

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

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OFFICE OF THE SECRETARY

_____)
In the Matter of _____)
Federal-State Joint Board On _____)
Universal Service _____)
_____)

CC Docket No. 96-45

REPLY COMMENTS OF AT&T CORP.

Pursuant to the Commission's *Public Notice*,¹ AT&T Corp. ("AT&T") respectfully submits these reply comments in response to comments filed by the Rural Utilities Service ("RUS") and others requesting that the Commission change its definition of "voice grade access" ("VGA") for purposes of federal universal service support.

INTRODUCTION AND SUMMARY

The comments overwhelmingly confirm that the Commission should not revise its definition of minimum VGA for universal service to include frequency ranges wider than 300 Hz to 3000 Hz.² First, RUS has provided no empirical evidence to support its contention that rural

¹ Public Notice, *Common Carrier Bureau Seeks Comment on Requests to Redefine "Voice Grade Access" For Purposes of Federal Universal Service Support*, CC Docket No. 96-45 (rel. Dec. 22, 1999) ("*Public Notice*").

² See, e.g., Comments of Advanced Fibre Communications, Inc. ("AFC"), Comments of AT&T Corporation ("AT&T"), Comments of Bell Atlantic ("Bell Atlantic"), Comments of BellSouth Corporation ("BellSouth"), Comments of Citizens Communications ("Citizens"), Comments of GTE ("GTE"), Comments of National Exchange Carrier Association ("NECA"), Comments Of The National Telephone Cooperative Association ("NTCA"), Comments of Nortel Networks ("Nortel"), Comments of SBC Communications, Inc. ("SBC"), Comments of the United States Telecom Association ("USTA"), Comments of US WEST Communications, Inc. ("US WEST"), Comments Of The Western Alliance ("Western Alliance"), Comments of Western Wireless Corporation ("Western Wireless").

D. J. [Signature]
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and urban customers do not currently receive comparable analog modem throughput speeds. *Second*, all parties, including RUS, agree that if any urban/rural modem performance discrepancy does exist, it is not the product of deficiencies in current or proposed universal service support mechanisms because these mechanisms already ensure that carriers can build networks that provide their rural and urban customers with modem throughput speeds in excess of 28.8 kbps. *Third*, the comments confirm that the billions of dollars in costs required to expand VGA bandwidth would greatly outweigh the (at best) marginal improvements in analog modem performance. *Finally*, as a number of commenters point out, even if the proponents of a modified VGA definition could identify some merit to their proposal, they could seek no more than a referral of the matter to the Joint Board. *See* 47 U.S.C. § 254 (a)(1) (“the Commission shall ... refer to [the Joint Board] ... a proceeding to recommend changes to any of its regulations ... including the *definition of services that are supported by [the federal fund]*”) (emphasis added).

I. THERE IS NO EVIDENCE THAT MODEM THROUGHPUT SPEEDS ARE SLOWER FOR RURAL CUSTOMERS THAN FOR URBAN CUSTOMERS.

The record evidence soundly refutes RUS’ assertion that rural customers suffer inferior analog modem performance. Citizens, for example, explains that its rural subsidiaries already provide telecommunications networks with VGA bandwidths that exceed those in many urban areas. *See* Citizens at 4-5. Likewise, the Western Alliance explains that its 250 rural telecommunications companies provide their customers with “state-of-the-art” telecommunications facilities and services. Western Alliance at 2-3. RUS itself states that since the 1960s it has promoted among its rural borrowers a “D66” scheme of loop loading that it claims results in a “real world bandwidth of about 200 Hertz to 4000 Hertz.” RUS at 5. And the

Common Carrier Bureau's own studies confirm that rural telephone companies provide state-of-the-art facilities and services, and have spent millions of dollars to modernize their networks.³

The only "evidence" RUS cites in support of its contrary assertion is an Internet survey. *See* RUS at 7 & Appendix.⁴ Even ignoring that RUS provides no data from which the statistical significance of any conclusions of the survey could be evaluated, the survey plainly admits of no conclusions whatever about relative modem performance in urban and rural areas. Rather, the cited study reports survey results from modem users throughout the United States and does not distinguish between urban and rural participants. Consequently, RUS' conclusion that "[j]udging from the survey results, the plant in urban and suburban areas is providing modem speeds of 28.8 [kbps] to a substantial majority of customers," RUS at 7, and the accompanying implication that rural modem throughput speeds are comparably slower, is a complete non-sequitur.⁵ The only conclusion that could conceivably be drawn from this study cited by RUS is that the majority of plant in *all* areas, both urban and rural, provides consumers with modem

³ *See, e.g.*, Western Alliance at 3 (citing several FCC opinions recognizing the fact that rural carriers have deployed facilities capable of providing high quality data communications).

⁴ This survey was conducted by Richard Gamberg, who describes himself as "an east-coast 'escapee' from the computer rat-race" and now runs a macadamia nut and coffee farm in Hawaii. *See* <<http://808hi.com/bb>>. Mr. Gamberg's Internet site does not explain the methods or procedures used to conduct his survey, nor does it disclose the data upon which his conclusions rely. *See id.* For these reasons alone, this study cannot provide sufficient grounds for a major shift in universal service policy. In any event, the conclusions of the study do not even appear to support RUS' positions.

⁵ In particular, this Internet survey does not purport to identify different modem throughput speeds for rural customers relative to urban customers. Indeed, its author notes that many conditions affecting modem performance have nothing to do with the location of the customer. *See* <<http://808hi.com/56k/what56.htm>> (noting that modem speeds are affected by several aspects other than the condition of the telephone line. These other aspects include the quality of the modem, the modem firmware/drivers, the quality of the ISP's modems, and the drivers used by the ISPs.).

throughput speeds of at least 28.8 kbps – a conclusion that is entirely consistent with the showing made by the vast majority of commenters.

II. EVEN IF RURAL AND URBAN CUSTOMERS DID NOT CURRENTLY ATTAIN COMPARABLE MODEM PERFORMANCE, IT IS NOT THE RESULT OF UNIVERSAL SERVICE SUPPORT DEFICIENCIES.

As RUS itself explains:

the plant architecture adopted in the Commission's HCPM/HAI Synthesis Model (Synthesis Model) can provide [28.8 kbps]. The Synthesis Model's short copper loops, coupled with most of today's lightwave carrier equipment, will provide a combination of frequency response, phase integrity and noise rejection needed to connect with at least 28.8 [kbps] performance.

RUS at 6. Indeed, RUS states that it has financed rural networks with D66 loading (presumably with existing universal service support) that it claims can more than support 28.8 kbps. RUS at 5. Therefore, to the extent that the embedded networks of rural and non-rural carriers do not provide appropriate capabilities for voice or data transport, it is not due to deficiencies in universal service support. Rather, if such a problem exists, it is the result of past decisions by these carriers to deploy plant that does not meet modern specifications. Thus, the solution to any existing problem is for carriers whose networks currently employ inefficient or antiquated design elements to take steps to ameliorate those deficiencies, not for the Commission to unnecessarily expand the defined minimum range of VBA bandwidth.

III. THE SMALL (IF ANY) BENEFITS OF INCREASING VGA BANDWIDTH COULD NOT CONCEIVABLY JUSTIFY THE ASSOCIATED COSTS.

The costs associated with implementing RUS' proposal would, by any measure, be astronomical.⁶ GTE estimates that increasing VGA bandwidth would cost it over \$2 billion. *See* GTE at 5. SBC, GTE and the Western Alliance report that a study provided to the Wisconsin Public Service Commission estimated the cost of upgrading all subscriber lines to support 28.8 kbps to exceed \$650 million dollars *for Wisconsin alone*;⁷ and the Western Alliance estimates that even if RUS exchanges were the only ones to be upgraded throughout the United States, the cost would range between \$592 and \$668 million dollars.⁸ And RUS itself concedes that even if a carrier could delay the proposed VGA bandwidth expansion until the time of a general plant rebuild, the *additional* costs associated with increasing the VGA bandwidth "usually does not exceed ... 20 percent." RUS at 10.⁹

As AT&T noted in its opening comments, the total network upgrade costs associated with implementing the RUS proposal could easily reach tens of billions of dollars. *See* AT&T at 9. But the true cost could be even greater. In particular, many carriers may

⁶ AT&T at 9-10; Bell Atlantic at 3; Citizens at 5-6; GTE at 4-8; NECA at 3; Nortel at 4; SBC at 2; USTA at 5; US WEST at 6-9; Western Alliance at 7.

⁷ *See* SBC at 2; GTE at 6; Western Alliance at 7.

⁸ *See* Western Alliance at 6-7.

⁹ This admission is striking. Note first that RUS' rebuild analysis is on a *total exchange* basis. Thus, its 20 percent adder is to the total cost of the exchange – including all of its lines that are less than 18,000 feet in length and which require absolutely no additional investment. Furthermore, RUS states that plant investment in its exchanges averages \$3,010 per line. Thus, this 20 percent cost adder would equate to an average increase of over \$600 per line. *See*, "Reply Comments of the Rural Utilities Service" in *Federal-State Joint Board on Universal Service: Promoting Deployment and Subscribership in Unserved and Underserved Areas, Including Tribal and Insular Areas*, CC Docket No. 96-45, filed January 19, 2000.

determine that it is uneconomic to pay the high costs of complying with an expanded VGA definition,¹⁰ and, instead, decide to forego receiving universal service support.¹¹ This development would likely diminish, not enhance, the network quality in rural areas.

RUS admits that there is no guarantee that these enormous expenditures would produce *any* discernable benefits. *See Ex Parte* Presentation of the Rural Utilities Service at 4 (Jan. 27, 1998) (“[a] 3400 Hz circuit will not guarantee that a modem will connect at 28.8 kbps”); RUS at 8 & n.14 (“bandwidth is not the only plant characteristic determining modem performance” and “a bandwidth without tolerances or certain other performance requirements is incomplete”). At best, as noted in a recent Commission study, any analog modem throughput increases would be miniscule compared to alternative technologies such as xDSL. *See Broadband Today: A Staff Report To William E. Kennard, Chairman FCC on Industry Monitoring Sessions* at 20 (October 1999) (noting that the highest possible analog modem throughput speeds are 56 kbps, whereas xDSL provides data transportation speeds exceeding 1,500 kbps). These facts are echoed by many parties to this proceeding,¹² and there is an overwhelming consensus that the costs of RUS’ proposal are not justified by its alleged benefits. Any money spent to increase VGA bandwidth in order to obtain modest, if any, improvements in analog modem throughput speeds would be far better spent on upgrading telecommunications

¹⁰ *See, e.g.*, AFC at 3; Bell Atlantic at 1-2; Citizens at 6; GTE at 15; SBC at 2-3; US WEST at 11; Western Alliance at 4.

¹¹ *See, e.g.*, AFC at 3; Bell Atlantic at 1-2; Citizens at 6; GTE at 15; SBC at 2-3; US WEST at 11; Western Alliance at 4.

¹² *See, e.g.*, AFC 1-2; Bell Atlantic at 4; BellSouth at 10-11; Citizens at 7; GTE at 8-14; Nortel at 4; US WEST 6-9.

networks to support broadband services that can provide data throughput at speeds that are *50 to 100 times* faster than the fastest analog modem speeds.¹³

IV. UNIVERSAL SERVICE DEFINITION ISSUES ARE MATTERS FOR THE JOINT BOARD.

The comments demonstrate that RUS' proposed VGA definition proposal is unnecessary and ill-advised, and, therefore, should not be adopted by the Commission. But even if RUS could identify some merit to its proposal, the proper procedural process would have been for it to seek to have the matter referred to the Joint Board.¹⁴ As several commenters recognize, § 254 requires "the Commission [to] refer to [the Joint Board] . . . a proceeding to recommend changes to any of its regulations . . . including the *definition of services that are supported by [the federal fund]*." 47 U.S.C. § 254 (a)(1) (emphasis added).¹⁵ Such a referral ensures that the Commission has a full and complete record on which to base any decisions that could alter the ability of telecommunications carriers to receive universal services support. *See* 47 U.S.C. § 254(c)(1).

¹³ *See, e.g.*, AT&T at 11-12; AFC at 3-4; Citizens at 7; GTE at 16; Nortel at 3-4; US WEST at 9-10; USTA at 5-10; Western Alliance at 8-9.

¹⁴ The Commission has already committed to convening the Joint Board on or before January 1, 2001. *See* Report and Order, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, 12 FCC Rcd. 8776, 8834-8835 (1997).

¹⁵ *See, e.g.*, Bell Atlantic at 4; BellSouth at 4, 12; US WEST 3-6; USTA at 2-4; Western Alliance at 9-10.

CONCLUSION

For the forgoing reasons, the Commission should not revise its VGA definition for universal service to include frequency ranges wider than 300 Hz to 3000 Hz.

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February 4, 2000

CERTIFICATE OF SERVICE

I, Peter M. Andros, do hereby certify that on this 4th day of February, 2000, a copy of the foregoing Reply Comments of AT&T Corp. was served by U.S. first class mail, postage prepaid, to the parties listed on the attached service list.


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