IEEE P802.11
Wireless LANs

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| Scrambler Corrections |
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Abstract

This document proposes resolutions to the scrambler issues CID: 9001 wrt Draft 8.0 of TGad.

Explicitly disallow a seed value of zero for the scrambler

A zero-value seed results in no scrambling; this should be prohibited. The reason for this is unscrambled data, in particular any pad bits, can results in a continuous run of a constant value. This can cause issues at the PHY. Further, disallowing zero-value scrambler seeds is consistent with the baseline specification.

***TGad Editor: modify P524L13-16 as follows:***

For each PPDU, the transmitter shall select a non-zero seed value for the scrambler (bits x1 through x7). The seed value should be selected in a pseudo-random fashion. The values selected are sent in the Scrambler Initialization field of the PLCP header. Each data bit in the data field of the PPDU is then XORed with the scrambler output (x4 XOR x7) and the scrambler content shifted once.