

Before the
Federal Communications Commission
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
1998 Biennial Regulatory Review --)	CC Docket No. 98-163
Modifications to Signal Power Limitations)	
Contained in Part 68 of the)	
Commission's Rules)	

**COMMENTS
OF THE
UNITED STATES TELEPHONE ASSOCIATION**

The United States Telephone Association (USTA) respectfully submits its comments in the above-referenced proceeding. USTA is the principal trade association of the local exchange carrier (LEC) industry. Its members provide over 95 percent of the incumbent LEC-provided access lines in the U.S. USTA's members are subject to the Commission's rules at issue in this proceeding.

In a Notice of Proposed Rulemaking released September 16, 1998, the Commission is proposing to increase the transmit signal power level for PCM modems from -12dBm to -6 dBm. These power limitations are now specified in 47 C.F.R. ¶68.308(h)(1)(iv) and 68.308(h)(2)(v) of the Commission's rules. The Commission's stated intention is to permit customers to transmit data at higher speeds over the telecommunications network. USTA agrees that such limitations may be modified to permit higher performance of customer equipment, as long as it can be accomplished without harming other existing or soon-to-be-deployed technologies.

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The Commission itself indicates that it should proceed with caution, and notes that, "[w]e certainly want to avoid making minor improvements for PCM modems at the expense of far more advanced consumer technologies".¹ There are many different technologies now deployed in the network and many that will soon be deployed. USTA believes that the Commission should not adopt its proposal without the appropriate engineering data that quantifies the benefits of the proposed change and demonstrates that no harm to existing or projected services will occur. The Commission's tentative conclusion that the signal power limitation may be relaxed without detrimental effect is not substantiated with any such evidence.

The Commission discusses the rationale for development of the original specification in 1975. The existing standard was based on equipment including cables and FDM systems commonly deployed at the time. That standard was based on technical information that demonstrated that no harm would be experienced if that limitation were adopted. Industry experience has demonstrated the correctness of that determination.

In contrast, the instant proposal simply states that "In light of the widespread use of digital rather than FDM transmission facilities, as well as recent analysis considering standard crosstalk models and industry-standard performance requirements for network equipment, relaxing the -12 dBm signal power limit in Part 68 to a transmit level of -6 dBm for PCM modems is likely to enable higher digital transmission rates for modem users without harmful effects on the network or its users".²

¹NPRM at ¶ 5.

²NPRM at ¶ 4.

USTA is concerned that the Commission's tentative conclusion is based on the information referenced at footnote 17 which appears to relate to General DataComm, Inc.'s "Analysis of -12 dBm Power Limit," dated July, 1997 under "Crosstalk Analysis".³ It is important to note that this analysis is not based on test data but is a paper exercise.

The modems at issue are intended for deployment on cables upon which multitudes of other services are deployed with which these modems might interfere, including other V.90 systems. These modems also may be expected to be deployed in significant numbers in common locations which will concentrate many units in a single cable, perhaps completely filling it. These conditions are more severe than most assumptions regarding fill percentages in a single cable. No assumptions concerning lack of interference as a result of these installations can be made without data that clearly supports that conclusion.

USTA is encouraged, however, that a basis for development of quantifiable information might soon be available to test the assertion that a relaxation of the power limit might not cause service difficulties. The ANSI Committee T1 standards organization is working on various documents which will identify what testing can be done, as well as overall requirements for spectrum management. T1A1.7's "Technical Report on V.90 Testing" will complete the Letter Ballot Process (LB 711) on October 27, 1998. USTA recommends that any decision be delayed

³ General DataComm, Inc.'s "Analysis of the -12dBm Power Limit", ITU-T contribution PMC'97-029, for Study Group 16 Question 23, V.pcm Rappourteur Meeting dated July 7-11, 1997. ("The only other services that this spectrum might interfere with are other voiceband services. Any perceptible crosstalk to another channel would appear as an increase in the noise floor, not as single-frequency interference or 'intelligible crosstalk'.")

until the completion of testing and analysis based on this report. The document will address the crosstalk issues and increasing the noise floor for other services within a cable.

T1E1.4 plans to draft a proposed standard on Spectrum Management and have it ready for letter ballot in the March - April 1999 time frame. This document will address power spectral density signatures which are compatible within existing subscriber cables, and should indicate whether increasing the power allowance for any technology in the 0-4 KHz spectrum will be a problem.

The incentives exist for the industry to organize comprehensive test efforts around these standards once balloting is completed. Data modem manufacturers should be proactive in obtaining reliable data. If, as the Commission asserts, increasing the transmit level of these modems to -6 dBm will have no degrading effect, and it is believed that actual testing will validate the assumptions that have been advanced, the modem manufacturers should want to obtain substantiating data very quickly. The LEC industry will cooperate in such a test program so that when the testing has been concluded, the results are accepted as valid. The sooner the tests can be completed and the results verified, the sooner the Commission will have a basis for allowing the power increase.

USTA is also concerned regarding whether or not the increase in power proposed will actually result in the realization of significantly increased transmission speeds. Actual performance is often governed by factors other than transmit power, especially the number of tandem analog to digital conversions that occur in a given circuit. It would be terribly shortsighted to permit a power increase that resulted in interference with existing or soon to be

deployed services without a perceptible increase in performance. USTA is concerned that the proposal stated in the item could well have that effect.

USTA respectfully requests that the Commission determine that any relaxation of the existing standard be based on test results and analysis in accordance with standards developed in industry processes. The modem manufacturers have a clear incentive to conduct these tests in cooperation with technical representatives of the LEC industry and reach conclusions that are supported by all industry segments.

The Commission's proposal to increase the power level is unsupported by any technical information to show that the increase would not result in network harm by way of interference with other services of the same kind, or that the proposed increase would result in noticeably increased performance of customer equipment. The data modem manufacturers have the incentive and the capability to conduct tests that can substantiate the claim that the power

increase will not result in harm. The LEC industry will cooperate in this activity. Until a power increase can be proposed based on actual data that demonstrates lack of interference to other services and other V.90 services under practical circumstances, the -12 dBm power limit currently specified in 68.308 should remain in effect.

Respectfully submitted,

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