**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | **Proposed Resolution for Comments #988** | |
| Date Submitted | July 17, 2024 | |
| Sources | Carlos Aldana (Meta) |  |
| Re: |  | |
| Abstract |  | |
| Purpose | To propose resolution to comment with CID #988 for “P802.15.4ab™/Draft 1.0 Standard for Low-Rate Wireless Networks” | |
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| 988 | Technical | 71 | 10.38.7.3 | 13 | SSBD can be used to specify LBT behavior. Please add the following text: "Channel access using listen before talk shall be used for improved coexistence performance. When used for narrowband assist, SSBD shall use the following control attribute values: phyCcaDuration should be set as required by local regulations;  macSsbdMinBf and macSsbdMaxBf shall be set to 0; macSsbdMaxBackoffs shall be set to 0; macSsbdTxOnEnd shall be set to FALSE; macSsbdPersistence shall be set to FALSE; phyCcaMode shall be set to 1 (energy above threshold) phyCcaEdThreshold shall be set to -67 dBm/MHz - Ptx for channels 0 to 49 and to -74 dBm/MHz - Ptx for channels 50 to 249, where Ptx is the equipment’s instantaneous transmit power in dBm." |  |

**Discussion**: There has been quite a bit of discussion on NB coexistence and various proposals have been made including LBT-based solution with a fixed EDT threshold and a duty-cycle limited no-LBT allowance.

This proposal allows for 2 options at the NB transmitter, where TXMAX\_power\_Regulatory is the max power allowed to be transmitted in the regulatory domain and Pcca\_dBm\_MHz is the CCA level is measured “per MHz”. The 2 options are as follows:

1. If Pcca\_dBm\_MHz <= EDT, then transmit up to TXMAX\_power\_Regulatory
2. If Pcca\_dBm\_MHz > EDT, then either
   1. do not transmit at TXMAX\_power\_Regulatory OR
   2. transmit up to Ptx using the formula below:

Ptx < = max(TXMAX\_power\_Regulatory, -67-Pcca\_dBm\_MHz) in channels 0 to 49 (UNII-3)

Ptx <= max(TXMAX\_power\_Regulatory, -74-Pcca\_dBm\_MHz) in channels 50 to 249 (UNII-5)

For example, if Pcca\_dBm\_MHz = -75 dBm, then the transmitter can transmit at 8 dBm in UNII-3 and 1 dBm in UNII-5.

Given that no consensus was reached on LBT-based solution with a fixed EDT threshold and a duty-cycle limited no-LBT allowance, this new transmit power control proposal is a way to achieve coexistence with non-802.15.4ab technologies.

**Proposed Resolution: Accepted**