IEEE P802.11
Wireless LANs

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| LB 200 Comment Resolution for Clause 9.20.2.1-3 |
| Date: 2014-03-03 |
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Abstract

This submission proposes resolutions for comments in clause 9.20.2.1-3 of TGah Draft 1.0 with the following CIDs:

1962, 1972, 1205, 2458, 2025, 1208

Revisions:

Rev 0 – Initial version of the document

Rev 1 – Clarification text added to 9.20.2.3 (highlighted in yellow)

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.***

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1962 | 189.61 | 9.20.2.2 | As the TXOP linit of 0 effectively prohibits SF and TXOP sharing the Table 8-117 should be changed as proposed in 13/0014r1. The default values recommended would be better suited to S1G operation. | Adopt default TXOP Limit values asproposed in 13/0014r1. | Rejected –Modifications to the default TXOP limit values have broader implications (QoS requirements such as access delay, achievable throughput etc) and this comment should be brought in REVmc. |
| 1972 | 168.01 | 9.20.2.2 | It is inappropriate to limit the transmission of PS-Poll frame within a TXOP to "PS-Poll frame with its Duration/ID field set to AID". This limitation shall be removed so that any type of PS-Poll frames is allowed to be transmitted. | Propose to delete "with its Duration/ID field set to AID" after "PS-Poll". | Revised –PS-Poll frames of type PS-Poll+SF (i.e., that include a duration and are sent as initial frame of SF) cannot be sent if TXOP limit is set to 0 because they are part of an SF exchange.TGah editor to make changes shown in 14/0280r1 under the heading for CIDs from 1962 to 1208. |
| 1205 | 168.19 | 9.20.2.3 | "or of an S1G frame"This creates a conflict with item b). | Exclude an S1G frame from list item b). | Revised –Agree with the commenter. Added exclusion in the proposed resolution. TGah editor to make changes shown in 14/0280r1 under the heading for CIDs from 1962 to 1208. |
| 2458 | 168.18 | 9.20.2.3 | So an S1G frame counts even if it had a bad FCS? | Add a NOTE to explain why S1G frames count even if their FCS was bad, and how to know it was really an S1G frame if the FCS was bad! | Revised –S1G STAs use an EIFS which is equal to DIFS. Hence conditions listed in a) and b) are basically the same. This should be clear by adding the exception to item b) as suggested by CID 1205.In addition, S1G STAs use RID mechanism which basically performs as an EIFS using info in the PLCP header of the received frame. TGah editor to make changes shown in 14/0280r1 under the heading for CIDs from 1962 to 1208. |
| 2025 | 171.20 | 9.20.2.9 | "If an S1G STA (e.g., Sensor type STA) invokes a backoff procedure at the primary 1MHz channel for 1MHz PPDU transmission...", for >=2MHz BSS, there is no such thing as primary 1MHz CCA sensing and backoff procedure, and secondary 1MHz CCA, therefore this backoff procedure is only for 1MHz BSS. | Change " at the primary 1MHz channel for 1MHz PPDU transmission..." to "in a 1MHz BSS". | Rejected –Note: This comment was already addressed in doc 11-14-0075r1 which has been motioned during the IEEE F2F January meeting but this CID was missing in the headering of the motioned document. Below resolution is copied from that document: “According to table 9-20a (in D1.1 of 802.11ah) a PHY-CCA indication of primary2 indicates that the primary1 is idle in which case an S1G STA that has started a backoff procedure in the primary 1MHz can transmit according to that statement. Hence, there is no inconsistency in the current draft.” |
| 1208 | 170.10 | 9.20.2.9 | It is not clear to me if this subclause supersedes or refines the non-S1G-specific EDCA subclauses. | Add para describing which of the other EDCA subclauses are relevant. If any subclause is not relevent to S1G, go to that subclause and indicate a statement that S1G STAs are excluded. For S1G EDCA, see 9.20.2.9. | Revised –See discussion.TGah editor to make changes shown in 14/0280r1 under the heading for CIDs from 1962 to 1208. |

**Discussion:** *Proposed resolution is to add the necessary exceptions as suggested by the commenter throughout the EDCA subclauses in a similar way as it has been done in 802.11ac D5.0 for VHT STAs. Note that comment resolution of CID 2558 in 13/1530r0 adds the following text to 9.3.2.3.4: “An S1G STA performing clear channel assessment (CCA) in the secondary 2, 4 and 8 MHz channels before transmitting a 4, 8, 16 MHz mask PPDU using EDCA channel access as described in 9.20.2.9*

*(EDCA channel access in an S1G BSS),” which is inline with the commenter’s suggestion. Another occurrence of this exception has to be added in 9.20.2.3 (Obtaining an EDCA TXOP) which is suggested below (Note that the subclause numbers are based in D2.0 of REVmc).*

* **EDCA TXOPs**

**Instructions to TGah Editor*: Change this paragraph as follows:* (#866)**

A TXOP limit value of 0 indicates that the TXOP holder may transmit or cause to be transmitted (as responses) the following within the current TXOP:

* A single MSDU, MMPDU, A-MSDU, A-MPDU, or PS-Poll that is not an PS-Poll+SF frame at any rate, subject to the rules in 9.7
* **Obtaining an EDCA TXOP**

**Instructions to TGah Editor*: Change the 1st inserted paragraph in 9.19.2.3 of 802.11ac D5.0 as follows:* (#866)**

When a STA and the BSS, of which the STA is a member, both support multiple channel widths, an EDCA TXOP is obtained based solely on activity of the primary channel. "Idle medium" in this subclause means "idle primary channel". Likewise "busy medium" means "busy primary channel". Once an EDCA TXOP has been obtained according to this subclause, further constraints defined in 10.15.9 (STA CCA sensing in a 20/40 MHz BSS) and 9.19.2.8 (EDCA channel access in a VHT BSS) might limit the width of transmission during the TXOP or deny the channel access, based on the state of CCA on secondary channel, secondary 40 MHz channel or secondary 80 MHz channel. Once an EDCA TXOP has been obtained by an S1G STA according to this subclause, further constraints might limit the width of transmission during the TXOP or deny channel access as described in 9.20.2.9 (EDCA channel access in an S1G BSS).

**Instructions to TGah Editor*: Change this paragraph as follows:* (#866)**

The specific slot boundaries at which exactly one of these operations shall be performed are defined as follows, for each EDCAF:

* Following AIFSN[AC] × aSlotTime – aRxTxTurnaroundTime of idle medium after SIFS (not necessarily idle medium during the SIFS(#156)) after the last busy medium on the antenna that was the result of a reception of a frame with a correct FCS or of an S1G frame. Note that upon reception of an S1G frame, an S1G STA updates its RID counter based on information obtained from the RXVECTOR as described in 9.3.2.4a (Setting and resetting the RID) and this update does not depend on the outcome of the FCS check.
* Following EIFS – DIFS + AIFSN[AC] × aSlotTime + aSIFSTime – aRxTxTurnaroundTime of idle medium after the last indicated busy medium as determined by the physical CS mechanism that was the result of a non-S1G frame reception that has resulted in FCS error, or of a frame reception that has resulted in PHY-RXEND.indication (-RXERROR) primitive where the value of RXERROR is not NoError.