Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
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 (Terminated)
	)	

COMMENTS OF ACCESS SPECTRUM, LLC

Access Spectrum, LLC ("Access Spectrum") hereby submits these comments in response to the FCC's *Notice of Proposed Rulemaking* concerning the development and deployment of cognitive radio technologies.[1] As further detailed below, Access Spectrum strongly supports the development of cognitive radio technologies for use by licensees as a means of facilitating secondary markets in spectrum use through voluntary agreements between licensees and third parties. Access Spectrum, however, urges the Commission to adequately protect licensees' investments by preventing unlicensed users from gaining access to licensed spectrum without licensee consent.

Access Spectrum is an FCC-authorized band manager currently operating in both the 220-222 MHz band ("220 MHz band") and the 746-806 MHz band ("upper 700 MHz band"). As a band manager, Access Spectrum is in the business of leasing spectrum

[1] *Facilitating Opportunities for Flexible, Efficient, and Reliable spectrum Use Employing Cognitive Radio Technologies, Authorization and Use of Software Defined Radio*, Notice of Proposed Rulemaking, ET Docket Nos. 03-108 and 00-47, FCC 03-322 (Dec. 30, 2003).

access to unaffiliated users. As noted in the Orders granting Access Spectrum the ability to provide band management services, band manager operations promote efficient use of spectrum and provide users with an additional option for deploying facilities in these bands.[2] For example, such services provide private wireless users with access to flexible spectrum capacity within tailored coverage areas, as opposed to a blanket geographic area license or procuring service as a customer of a licensee. Because end users have the financial incentive to minimize the amount and geographic areas of the spectrum they utilize, users only lease as much spectrum as they need for specific voice and/or data system requirements. As such, Access Spectrum ensures that its spectrum is utilized in the most efficient manner possible.

Access Spectrum has significantly invested in this FCC-encouraged business plan. As a result of this investment, Access Spectrum has successfully entered into multiple long-term spectrum use agreements[3] in both of its licensed bands and continues to make progress toward generating additional communications uses and spectrum applications consistent with its business objectives and FCC expectations.

Access Spectrum fully supports the development of cognitive radio technologies for use in its spectrum bands. The development of cognitive radio technologies will enable licensees, including Access Spectrum, to utilize their spectrum more intensively.

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[2] *Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules*, Second Report and Order, 15 FCC Rcd 5299, ¶ 2 (2000); Request for Waivers to Provide Band Management Services Utilizing Licenses in the 220-222 MHz Band, Memorandum Opinion and Order, 17 FCC Rcd 20464, ¶ 14 (2002).

[3] Access Spectrum's written agreements with end users of band manager spectrum have been drafted as "spectrum use agreements," or "SUAs," to avoid any confusion with respect to the creation of property rights associated with a "lease."

Specifically, Access Spectrum will be able to voluntarily contract with providers of "smart radios" to provide access to either portions or to all of its available bandwidth in specified geographic locations where other Access Spectrum users are either not using or have no issue with "smart radio" deployment in their service areas. Through its contractual process, Access Spectrum will be able to retain control over the spectrum environment so that service quality will be maintained.

Furthermore, "smart radios" will likely create new leasing opportunities. For example, Access Spectrum envisions being able to offer potential users the opportunity to satisfy voice service requirements using frequencies in the 800 MHz and 900 MHz bands and data applications using 700 MHz band frequencies via a single handset. In addition, smart radios will ultimately allow Access Spectrum to offer 220 MHz band radios that also access frequencies from other nearby land mobile allocations in order to provide users with greater capacity. Such applications will elevate the viability of both the 220 MHz and 700 MHz bands and spur new uses of that spectrum.

In that new world, however, the Commission must ensure that licensees continue to have full control over their spectrum environment by limiting the use of these technologies to licensees. Pursuant to its spectrum use agreements, Access Spectrum provides a specified level of service quality to its customers. In particular, several of Access Spectrum's customers have mission critical operations and are paying spectrum use fees commensurate with their level of anticipated service, *i.e.* a virtually guaranteed environment free of interference. If unlicensed users are allowed to operate unfettered in Access Spectrum's bands, Access Spectrum will no longer be able to guarantee the contractually stipulated level of non-interference. This in turn, would significantly

undermine one of the primary assets of band management – being able to specify a service quality commensurate with varying customer requirements. In light of the public benefits of band manager services, such a detrimental result is clearly not in the public interest. This limitation, however, should not hinder the development and deployment of these new technologies.

Moreover, allowing unlicensed users to gain access to auctioned spectrum will provide them with an inequitable competitive advantage. Licensees, including Access Spectrum, have typically paid substantially for their spectrum so that they can provide competitive services to a user community having a diverse set of communications requirements. Allowing unlicensed operators to use this same spectrum for *free* to provide a competitive service will seriously jeopardize the business pursuits of those who have participated in a public auction to secure access to exclusive spectrum. Furthermore, the addition of unlicensed devices, along with the commensurate rise in the noise floor, may impede the ability of licensees to implement their own low power services in competition with unlicensed devices. Such a clear preference for unlicensed service providers over licensees simply based on the type of technology each provider uses will completely undermine the auction process and is clearly not prudent national spectrum management policy.

As such, the Commission should clarify that licensees have full control over who has access to their spectrum. Voluntary contracts will achieve this purpose, as the terms and conditions for access will be clearly defined and known by all participating parties to the agreement. Although the Commission should encourage licensees to utilize cognitive radio technologies, either by implementing them into the licensee's own network or by

contractually allowing manufacturers or other service providers to utilize these technologies on the licensee's spectrum, the unrestrained ability of competitors to utilize these technologies to access licensed spectrum, without compensating the licensees, will result in an unwarranted competitive advantage that significantly harms the incumbent licensee. Access Spectrum, while supporting the development and deployment of cognitive technologies, urges the Commission to prohibit the use of these innovative devices by unlicensed users in licensed spectrum bands that have been assigned through competitive bidding processes, including the upper 700 MHz and the 220 MHz bands.

Respectfully submitted,

ACCESS SPECTRUM, LLC

By: /s/ Mark E. Crosby

Mark E. Crosby
President
Access Spectrum, LLC
Two Bethesda Metro Center
Bethesda, MD 20814
301.941.1100

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