IEEE P802.11
Wireless LANs

|  |
| --- |
| Clarifications on Beaon RSSI |
| Date: 2014-07-16 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Youhan Kim | Qualcomm |  |  | youhank@qca.qualcomm.com |
| Menzo Wentink | Qualcomm |  |  | mwentink@qti.qualcomm.com |
| Carlos Aldana | Qualcomm |  |  | caldana@qca.qualcomm.com  |

Abstract

This document proposes some clarifications for Beacon RSSI. Please see IEEE 802.11-14/0890r2 for further details on discussion.

**REVISION NOTES:**

R0: initial

R1: Clarified that the averaging of Beacon RSSI across multiple receive chains is done in linear domain.

R2: Moved Beacon RSSI definitions to Clause 10 and Annex C.

R3: Minor updates to MIB.

**Discussion:**

Please see IEEE 802.11-14/0890r2 for discussions on this topic.

**Proposed changes**

***Add the following new subclause:***

**10.45 Beacon RSSI**

Upon receiving a Beacon frame, a STA measures the received signal strength of the Beacon frame (dot11BeaconRssi). If the Beacon frame is received using multiple receive chains, the Beacon RSSI is averaged in linear domain over all active receive chains. The Beacon RSSI is reported in dBm. When operating in frequency bands below 6 GHz, the Beacon RSSI has an accuracy of ± 5 dB (95% confidence interval) within the specified dynamic range of the receiver. Beacon RSSI may be averaged over time using a vendor specific smoothing function.

**C.3 MIB Detail**

***Add the following MIBs:***

dot11BeaconRssiEntry ::=

   SEQUENCE {

 Dot11BeaconMACAddress MacAddress,

 Dot11BeaconRssi Integer32 }

dot11BeaconMACAddress OBJECT-TYPE

   SYNTAX MacAddress

   MAX-ACCESS read-only

   STATUS current

   DESCRIPTION

"This is a status variable.

It is written by MAC upon receiving a Beacon frame.

This attribute indicates the MAC address of the AP from which the beacon used for Beacon RSSI measurement was transmitted."

   ::= { dot11BeaconRssiEntry 1}

dot11BeaconRssi OBJECT-TYPE

   SYNTAX Integer32

   MAX-ACCESS read-only

   STATUS current

   DESCRIPTION

"This is a status variable.

It is written by MAC upon receiving a Beacon frame.

This attribute indicates the received signal strength in dBm of Beacon frames received on the channel, averaged (in linear domain) over all active receive chains. This may be time-averaged over recent history by a vendor-specific smoothing function."

   ::= { dot11BeaconRssiEntry 2}