IEEE P802.11  
Wireless LANs

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| CR on 27.5.2.6.2 Part 3 | | | | |
| Date: 2017-07-03 | | | | |
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Abstract

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

* CIDs: 5850, 5858, 6709, 9448

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.***

# UROA –Part III (in 27.5.2.6.2)

| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 5850 | 173.64 | 27.5.2.6.2 | If the Ack policy of QoS Null frame in random access is No ACK, the retransmission procedure cannot guarantee. For clarification, the Ack policy of QoS Null frame (e.g., BSR frame) should be the Normal Ack in random access. | Add below sentence in P174L6 (section 27.5.2.6.2 Random access procedure).  "When a non-AP STA sends one or more QoS Null frames in an HE trigger-based PPDU in a random RU assigned by AID 0 in a Basic Trigger frame or in a BSRP Trigger frame, Ack Policy subfield of the QoS Null frame shall be set to Normal Ack." | Rejected.  The Ack Policy rule for QoS Null frame is already defined in the 11ax spec text. For example, the ACK policy of QoS Null frame in Single MPDU is set to Normal ACK and the Ack Policy of QoS Null frame in A-MPDU is No ACK. In case of No ACK, a STA does not invoke the retransmission procedure.  For random access, we don’t need to insert the special Ack Policy rule of QoS Null frame. |
| 5858 | 172.35 | 27.5.2.6.2 | For random access, an HE AP may transmit a Basic Trigger frame or a BSRP Trigger frame that contains one or more RUs. However, BQRP is not described for random access. When the assigned RUs for random access are busy, a BSR and BQR inforamtion should be sent in random access. In addition, if the channel status is busy, the BSR and BQR information can be sent in random access. Therefore, the BSR and BQR information can be aggregated. | Define an aggregation method for BSR and BQR information for random access. | Rejected.  In 11ax spec, the aggregation method for BSR and BQR information already exist. For example, BSR can be carried in QoS Control field and BQR can be carried in HE A-control field of the QoS Null/data frame. |
| 6709 | 173.50 | 27.5.2.6.2 | "If the selected RU is considered busy": this raises the question of how HE devices in OBSSs should consider the initial tirgger frame, assuming they are able to decode it. One plausible rule is that they should interpret the medium as busy, just as if an initial CTS-to-Self had been transmitted (even though the following transmission(s) will be UL from other STAs, not DL by the original trransmitter). But another way of looking at it is that as a policy issue, we're in a contention-based access mode, albeit one that only HE devices understand, and that devices in OBSSs may still contend for the medium and use it if it's idle. It's not clear which of these is intended here; perhaps the OBSS STAs simply set their Inter-BSS NAV and we have the first possibility by default. If so, it seems the wrong approach. The amendment is supposed to provide high efficiency in dense environments and as a policy matter it should never be the right answer to turn ready-right-now devices away based on the possibility of other devices transmitting later, or to permit APs to seize medium time unilaterally unless it is used immediately. | Clarify the rules for HE devices in OBSSs. Clarify or specify, as appropriate, that such devices may access the medium notwithstanding receipt of the initial trigger frame. | Rejected.  The sentence “If the selected RU is considered busy…” is related to UORA procedure (RU selection procedure  In UORA, RU selection procedure is performed by only STAs which participate in UORA procedure.  Therefore, if HE OBSS STA receives a Trigger frame for random access RU assignment from an OBSS AP, the STA doesn’t participate UORA procedure. HE STAs receiving OBSS Trigger frame will set its Basic NAV according to the rule defined in 27.2.3 Updating two NAVs and 27.9 Spatial reuse of D1.3. That is, HE STA which receives OBSS frame and performs Spatial reuse may not update its NAV with the duration information in the OBSS frame and may contend for the medium. Therefore, we don’t have to add the additional function for it. |
| 9448 | 173.45 | 27.5.2.6.2 | The current random access procedure requires the STA to choose a second random number to select a random access RU to transmit when the STA already uses a first random number to determine that it can conduct random access. Using a second random number is redundant; since the first random number is sufficient to determine both whether the STA is allowed to conduct random access and which RU to use. OBO counter can be used to choose RU if the OBO counter is smaller than the number of RUs assigned to AID value 0 | Simplify the random access procedure by using use just the OBO counter for both determination whether a STA is allowed to conduct random access and which RU to use for random access. | Rejected.  It does not simplify random access procedure to re-use OBO counter for random RU selection because when the OBO counter is not larger than the number of RUs for random access, the STA should also perform the process to know which RU is the RU indicated by OBO counter, which is very similar procedure to the random RU procedure of the original UORA procedure.  It doesn’t seem like that re-using OBO counter for random RU selection brings more gain compared to the original random RU selection method.  If the number of random access RU in a Trigger frame is larger than the OCWmin, the current random RU selection could be better than the RU selection based on the OBO counter in the perspective of the collision probability. |