IEEE P802.11
Wireless LANs

|  |
| --- |
| CR for SR |
| Date: 2019-11-11 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Laurent Cariou |  |  |  | laurent.cariou@intel.com |

Abstract

This document provides CR for CIDs: 24025 24475

R1: version presented

R2: alternate resolution suggestion for CID24025

1. **Introduction**

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. The introduction and the explanation of the proposed changes are 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 o***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 24025 | Graham Smith | 419.55 | 26.10.2.4 | In many independant papers and analyses it has been clearly shown that there are problems with the solely TPC method and in reality it is difficult to see why any device would employ it as it puts the device at an immediate disadvantage. It may sound good that reducing the power makes you less of an interferer, but if you reduce the power, you reduce the SNIR of the wanted transmission, hence you decrease the MCS , you have a good possibility of not being successful, you slow down the network, but, most importantly, any legacy device or indeed DL traffic will cause significant problems. In addition there are no rules for the OBSS-PD level and the TX transmission power making it impossible to simulate or indeed know what an individual device may do. I would point at several independent studies that look at DSC and TPC. DSC is beneficial to the 11ax devices whereas TPC is beneficial to legacy devices. It makes no sense that we have TPC and not DSC. We need to add the DSC formula at which point we could sensibly work at devising a scheme that works. | Delete the requirement for TPC. In fact the whole section on spatial reuse should probably be deleted as it is unproven and dangerous to leave it in. It would be better to have a spatial reuse SG formed so that it can be done properly without the bad history that taints it in 11ax. | Rejected – The spatial reuse section is the result of long discussions in the 11ax task group and many simulations also backed the different introduced concepts.It is not true that the current spatial scheme is based solely on TPC, it is a combination of TPC and sensitivity reduction (OBSS\_PD). SRG OBSS\_PD is a mode where there are actually no TPC and just sensitivity reduction.In the mode where TPC is combined with sensitivity reduction, the rules are defined to determine what combinations of TxPower and Sensitivity (OBSS\_PD) are possible, but let to implementation the choice to select the combination that suits them based, for instance on how close they are to their serving AP. This is similar to MCS selection: spec defines the set of possible MCSs to choose from, and implementers will choose the one that suits them depending, for instance, on how close they are to their serving AP.Revised - At P520.54 (D6.0) Clause 26.10.2.4: Change “NOTE:” to “NOTE 1:”Then add the following note:““NOTE 2 - As an example, a non-AP STA might monitor the beacons transmitted by the AP to which it is associated and measure the received signal strength RSSI\_beacon. A value between 20 and 30 dB, OBSS PD Margin, might then be subtracted from the RSSI\_beacon, to provide a value for OBSS\_PDlevel. In accordance with Equation (26-5) the upper and lower limits of OBSS\_PDlevel are OBSS\_PDmax and OBSS\_PDmin respectively.” |
| 24235 | Wilhelmsson, Leif | 426.10 | 26.10.3.2 | The description of how things are normalized to 20 MHz becomes nicer if the formula is spelled out as on p. 420 l.35 | Rephrase how the normalization is done in the same was as on p. 420, l. 35 |  |
| 24236 | Wilhelmsson, Leif | 427.39 | 26.10.3.4 | The description of how things are normalized to 20 MHz becomes nicer if the formula is spelled out as on p. 420 l.35 | Rephrase how the normalization is done in the same was as on p. 420, l. 35 |  |
| 24475 | RISON, Mark |  | 26.10.2 | In OBSS\_PD spatial reuse, it is now clear how "RSSI is low because device is far away and so there is a largepath loss, so it's OK for me to transmit as long as I don't transmit tooloudly" and "RSSI is low because device is close but has chosen to transmitquietly, so it's not OK for me to transmit, even quietly" are distinguished. The resolution to CID 22293 claims there is no need to distinguish these two cases, but there clearly is, because in one case it is safe to transmit and in the other it is not safe (to the victim) to transmit | Delete Subclause 26.10.2 | Rejected – With baseline CCA, these 2 cases can already happen. If an 802.11 signal arrives at the receiver at -83dBm, coming from a STA that is transmitting from far away at high power, or coming from a STA that is transmiting for closeby with a very low power. Current baseline CCA mechanism does not differentiate between these 2 cases, as it relies solely on the receive power. OBSS\_PD follows exactly the same assumptions here. |
|  |  |  |  |  |  |  |

1. **Proposed changes**