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

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FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of)	
)	
Federal-State Joint Board on)	CC Docket No. 96-45
Universal Service)	
)	
Access Charge Reform,)	CC Docket Nos. 96-262,
Price Cap Performance Review for)	94-1, 91-213, and 95-72
Local Exchange Carriers, Transport)	
Rate Structure and Pricing, End User)	
Common Line Charge)	

**REPLY COMMENTS
OF THE
UNITED STATES TELECOM ASSOCIATION**

The United States Telecom Association ("USTA") hereby submits its reply comments to the comments submitted in response to the Commission's Public Notice¹ seeking comment on requests by three state commissions and the Rural Utilities Service ("RUS") to expand the definition of "voice grade access" in Section 54.101 of the Commission's rules.²

The requests of the state commissions and RUS were for an expansion of the bandwidth requirement for voice grade access from the current frequency range of 300 to 3,000 Hertz ("Hz") to a minimum of 200 Hz or 300 Hz to 3,400 Hz or 3,500 Hz. The stated objective of the requests was to ensure that rural customers of the public telephone network using 28.8 kilobits per second ("kbps") modems to access the Internet and other

¹ *Common Carrier Bureau Seeks Comment on Requests to Redefine "Voice Grade Access" for Purposes of Federal Universal Service Support*, DA 99-2985, released December 22, 1999 ("Public Notice").

² 47 C.F.R. §54.101.

information services could achieve data transmission speeds reasonably comparable to those achieved by non-rural customers using 28.8 kbps modems.

What is at stake here is a fundamental expansion of the definition of universal service to include data service. The requests attempt to establish a more stringent frequency response requirement for voice grade services that will compel a stated minimum data rate of 28.8 kbps. If there had been any doubt about RUS' objectives in making its request, its view is clearly stated in its comments. RUS stated that it "believes the time has come for a dual voice grade access specification that cites a frequency bandwidth component and a specific modem speed capability requirement."³ This would impose a new data transmission requirement on voice frequency circuits. It would have enormous economic, technical and public policy implications on the universal service program. Furthermore, the Commission does not have the option to unilaterally accept the judgment of the petitioners regarding this proposed expansion of the definition of universal service without following statutory procedures, including referral to the Joint Board on Universal Service.

In its comments, USTA opposed the requests of the state commissions and RUS for procedural, technical and public policy reasons. Specifically, USTA maintained that the Commission cannot unilaterally change the definition of universal service, but rather must follow the statutory procedures set forth in Section 254 of the Communications Act of 1934, as amended (the "Act"),⁴ which includes referral to the Joint Board on Universal Service. Also, USTA established that the petitioners' proposals to specify voice grade bandwidth for Internet access were technically deficient for a number of specific reasons.

³ RUS Comments at 8.

⁴ 47 U.S.C. §254.

The comments filed in this proceeding reflect a strong consensus that are in concert with USTA's procedural and technical positions. The critical issue raised by the petitioners drew comments from carriers, including incumbent local exchange carriers ("ILECs"), interexchange carriers ("IXCs"), wireless carriers, and their respective associations, equipment manufacturers, and state commissions. The consensus of these parties' comments was that the attempts to increase the voice grade bandwidth in the definition of universal service to achieve greater access to the Internet were seriously misdirected and should not be pursued. This included the conclusion of one of the petitioners, the Washington Utilities and Transportation Commission (the "Washington Commission").⁵

The following arguments against the petitioners' proposals are substantiated by the parties' comments and support USTA's position that the proposal should be dismissed.

1. The proponents of an expanded frequency response requirement have not and cannot show that the revised requirement will improve data speeds for rural customers.

The proponents have petitioned the Commission to expand the voice frequency response requirement for voice grade customer loop circuits. The proponents have stated their purpose in proposing this new requirement is an attempt to guarantee that any subscriber to telephone service will have access to at least a connect speed of 28.8 kbps. Assuming, *arguendo* that the objective is a worthy one, proponents fail to provide any

⁵ Accompanying the Washington Commission petition was a request to accept late-filed comments based on difficulties with the electronic filing of the document. Section 1.3 of the Commission's rules provides that the Commission may waive its rules for good cause shown. This is a particularly critical issue and the benefit of every party, particularly a petitioner, will serve the public interest. USTA believes that good cause exists for the Commission to accept the Washington Commission's comments and urges the Commission to do so. Likewise, GTE Service Corporation filed a motion to accept late-filed comments

evidence that their proposal would result in the benefit they seek. The Commission itself has acknowledged that many other factors affect experienced data rates; the RUS and the three petitioning states fail to provide any information that would provide any evidence that the proposed increase in the voice frequency range would result in an increase in data rates to meet their stated objective. To the contrary, RUS concedes that the change cannot guarantee increased data performance.⁶

2. The maximum achievable frequency response cannot be increased practicably through new techniques.

RUS advances an incorrect assertion concerning the maximum practical frequency response achievable. Specifically, it states, "Using more recently developed techniques like oversampling and digital filtering, modern digital systems can operate at nearly the theoretical limit. In other words, by applying inexpensive and widely used techniques, a digital switch's bandwidth could approach a full 4000 Hz."⁷

This piece of misinformation, stated as if it were fact, is refuted by an Alliance for Telecommunications Industry Solutions ("ATIS") report which states, "...the upper frequency of the voiceband is constrained by the anti-aliasing filter of the analog-to-digital conversion process to approximately 3,400 Hz."⁸ This respected source also supports the specifications and measurements referenced in USTA's Comments⁹ and the assertion that manufacturers and service providers are currently designing and deploying equipment that performs to the maximum practical frequency response available within the current industry sampling standard.

for reasons similar to the Washington Commission's. For the same reasons, USTA urges the Commission to grant GTE's motion and accept its comments as well.

⁶ See AT&T Comments at 10. RUS *ex parte* at 4.

⁷ RUS Comments at 3.

⁸ Technical Report No. 60, *Unbundled Voicegrade Analog Loops*. Prepared by T1A1.7 Working Group on Signal Processing and Network Performance for Voiceband Services, July 1999.

3. Establishment of an expanded bandwidth requirement would result in enormous new expenses without perceptible improvement in data rates.

A number of parties provide tangible evidence of the major expenses that would result from expansion of the voice grade frequency requirement.¹⁰ Parties addressing the technical aspects of the proposal have provided significant evidence that the bandwidth increase proposed will have little effect on the practical data rate of customer circuits. Commenters do not assert that frequency response does not have an effect, but that there are many other factors involved that an improvement in frequency response are overshadowed by the effects of other factors.¹¹

Furthermore, as U S WEST demonstrates,¹² one of the factors that affects data throughput is the number of Analog to Digital conversions. However, the unbundling requirements have forced U S WEST to favor Universal DLC rather than Integrated DLC, which increases the number of D/A conversions and virtually cuts the experienced data rates in half.¹³

Such a bandwidth requirement would also force telephone companies to make investments in old technologies that would reduce the resources available for deployment of advanced services that could result in significant improvements in speed of customer access.¹⁴

⁹ USTA Comments at page 6. 10.

¹⁰ AT&T Comments at 9. Citizens Comments at 5. 6. U S WEST Comments at 12. SBC Comments at 2. GTE at 6.

¹¹ AT&T Comments at 6. USTA Comments at 6-11. GTE Comments at 8. BellSouth Comments at 10- 11. Nortel Comments at 4.

¹² US West Comments at 6.

¹³ See USTA Comments at 9, Bellcore Memorandum Abstract Number TM-25704, *Guidelines for High Speed Analog Data Transmission in the Switched Network*, December 1996.

¹⁴ NECA Comments at 5.

All of these factors testify to the complexity of this issue and to the futility of addressing these matters in a simplistic attempt to redefine a single performance requirement. For these reasons, USTA believes that the methods by which increased data rates may be improved must be carefully studied. USTA believes that it may not be possible to establish purely technical specifications that will result in any particular level of performance. Valid choices must be identified as well as their costs, the methods and incentives available to encourage their deployment and the time required to implement them. Only then can intelligent and effective decisions be made that will result in practical improvements to the data speeds available to telephone company subscribers in the United States.

Conclusion

The state public utility commissions and RUS seek to expand the definition of “voice grade access” in the Commission’s universal service definition, which can only be changed after obtaining recommendations from the Joint Board on Universal Service after notice and opportunity for public comment. In addition to the procedural deficiencies of the request, there are significant technical and public policy reasons why the requests should not be granted. For all of the foregoing reasons, USTA requests that

the Commission deny the requests seeking change to the requirements for provision of voice telephone service.

Respectfully submitted,

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