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22 Competition Policy in the Post-Equal Access Market

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COMPETITION POLICY IN THE POST-EQUAL ACCESS MARKET

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Competition Policy in the Post-Equal Access Market

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I. Introduction

The two conditions that the United States Department of Justice and District Court Judge Harold Greene deemed necessary to prevent AT&T from exercising monopoly power and that were embodied in the Modified Final Judgment (MFJ) in United States vs. AT&T have now been substantially achieved. First, AT&T has been divested of the Bell Operating Companies (BOCs). It thus no longer has the opportunity to provide discriminatory interconnection to competitors, or the ability to subsidize the prices of its interexchange services with revenue from local exchange services or to shift costs from competitive interexchange services to local exchange services. Second, the BOCs are offering their customers equal access to all long-distance companies to the extent required by the MFJ.[1] As Judge Greene noted, "...with the removal of these barriers to competition, AT&T should be unable to engage in monopoly pricing in any market."[2]

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1 Under terms of the Modified Final Judgment, most telephone customers in metropolitan areas (i.e., most customers) now receive equal access to all long-distance companies. Customers in more rural areas will receive equal access as the necessary equipment is installed in the future. See Section III for additional discussion of equal access.

2 United States vs. AT&T 552 F. Supp. (D.D.C. 1982) at 172. In addition, note that AT&T's control of local bottleneck facilities was the (sole) reason the FCC itself cited for classifying AT&T as a dominant carrier in its Competitive Carrier proceeding.

We believe that achievement of the relief sought by the government in United States vs. AT&T provides a logical and compelling basis for now undertaking revisions in the way in which the FCC regulates AT&T. Indeed, if now is not the time for change, it is not clear when will be. There are no other obvious trigger points to motivate revisions in the Commission's regulation of AT&T.[3]

There are two basic reasons for undertaking change now and they relate to the two basic functions regulation performs. Regulation is, in the first instance, a substitute for competition. Ideally, properly functioning regulations bring about the results that properly functioning markets would if competition were feasible. It follows that as market imperfections are removed (as they have been) and competitive forces play an increasingly predominant role (as they do), the need for regulation as a substitute for

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3 Some of AT&T's competitors have suggested that AT&T cannot be deregulated until its market share falls to some prescribed level. That suggestion is transparently self-serving. As Professors Kaserman and Mayo have noted, "If changes in public policy must wait for the OCCs to announce that they are ready to compete openly without regulatory favoritism, then the current system will undoubtedly endure for a very long time indeed." See "Market Based Regulation of a Quasi-Monopoly--A Transition Policy for Telecommunications," Policy Studies Journal (Forthcoming); see also Kaserman and Mayo, "The Ghosts of Deregulated Telecommunications: An Essay by Exorcists," Journal of Policy Analysis and Management, Vol. 6 (Fall, 1986). The reader should note that we are advocating revisions rather than removal of regulatory controls at this time.

competition is diminished.[4] Maintaining unnecessary regulation would clearly be wasteful in that it would involve incurring unnecessary costs and, what is even more important, could actually stifle desirable competition that would bring benefits to consumers. Note also that traditional rate-of-return regulation is likely to become increasingly ineffective and unworkable as competitive forces operate because the regulated firm's profit rate is increasingly beyond its control. The post-divestiture AT&T enterprise is no longer a very capital-intensive business and, consequently, relatively small shifts in its income cause relatively large shifts in its profit rate.

Regulatory policies may also serve as a complement to competition. For example, policies providing for equal access and for toll deloading promote competition by, respectively, lowering entry barriers and expanding the extent of the market and hence the room for competitors. But while good regulation can help the competitive process to function effectively, regulatory failures clearly can prevent it from working. These failures may involve errors of omission as well as commission. Important in this regard are questions related to the long-run viability of competition in the

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4 This is not to suggest that competition has become fully or adequately effective. On the other hand, competition has certainly become more effective in recent years than it was before. And if the current level of competition were sustainable over the long run (an open question in our view), this market would be just as effectively competitive as several other unregulated markets in the economy.

interexchange business. In its submission to the FCC's Docket 83-1147 investigation of long-run deregulation of AT&T, the Ad Hoc Telecommunications Users Committee, a group of very large telecommunications users, argues that "such competition for AT&T's intercity transmission services as has developed up to now has been primarily driven not by any real economic foundation, but by entirely pecuniary distortions, principal among which are discounted access charges and rate averaging."[5] While we believe there are reasons to be somewhat skeptical of this claim, ultimately the only way to prove or disprove it is a fair market test. The relief sought by the government in United States vs. AT&T, approved by Judge Greene, and now substantially effected was intended to destroy artificial impediments to competition. It would be unfortunate if the FCC were now to allow its regulations and processes to operate or be exploited in ways that are fundamentally inconsistent with competitive market processes. One way to avoid this outcome would be to adopt policies that are less susceptible to error or abuse than current ones.

This paper is organized in the following manner: Section II describes in qualitative terms the avoidable costs of current regulation, that is, costs that need not be incurred to protect consumers from monopoly abuse. Section III provides a thumbnail sketch of the current state of

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5 In a frequently cited academic journal article, MacAvoy and Robinson draw the same conclusion. See "Losing by Judicial Policymaking: the First Year of the AT&T Divestiture," Yale Journal on Regulation, Volume 2, Number 2, 1985.

competition in the interexchange market including an evaluation of the extent of AT&T's market power. Section IV outlines a proposal for revision of the Commission's regulation of AT&T that we believe protects consumers who lack competitive alternatives at the present time and obviates concerns about predatory pricing or cross-subsidization. Section V is a brief summary.

II. Avoidable Costs of Regulation

The direct costs associated with the FCC's current regulation of AT&T are not insubstantial. One study submitted in the FCC's Docket 83-1147 deregulation inquiry estimated that direct costs, excluding AT&T's costs, were more than $40 million per year and that annual savings of between $15 and $25 million were possible.[6] In addition to these direct costs, it is also necessary to reckon the opportunity costs of the resources expended under current regulation to gauge the full extent of the regulatory cost burden. Opportunity costs measure the value of what could have been

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6 See Multinational Business Services, Inc./Peat Marwick, "Cost Analysis of Telecommunications Regulation." The figure for total direct costs was computed from the combined estimated costs of the FCC and all intervenors except AT&T. Intervenors included competitors in the telecommunications industry, industry users, state and local governments and others. While this study's estimates of potential cost savings are premised on reforms that differ from those we recommend, we nevertheless believe that they provide a reasonable ballpark estimate. Indeed, because AT&T's potential cost savings are excluded, because estimates are based on direct rather than relevant opportunity costs, and because our suggested revisions are likely to generate even greater cost savings, this study's range of estimates should, in our opinion, be viewed as lowerbounds for actual cost savings likely to be experienced.

produced with given resources in their most valuable alternative employment. In other words, they represent the value of what we sacrifice by using resources one way rather than another.

Given the existence of less resource intensive methods of effectively regulating AT&T, the opportunity costs of failure to adopt such methods consist of the benefits wasted resources could have produced in alternative employments. The true economic costs of technically inefficient regulation of AT&T include, inter alia, the benefits society necessarily foregoes from less effective regulation of access tariffs, accounting separations and other important activities of the Commission. As a result of the Bell System divestiture, the FCC now not only regulates AT&T, but also regulates the access tariffs filed by the Bell and other telephone operating company monopolies. The latter constitutes a monumental undertaking involving a very substantial commitment of resources that, prior to divestiture, was unnecessary.[7] Also in its Computer III Rulemaking the FCC now contemplates substitution of accounting controls for separate subsidiary requirements to regulate supply of enhanced information services by the telephone operating company monopolies. To be effective, accounting controls will also require

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7 The theory of the government's relief in United States vs. AT&T was to separate the competitive elements of the telephone system from the monopoly ones. The monopoly elements are located in local exchange operations, which continue to be regulated. But there has been no deregulation of the presumptively competitive long-distance sector, despite divestiture and equal access.

a very substantial commitment of resources to evaluate and monitor compliance with accounting separations plans. Finally, note that at a time when the Commission's resource requirements are growing, its budget is shrinking in real terms, and is likely to continue to do so for the foreseeable future. The upshot is that the opportunity costs of the Commission's increasingly scarce resources are very high indeed.

To maximize the benefits society derives from its existence, the FCC should allocate its scarce resources so that, at the margin, the net payoff to an additional expenditure on any given activity is equalized. The effect of divestiture, equal access and greater competition in long-distance communications is to reduce the societal payoff to regulation in this sector relative to others. Rational resource management in this circumstance requires reallocation of resources away from that activity where regulatory productivity has fallen relatively and towards those activities where productivity has risen relatively.

In addition to the direct and opportunity costs of the resources involved in administering current regulations, it is also necessary to consider the economic losses that those regulations impose on consumers. Regulation may be conceived as the cure for some problems, but it is, incontrovertibly, the cause of others. That society benefits on net is certainly disputable. In our view, the principal effect of current regulation of AT&T is creation of equities in the status quo, regulation merely serving to isolate firms from competitive market pressures.

We focus on three important adverse consequences of current regulation. The first is that rate-of-return regulation significantly weakens the economic incentive for a regulated firm to minimize costs and to maximize the benefits it provides the public. Inflated costs may take many forms -- plush offices, overdesigned equipment, high salaries, or a bloated work force. Economists have focused most of their attention on one distortion, namely, overcapitalization. If regulators set the allowed rate-of-return above the cost of capital, but keep prices below the profit-maximizing level, a regulated firm will have an incentive to expand its rate base beyond the cost-minimizing level.[8] Regulators have attempted to deal with this adverse side-effect of rate-of-return regulation by requiring regulated firms to gain approval for investment in new facilities. In practice such requirements have not been very successful. The FCC has, for example, approved all of AT&T's requests for new international cables

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8 See H. Averch and L. Johnson, "Behavior of the Firm under Regulatory Constraint," American Economic Review, Volume LII, (December 1962). In his treatise on industrial organization, F. M. Scherer offers some anecdotal evidence suggesting that overcapitalizaton was, at a least historically, a serious problem in telephony. See Industrial Market Structure and Economic Performance (1970), pp. 533-537.

facilities even when there was little demonstrated need for additional capacity.[9]

Even more difficult than preventing inflated costs is assuring that a regulated firm effectively serve its customers' needs. Assuring that prices reflect costs and that costs are minimized are fine goals, but they are not enough if the products and services consumers desire are not produced. In this respect, AT&T's performance in the customer premise equipment market was certainly never anything to write home about and, in general, inferior to the performance of that business segment under competitive organization.

A particularly troubling aspect of this general problem of incentives is the lack of incentive a rate-of-return-regulated firm has to introduce product and service innovations. Because the regulated firm's profits are restricted, its incentives to seek out lower-cost methods of production or innovative services are also restricted. From society's point of view, there is nothing wrong with profits per se. It is ill-gotten profits that society dislikes and, with justification, seeks to discourage.[10] The trouble with rate-of-return regulation is that it does not distinguish

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9 See E. Kwerel and J. McNally, "Promoting Competition Between International Telecommunication Cables and Satellites," OPP Working Paper Series, No. 18, Federal Communications Commission (January 1986).

10 If monopolizing behavior were legal, that would encourage wasteful resource investments in acquiring monopoly power.

between profits that are generated by monopoly pricing behavior and profits that are generated by socially desirable innovative activity. It throws the baby out with the bath water.

The second adverse effect of current regulation is to divert resources away from marketplace competition to competition within the regulatory and political arenas and, thereby, to stifle the competitive rivalry that most benefits consumers. To reduce rates or introduce new services, AT&T must first convince regulators that its proposed changes are cost-justified. That task is formidable enough in the presence of common costs and uneconomic regulatory cost standards,[11] but when its competitors are permitted (and thus given additional incentives) to delay and harass AT&T, passive, noncompetitive behavior on AT&T's part is encouraged. Vigorous competition is thereby discouraged and consumers' expectations are likely to be frustrated. In this regard, note that AT&T's competitors have opposed virtually every price reduction proposed by AT&T in the period since divestiture and have in many cases successfully delayed the availability of beneficial price cuts to consumers. No one concerned with the economic

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11 In unregulated markets prices are determined by supply and demand, and increases in supply relative to demand may cause prices to fall below individual firms' book costs. That leads naturally to equilbrating reductions in supply. Regulatory attempts to prevent prices from falling below (mismeasures of) costs may lead to further increases in supply and eventually to even greater downward pressure on prices. They are thus likely to be wasteful and self-defeating.

welfare of consumers can logically argue that toll rates should be kept artificially high and that the FCC should practice handicapped regulation and umbrella pricing in toll markets.

A third important adverse consequence of current regulation is that it prevents the Commission from acquiring the information it needs to make a reasoned determination about the long-term viability of competition in the long-distance business. Current regulation makes it impossible to distinguish whether the market entry we observe reflects actual comparative efficiencies on the part of competing firms or is merely a response to distortions introduced by regulation itself and hence not sustainable as the distortions are mitigated by competition. Without knowing the genealogy of observed entry, it is impossible to prescribe, with any acceptable degree of confidence, long-term regulatory policies that will promote consumer welfare.[12] How can the Commission presume to act in the public interest when it lacks the information it needs to make reasoned policy determinations?[13]

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12 See J. Haring, "Implications of Asymmetric Regulation for Competition Policy Analysis," OPP Working Paper Series, No. 14, Federal Communications Commission (December 1984).

13 Besides being incompatible with the use of competition as a discovery procedure, continued rate-or-return regulation may also be incompatible with the natural evolution of a competitive market structure. For example, if there is regulatory failure and AT&T is not permitted to earn a competitive rate-of-return, that will effectively exclude all rivals who are not more efficient than AT&T. And that problem will be exascerbated if new entrants must pay a premium for capital because their capacity to produce profits is unproven and, therefore, possibly riskier.

III. The Extent of AT&T's Market Power

In this section we examine the extent of AT&T's market power. Market power is the ability of a firm to maintain prices profitably above minimum costs of production for an extended period of time. We assume that the purpose of regulating AT&T is to limit the exercise of market power. It follows that to the extent AT&T's market power is being dissipated the putative benefits of regulation are declining.

While one can't be a little pregnant, a firm can have a little market power. Indeed, most firms in the economy possess some market power. Showing that a firm possesses market power is not sufficient to justify regulation. Instead, the relevant question is at what level of market power do the benefits of regulation outweigh the costs. We believe that AT&T's ability to raise prices above competitive levels has fallen to a point where the benefits of rate-of-return regulation fall short of its costs. Presently, we will propose a streamlined form of regulation to limit AT&T's ability to exercise whatever market power it may still possess.

A. Analytical Framework

A firm's ability to raise prices profitably above the perfectly competitive level depends on the degree to which it loses customers as it raises its price. The more customers it loses, the less its price will deviate from the competitive level. In technical economic terms, a firm's market power may thus be said to vary inversely with its perceived

elasticity of demand, the latter defined as the percentage loss in quantity sold when price is raised by one percent.[14]

When one firm in the market acts as a price setter while the remaining firms act as price takers, the elasticity of demand (e_d) facing the price-setting firm can be expressed in terms of the market elasticity of demand (E_d), the elasticity of supply of the other firms in the market (E_s), and the price-setting firm's market share (s). It can be shown that:[15]

$$e_d = E_d/s + E_s(1-s)/s. \qquad (1)$$

We consider each of these three factors as they apply to AT&T.

Market elasticity of demand: One constraint on AT&T's market power is the market elasticity of demand. If the price of long-distance services were to rise, customers would reduce their total consumption of such services. They would economize on their calling and substitute postal services, personal visits and other alternatives for telephone communication. Some calling might be foregone altogether, and other calls will be of shorter duration. From equation (1) it is clear that the greater the market elasticity of demand (E_d),

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14 William Landes and Richard Posner, "Market Power in Antitrust Cases," Harvard Law Review, 94:5 (March 1981).

15 See Landes and Posner, p. 945.

the greater the elasticity of demand faced by AT&T, other factors the same. Econometric studies suggest that the market elasticity of demand for long-distance services is on the order of .5 in the short run and approximately unitary elastic in the long run after consumers have had a chance to adjust their consumption.[16] These elasticities imply that if AT&T were to raise price, its revenue would increase in the short run and remain roughly constant in the long run, assuming the absence of rival firms. Since its total costs would fall or remain constant as output declined, its total profit would rise.

Supply elasticity of competitive fringe: Another constraint on AT&T's willingness to raise its prices is its fear of losing customers to its rivals. In terms of equation (1), the larger the elasticity of supply (E_s) of the competitive fringe, the larger the elasticity of demand perceived by AT&T. If AT&T's competitors increased their output by a large amount in response to a price increase, AT&T would lose a large percentage of its sales to other firms by raising price.

One indication of large elasticity of supply in the long-distance business is the rate and relative ease with which productive capacity is currently being expanded. A survey by The Hudson Institute indicates that firms other than AT&T plan to add more than 5.3 billion circuit-miles of

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16 Lester Taylor, Telecommunications Demand: A Summary and Critique, (Cambridge, Massachusetts: Ballinger Publishing Co., 1980), p. 100.

fiber-optic capacity to the U.S. long-distance telephone network by 1988. This would represent a 379 percent increase over the approximately 1.4 billion circuit-miles of total U.S. capacity in 1985.17

According to a recent survey conducted by the the Industry Analysis Division of the FCC's Common Carrier Bureau (CCB), carriers other than AT&T have already put in place large amounts of fiber-optic transmission capacity.18 The CCB estimates that about 650,000 fiber-miles of capacity was installed by the end of 1986 by carriers other than AT&T. (See Table I). That capacity could provide approximately 1.6 billion 2-way circuit miles using current optical electronics technology and over 4 billion circuit miles using terminal and repeater technologies likely to be available in the near future. The presence of such large amounts of easily expandable capacity clearly constrains AT&T's ability to exercise market power by restricting output. Note also that once capacity is installed, it is effectively sunk and cannot exit. That means that while the identities of future competitors may differ from those of current competitors, there will, in fact, be supply alternatives in the future. Huge increases in supply relative to demand spell lower and lower prices well into the future.

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17 William Johnston, "The Coming Glut of Phone Lines," Fortune, (January 7, 1985).

18 Jonathan Kraushaar, "Fiber Deployment as of Yearend 1986," Industry Analysis Division, Common Carrier Bureau, FCC (December 1986).

Table I

Estimated Fiber Deployment by Major Interexchange Carriers

Yearend 1986

	Fiber-Miles	Percentage
AT&T	261432	29%
U.S.-Sprint	172469	19%
MCI	167400	18%
Lightnet	158785	17%
NTN	133182	15%
Electra	10194	1%
RCI	6960	1%
Total	910422	

Source: Jonathan Kraushaar, "Fiber Deployment as of Yearend 1986," Industry Analysis Division, Common Carrier Bureau, FCC (December 1986).

Market share: Market share is another factor to be considered in analyzing market power. Holding constant the market elasticity of demand and the elasticity of supply of competitors, equation (1) indicates that the larger a firm's market share the smaller its elasticity of demand, and, hence, the greater its market power. Of course, equation (1) also shows that market share is only one factor affecting market power. Even if market share were large, market power would be small if the market elasticity of demand or the elasticity of supply of competitors were large.

The influence of market share can be decomposed into its interaction with the market elasticity of demand and with the elasticity of supply of competitors. To simplify the exposition, we will assume that the elasticity of supply is zero when discussing the market elasticity of demand and vice versa. First, consider the influence of market share on the relationship between the market elasticity of demand and the elasticity of demand facing the firm. The smaller the market share of the price-setting firm, the greater the percentage reduction in its output for a given percentage reduction in market output, and hence the greater its elasticity of demand relative to the market elasticity of demand. For example, if the market output is 100 units while the firm's output is 10 units, a 5 unit reduction in output would represent a 5% reduction in market output but a 50% reduction in the individual firm's output.

Similarly, as the firm's market share falls (and the share of the competitive fringe increases), a given percentage increase in supply by the

competitive fringe will represent a larger percentage increase relative to market output, and a larger percentage decrease in the sales of the price-setting firm. This means that the price-setting firm must reduce its output by a greater percentage to achieve a given percentage increase in market price, the smaller its market share, given the elasticity of supply of the competitive fringe and the market elasticity of demand.

AT&T's share of the long-distance business has been steadily declining. Table II shows that AT&T's share of the interstate toll market has dropped significantly during the last two years. AT&T's share of total minutes fell from about 83% to 77%. In those particular market segments where the OCCs have chosen to compete, AT&T's market share has fallen to significantly lower levels. One study estimated that AT&T's share of the business in "contested" market segments fell below 70% in 1986 and would be less than 60% by 1988.[19]

These figures overstate AT&T's <u>prospective</u> market power because they reflect historical sales, rather than the ability to compete for customers in the future. Thus AT&T's share of productive capacity may be a better measure of its market power. AT&T's capacity share is falling quite

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19 See Multinational Business Services, Inc., "Competition in the Telecommunications Marketplace," October 1986.

precipitously. Table I shows that as of yearend 1986, AT&T controlled only 29% of fiber optic interexchange capacity. Even when conventional capacity is included in the calculation of capacity share, AT&T's share falls well below 50%.

Table II

AT&T's Share of

Interstate Switched Access Minutes

1985:	Quarter 1	83.1%	
	Quarter 2	80.3%	
	Quarter 3	78.5%	
	Quarter 4	77.2%	
1986:	Quarter 1	78.9%	
	Quarter 2	77.9%	
	Quarter 3	77.0%	(preliminary)

Source: Data on AT&T's access minutes are contained in a letter from D. Culkin of AT&T to A. Halprin, Chief, Common Carrier Bureau, FCC, November 24, 1986. Data on total market access minutes are from National Exchange Carrier Association (NECA), "Monthly Summary of Pool Results," monthly reports filed with the FCC.

B. Additional Considerations

For purposes of analyzing market power, certain other considerations may be usefully taken into account. These include the geographic location of call origination and destination, type of service, and customer size:

Call Destination--International Calls: The market power analysis given above is not applicable to the international market. The most significant difference between the international telecommunications market and the domestic market is that foreign telecommunication authorities (PTT's) control access to foreign markets but are not subject to U.S. regulation. In such an environment, market power possessed by U.S. international carriers could, in fact, serve U.S. interests by counterbalancing the market power of PTT's. Rate-of-return regulation does not protect the interests of U.S. consumers of international telecommunications, in any event, because it permits regulated U.S. carriers to pass on the costs of payments to monopoly PTT's.[20]

Exchange in which Call Originates--Equal Access, Presence of Competitors: The degree of AT&T's market power for interstate switched voice service (MTS) may vary across local exchanges depending on the presence or absence of competitors offering such service in a particular exchange, and on the availability of equal access. As part of the

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20 See Kwerel and McNally, pp. 61-64.

divestiture agreement between AT&T and the Department of Justice, the BOCs are required to offer all long-distance carriers access that is "equal in type and quality" to that provided to AT&T. Likewise, the GTE Consent Decree requires the eighteen GTE telephone operating companies to provide equal-access interconnection. Equal access assures all long-distance carriers equal transmission quality, permits all carriers to offer service to customers with rotary as well as tone phones, allows customers to reach all carriers by dialing the same number of digits, allows all carriers to automatically identify the phone number of the party originating a call on its network, and allows all carriers to determine precisely when a call has been terminated. Under the divestiture agreement, each BOC was required to offer equal access in offices serving at least one-third of its lines by September 1, 1985, and to offer it in the remaining end offices by September 1, 1986 "upon bona fide request."

By the end of 1986 about 70% of all lines were converted to equal access.[21] Of course, many people without equal access still have a choice of two or more carriers, albeit in a less convenient but also less expensive form. Assuming that all of the people with equal access have a choice of carrier but that only half of the customers without equal access have such a

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21 Bell Operating Companies, with about 80% of all lines, converted 74% of their lines, while independent companies converted 38.6%. "Trends in Telephone Service," Industry Analysis Division, Common Carrier Bureau, FCC, February 2, 1987.

choice, about 85% of all customers will have a choice of two or more carriers by the end of 1986.22

While AT&T's market power may be greater in those exchanges currently lacking actual competitors, its market power is still, of course, limited by the ability of competitors to enter these markets. Expansion of an existing network into new territory is easily accomplished. Moreover, it is certainly possible that AT&T's market power may actually be less in markets without equal access than in those with it. This is merely a reflection of the generous 55% discount on access charges OCCs receive for non-premium service. That discount more than compensates these carriers for lower quality interconnection. Thus OCCs are more likely to be able to undercut AT&T's prices and expand output at AT&T's expense in exchanges without equal access, other things being equal.

Type of Service--Switched vs. Private Line: One would expect the private-line market to be more competitive than the switched-services market because private-line users are highly sophisticated and have enough at stake financially to justify shopping carefully for the best deal. Indeed, the private-line market was the first service to experience competitive entry. On the other hand, the fact that few carriers currently offer private-line

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22 This estimate does not take into account the fact that some customers have multiple lines.

services relative to the number offering switched services suggests that the private-line market may be less competitive than the market for switched services. The lack of suppliers may, however, be a result of regulation, and not an indication of the potential long-run competitiveness of the private-line market. There may be few firms offering private lines because private-line users have been effective in using the regulatory process to hold down AT&T's private-line prices. Individual private-line users may save enough from a reduction in private-line rates that it pays them to participate actively in the regulatory process. The fact that AT&T reported a negative rate of return on private line services of 4% for 1984, at the same time that it reported positive earnings of 15% on switched services is strong evidence that regulation has held private-line rates below the competitive level.[23] Absent regulation, AT&T would have the freedom to raise its prices for private lines, but if it did new competitors would quickly enter the market. Moreover, many private-line users are large enough that they may be able to put together their own system. Alternatively, large users might sign long-term contracts with AT&T's competitors, thereby sharing the risk that AT&T might lower its prices.

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23 See AT&T Tariff Filing Reference Package, Vol. 2, 1984 Annual Fully Distributed Cost Report, June 1985.

Transactions Costs, Product Differentiation and Size of User: The model discussed in Landes and Posner's article assumes a homogeneous product, perfect information about prices, and no transactions costs involved in changing suppliers. Under these conditions, if a firm raised its price above that of other firms, it would lose all its sales. Thus, there would be a single market price in equilibrium. In their model the dominant firm raises the market price by reducing its output. This describes some markets better than others. For example, it may be a reasonable description of the market for oil in the early 1970's. Saudi Arabia was a dominant supplier at that time and was able to raise the world price of oil by reducing its output.

In the telecommunications market, however, individual carriers do not all charge the same price for a service. One reason for this is that the products offered by different vendors are not identical. For example, people appear willing to pay more for more reliable or clearer connections. Another reason is that it is costly to become fully informed about prices and service characteristics. It is also costly to calculate whether it pays to switch to a new carrier. It may not pay small users to incur these costs, so they may continue to use AT&T even if they might be better off if they could costlessly switch to some other carrier.

Transactions and information costs may thus give an incumbent firm such as AT&T a modicum of market power. The profits obtainable from raising price to these users are limited, of course, by the small volume of calls

each of these users makes, the modest size of relevant information and transactions costs, and the ability of competitors to reduce the information costs by advertising. The more AT&T seeks to extract a premium over cost, the greater the incentive of its competitors to advertise that fact.

IV. Proposal

We have argued that AT&T's ability to raise prices above competitive levels is generally constrained by the ability of competitors to expand their output and the demonstrated willingness of customers to switch to alternative sources of supply. Yet there may be some areas in which AT&T retains market power. For example, small users in exchanges currently served only by AT&T might be one example. Such exchanges are typically in rural areas served by independent local exchange carriers.

Note, first, that requiring AT&T to maintain a single nationwide price schedule limits its ability to exercise market power in any particular <u>geographic</u> region. AT&T cannot raise prices for those customers who currently have no choice of long-distance carrier without simultaneously raising the prices for those who do. Uniform nationwide pricing requirements place less of a constraint, however, on AT&T's ability to raise prices in the submarket composed of small users. AT&T already serves these customers and may derive some limited market power from the fact that it may not pay such customers to incur the information and transactions costs involved in finding a lower-priced carrier. Even with the requirement that AT&T maintain uniform national prices, AT&T could conceivably establish a

set of optional calling plans that allowed it to charge lower prices to high-volume customers for which AT&T faces intense competition and higher prices to those small-volume customers for which it faces less intense competition.

There are several options for dealing with the possibility that AT&T may retain pockets of market power in a limited number of areas. One is to continue subjecting AT&T to the current form of regulation in all markets because some markets may not be competitive. The second is to deregulate only those markets that are deemed competitive. The third is to deregulate all markets despite the fact that some may not be competitive in the short term. Finally, there is the option that we examine here. The essence of our proposal is to replace rate-of-return regulation with a price cap on a limited set of "core" services that must be offered in all markets. We consider each option in turn.

The option of continuing to regulate AT&T in all markets has little to recommend it. It would be a mistake to forego the benefits of rapid introduction of new services and innovative pricing schedules in all markets because AT&T retains some residual market power in certain areas.

The option of market-by-market deregulation would present great administrative problems. Many of AT&T's facilities simultaneously serve both regulated and unregulated markets, and there is no meaningful (i.e., economically nonarbitrary) way to apportion joint costs to separate markets.

Thus the FCC might find itself bogged down in endless debates about cross-subsidies between regulated and unregulated markets.

The third option of complete deregulation appears to be the best long-run approach. It eliminates the distortions associated with rate-of-return regulation and gives AT&T the freedom to introduce new services and pricing options without lengthy regulatory delays. But, as noted above, it fails to account for the possibility that AT&T may retain some market power over small customers in exchanges without equal access and where rivals are absent and not likely to enter because of the small number of customers to be contested.

We believe that the fourth option offers the best balance between preventing AT&T from exploiting any residual market power it possesses and providing customers with the benefits of more innovative service and pricing. The essence of this approach is to replace the current system of rate-of-return regulation with a price ceiling on a small set of core offerings. Core services would be defined so that for any service over which AT&T has significant market power, that service would either be within the core or there would be a close substitute for the service among the regulated core services. AT&T would be required to offer the core services at a uniform price throughout the country. These core services might include MTS and WATS or perhaps only MTS. Private lines probably would not be classified as a core service because this market is potentially highly competitive (i.e., AT&T lacks significant market power).

outlined.[25] The "problem" the British now confront is that British Telecom has lowered its costs substantially and is earning high profits. These profits "look bad" even though they represent a freeing-up of resources to produce other sources of consumer welfare.

One proposal now being considered by the British is to "look at" the regulated firm's profitability periodically. If profits are judged to be "too high," then the price ceilings might be lowered. The problem with this approach is that it might stifle the innovative or economizing activity that is responsible for lower costs or more effective performance in the first place. It puts the benefits of such activity at risk. If society merely substitutes one form of profit regulation for another, it will necessarily sacrifice much of the benefit of getting rid of profit regulation. There are no eggs if you kill the goose.

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25 See I. M. Stelzer, "Regulating Telecommunications in Britain: A New Alternative to the U.S. Approach," Telematics, Vol. 3, No. 9 (September 1986).

during the period of below-cost pricing. But if there is a price ceiling, AT&T would not be able to raise its prices to reap the benefits of predation, so it would have no incentive to engage in predation.24

Finally, the proposal would eliminate the problem of cross-subsidization between regulated and competitive markets. Cross-subsidization is a problem caused by regulation. Without rate-of-return regulation AT&T would have no incentive to engage in cross-subsidization. Cross-subsidization occurs because regulation limits the profits that may be earned in some activities but not others. Under rate-of-return regulation a firm has an incentive make it appear that profits earned in the regulated activities were earned by the unregulated ones. It may do this either by charging costs of the unregulated activities to the regulated ones or by crediting revenues earned by the regulated activities to the unregulated ones. If there is no absolute regulatory limit on the amount AT&T may earn in any of its activities, AT&T would have no incentive to do this.

V. Concluding Remarks

We believe we have described a "better way" in this paper. Specifying a better way is not the same as effecting one, although it might be a step in that direction. The British have adopted a variant of the approach we have

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24 See William Baumol, "Quasi-Permanence of Price Reduction: A Policy for Prevention of Predatory Pricing," Yale Law Journal, (November 1979).

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