



UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and
Information Administration
Washington, D.C. 20230

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
The Portals
445 Twelfth Street, S.W.
Room TW-A325
Washington, DC 20554

Re: Revision of Part 15 of the Commission's Rules Regarding Ultrawideband
Transmission Systems, ET Docket No. 98-153

Dear Ms. Salas:

Enclosed please find an original and five copies of the Letter from Assistant Secretary Gregory L. Rohde, National Telecommunications and Information Administration, Department of Commerce, to Chairman Kennard in the above-captioned proceeding.

Please direct any questions you may have regarding this filing to the undersigned. Thank you for your cooperation.

Respectfully submitted,

Milton Brown
Acting Chief Counsel

Enclosures

cc: The Honorable William E. Kennard
The Honorable Susan Ness
The Honorable Harold Furchtgott-Roth
The Honorable Michael Powell
The Honorable Gloria Tristani

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UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Communications
and Information
Washington, D.C. 20230

SEP 30 2000

The Honorable William E. Kennard
Chairman, Federal Communications Commission
The Portals
445 12th Street, S.W. TW-A325
Washington, D.C. 20554

Re: Revisions of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems, ET Docket No.98-153

Dear Chairman Kennard:

The National Telecommunications and Information Administration (NTIA), an Executive Branch agency within the Department of Commerce, manages and authorizes the Federal Government's use of the radio frequency spectrum. NTIA is the President's principal adviser on domestic and international telecommunications policy, including policies relating to the Nation's economic and technological advancement in telecommunications. NTIA's responsibilities include both fostering new technology and assuring that the Federal agencies' access to the spectrum to perform their critical missions is free from interference.

NTIA and the Federal Communications Commission (FCC) jointly manage the use of the radio frequency spectrum in the United States. Radio systems using ultrawideband (UWB) technologies, which the above captioned proceeding discusses, operate in wide portions of the spectrum consisting of bands managed by both agencies.¹ UWB technology can be used in a variety of applications including communications, imaging, and ranging. These systems have very wide information bandwidths, are capable of accurately locating nearby objects, and can use processing technology with UWB pulses to "see through objects" and communicate using multiple propagation paths. However, the establishment of rules for such use must provide protection to critical Federal radio communication and safety systems, protection that is not yet apparent.

In the UWB NPRM, the FCC seeks information on how to make sure that critical systems operating in the restricted bands established by Part 15 of the FCC's Rules are protected from harmful interference.² The FCC recognizes the complexity of the interaction between UWB and

¹ *Revisions of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems, Notice of Proposed Rule Making, ET Docket No. 98-153, FCC 00-163 (rel. May 11, 2000) (hereinafter "UWB NPRM").*

² Part 15 permits the operation of certain radio frequency devices without a license from the FCC or the need for frequency coordination (47 C.F.R. § 15.1). The technical standards contained in Part 15 seek to ensure that

conventional radiocommunication systems by acknowledging that further testing and analysis will be needed before UWB transmission systems could be authorized to operate in the bands used for these protected services.³ The Commission stressed, in particular, the need for further measurements and analyses in the bands below 2 GHz to protect the Global Positioning System (GPS) receivers used for navigation of all types, accurate timing, and automatic landing of aircraft.⁴ The Commission also states that

[It] welcome[s] these testing programs and believe that the information they yield will be important for developing emission limits for UWB devices that will protect other radio services against interference. Commission staff will monitor the progress of these tests. . . . [The FCC] encourage[s] parties to submit the test results into the record in this proceeding by October 30, 2000. At the appropriate time, [the FCC] will issue a public notice to provide an opportunity to provide comments and replies on the test results and analyses.⁵

NTIA agrees that the technical questions raised in the FCC's UWB NPRM are complex. NTIA has embarked, therefore, on two measurement programs to determine how UWB devices may impact conventional radio systems operating in the restricted bands. The first program examines the emissions from several UWB devices to determine how best to characterize the many types of UWB signals, describe procedures and methods for measuring UWB signals for developing operable certification standards, and develop criteria for UWB operation in the restricted bands.⁶ The second program, extends the first by examining the potential effect of UWB devices on GPS receivers.⁷

there is a low probability that unlicensed devices will cause harmful interference to other users of the radio spectrum (47 C.F.R. § 15.5). Within the Part 15 Rules, intentional radiators (devices that transmit a telecommunication signal) are permitted to operate under a set of limits (47 C.F.R. §15.209) that allow desired signal emissions in certain frequency bands. They are not permitted to operate in certain sensitive or safety-related frequency bands, which are designated as restricted bands (47 C.F.R. §15.205). UWB devices are intentional radiators under Part 15 Rules.

³ See UWB NPRM, *supra* note 1, at § 30.

⁴ *Id.*

⁵ *Id.* at § 31.

⁶ See "Notice, Request for Comments on Ultrawideband Systems Test Plan," National Telecommunications and Information Administration, Department of Commerce, 65 Fed. Reg. 40614 (June 30, 2000). The text of the notice, the proposed test plan (Master Plan) and the measurement program are available on NTIA's website at <<http://www.ntia.doc.gov/osmhome/uwbtestplan/>>.

⁷ See "Notice; Request for Comments on Global Positioning System/Ultrawideband Measurement Plan, 65 Fed. Reg. 49544 (Aug. 14, 2000). The text of the notice, the proposed ITS measurement program are available on NTIA's website at <<<http://www.ntia.doc.gov/osmhome/uwbtestplan/gpstestfr.htm>>>.

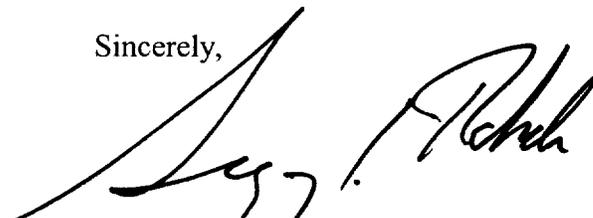
In our September 12, 2000 filing,⁸ NTIA presented a very ambitious program to complete our tests and analyses and determine whether operation of UWB devices in restricted bands could be supported by October 30. It is not possible to meet this date, however, because of the unusually complex and variable nature of UWB signals and GPS test instruments and other exigencies of testing.

This letter, based on our experience with the thus far completed testing, is to inform you of the revised schedule the NTIA will meet for filing its measurement and analysis reports in the above captioned proceeding.

1. NTIA's report documenting the measurements made of UWB devices in the time and frequency domains, the aggregate effects of several UWB devices, the effects of UWB signals on several non-GPS receivers, the analysis report documenting those measurements and the analysis models for determining whether unlicensed operation of UWB devices can be permitted in the restricted bands and a proposed procedure for measuring UWB devices will be published in early to mid-January 2001. This delay results from delays in obtaining devices to test from both UWB manufacturers and Federal users of the spectrum as well as expanding requirements for measuring UWB devices themselves.
2. The report on the measurement of the effects of UWB signals on GPS receivers and the analysis of those measurements from current ongoing efforts will be completed by the end of February 2001. This delay is the direct result of the complex nature of the test equipment, which has been difficult to set up and calibrate, difficulties in obtaining GPS devices and the information needed to test them, the difficulties inherent in setting up automated tests, and the delay encountered in obtaining funding until early September.

NTIA, agrees with the concern expressed by the FCC for thorough measurements of UWB devices and their potential impact on authorized telecommunication systems. We must continue to reserve our decision on whether unlicensed operation of UWB devices can be permitted in the restricted bands until these reports have been filed and until review and analyses of measurements and analyses reports of all commenters have been completed.

Sincerely,



Gregory L. Rohde

⁸ See "Comments of the National Telecommunications and Information Administration," Revision of Part 15 of the Commission's Rules Regarding Ultrawideband Transmission Systems, ET Docket No. 98-153", (September 12, 2000)