

**SEPARATE STATEMENT OF  
COMMISSIONER KEVIN J. MARTIN**

*Re: Facilitating Opportunities for Flexible, Efficient, and Reliable Spectrum Use Employing Cognitive Radio Technologies (ET Docket No. 03-108); Authorization and Use of Software Defined Radios (ET Docket No. 00-47), Notice of Proposed Rulemaking and Order*

I am very pleased to support this item, which seeks to facilitate the development of cognitive or “smart” radio technology. Cognitive radio technology has truly great potential to improve spectrum access and efficiency. Among other things, the technology allows for greater sharing of spectrum. As I have previously discussed, promoting spectrum sharing is a fundamental part of encouraging efficient spectrum usage. *See, e.g.,* Remarks by Kevin J. Martin to the FCBA Policy Summit & CLE, *U.S. Spectrum Policy: Convergence or Co-Existence?* (Mar. 5, 2002). While the amount of available spectrum is ultimately limited only by technology, the spectrum supply currently feels very limited. Sharing spectrum is a crucial means to get more mileage out of this important resource. *See id.* Cognitive radio technology allows for greater spectrum sharing by enabling devices to find and use available spectrum in different frequencies, times, or spaces. This can be as simple as frequency hopping in a wireless local area network or as advanced as DARPA’s XG program, which would allow multiple users to share common spectrum by avoiding conflicts in time, frequency, code, and other signal characteristics. I am confident that we will see even greater advances in spectrum sharing through cognitive radio technology, and the Commission should do what it can to facilitate such advances.

Cognitive radio technology also makes possible improved spectrum access in rural areas. Many Wireless Internet Service Providers (WISPs) are using unlicensed spectrum to provide innovative services in rural areas but are finding it difficult to provide adequate signal coverage because of our current Part 15 power limits. This item proposes allowing such providers to increase their power input if they use cognitive radio technology to avoid interference to other users. I am very supportive of this proposal, and I look forward to receiving comments.

Cognitive radio technology also has great potential for enabling interoperability among public safety agencies. Lack of interoperability has been identified as a significant problem in our response to the September 11 attacks and in other disasters involving multiple jurisdictions, and we must all focus on improving interoperability. Cognitive radio technology can play an important part in that improvement by enabling devices to bridge communications between jurisdictions using different frequencies and modulation formats. Through such a mechanism, a fire department from Long Island could communicate effectively with a police department from Manhattan even if they use completely different radio systems. Such interoperability is crucial to enabling public safety agencies to do their jobs.

Accordingly, for all of these reasons, I look forward to receiving comment on how we can best promote cognitive radio technology.