

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

In the Matter of	)	
	)	
Revision of Part 15 of the Commission's	)	ET Docket No. 98-153
Rules Regarding Ultra-Wideband	)	
Transmission Systems	)	

**Comments of Sprint Corporation**

Sprint Corporation hereby submits its comments in response to the Commission's *Notice of Proposed Rulemaking (NPRM)* in the above-captioned proceeding.<sup>1</sup> In the NPRM, the Commission proposed to amend Part 15 of the Commission's rules to accommodate ultra-wideband ("UWB") devices. As described below, while Sprint supports the development of innovative technologies such as UWB, Sprint respectfully suggests that amendments to Part 15 are premature at this time. It is imperative that thorough and complete interference testing be performed and analyzed prior to adopting new rules and introducing these services into operation. The NPRM requests comment on potential restrictions on operation for UWB, yet the results of interference studies will not be made available until well after comments are due, thus rendering evaluations of any restrictions speculative at best. Sprint agrees with the Commission that an opportunity must be provided for comment on the results of tests voluntarily conducted by industry as

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<sup>1</sup> See *Ultra-Wideband Transmission Systems*, ET Docket No. 98-153, *Notice of Proposed Rulemaking*, FCC 00-163 (May 11, 2000), 65 Fed. Reg. 37332 (June 14, 2000)(“*NPRM*”).

well as NTIA and the Department of Transportation ("DOT"). However, Sprint also urges the Commission to ensure that further studies are conducted, as necessary, to evaluate interference by the full range of UWB offerings with existing services so that informed recommendations on UWB restrictions may be made and harmful interference to ongoing, commercially viable enterprises maybe avoided.

In the NPRM, the Commission invited comments on "the **PRECISE** frequency below which operations of UWB devices may need to be restricted" (emphasis added). Yet, the Commission "recognizes that the establishment of emissions limits requires a firm understanding of the characteristics of UWB signals, their impact on victim receivers, and the minimum separation distance between UWB devices and victim receivers."<sup>2</sup> Parties are "encouraged" to submit test results into the record in this proceeding by October 30, 2000. Thus, the Commission requests comment on precise restrictions to UWB operation prior to evaluation of test results even though the Commission itself recognizes that such test results are necessary to the proper evaluation of such restriction.

Sprint urges the Commission to ensure that comprehensive testing is performed beyond that proposed by the NTIA and DOT, covering the full range of UWB applications and all services currently operating within bandwidths potentially impacted by UWB interference before seeking recommendations regarding operational restrictions of UWB and, certainly, before promulgating permanent rules in this regard. Without systematic and carefully monitored testing, interference analysis is handicapped and can

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<sup>2</sup> NPRM at ¶ 29.

not provide the understanding of UWB signals and their impact on victim receivers that the Commission rightfully finds critical to establishing limits.

The Commission notes in the NPRM that "Section 7 of the Communications Act of 1934, as amended, requires the Commission "to encourage the provision of new technologies and services to the public." Accordingly, we conclude that the Commission should develop reasonable regulations that will foster the development of UWB technology while continuing to protect radio services against interference."<sup>3</sup> Sprint agrees that UWB technology holds promise. Sprint emphasizes, however, that among the "radio services" to be protected are other new technologies and advanced services -- such as two-way broadband Multipoint Distribution Services ("MDS"), Instructional Television Fixed Services ("ITFS"), personal communications services ("PCS"), Local Multipoint Distribution Services ("LMDS"). and others --which the Commission has found serve critical needs of the public and in which the Commission has encouraged investment.<sup>4</sup>

The benefits brought by the introduction and development of broadband PCS are a matter of public record. As the Commission reports:

The FCC's auctions of Broadband PCS licenses helped kick off an entirely new industry. Analysts predict that within ten years, there could be 100 million wireless telephone subscribers - an increase of more than 80 million. The creation of this new industry is estimated to generate tens of billions of dollars of future investment. Hundreds of thousands of new jobs will also be created.

Competition in the PCS industry will benefit consumers and businesses...Consumers will be able to choose from multiple providers and will receive lower prices and better service as a result. Businesses will increase their productivity and enhance efficient delivery of products because they will have greater choice among service providers and more advanced telecommunications services. Businesses also will benefit by

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<sup>3</sup> Id. at ¶ 8.

<sup>4</sup> Sprint notes that, simultaneous to filing these comments, Sprint and Time Domain are jointly submitting the results of testing performed to characterize the effect of UWB devices on an IS-95 PCS system.

providing a supporting role to this new industry, in construction of infrastructure, software development, etc.<sup>5</sup>

In addition, several companies, including Sprint, WorldCom and Nucentrix, have already launched ITFS/MMDS service in the 2 GHz band and are offering broadband wireless service to the public. Sprint has invested over \$1 billion dollars in licenses that will ultimately cover a total of 90 markets and an estimated 30 million households. Sprint currently offers fixed wireless broadband service in Tucson and Phoenix, Arizona. Sprint has filed applications with the FCC to offer wireless broadband service in 44 markets across the United States, and plans to file in additional markets during the February/March 2001 filing window.<sup>6</sup>

WorldCom has made similar investments and is conducting market trials of ITFS/MMDS broadband service in Boston, Dallas, Baton Rouge, Memphis, and Jackson, MS, and plans additional launches in the near future.<sup>7</sup> Nucentrix Broadband Networks plans to operate MDS-based broadband systems in 20 markets by year-end 2001.<sup>8</sup>

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<sup>5</sup> See Broadband PCS Fact Sheet, <http://www.fcc.gov/wtb/pcs/bbfctsh.html>.

<sup>6</sup> The new market applications include: Chicago, Ill.; San Francisco, San Jose, Fresno and Eureka, California; Milwaukee, Green Bay and Fon du Lac, Wisconsin, Lansing, Michigan; Las Vegas, Nevada; Salt Lake City, Utah; Boise, Idaho; Cincinnati, Columbus, and Toledo, Ohio; St. Louis, Missouri; Indianapolis and Bloomington, Indiana; Seattle, Washington; Nashville, Tennessee; Omaha, Nebraska; and Denver, Colorado Springs, Ft. Collins and Greeley, Colorado.

<sup>7</sup> See MCI WorldCom Adds Dallas to 'Fixed Wireless' Service Trials," <[http://www.wcom.com/about\\_the\\_company/press\\_release/display.phtml?R/20000405](http://www.wcom.com/about_the_company/press_release/display.phtml?R/20000405)>; [http://dailynews.yahoo.com/h/ap/20000814/bs/worldcom\\_broadband\\_1.html](http://dailynews.yahoo.com/h/ap/20000814/bs/worldcom_broadband_1.html).

<sup>8</sup> See Smith, "Laying the New Broadband Foundation," *Wireless Week* at 21 (Feb. 28, 2000).

The demand for the high-speed internet access services these companies intend to provide is well known.<sup>9</sup> The Commission recognized the significance of wireless cable as a facilities-based broadband alternative in its Advanced Services NOI, stating:

[w]ireless cable spectrum gives a new broadband last mile, and one allegedly cheaper to use than a cable-TV-based last mile, to companies that already possess most of the other necessary inputs for broadband.... It appears to us that the combination of wireless cable spectrum with existing switched telecommunications know-how opens the possibility of a significant, additional last mile to the residential customer.<sup>10</sup>

The Commission reiterated its support for the provision of MMDS/ITFS wireless broadband services in its recently released Fifth Report to Congress on competitive market conditions in the Commercial Mobile services ("CMRS") industry, writing:

[MDS/ITFS] transmissions have a greater radius than upperband fixed wireless service, generally 35 miles versus three to five miles for upperband services. This is partly due to the fact that MMDS signals are less attenuated by rain and other severe weather conditions. MMDS's larger radius makes the service well-suited for not only residential customers, but customers in rural, underserved, and unserved areas as well.<sup>11</sup>

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<sup>9</sup> As Chairman Kennard recently noted, "[o]ur Internet traffic is doubling every 100 days, and over 40 percent of U.S. households now have Internet access." However, less than three percent of all Internet users in North America use Broadband services. (*See* Remarks by Deborah A. Lathen, Chief, Cable Services Bureau, Federal Communications Commission before the National Governors' Association at 1 (Feb. 27, 2000) (as prepared for delivery)). The Wall Street Journal reports that "the demand already exists among many consumers who are still waiting for broadband offerings to come to their hometowns." (Wall Street Journal, Stephanie N. Mehta & Kathy Chen, "U.S. Market for Broadband is Barely Tapped" at B8 (Jan. 12, 2000)).

<sup>10</sup> *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, CC Dkt. No. 98-146, Notice of Inquiry, FCC 00-57, Attachment A ¶ 16* (rel. Feb. 18, 2000); see also Chairman Kennard's CTIA Address ("[Wireless has] the potential to be much more than a substitute. You are much more than an add-on, an adjunct, a niche-filler, whether to wireline or any other service.").

<sup>11</sup> *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 - Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services (Fifth Report)*, FCC 00-289, Appendix E at 8 (rel. Aug. 18, 2000).

Certainly, in light of the enormous and immediate demand for these services, it is critical that thorough interference testing be completed for all types of UWB operations to ensure that their introduction does not compromise the operation of existing, viable services that meet other, equally or more urgent needs of the public.

Sprint looks forward to evaluating the results of studies testing the many proposed applications of UWB technology against potential interference with existing services such that harmonious coexistence may be achieved and the public may enjoy the benefits of the full range of new technologies. Sprint urges the Commission to carefully monitor testing to ensure that it is thorough and covers all services. Further, the Commission must allow ample opportunity for test evaluation and comment by industry prior to establishing any rules governing UWB to ensure that such rules are based on informed, thorough analysis.

Respectfully submitted,

Sprint Corporation

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