

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

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AUG 18 1997

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
Federal-State Joint Board on)	CC Docket No. 96-45
Universal Service)	
)	
Forward-Looking Mechanism for)	CC Docket No. 97-160
High Support for Non-Rural LECs)	

**REPLY COMMENTS OF AMERITECH TO
FURTHER NOTICE OF PROPOSED RULEMAKING**

A. Introduction and summary.

Ameritech files its reply comments responding to the Commission's questions on mechanisms for the calculation of forward-looking economic costs for non-rural carriers who are not compensated through formal cost studies. In its reply comments, Ameritech will respond to the proposals of other parties that, if adopted, would cause the cost recovery mechanism to deviate from real-world forwarding-looking costs that will be experienced by incumbent local exchange carriers ("ILECs"). For instance, Ameritech will show that WorldCom's proposed for the handling of switch costs fails to accurately handle year-to-year fluctuations in switching costs and does not use the most accurate available data.

In addition, Ameritech will show that AT&T/MCI are incorrect when they claim in their joint comments that the Hatfield Model is the best available model.¹

¹ AT&T/MCI at 3-5.

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AT&T/MCI spend a great deal of time pitching the Hatfield model on the basis that it produces all the types of data that the Commission is seeking. However, the problem with the Hatfield model is not that it fails to spew out great quantities of data, but with the accuracy of that data.

As has been previously demonstrated by Ameritech and many other parties, the Hatfield model is flawed and seriously understates forwarding-looking costs of even the most efficient real-world provider. These flaws have not been corrected. Moreover, the model's inherent limitations and reliance on unrealistic assumptions, rather than real-world experience, mean that it should never be used to calculate universal service compensation of individual ILECs.

B. The Hatfield model intentionally understates forward-looking costs.

In its comments filed on February 18, 1997 in the Commission's Cost Proxy Models Proceeding Ameritech, along with many other parties, expressed grave concerns about the ability of the proposed cost proxy models, most particularly the Hatfield model, to accurately calculate forward-looking costs of an efficient ILEC.² In a nut shell, proxy models cannot provide relevant input into compensation decisions, since they do not seek to determine expected actual forward-looking costs of ILECs. Rather, the proxy models only estimate the forward-looking costs of an optimally configured hypothetical firm, which are, by definition, significantly lower than could possibly be achieved by even the most efficient actual market participant.

AT&T/MCI fail to prove that these serious design flaws have been corrected, and that the Hatfield model's output has been validated based upon a thorough

² In the matter of The Use of Computer Models for Estimating Forward-Looking Economic Costs, DA 97-56 (Cost Proxy Models Proceeding), Ameritech Comments at 7-8.

testing of its output. Despite its increasing immensity and complexity, the “improved” Hatfield cost proxy model still has the same inherent design shortcomings that invalidated it previously. The model continues to grow and become more ponderous, yet does not become any more accurate.

As AT&T/MCI candidly admit, the Hatfield model seeks a “forward-looking, least cost engineering ideal by building a narrowband network from the bottom-up assuming the best available technology and current wire center locations.”³ (Emphasis supplied.) However, no such network exists or could ever exist, nor does the Hatfield model even come close to reflecting the circumstances of any real network. The effect of this intentional deviation from reality is that, by design, the model understates forward-looking ILEC costs.⁴ As such, the model can only be used to help resolve issues that simply require establishing rank-order or cost relationships. That is to say, the Hatfield cost proxy model might someday be able to establish relative cost relationships between geographic areas (i.e.; high cost vs. low cost).

An example of the unrealistic basis of the Hatfield model is its scorched-node and greenfield assumptions.⁵ These assumptions assume that the best available technology will be deployed and utilized immediately throughout an ILEC’s infrastructure on an on-going basis. However, even the most efficient firm must use an assortment of technologies, since it takes time to test and deploy new technologies.

³ AT&T/MCI at 4.

⁴ The use of the Hatfield model may thereby be confiscatory, will stifle network investment, and lead to serious competitive dislocations.

⁵ AT&T/MCI admit that the Hatfield model assumes use of the “best available technology,” AT&T/MCI at 4.

The Hatfield model thereby does not realistically handle the timing of new investments, and the fact that layers of investment with different technology vintages are always in use at the same time by even the most efficient firm.

C. The Hatfield model's handling of switching costs still has serious flaws that invalidate its use.

The flaws in the current version of the Hatfield model go far beyond its inherent design limitations. It turns out that, even within the hypothetical world the Hatfield model creates, the model understates the costs of its assumed optimally efficient hypothetical provider. These flaws have been previously demonstrated by Ameritech and most others parties.⁶ Ameritech will discuss in this section the flaws that are relevant to this phase of this proceeding.

AT&T/MCI state⁷ that they prefer to model switching costs using a market-based average approach relying on public data to construct a switching cost curve that averages switches from all vendors. The Commission should reject this approach. The limitation in averaging approach is that it does not reflect actual switch purchases of ILECs. Rather, the data relied upon in the Hatfield model is based on a Northern Business Information ("NBI") report.⁸ However, NBI is neither a telephone company nor a telecommunications equipment manufacturer, and the data it is providing was obtained through surveys. This report is at best a secondary source and does not provide the most reliable available data on prices actually being paid by the ILECs for switches. Ameritech proposes that the Commission use actual

⁶ See, ft. nt. 2. *Supra*.

⁷ AT&T/MCI at 12-13.

⁸ See, *Id.* at 9, n. 9

prices of switches paid by LECs, as reflected in company-specific TSLRIC and TELRIC cost studies.

The Hatfield model's average switch strawman alternative is also more complicated than necessary. A more direct and practicable approach is available. Actual switch prices are available and have been the basis for switching costs used in Ameritech's TSLRIC and TELRIC proceedings. Specifically, SCIS has been used to calculate switching investments. The legitimate proprietary concerns of ILECs, their switch vendors and Bellcore have been resolved, so all interested parties who will recognize the proprietary concerns have access to the data. Bellcore has provided extensive documentation for using and understanding SCIS. For example, several intervenors examined portions of SCIS in Ameritech's TELRIC proceedings and were successful in using, verifying and analyzing investment information produced by SCIS. SCIS should be used as the basis for determining switching costs.

Another error in the Hatfield model's approach to switching costs is that it creates two average switching cost curves to fit the entire industry. However, the approach hides cost differences among the many different vendor switches. In part, AT&T/MCI argue that in order for the Hatfield model to have general applicability, it must not be dependent on the characteristics of manufacture-specific equipment.⁹ But, of course, if the model is to be accurate, it must also reflect real-world differences experienced by LECs that use different mixes of switches. By using only two "average" switching costs curves, the Hatfield model oversimplifies and, thereby, incorrectly states the switching costs that will be faced by any particular ILEC in the

⁹ AT&T/MCI at 13.

future. Universal service compensation should reflect actual cost incurred by the incumbent LECs, and not some nonexistent average company.

A further flaw in the Hatfield model's approach to switching costs is that it depends on an algorithm, rather than actual data, to determine the mix between standalone switches and host-remote arrangements. As Ameritech said in its Comments, there is no generic algorithm that magically gives the forward-looking mix between standalone switches and host-remote arrangements. Similarly, there is no magic formula that gives the mix of switches amongst vendors. However, the existing mix of forward-looking switches, both by vendor and by configuration, best captures the forward-looking least-cost switching network for Ameritech.

AT&T/MCI claim that using the embedded switch mix is not be a satisfactory resolution. However, their analysis is incomplete and misleading. Ameritech's proposal restricts the host/remote mix to forward-looking switches. This is the optimal network configuration of switches that has been used in Ameritech's TELRIC studies. Of course, the costs for switches used in the development of ILECs for universal service will reflect the sizing of switching components to the current levels of supported services, rather than the sizing when a switch was originally placed. Because the placement of host/remote arrangements has been occurring for many years, the procurement of new digital switches over the past fifteen years, which underlies Ameritech's proposed mix of switches, provides a reasonable estimate for use in calculating forward-looking costs.

D. WorldCom's proposal for switching depreciation would not accurately reflect year-to-year fluctuations in the prices of switches.

WorldCom proposes that the Commission base the calculation of ILEC forward-looking switch costs on the Nortel product line only, using the 1993-95 data that was gathered in depreciation studies the Commission recently released.¹⁰ However, although easy to administer, this proposal does not provide reasonably accurate estimates of switch investments on a forward-looking basis, since it is based upon historical data of one vendor that has not even been adjusted to reflect their current value.

WorldCom's proposal is unduly simplistic and would prove unreliable. Its summary of its regression analysis and equations leaves unaddressed large portions of the switch costs. In particular, WorldCom's equation for DMS 100 switches for 1993-95 only explains about half of the variation in switch costs actually being experienced, and the equation for RSC for 1993-95 only about a third. More importantly, based on the unexplained variations reported in their analysis, the switch costs derived from these equations are not accurate.

A key problem with WorldCom's proposal is that it does not adjust historical data to current values.¹¹ WorldCom glibly defends this failure to use a "cost deflator" on the basis that this omission is offset by on-going reductions in switch costs. However, WorldCom presents no evidence to support its assumption.

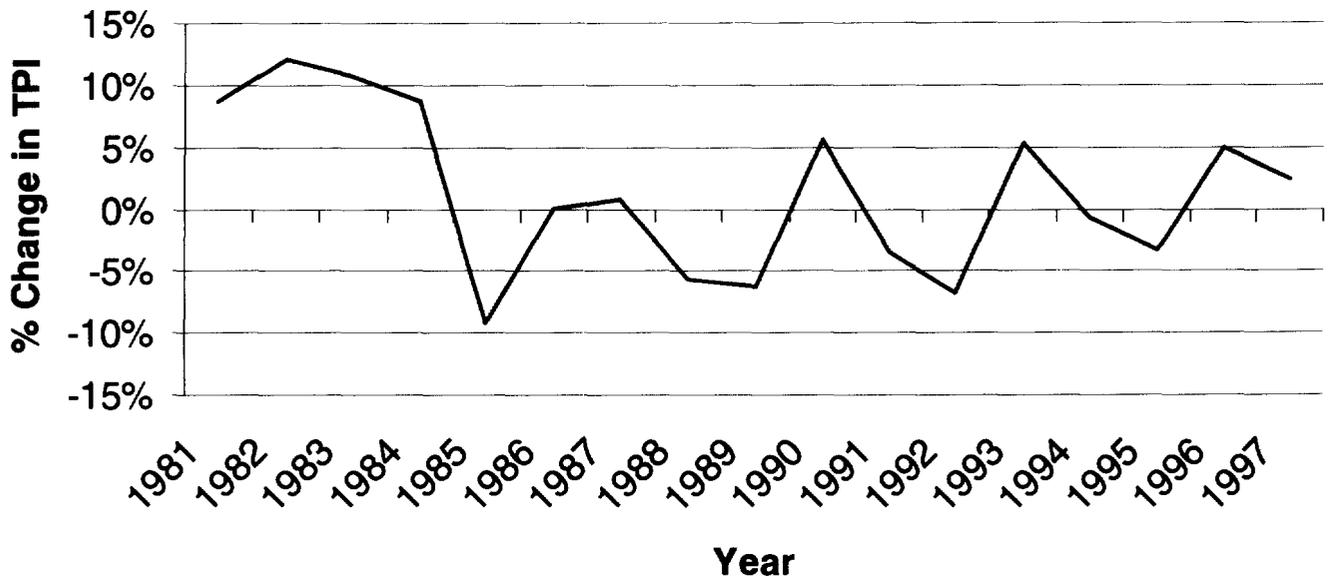
More importantly, WorldCom's assumption does not comport with Ameritech's real-world experience. As the following chart demonstrates, the percent change in

¹⁰ WorldCom at 5.

¹¹ It appears that the Commission's Staff's analysis that the Commission relied upon in its tentative conclusion regarding the level of switch cost suffers from the same defect. FNPRM at ¶132.

digital switch costs experienced over past years based upon its Telephone Plant Index (TPI) for digital switching equipment, has not consistently been negative.

**Percentage Change in Digital Switch Equipment Prices:
1981-1997**



As it can be seen, while these costs have declined in some years, they have gone up in other years.

A better approach is to use up-to-date and complete data. WorldCom is mistaken when it states that such data is not reasonably available.¹² While WorldCom is apparently unaware that such data exists, it can be obtained by using SCIS. Virtually all non-rural ILECs use SCIS, and SCIS reflects all major switch types being purchased by them. Equally as important, SCIS data is updated on an on-going basis, and reflects current prices for digital switches. SCIS also recognizes other factors, such as usage characteristics, that drive switching costs.

E. Other flaws in the Hatfield model also invalidate its use.

¹² *Id.*

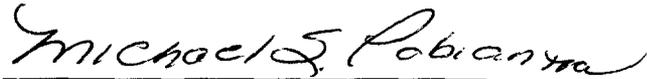
Although many of the flaws in the Hatfield model exceed the scope of this phase of the proceeding, they still result in output that systematically understates costs and invalidates the model for use in compensating non-rural LECs in states that do not submit cost studies. For instance, the Hatfield model continues to advocate an equal sharing of structure costs (e.g., telephone poles, conduit, ect.) between the local exchange telephone company, the electric utility, and the cable TV company. The 1/3, 1/3, 1/3 rule has no basis in reality. While this flaw will unreasonably reduce loop costs, it will also reduce interoffice transport costs. As with the other flaws in the Hatfield model, this unrealistic allocation of two thirds of the costs of structure to non-LECs would have the effect of reducing the compensation that should be paid by the model's sponsors, MCI and AT&T.

F. Conclusion.

Cost proxy models, such as the Hatfield model, should not be used as a vehicle to enable certain carriers to evade their social and statutory obligations. Rather, universal service compensation should be based upon cost studies that reflect

accurate forwarding-looking costs. To that end, as outlined above, the Commission should require the use of data based upon real world experience, and shun the use of algorithms and surveys where more accurate data is available.

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August 18, 1997
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CERTIFICATE OF SERVICE

I, Todd H. Bond, do hereby certify that a copy of the foregoing Reply Comments of Ameritech to Further Notice of Proposed Rulemaking has been served on the parties on the attached service list, via first class mail, postage prepaid, on this 18th day of August, 1997.

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