IEEE P802.11  
Wireless LANs

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| LB225 CR Sub-clause 10.3.2.4 | | | | |
| Date: 2017-02-07 | | | | |
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Abstract

This submission proposes resolutions of comments received from TGax LB225.

(The proposed change is based on TGax Draft 1.0.)

* CIDs: 5931, 7528, 9748 (3 CID)

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** |
| --- | --- | --- | --- | --- | --- |
| 5931 | 115.31 | 10.3.2.4 | NAVTimeout is not defined for MU-RTS. | Amend corresponding statement in 802.11-2016 with necessary changes to include the case for MU-RTS. | Revised-  Agree in principle.  Define the NAVTimeout for MU-RTS.  TGax editor makes changes as shown in the as specified in 11-17/0227r0. |
| 7528 | 115.32 | 10.3.2.4 | The next paragraph in 802.11-2016 states "In non-DMG BSS NAVTimeout period is equal to (2 x aSIFSTime) + (CTS\_Time) + aRxPHYStartDelay + (2 x aSlotTime). The "CTS\_Time" shall be calculated using the length of the CTS frame and the data rate at which the RTS frame used for the most recent NAV update was received.". This paragraph should be updated for 11ax as CTS responding to MU-RTS are sent with a constant CTS\_Time | Add the 802.11-2016 parapraph in comment, and add "In case of responding to MU-RTS, CTS\_Time is calculated using 6Mbps data rate in non-HT format" | Revised-  Agree in principle.  Define the NAVTimeout for MU-RTS.  TGax editor makes changes as shown in the as specified in 11-17/0227r0. |
| 9748 | 115.31 | 10.3.2.4 | Regarding the NAVTimeout period, the base specification explains it as the following: "In non-DMG BSS, NAVTimeout period is equal to (2 x aSIFSTime) + (CTS\_Time) + aRxPHYStartDelay + (2 x aSlotTime). The CTS\_Time shall be calculated using the length of the CTS frame and the data rate at which the RTS frame used for the most recent NAV update was received." In here, there are two issues. First issue, when an HE STA received a MU-RTS frame, CTS\_Time for calculating the NAVTimeout period of the received MU-RTS frame is fixed to 6Mbps. Second issue, aRxPHYStartDelay is quite different depending on whether an received RTS or MU-RTS is an intra-BSS frame or an inter-BSS frame. When an received RTS or MU-RTS is an intra-BSS frame, aRxPHYStartDelay is 96 us. But, when an received RTS or MU-RTS is an inter-BSS frame, aRxPHYStartDelay is 40us. For an HE STA, the NAVTimeout period should be defined seperately depending on whether the RTS or MU-RTS is received from an intra-BSS or an inter-BSS. | As per comment. | Revised-  Agree in principle on the first issue.  Define the NAVTimeout for MU-RTS.  Regarding the second issue, I agree that aRxPHYStartDelay of 96us can make a problem.  But, the spec does not say which aRxPHYStartDelay is used in the NAVTimeout calculation when several frame formats are supported (e.g., HT-mixed PPDU or HT-greenfield PPDU).  So, it seems that the solution is an implementation issue.  TGax editor makes changes as shown in the as specified in 11-17/0227r0. |

10.3.2.4 Setting and resetting the NAV

***TGax editor: change the sub-clause 10.3.2.4 as the following:***

A STA that used information from an RTS or MU-RTS frame as the most recent basis to update its NAV setting is permitted to reset its NAV if no PHY-RXSTART.indication primitive is received from the PHY during a NAVTimeout period starting when the MAC receives a PHY-RXEND.indication primitive corresponding to the detection of the RTS or MU-RTS frame.

In non-DMG BSS, NAVTimeout period is equal to (2 x aSIFSTime) + (CTS\_Time) + aRxPHYStartDelay + (2 x aSlotTime). When the RTS frame was used for the most recent NAV update, t~~T~~he “CTS\_Time” shall be calculated using the length of the CTS frame and the data rate at which the RTS frame ~~used for the most recent NAV update~~ was received. When the MU-RTS frame was used for the most recent NAV update, the “CTS\_Time” shall be calculated using the length of the CTS frame and the 6 Mb/s data rate (see 10.3.2.8a.3 (CTS response to MU-RTS)). (#5931, 7528, 9748)