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**IEEE P802.11  
Wireless LANs**

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**Proposal for text replying to point 14 and 15:**

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The Commission has asked comments concerning modification of the current jamming margin test. The proposal is to use a Gaussian noise modulated jamming signal instead of the current CW jamming signal.

The jamming margin test was introduced as a means to assess the effective performance of spread spectrum systems that is technology neutral. This test has performed its intended function very well: today systems delivering a data rate of 11 Mbit/s are on the market - backed by a technical standard developed under the auspices of the IEEE. These systems operate in the same spectrum envelope as their 1 and 2 Mbit/s precursors and that can be successfully and reliably tested with the CW jamming margin test. A stringent interpretation of the spreading rules and specific verification of compliance to such rules would have prevented this fortuitous development - without benefit to anyone.

A jamming margin test based on a Gaussian interference at first sight seems to be more in line with theoretical SNR – bit error rate performance considerations than the current applied jamming margin test based on a CW signal. However, a closer inspection shows that this is not the case: A Gaussian jamming signal a more complex definition and measurement process that is prone to errors. The bandwidth of the Gaussian signal and the filters used in generating and measuring it must be clearly defined and the measurement equipment must be properly set up to give the correct results. Further, implementation loss of the system under test plays a more prominent role in a Gaussian jamming margin test than it does with a CW jamming margin test. The proposed margin of 2 dB is impracticably low but agreement on higher values may be difficult to reach. Assessment of this implementation loss would thus become a part of the assessment of compliance. Clearly, this is undesirable, both for the Commission and for the industry.

Therefore, we recommend not to introduce a Gaussian noise based jamming margin test but to stick to the current jamming margin test based on CW signal. In practice, this simple test has proven adequate to prevent misuse of the rules without preventing significant technological advanced. It is in the interests of the users and of the industry to maintain the current test methods and so assure a stable basis for further technological advances.

Finally we point out that the original intent of the CW jamming margin test was, at least in our view, to assure a minimum level of quality of the systems claiming compliance to the part 15 rules for Direct Sequence equipment. The test was not intended to verify implementation of direct sequence spreading with 10 chips or more – this is only one method of achieving processing gain. Today we have more powerful technologies.

