BOULT
CUMMINGS
CONNERS
& BERRY PLC

LAW OFFICES
414 UNION STREET, SUITE 1600
POST OFFICE BOX 198062
NASHVILLE, TENNESSEE 37219

Jon E. Hastings
(615) 252-2306
Fax: (615) 252-6306
Email: jhasting@bccb.com

TELEPHONE (615) 244-2582
FACSIMILE (615) 252-2380
INTERNET WEB http://www.bccb.com/

September 15, 1999

David Waddell, Executive Secretary
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37238

Re: Petition of AT&T Communications of the South Central States, Inc, MCI Telecommunications Corporation, Sprint Communications Company LP, and WorldCom Network Services, Inc., d/b/a WilTel Network Services for the Commencement of a Rulemaking Proceeding to Provide for the Termination of Price Cap Regulation for Interexchange Carriers and to Amend Rule 1220-4-2-.55(2) Governing the Regulation of Interexchange Carriers
Docket No. 98-00097

Dear Mr. Waddell:

Enclosed please find one copy of the Public Policy Considerations for Regulation of the InterLATA Telecommunications Market in Tennesee/Statement of Richard Cabe and the Affidavit of Gregory J. Darnell to be filed in the above-referenced docket.

Thanking you for your assistance in this matter, I am

Very truly yours,

BOULT, CUMMINGS, CONNERS & BERRY, PLC

Jon Hastings

Jon E. Hastings

JEH/th
Enclosure

0591486.01
058100-034 09/15/1999

Public Policy Considerations for Regulation of the InterLATA Telecommunications Market in Tennessee

STATEMENT OF RICHARD CABE

On behalf of MCI Worldcom

September 14, 1999

I. Introduction

1. My name is Richard Cabe. My address is 221 I Street, Salida, Colorado 81201.

2. I am an economist in private practice, specializing in economic analysis of regulatory matters in the telecommunications industry. I have presented testimony in matters concerning competition in the telecommunications industry to the public utility commissions of Alabama, Arizona, Colorado, Florida, Georgia, Iowa, Kentucky, Louisiana, Mississippi, Oregon, North Carolina, South Carolina, Texas, Utah and Washington. Until recently I was employed as Associate Professor of Economics and International Business at New Mexico State University. In that position I taught graduate and undergraduate economics courses and arranged the telecommunications curriculum for conferences sponsored by the Center for Public Utilities. Over the last several years I offered graduate courses in Industrial Organization, Microeconomic theory, Antitrust and Monopoly Power, Game Theory, Public Utilities Regulation, and Managerial Economics for MBA students. My experience with telecommunications regulation began when I was employed by the Washington Utilities and Transportation Commission in various capacities. During my employment at the Washington Commission I served as a staff member to the Federal - State Joint Board in CC Docket No. 86 - 297. When I left the Washington Commission to complete my doctoral degree my title was Telecommunications Regulatory Flexibility Manager. Additional information concerning my qualifications is provided as Exhibit 1.

3. I have been asked by MCI Worldcom to examine the IXC rule (Paragraph (2) of Rule 1220-4-2-.55 Regulatory Reform) presently in force as well as the proposal now under consideration to change the rule, and to comment on questions of public policy raised by those rules.

4. My conclusion is that the interLATA long distance market is effectively competitive in Tennessee, just as it is in the remainder of the country. Imposition of the regulatory requirements now in the Tennessee IXC rule or in the proposed amendment to the rule are not necessary; market forces are sufficient to ensure that rates are just and reasonable without price regulation. Further, I conclude that imposition of these regulatory requirements can only interfere with the otherwise effective operation of competitive forces, denying the full benefits of competition that the market could provide without regulatory intervention in prices.

II. Competition in the InterLATA Market

5. The interLATA telecommunications market is characterized by effective competition. In order to evaluate the status of competition in a market it normally suffices to evaluate the extent of the market power of the largest firm in the market. When I was a member of the staff of the Washington Utilities and Transportation Commission I was asked to make a recommendation as to whether AT&T was subject to effective competition in its offerings of intrastate interLATA telecommunications services. Insofar as AT&T, the largest firm in the market, is subject to effective competition it is reasonable to conclude that the market itself exhibits effective competition and that all firms in the market are disciplined by effective competition.

6. My analysis in that case reached the conclusion that AT&T was subject to effective competition. My testimony making this recommendation on behalf of Commission Staff was filed on April 6, 1987, and is attached to this statement as Exhibit 2. The Commission adopted my recommendation and classified AT&T as a 'competitive telecommunications company.' Under Washington statute and the Commission's rules, classification as a competitive telecommunications company amounted to deregulation; it removed the constraints of rate of return regulation and imposed no price regulation or any other limitation on the company's earnings or prices. Since that time AT&T, as well as all other interLATA long distance companies providing service in Washington, has not been subject to regulation of a form that is at all similar to the requirements of either the existing Tennessee IXC rule or the proposed amendment to that rule now under consideration. I am not aware of another state which imposes requirements similar to those of the Tennessee IXC rule on interLATA long distance companies.

7. At the time my testimony on behalf of Commission Staff was filed, in April of 1987, I recommended, and the Commission adopted, a constraint on AT&T's freedom to fashion volume discounts. The constraint applied only to AT&T and was to operate for the limited period expiring on 1 January, 1989. As indicated in my testimony at the time, the need for such a restriction was a transitional one. I don't believe that any such restriction would be appropriate under current market conditions.

8. After recently discussing the question with a current member of the Washington Commission Staff I am confident in saying that the Washington Commission has never regretted its classification of AT&T as competitive and its consequent reliance

on the forces of market competition rather than on regulation to serve the public interest.

9. My evaluation of the extent of AT&T's market power in the testimony attached as Exhibit 2 was conducted in accordance with the specific framework provided by Washington State statute, but the criteria are reasonable ones for the determination of the existence of effective competition in any market. The Washington statute requires the Commission to consider, at a minimum, the following criteria:

   (a) the number and size of alternative providers of service
   (b) the extent to which services are available from alternative providers in the relevant market
   (c) the ability of alternative providers to make functionally equivalent or substitute services readily available at competitive rates, terms and conditions
   (d) other indicators of market power which may include market share, growth in market share, ease of entry, and the affiliation of providers of services.

10. The findings that I reached as to the existence of effective competition in that case and my recommendation that there is no need for regulatory constraint on prices are discussed in detail in Exhibit 2. These findings apply today in Tennessee with even greater force after intervening events that have occurred during the passage of twelve years since that testimony was filed.

11. Over the twelve years since the Washington Utilities and Transportation Commission found effective competition in the Washington interLATA market, an enormous amount of market entry has occurred, a great deal of new capacity has been installed, information about the functioning of the market has become widespread, and competition has come increasingly to emphasize price. Each of these considerations reinforce the determination that the interLATA market is subject to effective competition.

A. Market Structure

12. The publicly available data on long distance market structure, and market entry in particular, makes little distinction between interstate and intrastate calling. For purposes of analyzing the performance of this market it is appropriate to neglect this distinction. To restrict one's attention to intrastate calling would be an error because entry and exit decisions do not observe the distinction.

13. The FCC's Preliminary Statistics of Communications Common Carriers, 1998 edition, demonstrates the relationship between the intrastate and interstate portions of the Tennessee InterLATA market: of the interLATA billed access minutes originating or terminating in Tennessee, 9,163,673,000 are interstate; 2,120,299,000 are intrastate. That is, of the interLATA telecommunications minutes originating or terminating or both within Tennessee, approximately 19% are intrastate in nature. The vast majority of interLATA telecommunications affecting Tennessee consumers - 81% - is interstate in nature.

14. Firms simply do not consider going into the business of providing Tennessee intrastate telecommunications services. If there were such a firm it would quickly realize that some 80% of its business extended beyond state boundaries, and it would adjust its view of the market accordingly.

15. Some facilities-based interexchange carriers only have their own switching and transmission facilities in a limited region, but such carriers must act as resellers to send calls outside the region in which they have facilities. Furthermore, facilities-based interexchange carriers in one region face market discipline from carriers in adjacent regions; carriers in neighboring regions are very well positioned to enter and take advantage of opportunities created by prices in excess of costs. These basic facts

of the interexchange telecommunications market call for analysis of market data without reference to the interstate/intrastate distinction.

16. My 1987 recommendation as to the existence of effective competition contained in Exhibit 2 was borne out by a more recent Federal Trade Commission study based on data from the several years following my recommendation[1]. Michael Ward's 1995 report found AT&T market power sufficient to support only a miniscule departure from the ideal result of perfect competition: a possible deadweight loss[2] in the amount of between .03% and .36% of industry revenue. This estimate is for the period of 1988 to 1991. The report also notes: "Competitive pressures continue to mount and it is likely that the potential deadweight loss currently [1995] is smaller." (page 60)

17. Since 1995 competitive pressures have continued to mount and I expect that the potential for exercise of market power is considerably smaller today.

18. The degree of concentration in an industry can be summarized by the Herfindahl-Hirschmann Index (HHI). The index has a value of 10,000 for a monopoly and approaches zero as the number of firms in the industry increases and their individual market shares become insignificant. By 1984, after many years of non-equal access competition, the interLATA long distance market's HHI had fallen from 10,000 to 8,155[3]. By 1987, when the testimony of Exhibit 2 recommended that market forces were sufficient to ensure just and reasonable rates without regulation, the HHI had fallen to 6,298; despite the very high concentration, all evidence taken together

---

[1] Federal Trade Commission Bureau of Economics Staff Report, "Measurements of Market Power in Long Distance Telecommunications", Michael R. Ward, 1995

[2] Deadweight loss is a measure of the inefficiency introduced by prices that depart from the ideal of perfect competition. In this case it shows the dollar value of the inefficiency which could have been caused by AT&T's abuse of its remaining market power as of the 1988 - 1991 period.

[3] All of the long distance market Herfindahl-Hirschmann Index values are taken from the FCC report: Long Distance Market Shares, Fourth Quarter 1998, released March 1999, Table3.2.

provided assurance that the market was effectively competitive. During the period 1988 through 1991, during which the FTC report cited above found a potential deadweight loss of less than one half a percent of industry revenue, the HHI fell from 5,720 to 4,321. For the most recent year available, 1997, the reported HHI was 2,508.[4] The other likely measure of concentration, AT&T's market share, shows a similar decline.

19. This fall in values of the HHI demonstrates two important points for evaluating the effectiveness of competition in the long distance market: First it shows that concentration in the industry has declined dramatically, and that the trend seems to be continuing. This fact, in and of itself, shows that the exercise of market power is much less likely today than it was in the past. Market concentration is by no means the only indicator to be examined in evaluating the effectiveness of competition, but market power is much less likely to be exercised in an industry with lower concentration.

20. Second, the decline in Herfindahl-Hirschmann Index has occurred through entry and expansion of AT&T's competitors. The fact that the decline has occurred and continues demonstrates that any remaining barriers to entry and expansion in the industry are routinely being surmounted.[5]

21. The main barrier to entry in this industry, which once justified government intervention in the form of price regulation, was AT&T's monopoly control of access to customers through the local exchange network. This barrier prevented expansion of AT&T's competitors before the divestiture of 1984. The possibility of effective

[4] A table is provided below showing Herfindahl-Hirschmann Index values for some other industries.

competition in the industry opened up as the equal access requirement which accompanied divestiture was implemented.[6] In 1984 there was no equal access by interexchange companies other than AT&T. The most recent data I have seen (end of year 1996) showed 98.8% conversion to equal access in Tennessee and 99.4% nationally. The decline in HHI and in AT&T's market share reflect removal of this barrier to entry and the subsequent operation of market forces.

B. Growth of Capacity

22. The decline of market concentration discussed above was accompanied by reductions in the inflation-adjusted price of long distance services and prodigious growth in volumes. Interstate access minutes increased by 427% from 1987 through 1998[7], an annual growth rate of approximately 14%. Capacity has grown apace, and has changed from mostly microwave radio systems to almost entirely fiber optic cable. The new entrants in the industry managed to install sufficient capacity to accommodate a ten-fold increase in volume, contrasted with AT&T's doubling of volume, from mid 1984 through the end of 1997[8].

23. Meanwhile, efforts to increase capacity have benefited from important technological developments. As noted in the FCC's most recent fiber deployment update, "... newer technologies using wavelength division multiplexing boost this capacity estimate significantly. Moreover, in some cases this technology can be overlaid on

---

[5] Additional evidence of the absence of barriers to entry or expansion is provided below in the discussion of capacity expansion.

[6] Note that since the Bell Operating Companies (BOCs) were not in the long distance business, working out the considerable technical difficulties of equal interconnection arrangements with AT&T's competitors was not hampered by the incentive problems which now plague efforts at interconnection by CLECs that hope to compete directly with the BOCs.

[7] FCC Long Distance Market Shares Report, March 31, 1999, Table 1.1.

[8] FCC Long Distance Market Shares Report, March 31, 1999, page 1.

existing systems without requiring total replacement of terminal equipment.[9]" Further, "It is important to note that the increased fiber system capacity made possible by increased use of optical amplification and wavelength division multiplexing have reduced the need of existing carriers to construct new fiber[10]".

24. Fiber optic cable was always a remarkable investment because its capacity could be increased after installation without replacing the fiber but by merely replacing the opto-electronic equipment at each end of the fiber. Current technology often allows great increases in capacity without replacing the equipment at each end of the fiber, but rather by installing supplemental equipment at each end.

25. As to the existence of adequate current capacity to actually serve customers who might be won from a competitor, Exhibit 3 provides some evidence. The Wall Street Journal, September 7, 1999 notes that "Sprint officials say the no. 3 long-distance concern, Westwood, Kan., has seen its call volumes go up 30% since it introduced its nickel-calling plan six weeks ago". The article doesn't say that Sprint is concerned with its ability to serve these new customers, despite the fact that the FCC's most recent Fiber Deployment Update shows Sprint as the interexchange carrier with the smallest fraction of dark fiber[11].

26. The existence of adequate current capacity and the ease of increasing capacity are important to analysis of the effectiveness of competition. Difficulty in acquiring new capacity or expanding existing capacity are potential barriers to entry and expansion which could impair the effectiveness of market forces. No such difficulty is apparent in today's interexchange telecommunications industry.

---

[9] Fiber Deployment Update, End of Year 1997, page7.
[10] Fiber Deployment Update, End of Year 1997, page7.

C. Market Information and Price Competition

27. In order for market forces to achieve the goal of allocative efficiency, consumers must have information about quality, price and other terms and conditions attached to market transactions. If these conditions are absent it is more likely that regulatory intervention, of one sort or another, might improve on market outcomes.

28. At the time of divestiture, when the logjam barrier to entry of unequal access was just being removed, most consumers had no experience and very little good information about how an open market for long distance telecommunications services might work. Consumers were unsure of the quality of service that might be provided by carriers other than AT&T. Information concerning prices, terms and conditions of purchase of long distance service is now more widely available and better understood.

29. Exhibit 3, a September 7, 1999 Wall Street Journal article notes that: "A cutthroat price war in the long-distance telephone market is prompting record numbers of calls by consumers seeking to re-evaluate their own calling plans.[12]" Consumers are now evaluating calling plans, and because of changes in rate structures, the evaluation is getting easier to do.

30. The rate structures, or calling plans, that consumers are evaluating are becoming simpler than in the past. The 'postalized' or non-distance-sensitive rates now common in calling plans are much simpler for consumers to evaluate than distance sensitive rates. Consumers can now realistically evaluate a calling plan by acquiring a modest amount of information and forming an estimate of the plan's implications for total cost when applied to the consumer's calling pattern. This task is much more complex with rates that vary by distance to the called party.

---

[11] Fiber Deployment Update, End of Year 1997, Table 3.

31. Consumers who want to find the best calling plan for their pattern of usage can also use the services of ratemasters.com. This world wide web site solicits information about the consumer's calling pattern in the form of consumer responses to questions in a form on the web page. The service then compares the cost of the consumer's present calling plan to other available offerings. The lowest cost calling plan is selected and projected savings reported, using the calling pattern described by the consumer.

32. Even customers who do not shop around for the best deal are getting the benefits of competition. As one example, in September of 1997 MCI inaugurated 5¢ Sundays: a simple price reduction which applied to all presubscribed customers. It was not necessary for customers to call in or subscribe to a calling plan in order to receive the benefit of the reduction.

33. Just as in any other purchase, consumers will vary in the amount of information gathered to support the purchase of long distance services. There are very good reasons why consumers will choose to acquire different amounts of information in preparation for making their purchase decisions. Furthermore, consumers will differ in their ability to process information and make wise decisions about purchases in the entire range of consumer products and services - telecommunications services among them.

34. In contrast to the first days after divestiture, the long distance telecommunications market is now well understood by consumers, specific price information is readily available, and rate structures are becoming less complex. These facts support the conclusion that inadequate information is no longer an impediment to proper

[12] Phone War Prompts a Record Number of Calls, The Wall Street Journal, September 7, 1999, page B6.

functioning of the market. Insofar as some groups of consumers are disadvantaged in access to information about long distance prices or in their ability to evaluate alternative offerings, public policy should support the dissemination of information about current prices and calling plans, or provide consumer education services - the existence of such groups is not a recommendation for price regulation.

III. The Need for Regulation in the InterLATA Market

35. When markets are working reasonably well they can do a better job of fostering the public interest than regulation can. This proposition is fundamental to our political and economic institutions. Perfect competition is not required. If regulation were adopted in the absence of something close to perfect competition, many more industries in this country would be regulated.

36. As I have stated above, the interLATA long distance market is effectively competitive. All evidence suggests the absence of impediments to competition which might call for government intervention in the form of price regulation.

37. Effective competition is often defined as competition that is working well enough so that regulation is unlikely to improve on the outcome of market forces. For many decades before the unequal access barrier to entry was removed as an impediment to competition in the long distance industry, there was a consensus that regulation was justified. Now that the barrier of unequal access has been removed, entry is demonstrably open, market forces are at work changing the structure of the industry, and information necessary for price competition is widely available, I see no reason to continue economic regulation of the long distance industry.

38. Table 1 shows a selection of industries with Herfindahl-Hirschmann Index values greater than 2000. The list includes common industries from macaroni to men's trousers. In addition to sharing relatively high Herfindahl-Hirschmann Index values, these industries share the attribute of not being subject to price regulation. Despite concentration of much of the industry's production into the hands of a few firms, as indicated by high Herfindahl-Hirschmann Index values, these industries are not subject to price regulation.

39. Any suggestion of imposing price regulation on the industries in this table is likely to be met with strong negative responses. There are important differences in the way in which we should interpret the HHI values for different industries[13], but the two factors which make price regulation of the long distance industry seem plausible on its face are the high concentration and the heritage of regulation. As discussed above, neither factor justifies price regulation today.

[13] For example, the manufacturing industries in this list are essentially all subject to foreign competition, which will not be captured by the HHI reported by the Census of Manufactures.

Table 1. Selected Herfindahl-Hirschmann Index Values

SIC Code	Description	Herfindahl Hirschmann Index
2043	Cereal Breakfast Foods	2253
2062	Cane Sugar Refining	2125
2066	Chocolate and Cocoa Products	2188
2076	Vegetable Oil Mills, Except Corn, Cottonseed, and Soybean	2119
2087	Flavoring Extracts and Flavoring Syrups, Not Elsewhere Classified	2085
2096	Potato Chips, Corn Chips, and Similar Snacks	2716
2098	Macaroni, Spaghetti, Vermicelli, and Noodles	2237
2296	Tire Cord and Fabrics	2682
2325	Men's and Boys' Separate Trousers and Slacks	2338
2381	Dress and Work Gloves, Except Knit and All-Leather	2239
2655	Fiber Cans, Tubes, Drums, and Similar Products	2306
2754	Commercial Printing, Gravure	2310
2824	Manmade Organic Fibers, Except Cellulosic	2158
2833	Medicinal Chemicals and Botanical Products	2999
3221	Glass Containers	2162
3262	Vitreous China Table and Kitchen Articles	2470
3275	Gypsum Products	2078
3331	Primary Smelting and Refining of Copper	2827
3355	Aluminum Rolling and Drawing, Not Elsewhere Classified	2566
3511	Steam, Gas, and Hydraulic Turbines, and Turbine Generator Set Units	2549
3641	Electric Lamp Bulbs and Tubes	2702
3692	Primary Batteries, Dry and Wet	2929
3711	Automobiles	2676
3721	Aircraft	2717
3724	Aircraft Engines and Engine Parts	2378
3769	Guided Missile and Space Vehicle Parts and Auxiliary Equipment	2034
3861	Photographic Equipment and Supplies	2408
3995	Burial Caskets	2149
3996	Linoleum, Asphalted-Felt-Base, and Other Hard Surface Floor	2741
	Source: 1992 Census of Manufactures report MC92-S-2, "Concentration Ratios in Manufacturing."	

IV. The Costs of Unnecessary Regulation

40. When regulation is not needed to protect the public interest, but is imposed nevertheless, society incurs two different types of costs. The direct costs of

complying with and enforcing regulatory directives, and the inevitable distortions of the outcomes of an otherwise well-functioning market. The first type of costs involves resources of complying companies and regulatory agencies. Companies must devote resources to keeping records, preparing reports and developing policies for conducting business in compliance with the regulations. Regulatory resources must be devoted to analysis and enforcement efforts in the long distance industry which could have been more productively used in other areas. These costs are straightforward and easy to understand.

41. The second type of cost is much less apparent to casual observation, but I believe this second cost of unnecessary regulation is of much greater consequence. In my 1987 testimony on behalf of the Washington Commission Staff (Exhibit 2, page52) I referred to this second type of cost as follows:

> This is the cost due to facilities built in the wrong place, or of the wrong type, or not built when they should have been or built when they should not have been. This is the cost of regulatory distortions of the signals that cause firms to do things in the interest of making a profit. This is inevitable because regulatory institutions are not as efficient at processing information as the decentralized market. Obviously, if I didn't believe that it is sometimes worth this cost I wouldn't be working for this Commission. In the case of AT&T, however, I believe that our regulatory interventions are mostly an unnecessary expense and an unnecessary distortion in an otherwise effectively working market.

42. It is not easy to quantify the distortions which are inevitably caused by regulation, but there is unanimity among professional economists that these are real costs imposed on society by regulatory intervention in markets. Whether the benefits sought from the activities which cause these costs are worth the costs depends on the nature of the imperfections in the market being regulated. As I indicated above, all indicators of

competition in the interLATA long distance market suggest that the market doesn't need price regulation.

43. There is currently a great deal of innovation going on in the pricing of long distance services. Much of this innovation amounts to price reduction (as referred to in Exhibit 3) and bringing the structure of prices into closer correspondence with the structure of costs[14]

44. Other changes may involve price increases, but price increases in an effectively competitive industry are not a bad thing. Price increases may be necessary in an effectively competitive industry in order to reflect costs more closely. In this case society benefits from the more efficient allocation of resources which result from the price increase.

45. In industries with opportunities for innovation, price increases often reflect an increase in value to consumers. In order for markets to function properly the prospect of increasing price in return for increasing value to the customer is a crucial element. The increase in value to the consumer could come in a variety of forms: it could take the form of better service in some dimension of service that is difficult to provide; it could involve creative billing arrangements; it could involve innovative bundling of services. To speculate further would be to try to anticipate the workings of competitors' marketing and product development departments.

46. My point is that those of us involved in the regulatory process cannot and should not attempt to 'pick winners' or in any way constrain the experimentation of companies

[14] I referred above to long distance rates that do not vary with distance called. This is an example of rate structure coming into closer correspondence with cost structure. The FCC's most recent fiber deployment update notes that: "... the inherent cost of long haul transmission is becoming less a function of distance than of the number of terminations ..." Fiber Deployment Update, End of Year 1997, page7

subject to effective competition. The companies' marketing and product development departments have much better resources to engage in this sort of creative effort than the resources that can be brought to bear in regulatory proceedings.

47. In an effectively competitive industry there is no reason to fear these efforts to create value for customers. No individual company has a corner on the market for value enhancing innovation. The companies will compete with each other in price, but also in efforts to create value in innovative ways. Companies which succeed in creating value for customers will find their competitors' efforts directed to imitating the success. Competitors who cannot accomplish the value enhancing innovation necessary to compete will have to lower price in order to compete in the short run, even if the lower price is not compensatory in the long run and the company's old business plan is no longer viable in an environment that includes others who have figured out how to enhance value in important ways.

48. Most important, the engine of competition in value enhancing innovation is driven by the motive of earning additional profit. In many circumstances the innovator's incentive depends on the prospect of capturing part of the benefit of the innovation by increasing price. If competitors are denied the prospect of raising price to capture some of the value created by innovation, the incentive for innovation is simply not there.

V. Conclusion and Recommendation

49. The interLATA long distance market in Tennessee, as in the rest of the country, is subject to effective competition. This market doesn't show the failings of competition

(chiefly barriers to entry and expansion) which justify price regulation in other industries, such as the local exchange industry.

50. In the presence of effective competition price regulation is not needed. Market forces in the interLATA long distance industry are sufficient to ensure that prices will be just and reasonable without regulation.

51. Finally, imposition of price regulation where it is not needed is a costly proposition. Regulatory resources devoted to the interLATA long distance industry would be much better spent in other activities. The cost to companies of compliance with directives associated with price regulation is an unnecessary expenditure. Most importantly, price regulation inevitably distorts market participants' incentives for competition in ways that deny consumers the full benefit of an effectively competitive market.

Exhibit 1

Richard Cabe, Ph.D.

President
Richard Cabe, Inc.
221 I St.
Salida, CO 81201

(719) 530-0278 (office)
(719) 530-0265(fax)
(719) 530-0249 (home)
Internet: rcabe@sni.net

Education

Ph.D., Economics, University of Wyoming, 1988
Public regulation & Industrial organization
Natural resource & Environmental economics

M.A., Economics, Pennsylvania State University, 1980
Mathematical economics
History of economic thought

B.A., Mathematics, University of Maine at Presque Isle, 1978
Minor in Business Administration

AREAS OF INTEREST

Telecommunications industry
Microeconomics of technological change
Economics of Management

EXPERT TESTIMONY AND REPORTS:

Before the Iowa Utilities Board, Docket No. INU-99-3: In the Matter of Petition for Determination of Effective Competition, for Waiver of Accounting Plan Requirement and for Expedited Consideration; Direct Testimony filed September 10, 1999

Before the Public Utilities Commission of the State of Colorado, Docket No. 99A-161T: In the Matter of the Application of U S West Communications, Inc. to Reduce Business Basic Exchange and Long Distance Revenues upon Receipt of the Colorado High Cost Support Mechanism in Accordance with Decision No. C99-222; Direct Testimony filed August 6, 1999

State of Florida Division of Administrative Hearings DOAH Case No. 98-2445RP: Telephonic Deposition of Dr. Richard Cabe in the matter of Florida Competitive Carriers Association, Inc.; Telecommunications Resellers Association, Inc.; AT&T Communications of the Southern States, Inc.; MCI Telecommunications Corporation; and Sprint Communications Company Limited Partnership, Petitioners, v. Florida Public Service Commission, Respondent. August 14, 1998 on behalf of Florida Competitive Carriers Association.

Before the Mississippi Public Service Commission, Docket No. 97-AD-544: Generic Proceeding to Establish Permanent Prices for BellSouth Interconnection and Unbundled Network Elements; Direct Testimony filed January 28, 1998; Rebuttal testimony filed March 13, 1998; Hearing testimony March 31, 1998; On behalf of AT&T Communications of the South Central States, Inc.

Before the North Carolina Utilities Commission, Docket No. P-100, Sub 133d: Review of Cost Studies, Methodologies, and Cost-Based Rates for Unbundled Network Elements; Direct testimony filed December 15, 1997; Rebuttal testimony filed March 9, 1998; Hearing testimony March 25, 1998; On behalf of AT&T Communications of the Southern States, Inc. and MCI Telecommunications Corporation

Before the South Carolina Public Service Commission, Docket No. 97-374-C: Proceeding to Review BellSouth Telecommunications, Inc.'s Cost for Unbundled Network Elements and Interconnection Arrangements; Direct Filed November 17, 1997; Hearing Testimony December 16, 1997; On Behalf of AT&T Communications of the Southern States, Inc.

Before the Public Utilities Commission of the State of Colorado, Docket No. 97M-063T; On Behalf of AT&T Communications of the Mountain States, Inc. and MCI Telecommunications Corporations; In the Matter of the Administration of the Colorado High Cost Fund and the Development of a Cost Model; Direct Testimony filed in the name of William Lehr; Hearing Testimony 1 December, 1997

Before the North Carolina Utilities Commission, Docket No. P-55, SUB 1022; Hearing Testimony September 30, 1997; In RE: Notification of Intention to File a Section 271 Petition for In-Region InterLATA Authority with the FCC Pursuant to the Telecommunications Act of 1996; Filed September 3, 1997; On Behalf of MCI Telecommunications Corporation and AT&T Communications of the Southern States

Before the Alabama Public Service Commission, Docket No. 26029, Review of Cost Studies; Filed August 29, 1997; Hearing Testimony September 24, 1997; On Behalf of MCI Telecommunications Corporation and AT&T Communications of the South Central States

Before the Georgia Public Service Commission, Docket No. 7061-U, Review of Cost Studies, Methodologies, and Cost-Based Rates for Interconnection and Unbundling of BellSouth Telecommunications Services; Direct filed April 30, 1997; Rebuttal and Supplemental filed August 29, 1997; Surrebuttal filed September 8, 1997; Hearing Testimony September 18,1997; On Behalf of MCI Telecommunications Corporation and AT&T Communications of the South Central States

Before the Louisiana Public Service Commission, Docket No. 22022/22093; In RE: Review and Consideration of BellSouth Telecommunications, Inc.'s TSLRIC and LRIC Cost Studies; Filed August 25, 1997; Hearing Testimony 12 September, 1997; On Behalf of MCI Telecommunications Corporation and AT&T Communications of the South Central States

Before the Public Service Commission, Commonwealth of Kentucky, In the Matter of: Inquiry into Universal Service and Funding Issues, Administrative Case No. 360, Filed July 11, 1997; Hearing Testimony August 6, 1997; on behalf of MCI Telecommunications Corporation

Before the Florida Public Service Commission, In The Matter of the Petition of MCI Telecommunications Corporation for Arbitration with United Telephone Company of Florida and Central Telephone Company of Florida concerning interconnection rates, terms and conditions pursuant to the Federal Telecommunications Act of 1996, Docket No. 961230-TP; Direct filed October 11, 1996; Rebuttal filed November 19, 1996; Hearing Testimony December 19, 1996; on behalf of MCI Telecommunications Corporation

Before the Arizona Corporation Commission, In The Matter of The Petition Of MCImetro Access Transmission Services, Inc. For Arbitration Of Interconnection Rates, Terms, And Conditions Pursuant to 47 U.S.C. § 252(b) Of The Telecommunications Act Of 1996, Docket No: U-3175-96-479; October 18, 1996; on behalf of MCImetro Access Transmission Services, Inc.

Before the Public Utility Commission of Texas, In The Matter of The Petition Of MCImetro Access Transmission Services, Inc. For Arbitration Of Interconnection Rates, Terms, And Conditions Pursuant to 47 U.S.C. § 252(b) Of The Telecommunications Act Of 1996, Docket

Nos. 16300, 16355, October 14, 1996; on behalf of MCImetro Access Transmission Services, Inc.

Before the Public Utilities Commission of the State of Oregon, In The Matter of The Petition Of MCImetro Access Transmission Services, Inc. For Arbitration Of Interconnection Rates, Terms, And Conditions Pursuant to 47 U.S.C. § 252(b) Of The Telecommunications Act Of 1996, ARB 9, October 11, 1996; on behalf of MCImetro Access Transmission Services, Inc.

Before the Utah Public Service Commission, In the Matter of the Petition for Arbitration, Consolidation and Request for Agency Action of MCIMetro Access Transmission Services, Inc. Pursuant to 47 U.S.C. Section 252, Docket No. 96-095-01; Direct testimony filed 8 November 1996; Rebuttal testimony filed 22 November, 1996

Before the Iowa Utilities Board, In Re MCI Metro Access Transmission Services, Inc., Petitioning Party, and U S West Communications, Inc., Responding Party, Docket No. ARB-96-2, September 6, 1996; on behalf of MCImetro.

"Before the Public Utilities Commission of Oregon:UM 351, In the matter of the Investigation into the Cost of Providing Telecommun ications Services, Electric Lightwave, Inc.'s Response to Issues 1, 3, and 4, filed 30 August, 1993"

Before the Washington Utilities and Transportation Commission, In the Matter of the Complaint of GTE Northwest Incorporated against Pacific Northwest Bell Telephone Company with respect to Interexchange Traffic Utilizing Extended Area Service Facilities, Docket No. U-88-1719-F; on behalf of U.S. Metrolink Company; Cross Examination December 1989

"Affidavit of Richard Cabe", in Support of Motion of U.S. MetroLink Company for Suspension and Hearing in the matter of U. S. West Communications Tariff Filing 2056T before the Washington Utilities and Transportation Commission, September 1989

Implementation of the Colorado Telecommunications Act of 1987: An Evaluation", Report to the Colorado Public Utilities Commission, with Vinson Snowberger, June 30, 1988

Before the Energy and Utilities Committee of the Washington State House of Representatives, to present the Annual Report of the Utilities and Transportation Commission on the Status of the Washington Telecommunications Industry, February 1987

Before the Washington Utilities and Transportation Commission, In the Matter of Application of Pacific Northwest Bell for Banded Tariffs, Cause no. U-86-40; Cross Examination September 1986

Before the Washington Utilities and Transportation Commission, In the Matter of the Petition of AT&T of the Northwest for Classification as a Competitive Telecommunications Company, Cause no. U-86-113; Cross Examination April 1986

Cost of Service Information for Implementation of the Regulatory Flexibility Act, Report to the Washington Utilities and Transportation Commission, July 1985

"On Reducing Errors in Air Pollution Epidemiology," with S. Atkinson and T.D. Crocker, draft report, Institute for Policy Research, University of Wyoming to U.S. Environmental Protection Agency for Grant CR808893-01, April 1982.

Consulting Clients:

Texas Office of Public Utility Counsel
Florida Competitive Carriers Association
Avantel, Mexico
AT&T
MCI and MCI Worldcom
Marcatel, Mexico
New Mexico State Corporation Commission
Electric Lightwave Inc.
Washington Utilities and Transportation Commission
U.S. MetroLink Company
Colorado Public Utilities Commission
Maryland People's Counsel

PUBLICATIONS:

"Issues, Indicators, and Baselines: The Benefits and Hazards of Using a Natural Resource Accounting System in the RCA Analytical Process", with Jason Shogren and Stanley R. Johnson, in Evaluating Our Nation's Natural Resources, edited by T. Robertson, B. English, R. Alexander, and P. Rosenberry, University of Tennessee Agricultural Experiment Station, 1996

"CEEPES: An Evolving System for Agroenvironmental Policy", with Aziz Bouzaher, Stanley Johnson, Andrew Manale and Jason Shogren, p 67-89 in Integrating Economic and Ecological Indicators, edited by J. Walter Milon and Jason Shogren, Praeger, Westport CT, 1995

"Metamodels and Nonpoint Pollution Policy in Agriculture", with Aziz Bouzaher, Alicia Carriquiry, Phil Gassman, P. G. Lakshminarayan, and Jason Shogren, Water Resources Research 29, p. 1579-1587, June 1993

"The Effects of Environmental Policy on Tradeoffs in Weed Control Management", with Aziz Bouzaher, David Archer, Alicia Carriquiry and Jason Shogren, The Journal of Environmental Management, 36, #1, 69 - 80, Sept. 1992

"The Regulation of Non-Point Source Pollution Under Imperfect Information", with Joseph Herriges, The Journal of Environmental Economics and Management 22, 134-146, 1992

"Equilibrium Diffusion of Technological Change Through Multiple Processes", Technological Forecasting and Social Change 39, Number 3, May 1991

"Natural Resource Accounting Systems and Environmental Policy Modeling", with Stanley R. Johnson, The Journal of Soil and Water Conservation 45 # 5, p 533-9, September/October 1990

"Network Differentiation and the Prospects for Competition in Local Telecommunications", in Sixth Annual Current Issues Challenging the Regulatory Process, The Center for Public Utilities, New Mexico State University, 1990

"Prospects for Competition in the Local Exchange Telecommunications Industry", in Telecommunications Regulation in Washington State, Washington Utilities and Transportation Commission, January 29, 1989

"Rate of Return Regulation of Multiproduct Firms," Doctoral Dissertation, University of Wyoming, Department of Economics, 1988

Annual Report to the Legislature on the Status of the Washington Telecommunications Industry, principal author for the Washington Utilities and Transportation Commission, January, 1987

"Normative Economics and the Acid Rain Problem" with L.S. Eubanks, in T.D. Crocker, ed., Perspectives on the Economics of Acid Deposition, 1983, Ann Arbor Michigan: Ann Arbor Science Press.

"Intertemporal and Intergenerational Pareto Efficiency: An Extended Theorem," Journal of Environmental Economics & Management 9, p 355-360, December 1982.

"Investment Criteria for Projects with Intergenerational Effects," Masters Thesis, Pennsylvania State University, Department of Economics, 1982.

EMPLOYMENT

Teaching:
Associate professor, Department of Economics and International Business, New Mexico State University; 1994 - 1999, Assistant professor 1990 to 1994: Antitrust Policy and Monopoly

Power; Graduate Microeconomic Theory; Mathematical Economics; Industrial Organization; Seminar in Regulatory Economics; Economics of Risk, Uncertainty and Information; Game Theory; Advanced Seminar in Industrial Organization; Econometrics; Managerial Economics; Introduction to Economics; Microeconomic Principles

Assistant professor, Department of Economics, West Virginia University, 1983-1984: Graduate Environmental Economics; Principles of Economics.

Lecturer, Department of Economics, University of Wyoming, 1982–1983: Money & Banking; Intermediate Microeconomics.

Teaching assistant, Department of Economics, University of Wyoming; Fall, 1980.

Teaching assistant, Department of Economics and Department of Mathematics, Pennsylvania State University, five quarters in academic years 1978-1979 and 1979-1980.

Public Policy:
Economic Consultant, 1988. Performed economic analysis concerning regulation of the telecommunications industry under contract to the Colorado Public Utilities Commission and the Washington Utilities and Transportation Commission.

Associate, RCG/Hagler, Bailly, Inc. 1987-1988. Assignments included litigation support in Bell Operating Company requests for lessened regulation and a study of the effect on property values of proximity to a major defense facility containing hazardous waste sites.

Telecommunications Regulatory Flexibility Manager, Washington Utilities and Transportation Commission, 1985-1987. Duties included conduct of investigations and preparation of recommendations, primarily with regard to the telecommunications industry; preparing evidence, assisting in cross examination and presenting expert testimony; and serving as a member of the Federal - State Joint Board Staff, FCC Docket 86-297, concerned with revising jurisdictional separations of telecommunications company costs and revenues.

Research:
Post-Doctoral Research Associate, Center for Agricultural and Rural Development, Department of Economics, Iowa State University, September 1988 to August 1990. Participate in policy-oriented economic research and serve as liason to the Economic Research Service, USDA.

Research Associate, Department of Economics, University of Wyoming, spring 1981 through summer 1982. Theoretical modelling, data construction, and analysis on health effects of air pollution and application of economic methods to ecosystem modelling. Under the direction of Thomas Crocker.

Research assistant, Department of Economics, University of Wyoming, summer 1980. Data construction and analysis on health effects of air pollution. Under the direction of Ralph d'Arge.

Research assistant, Department of Economics, Pennsylvania State University, summer and fall 1979. Theoretical and empirical work with Assymetric Quadratic Gorman Polar forms (flexible functional forms with explicit analytical solutions for the dual cost or expenditure function). Under the direction of Jonathon Dickinson.

Other Employment:
One year, Administrative Research Assistant, Aroostook County Action Program, Presque Isle, Maine.

Four years, U.S. Coast Guard, Electronics Technician.

AWARDS
Washington Utilities and Transportation Commission employee award for contributions to a positive work environment, Olympia, Washington, December 1986.

Award of merit, College of Commerce and Industry, University of Wyoming, 1981.

John S. Bugas fellow, University of Wyoming, academic year 1980-1981.

PERSONAL
Born July 16, 1950; Pulaski County, Arkansas
Married, one child
Second language: Spanish

Exhibit 2

CAUSE NO. U-86-113
TESTIMONY OF: Richard Cabe
EXHIBIT: T-40

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of AT&T Communications of the Pacific Northwest, Inc., for Classification as a Competitive Telecommunications Company.	)))))	CAUSE NO. U-86-113

TESTIMONY OF

RICHARD CABE

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

April 6, 1987

Q. Please state your name and business address.

A. My name is Richard Cabe and my business address is 1300 Evergreen Park Drive South, Olympia, Washington 98504.

Q. By whom are you employed and in what capacity?

A. I am employed by the Washington Utilities and Transportation Commission as Telecommunications Regulatory Flexibility Manager.

Q. Please describe your duties with the Commission.

A. Since June of 1985 I have been assigned to matters involving implementation of the Regulatory Flexibility Act. I have prepared drafts of rules, analyzed filings, prepared policy memoranda and participated in staff activities in contested cases. From January 1985 through May 1985 I was assigned to other duties concerning utility rates of return, affiliated transactions, etc.

Q. Please describe your employment history prior to joining Commission staff.

A. Immediately prior to joining Commission staff I was an Assistant Professor of Economics at West Virginia

University. I served as a provisional member of the Graduate Faculty and taught a graduate level course in Environmental Economics as well as undergraduate courses in Principles of Economics. Prior to appointment to the faculty at West Virginia University I served as Instructor in Economics at the University of Wyoming where I taught courses in Intermediate Microeconomic Theory and Money and Banking. At the University of Wyoming I also served as Research Assistant and later as Research Associate in research projects in Environmental Economics.

Q. Please describe your educational background.

A. I received the B.A. degree in Mathematics from the University of Maine at Presque Isle in 1978. I received the M.A. in Economics from Penn State University in 1980 with fields of specialization in Mathematical Economics and the History of Economic Thought. I have completed all but the dissertation requirement for the Ph.D. in Economics at the University of Wyoming. I have completed the Ph.D. course-work and comprehensive exams for fields of specialization in Natural Resource and Environmental Economics and in Public Regulation and Industrial Organization. I am currently conducting research for a dissertation on game theoretic modeling of telecommunications pricing.

Q. Has your written work in economics been published?

A. My paper "Intertemporal and Intergenerational Pareto Efficiency: An Extended Theorem" appeared in the December 1982 Journal of Environmental Economics and Management. I was the author with L. S. Eubanks of "Normative Economics and the Acid Rain Problem" in Perspectives on the Economics of Acid Deposition, Ann Arbor Science Press, 1983. I was one of three Joint authors of a research report On Reducing Errors in Air Pollution Epidemiology of the Institute for Policy Research, University of Wyoming. My assistance was acknowledged in the headnote of a paper by Jonathan Dickinson, "Asymetric Quadratic Gorman Polar Forms: Flexible Functions With Explicit Duals", in the working paper series of the Department of Economics, Penn State University.

Q. Have you presented testimony before this Commission in other cases?

A. Yes. In Cause No. U-86-40, a case involving banded rates for Pacific Northwest Bell, I recommended that pricing flexibility not be granted where there was danger that monopoly power would be abused.

SUMMARY

Q. What is the purpose of your testimony?

A. I will analyze AT&T's petition for classification as a competitive telecommunications company. I have concluded that AT&T's services are subject to effective competition, except for certain "vestiges of market power" which need not impede classification provided that the Commission adopt certain restrictions which would prevent the abuse of any vestiges of market power which do remain.

Q. Generally, what restrictions do you recommend?

A. I recommend that AT&T be required to maintain its practice of charging rates which do not vary between geographic areas. I recommend that AT&T's pricing flexibility be limited, for a fixed period, in such a way as to assure that customers with low volumes of usage receive the benefit of competition for the business of larger volume customers. I also provide detailed recommendations for the disposition of AT&T's waiver requests in a way that is consistent with other waivers which this Commission has granted to competitive telecommunications companies.

STANDARDS AND TESTS FOR EFFECTIVE COMPETITION

Q. What standards should be applied in the Commission's consideration of AT&T's petition for classification as a competitive telecommunications company?

A. The Regulatory Flexibility Act of 1985 provides that the Commission shall classify a company providing service in a relevant market as competitive and give it the benefits of minimal regulation when the Commission finds that there is effective competition for the company's "services". The Act defines effective competition as the presence of reasonably available alternatives for the company's customers and the absence of a significant captive customer base.

Q. Does the Act provide specific tests to consider in determining whether effective competition exists?

A. Yes. The Act provides that the Commission shall consider, at a minimum, the following tests:

"(a) The number and sizes of alternative providers of service;

(b) The extent to which services are available from alternative providers in the relevant market;

(c) The ability of alternative providers to make

functionally equivalent or substitute services readily available at competitive rates, terms and conditions; and

(d) Other indicators of market power which may include market share, growth in market share, ease of entry, and the affiliation of providers of services."

Q. How will you apply the statutory definition and tests to AT&T's petition?

A. First, I will adopt a definition of the services which AT&T offers within the state of Washington. Next, I will analyse the relevant product market for each of these services. Then, I will discuss the geographic component of the relevant product markets. Finally, I will apply the statutory tests and reach a conclusion on whether the relevant product markets are subject to effective competition under the definition of the act.

Q. How does Section 4(3) of the Act bear on this case?

A. Section 4(3) of the Act establishes a presumption that all companies providing interLATA interexchange service will be subject to effective competition when the equal access requirements of the federal court decree ordering divestiture of the Bell system have been met.

Q. In your opinion, have those requirements been met?

A. Yes. The MFJ required that "by September 1, 1986 the Operating Companies must provide access services to interexchange carriers and information service providers which are "equal in type, quality, and price" to the access services provided to AT&T and its affiliates." The MFJ, and by reference, the Washington Regulatory Flexibility Act, only required that equal access be provided by the Bell Operating Companies, in this case Pacific Northwest Bell. Further, the requirement contained an exception for older and smaller switches. PNB has surpassed the requirement for provision of equal exchange access and will be offering equal access in all of its exchanges by 1988.

Q. Are you offering a legal opinion on this issue?

A. No. I have read the MFJ and some of the opinions on reconsideration but I am not offering a legal opinion. I am offering my professional judgement that interexchange companies' access to the local exchange is sufficiently "equal" to support effective competition in the interlata interexchange business.

Q. Is your analysis based on the presumption of Section 4(3) of

the Act?

A. No. I will examine the markets for AT&T's services to determine whether or not effective competition exists. I do however concur in the legislature's view that substantial removal of AT&T's competitive access advantage justifies the statutory presumption.

Q. You mentioned vestiges of market power. What statutory authority does the Commission have to grant AT&T's application despite the existence of vestigial market power?

A. The statute requires effective competition - not perfect competition. Very few real world markets approach the ideal of perfect competition. Nevertheless, despite their abundant flaws, imperfect markets are widely regarded as preferable to the alternatives under most circumstances. The difference between the effective competition required by the Act and ideal or flawless or perfect competition is apparent in the statute's use of the word "significant" in its definition of effective competition. As I explain later, I believe that AT&T may have a significant captive customer base, in part and for a limited period. It is these customers who I believe should receive the benefit of the transition mechanism which I will describe.

Market power similar in extent to the vestiges of market power which I will identify exists in many unregulated markets which are generally regarded as workably competitive. AT&T's market power is different in that it derives from the company's former incarnation as a vertically integrated monopoly protected from entry by regulatory barriers and by its control of the local exchange bottleneck. Since AT&T's monopoly derived, in part, from public policy the company should be prohibited from exploiting any vestiges which remain of that monopoly during a transition to public policy which relies heavily on competition. Further, as suggested in Section 4(2) the Commission should waive regulatory requirements where the purposes of those requirements are now served by competition. The Commission is explicitly allowed to waive different regulatory requirements for different companies.

RELEVANT PRODUCT MARKETS FOR AT&T SERVICES

Q. The statute calls for classification as a competitive company when the company's services are subject to effective competition. What services are offered by AT&T?

A. With one exception, I will use the "services" described in Exhibit "B" of the petition, ~~with one exception~~. Exhibit B describes three services: 1) long distance service which I

will also refer to as MTS (Measured Toll Service); 2) WATS and 800 service; and 3) channel service which I will also refer to as private line. I will adopt these definitions of AT&T's "services" with the exception that I will treat WATS and 800 as separate services.

Q. How will your analysis of relevant markets proceed?

A. For each of AT&T's services I will analyze the services which provide market discipline to AT&T's service. This set of services constitutes the relevant product market in which AT&T's service is bought and sold. In this analysis, both demand side substitutability and supply side substitutability will be considered.

Q. What is meant by the terms "demand side substitutability" and "supply side substitutability"?

A. Demand side substitutability is the ability of consumers to easily shift their purchases between different services. When demand side substitutability exists between two products, market power over one product or service can only be exercised if market power also exists over the substitute product or service. For example, a firm with a monopoly over front wheel drive automobiles would not be able to exercise market power unless it could prevent its customers

from defecting to rear wheel drive automobiles.

Supply side substitutability occurs when the suppliers of one service can easily transsfer productive facilities to the provision of another service. For example, an automobile monopolist could not exercise market power so long as manufacturers of buses, trucks, tractors, motorcycles, etc. were able to easily shift resources into the production of automobiles.

Q. How are these concepts used in analyzing markets?

A. Demand side and supply side substitutability are used to determine the relevant product markets for particular services. The relevant product market is the smallest set of services which a hypothetical monopolist would have to control supply for in order to exercise market power over the service in question. Accordingly, I examined each of AT&T's services to determine the relevant product market for each service.

Q. What is your analysis of the relevant product market for AT&T's MTS service?

A. The relevant product market for MTS must include WATS because MTS customers can very easily use WATS to replace their MTS purchases. This can be accomplished either

directly by ordering WATS service, or indirectly through the offices of a reseller. Resellers can very easily combine WATS service and local exchange access with a PBX to provide MTS. Of course, a WATS reseller operates at the mercy of the difference between WATS rates and other providers' MTS rates in just the way that any merchant or manufacturer operates at the mercy of the difference between costs of inputs and prices of outputs. The point is that market power in the MTS market cannot be exercised without control over the WATS market, thus the relevant market for MTS must include WATS. These are two ways of substituting WATS for MTS on the demand side.

Supply side substitutability is another reason why one cannot exercise market power over the MTS market without controlling the WATS market, and this reason applies equally to 800 service. WATS or 800 service providers can very easily shift resources into the provision of MTS service; the identical switching and transmission facilities can be used to provide any of these services.

One cannot raise prices above competitive levels in the MTS market without having MTS customers switch to WATS service and WATS and 800 providers switch resources to the provision of MTS. Therefore, the WATS and 800 markets provide market discipline to prevent the exercise of market power in the MTS market. I conclude that the relevant market for MTS

must include WATS and 800 service.

Q. Are there other services which prevent the exercise of market power in the MTS market?

A. Yes, private line service can substitute for MTS on the demand side and private line providers can convert their facilities to the provision of MTS service. However, on neither the demand side nor the supply side is private line as close a substitute as WATS. On the demand side, a user or reseller seeking to substitute private line for MTS would have to attain a greater volume, or face a wider difference in prices in order to find the substitution profitable. On the supply side, private line providers would have to acquire switching capacity not needed in the private line business in order to offer MTS service. Nevertheless, an MTS provider who sought to maintain MTS prices above the competitive level would have to prevent large customers from replacing some MTS with private lines, prevent resellers from facilitating the sharing of private lines among smaller users, and prevent private line providers from using their transmission facilities to offer competitive MTS service. For these reasons, private line service must be included in the relevant market for MTS.

Q. What is your analysis of the relevant product market for

AT&T's WATS service?

A. WATS users could respond to price increases by using MTS or private line. To be sure, there are limitations on the use of private line as a substitute for WATS just as substitution of private line for MTS is limited to large volume users, and such use will often require the services of a reseller to facilitate the sharing of bulk offerings among many small users. On the supply side, WATS prices above the competitive level would induce private line providers, 800 service providers and MTS providers to seek a share of the WATS profits by expanding and diverting facilities to provision of WATS service.

A firm which sought to exercise monopoly power over the WATS market would have to prevent users from substituting MTS or private line for WATS and would have to prevent MTS, 800 service and private line providers from offering WATS. Hence, the relevant market for WATS must include MTS, 800 service and private line as well.

Q. What is your analysis of the relevant product market for AT&T's 800 service?

A. I will conclude that the relevant market for AT&T's 800 service must include MTS, WATS and private line. The ability of alternative providers to offer a service that is essentially identical to AT&T 800 service has been slow in

coming. For this reason I will briefly discuss similar offerings of other carriers and survey recent developments which allow new OCC 800 offerings.

Q. How have other carriers offered substitutes for AT&T's 800 service in the past?

A. OCCs have offered a substitute for AT&T's 800 service by subscribing to AT&T's 800 service and allowing OCC customers to advertise the availability of that 800 number. When the 800 number is called, an OCC operator answers and routes the call to the appropriate customer. This substitute is clearly inferior to AT&T's 800 service in several respects: It requires the caller to speak to an operator before reaching the OCC's customer, it doesn't allow the customer any choice of 800 number (e.g., 800-CALLATT), and the OCC is dependent on the structure of AT&T's 800 tariff. When AT&T controlled the local exchange network it was a simple matter to have all 800 calls routed to long lines and, in its role of North American Numbering Plan Administrator, assign 7 digit numbers to customers of AT&T's 800 service.

Q. What has changed since divestiture?

A. The two important changes that have allowed OCCs to offer true 800 service are that AT&T no longer controls what the

local operating companies do with 800 calls and AT&T no longer administers the North American Numbering Plan. AT&T cannot prevent the assignment and routing of blocks of 800 numbers to OCCs. Although much is unsettled about how the 800 service market will work (the FCC has CC Docket 86-10 open in the matter), it is apparent that OCCs will be offering very close substitutes to AT&T 800 service. Exhibit 41 is an article from the Wall Street Journal reporting announcements of OCC 800 service. This evidence of OCC ability to offer close substitutes for AT&T 800 service leads me to conclude that the proper relevant market for 800 service is the same as the relevant market for WATS.

Q. What is your analysis of the relevant product market for private line service?

A. Private line service is essentially raw transmission capacity. For some applications MTS or WATS provides a substitute for private line service; for other applications demand side substitutability between private line and switched services is not good. On the supply side, any provider of WATS, 800 or MTS which owns transmission capacity can use that capacity to offer private line service as well as switched services. The relevant market for private line must therefore include the facilities-based

portion of WATS, 800 and MTS. Resellers of switched services will not impede the exercise of market power in the private line market, hence are excluded from the relevant market.

RELEVANT GEOGRAPHIC MARKET FOR SERVICES

Q. Having identified the relevant product markets for AT&T's services, how should the relevant geographic markets for these services be determined?

A. The geographic dimension of the relevant markets is determined by examining demand side opportunities for consumers to avoid price increases by using an alternative service offered by a more or less distant provider, and by examining supply side opportunities for more or less distant providers to offer service at the user's location in response to price increases above the competitive level. A discussion of this aspect of the relevant markets for AT&T's services requires an understanding of the way in which interexchange carriers depend on the local exchange companies.

Q. Please describe the nature of the interexchange carriers' dependence on the local exchange network.

A. The local exchange companies control the network of switching and transmission facilities which provide the vast majority of intraLATA telecommunications services. The Interexchange Carriers (IXCs) must gain access to their customers through this intraLATA network. IXCs can get access in various forms which involve differing levels of penetration into the intraLATA network. An IXC can take all access through tandems to minimize duplication of LEC facilities. Alternatively, an IXC can build transmission facilities (or lease them from LECs) to minimize reliance on the interexchange portion of the intraLATA network. Use of the intraLATA network is available to IXCs at nondiscriminatory tariffed rates established by regulators.

Q. What significance does the availability of these options have for definition of the geographic dimension of the relevant market for AT&T's services?

A. It is the availability of local access and transport from local exchange companies that allows IXCs to easily serve all geographic areas within the state without the need to build transmission facilities to each locale, which would and limit supply substitutability among geographic areas. It is the availability of access to the intraLATA network which leads me to conclude that no interexchange carrier could exercise market power in one geographic area without

also being able to limit entry from other carriers serving other parts of the LATA. Similarly, retail providers in one LATA can serve another LATA by using the wholesale services of carriers' carriers.

An illustration of this concept came before this Commission through Sprint witness Ronald Havens in Cause U-85-23. (Tr. 2075) According to Mr. Havens, Sprint was using Feature Group B Tandem access in the Seattle LATA by which customers could originate a call from anywhere in the LATA. This form of access allows an interexchange carrier to offer service to customers in every exchange in the state, including those not converted to equal access, while having a physical point of presence only at the LATA's access tandem(s).

Q. How, then, would you define the geographic scope of the relevant market for AT&T's services?

A. I would define the geographic dimension of the private line relevant market as all routes between each pair of LATAs in the state. If these markets were found to be competitive (which they are) I would then define the geographic dimension of the relevant market for switched services as the entire state. Instead, because of the practice of statewide averaging of rates, I will take the shortcut of examining ~~other~~ all markets in a statewide context.

Q. How does the practice of geographically averaged rates bear on the question of the proper geographic definition of relevant markets for this case?

A. A prohibition of geographic deaveraging makes the question of geographic market definition moot. The purpose of studying the geographic dimension of relevant markets is to determine if there are any areas in which the forces of competition might not replace the need for regulation of AT&T's rates. If AT&T is required to charge rates that do not vary by locale, then all areas will receive the benefit of AT&T's response to competition in the most intensely contested geographic submarket.

With geographically invariant rates we need only find effective competition in one area in order for the entire state to receive the benefits of competition. This principle does not, of course, apply in the extreme. The area in which competition exists must be of sufficient importance to the company to make price reductions to retain a share of that market more attractive than the concomitant loss of profits in less competitive segments.

AT&T has offered assurances that it has no intention of geographically deaveraging rates. (Tr. 94-95) It has

expressed a willingness to accept a prohibition of such deaveraging until it receives the consent of this Commission. (Tr. 346-347) If the Commission grants AT&T's petition, the commitment to geographically invariant rates should become a part of the Commission's order in this matter.

EXISTENCE OF EFFECTIVE COMPETITION

Q. Please describe the analytical task of determining whether AT&T's services face effective competition in their relevant markets.

A. For each of AT&T's 4 services (MTS, WATS, 800 service and private line) I have delineated a relevant market, including both product and geographic components. As it turns out, there are only 2 relevant markets to analyze for effective competition. MTS, WATS and 800 service are each within the relevant market consisting of all interLATA telecommunications within the state. The relevant market for private line service includes only that portion of the interLATA intrastate telecommunications market which is provided by facilities-based carriers. Resellers are excluded from the relevant market for private line service. For each of these two relevant markets we must apply the standards set forth in the Act to determine whether the

statutory definition is met.

Q. Beginning with the broad relevant market which you stated applies to switched services, but which also includes private line, approximately how many alternative providers are involved and what are their relative sizes?

A. The number of common carriers varies with the source of data. At latest count there were 30 registered with this Commission and 43 "suspected outlaws" with whom the Commission is engaged in correspondence concerning the need for registration. AT&T identified 36 alternative providers Tr. 496. 19 companies appeared on PNB equal access ballots in 1986. In addition to these more or less common carriers offering primarily switched services, some of the demand in this relevant market is met with private transmission facilities, predominately microwave, constructed by several local and many national firms.

Of the common carriers, AT&T is by far the largest according to any measure. AT&T serves between about 70 and 80 percent of the market, depending on the measure of size. The next largest firm probably serves less than 10 percent of the market.

Q. To what extent are services available from alternative providers in the relevant market?

A. Services are widely available from numerous providers in the relevant market. In response to Record Requisition 22 AT&T provided a survey of services offered by various firms with descriptions of the services. This is attached as Ex. 42.

Q. Please discuss the ability of alternative providers to make functionally equivalent or substitute services readily available at competitive rates terms and conditions?

A. Having defined the relevant market on the basis of considerations of the ability of consumers to substitute between services and the ability of providers of similar services to offer substitutes, the presence of alternative providers of any service within the relevant market satisfies this test. It should be noted that for the purpose of analyzing market power, which is clearly the intent of the Act, the terms "functionally equivalent" should be taken in the economic sense and not the technical sense. If two services are reasonably close substitutes, in the sense that a monopoly provider of one service would not be able to hold price significantly above the competitive level without losing sales to the other service, then the two should be regarded as functionally equivalent. For example, Fords are certainly not equivalent to Chevrolets; neither are red Fords equivalent to green Fords, in the most

technical sense. For the purpose of assessing market power, however, they are substitutes. The divestiture court has recognized this in the process of accepting and enforcing the MFJ. In a section entitled "What does 'Equal' mean", the court chose not to "insist on absolute technical equality" which would have required identical values for loss, noise, echo and identical possibility of blocking. Instead, the court adopted a definition which required equality within a "reasonable range".

Q. You alluded to market share when considering the number and sizes of alternative providers. Please describe AT&T's market share in greater detail.

A. Several measures of AT&T's market share have been introduced in this proceeding or are readily at hand. Exhibit 43 is a table of 13 estimates of AT&T's share of the Washington market. Some numbers are more reliable than others. I would place greatest confidence in the figures on lines 9, 11, 12 and 13. I view these measures as generally consistent with each other, allowing a range for estimators and considering differences in time period and measure used. This evidence shows that AT&T's market share is high. Only one measure falls within Judge Hand's 60 to 64 percent for which he regarded monopolization as doubtful in the Alcoa case. Market share is falling; both sets of estimates of

the same measure from different time periods (lines 1 & 2 vs. lines 3 & 4 and line 8 vs. line 9) show significant declines. Market share is higher in penetration numbers and lower in revenue terms; lines 1 & 2 vs. lines 5 & 6 all come from the same study at the same time period. Comparison of lines 1 & 2 with lines 11 & 12 suggests that the Market Trends study is flawed; but if the bias in the study applies similarly to penetration and revenue numbers, our inference is justified. Also, even if the Market Trends long distance expenditure questions elicited biased responses, the market share figures may be more accurate. This will be the case if the reporting bias applies similarly to AT&T and the OCCs and thus is approximately correct in the ratio.

Q. Which market share estimate is conceptually more correct?

A. The estimate on line 10, of 84%, is based on total revenues from the Washington market reported to the Commission by registered interexchange carriers. It is the most appropriate conceptually because it captures all intrastate services, aggregated by revenue. However, the 84% figure overstates the conceptually correct market share in several ways. First, it fails to capture the service provided by unregistered companies; this is certainly significant. As indicated above, the Commission has correspondence pending with some 43 companies which seem to be operating in the

state but are not registered. There are also companies which claim that their services are all interstate in nature. WTCI is not registered with the Commission because it assumes that its services fall entirely within the interstate jurisdiction although it offers private line service connecting Seattle, Spokane and Yakima. This measure also overstates the conceptually correct market share because it doesn't include private telecommunications systems which serve needs that fall within the relevant market or which could relatively easily be used to serve the relevant market if profit opportunities were apparent. The importance of this source of market discipline should not be exaggerated, but probably amounts to a percentage point or two. Finally, AT&T's share is probably overstated in the estimate because AT&T is in a better position to accurately measure its revenue from intrastate services. Since these revenue estimates are used for the purpose of assessing regulatory fees, I expect that estimates from other companies err on the low side.

Q. Are there any other adjustments which should be made to this estimate in order to apply it in this proceeding?

A. Yes, it should be corrected to give effect to the reduction in AT&T's market share which has probably occurred since calendar year 1985, the period which applies to the estimate

on line 10. To give effect to all of these factors I would reduce the estimate to approximately 75 percent, but the implication for AT&T's market power is the same in either case.

Q. What is the implication of a market share of 75 to 84 percent for AT&T's market power?

A. This market share alone is neither sufficient to show the presence nor the absence of market power. It calls for further analysis, particularly in the direction of two additional factors listed in the Act: growth of market share and ease of entry.

Q. How does growth of market share bear on the question of market power?

A. Market power is the ability to raise price without suffering significant losses in market share. If a firm is losing market share it probably does not have significant amounts of market power. The exceptions which lead me to qualify this statement with the word "probably" are of two sorts: the phenomenon causing the loss in market share might be a transitory event, or the decline in market share might be a strategic action of the firm alleged to have market power.

Q. Is AT&T's recent loss in market share caused by a transitory phenomenon?

A. No. AT&T has been slowly losing market share for decades as it has slowly lost control of the local exchange bottleneck. This gradual loss of the basic source of its former market power took great leaps forward with the divestiture of the operating companies and the implementation of equal access. Consequently, we are now observing faster reductions in market share. The important point is that the severance of AT&T's control over the local exchange is not a transitory event.

Q. Do you believe that the present decline in AT&T's market share might have been orchestrated by AT&T, perhaps to avoid regulation or antitrust actions?

A. No. There is a long history of AT&T tariff filings (route specific private line rates, optional calling plans, etc.) designed to stem the tide of customers taking their business to OCCs or private systems. AT&T would have lost market share much faster by inaction than by the course it has followed. For example, in a case before this Commission, Cause No. U-85-68, AT&T sought to demonstrate a revenue deficiency but raise rates less than enough to recover its entire revenue requirement. If AT&T was manipulating a loss

of market share for the benefit of this Commission it surely would have sought to raise prices enough to cover the entire revenue deficiency.

Q. What is the significance of the statute's test of ease of entry?

A. The amount of market power which can be maintained in a particular market is directly related to the magnitude of barriers to entry in that market. Without significant barriers to entry, significant market power cannot exist. The present structure of the industry (numbers of alternative providers, market shares, etc.) together with evidence of declining market share suggests that market power no longer exists, or at least that it is dissipating. If an examination of the ease of entry into the industry finds no significant barriers to entry, then we are secure in the conclusion that no significant market power exists.

Q. What would be an example of a barrier to entry in the telecommunications industry?

A. The history of the industry holds several such examples, but by far the most important is control of the local exchange network. AT&T exercised market power in the interexchange market by denying its interexchange competitors access to

customers through the local network. Replication of the local network was an enormous sunk cost which new entrants would have needed to incur in order to provide interexchange service comparable to that provided by AT&T with universal origination and termination. As was indicated above, this barrier has been substantially dismantled and its ruins are quickly being swept aside.

Q. Do barriers to entry exist today?

A. Certainly. The remains of the unequal access barrier and the sunk costs associated with acquiring right of way, location specific system design and construction costs, and perhaps others should be regarded as barriers to entry in the interexchange industry. The pertinent question is whether these remaining barriers are significant, and the answer to that question hinges on whether the barriers prevent entry.

Q. Are remaining barriers significant in the sense of preventing entry?

A. No. Entry and expansion is occurring in this industry at a rapid rate. Some of the best evidence of this is in the announced expansion plans of MCI and Sprint. The fact that expansion is occurring indicates that barriers to entry are

not significant in the sense that is relevant to this proceeding. There is also new entry in progress. Northwest Microwave, with private line facilities now under construction between Seattle and Spokane is a case in point.

Q. Are there other examples of entry into the Washington telecommunications market?

A. Yes, and I would like to mention two more examples: one recent, one prospective. The first is prospective; service has not been offered, construction of facilities has not begun, but the operation now appears ready to make its entrance if opportunities for profit arise. A large forest products firm designed a digital microwave route from Eugene, Oregon through Washington and into British Columbia. For one reason or another it was never built. A Washington firm with experience in building and operating such facilities on a smaller scale now holds an option to buy the design for the system. I learned of the existence of this plan when the firm inquired about regulatory requirements for the operation of such a transmission facility on a common carrier basis. I don't know whether the system will ever be built. I am confident that such systems would be built if prices in the Washington telecommunications market were held above the competitive level.

Q. You also have an example of recent entry that has already occurred?

A. Yes. Attached as Exhibit 44 is a newspaper report from the Aberdeen Daily World of March 31, 1986 which describes a microwave link between South Bend and Long Beach owned by Pacific County. This facility was constructed in response to an increase in AT&T's private line rates. The report indicates that by this device the county's telephone costs will return to their level before the AT&T rate increase. This is an example of a large user building its own facilities in response to a price increase; not all users can respond in this way, but some can. A few weeks ago I received a call from an attorney in the county seat. His law offices and the local title company were interested in sharing the county's facilities. The county was agreeable and he wanted to know whether the arrangement would be regulated by this Commission. This example is very rich with illustrations, some of which I return to later, but I offer it here as evidence that existing barriers to entry in the interexchange industry do not prevent entry and thus are not "significant" barriers to entry in the appropriate sense.

Q. You determined earlier that AT&T's private line service should be analyzed in a more narrowly defined relevant

market. Please proceed to your discussion of competition in that market.

A. The only difference between the two relevant markets is that for analysis of competition for AT&T's private line service, resellers in the retail market for switched services should be excluded, since they cannot readily convert their operations to the provision of private line services which could compete with AT&T's services. Much of what has been said above applies equally in this more restricted market.

Q. How many alternative providers of service are there when resellers are excluded?

A. Mr. Sumpter estimated that about half of his known competitors had no transmission facilities. I expect that his estimate is approximately correct, but to err on the side of conservatism, I will use the figure of one quarter. Applying that ratio to the sum of registered companies and unregistered "suspects" yields about 18 facilities based carriers.

Q. Are services widely available from alternative providers in this more narrowly defined relevant market?

A. Yes, they are. The options may be greater going north and

south on the I-5 corridor than going east and west between the Seattle and Spokane LATAs, although WTCI does offer private line service between Seattle and Spokane and Seattle and Yakima. Digital private line facilities are now under construction between the two LATAs by U.S. Sprint and by Northwest Microwave. Further, if the Commission accepts AT&T's offer (Tr. 346-347) to have its classification be conditioned on continued geographically invariant rates, we need not concern ourselves with the distribution of competition within the market.

Q. Are alternative providers able to offer functionally equivalent or substitute services at competitive prices?

A. Yes. Indeed, when attention is restricted to facilities serving the Washington market, it becomes obvious that AT&T has the competitive disadvantage of having older facilities, installed prior to recent innovations in digital radio, digital transmission on cable media and the fiber optic transmission medium. Although AT&T faces no greater barriers to replacing or expanding these facilities than do other carriers, such projects take time; in the interim, competitors will have an advantage which will be important to some customers.

Q. Are there other indicators of market power which require

further discussion, beyond that directed to the broader relevant market?

A. Generally, the earlier discussion should suffice, but I would like to remark on the market share based on capacity implied by Mr. Sumpter's testimony in Ex. T-5 at p.12, line 8. Using Mr. Sumpter's estimates, AT&T now controls 67 percent of the market's backbone transmission capacity. With the completion of Sprint's fiber construction project and Northwest Microwave's 18 DS3 channels under construction AT&T's share will fall to 29 percent, and the competition will be more or less evenly divided between north/south and east/west. Note that these percentages are upper bound estimates of AT&T's market share because they include only some of the market's capacity.

Q. Is it proper to include capacity still under construction in calculating a market share?

A. In this case it appears that sufficient resources have been committed to the projects to make their completion virtually certain. Given that prospect, the incumbent will certainly not attempt to hold price above the competitive level until the new facilities are completed for fear of alienating customers and damaging its prospects for the very near future.

Q. Please summarize your conclusion on the existence of effective competition.

A. After applying the statutory tests to the circumstances at hand I conclude that AT&T meets the statutory definition of a firm subject to effective competition.

PRICE DISCRIMINATION AND LOW VOLUME USERS

Q. If AT&T's petition is granted with only the restriction on geographic deaveraging of rates, is there a potential for abuse of some submarkets?

A. Yes. One of the requirements for a smoothly operating market is widely available information. As Dr. Kaserman acknowledged (Tr. 398-399) low volume users will have lower incentives to seek out and act on information concerning competitive alternatives. Since AT&T is the incumbent, with the longest history in the market, and still associated in some people's minds with "the telephone company", many customers with low incentives to explore alternatives remain AT&T customers by default (default in the equal access balloting sense as well as more generally). This competitive advantage, not available to OCC's, has been conferred on AT&T by virtue of longstanding market

dominance.

This thesis is supported by the Market Trends finding that AT&T residential customers are significantly less likely to switch long distance companies in response to a 10 percent price increase. Ex. C-33, P 30. This difference is statistically significant at the 95% confidence level. The same result holds for the business market at the lower 90% level. This difference in likelihood to switch carriers implies a difference in firm-specific elasticity of demand. Firm specific elasticity of demand is inversely related to market power. Thus, the market trends result suggests that AT&T possesses the vestiges of market power over some customers. I believe that the only identifiable group of customers for which this is a matter of concern is low volume users who do not benefit from AT&T's volume discount programs and who lack the incentives to seek out and act on market information. Market Trends data shows a positive association between volume of interLATA interexchange calling and likelihood to switch carriers in response to a 10% price increase. This finding is statistically significant at the 90% confidence level.

Q. Does this group constitute a significant captive customer base?

A. Only in part, and for a limited period. These customers are

not captives except of their own failure to seek out information. Alternatives are available to these customers and information which they trust and can act on will come to them in time. In any case, a simple remedy exists by which low volume users can receive the benefits of competition without the state continuing in the expensive and unnecessary regulation of AT&T as if AT&T was a franchised monopoly.

Q. What do you recommend?

A. I recommend that AT&T's long distance prices for low volume customers (where I claim competition is not yet fully developed) be tied to prices faced by larger volume users for whom AT&T has great incentives to offer price reductions. I also recommend that AT&T be directed to divide rate reductions stemming from the current round of access charge reductions between MTS and WATS on the basis of relative volumes.

Q. Please describe your plan for tying prices in the less competitive low volume market to prices in the more competitive high volume market.

A. I recommend that the Commission order AT&T not to change prices for switched interexchange services in such a way as

to decrease any ratio of average rate per minute for a volume of ten hours per month to the average rate per minute for a volume of one hour per month. Average rate per minute for a particular volume of calling is the customer's total cost under the most favorable tariff or price list for that volume of calls divided by the number of minutes in that volume of calls. Calls for MTS and optional calling plans are assumed to have a seven minute duration. For any mileage band and time of day, the average rate per minute is calculated on the assumption that all calls are made within the specified mileage band and time of day. This provision should be in force until 1/1/89 by which time I believe that sufficient information will be widely available that market forces can be expected to replace this regulatory requirement.

Q Would you please explain what your proposal means?

A. Although it sounds complicated, the requirement is very easily observed and is fashioned to interfere as little as possible with the pricing flexibility appropriate for a competitive telecommunications company. The principle is simple: suppose that good C is subject to competition and good M is provided in a monopoly market, and both goods are produced by the same firm. A regulator wishes to grant as much flexibility as possible to the firm producing C and M

but wants the users of M to receive the benefits of competition for C. One way to accomplish these ends is to allow the firm to choose whatever price it wishes, with the condition that the ratio of the two prices cannot shift to the detriment of users of good M. Then the firm will price C with a view to competition, and M will receive the benefit of any price cuts.

The present proposal is just that simple in principle, but is complicated because prices vary with time of day and various discounts and rate plans. Average rate per minute is the common denominator by which the price paid by the low volume user is compared to the price paid by the larger user. The relationship between average rate per minute and volume for daytime usage in the several mileage bands is shown in Ex. 45. The nature of the price break available to larger users is apparent.

Q. Why did you select ten hours for the larger volume?

A. Ten hours is the lowest volume for which a volume discount applies in the lowest mileage band. A ten hour per month customer in that mileage band and time of day would spend about $75 per month on that long distance service. In the longest mileage band, such a customer would use WATS and spend about $175 per month. Ten hours per month is not a very large volume (one half hour per business day) but is

large enough that AT&T would not be likely to sacrifice market share in this submarket in order to exploit whatever vestigial market power it possesses over lower volume customers.

Q. What pricing flexibility would remain to AT&T if this proposal is adopted?

A. AT&T would have a great deal of flexibility under this proposal. MTS rates could be lowered without any restrictions. WATS or optional calling plan rates could be raised without any concern for violating this requirement. WATS rates or optional calling plan rates could be lowered so long as an equal percentage reduction (in the sense defined in the proposal) is given to MTS. New mileage bands could be added or existing ones collapsed. New time of day rates could be added or existing ones collapsed. There are four hourly rate blocks in AT&T's existing WATS tariff. The last three of the four could be lowered without considering this requirement; only the first would require a corresponding reduction in MTS rates. In essence, AT&T would have the freedom to do whatever it wants with rates except to respond to competition for the ten hour per month customer without giving the benefit of that competition to one hour per month users.

Q. Aren't these price differences for the various volumes of usage based on cost differences?

A. I doubt it very seriously. The main costs that are likely to vary with volume are billing costs. Since the local exchange companies perform billing and collection services for AT&T, the pattern of billing costs are easily observed in the tariffs of the local exchange companies. I performed some calculations of billing costs per minute for WATS and MTS based on PNB's billing and collection tariff. A graphical presentation of these calculations is presented in Exhibit 46. For the purposes of the calculations, average MTS call duration was assumed to be 7 minutes and average WATS call duration was assumed to be 3.4 minutes, as suggested to me by Jim Agan of AT&T.

Several points are worth observing. Billing costs per minute do decline with usage (more minutes over which to spread the fixed cost per bill of rendering a bill). For any given volume, billing cost per minute are lower for MTS than for WATS because of the difference in call duration. Certain costs vary with number of calls and a given volume of WATS has approximately twice as many calls as the same volume of MTS because of the difference in average call duration. Costs per minute level off after about 5 hours. The total amount of variation in cost per minute is tiny (from about 1.25 to about 4 cents per minute) by comparison

to very significant differences in price per minute for different volumes.

If cost differences are to justify the large discounts afforded to large users they will have to be costs other than billing and collection costs. While I remain skeptical that other cost differences could justify existing price differences, I do not believe that it matters for this proceeding.

Q. If the price differences aren't based on costs then shouldn't the Commission require AT&T to cost justify existing rates before granting pricing flexibility?

A. I believe not. I believe that an effectively competitive market will do a much more accurate and much more efficient job of determining costs than will any regulatory proceeding. The Commission's rules for classification of competitive companies and services require no cost of service studies for companies which claim that all of their services are subject to effective competition. The rules do require such cost support for companies which offer a mixture of competitive and noncompetitive services. The rationale is clear: so long as a service is not subject to effective competition it is the potential source of a subsidy to competitive services. So long as a company offers a mixture of competitive and monopoly services, it

will have an incentive to justify such a cross subsidy by presenting the Commission with self-serving cost studies. Unfortunately, such cost studies must be scrutinized very carefully. There is no such reason to get involved in the intricacies of the costs of a company which offers only services which are subject to effective competition.

Q. Shouldn't the Commission be concerned about predatory pricing?

A. Not in this case. I generally agree with Dr. Kaserman on the topic of predatory pricing by firms other than regulated firms offering a mixture of competitive and monopoly services. His testimony provides an excellent statement of the view that is conventional within the economics profession and properly applies that view to the case at hand. (Ex. T-1 p. 25-27) Dr. Kaserman correctly points out that there is very little uncontested historical evidence of predatory pricing. Further, the conditions which must be met to satisfy the theoretical basis of an incentive to engage in predatory pricing are not satisfied in the case at hand.

Q. Will your proposal to protect low volume users require filings before the Commission whenever AT&T wants to change rates?

A. No. Compliance is very easy to monitor. When a price list change is filed it would be a very simple matter (taking only a few hours of analysis) to confirm or deny that a violation had occurred. The computation is straightforward and the required data are easily observed. There is very little room for argument about whether a particular price change violates the requirement I propose.

OTHER RESTRICTIONS THAT MIGHT BE IMPOSED ON AT&T

Q. Do you believe that a restriction similar to your proposal should be imposed on AT&T with regard to short haul interLATA toll rates?

A. No. I suspect that short haul toll rates are too low right now, particularly in light of the structure of costs faced by an interlata interexchange carrier. The distance on which costs depend for such a carrier is the sum of the distances from the calling party's central office to the IXC's nearest Point of Presence (POP), from that POP to the appropriate POP in the adjacent LATA, and from this second LATA's POP to the central office serving the called party. This is true for any call, regardless of the distance between the calling party and called party, or length of haul, on which rates are based. Short haul interLATA toll

occurs when a call is placed to a nearby subscriber but a LATA boundary happens to lie between the calling party and the called party. This situation only arises when both parties are near the outer edges of their respective LATAs. Since POPs are generally located at population centers within the LATAs, not near their edges, the first and third distances (from end user to POP) in the sum above will generally be greater for short haul toll than for long haul toll, so short haul toll may cost more on average than certain longer haul calls. The principle is that it costs more to serve customers who live near the LATA boundary, and short haul interLATA toll involves serving two such parties. This is a quirk caused by the location of the LATA boundary. Firms in a competitive market have incentives to bring rates into correspondence with costs, and should be free to do so. If AT&T's costs are higher than the competitive level, someone will see an opportunity to make a profit by building a transmission facility between nearby exchanges which happen to be separated by a LATA boundary. This is precisely what Pacific County did between South Bend and Long Beach. Ex. 44. Independent telephone companies serving areas near LATA boundaries which have some community of interest in the adjacent LATA may consider building a trunk group to the adjacent exchange -- and AT&T should be free to set rates that reflect costs. If AT&T's rates accurately reflect costs, those rates will convey the proper signals to

owners and potential builders of network transmission capacity and facilities will be constructed to serve the state's telecommunications needs at the lowest cost possible.

Q. Will AT&T change rates dramatically and expose ratepayers to "rate shock"?

A. AT&T has incentives not to alienate customers. I would expect that dramatic changes, such as that experienced on Pacific County's private lines (which occurred without the benefit of pricing flexibility) would be rare events.

Q. Do you believe that OCC's will be interested in competing in remote exchanges?

A. Yes, and I'll offer an example. Nespelem is a town of some 295 people about 103 miles Northwest from Spokane and 119 miles Northeast from Wenatchee by road. The Nespelem exchange covers 1077 square miles and serves 439 access lines. Nespelem was cut over to equal access on 12/1/86. The ballot contained AT&T and 7 other carriers.

Q. Do you believe that a prohibition on route abandonments is needed if the Commission grants AT&T's petition?

A. No, I do not believe that such a prohibition is necessary but I see no harm in imposing the prohibition.

Q. Should AT&T be prohibited from placing restrictions or surcharges on services purchased for resale?

A. The divestiture court considered such a proposal and found it unnecessary. Although the court based its finding on FCC rules requiring resale, I believe that it is even less necessary now than when the court considered it. At the time of divestiture there were fewer alternative providers available than there are now. Unless AT&T hoped to exclude competitors by denying access, a hope which has less basis now than at the time of divestiture, AT&T should be glad to have the wholesale business of retail competitors. Although I find the proposal unnecessary, I also find it innocuous.

Q. Do you believe that the Commission should impose a cap on AT&T's rate of return, so that if AT&T were overearning at some future time the Commission could reconsider AT&T's classification?

A. No. The Commission is free to reconsider AT&T's classification at any time, and indeed, the evidentiary requirement in such a case is lighter than for the initial competitive classification. The initial classification requires a finding of effective competition and prescribes

certain tests, but reclassification requires only that the Commission find that reclassification is in the public interest. I believe that the question comes down to speculation about what would be the proper trigger for a reclassification proceeding if indeed the market will not support competition. I would not rely on a rate of return calculated from "costs" arising from books of account and extruded through the jurisdictional separations process. Separations processes are necessary for regulating a monopoly which uses common facilities to provide services to two regulatory jurisdictions with different views about which jurisdiction should bear which cost. As an indicator of the effectiveness of competition in serving the purposes of public interest regulation, however, such a rate of return would be a poor instrument. It is preferable to rely on the structure of the market and conduct of its participants. This requires considering what is happening to market shares and to what extent are market participants engaged in rivalrous behavior, among other market indicators.

Q. Are you troubled that MCI, one of AT&T's principal competitors, now supports the notion of relieving AT&T from rate of return regulation?

A. Yes I am, if this new support for AT&T's deregulation

initiatives is based on the belief that deregulation would lead to higher prices than would occur with regulators setting prices, or is an indication of a willingness to reduce the level of price competition. I believe, however, that there are now too many competitors in the industry with aspirations of greater market share to make such results plausible for more than a very short period.

If this change of strategy was taken as an indication that MCI is unsure of its ability to compete without access charge discounts in the face of aggressive FCC ordered price reductions, this would be especially troubling because it lends support to the thesis that AT&T is a natural monopolist and if deregulated will earn extraordinary profits at a price high enough to provide an umbrella for some fringe competition. This thesis suggests that the technology of the industry will not support vigorous competition.

Q. Is that the argument that AT&T benefits from such economies of scale and that AT&T will earn supernormal profits while other carriers earn competitive profits?

A. Yes, it is.

Q. How do you evaluate this argument?

A. I do not believe that the argument is correct. The market is growing very rapidly and other carriers are installing the most modern facilities. A statement in Ex. 41 attributed to MCI estimated an annual growth rate of 12% for the long distance market. Using that figure, and assuming that growth is split equally between AT&T and others, I asked the question : "How long will it be before the OCC's carry an amount of traffic equal to AT&T's current traffic"? The answer is 6.6 years. This suggests that any benefits of economies of scale which AT&T now enjoys are likely to decay rather quickly as the total market grows.

I have also heard the argument that the newest transmission technology, optical fiber, is essentially a natural monopoly technology and will not support effective competition (The Future of Competition in the Telecommunications Industry, by Timothy M. Pryor and Carl G. K. Weaver, Public Utilities Fortnightly, March 5, 1987). I doubt that is the case, but if it is, we may find ourselves regulating Sprint in a few years rather than AT&T. At this point there is no way to know without allowing the test to be performed in the market.

Q. You recommend that AT&T be granted the pricing flexibility requested in this case. What benefits do you believe will accrue to the public from this classification?

A. The most immediately obvious benefit to the public is the savings that will result from not going through expensive regulatory proceedings if they are not necessary. I am convinced that most of the regulation currently applied to AT&T in this state is unnecessary, with competition serving the same purposes as public interest regulation. I believe that the direct costs of regulation are only part of the total cost which falls on society when regulation is chosen over a market mechanism. This is the cost due to facilities built in the wrong place, or of the wrong type, or not built when they should have been or built when they should not have been. This is the cost of regulatory distortions of the signals that cause firms to do things in the interest of making a profit. This is inevitable because regulatory institutions are not as efficient at processing information as the decentralized market. Obviously, if I didn't believe that it is sometimes worth this cost I wouldn't be working for this Commission. In the case of AT&T, however, I believe that our regulatory interventions are mostly an unnecessary expense and an unnecessary distortion in an otherwise effectively working market.

WAIVERS AND REPORTING REQUIREMENTS

Q. What waivers of Commission laws and rules does AT&T seek in

its petition in this case?

A. The waivers requested by AT&T are set forth in Ex. 28, sponsored by AT&T witness Dunn. In essence, AT&T requests waivers of statutes relating to annual reports, budgets, affiliated interests, securities, transfers of property, and contracts. Waiver is also requested of Commission rules relating to certain of these statutes, but AT&T does not seek waiver of WAC 480-120-056, the Commission's customer deposit rule.

Q. Does AT&T seek waiver of statutes and rules similar to waiver requests of other companies which have been classified as competitive telecommunications companies?

A. Yes. With only minor variations, AT&T has requested many of the same waivers of laws and rules that have been granted other firms. These waiver requests include waiver of statutes relating to securities, (Chapter 80.80 RCW), transfers of property (Chapter 80.12 RCW), affiliated interests (Chapter 80.16 RCW), tariffs (RCW 80.36.100) and contracts (RCW 80.36.150). Requested waivers of Commission rules include rules relating to tariffs (Chapter 480-80 WAC, WAC 480-120-026 and 046), securities, affiliated interests, and transfers of property (WAC 480-120-036), contracts (WAC 480-120-066), and accident reporting (WAC 480-120-131).

Q. Do you agree that such waivers should also be granted to AT&T?

A. Yes. Once a telecommunications company is classified as competitive, the need for prior regulatory approval of many of its transactions is lessened, if not eliminated.

Q. Has AT&T requested waivers of Commission rules that have been denied other telecommunications companies that have been granted competitive status?

A. Yes. AT&T requests waivers of WAC 480-120-081, the Commission's disconnect rules. Requests for waiver of this rule has consistently been denied by the Commission.

Q. Should such a waiver be granted to AT&T?

A. No. Mr. Dunn testified during the clarification proceeding that AT&T does not currently have the ability to terminate a customer's AT&T service without also terminating local exchange service (Ex. 34, Tr. 127). He also testified that for now, when local exchange companies do the billing for AT&T, that the rule not be waived. Tr. 384. Moreover, he admitted that AT&T had not yet developed its own set of disconnect rules. Tr. 385.

Under these circumstances, and in view of established Commission policy in this area, no waiver of the disconnect rule should be allowed at this time. The Commission may wish to reconsider this waiver request in an appropriate case when 1) AT&T has a particular disconnect policy to propose, and 2) a customer will not be disconnected from local exchange service if it is disconnected from AT&T's long distance network. At that time, the Commission can more appropriately consider the impact on customers and the public interest considerations of terminating long distance service under a yet to be proposed disconnect policy.

Q. Has AT&T requested waiver of Commission statutes that have not been requested by other telecommunications companies that have been granted a competitive classification?

A. Yes. AT&T requests waiver of annual report filing requirements (RCW 80.04.080), the valuation statute (RCW 80.04.250), budget requirements (RCW 80.04.300-330), depreciation schedules (RCW 80.04.350), excessive earnings reserve fund (RCW 80.04.360), investigation of accidents (RCW 80.04.460) and leasing of utility facilities (RCW 80.04.520).

Q. Which of these statutory sections should be waived?

A. If AT&T is granted competitive classification, and traditional rate base regulation is removed, the budget statutes, excessive earning statutes, and leasing statutes have little or no applicability and should be waived. The accident investigation statute should also be waived since this statute has little purpose in a relaxed regulatory environment.

Q. Which of these statutory sections should not be waived and why should such sections not be waived?

A. The annual report filing requirements should not be waived. It is important that sufficient records be kept by AT&T so that should re-regulation be necessary, adequate records are available to readily accomplish re-regulation. Annual reports are critical for that purpose. The annual report required by RCW 80.04.080 is consistent with the type of report already required by the FCC. The burden on AT&T should therefore be minimal. If the FCC relieves AT&T of existing reporting and record keeping requirements, AT&T could petition the Commission to reconsider this waiver request.

Also, the valuation statute and the depreciation statute should not be waived. Neither of these statutes imposes

possible.

"A lot of biochemical steps must take place within the body before a tumor can begin, and each one of these represents a target and an opportunity" to block the cancer process, adds John Fried, a senior vice president of the corporation and presi-

that do well enough in animal tests to qualify for human clinical trials, only about one in 10 pays off, according to Robert Young of the National Cancer Institute. Human clinical trials—typically the most expensive part of development—are long

fero
subs
trea
lary

CAUSE NO. U-86-113
WITNESS: Richard Cabe
EXHIBIT NO. 41

MCI Set to Offer Toll-Free 800-Service, Entering Market Dominated by AT&T

By Francine Schwadel
Staff Reporter of The Wall Street Journal

MCI Communications Corp. said it soon will enter the rapidly growing market for toll-free 800-service, which until recently had been offered nationally only by American Telephone & Telegraph Co.

The announcement marked another step in Washington-based MCI's effort to provide the full range of long-distance services offered by AT&T. In recent months, MCI has expanded its international coverage and begun offering new pricing plans and other services. But Roy Gamse, MCI's vice president of marketing, described toll-free inbound calling as "one gaping hole" in the services it currently sells to business customers. He estimated the current size of the 800-service market at $4 billion annually.

By using its 800-service internally, MCI also is expected to reap savings of "millions of dollars" a quarter, according to one analyst. That is because MCI now relies on AT&T's 800-service to complete ny calls dialed by MCI credit-card cusners and those trying to reach its telemarketing or customer-service centers. An MCI spokesman declined to comment on how large the savings might be.

Analysts viewed MCI's announcement as the first salvo in what they expect to be heated competition for 800-service customers, beginning next year.

MCI said it plans to test its 800-service with certain customers this fall and to offer it to others in the first quarter of 1987. The long-distance unit of Western Union Corp., Upper Saddle River, N.J., has said it will provide a similar service, beginning Oct. 15. US Sprint Communications Inc., a Kansas City, Mo.-based joint venture of GTE Corp. and United Telecommunications Inc., plans to enter the 800-service market early next year.

Toll-free 800-service appeals to businesses that operate telemarketing, customer-service or reservation centers and want to allow customers to call them without incurring a charge. The calls are billed to the businesses, rather than the individual callers.

The market is growing at an annual rate of about 20%, compared with a 12% growth rate for the overall long-distance market, according to MCI. The higher growth rate makes 800-service especially ractive to AT&T's competitors.

ut until recently, the rivals' toll-free offerings were considered inferior to AT&T's because they generally required dialing extra digits. The new services were made possible by the regional Bell operations companies' assignment of 800 numbers to AT&T's competitors. A more sophisticated system that will allow AT&T's competitors to offer a wider range of "vanity" numbers that spell out words or catchy phrases is being developed.

The Bell operating companies will handle the calls in much the same manner as they currently handle equal-access long-distance calls for AT&T's competitors. The local phone companies will route an 800-service call to the proper long-distance carrier, which will then transmit it to another local phone company. That company will then deliver the call to the business customer that owns the 800-number and receives the bill.

MCI plans to charge less than AT&T for its 800-service, Mr. Gamse said, noting that the price differential would be "similar" to that of its other business services. Analysts estimated that would mean a price advantage of 10% to 12% compared with AT&T's charges.

MCI said its service will be able to handle calls from the 48 contiguous states. It plans options to handle calls from Hawaii, Alaska, Puerto Rico, the U.S. Virgin Islands and certain international locations.

In addition, MCI said its 800-service would provide a number of features not available with standard AT&T service. These include distance-sensitive pricing, no additional charge for using the same number for both in-state and out-of-state calls, volume discounts and detailed information about calls.

An AT&T spokesman declined to comment on MCI's claims, but said the company "feels that AT&T's 800-service remains unique."

In national over-the-counter trading yesterday, MCI closed at $8.125 a share, up 12.5 cents.

Lydall Buys Hammermill Unit

MANCHESTER, Conn. — Lydall Inc. said it completed the previously announced acquisition of Hammermill Paper Co.'s Manning Paper division, of Green Island, N.Y.

Terms weren't disclosed, but Lydall, a maker of fiber materials, said Manning had sales of $25 million in 1985.

boxed chocolates

Wall Street Journal
9/11/86

WITNESS: Richard Cabe
ALLNET COMMUNICATION SERVICES, INEXHIBIT NO. 42

Name of Service	Description
	Long distance - One way dial up multipoint service. Customer must dial access number of Allnet's NCS switch.
Allnet Option A-Basic	Subscribers may terminate interexchange calls to any city except where originating and terminating cities are located in the same LATA and authority has not been granted. (Billing is time and distance sensitive with time of day discounts. Calls are rounded to the first whole minute and to each whole minute thereafter).
Allnet Option A-Metered	These calls are rounded to the next higher 6-second increment.
Allnet Dedicated Svc. (ADS)	One way multipoint dedicated service. subscriber can terminate calls in all service cities except where the appropriate intrastate authority has not been granted. They may terminate traffic on the ("OnNet) network and all other traffic terminated is described as off the network ("OffNet).
Allnet Dedicated Svc. ADS Option D	Rates vary depending upon percentage of billable Off-Net minutes. Basic hourly rates are rounded to the nearest tenth of an hour for each access line.
ADS Option E	Based on total usage charge for all calls (weekdays, evening, night & weekend) of $300 per line average.
Allnet Option A-Travel Service	One way dial up multipoint service whereby the customer originates and terminates calls via Allnet. (Time of day discounts. Calls are rounded to the first whole minute and to each whole minute thereafter).
Volume Disconnects	For Option A Basic and Optional A Travel based upon total monthly usage (does not include 10444 Equal Access dialing sequence, directory assistance charges or charges for calls to a 976 prefix) per rate period for the month such usage is billed. Billing is time of day, percentage discounts based on the total usage.
Directory Assistance	Per call $.54
976 Prefix	Long Distance - Per call $2.00 plus a surcharge of $1.00 per call.

AMERICAN NETWORK, INC.

Name of Service	Description
American Network/Dial Up	Direct Dial Up service, which can be done by dialing up a multi-digit access number. Volume discounts are applicable after the first $150 a month usage and has time of day discounts.
Commercial Service	Provided to companies, corporations, and other business entities. Providing both 24 hour and restricted hours access.
Residential Service	Provided to private individuals for personal use. Providing 24 hour and restricted hours access.
Employee Discount Service	Employees of business entities who are already using American Network may subscribe at a discount.
Cross-Town Calling Service	Provided in certain switched cities that enables a customer to call from one side of a switch city, long distance, to the other side of town at lower rates than the BOC.
Quik Call/Phone Home	Where an authorization code automatically facilitates dialing of a customer - specified phone number.
Consecutive Calling	Eliminates the customer's need to redial an American Network access number and the customer's assigned authorization code after each consecutive call.
Travel Service	There are 2 travel services available; Regular and Premier. Regular: gives use of local access numbers in his "Home LATA" to call and use of 800 numbers to make calls back to his home city. Premier: Allows use of local access numbers in "Home LATA" as well as additional LATAs.

Name of Service	Description
Individual Accounting	Enables a customer to identify individual or group users and allocate the costs of his service accordingly. A multi-digit accounting code is entered at the end of the normal dialing protocol.
Enhanced Detail Billing Report	A billing statement that provides the customer a report on the most frequently called numbers and on call over ten minutes in duration.
Data Transmission	Provides data over terrestial of facilities to ensure clean transmission up to 4800 bpm. A special code is issued and the normal dialing protocol follows.
Ground Line Service	A customer may specify the use of ground only to carry his calls.
Direct Line/Port	Customer has exclusive use of a port. The port is connected to the customer premises from American Network by a private, customer-furnished line.
All Services	- Offered on a monthly basis - The customer may obtain an additional 15% discount by paying a $100 per month fee - Customer pays installation costs - Calls are billed in full minute increments
Directory Assistance	Per call - IntraLATA $.25 Per call - InterLATA $.75
Long Distance	Rates are mileage based. Calls are billed in one minute increments.

AMERICAN SHARECOM, INC.

Name of Service	Description
Comlink	Service which involves access to the Carrier Network via the Public Switched Network (PSN) by means of an automatically or manually dialed access number followed by an authorized billing number assigned to the subscriber. Rates are calculated on a per minute basis by mileage bands and time of day discounts. A volume discount of 5% is applicable on long distance usage over 50 hours per month.
Tie Link	A service location where each subscriber's telephone system is equipped with dedicated or tie-line access to the Carrier Network. The charges consist of the total of applicable Network Usage Charges ((NUC's), and charges for access lines between the subscriber's premises and the Carrier Network access points. Billing is by hourly rate band and time of day discounts.
Custom 800 In Wats	Customer is issued a 3 digit extension number upon joining the service. The party calling the subscriber dials a common AT&T or PNB provided 800 number and is answered by an American Sharecom, Inc. (ASI) operator. The calling party tells ASI operator the extension desired and the caller is switched electronically to the specific operator. Customers pay a one-time service order fee and a monthly fee plus a cost per minute of use, billed in six second increments.
Traveler's Call-In	An added value network feature allowing the customer to call point-to-point from anywhere in the nation by accessing an ASI switch through an 800 inbound number. Cost is determined by 2 rate elements; 1) an inbound charge for accessing an 800 number to reach the carrier's switch 2) the outbound charge from the carrier's switch to terminate point of call. Calls are billed per minute to the next six second increment and on a time of day discounts.

AMERICAN TELE-SAVE OF SPOKANE, INC.

Name of Service	Description
Metered	Carrier is a resale common carrier of intrastate communications long distance message toll telephone service to customers. Customer dials access number of the carrier, gets the computer generated dial tone, the customer then enters their authorization number followed by the area code and phone number desired. The monthly charges are calculated by rates per minute and rounded to the nearest six seconds and are time of day sensitive. Additional per minute charges for customer calls originating from locations other than Spokane, Wash. that are also time of day sensitive.

AMERICAN TELEPHONE EXCHANGE

Name of Service	Description
Metered	Carrier is a resale common carrier providing intrastate communications. Their switch is located in Spokane, Washington . The customer deals an access number that is answered by a computer generated dial tone. The customer dials their authorization number and the telephone number desired. Customer's monthly charges are calculated by rates per minute, distance and time of day sensitive. The duration of each call will be rounded to the next 1/10 minute. Additional per minute charges are applicable if call originate from other locations.

Name of Service	Description
Basic Service	Available on a full time basis. Customer leases a dedicated access line(s) from the local exchange Carriers or other Common Carrier between his premises and the Carrier's terminal location. The Carrier will act as billing agent.
Volume Discounts	Differ according to service offered. Customer automatically qualifies for additional discounts on volume calling.
ARGONET Basic	Digital Switched interexchange service. Calls placed on this service can be completed throughout the State of Washington and all contiguous Continental U.S. locations. Pricing is divided into 3 categories and calculated per monthly minute per trunk.
ARGONET Metro	Digital switched intercity service primarily designed to provide communications between metropolitan cities on the Carrier's network. Allowing calls placed within the state as well as the Continental U.S. Monthly usage is accumulated for each port in service (not separated for time of day) to determine the applicable volume band for rating with a $200 average circuit minimum for the service.
ARGONET FX Plus	Digital switched intercity service primarily designed to provide communications between metropolitan cities on the Carrier's network at a flat rate charge. Provides unlimited service (up to 200 hours per line) to Argo metro-city points for $1,600 per month. Any usage over 200 hours will be billed at 6¢ per minute.

ARGO COMMUNICATIONS CORP.

Name of Service	Description
ARGONET Pacific WATS	Digital switched intercity service primarily designed to provide communication within the state as well as the Continental U.S. A $200 average circuit minimum applies. Billing is accumulated in 6 second increments.
Argo OMNI	A digital switched intercity service designed to provide communications within the State at the same rate. The average minutes of use per circuit in each time-of-day period determines the rates.
Argo OMNI Plus	A digital switched intercity service designed for higher volume users to provide communication within the State. The service is accessed via T-1 facilities and is designed for users that have a minimum of 30,000 minutes of traffic per month.
Argo OMNI FX Prime	Digital switched intercity service designed to provide communications to the ARGO OMNI Band A cities at a flat rate. Service is provided to designated cities for a flat charge of $1,100 for the first 100 hours of use. Any additional usage is billed at .17 cents per minute.
Switched Access Option	Offers switched access to Argo OMNI and Argonet Basic services. This is provided through Feature Group B circuits with 3 different options: 1) can be used as an adjunct to Argonet Basic or Argo Omni, 2) can be used as a stand alone basis, which is ideal for lower volume users, 3) customer has an option of using Switched Access in the time period before the Argonet Basic or Argo OMNI service dedicated access lines are installed.

CALL U.. S. ,INC.

of Service	Description
Metered	Carrier is a resale common carrier and customer can access the carrier's switch, located in Portland, Oregon on a dial up basis calling the carrier's computer generated dial tone followed by the area code and number desired. Monthly charges are time and distance sensitive and are applicable by rates per minute and then rounded to the nearest six seconds. They are also time of day sensitive. Additional per minute charges for customer calls originating from other locations apply that are time of day and distance sensitive.

Comnet, Inc.

Name of Service	Description
Metered	To originate a call, the customer accesses the carrier's switch located in Spokane on a dial up basis by calling the access number of the carrier. The carrier's switch answers with a computer generated dial tone. The customer enters their authorization number then follows with area code and phone number. For billing purposes, each call will include the first minute or any portion thereof with additional time rounded to the next 6 seconds with mileage bands and time of day discounts.
Direct Access	Communications originate when calls reach the carrier's network via the customer's access line(s) or tie trunks. Charges consist of the applicable usage charges and the recurring charges for access lines between the customer's and the carrier's network access point. Billing is by houry rate bands, and time of day discounts.
Special Wholesale Provided Services	By contractual agreement, carrier may provide services to a registered telecommunications provider at wholesale rates.
Custom 800	Provides a customer to utilize the carrier as an answering and call transfer service. Customers are charged a per minute flat rate plus the applicable rate for the outbound portions of the call from the carrier's switch to the point of termination.

DIAL U.S.

Name of Service	*Description*
Metered	*Carrier is a resale common carrier providing intrastate communication. Communication originates when you dial the access number connecting you to the switch in Spokane, Washington and a computer generated dial tone answers. The customer will follow it with the complete telephone number desire.* *Customer's monthly charges applicable per minute of use and are distance and time sensitive. The duration of the call will be rounded to the next six seconds. An additional charge applies should the customer originate the call from another location.*

ENHANCED TELEMANAGEMENT, INC.

Name of Service	Description
	This company is a complete telecommunication consultative service. They also resell exchange services utilizing PNB's inplace Centraflex for the switching vehicle and ATT-Com. WATS for the long distance.
First LIne	This the customer's main telephone number and it includes all Enhanced TeleManagement's standard features.
Coverage Line	This is an internally used line. It's purpose is to be available to accept calls from lines that are call forwarded within the system.
Additional Line	This line can be directly dialed or with Enhanced TeleManagement's optional feature "Hunting" will accept calls rolled over from the busy first line This includes all the standard features.
ɐnsion	This allows an extra station to access a predetermined line.
Off Premise Extension	Enables a user at a different physical location to access a predetermined line.
Order Charge	A non-recurring fee for service. All long distance rates are dial 9 + 1 activated to PNB or AT&T WATS lines and are a flat rate calculated by the minute. All other feature are flat rate billed with an initial installation charge.

Executives, Inc.

e of Service	Description
.ietered	Carrier is a resale carrier providing interstate and intrastate long distance. Customer accesses the carrier's switches located in Yakima and Kennewick, Wash. on a dial up basis by calling the access number of the carrier to originate communications. A computer generated dial tone will answer the access code. The customer's monthly charge for service are calculated by mileage bands, first minute and each additional minute at a lesser charge and rounded to the nearest six seconds with time of day discounts.
IN-WATS (800)	Calls are charged at 35c per minute on the portion of the call terminating at an Executives switch location plus the applicable intraLATA and interLATA rates.

MCI TELECOMMUNICATIONS CORP.

Name of Service	Description
Metered Use Svc. (General)	Provided two separate service options (Execunet and Credit Card)
Execunet (metered)	Is a one-way, dial in - dial out multipoint service allowing customers to originate and terminate calls via MCI provided local business lines. Customers may dial direct by dialing 10222 or via a 7 digit access number. All calls are rounded to the next higher full minute. It is also available on a Corporate (Group) account billing basis in which the monthly usage must exceed $20.00. Execunet is a per minute usage charges and time of day discounts.
Directory Assistance	$.55 per call.
Credit Card	One way dial in - dial out multipoint service. Customer can terminate within any city in Washington, providing the originating and terminating locations are different LATAs. Depending on the city, customer can access MCI via on MCI provided facilities by dialing a 7 digit access number or by dialing a toll free 800 number. Two-tier pricing for both usage charges and surcharge is applicable and is based upon the two separate types of access. All credit card calls are milege banded and rounded to the next higher full.minute.
MCI Around Town	Enhancement to the Credit Card service which is available only to customers whose account phone number is within a 950-1022 local access area, in which calls originating in the same local access area as the customer's phone number. Per call surcharges do not apply.
Volume Discounts	Available to credit card customers with monthly usage that equals or exceeds $20. Discounts are applied by total monthly usage and time of day schedule. Not available to casual users.
Directory Assistance	Per call $.55 with credit allowance.

MCI TELECOMMUNICATIONS CORP.

Type of Service	Description
Option K	An intercity, switched voice communications service that permits the placing of calls from anywhere within the contiguous U.S. to a customer's location. Available by dialing 7 digit access number. Charges are per mileage bands and by time of day discounts and are rounded to the next higher full minute.
Special Promotional Offerings	MCI may provide from time to time, special promotional offerings to its customers. Offers may be limited to certain dates, times and locations.

MNW Communications

Name of Service	Description
Voice Grade Audio	Voice grade private line service available to 11 areas of Washington at a flat rate.
Special Construction	Special charges may apply.

MORRISON-KNUDSEN TECHNOLOGIES, INC.

Name of Service	Description
	Carrier is a resale common carrier providing intrastate communications long distance service. Communication originates when the customer accesses the carrier's switch located in Spokane, Wash. Dial-up customers access the switch by dialing the access number and the computer generated dialtone will answer. The customer then enters his authorization number and the area code and number desired. Equal Access (1+) access by dialing 1+ and the telephone number. When the carrier receives ANI from the local exchange company, communications will commence. Special access customers will be connected via dedicated (point to point) facilities. Communication commences when the customer accesses the carriers computer. The customer shall pay the carrier a management fee of $.03 for each billable minute of service, excluding direct distance dialing services and will be rounded to the nearest six seconds.

Name of Service	Description
Message Service	Switched voice communications services that permits users to place calls between stations in the state of Washington.
Type I Message Service	Routed via a dedicated Access Channel under Company-provided facilities, and the exchange telephone Network serving the destination station. Customers are billed on a monthly basis calculating by hourly usage, by business or non-business day and depending on the commitment terms agreed upon, the customer will be billed by tier. Flat rate options are available on a month to month or for a twelve month term.
Directory Assistance	A charge of $ .45 per call
Traffic Protection Service (TPS)	Optional feature is only available to Type I customers and is a service that satisfies the requirements specified in the Department of Defense for transmission of Unclassified, National Security Related (UNS-R) Information.
Special Services	The cost to the Company for special services include those associated with the preparation of a detailed plan and charge quotation, may be amortized over a reasonable number of years in determining nonrecurring and monthly recurring charges to the customer.
Type III Message Service	Switched voice that permits the placing of calls from anywhere within the State of Washington to customer locations.

SATELLITE BUSINESS SYSTEMS

Name of Service	Description
Type III-B Message Service	Calls routed from the call origination station via either the exchange telephone network or via an "800" number to Company-provided facilities and completed via an Egress channel. An Egress channel is a Company-provided voice-grade facility that connects to customers premises.

STARNET CORPORATION

Name of Service	Description
STARCALL Metered Service	A time of day and usage sensitive, dedicated access long distance service. Rates are on a per minute basis. Lower rates apply to On-Net.
STARMAX Flat Rate Service	An interstate and intrastate On-Net, dedicated access long distance service. Off-Net traffic under this service is billed time-of-day and usage sensitive rates.
STARNET Business WATS Service	A dedicated access, long distance service which is rated as a banded, time-of-day and usage sensitive structure. Rates are by hourly rate bands.
STARNET Long Distance	A dial access, long distance service which is rated as a banded, time-of-day and usage sensitive. Rates are by a per minute basis.
STARNET HotelWATS Service	A dedicated, long distance service which is rated as a banded, time-of-day usage sensitive structure, per minute basis. In addition, if 50% or more traffic occurs in the evening and night/weekend hours, a 15% to 20% discount applies depending on average hours used.

TELNET

Name of Service	Description
Measured	Carrier provides resale intrastate communications LDMTS. When the customer accesses the carrier's switch located in Pasco, Washington, communication begins. The customers monthly charges are time of day and distance sensitive and duration of the call is rounded to the next minute. Additional per minute charges for customer calls originate from locations other than Pasco, Washington.

THRIFTY TELEPHONE EXCHANGE OF SPOKANE

Name of Service	Description
Metered	Resale common carrier service. Communication originates when the customer access the carrier's switch located in Spokane, Washington on a dial up basis by calling an access number and a computer generated deal tone will answer. The customer enters their authorized number followed by area code and telephone number desired. Customer's monthly charges are based upon mileage and time of day discounts. Additional per minute charges apply when the customer calls originate from locations other then Spokane, Washington.

U.S. SPRINT

Name of Service	Description
Sprint Service	Long Distance (available thru 1+ dialing (e.g. access) and dial up method) Charges based on the distance and duration of the call, the time of day and day of week.
Volume Discounts	Customers receive a discount based on total monthly usage in each rate period. (Note: not available to casual callers.)
U.S. Sprint WATS Dial 1 WATS	WATS service originated in equal access areas and terminated via normal shared use facilities. (Hourly rate bands lower rates for On-Net calls, time of day discounts.)
Sprint Advanced WATS	WATS service originated via dedicated facilities between the subscribers premises and U.S. Sprints POP in the originating city and terminated via normal shared use facilities. (Hourly rate bands, lower rates for On-Net calls, time of day discounts.)
Ultra WATS	WATS service originated via dedicated facilities between subscribers premises and U.S. Sprints POP in the originating city and terminated via normal shared use facilities. (Not rate banded, flat rate per minute, discounted for evening and night.)
Monthly Leased Line Service	Private Line facilities offered in numerous configurations depending on customers needs. Charges consist of monthly rate plus milage.
Credit Card Reader Phone	Customer can access a Credit Card Reader Phone with a personal credit card. (Service charge intrastate =.50 per call.)

U.S. SPRINT

Name of Service	Description
Travel Card Service	Calling/Credit card (Service charge intrastate - .50 per call.)
Stand-Alone Travelcard	Now U.S. Sprint customers may subscribe to Travelcard service for an initial fee plus usage & surcharges.
Operator Services	- Person to Person - Collect calls (Call plus service charge)
Directory Assistance	Intrastate -.50 per call (call allowance 2 calls per mo.)

UNIVERSAL RESIDENTIAL COMMUNICATIONS, INC.

Name of Service	Description
Measured	Carrier is a resale common carrier providing intrastate communications LDMTS to customer. Communication originates when the customer accesses the carrier's switch located in Seattle, Washington where a computer generated dial tone answers. The customer enters their authorization number & number desired. The monthly charges are based upon applicable rates per minute, the airline mileage between two points and time of day discounts. Each call will be rounded to the nearest six seconds. Additional per minute charges for customer calls apply if the call originates from other locations.

UNIVERSAL TELEPHONE SYSTEMS, INC.

Name of Service	Description
Measured	Carrier is a reseller providing intrastate communications LDMTS to customers for their direct transmission and reception of voice, data, and other types of communications. The carrier's switch is located in Seattle, Washington. Customer dials the access number and makes contact with a computer generated dial tone. The customer dials the authorization number and follows with the telephone number desired. Service is charged by rates applicable per minute that is distance and time sensitive with additional rates should the call originate from another location.

Name of Service	Description
Western Union Long Distance Service (WULDS)	Shared Company-owned switching and transmission facilities for intrastate Washington calls.
Shared Dial Access (SDA)	Provides general access between the public telephone exchange service in specified service locales and the Company's WULDS switches. Billing is by a per call usage and is distance sensitive, with time of day discounts and in one minute minimum per call basis and in one minute increments thereafter.
Volume Discounts	Applicable on net volume usage of SDA. Costs are calculated on a monthly basis with percentage discounts and dollar rate bands.
Abbreviated Dial	Frequently called numbers may be represented by a 3-digit code which the WULDS switch will recognize and convert to a preprogrammed 7 or 10 digit number. This service is available at a flat rate.
Directory Assistance	A $ .60 per call charge with a maximum of two requests per call.

BY AT&T SERVICE
- WASHINGTON -

NAME	AT&T SERVICE		
	LONG DISTANCE	WATS/800	CHANNEL SERVICES
NW Comm. ations			- Control circuits only for beeper services
Morrison-Knudsen Technologies	- Procures, installs, operates and maintains peripheral equipment providing long distance service exclusively to Spokane Telco		
National Gateway Telecom			- 56 Kbps up to - DS3
Northwest Micro-wave Systems, Inc.			- Private line microwave undisclosed speeds and capabilities
Satnet			- Business voice and data private line to 1200 baud - Customer earth station capability - Geared to simultaneous distribution of data to multiple locations
Spokane Telco (Exec-U-Call)	- Resale long distance (from MKTI) - Automatic number dialers - Travel service - Equal access in Spokane	- "In WATS office call" (WATS-like) - "Open access in-WATS" (800-like)	
Starcom	- Resale long distance - Travel Service		
Starnet	- Starnet long distance	- Starcall (business - low volume, WATS-like) - StarWATS - medium volume - Starmax (WATS - high volume) - Starpoint (800-like) with dedicated access line or PL access - Starnet business WATS - Hotel WATS	
Sure	- Resale long distance		
Tel-Net	- Resale long distance - Limited equal access - Travel service		
Thrifty Tel (a Comnet company)	- Resale long distance - Equal access - Travel service		
TriCom	- Resale long distance - Travel service		
Universal Telephone Systems • Dial U.S. • Universal Residential Communications	- Resale long distance to Seattle - Visa and MasterCard billing - Travel service - Automatic number dialer		
U.S. Sprint	- Equal access - Directory assistance - Discount calling program	- Sprint Advanced WATS (WATS-like) - In Sprint (800-like) - Proposed 800 service	- Sprint private line - FX - Voice tie-line (TX data to 4800 BPS)
Western Telecommunications Incoroporated	- Switched voice to Alaska through GCI subsidiary		- Resale voice and data private line of facilities to MCI, GTE U.S. Tel and Allnet - Earth stations - Turn-key microwave construction
Western Union	- "Metrophone" long distance - Equal access in some exchanges - Travel service - Directory assistance - "Abbreviated" dialing	Optimized WATS - Shared dial service - Dedicated access lines to WU switches are available - 800 Optimized IN-WATS (Proposed)	

Trave" "ervice - 800 Telephone Number Access to Carrier's Switch

Updated October 15, 1986

2044E

INTEREXCHANGE CARRIER COMPETITION
BY AT&T SERVICE
- WASHINGTON -

NAME	AT&T SERVICE		
	LONG DISTANCE	WATS/800	CHANNEL SERVICES
Allnet	- Intrastate/intraLATA calling - Equal access - Credit card calling - Travel service - ALLDIALER automatic number dialer	ALLNET WATS Plus/Maxcom I - complete U.S. coverage on 5 bands (Will be available in Seattle soon) - Dedicated access line between customer and switch	
America Calling	- Resale long distance - Extended area service in Seattle		
American Network • Savenet	- Operator assistance and DA planned - Equal access - Travel service - IntraLATA service - Data to 4800 BPS - Pre-programmed telephone number dialing	- Direct Line (WATS-like) - Dedicated access line between customer and AmNet switch	
American Satellite Company			- Single source supplier - PL at 64 MBS, 9.6 MBS, 56 Kbs - FX - FAX - Video teleconference at 1.544 MBS - Flex Stream - multiplex voice, data, video
American ShareCom • Altcom	- Resale long distance - IntraLATA long distance - Travel service - Equal access - Automatic number dialer	Custom 800 service -- 800 telephone number to American ShareCom switch where call is routed to customer - 800 IN-WATS	
American Tele[illegible]ne Exc[illegible]	- Resale long distance Equal access competitor in some exchanges - Travel service - Speed dialers		
American Telesave (a Comnet Company)	- Resale long distance - Equal access - Travel service	- Customer 800: OCC number to OCC switch where call is routed to customer - Dedicated access line between customer and switch	
Argo Communications	- Argonet (business only) •switched voice/data to 4.8 Kbps •FX •switched 56 Kbs - ARGO Omni/Omni Plus (high volume) - ARGO Net-S (used w/ARGO Omni/Argonet basic) - Directory assistance	- Pacific WATS - Argonet/Argonet FX Plus - Dedicated access line to Argo switch	- Argo point •PL to on-net cities •video conferencing • FAX
Call U.S.	- Resale long distance - Equal access - Travel service		
City Net	- Intrastate long distance resale only		
Comnet	- Resale long distance - Equal access - Travel service	- Dedicated access line between customer and switch	
Courtesy Call	- Resale long distance - Limited equal access		
Enhanced Telemanagement	- Resale long distance - Resale Centraflex services - Consultant service		
Execulines	- Resale long distance - Equal access - Travel Service - Automatic Number Dialer		
ITT Longer Distance (USTS)	- Equal access competitor - Adverstises no additional intrastate services	- Smart WATS	
MCI •SBS	- "Execunet" service - Equal access - Directory assistance - Discount calling program - Credit card	- MCI banded WATS - PRISIM - Hotel WATS - Proposed 800 service	- Digital private line - Speeds up to 1.5 MBS - Planning "V Net" virtual private line - FX

CAUSE NO. U-86-113
WITNESS: Richard Cabe
EXHIBIT NO. 43

AT&T WASHINGTON MARKET SHARE ESTIMATES

	Share	Market	Measure	Source	Period
1	63%	Bus	Penetration	Market Trends	7/86
2	87%	Res	Penetration	Market Trends	7/86
3	79%	Bus	Penetration	Compass	1985
4	93%	Res	Penetration	Compass	1985
5	51%	Bus	MTS Revenue	Market Trends	7/86
6	86%	Res	MTS Revenue	Market Trends	7/86
7	69%	Total	MTS Revenue	Market Trends	7/86
8	97%	Total	Switched MOU	E&W	6/85
9	82%	Total	Switched MOU	'86 Annual Report	6/86
10	84%	Total	Total Revenues	'86 Annual Report	Calendar '85
11	79%	Bus	Equal Access Ballots	AT&T Counsel Req. 1.C.12.	11/20/86
12	83%	Res	Equal Access Ballots	AT&T Counsel Req. 1.C.12.	11/20/86
13	82%	Total	Equal Access Ballots	AT&T Counsel Req. 1.C.12.	11/20/86

Pacific County microwave system nears completion

WITNESS: Richard Cabe
EXHIBIT NO. 44

Aberdeen, WA
(Grays Harbor Co.)
Aberdeen Daily World
(Cir. D. 18,335)

MAR 31 1986

Allen's P. C. B Est. 1888

By Pam McGaffin
Daily World writer

SOUTH BEND — A microwave communications system that would give Pacific County lower telephone costs and bring it a step closer to offering 911 emergency service could be operating by the end of April, officials say.

John Trent, Pacific County public works director, said the microwave system, which eliminates the need for long-distance service between South Bend and Long Beach, will be more reliable than the present redialing system and should reduce the county's telephone costs to what they were a year ago.

"Without this system, there would be no choice but to sever communications with the Long Beach Peninsula" because of high long-distance costs, Trent said. "Residents of Long Beach would have to pay a toll to call the county seat."

COMPLETION OF the microwave system is awaiting the installation of more equipment and a satisfactory lease agreement with Weyerhaeuser, which owns land at two of the sites where the facilities are located, Trent said.

Currently all three towers are up — in Long Beach, on K.O. Mountain east of Raymond in the Willapa Hills, and on Holy Cross Hill north of South Bend. Antennas are being mounted on the towers and microwave equipment is being installed in the buildings, Trent said.

The system would operate on microwave transmissions just like the Bell system, except on a much smaller scale, Trent said.

The county has studied developing a microwave system for several years, but an eye-popping rate hike for 13 private and foreign exchange telephone lines last year really spurred the decision to go ahead, he said.

Monthly charges for 10 private telephone lines jumped from $195 to $1,833 per line last July. The private lines connect the central telephone system in South Bend to various branch offices in Long Beach. They are used in transferring same calls and for interoffice communication between the northern and southern portions of the county.

THE RATE changes were the result of telephone deregulation and a state Utilities and Transportation Commission decision last May, granting AT&T an average 53 percent rate increase on private business lines.

Along with the rate hike came a change in billing methods that no longer assesses private long-distance telephone lines on a simple point to point basis. Instead, they are assessed on air mileage between AT&T "points of presence" or switching centers.

The net result of this complicated billing arrangement is that a private line in Pacific County that used to be charged for 27 air miles is charged for 550 miles.

In the wake of the tremendous telephone increases, the county disconnected its expensive private lines and put in some long distance lines and a redialing system, which dials a long-distance number from local numbers out of Long Beach and Naselle.

The redialing system, while cheaper than what county had before, represents a cut in service to Long Beach and is still more expensive than the telephone costs under the microwave system.

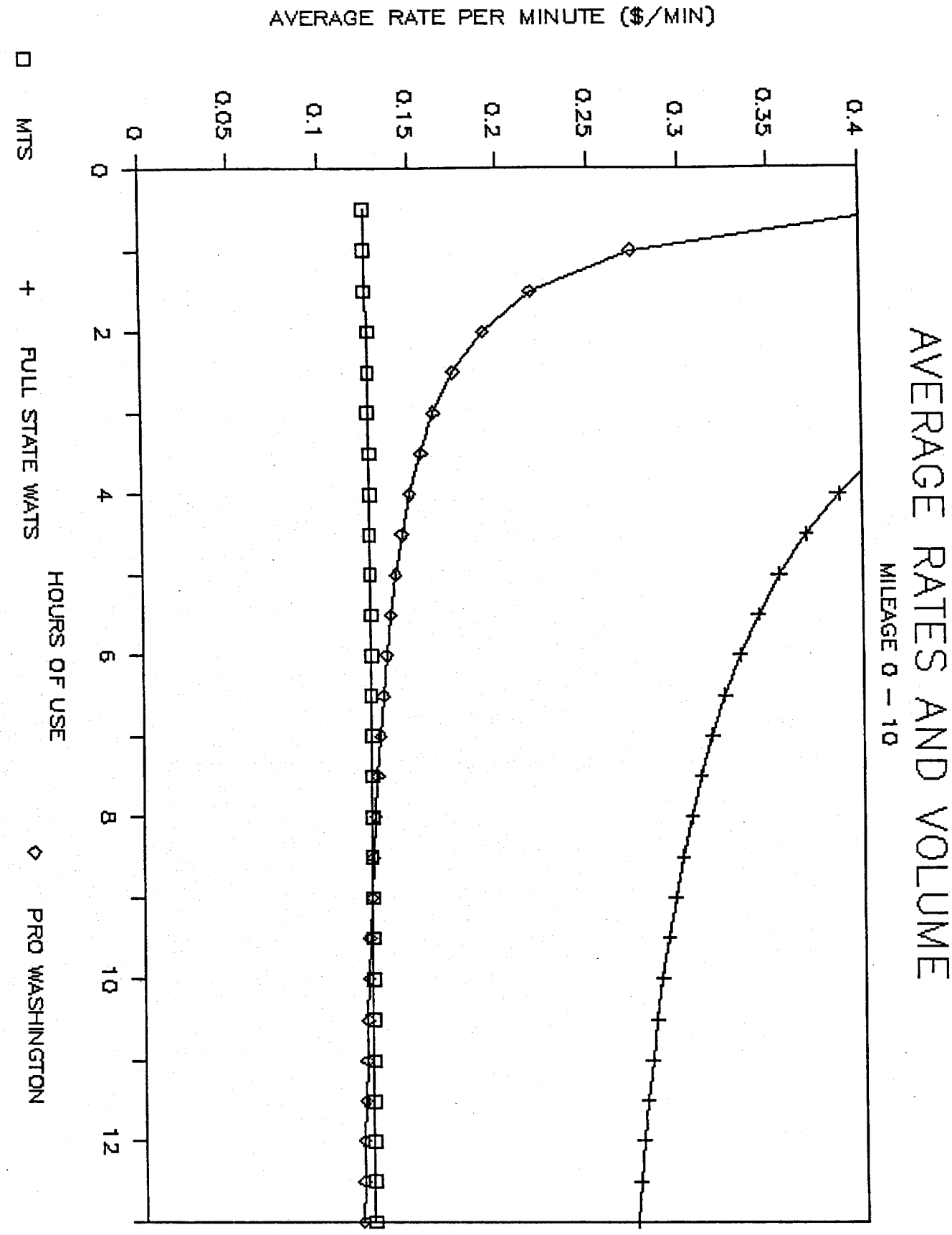
THE MICROWAVE system would eliminate the delay that callers experience with the redialer, said Ed Kaech, public works accountant.

The $281,000 system eventually will pay for itself, officials say.

Funding is coming from the county's Equipment Rental and Revolving Fund and a Federal Emergency Management Administration grant of $65,000.

Possible development of a 911 emergency system is another advantage of the microwave network, officials say. Such a system would be impossible without the microwave facilities, Trent said.

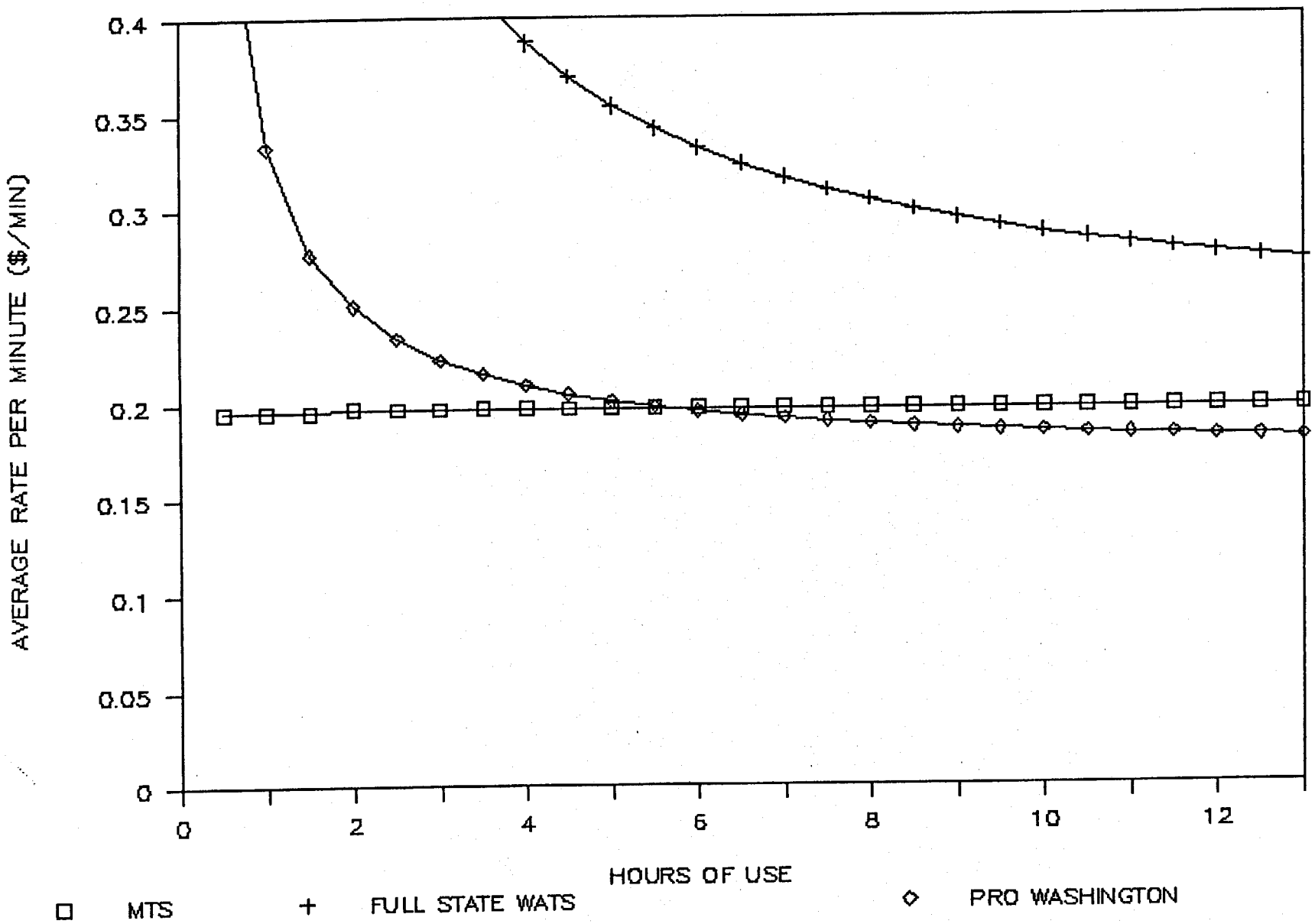
CAUSE NO. U-88-119
WITNESS: Richard Cabe
EXHIBIT NO. 45



1

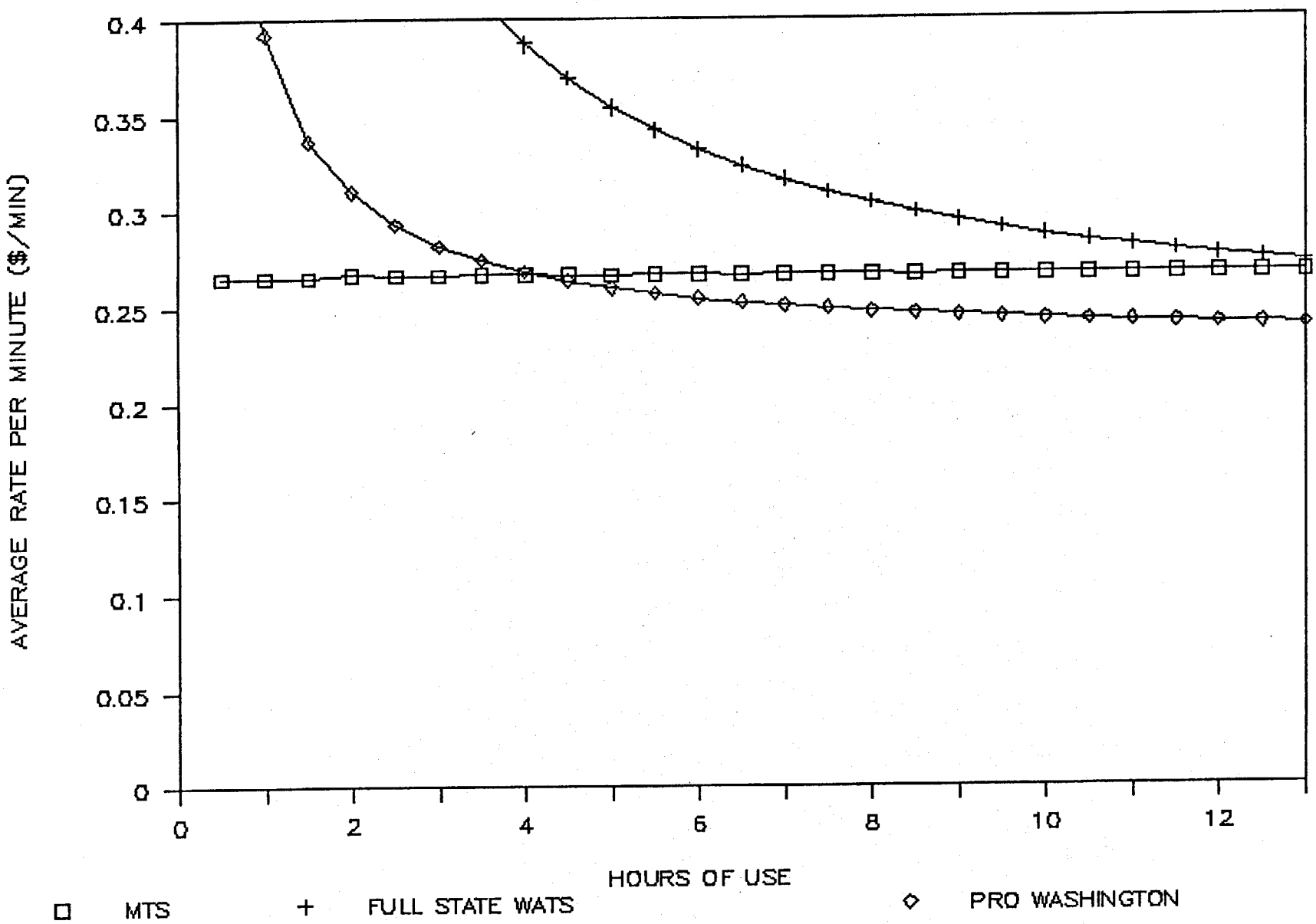
AVERAGE RATES AND VOLUME

MILEAGE 11 – 22



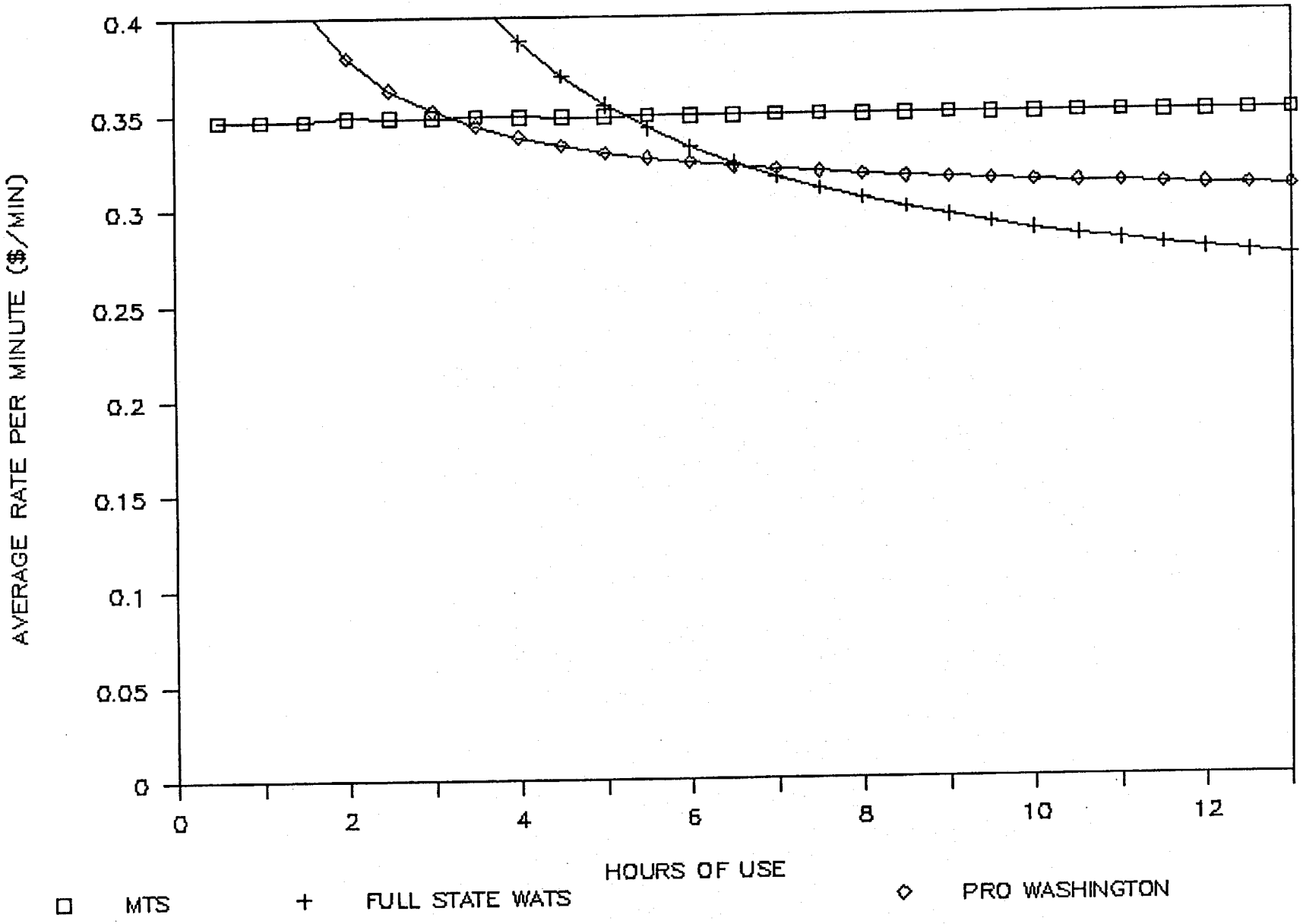
AVERAGE RATES AND VOLUME

MILEAGE 23 – 55



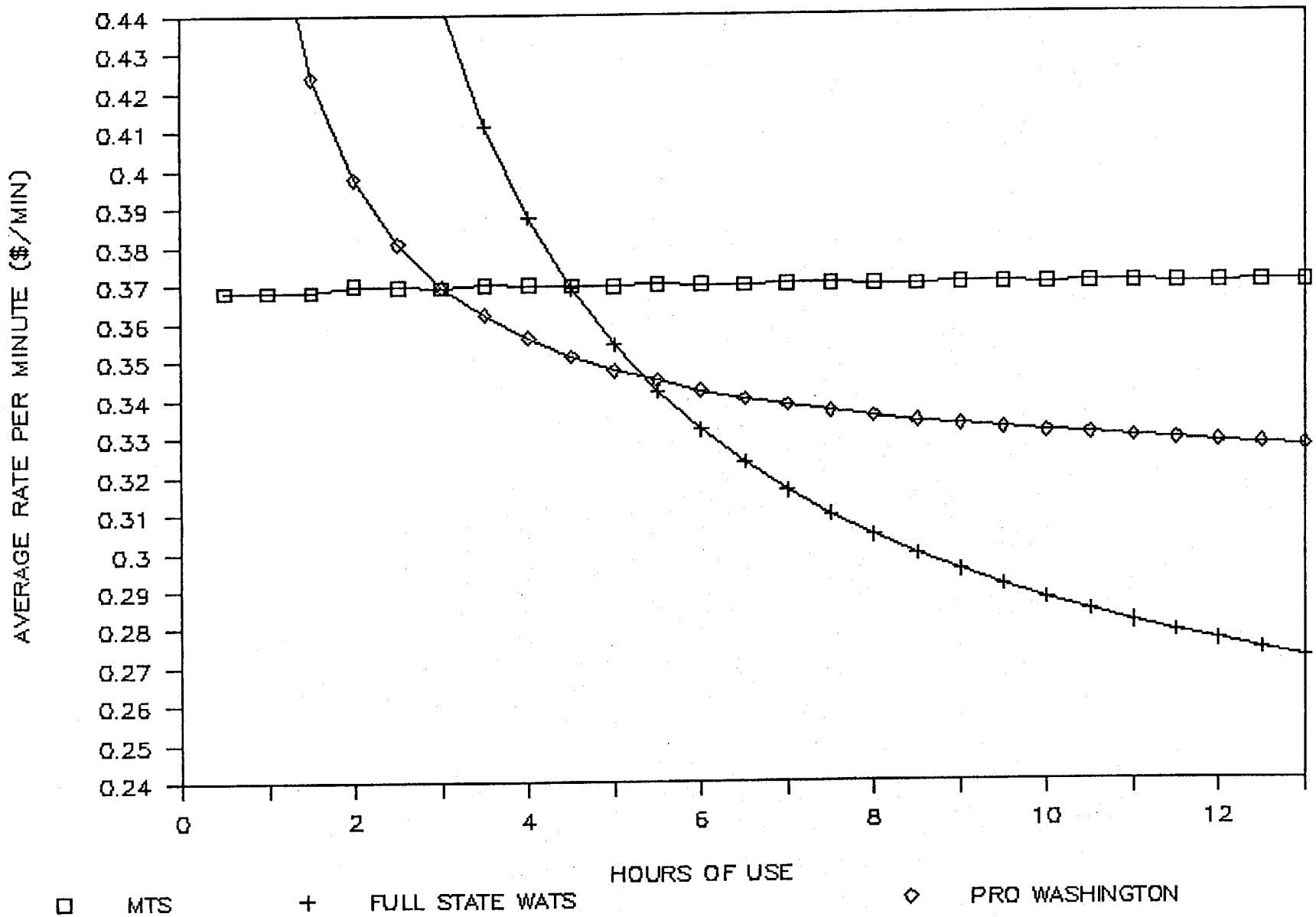
AVERAGE RATES AND VOLUME

MILEAGE 56 — 124



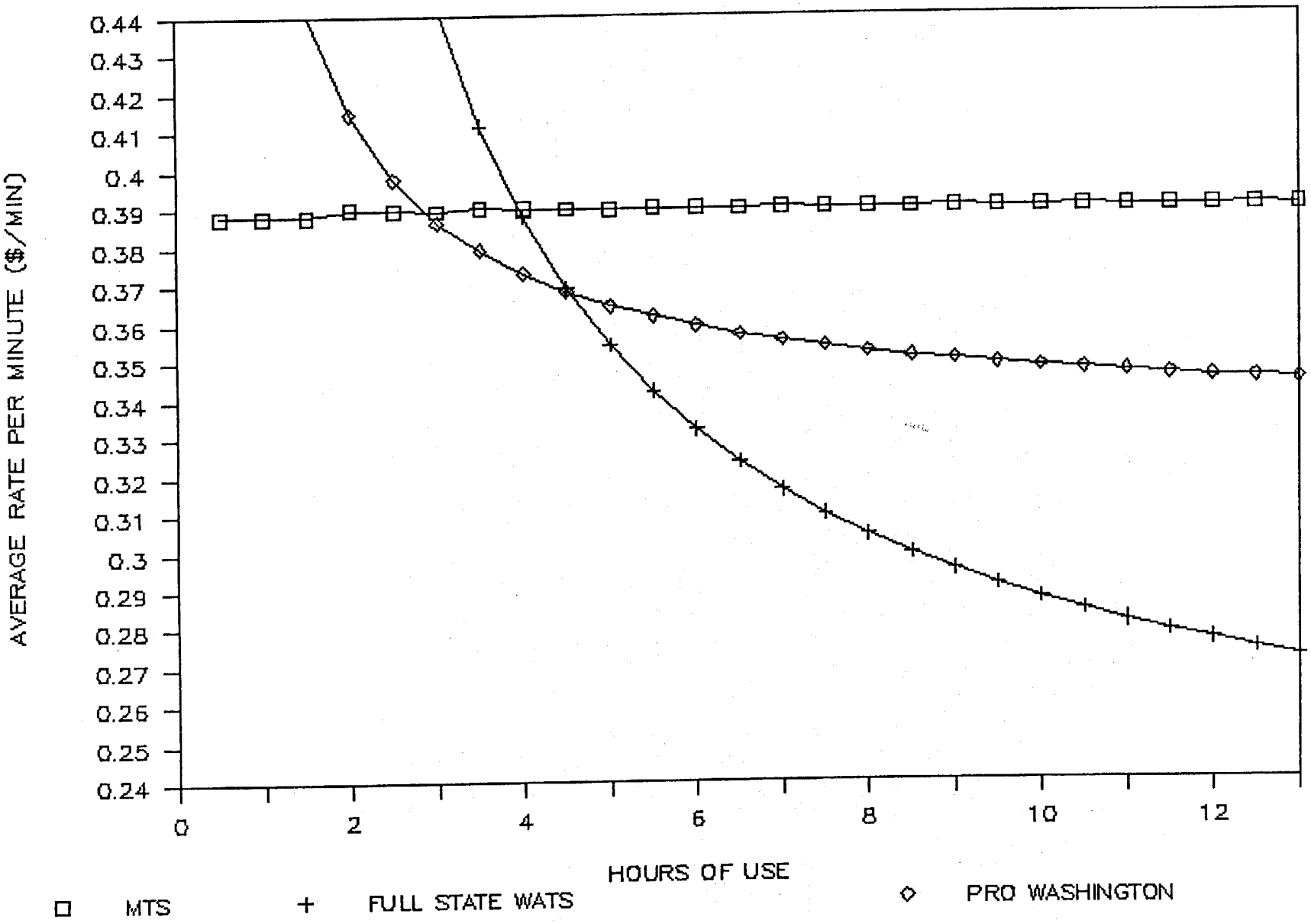
AVERAGE RATES AND VOLUME

MILEAGE 125 – 196



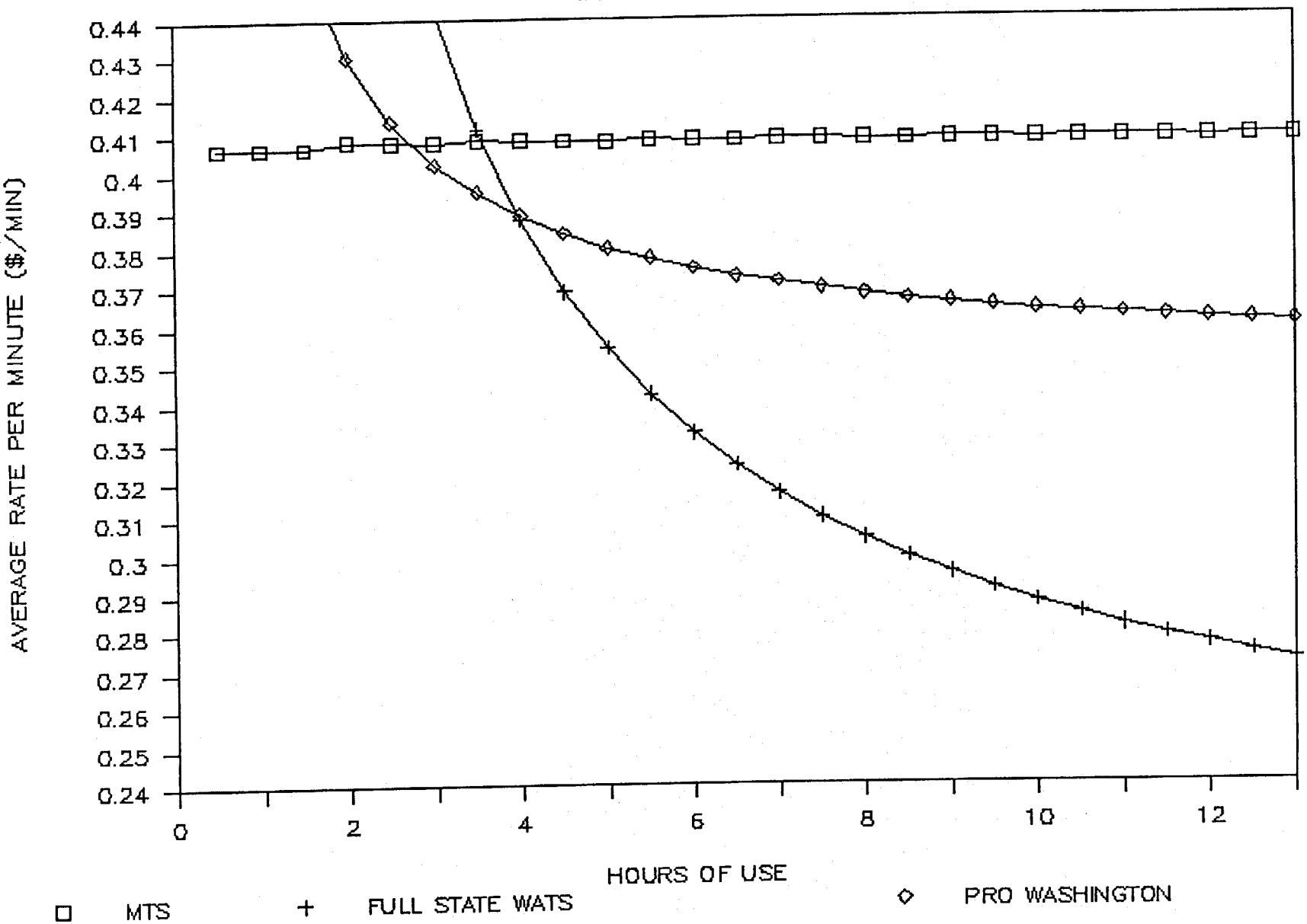
AVERAGE RATES AND VOLUME

MILEAGE 197 – 292

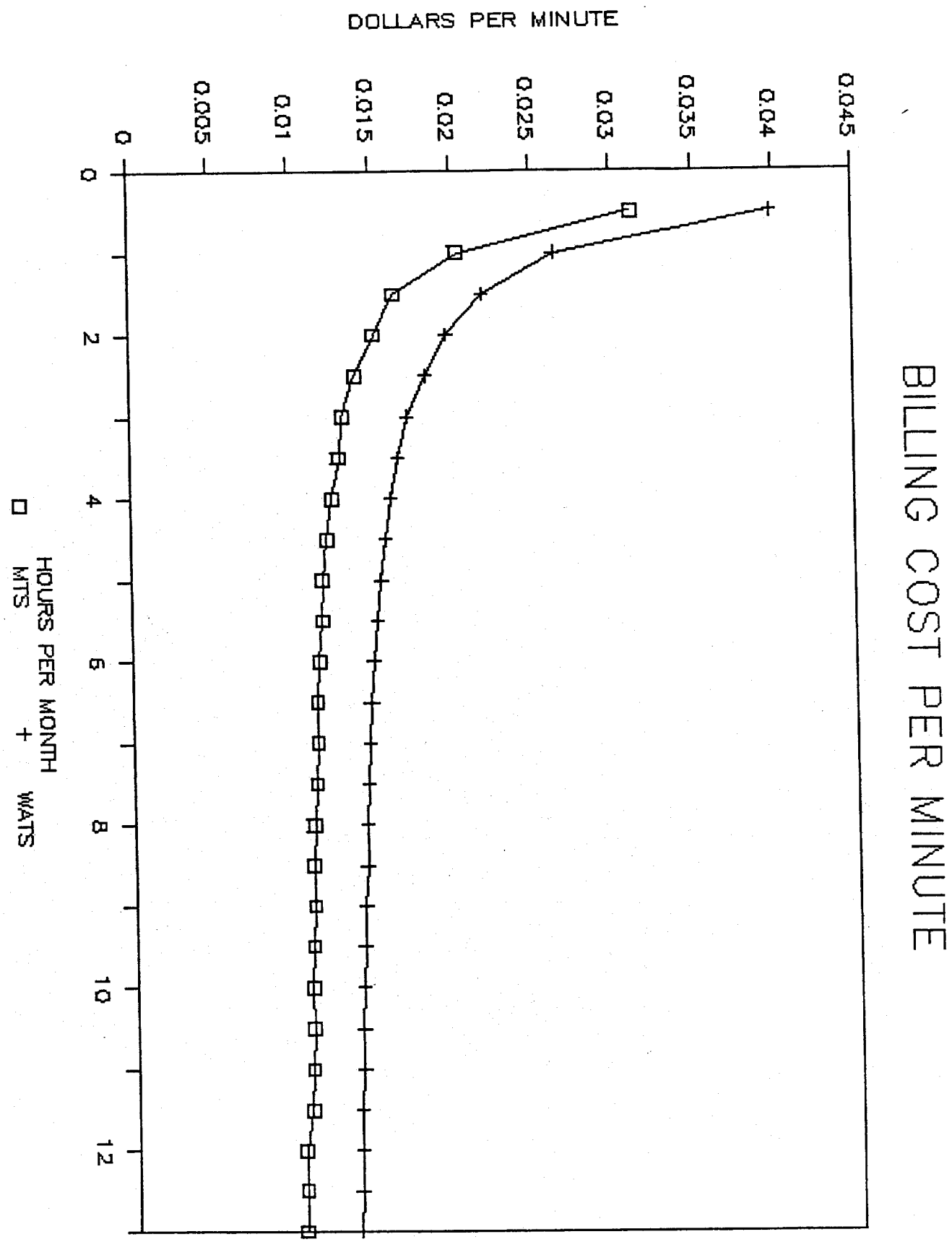


AVERAGE RATES AND VOLUME

MILEAGE OVER 292



CAUSE NO. U-86-113
WITNESS: Richard Cabe
EXHIBIT NO. 46



BILLING COST PER MINUTE

Exhibit 3

Phone War Prompts a Record Number of Calls

By Rebecca Blumenstein
Staff Reporter of The Wall Street Journal

NEW YORK—A cutthroat price war in the long-distance telephone market is prompting record numbers of calls by consumers seeking to re-evaluate their own calling plans.

All three of the nation's major long-distance companies are reporting unprecedented call volume in response to a flurry of new offers introduced in recent weeks. **MCI WorldCom** Inc., for example, says it has added one million new customers since it launched its five-cent calling plans three weeks ago.

That pace has picked up markedly since Aug. 30, when **AT&T** Corp. came out with its seven-cent-per minute, 24-hour-a-day plan for $5.95 a month, or $4.95 a month if customers sign up for AT&T's local long-distance service. All told, analysts say the offers are prompting the biggest shake-up in the industry in at least four years, when **Sprint** Corp. first introduced its 10-cent calling plan.

It remains unclear whether any company will emerge as a clear winner in the latest round of price cuts. Most analysts say it is logical to assume that Sprint and MCI WorldCom would grow their shares against market leader AT&T, which holds 60% of the approximately $50 billion consumer long-distance market.

Officials at MCI WorldCom, which holds a market share of about 20%, said the launch of its new nickel product is the most successful in the Clinton, Miss., company's history. But AT&T officials vowed this week to use its offer to stem a tide of declining market share. In the meantime, the competition will likely mean good news for consumers.

AT&T issued its plan in response to major price cuts by MCI WorldCom and Sprint. Both companies are aggressively pushing plans that offer five-cent-per-minute calling during nights and weekends. Depending on calling patterns, any of the plans can generally save consumers 30% compared with the 10-cent calling plans that dominated until the latest round of price cuts.

But consumers have to call their phone company to get the lowest price. That often hasn't been easy. The volume has been so great that at least one company, AT&T, has had trouble keeping up. AT&T officials say they have been stunned by the demand for its new plan. The phone giant has scrambled to add calling-center personnel and update computer systems to accept orders for the different plans.

A frenzy of matching offers also has complicated things for both the companies and consumers. AT&T and Sprint say the companies will match any of the plans of their main rivals. For example, AT&T officials said last week that the phone giant will match MCI WorldCom's nickel offers, either a $4.95 plan for five-cent calling on nights and weekends and 10-cents during the day, or a $1.95 plan that charges 25 cents for daytime calls.

But a number of AT&T customers who called in to get the nickel offers instead of AT&T's main seven-cent offer said they were told by customer service representatives that AT&T, New York, isn't offering any such plans.

Company officials say they had some delays in communicating all the plans available to their customer service representatives, and in some cases hadn't filed the necessary federal documents to match competitors' rates.

For example, AT&T says it won't be making the necessary filing to match MCI's $1.95 plan until next week. The company will be taking names for the plan until then as not to lose customers.

"Demand has far exceeded our expectations," an AT&T spokeswoman said. She added that the company also has moved to update its computer systems to reflect the various plans.

Sprint officials say the No. 3 long-distance concern, Westwood, Kan., has seen its call volumes go up 30% since it introduced its nickel-calling plan six weeks ago. Sprint's plan offers 35 hours of five-cent-per-minute calling for $5.95 per month.

"Our minutes of use are up considerably, which means we are definitely growing share with higher-usage customers," said Len Lauer, president of Sprint's consumer long-distance group. The executive said he wasn't yet certain whether the results will help Sprint increase its 10% market-share position.

Analysts have been concerned about the impact of the lower prices on profits of the long-distance companies. But each of the main long-distance concerns says it remains on target for meeting annual targets for earnings and revenue growth.

TV Ad Against Medicare Drug Plan Puts Clinton and the Industry at Odds

By Elyse Tanouye
Staff Reporter of The Wall Street Journal

A new television commercial attacking President Clinton's plan to add prescription-drug coverage to Medicare has reignited tensions between the pharmaceutical industry and the administration.

The ad, paid for by a drug-industry-led group, began running last week in national cable and local TV markets, about a week before Congress resumes work after the Labor Day holiday.

Appealing to Medicare-eligible senior citizens, the ad says "the White House plan puts bureaucrats in charge of our medicines." It warns the president's proposal could cause millions of senior citizens to lose their private coverage and "end up in a big government plan."

In an interview over the weekend, Chris Jennings, deputy assistant to the president for health policy, called on the drug industry to pull the ad and said the White House is weighing its options to respond if it doesn't. He called the ad "false, misleading, full of hyperbole and apparently designed to scare people about nonexistent policies. . . . The White House will not sit back and watch anyone mischaracterize the policy of the president."

The dispute threatens to chill a relationship that was starting to warm up earlier this year as industry and administration officials discussed ways to provide prescription drug coverage under Medicare, which doesn't pay for outpatient prescription drugs. The administration's proposal, released earlier this summer, ostensibly addressed some of the industry's demands that any future Medicare prescription-drug program remain free of price controls and be administered through a private-sector mechanism.

But drug makers were deeply dismayed by elements in the president's plan that, they believed, could lead to price controls down the road and ultimately reduce profit margins and inhibit their ability to spend money on research and development to devise new medicines.

Hence, they came up with the ad campaign, with a budget of $20 million to $30 million. The new ad, featuring an older woman named Flo, is the second installment of an effort that aims to influence the Medicare-reform debate this fall. The first ad, which began running in late July, didn't mention the Clinton plan specifically; in it, Flo indignantly declared, "I don't want bureaucrats in my medicine cabinet."

The ads are the creation of Citizens for Better Medicare, a new group that represents a mix of industry and patients groups and individuals but is largely financed by drug makers. The group is run by Tim Ryan, who recently left his post as advertising director of the Pharmaceutical Research and Manufacturers of America, the industry's lobbying organization.

STATE OF COLORADO)
) SS
COUNTY OF CHAFFEE)

AFFIDAVIT OF RICHARD CABE

I, Richard Cabe, of lawful age and being first duly sworn, depose and state:

1. I am an economist in private practice.

2. I am submitting the foregoing statement entitled "Public Policy Considerations for Regulation of the InterLATA Telecommunications Market in Tennessee" to the Tennessee Regulatory Authority on behalf of MCI Worldcom.

3. My statement is true and correct as I verily believe.

Further affiant sayeth not.

Richard Cabe

Richard Cabe

Subscribed and sworn to before me this 13th day of September, 1999.

Carol Mackelne

Notary Public

[SEAL]

My commission expires:

7-20-00

AFFIDAVIT OF GREG DARNELL

ON BEHALF OF

MCI WORLDCOM, INC.

BEFORE THE TENNESSEE REGULATORY AUTHORITY

SEPTEMBER 14, 1999

My name is Greg Darnell, and my business address is 6 Concourse Parkway, Atlanta, Georgia, 30328. I am employed by MCI Worldcom, Inc. as Regional Senior Manager of Public Policy. In this capacity I am responsible for ensuring effective advocacy of MCI Worldcom's public policy positions throughout the nine states served by BellSouth. Attachment GJD-1 to this affidavit provides a summary of my academic and professional qualifications.

The purpose of this testimony is to assist in providing the TRA with the information necessary to eliminate the detrimental IXC rule. My affidavit is organized in five parts. Part one addresses how the IXC rule hurts consumers. Part two addresses how the IXC rule is unnecessary. Part three addresses how Tennessee's IXC rule is excessive and out of balance with what is required in other states. Part four addresses the disparity between the TRA's regulation of a competitive market and the pricing flexibility it provides ILECs in the monopoly local market. Part five addresses the ambiguities of TRA staff's proposal to modify the existing IXC rule and its failure to solve the problem.

Part One: The IXC rule hurts consumers in Tennessee.

By limiting the pricing flexibility of companies in the competitive interLATA marketplace the IXC rule has not only failed to help but has actually hurt consumers.

One example how this has occurred is that the IXC rule is the only reason MCI Worldcom dial one customers in Tennessee do not have the option of a peak/off peak price structure. MCI Worldcom dial one customers in all other states can choose a peak/off peak rate structure if they want. When MCI Worldcom rolled out its dial one peak/off peak rate structure throughout the United States a year and a half ago, we consciously decided not to offer customers in Tennessee this option because the IXC rule, as applied by the TRA, precluded us from offering a feasible plan. This peak/off-peak rate structure has a higher rate for MCI Worldcom's peak demand period and a lower rate for MCI Worldcom's off-peak demand period.

This peak/off-peak rate structure is beneficial to many residential consumers because it provides lower rates in the evening when they may be most likely to use the phone. Further, certain residential customers would be willing to modify their calling habits to take even greater advantage of the lower off-peak rates.

This peak/off-peak rate structure for residential consumers is beneficial to MCI Worldcom because it provides consumers a financial incentive to change their calling practices and increase their usage of MCI Worldcom's network during off-peak hours. Increased usage during off-peak hours would help to even out daily variations in MCI Worldcom's demand that, in turn, enables MCI Worldcom to better utilize its switching and transport facilities. An increased utilization of switching and transport would lower MCI Worldcom's average cost and, given the dynamics of a competitive market, this lower cost would find its way back to the consumer through lower rates.

The inability of MCI WorldCom to offer Tennessee consumers peak/off-peak pricing was caused because the IXC rule does not permit MCI Worldcom to raise ANY dial one rates and the peak/off-peak rate structure includes higher peak period rates. As such, this rule has hurt consumers in Tennessee in more ways than just not having the opportunity for lower off peak rates. It has also increased MCI Worldcom's cost of doing business because our network facilities are less efficiently utilized due to unnecessarily peaked demand.

The IXC rule also hurts facility based IXC competition in Tennessee. The IXC rule is not imposed on Resellers. As such, resellers are permitted to raise their rates and more effectively address the high-end market. Some end users want to pay higher prices, provided they believe there is something useful is being done with their money or they believe they will get better service if they pay more money. The fact that the IXC rule is not imposed on resellers provides them, and only them, an undue competitive advantage in product differentiation and their ability obtain revenues from the socially conscious, conspicuous consumption and other high end markets.

For example, a consumer might be willing to pay more for telephone service if they believed some of the revenue is going to be used for the American Lung Association, American Cancer Society, Muscular Dystrophy, The Sierra Club or The American Kennel Associations. Resellers can quickly address these markets, charge higher rates and certain customers will be willing to pay higher rates. Because of the IXC rule, facility based IXCs are only be permitted to meet this market demand if they first can prove to the TRA that such an offering would constitute a new service and it does not raise rates. The fact that facility based IXC first have to prove something to the TRA and resellers do not, provides resellers an undue competitive advantage

and unnecessarily harms facility based competition.

As Dr. Cabe explains in his affidavit, the general principals of economics are founded on the fact that a competitive and open market is the most efficient regulator of prices. There can be no argument that the IXC market in Tennessee is competitive and open. By imposing pricing restrictions on an otherwise effectively functioning competitive market the TRA causes inefficiency and this causes prices to end users to be higher than they otherwise should be. Through the IXC rule, the TRA is doing consumers a disservice by imposing unnecessary regulations and costs on a competitive market.

MCI Worldcom has a history of being a staunch supporter of competition and believes what is best for competition in the telecommunications industry ultimately will be best for MCI Worldcom. Many people say MCI founded competition in the telecommunications industry and I am personally proud that I had a hand in creating the competitive interLATA telecommunications market. MCI Worldcom opposes the IXC rule because it is bad for the competitive telecommunications industry. Regulation of an effectively, irreversibly competitive market is the wrong thing to do. The TRA's IXC rule is the wrong thing to do in both its current and proposed form.

Part Two: The IXC rule is unnecessary.

As Dr. Cabe concludes in his affidavit, the market forces in the IXC industry are sufficient to ensure that prices will be just and reasonable and price regulation of the IXC industry is not needed.

The average rate per minute for long distance service has been declining for the last 14 years. Further, it has astonishingly declined faster than the IXCs'

underlying cost of access. Even further, rates for long distance service declined faster since divestiture than prior to divestiture. This does not mean every single consumer's rates have declined or will continue to decline. What it does mean is that the country as a whole has benefited and most consumers have enjoyed significantly lower rates. While economists may debate ad nauseum how much or how little of this benefit is due to competition, it safely can be said that competition did stimulate innovation that has resulted in lower rates, better service and a wider range of services.

Prior to MCI bringing competition to the IXC industry, there had been over 50 years of regulatory rate setting. This is an awfully long time for rates to be manipulated by politics and factors other than economic cost. This length of time has created expectations of what is normal for telephone rate structures. For example, consumers are used to being charged for telephone service on a per minute basis. This occurs even though switching equipment is now capable of much more accurate measurement.

For several years, LCI (now Qwest) attempted to use six-second billing as a marketing initiative. Absent 50 plus years of customer expectations, more accurate billing should have been a strong marketing message. However, I think even LCI/Qwest would admit due to strong customer comfort with per minute billing, its six second billing marketing initiative was less successful than hoped. If this initiative had been more successful other IXCs would have been prompted by the market to follow LCI/Qwest's lead. If customers value six-second billing, it should be imposed on the market by the discipline of competition – not by regulation.

Fifty plus years of manipulated rate structures will not be eliminated by market

forces overnight or without some grief. For example, certain regulators are concerned with the monthly minimum charge some IXCs are beginning to require. From a purely academic standpoint, it can easily be understood that the cost of rendering a bill for one call is very similar to the cost of rendering a bill for ten calls. Because certain costs are incurred regardless of how many calls are made, minimum monthly fees are reasonable. If some customers are opposed to minimum fees, the competitive market provides them a powerful recourse. They can vote with their feet and change carriers if they don't like what is being offered to them by their current carrier. However, whether or not customers care enough to vote with their feet and slow or eliminate the roll-out of minimum charges, should be their choice. Regulatory intervention is not needed. Further, regulatory intervention would be detrimental to the consumer.

Another example is that of a per-call and per-minute rate structure. As determined in the UNE cost proceeding, the initial call set up causes additional cost. It might cost $0.004 for the switch to set up the call and $0.002 a minute after that for the switch to transmit the call. Therefore, it might be reasonable for an IXC to have a per-call and per-minute rate structure.

While changes such as the ones described above would cause some customers grief, rate structures that more closely follow cost causation are good things. Only by following cost causation, can the rate structure provide the correct incentives for use of the facilities and, as such, permit optimal efficiency. However, even with pricing flexibility, changes such as the ones described above will not take hold overnight; just ask LCI/Qwest. Many customers abhor change. Some customers thrive on change. The TRA can take comfort in the dynamics of the competitive

marketplace. As long as there is a demand for a certain type of rate structure, carriers in the competitive interLATA marketplace will meet that demand. No IXC can unilaterally impose an undesired rate structure on the marketplace because every customer has the option of choosing a different carrier.

Carriers will attempt to meet consumer demand and change consumer demand. Some carriers will succeed in changing consumer demand and some will fail. The successes will be perpetuated and the failures will be abandoned. It is this ever changing, constantly re-evaluating process that makes the effectively competitive marketplace the most efficient regulator.

The IXC rule hinders the ability of the market to undo the 50 plus years of inefficiency that developed during the period of monopoly. While it might take some faith in the competitive market, the TRA should let market forces work, eliminate the IXC rule and deregulate IXC pricing. This would be the right thing to do for all consumers.

Part Three: The IXC rule is out of balance with other states requirements.

As shown in attachment 2, Tennessee is alone in maintaining rules that restrict rate increases in the competitive IXC industry. Further, 40 states not only do not restrict rate increases but do not require IXCs to provide any supporting documentation to increase rates.

There is no evidence that supports a contention that elimination of the IXC rule will lead to increased rates. IXCs set rates based on what consumers are willing to pay for their service. The customer's willingness to pay is depends upon the substitutable services that they see available in the market. If an IXC's rates are too

high as compared to those substitutable services, consumers will not buy their service but will buy the substitute. This will force that IXC to lower its rates and keep lowering them until customers buy the IXC's service or will force that IXC to find a way to improve consumer's perception of their service. Rates are not set by IXCs through some self-determination of cost. A determination of cost by the IXC or anyone else is unnecessary in a competitive market. A competitive market will only permit carriers to charge what the customer is willing to pay and that determination is made by the consumer independent of what it costs the carrier to provide the service.

For example, assume you drive off the interstate to get gasoline and there is an Amoco station and a Quicktrip discount station. Amoco refines its own gasoline and, as such, can be considered facility-based provider of gasoline. Quicktrip resells gasoline refined by other companies. However, your decision regarding which gasoline to buy will be based on your perception of the quality provided by each company in relation to each station's price for gasoline. Now if you believe the advertising and marketing and think Amoco gasoline is better than Quicktrip, you might be willing to pay more for the Amoco gasoline. How much more you would be willing to pay is based on how much you think the gasoline is worth. It is not based on how much the gasoline costs the Amoco station.

Tennessee does not cap the interLATA rates charged by resellers. The rationale for imposing a cap on facility based IXCs and not on resellers was based in part on an assumption that resellers lack market power sufficient to charge set rates. However, facility based IXCs, just like the Amoco gas station in my prior example, also lack market power sufficient to set rates. Customer choice is a great regulator.

As such, facility based IXCs are no different than resellers from a retail pricing standpoint, in that the competitive market set the rates for both type IXC. The competitive IXC market sets the price based on perceived quality and substitutability. All facility based IXCs and resellers can do is attempt to differentiate themselves and influence the customer's perception of quality through marketing, advertising and actual performance. As such, neither facility based IXCs nor resellers should be saddled with pricing restrictions.

Part Four: The TRA places greater restrictions on a competitive market than a monopolized market.

The TRA places more strict regulation on pricing in the competitive IXC industry than it does on ILEC pricing in the monopolized local market. The TRA establishes a price cap for ILEC non-competitive services and permits this price cap to be adjusted annually to account for inflation. The IXC rule does not even permit an annual adjustment for inflation. The TRA permits ILECs to price discretionary services at "market" based levels. The word "market" is placed in quotations because when the customer's only choices are to buy or not buy, as is the case in the vast majority of the ILEC's local market, the market is not fully functioning. A fully functioning market provides customers with additional choices. At a minimum in a fully functioning market the customer must have the choices to buy, *to buy from someone else* or to not buy.

The TRA permits ILECs with market power (e.g. the power to reap supra-normal profits) pricing flexibility and also permits them annual increases to price caps in a currently declining cost industry. Yet, the TRA does not permit interexchange

carriers lacking monopoly power pricing flexibility on direct distance dialing. The TRA does not provide IXC pricing flexibility on direct distance dialing even though the IXC market is a fully functioning market where consumers have the choice to buy, *to buy from someone else* or to not buy. The paradox of regulating a competitive market more stringently than a monopoly market makes absolutely no sense.

Part Five: Staff's proposed modified IXC rule fails to solve the problem and creates new problems.

TRA Staff has proposed a modified IXC rule that would establish a net revenue cap for each IXC based on that company's average intrastate revenue per minute for residential services. This proposal is no better for competition or consumers than the current rule. Under the proposed rule, an IXC that has low rates would be penalized for those low rates by having a low revenue per minute cap established. Conversely, an IXC with high rates would be given the benefit of a high revenue per minute cap.

While one might want to, one cannot conclude that consumers are better off with the lower priced carrier – if the matter were as simple as that customers would have already switched to the lower priced carrier. The level of service may or may not be the same. The proposed revenue cap would not and cannot take into account differing levels of service. As such, the proposed IXC rule would be unfair to an efficient carrier providing good service at a low cost by not permitting that carrier to reap the rewards (i.e. increased revenue and profitability) of its efficiency. Likewise, the lower price carrier could learn that the market demands higher quality and is willing to pay a higher price for higher quality. The IXC rule presents a roadblock preventing that company from changing its business plan in accordance with the

demands of consumers. Further, the proposed IXC rule would shelter inefficient carriers by taking away incentives for more efficient carriers to offer service in Tennessee.

MCI Worldcom can see no reason why the TRA would take away incentives for efficient carriers to serve customers in Tennessee. Further, there is no reason to micromanage a competitive market. All the proposed IXC rule will do is succeed in creating inefficiencies and perpetuating the existing inefficiencies created by the current IXC rule.

There are also many ambiguous provisions contained in the proposed IXC rule. Such as, paragraph 2(d)(2) refers to a net revenue cap and an aggregate net revenue cap without explaining the difference. It also uses the term "aggregate net revenue cap" in the context of "each" IXC. However, if the cap is to be done in the aggregate, would it not be more accurate for it to be based on the revenue of "all" IXCs? Further, in paragraph 2(d)(3) the proposed rule refers to a **price** cap, when the prior paragraph lays out requirements for a type of **revenue** cap.

One could go through the exercise of attempting to eliminate the ambiguities contained in the proposed IXC rule. However, this would be a waste of time because eliminating the ambiguities in the proposed rule will not solve the problem. Only by eliminating the IXC rule can the TRA eliminate the inefficiency caused by this unnecessary regulatory intervention in the competitive IXC market.

Summary

The TRA is alone among regulators in the United States in imposing a rate cap on the competitive interLATA long distance industry. Attempting to fix the IXC rule is

a waste of time. Regulatory intervention into the effectively competitive interLATA market can only serve to interfere with its effective and efficient operation. The IXC rule causes inefficiencies, harms consumers, harms the telecommunications industry and harms facility based IXC competition. As such, the TRA should do the right thing for the people of Tennessee and should eliminate the caps on IXC prices and artificial mandatory flow through requirements contained in the IXC rule as quickly as possible.

Further Affiant saith not.

Gregory J. Darnell
September 14, 1999

Sworn to and subscribed before me
this 14th day of September, 1999

Melissa A. Burris
Notary Public

My Commission Expires:_____

OFFICIAL SEAL
Melissa A. Burris
Notary Public, State of Georgia
My Commission Expires June 11, 2000

Attachment GJD-1

GREGORY J. DARNELL
PROFESSIONAL EXPERIENCE

6/21/96 - Date *REGIONAL SENIOR MANAGER, MCI WORLDCOM, PUBLIC POLICY.*

Responsibilities: Define MCI's public policy and ensure effective advocacy throughout BellSouth Region.

9/1/95 - 6/21/96 *SENIOR STAFF SPECIALIST III, MCI, NATIONAL ACCESS POLICY.*

Responsibilities: Define MCI's national access policies and educate field personnel. Present MCI's access policy positions to Executive Management and obtain concordance.

9/1/94 - 9/1/95 *SENIOR STAFF SPECIALIST III, MCI, CARRIER RELATIONS.*

Responsibilities: Manage MCI's business relationship with ALLTEL.

1/1/93 - 9/1/94 *SENIOR STAFF SPECIALIST II, MCI, SOUTHERN CARRIER MANAGEMENT.*

Responsibilities: Chief of Staff.

9/1/91 - 1/1/93 *MANAGER, MCI, ECONOMIC ANALYSIS.*

Responsibilities: Testify before state utility commissions on access issues. Write tariff and rulemaking pleadings before the FCC. Serve as MCI's expert on Local Exchange Carrier revenue requirements, demand forecasts and access rate structures.

1/1/90 - 9/1/91 *SENIOR STAFF SPECIALIST I, MCI, FEDERAL REGULATORY.*

Responsibilities: Direct analysis to support MCI's positions in FCC tariff and rulemaking proceedings. Provide access cost input to MCI's Business Plan. Write and file petitions against annual tariff filings and requests for rulemaking. Train State Utility Commissions on the use and design of financial databases.

GREGORY J. DARNELL

1/1/89 - 1/1/90 *STAFF SPECIALIST III, MCI, FEDERAL REGULATORY.*

Responsibilities: Track and monitor tariff transmittals for Ameritech, BellSouth, SWBT and U S West. Author petitions opposing RBOC tariff filings. Represent MCI at National Ordering and Billing Forum.

10/9/87 - 1/1/89 *SUPERVISOR, MCI, TELCO COST ANALYSIS.*

Responsibilities: Supervise team of analysts in their review of interstate access tariff changes. Coordinate updates to Special Access billing system.

1/1/86 - 10/9/87 *FINANCIAL ANALYST III, MCI, TELCO COST.*

Responsibilities: Analyze MCI's access costs and produce forecasts.

6/1/85 - 1/1/86 *STAFF ADMINISTRATOR II, MCI, LITIGATION SUPPORT.*

Responsibilities: Support MCI's antitrust counsel in taking depositions, preparing interrogatories and document requests.

1/1/84 - 6/1/85 *PRODUCTION ANALYST, MCI, LITIGATION SUPPORT.*

Responsibilities: Review and abstract MCI and AT&T documents obtained in MCI's antitrust litigation.

8/1/82 - 1/1/84 *LEGAL ASSISTANT, GARDNER, CARTON AND DOUGLAS.*

Responsibilities: Research and obtain information from the FCC, FERC and SEC.

EDUCATIONAL EXPERIENCE

9/1/92 - 1/1/93 *GEORGE WASHINGTON UNIVERSITY, GRADUATE SCHOOL OF TELECOMMUNICATIONS.*

Studies: Advanced courses in Public Policy, Electrical Engineering and Economics.

9/1/78 - 6/1/82 *UNIVERSITY OF MARYLAND, B.A., ECONOMICS.*

Studies: Macro and Micro Economics, Statistics, Calculus, Astronomy and Music.

STATE	NEW PRODUCT	RATE INCREASE	DOCUMENTATION REQUIRED TO SUPPORT INCREASE	RATE DECREASE	PROMOS	NOTICE
AL	5	7	None	5	1-letter	NO
AK (1)	N/A	N/A	N/A	N/A	N/A	N/A
AZ	3	3	Only required for above Cap Increase	3	1-letter	MARKETING MESSAGE PRIOR TO EFFECTIVE DATE
AR	1	1	None	1	1-letter	NO
CA (2)	40	5/30	None	5	5-tariff	MARKETING MESSAGE PRIOR TO EFFECTIVE DATE
CO	14	14	Only required for above Cap Increase to Non-optional operator services	14	14-tariff	MARKETING MESSAGE 14 DAYS PRIOR TO EFFECTIVE DATE
CT	14	14	None	14	5-tariff	NO
DE	10	14	None	5	5-tariff	NO
FL	1	1	None	1	1-tariff	NO
GA (3)	5	7	None	5	1-letter	NO
HI	5	5	None	5	5-tariff	NO
ID	10	10	None	10	10-tariff	MARKETING MESSAGE 10 DAYS PRIOR TO EFFECTIVE DATE
IL	1	14	None	1	1-tariff	MARKETING MESSAGE PRIOR TO EFFECTIVE DATE
IN	1	1	None	1	1-tariff	NO
IA	DEREG	DEREG	None	DEREG	DEREG	NO
KS (4)	1	1	None	1	1-letter	NOTICE WITHIN 30 DAYS OF EFFECTIVE DATE
KY	1	1	None	1	asap-letter	NO
LA	10	10	None	10	10-tariff	NO
ME	30	30	Customer notification required for increases greater than 20%	14	30-tariff	IF INCREASE IS 20% OR MORE, NOTICE REQUIRED 15 DAYS PRIOR TO EFFECTIVE DATE
MD	14	14	None	14	1-tariff	NEWPAPER NOTICE REQUIRED 3 DAYS PRIOR TO EFFECTIVE DATE
MA	30	30	None	30	30-tariff	NO
MI	1	1	Annual report on revenue impact of all increases	1	1-tariff	NO
MN	1	1	None	1	1-tariff	MARKETING MESSAGE REQUIRED 1 DAY PRIOR TO EFFECTIVE DATE
MS	30	7/30	None	7/30	7/30-tariff	NO
MO (5)	30	10	None	7	30-tariff	MARKETING MESSAGE REQUIRED 10 DAYS PRIOR TO EFFECTIVE DATE
MT	7	7	None	7	7-tariff (11)	NO
NE	10	10	None	10	10-tariff	MARKETING MESSAGE REQUIRED 10 DAYS PRIOR TO EFFECTIVE DATE
NV	DEREG	DEREG	None	DEREG	DEREG	NO
NH (6)	30	1	None	1	5-letter	NO, UNLESS ORDERED BY COMMISSION

NJ	5	5	None	1	1-letter	NEWSPAPER NOTICE REQUIREDON THE ISSUE DATE OF THE TARIFF
NM	30	30	None	30	5-letter	NO
NY (7)	10	1	None	1	1-tariff	MARKETING MESSAGE REQUIRED PRIOR TO EFFECTIVE DATE
NC	14	14	None	14	3-tariff	DIRECT NOTICE REQUIRED 14 DAYS PRIOR TO THE EFFECTIVE DATE
ND	DEREG	DEREG	None	DEREG	N/A	NO
OH	0	0	None	0	0-tariff	MARKETING MESSAGE REQUIRED PRIOR TO EFFECTIVE DATE
OK	30	30	Estimated Annual Revenue Impact	30	30-letter	DIRECT NOTICE REQUIRED 30 DAYS PRIOR TO THE EFFECTIVE DATE
OR	DEREG	DEREG	None	DEREG	N/A	NO
PA	14	1	None	1	1-tariff	NO
RI	30	30	None	30	30-tariff	NO
SC (8)	30/7	30/7	Estimated Annual Revenue Impact	30/7	1-letter	RESIDENTIAL ONLY, REQUIRED 14 DAYS PRIOR TO THE EFFECTIVE DATE
SD	1	1	None	1	1-tariff	MARKETING MESSAGE REQUIRED PRIOR TO EFFECTIVE DATE
TN	1	30 Bus	Residential Increases not Permitted Business Increases require Approval	1	1-tariff	NOTICE REQUIRED 30 DAYS PRIOR TO EFFECTIVE DATE
TX (9)	1	1	None	1	N/A	NO
UT	1	1	None	1	1-tariff	NO
VT	45	45	None	5	5-tariff	NEWSPAPER NOTICE REQUIRED 30 DAYS PRIOR TO EFFECTIVE DATE
VA	1	1	None	1	1-letter	MARKETING MESSAGE REQUIRED 14 DAYS PRIOR TO EFFECIVE DATE
WA	10	10	None	10	10-tariff	MARKETING MESSAGE REQUIRED 10 DAYS PRIOR TO EFFECTIVE DATE FOR BOTH INCREASES AND DECREASES
WV	14	14	Estimated Annual Revenue Impact	14	14-tariff	NEWSPAPER NOTICE REQUIRED PRIOR TO EFFECTIVE DATE FOR ALL TARIFF CHANGES
WI	0	0	None	0	0-tariff	MARKETING MESSAGE REQUIRED PRIOR TO EFFECTIVE DATE
WY	1	1	None	1	1-tariff	NO

(1) AK - MCI does not operate
(2) CA - 5 business days minor increase [revenue increase of not more than 1% and rate increase of not more than 5%]
30 calendar days major increase [increase greater than that described above]
(3) GA - Docket 4186-U Order dated 12/21/92 approves earlier stipulation stating, "All new service introductions and rate decreases shall be filed on five (5) days notice. All increases in rates shall be on seven (7) days notice."
(4) KS - Rules and Regulations filed on seven days' notice
(5) MO - Have option of filing tariff to reduce promos to ten days. Sprint and AT&T have done this. MCI is in the process of making this filing.
(6) NH - Five days for promo introduction and one day for extensions.
(7) NY - Increasing non-MTS rates: 1 day if within flexible bands; 10-30 days is above; MTS rate - increases require 15 days' notice
(8) SC - per commission Staffer Joe Rogers all IXCs file 30 day residential/7 day business

(9) TX - Requires updating of price list once a quarter. However, MCI updates as needed to satisfy internal billing requests.
(10) AZ - If the proposed rate exceeds the maximum, an application to set a new maximum is required. The application must include
a) the reason the increase is required,
b) revenue impact,
c) affidavit that proper customer notice was given,
d) any additional information as required by the Commission or staff.
(11) MT - Changes to existing promotions go to hearing.