

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 --)
Modifications to Signal Power)
Limitations Contained in Part 68)
of the Commission's Rules)
-----)

CC Docket No. 98-163

BELLSOUTH REPLY COMMENTS

BellSouth Corporation, on behalf of BellSouth Telecommunications, Inc. ("BellSouth"), hereby responds to comments submitted pursuant to the Commission's *Notice of Proposed Rulemaking* in the above referenced proceeding.¹

In the *Notice*, the Commission proposed to modify its Part 68 Rules² to increase the signal power limitation on encoded analog content generated by pulse code modulation ("PCM") modems from -12 dBm to -6 dBm.³ The vast majority of commenting parties joined BellSouth in observing that while the Commission's proposal might ultimately foster modest end user benefits, current modification of the Part 68 Rules would be premature. Rather, these parties encouraged the Commission to await the availability of empirical data from existing industry test plan initiatives to confirm that the nominal anticipated benefits would not be offset by an increased risk of harmful interference generated by equipment operating at higher power levels. Conversely, only one party purported to present data in support of the Commission's proposal,

¹ 1998 Biennial Regulatory Review -- Modifications to Signal Power Limitations Contained in Part 68 of the Commission's Rules, CC Docket No. 98-163, *Notice of Proposed Rulemaking*, FCC 98-221 (rel. Sept. 16, 1998) ("Notice").

² 46 C.F.R. § 68.1 *et seq.*

³ The current -12 dBm limitation is codified in Sections 68.308(h)(1)(iv) and 68.308(h)(2)(v) of the Commission's Part 68 Rules.

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but that data is conclusory on its face, unsupported, and unpersuasive. Accordingly, the Commission should not adopt its proposed rule modification at this time.

The recommendation to await industry test initiatives is not an abstract suggestion for delay. Coincident with the timing of the Commission's *Notice*, Committee T1 of the Alliance for Telecommunications Industry Solutions ("ATIS") was already circulating within the industry a proposed test plan to investigate the crosstalk generating potential in the environment to which the *Notice* applies.⁴ Upon adoption of the test plan and the availability of reliable specifications from manufacturers demonstrating the levels of steady state and transient noise tolerated by their respective modems, the manufacturers will be able quickly to move into testing their equipment in conjunction with LECs in an environment that realistically simulates actual subscriber loops.⁵

Additionally, the recommendation that the Commission await the availability of empirical test data before advancing a rule change was supported by multiple parties. As might be expected, carriers, having the greatest and most direct exposure to potential increases in risks of harm, were the most decisive in recommending that the signal power limitation not be raised in the absence of supporting test data relative to potential network harms.⁶ They were joined, however, even by certain equipment manufacturers who, while generally supportive of the Commission's proposal, nevertheless recognized the desirability of supporting test data.⁷

⁴ Alliance for Telecommunications Industry Solutions, Inc., on behalf of Committee T1, at 5-6 and Appendix.

⁵ BellSouth also concurs with GTE that even after the Commission alters its rule, only modems that have been tested and shown not to cause network harm should be allowed to use signal power of -6 dBm; all other modems must continue to observe the -12 dBm limitation. GTE at 5.

⁶ See, GTE at 2-4; Ameritech at 2; Bell Atlantic at 2-4; SWBT at 2-7; US West at 5; USTA at 2-4.

⁷ See, e.g., Northern Telecom at 2 ("The absence of voice band cross-talk interference should be validated by Committee T1A1.7's test plan." (capitalization omitted)); TIA at 3 ("Although supportive of the proposed changes, TIA notes that there are concerns on the lack of practical test data to verify this conclusion and further notes that T1A1.7 Standards Development group is finalizing a detailed test plan that should lead to a much fuller understanding of the voice band power limits associated with PCM modems.").

Only 3Com, a manufacturer of modems, purports to present test data to demonstrate the relative benefit of the proposed power increase,⁸ but its showing is conclusory and insufficient. As best as can be derived from 3Com's summary of results, 3Com's tests were not conducted over test connections that reasonably simulated actual subscriber connections; did not consider effects of digital pads, which are common in networks to control echo; ignored power harmonic noise, which is always present to some extent on subscriber loops; and did not include consideration of universal digital loop carrier channels, which, at least in BellSouth's care, are present on about 15% of subscriber loops. Moreover, the test results reported by 3Com reflect only "final" data rates measured approximately 30 seconds after call origination. Because the modems can shift speeds up or down, these final rates do not necessarily indicate the average rates experienced by a modem user during the course of a data exchange (*e.g.*, a file transfer). Accordingly, 3Com's analysis falls far short of what is required to justify a Part 68 rule change.

Indeed, 3Com's analysis actually highlights the point made by a number of parties that the proposed rule will provide only nominal benefit to end users. That is, even with its shortcomings, 3Com's data reveals that with increased power, modems might deliver 56 kbps *only to loops of 3000 feet or less*. 3Com further noted, as did a number of other parties,⁹ that "*many network parameters affect V.90 modem speed.*"¹⁰

In the light of these known multiple effects on modem speeds, BellSouth is in concurrence with Bell Atlantic's observation that the primary "problem" with achieving

⁸ 3Com Corporation at "Technical Appendix."

⁹ *See, e.g.*, Bell Atlantic at 4-5; SWBT at 4-5; USTA at 4-5; BellSouth at 2-3; GTE at 6.

¹⁰ 3Com at Technical Appendix, 1 (emphasis added). Among the parameters affecting modem speeds cited by commenters is the quality of the inside wire at a customer's premises. SWBT at 7. The costs, inconvenience, and ill-will generated by the presence of substandard inside wire have been well documented in CC Docket No. 88-57. BellSouth urges the Commission promptly to issue an order in that proceeding redressing those concerns. Such an order will foster the additional benefit of providing greater assurance of end users' abilities to realize faster actual modem speeds.

theoretical maximums lies not in signal power limitations, but in the insupportable expectations that have been created through over-zealous marketing of "56 kbps" modems.¹¹ Thus, regardless of whether the Commission ultimately modifies its signal power limits, it should work with modem manufacturers and vendors to ensure that the public is not misinformed about the expected performance of the equipment.

CONCLUSION

BellSouth reiterates its concern that the Commission await empirical data from industry tests before it raises its Part 68 signal power limitations.

Respectfully submitted,
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¹¹ Bell Atlantic at 4-5.

CERTIFICATE OF SERVICE

I, Karen S. Bullock, do hereby certify that I have this 13th day of November, 1998, served all parties to this action with the foregoing BELLSOUTH REPLY COMMENTS, by hand delivery or by placing a true and correct copy of the same in the United States Mail, postage prepaid addressed to the parties as set forth on the attached service list.



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