IEEE P802.11  
Wireless LANs

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| LB200 Proposed Comment Resolutions for 8.4.2.28 and 8.4.2.63 | | | | |
| Date: 2014-03-14 | | | | |
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|  |  |  |  |  |

Abstract

This submission proposes resolutions for following MAC comments of P802.11ah D1.0 WG Letter Ballot (LB200):

* 2561
* 2597

R0: Initial

| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 2561 |  | 8.4.2.31 | It is better to define Default TXOP limit values for an S1G STA in the Table 8-105 (Default EDCA Parameter Set element parameter values if dot11OCBActivated is false). | Insert the subclause 8.4.2.31 (EDCA Parameter Set element), and change the Table 8-105 of IEEE P802.11af by adding a new column corresponding to the S1G STA (For PHY defined in Clause 24). The TXOP limit values are following:  - 0 for AC\_BK and AC\_BE  - 30.08ms for AC\_VI  - 15.04ms for AC\_VO | Revised.  Agree in principle.  TGah editor to make changes shown in 11-14/0289r0 under the heading for CID 2561. |

**Discussion**

This comment relates to the table 8-117 in subclause 8.4.2.28 of IEEE P802.11mc D2.0.

With current Table 8-117, default TXOP limit values for an S1G PHY are all 0. This default value prevents the use of RD, SF, and TXOP Sharing for all ACs.

With appropriate default TXOP values, an S1G STA can use a QoS Capability element instead of EDCA Parameter Set element in beacons, and reduce 17 octets. The S1G PHY is 1/10 down clocked variant of VHT PHY, proposed default TXOP limit values are default TXOP limit values of VHT PHY multiplied by 10.

**Resolution for CID 2561:**

Revised. TGah editor to make changes as follows;

### 8.4.2.28 EDCA Parameter Set element

*Instructions to TGah Editor: Modify the Table 8-117 as follows (Based on IEEE Std 802.11af-2013 (Note: IEEE P802.11af D3.0 has some typos in this table which are collected in D5.0)):*

Table 8-117—Default EDCA Parameter Set element parameter values if dot11OCBActivated is false

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **AC** | **CWmin** | **CWmax** | **AIFSN** | **TXOP limit** | | | | |
| **For PHYs defined**  **in Clause 16 and**  **Clause 17** | **For PHYs defined**  **in Clause 18,**  **Clause 19,**  **Clause 20 and Clause 22** | **For PHY defined in clause 23** | **For PHY defined in clause 24** | **Other PHYs** |
| AC\_BK | aCWmin | aCWmax | 7 | 0 | 0 | 0 | 0 | 0 |
| AC\_BE | aCWmin | aCWmax | 3 | 0 | 0 | 0 | 0 | 0 |
| AC\_VI | (aCW­min +1)/2 - 1 | aCWmin | 2 | 6.016 ms | 3.008 ms | 22.56 ms (basic chan­nel unit: 6 or 7 MHz),  16.92 ms (basic chan­nel unit: 8MHZ) | 30.08 ms | 0 |
| AC\_VO | (aCW­min +1)/4 - 1 | (aCW­min +1)/2 - 1 | 2 | 3.264 ms | 1.504 ms | 11.28 ms (basic chan­nel unit: 6 or 7MHz),  8.46ms (basic channel unit: 8MHz) | 15.04 ms | 0 |

| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
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| 2597 |  | 8.4.2.63 | In the subclause 8.4.2.63 (Channel Switch Timing element) of the IEEE P802.11mc D1.1, the Switch Time field and Switch Timeout field are defined as 2 octets field expressed in units of microseconds. So, maximum value is about 67 ms, which is not sufficient for an S1G STA. | Insert the subclause 8.4.2.63 (Channel Switch Timing element) and modify the 3rd paragraph and the 1st sentence of 4th paragraph as follows:  ---  The Switch Time field is set to the time it takes for a STA sending the Channel Switch Timing element to switch channels, in units of microseconds for a non-S1G STA and 10 microseconds for an S1G STA.  The Switch Timeout field is set to a time in units of microseconds for a non-S1G STA and 10 microseconds for an S1G STA. | Revised.  Only the Switch Timeout field is modified.  TGah editor to make changes shown in 11-14/0289r0 under the heading for CID 2597. |

**Discussion**

Both the TDLS Channel Switch Request frame and the TDLS Channel Switch Response frame contain a Channel Switch Timing element. The subclause 10.23.6 (TDLS channel switching) specifies the procedure of TDLS channel switching.

The Switch Time field is set to the time it takes for a STA sending the Channel Switch Timing element to switch channels. The current maximum value of 67 ms is enough for an S1G STA to switch channel, and do not need to change.

The Switch Timeout filed is set to the time for the STA sending the Channel Switch Timing element waits for the first Data frame exchange on the off-channel before switching back to base channel. An S1G STA other than TDLS peer may occupy wireless media up to few tens of ms, the current maximum timeout value of 67 ms is not enough for the S1G STA.

**Resolution for CID 2597:**

Revised. TGah editor to make changes as follows;

### 8.4.2.63 Channel Switch Timing element

*Instructions to TGah Editor: Modify the last sentence as follows (Based on IEEE P802.11mc D2.0):*

The Switch Timeout field is set to a time in units of microseconds for a non-S1G STA and 10 microseconds for an S1G STA. The STA sending the Channel Switch Timing element waits for the first Data frame exchange on the off-channel for the time specified by the Switch Timeout field~~microseconds~~ before switching back to base channel. The time is measured from the end of the last symbol of the Ack frame that is transmitted in response to TDLS Channel Switch Response frame, as seen at the air interface.