IEEE P802.11
Wireless LANs

|  |
| --- |
| D0.1 Comment Resolution – CID 808 |
| Date: 2011-05-10 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Reza Hedayat | Cisco Systems | 2200 E. G. Bush Turnpike, Richardson, TX 75082, USA |  | rehedaya@cisco.com |
| Brian Hart | Cisco Systems | 170 W Tasman Dr, San Jose, CA 95134, USA |  | brianh@cisco.com |

##### Baseline is 11ac D0.3 document.

##### This document proposes resolution for the following CID:

##### MAC: 808

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **808** | **Loc, Peter** | **7.4.12.4** | **37** | **46-50** | **TR** | **The Operating Mode Notification frame can be sent by both non-AP STA and AP implies that any STA can decide to operate with less than 80MHz bandwidth although the AP and other STAs still operate with 80 MHz. This will create coexistence issues among the STAs operating in the same BSS**  | **Add text to state that although a non-AP STA can send an Operating Mode Notification frame to change its operating channel width, it shall continue to operate with the current channel width until the AP sends out a Operating Mode Notification frame. This may need further discussion in the task group.** |  | **MAC** |

**Proposed resolution:** Agree in principle.

**Discussion:** The problem stated by this CID is regarding sending Operating Mode Notification by a STA when it’s changing its bandwidth from e.g. 80MHz to 40MHz. The commenter states that there would be coexistence issues when the STA has sent the notification and assumes its operation with 40MHz bandwidth while AP still assumes the STA operates with 80MHz. While it’s not clear what the referred coexistence problems are, the non-AP STA sending the Operating Mode Notification Action frame can exercise some caution to lower the probability of packet loss. For instance, the STA that narrows its bandwidth can postpone switching to the new narrower bandwidth until it’s made sure that the AP has likely respected the change of bandwidth that the STA has notified AP with.

***TGac editor: change as follow***

**11.20 VHT BSS operation**

**11.20.1 Basic VHT BSS functionality**

A VHT STA that is a member of a VHT BSS shall not transmit a 20 MHz VHT PPDU that does not use the primary 20 MHz channel of the BSS.

A VHT STA that is a member of a VHT 40 MHz, 80 MHz, 160 MHz or 80+80 MHz BSS shall not transmit a 40 MHz PPDU that does not use the primary 20 MHz channel of the BSS.

A VHT STA that is part of a VHT 80 MHz, 160 MHz or 80+80 MHz BSS shall not transmit an 80 MHz PPDU that does not use the primary 20 MHz channel of the BSS.

A VHT STA shall not transmit a 160 MHz VHT PPDU using a 160 MHz channel that cannot be used to setup a VHT 160 MHz BSS.

A VHT STA shall not transmit a 80+80 MHz VHT PPDU using two nonadjacent 80 MHz channels if either channel cannot be used to setup a VHT 80 MHz BSS.

The Operating Mode Notification Action frame may be used by a VHT STA to notify another VHT STA that it is capable of receiving frames with a bandwidth up to and including the indicated Channel Width and with a *NSS* up to and including the indicated Rx Nss.

*NOTE—To avoid possible frame loss, a VHT STA that sends an individually addressed Operating Mode Notification frame to a second VHT STA indicating reduced operating channel bandwidth and/or reduced Rx Nss can continue with its current operating channel bandwidth and Rx Nss until it receives a frame addressed to itself from the second VHT STA in a PPDU with a bandwidth and Nss that are equal to or less than the channel bandwidth and Nss, respectively, indicated in the Operating Mode Notification frame or a time period has elapsed that reasonably accommodates the time the second VHT STA needs to adapt to the new operating mode, whichever occurs first.*

*NOTE—It may take a long time for a STA to change its operating mode following the transmission of the Operating Mode Notification frame and during that time the STA may not be able to receive frames resulting in frame loss. If a non-AP STA cannot tolerate frame loss during that period it can set the Frame Control Power Management subfield of the Operating Mode Notification frame to 1 to indicate that the STA has entered power save. When the non-AP STA has completed its operating mode change, it can send another frame (such as a QoS Null) with the Frame Control Power Management subfield set to 0 to indicate that the STA has exited power save.*

The use of RIFS in a VHT BSS is deprecated. As such, a VHT AP shall set the RIFS Mode field in the HT Operation element to 0.