### IEEE P802.11Wireless LANs

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| Resolution for LB258 CID2215 |
| Date: 2012-06-21 |
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Abstract

This submission proposes resolution for comment 2215.

From the letter ballot of TGme LB258,

Changes relative to REVme D1.3.

Revisions:

* Rev 0: Initial version of the document.
* Rev 1 : Editorial (doc number missing in header)
* Rev 2: Editorial

**CIDs**

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 2215 | 4174 / 56 | 26.5.4.1 | NOTE-3 provides a solution for triggering for random access STAs from various BSSs of a multiple BSSID set. It seems to be too much complicated. | A simpler solution is to send a single Trigger Frame, allocating RA-RU with AID value of User Info fields set to an intended BSS-Index . This principle is already used in DL direction when a MU DL PPDU contains an AID of a DL RU set to BSSID Index (Broadcast RU).Please allow use of BSS Index in AID of User Info field. | Revised – Agree in principle with the commenter. Revision is done according to the suggestion of triggering individual BSSs of a multiple BSSID set, by using BSS Index value as AID (same principle as for DL MU PPDU).**TGme Editor, please make the changes as shown in this document for CID2215.** |

**Discussion:**

When a multiple BSS set is activated, the 802.11REVme standard mandates that:

* the MaxBSSID Indicator field contains a value assigned to *n*, where 2*n* is the maximum number of BSSIDs in the multiple BSSID set, including the reference BSSID (see 9.4.2.45).
* the BSSID Index field is a value between 1 and 2*n*– 1 that identifies the nontransmitted BSSID (see 9.4.2.73).

A DL MU PPDU (see REVme 1.3, section 26.11.1 STA\_ID\_LIST) can already use a BSSID Index value : “*if the RU is intended for more than one associated STA in any of its BSSs that is not a recipient of an individually addressed RU, the parameter STA\_ID is set to 0 for transmitted BSSID or to the value of the BSSID Index field corresponding to that BSS*”.

We propose to extend this usage of BSSID values for RA-RU in UL, so that Trigger Frame for random access can assign RUs to different BSSs of a multiple BSS set. This allows stations from various BSSs to be randomly triggered for uplink communication, within a single channel access.

So, a multiple-BSS TF is still identified by setting the TA field to the transmitted BSSID value, but in addition, the AP can associate some RA-RUs to a specific BSS through the AID12 field value:

* Value 0 is for transmitted BSSID (classical)
* Value between 1 and 2*n*– 1 (this is the BSSID Index) identifies a nontransmitted BSSID.

**Proposed Specification text for CID#2215**

***(Track change on)***

* Allowed settings of the Trigger frame fields and TRS Control subfield

***TGme Editor: Please make the following changes to the 14th paragraph in 26.5.2.2.4 (REVme D1.3 P4168L19):***

An AP shall not transmit a Trigger frame that contains more than one User Info field with the same value in the AID12 subfield, unless the value in the AID12 subfield is 0 or between 1 to 2n– 1 which corresponds to a BSSID Index of a multiple BSSID set (see 9.4.2.73 (Multiple BSSID-Index element)) when the AP has dot11MultiBSSIDImplemented equal to true, or greater than 2007. The AP shall place User Info fields with the same value in the AID12 subfield together as a contiguous block in the Trigger frame. The AP shall place User Info fields with the AID12 subfield set to 0 or between 1 to 2n– 1 which corresponds to a BSSID Index of a multiple BSSID set (see 9.4.2.73 (Multiple BSSID-Index element)) when the AP has dot11MultiBSSIDImplemented equal to true, or a value greater than 2007 after User Info fields with the AID12 subfield set to a value in the range 1 to 2007 (if any present).

* UL OFDMA-based random access (UORA)

26.5.4.1 General

***REVme Editor: Please remove Note 3 (REVme D1.3 P4180L56):***

* Eligible RA-RUs

***REVme Editor: Please make changes of 2nd paragraph as shown below (REVme D1.3 P4181L34):***

A non-AP STA shall consider an RU as an eligible RA-RU if it is capable of transmitting an HE TB PPDU in that RU according to the parameters indicated in the Common Info field and in the User Info field that allocates the RU (as described in 26.5.2.3 (Non-AP STA behavior for UL MU operation)), the non-AP STA is associated with the BSS whose BSSID is the value in the TA field of the Trigger frame (or non-AP STA with dot11MultiBSSIDImplemented equal to true is associated with a nontransmitted BSSID whose transmitted BSSID is the value in the TA field of the Trigger frame), and the RA-RU is allocated for associated STAs.

* Trigger frame format(11ax)
* General

(…)

The TA field is the address of the STA transmitting the Trigger frame if the Trigger frame is addressed to STAs that belong to a single BSS. The TA field is the transmitted BSSID if the Trigger frame is addressed to STAs from at least two different BSSs of the multiple BSSID set. The rules for setting of the TA field are defined in 26.5.2.2.4 (Allowed settings of the Trigger frame fields and TRS Control subfield).

(…)

***REVme Editor: Please make the following changes for the 35th paragraph (REVme D1.3 P995L55), as shown below:***

If the AID12 subfield is in the range 1 to 2007, then the RU Allocation subfield indicates the RU allocated to the STA identified by the AID12 subfield. If the AID12 subfield is 0, or a BSSID Index value if the Trigger Frame is addressed to STAs from at least two different BSSs of the multiple BSSID set (see 9.4.2.73 (Multiple BSSID-Index element)) when the AP has dot11MultiBSSIDImplemented equal to true, or 2045, then the RU Allocation sub-field indicates the starting RU of one or more contiguous RA-RUs allocated by the User Info field. If the AID12 subfield is 2046, then the RU Allocation subfield indicates an unallocated RU.

***REVme Editor: Please make the following changes for the 40th paragraph (REVme D1.3 P996L19), as shown below:***

If the AID12 subfield is either 0, or a BSSID Index value if the Trigger Frame is addressed to STAs from at least two different BSSs of the multiple BSSID set (see 9.4.2.73 (Multiple BSSID-Index element)) when the AP has dot11MultiBSSIDImplemented equal to true, or 2045, then B26–B31 of the User Info field is the RA-RU Information subfield; otherwise, B26–B31 of the User Info field is the SS Allocation subfield. (#11713)