to be simplified.	Change the sentence to: "The MAC address of the transmitted BSSID when dot11MultiBSSIDActivated is true and the Trigger frame is destined for STAs associated with more than one AP that are part of the same multiple BSSID set and have indicated support to received such frames via the Rx Control Frame to MultiBSS field in HE Capabilities element."	Revised Agree with the comment. The sentence is revised correctly capture the desired meaning. Also see resolution to CID 5708 TGax editor please make the changes as shown in 11-17/0230r1
5709	Guoqing Li	27.5.2.2.2	165.51	"intend to communciate" is not an accurate wording. A more suitable word is "is capable of communicating"	"intend to"-->"is capable of communicating"	Revised Agree with the comment. The sentence is updated to correctly capture the desired meaning. “intend to” has been replaced with “from at least two BSSs”. Also see resolution to CID 5708 TGax editor please make the changes as shown in 11-17/0230r1
5710	Guoqing Li	27.5.2.2.2	165.54	There is no field called "multiple BSSUD support field". I think this refers to the "RX Control Frame to MultipleBSS" field in HE Capabilties Element.	change the terminology to be consistent	Revised Agree with the comment. The sentence is updated to refer to the correct subfield. Also see resolution to CID 5708 TGax editor please make the changes as shown in 11-17/0230r1
9709	Yongho Seok	27.5.2.2.2	165.53	"...that have indicated reception support for this Trigger frame in the Multiple BSSID Control Support field of the HE Capabilities element it transmits..." The Multiple BSSID Control Support field is not defined. Replace "Multiple BSSID Control Support" with "Rx Control Frame To MultiBSS".	As per comment.	Revised Agree with the comment. The sentence is updated to refer to the correct subfield. Also see resolution to CID 5708 TGax editor please make the changes as shown in 11-17/0230r1
5711	Guoqing Li	27.5.2.2.2	165.54	What is the meaning of "RX Control Frame to MultiBSS"? Is it capable to receive trigger frame destined to more than one BSS or it's the capability of the STA assocaited with non transmitted BSS to be able to receive frame with TA=transmitted BSSID?	Clarify	Revised It means both – a STA associated with a non transmitted BSS may be triggered by its own AP in which case the TA is the BSSID of the BSS the STA is associated with or the STA may be listed in a trigger frame which is intended for STAs that are associated with more than one BSSIDs of

						the multiple BSSID set. TA=transmitted BSSID serves as an address that indicated that the trigger frame is intended for the latter purpose. A STA indicates whether it supports receiving such multi-BSS trigger via the field in HE Capabilities element. The text in this section has been updated to clarify the meaning. Also see resolution to CID 5708 TGax editor please make the changes as shown in 11-17/0230r1
7177	kaiying Lv	27.5.2.2.2	165.51	It is not clear to say "STAs that intend to communicate with at least two different BSSs of the multiple BSSID set "?	Change to "The MAC address of the transmitted BSSID when dot11MultiBSSIDActivated is true and the Trigger frame is directed to STAs from at least two different BSSs of the multiple BSSID set"	Revised Agree with the comment. The sentence is revised to clearly state the two cases. Also see resolution to CID 5708 TGax editor please make the changes as shown in 11-17/0230r1
3163	Ahmadreza Hedayat	9.3.1.23	41.65	Looks like this sentence needs more description for the case of a multi-BSSID AP: "The TA field value is the address of the STA transmitting the Trigger frame."	Describe what address a multi-BSSID AP shall set this value to when the AP addresses STAs from one/several BSS	Revised Agree with the comment. Add new text to capture the case of AP belonging to single and multiple BSSID. TGax editor please make the changes as shown in 11-17/0230r1
9821	Young Hoon Kwon	9.3.1.23	41.65	Clarification is need on how to set TA field in case multiple BSSID is supported. Especially for the case that the Trigger frame schedules STAs in different virtual APs under the same physical AP.	As in the comment.	Revised Agree with the comment. Add new text to capture the case of AP belonging to single and multiple BSSID. TGax editor please make the changes as shown in 11-17/0230r1
3075	Abhishek Patil	27.6.2	176.20	Current sentence is convoluted. Simplify it.	Change sentence to: "If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS subfield in the HE MAC Capabilities Information field equal to 1 from a STA, then the HE AP shall not send the NDP Announcement frame to the STA if the frame is destined for STAs associated with more than one AP that are part of the same multiple BSSID set."	Revised Agree with the comment. The sentence is updated to correctly capture the desired meaning. TGax editor please make the changes as shown in 11-17/0230r1
7972	Mark RISON	27.6.2	176.21	"If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS subfield in the HE MAC Capabilities Information field equal to 1 from a STA, the HE AP shall not send a NDP Announcement frame whose destination STAs associate with more than one APs to the STA." is not clear ("APs to the STA" is especially confusing, as is "associate with more than one AP"). Also wrong pronoun before "NDP" and plurality for "APs"	Change to "If an HE AP does not receive from a STA an HE Capabilities element with the Rx Control Frame To MultiBSS subfield in the HE MAC Capabilities Information field equal to 1, the HE AP shall not send to the STA an NDP Announcement frame whose destination STAs are associated with more than one BSS."	Revised Agree with the comment. The sentence is updated as suggested to simplify it and correctly capture the desired meaning. TGax editor please make the changes as shown in 11-17/0230r1
7552	Liwen Chu	27.6.2	176.23	Remove "to the STA" from the sentence	As in comment	Revised The text “to the STA” is required since it referring to the STA that the AP is transmitting the frame to. The text was revised to simplify the sentence and correctly capture the desired meaning.

						TGax editor please make the changes as shown in 11-17/0230r1
8533	Robert Stacey	27.6.2	176.25	Missing TA field setting rules of NDPA in MultiBSSID is supported, as defined in Trigger frame (see section 27.5.2.2.2)	Need to add the TA field setting rules for the NDPA in case of dot11MultiBSSIDActivated is false / true, similar to the rules of trigger frame (section 27.5.2.2.2)	Accept Propose to add a new paragraph in 27.6.2 to cover the case of setting the TA field when the frame is addressed to STAs belonging to at least two BSSs of a multiple BSSID set or the case of STAs belonging to a single BSS. TGax editor please make the changes as shown in 11-17/0230r1
3061	Abhishek Patil	27.4.1	158.11	The AP's condition to responding with M-BA to a multi-BSS STAs is meaningless, since STAs that send HE Trigger-based PPDU get to decide the ack policy. So, the right way is to stop this condition happening by not sending the trigger frame to STAs belonging to multiple BSSs in a multi-BSS setup.	As in the comment	Reject This sentence is necessary as it specifies the signaling required between AP/STA to indicate whether the STA supports receiving Multi-STA BA addresses to STAs from multiple BSSs.
5455	Graham Smith	27.2.1	149.31	"..and the RA field, TA field or BSSID field of the received frame with the Individual/Group bit forced to the value 0 is same as the BSSID of any member of the Multiple BSSID Set"	To read "and the RA field, TA field of the received frame with the Individual/Group bit forced to the value 0, or the BSSID field, is the same as the BSSID of any member of the Multiple BSSID Set"	Reject The existing sentence correctly captured the desired meaning. I/G bit value 0 applies to BSSID field too. TGax editor please make the changes as shown in 11-17/0230r1
7163	kaiying Lv	27.1.2	149.43	One of the conditions to take a received PPDU as an intra-BSS frame is that "The frame is a control frame that does not have a TA field and the RA matches the saved TXOP holder address for the BSS to which it is associated." Multiple BSSID set should be also considered.	Please change the text as follows: "The frame is a control frame that does not have a TA field and the RA matches the saved TXOP holder address for the BSS to which it is associated or for the BSS which is any member of the multiple BSSID set"	Revised Agree with the comment. Added a separate bullet to capture various conditions under multiple BSSID case. TGax editor please make the changes as shown in 11-17/0230r1
7164	kaiying Lv	27.1.2	149.34	One of the conditions to take a received PPDU as an intra-BSS frame is that "The RXVECTOR parameter PARTIAL_AID in the received VHT PPDU with the RXVECTOR parameter GROUP_ID equal to 0 is the same as the BSSID[39:47] of the AP to which the STA is associated" Multiple BSSID set should be also considered.	change to "The RXVECTOR parameter PARTIAL_AID in the received VHT PPDU with the RXVECTOR parameter GROUP_ID equal to 0 is the same as the BSSID[39:47] of the AP to which the STA is associated or the BSSID[39:47] which is any member of the multiple BSSID set"	Revised Agree with the comment in general. However, for the case of multiple BSSID set, the LSBs of the BSSIDs are different (up to n-bits, where n is the MaxBSSID Indicator). As a result, comparing with partial BSSID (i.e., LSBs of the BSSID) can lead to ambiguous results. Therefore it is recommended that for such case, the BSSID in the MAC header is compared with the BSSIDs of the members of the multiple BSSID set. A recommendation note was added to this paragraph. TGax editor please make the changes as shown in 11-17/0230r1
9378	Weimin Xing	27.2.1	149.35	Add the case for the Multiple BSSID Set.	Please change the text to "The RXVECTOR parameter PARTIAL_AID in the received VHT PPDU with the RXVECTOR parameter GROUP_ID equal to 0 is the same as the BSSID[39:47] of the AP to which the STA is associated or the BSSID[39:47] of any member of the Multiple BSSID Set."	Revised Agree with the comment in general. A note recommending that the receiving STA check the BSSID in the MAC header was added to this paragraph. Please see resolution to CID 7164 for further explanation.

						TGax editor please make the changes as shown in 11-17/0230r1
7165	kaiying Lv	27.1.2	149.50	Multiple BSSID set should be considererd.	Please clarify it	Revised Agree with the comment. The paragraph is updated in this document to have a separate bullet dedicated for multiple BSSID case. TGax editor please make the changes as shown in 11-17/0230r1
7841	Mark RISON	27.2.1	149.51	A frame without BSS_COLOR that is part of a Multiple BSSID Set but is not the BSSID of the AP to which the STA is associated will be identified as both infra-BSS (line 27) and inter-BSS (line 51). This does not appear to be the intention (line 58), and is not resolved by giving priority to MAC address decisions (page 150 line 15).	Either: i) Expand the precedence rule on (page 150 line 15) so that the intra-BSS designation takes priority over the inter-BSS designation, -or- ii) Gate the inter-BSS BSSID check (page 149 line 51) on the AP not being a member of a Multiple BSSID Set.	Revised The case of BSS_COLOR not present was covered in D1.0 in 3rd and 4th bullet in this paragraph. The paragraph is updated in this document to have a separate bullet dedicated for multiple BSSID case. TGax editor please make the changes as shown in 11-17/0230r1
7169	kaiying Lv	27.2.2	150.04	Multiple BSSID set should also be considered.	change to "The RXVECTOR parameter PARTIAL_AID in the received VHT PPDU with the RXVECTOR parameter GROUP_ID equal to 0 is different from the BSSID[39:47] of the AP to which the STA is associated and the BSSID[39:47] which is any member of the multiple BSSID set"	Revised Agree with the comment. Added a separate bullet to capture various conditions under multiple BSSID case. TGax editor please make the changes as shown in 11-17/0230r1
9379	Weimin Xing	27.2.1	150.04	Add the case for the Multiple BSSID Set.	Please change the text to "The RXVECTOR parameter PARTIAL_AID of the received VHT PPDU frame with the RXVECTOR parameter GROUP_ID equal to 0 is different from the BSSID[39:47] of the AP to which the STA is associated and the BSSID[39:47] of any member of the Multiple BSSID Set."	Revised Agree with the comment. Added a separate bullet to capture various conditions under multiple BSSID case. TGax editor please make the changes as shown in 11-17/0230r1
7146	kaiying Lv	27.5.2.3	167.59	Miss the case of Multiple BSSID set. Please change the text to "The User Info field is addressed to a STA if the AID12 subfield is equal to the AID of the STA and the STA is associated with the AP or the TA field of the received Trigger frame with the Individual/Group bit forced to the value 0 is the same as the BSSID of any member of the Multiple BSSID Set	As in comment	Reject The AID12 subfield of the User Info field identifies the STA that is being addressed by the trigger frame. This applies even in case of a trigger frame addressed to STAs that belong to different BSSs (i.e., a multi-BSS Trigger frame). A STA will not use an RU specified in the Trigger frame just because the TA matched the associated BSS's TA or one of BSSs of the multi-BSS case.
8280	Pascal VIGER	27.5.2.2.1	164.46	A value of 0 in AID12 indicates that nonassociated STAs can transmit using the random access procedure. When support of multiple BSSID is activated, the case of several BSSs shall be managed with regards to the RAPS profile usage.	as per comment, a procedure is required for RAPS management in case of multiple-BSSID.	Reject In a multiple BSSID set, the AP corresponding to the transmitted BSSID beacons. Therefore, there is only one Beacon for the multiple BSSID set. As a result, there will be only one RAPS profile for the multiple BSSID set.
8292	Pascal VIGER	27.5.2.2.2	165.46	In case of multiple BSS, the TA field of TF shall be set to the MAC address of the transmitted BSSID. In order to distinguish (because it seems the case is not supported yet) between TF addressed to STAs of the single 'transmitted BSSID', and TF addressed to STAs of the overall multiple BSS set, the	as per comment	Reject The recommended change is not acceptable as it doesn't fit with the definition of the I/G bit. Further, it is an AP's choice on whether to transmits a multi-BSS control frame (i.e., an AP implementation may choose not to send such frames). The decision may depend on how many associated STAs support

				Individual/Group bit shall be used (forced to 1).		receiving multi-BSS control frames. Therefore, the situation pointed out by the commenter will be rare occurrence.

27.4.1 Overview

TGax Editor: Please modify the 8th paragraph of this section in D1.1 (pg 162, line 25) as follows:

[3060, 9444]If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS subfield in HE MAC Capabilities Information field set to 1 from a STA, then the HE AP shall not send to the STA a Multi-STA Block Ack frame ~~whose destination~~ directed to STAs from at least two different BSSs of the multiple BSSID set. ~~associate with more than one APs to the STA.~~

TGax Editor: Please add a new paragraph after the 8th paragraph (above) in this section as follows:

An AP that transmits a Multi-STA BlockAck frame addressed to HE STAs shall set the TA field of the frame to the MAC address of the AP, except when dot11MultiBSSIDActivated is true and the Multi-STA BlockAck frame is directed to STAs from at least two different BSSs of the multiple BSSID set, in which case, the AP shall set the TA field of the frame to the transmitted BSSID.

TGax Editor: Please modify the 9th paragraph of this section in D1.1 (pg 162, line 30) as follows:

A non-AP HE STA that is associated with a BSS corresponding to[5175] a nontransmitted BSSID and has indicated support for receiving Control frames with TA set to the ~~T~~transmitted BSSID (via Rx Control Frame To MultiBSS subfield set to 1 in HE Capabilities element that it transmits), shall[3062], upon receiving an MU BAR Control frame with TA set to the transmitted BSSID, respond with a BlockAck frame whose RA is set either to the (nontransmitted) BSSID of the BSS[5175] it is associated with or the transmitted BSSID (i.e., the TA of the soliciting MU BAR frame).

27.5.2.2.2 Allowed settings of the Trigger frame fields and UL MU Response Scheduling A-Control subfields

TGax Editor: Please modify the paragraphs in this section of D1.1 (pg 169 line 59) as follows:

TGax Editor: Move the 1st sentence in the 2nd paragraph before the paragraph that describe the rules for setting the TA field (i.e., move it before the 1st paragraph in D1.1).

If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS subfield in HE MAC Capabilities Information field equal to 1 from a STA, the HE AP shall not send to the STA a Trigger frame directed to STAs from at least two different BSSs of the multiple BSSID set.[3072, 4817]

An AP that transmits a Trigger frame shall set the TA field of the frame to the MAC address of the AP, except when dot11MultiBSSIDActivated is true and the Trigger frame is directed to STAs from at least two different BSSs of the multiple BSSID set, in which case, the AP shall set the TA field of the frame to the transmitted BSSID. ~~one of the following:~~

- ~~The MAC address of the AP transmitting the frame when dot11MultiBSSIDActivated is false or when dot11MultiBSSIDActivated is true and the Trigger frame is directed to STAs that intend to communicate with the AP~~
- ~~The MAC address of the transmitted BSSID when dot11MultiBSSIDActivated is true and the Trigger frame is directed to STAs that intend to communicate with at least two different BSSs of the multiple BSSID set and that have indicated reception support for this Trigger frame in the Multiple BSSID Control Support field of the HE Capabilities element it transmits (see 11.1.3.8 (Multiple BSSID procedure)).~~[5708, 3071, 5709, 5710, 9709, 5711, 7177]

NOTE—All MPDUs within an A-MPDU carried in an HE trigger-based PPDU have the same RA (see 9.7.3 (A-MPDU contents). The settings of the address fields of MPDUs within the A-MPDU depend on the type and subtype of the MPDU as defined in 9.3 (Format of individual frame types).

~~If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS field equal to 1 from a STA, the HE AP shall not send a Trigger frame whose destination STAs associate with more than one APs to the STA.~~ The RA field of the frames sent in response to a MU-RTS frame is set as defined in 9.3.1.3 (CTS frame format). The RA field of the MPDUs sent in response of a MU-BAR is set as defined in 9.3.1.9 (BlockAck frame format). BlockAck frame and Data frames whose RAs are different shall not be aggregated in one A-MPDU in responding to an MU-BAR frame. The RA field of the Data frames and Management frames sent in response to a Trigger frame shall be set to the MAC address of the destination AP.

9.3.1.23 Trigger frame format

TGax Editor: Please modify the 5th paragraph of this section in D1.1 (pg 42, line 65) as follows:

The TA field value is the address of the STA transmitting the Trigger frame when the Trigger frame is addressed to STAs that belong to a single BSS. The TA field value is the address of the transmitted BSSID when the Trigger frame is addressed to STAs from at least two different BSSs of the multiple BSSID set.[3163, 9821]

27.6.2 Rules for HE sounding protocol sequences

TGax Editor: Please modify the 2nd paragraph of this section in D1.1 (pg 180 line 20) as follows:

If an HE AP does not receive an HE Capabilities element with the Rx Control Frame To MultiBSS subfield in the HE MAC Capabilities Information field equal to 1 from a STA, the HE AP shall not send to the STA an NDP Announcement frame ~~whose destination~~ directed to STAs from at least two different BSSs of the multiple BSSID set. ~~associate with more than one APs to the STA.~~[3075]

TGax Editor: Please add the following (new) paragraph to section 27.6.2 after the 2nd (above) paragraph:

[8533]An AP that transmits an NDP Announcement frame addressed to HE STAs shall set the TA field of the frame to the MAC address of the AP, except when dot11MultiBSSIDActivated is true and the NDP Announcement frame is directed to STAs from at least two different BSSs of the multiple BSSID set, in which case, the AP shall set the TA field of the frame to the transmitted BSSID.

TGax Editor: Please add the following (new) paragraph to section 27.6.2 after the 15th paragraph (below Figure 27.4) [pg 182 line 27 in D1.1]:

A non-AP HE STA that is associated with a BSS corresponding to a nontransmitted BSSID and has indicated support for receiving Control frames with TA set to the transmitted BSSID (via Rx Control Frame To MultiBSS subfield set to 1 in HE Capabilities element that it transmits), shall, upon receiving an NDP

Announcement Control frame with TA set to the transmitted BSSID, respond with a Beamforming feedback frame whose RA is set either to the (nontransmitted) BSSID of the BSS it is associated with or the transmitted BSSID (i.e., the TA of the soliciting NDP Announcement frame).

27.2.1 Intra-BSS and inter-BSS frame determination

TGax Editor: Please modify the following paragraphs of this section in D1.1 (pg 153, line 18) as follows:

An HE STA determines whether a received frame is an inter-BSS or an intra-BSS frame by using the RXVECTOR parameters (e.g., BSS_COLOR in HE PPDUs or GROUP_ID and PARTIAL_AID in VHT PPDUs) or MAC address.

A frame received by the STA is an intra-BSS frame if one of the following conditions is true:

- The RXVECTOR parameter BSS_COLOR in the received PPDU carrying the frame is the same as the BSS color announced by the AP to which the STA is associated
- The RA field, TA field or BSSID field of the received frame with the Individual/Group bit forced to the value 0 is the same as the BSSID of AP to which the STA is associated
- ~~The AP to which the STA is associated is a member of a Multiple BSSID Set with two or more members and the RA field, TA field or BSSID field of the received frame with the Individual/Group bit forced to the value 0 is same as the BSSID of any member of the Multiple BSSID Set~~[7163]
- The RXVECTOR parameter PARTIAL_AID in the received VHT PPDU with the RXVECTOR parameter GROUP_ID equal to 0 is the same as the BSSID[39:47] of the AP to which the STA is associated
- The value of RXVECTOR parameter PARTIAL_AID [5:8] in the received VHT PPDU with the RXVECTOR parameter GROUP_ID equal to 63 is the same as the partial BSS color announced by the AP to which the STA is associated when the Partial BSS Color field in the most recently received HE Operation element is 1.
- The frame is a control frame that does not have a TA field and the RA matches the saved TXOP holder address for the BSS to which it is associated.
- The AP to which the STA is associated is a member of a multiple BSSID set with two or more members and one of the following condition is true:
  - the RA field, TA field or BSSID field of the received frame with the Individual/Group bit forced to the value 0 is same as the BSSID of any member of the multiple BSSID set.
  - the frame is a control frame that does not have a TA field and the RA matches the saved TXOP holder address for a BSS that is a member of the multiple BSSID set.[7163]

Note – A frame received by a STA is classified as an intra-BSS frame if the MAC address is the same as the BSSID of any member of the multiple BSSID set when the STA is associated with an AP that is a member of a multiple BSSID set with two or more members and the received VHT PPDU has RXVECTOR parameter GROUP_ID equal to 0.[7164, 9378]

A frame received by the STA is an inter-BSS frame if one of the following conditions is true:

- The RXVECTOR parameter BSS_COLOR of the PPDU carrying the frame is not 0 and does not match the BSS color announced by the AP to which the STA is associated
- When the RXVECTOR parameter BSS_COLOR of the PPDU carrying the frame is not present:
  - The BSSID field of the received frame with Individual/Group bit forced to the value 0, if available, does not match the BSSID of AP to which the STA is associated

- If the BSSID field is not available, both the RA and TA fields exist, and none of the address fields of the received frame with Individual/Group bit forced to the value 0 match the BSSID of AP to which the STA is associated

— ~~The AP to which the STA is associated is a member of a Multiple BSSID Set with two or more members and the BSSID field of the received frame with Individual/Group bit forced to the value 0, if available, does not match the BSSID of any member of the Multiple BSSID Set~~

— ~~If the AP to which the STA is associated is a member of a Multiple BSSID Set with two or more members, the BSSID field is not available, both the RA and TA fields exist, and none of the address fields of the received frame with the Individual/Group bit forced to the value 0 match the BSSID of any member of the Multiple BSSID Set~~[7165, 7169, 7841, 9379]

— The RXVECTOR parameter PARTIAL_AID of the received VHT PPDU frame with the RXVECTOR parameter GROUP_ID equal to 0 is different from the BSSID[39:47] of the AP to which the STA is associated

— The value of RXVECTOR parameter PARTIAL_AID [5:8] in the received VHT PPDU with the RXVECTOR parameter GROUP_ID equal to 63 is different from the partial BSS color announced by the AP to which the STA is associated when the Partial BSS Color field in the most recently received HE Operation element is 1.

— An HE AP receives either a VHT MU PPDU or an HE MU PPDU.

— The AP to which the STA is associated is a member of a multiple BSSID set with two or more members and one of the following condition is true:

- the BSSID field of the received frame with Individual/Group bit forced to the value 0, if available, does not match the BSSID of any member of the multiple BSSID set.[7165, 7841]
- the BSSID field is not available, both the RA and TA fields exist, and none of the address fields of the received frame with the Individual/Group bit forced to the value 0 match the BSSID of any member of the multiple BSSID set.[7841]
- the RXVECTOR parameter PARTIAL_AID in the received VHT PPDU with the RXVECTOR parameter GROUP_ID equal to 0 is different from the BSSID[39:47] of any member of the Multiple BSSID set.[7169, 9379]

If the received frame satisfies both intra-BSS and inter-BSS conditions, the decision made by using the MAC address takes precedence over the decision made by using the RXVECTOR parameter BSS_COLOR.

If the received frame does not satisfy any of the intra-BSS and inter-BSS conditions, then the frame cannot be determined as intra-BSS or inter-BSS frame.

11.1.3.8 Multiple BSSID procedure

TGax Editor: Please modify the 1st paragraph of this section in the baseline (802.11-2016 spec) as follows:

Implementation of the Multiple BSSID capability is optional for a WNM STA and for a DMG STA. A STA that implements the Multiple BSSID capability has dot11MultiBSSIDImplemented equal to true. When dot11MultiBSSIDImplemented is true, dot11WirelessManagementImplemented shall be equal to true except for a DMG STA and an HE STA, in which case it may be equal to false. A STA in which dot11MultiBSSIDActivated is true is defined as a STA that supports the Multiple BSSID capability. The STA shall set to 1 the Multiple BSSID field of the Extended Capabilities elements that it transmits.

TGax Editor: Please modify the 3rd paragraph of this section in D1.1 (pg 145 line 30) as follows:

Please note, following modifications are proposed to make the text in this paragraph consistent with the text in the rest of the 11ax draft

An HE STA that supports receiving control frames ~~addressed~~ directed to STAs from at least two different BSSs of a ~~belonging to~~ multiple BSSIDs~~s~~ set (i.e., has the Rx Control Frame To MultiBSS subfield set to 1 in the HE Capabilities element it ~~sends~~ transmits) and is associated with an HE AP whose MaxBSSID Indicator field is set to *n* and whose Tx BSSID Indicator is set to 0 shall decode the Beacon frame with a Multiple BSSID element whose 48 − *n* MSBs of the BSSID are same as the 48 − *n* MSBs of BSSID of the AP with which the STA is associated in order to identify the transmitted BSSID.