IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Text  Dynamic OBSS\_PDlevel | | | | |
| `Date: 2018 - 09 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Graham Smith | SR Technologies | Davie, FL, USA | 916 799 9563 | Gsmith@srtrl.com |
| Lauren Cariou | Intel |  |  | Laurent.cariou@intel.com |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

The current OBSS\_PD SR scheme does not cover how a STA might choose the level. As spatial reuse affects all STAs, the absence of any scheme could result in STAs using different criteria resulting in deployment difficulties.

It is proposed to add a recommendation that the OBSS\_PD level may be based on an equation using the received RSSI from the beacons of the AP to which the STA is associated.

R1 – punctuation corrections

R3/R4 – Referenced to D3.0

**CID 166**

**Suggested changes for DSC to 802.11 Standard**

**BACKGROUND STUFF**

The following text edits are based upon D3.0

**At P172.12 Figure 9-589cx**

**Add “OBSS PD Margin field**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Element ID  255 | Length | Element ID Extension | SR Control | Non-SRG OBSS PD Max Offset | SRG OBSS PD Min Offset | SRG BSS PD Max offset | SRG BSS Color  Bitmap | SRG Partial BSSID Bitmap | OBSS PD Margin |

Octets 1 1 1 1 0 or1 0 or 1 0 or 1 0 or 8 0 or 8 0 or 1

**Figure 9-589cx – Spatial Reuse Parameter Set element**

**At P172.30 Figure 9-589cy**

**Add “OBSS PD Margin Present” subfield**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SRP Disallowed | Non- SRG OBSS PD SR Disallowed | No-SRG Offset Present | SRG Information Present | HESIGA\_Spatial\_reuse\_value15\_allowed | OBSS PD Margin  Present | Reserved |

Bits 1 1 1 1 1 1 1

**At end of 9.4.2.241 P 173.51 Add following:**

The OBSS PD Margin subfield is present when the value of the OBSS PD Margin Present subfield is equal to 1; otherwise the OBSS PD Margin subfield is not present. The OBSS PD Margin field contains an unsigned integer which indicates the value of the OBSS PD Margin, in dBs.

**At end P341.42, after Table 27.10 add following:**

The AP may include an OBSS PD Margin subfield in the Spatial Reuse Parameter Set that recommends a STA to adjust its OBSS\_PD level in accordance with Equation 27-X.

*OBSS\_PDlevel = RSSI\_beacon – OBSS PD Margin,*

*with OBSS\_PDmin ≤OBSS\_PDlevel≤OBSS\_PDmax (27-X)*

A STA may monitor the beacons transmitted by the AP to which it is associated and measure the received signal strength of the beacons, RSSI\_beacon. The received signal strength of the beacon frames may be averaged over time so as to account for the mobility of a STA. The value of OBSS PD Margin is then subtracted from the time averaged received signal strength of the beacons, RSSI\_beacon, using equation 27-X, to provide an interim value for OBSS\_PDlevel. The upper and lower limits of OBSS\_PDlevel are OBSS\_PDmax and OBSS\_PDmin respectively.