IEEE P802.11  
Wireless LANs

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| SA1 CR MAC Miscellaneous | | | | |
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Abstract

This submission proposes resolutions of comments received from TGax 1st SA Ballot.

(The proposed change is based on TGax Draft 6.1.)

* CIDs: 24402, 24465 (2 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 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** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 24402 |  | C.3 | [Resubmission of comment withdrawn on D5.0] OCW defaults should be in the MIB, just like EDCA defaults are | As it says in the comment | Revised-  Agree in principle.  TGax editor makes changes as shown in the as specified in 11-20/1063r3. |
| ***TGax Editor: Change the Annex C.3 (MIB Detail) as follows (#24402):***  Dot11HEStationConfigEntry ::=  SEQUENCE {  …  dot11MinPSCProbeDelay Unsigned32,  dot11OCWmin Unsigned32,  dot11OCWmax Unsigned32  }  dot11OCWmin OBJECT-TYPE  SYNTAX Unsigned32 (0..127)  MAX-ACCESS read-only  STATUS current  DESCRIPTION  "This is a control variable.  It is written by the MAC upon receiving an UORA Parameter Set.  Changes take effect as soon as practical in the implementation.  This attribute specifies the value of the minimum size of the OFDMA contention window (OCW) that is used by the non-AP STA for UL OFDMA-based random access. The value of this attribute is such that it could always be expressed in the form of 2^X - 1, where X is an integer."  DEFVAL { 7 }  ::= { dot11HEStationConfigEntry 40 }  dot11OCWmax OBJECT-TYPE  SYNTAX Unsigned32 (0..127)  MAX-ACCESS read-only  STATUS current  DESCRIPTION  "This is a control variable.  It is written by the MAC upon receiving an UORA Parameter Set.  Changes take effect as soon as practical in the implementation.  This attribute specifies the value of the maximum size of the OFDMA contention window (OCW) that is used by the non-AP STA for UL OFDMA-based random access. The value of this attribute is such that it could always be expressed in the form of 2^X - 1, where X is an integer."  DEFVAL { 31 }  ::= { dot11HEStationConfigEntry 41 }  dot11HEComplianceGroup OBJECT-GROUP  OBJECTS {  …  dot11MinPSCProbeDelay,  dot11OCWmin,  dot11OCWmax }  STATUS current  DESCRIPTION  "Attributes that configure the HE Group for IEEE 802.11."  ::= { dot11Groups 100 }  ***TGax Editor: Change the26.5.4.1 (General) as follows (#24402):***  A non-AP HE STA shall maintain an internal OCW and an internal OBO counter. OCW is an integer in the range *OCWmin* to *OCWmax*. The *OCWmin* and *OCWmax* parameters are defined by dot11OCWmin and dot11OCWmax. A non-AP HE STA shall ~~obtain~~ *~~OCWmin~~* ~~and~~ *~~OCWmax~~* ~~from the most recently received UORA Parameter Set element~~ update dot11OCWmin and dot11OCWmax from an UORA Parameter Set element within an interval of time equal to one beacon interval after receiving an updated UORA Parameter Set element carried in a Beacon, Probe Response or (Re)Association Response frame transmitted by its associated AP unless the non-AP HE STA is associated with a nontransmitted BSSID of a multiple BSSID set, in which case it shall ~~determine~~ *~~OCWmin~~* ~~and~~ *~~OCWmax~~* update dot11OCWmin and dot11OCWmax by following the rules in 11.1.3.8.4 (Inheritance of element values).  A non-AP HE STA shall maintain an internal OCW and an internal OBO counter. OCW is an integer in the range *OCWmin* to *OCWmax*. The *OCWmin* and *OCWmax* parameters are defined by dot11OCWmin and dot11OCWmax. A non-AP HE STA, on receiving an updated UORA Parameter Set element from its associated AP or from the AP associated from the transmitted BSSID of a multiple BSSID set (see 11.1.3.8.4), should update dot11OCWmin and dot11OCWmax as soon as practical in the implementation and shall ~~obtain~~ *~~OCWmin~~* ~~and~~ *~~OCWmax~~* ~~from the most recently received UORA Parameter Set element~~ update them within an interval of time equal to one beacon interval ~~carried in a Beacon, Probe Response or (Re)Association Response frame transmitted by its associated AP unless the non-AP HE STA is associated with a nontransmitted BSSID of a multiple BSSID set, in which case it shall determine~~ *~~OCWmin~~* ~~and~~ *~~OCWmax~~* ~~by following the rules in 11.1.3.8.4 (Inheritance of element values).~~  ~~A non-AP HE STA that has not received a UORA Parameter Set element from the AP with which it intends to communicate shall use the default values~~ *~~OCWmin~~* ~~= 7 and~~ *~~OCWmax~~* ~~= 31 if contending for RA-RUs allocated by that AP.~~  Each time a non-AP HE STA associates with a different AP and prior to the initial attempt of RA-RU transmission towards it, the non-AP STA shall set the value of OCW to the *OCWmin* value, and shall initialize its OBO counter in the range 0 to OCW as defined in 26.5.4.3 (Transmission procedure for UORA).  ~~A non-AP HE STA that has not received a UORA Parameter Set element from the AP with which it intends to communicate shall use the default values~~ *~~OCWmin~~* ~~= 7 and~~ *~~OCWmax~~* ~~= 31 if contending for RA-RUs allocated by that AP.~~  Each time a non-AP HE STA associates with a different AP and prior to the initial attempt of RA-RU transmission towards it, the non-AP STA shall set the value of OCW to the *OCWmin* value, and shall initialize its OBO counter in the range 0 to OCW as defined in 26.5.4.3 (Transmission procedure for UORA). | | | | | |
| 24465 | 220.20 | 9.4.2.262 | "The UL MU Power Capabilities element indicates the relative maximum transmit  power that a STA is capable of transmitting an HE TB PPDU for each HE-MCS in the operating channel  width" -- but this doesn't work, because the operating channel width can change (and there's no mechanism for the element to be updated, since it's only included in the (re)assoc req). The resolution to CID 22265 seems to be saying ("it does not represent the power beyond the current operating channel") that the information would become useless if the operating channel width changed, which sounds pretty bad to me. The information passed needs to work for all oeprating channel widths | Delete " in the operating channel width" from the cited text. In 26.5.9 delete "in the current operating channel width " | Revised-  Agree in principle.  In addition to the proposed changes from the commenter,  Please TGax editor remove the first sentence in 9.4.2.2.62 because this is a redundant sentence with the second sentence.  TGax editor makes changes as shown in the as specified in 11-20/1063r3. |
| ***TGax Editor: Change the subclause 9.4.2.262 as follows (#24465):***  **9.4.2.262 UL MU Power Capabilities element**  ~~The UL MU Power Capabilities element specifies the relative maximum transmit powers with which a STA is capable of transmitting an HE TB PPDU when using an RU size greater than or equal to 242 tones, as a function of HE-MCS.~~ The UL MU Power Capabilities element indicates the relative maximum transmit power that a STA is capable of transmitting an HE TB PPDU for each HE-MCS ~~in the operating channel width~~ when using RU size greater than or equal to 242 subcarriers. The format of the UL MU Power Capa-bilities element is shown in Figure 9-787aj (UL MU Power Capabilities element format).  ***TGax Editor: Change the subclause26.5.9 as follows (#24465):***  **26.5.9 UL MU transmit power capabilities**  A non-AP HE STA may use the UL MU Power Capabilities element in an (Re)Association Request frame in order to inform an HE AP of the relative maximum transmit power at which the non-AP HE STA is capable of transmitting an HE TB PPDU for each HE-MCS ~~in the current operating channel width~~ when using an RU size greater than or equal to 242 subcarriers. | | | | | |