distance market and to stifle nascent competition in the local markets. Regulation will be insufficient to control such incentives and monopoly power. Consequently, only widespread, effective facilities-based local competition will prevent Ameritech from acting on its ability and incentive to harm the competitive process.

6. Any complete analysis of a BOC's entry application must address both the benefits and the costs of such entry. Our affidavit focuses on the costs; i.e., the potential harm to competition and economic efficiency associated with Ameritech's application. In a companion affidavit, Robert Hall addresses and rebuts Ameritech's arguments, advanced by Paul MacAvoy as well as by Robert Crandall and Leonard Waverman, that the long-distance industry is performing poorly and BOC entry is needed to break up a tacitly collusive long-distance cartel. We agree with Professor Hall that significant economies of vertical integration from RBOC entry into interLATA service are very unlikely, especially given the requirements for structural separation in Section 272 of the 1996 Act. Absent any credible expected benefits from interLATA entry by the BOCs, the FCC's entry decision should turn on whether the expected costs of interLATA entry by the BOCs are also negligible. We find that these risks are quite substantial at this time, however, so that Ameritech Michigan should not be allowed to offer interLATA service now.

II. THERE ARE SIGNIFICANT SOCIAL COSTS FROM PREMATURELY ALLOWING AMERITECH TO PROVIDE INTERLATA SERVICE.

A. The linkage between allowing Ameritech to offer interLATA service and the level of competition in local telephone markets.

7. There are three distinct rationales for linking Ameritech's entry into interLATA service to the level of competition for local services. First, as long as Ameritech controls a regulated, bottleneck facility, it will have powerful incentives for anticompetitive behavior if it is allowed to participate in other markets for which access to the bottleneck is essential. This is true in particular for the long-distance market. When customers have a real choice among facilities-based local competitors, independent long-distance companies will become less dependent on the BOC's upstream (i.e., local exchange) services, reducing the incentive for anticompetitive behavior by the BOC and reducing the potential harm to competition in downstream markets.

8. Second, premature entry into interLATA long distance will allow Ameritech to engage in behavior that will limit the extent to which local competition can develop. Among these strategies are signing up customers for bundled local and long-distance services before local competition has had a chance to develop; the use of customer specific discounts on long-distance or bundled services in order to cut prices to local service customers most likely to patronize new local service entrants; raising the cost to customers of switching local service providers; and providing poor service when customers switch to new local carriers (thereby damaging the new carrier's reputation and requiring it to incur additional costs to mollify their customers). These strategies

can all enable the BOC to "lock in" its control over local service customers prior to the development of effective local competition.

9. Third, regulatory approval of interLATA entry serves as a reward or "carrot" to induce the BOCs to open up their local networks. Under the 1996 Act, they are required to unbundle their local networks and sell the components at cost-based rates. But these actions on the part of the BOC, while legally required, are complex and difficult to monitor. It will be hard for regulators to determine if the BOC is really complying with the Act's requirements to the best of its ability. If a BOC receives the carrot of long distance entry before it has opened its network in a meaningful and irreversible way, its sole business incentive to cooperate in setting reasonable terms, conditions, and operating procedures for local network access by competing local exchange carriers is eliminated.

B. Ameritech would have powerful anticompetitive incentives in the interLATA business if it were allowed to enter.

10. Ameritech's entry into interLATA long-distance service is likely to harm the competitive process and therefore make consumers of long-distance and local services worse off, unless it faces effective competition in the markets for unbundled network elements and for retail local exchange services. Until effective local competition develops at both levels, Ameritech will continue to control bottleneck upstream facilities. Economists and policy-makers have long recognized the dangers of allowing a regulated, bottleneck monopolist to compete in related

markets. Absent either enough facilities-based local entry, so that competition replaces regulation as the effective constraint in Ameritech's upstream pricing, or ideal regulation that would ensure access by others to its local facilities on equivalent terms, Ameritech will retain both the ability and incentive to discriminate against competitors in the long-distance market. With only very limited possible exceptions, however, regulators' ability to regulate access to Ameritech's facilities will necessarily be imperfect, and long-distance competitors (and their customers) cannot expect to benefit from truly nondiscriminatory access to Ameritech's facilities until effective competition appears.

11. Public policy for at least the past 15 years has recognized that allowing a regulated, bottleneck monopolist such as Ameritech into related markets carries substantial dangers. These concerns are firmly founded in the economics literature.[1] A regulated bottleneck monopolist has a strong financial incentive to enter into and control potentially competitive related markets in order to evade the constraints that regulators attempt to place on its profits and prices at the bottleneck level. It can block competition and gain control over those related markets it is allowed to enter simply by refusing rivals access to its bottleneck facilities. Where outright denial is not allowed, it can be expected to attempt to provide access only on discriminatory terms. Where regulation constrains its profits in the core monopoly, Ameritech can expect that, by raising the input costs of its rivals, it could profitably increase its own price for the unregulated

[1] See, for example, J.A. Ordover and G. Saloner, "Predation, Monopolization and Antitrust", in The Handbook of Industrial Organization, Vol. 1, Chapter 9; edited by R. Schmalensee and R. D. Willig; (North Holland) 1989.

downstream service while suffering no offsetting loss in the constrained profits of the core monopoly. Where regulation directly constrains Ameritech's prices, but not its profits, incentives for discrimination remain pervasive because the profit gain downstream from discrimination will often outweigh any forgone profit in the core monopoly due to lost sales, and lost margins, due to discrimination against downstream rivals. Additionally, Ameritech may attempt to cross-subsidize its competitive activities with revenues from monopoly markets. This cost shifting is profitable to the extent that Ameritech is allowed to pass these costs through via higher prices to its local service customers.

C. Ameritech has strong incentives to discriminate against local telephone competitors.

12. Concerns over the LECs' ability and incentive to discourage local competition proceed from a different theoretical framework than the concerns described above over anticompetitive leveraging into adjacent markets. The LECs have continuing incentives to discriminate against local exchange competitors that are even more direct than their incentives to discriminate against rival long-distance suppliers. Indeed, there is substantial evidence that the ILECs have frustrated competitive entry at every turn, and Ameritech is not exception.[2] The BOCs have incurred enormous sunk costs to build their local networks. The modern economics literature on industrial

[2]See Michigan Public Service Commission Staff's Request for Clarification, In the Matter of the Application of City Signal, Inc. for an order establishing and approving interconnection arrangements with Michigan Bell Telephone Company, Case No. U-10647 (July 26, 1995)

organization recognizes the role that sunk costs play as barriers to entry.[3] When incumbents have sunk their costs, and entrants have not, incumbents are said to have a "first-mover" advantage.[4] First-mover advantages often turn out to be of strategic importance because the incumbent, having already sunk its costs, will have available a variety of tactics that are relatively costless to it but that can dramatically reduce the incentives of potential entrants to actually sink the costs necessary to enter. Moreover, since the value of monopoly profits will exceed the entrant's portion of industry profits, actions taken by the incumbent that appear to inflict equal costs or losses on both the entrant and incumbent will be highly profitable if, as a result, monopoly profits are preserved because entry is foreclosed or the scale of entry is reduced. This principle has been recognized by the Federal Communications Commission: "The economic principle at work...is that a monopolist stands to lose more profits than a duopolist has to gain; thus, the monopolist has a greater incentive to preempt than an entrant has to enter."[5]

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[3]The sunk costs associated with entry are the costs that cannot be recovered if the entry attempt is unsuccessful. Common examples are marketing costs (to the extent, as will usually be the case, that the "brand name capital" cannot be fully transferred to other markets), facilities costs (to the extent that full value of the equipment, less normal depreciation, cannot be recovered in a used equipment market), and any costs incurred to compensate customers for the costs they incur in switching suppliers. For a discussion of the relation between sunk costs and barriers or impediments, see Jean Tirole, *The Theory of Industrial Organization*, Chapter 8, The MIT Press (1989).

[4]First-mover advantages are not simply the product of being first. If sunk costs are not necessary for entry, no first-mover advantage exists.

[5]See Federal Communications Commission, Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rulemaking, CC Docket No. 92-297, Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 Ghz Band, to Reallocate the 29.5-30.0 Ghz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, March 11, 1997, pp. 76-7.

13. Examples of potentially exclusionary tactics include:

a) Strategic use of long term contracts. Incumbents faced with potential entry have incentives to sign up customers for long term contracts and to stagger the terms of those contracts. Simply "locking in" customers with long term contracts pushes the threat of entry off into the future, since the size of the entrant's potential market is smaller. This, in turn, reduces the financial feasibility of entry. Staggering the contract lengths imposes a permanent cost penalty on entrants, since the potential market available to the entrant will be smaller in all periods.[6] Discounts that induce exclusive dealing (where customers deal with only one seller for a product) or contracts with high withdrawal penalties can have the same "lock-in" effect.[7]

b) Poor service to new entrants. Providing poor service in provisioning network elements when switching a customer to a new local carrier raises the costs of entry, since the entrant will be forced to increase promotional and marketing expense to offset, as best it can, the adverse effects of the BOC's poor performance on its own reputation.

c) Artificially raising the costs of switching between local carriers. Since the incumbent BOC starts with all the local customers, policies that uniformly raise customer switching costs, such as setting artificially high nonrecurring charges for service ordering or line connection for unbundled network

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[6]The long-distance industry now features a variety of calling and promotional plans. For businesses, concessions and promotional terms are often individually negotiated (even though the pricing plans themselves are offered on a nationwide basis). Thus simply by engaging in what is normal business practice in the long-distance business, Ameritech will be able to offer customer-specific discounts to local service customers most likely to patronize a new entrant. The discounts are pro-competitive in long distance, where facilities-based competition is well established. However, such discounts can discourage facilities-based entry for local service when employed by an incumbent who is just beginning to face competition.

[7]The consent decree between the U.S. Department of Justice and Microsoft requires that Microsoft remove from its contracts with computer manufacturers a particular discount structure that induced exclusive dealing. The decree also requires Microsoft to shorten the length of its contracts.

elements (UNEs), protect the incumbent's customer base and raise the costs of entry.[8]

d) Discriminatory access to customer information. For example, a local entrant who relies in part on UNEs must provide to the BOC competitively sensitive information, such as the identity of customers who are considering switching to them from the BOC. The BOC then has incentives to target marketing resources to those customers to try to prevent the switch. The entrant has no such information when one of its customers is contemplating a switch back to the BOC.[9]

e) Pricing of and access to UNEs. Access to unbundled network elements is key to many new entrants. Clearly, however, it is not in the LEC's interest to assist its direct competitors. If unbundled elements are priced well above economic cost, or if the procedures for purchase of unbundled elements simply don't work very well, then entry barriers are higher than with cost-based pricing under a well-functioning set of purchase procedures. It is our understanding that the final pricing of UNEs is still not established in Michigan. Uncertainty over the pricing for major inputs can only inhibit entry.[10] In addition, it is also our understanding that there has only been very limited and unsatisfactory experience with how well the ordering, provisioning, and maintenance processes for UNEs under the

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[8]Ameritech's behavior in the intraLATA business provides a good analogy. When intraLATA competition was allowed in several Ameritech states, it instituted PIC freezes. A PIC freeze is a cessation of the customary practice whereby the LEC will change a customer's presubscribed interLATA (or intraLATA) carrier based on a request from that carrier authorized by the customer. When a freeze is in effect, a change in long-distance carrier cannot be implemented until the customer directly and personally provides authorization for the change to the LEC. This raises the cost of customer switching, which is an advantage for an incumbent who begins with all or almost all the customers. PIC freezes can give the BOC an advantage in competing for customers who prefer purchasing bundled local and long-distance service. The IXCs don't know which customers have signed up for the freezes, so they waste marketing costs reaching those customers. If the BOC's long-distance affiliate knows which customers are more expensive to switch (because they have signed up for the freeze), then it is better able than its rivals to efficiently utilize its marketing resources.

[9]MCI has filed complaints against PacBell and SNET for precisely this type of behavior.

[10]See Avinash Dixit and Robert Pindyck, *Investment Under Uncertainty*, Princeton University Press (1994).

arbitration agreements will work in practice. Slow, cumbersome, expensive, or unreliable processes can all impede or delay entry.

D. The "carrot" rationale for linking Ameritech's interLATA authority to the state of local competition.

14. Two local telephone markets are relevant to these proceedings: the downstream, retail market, where telecommunications services are sold to final customers, potentially by a large number of suppliers, and the upstream market for unbundled network elements (UNEs), where inputs are sold to providers of retail telecommunications services.

15. Because Ameritech's natural business incentive is to restrict and delay local entry, it makes sense to offer the company both carrots and sticks depending on how local competition (which depends in large part on Ameritech's behavior) develops. One carrot is interLATA entry, which Ameritech and other BOCs have coveted for some time. But since local competition depends on the degree to which Ameritech makes UNEs fully and generally available on reasonable terms, and the extent to which interconnections between local networks work in practice, it would be a mistake to give up the carrot too soon. Once Ameritech gets interLATA authority, its sole business incentive for cooperating in opening its network to competition will disappear. InterLATA authority should not be granted based on promises that Ameritech will have in place well-functioning methods for large-scale provision of UNEs at some time in the future. The Michigan PUC and the Federal Communications Commission cannot judge how well the UNE process is working until they actually see it in practice and have a chance to address the inevitable practical problems of implementation that will arise.

16. It is critical to note that Ameritech's incentives to discriminate (e.g., by placing artificial roadblocks to the smooth functioning of the unbundled element market) will increase significantly once competition develops at the retail level. For initial and small losses of retail business to the entrant, Ameritech's most profitable strategy will be to maintain its retail price and accept the loss of business, rather than cut prices more broadly. But as the amount of retail business that the entrants captures increases, at some point Ameritech will find it profitable to cut price to stem the loss of business. At that point the incentive to restrict (or increase the price of) the CLECs' purchases of unbundled network elements increases dramatically, since an increase in CLEC costs and hence prices now allows Ameritech to increase prices to its retail customers as well. It is thus important that the Commission recognize that Ameritech's incentives to frustrate local entry will be even higher in the future than they are today. This makes giving up the carrot too soon even more unwise.

E. Regulation will not be sufficient to prevent Ameritech from discriminating against their competitors

17. Faced with the undeniable incentives for anticompetitive behavior, advocates of BOC entry into interLATA markets, such as Ameritech's economic and regulatory witnesses Gilbert, Panzar, Wilk and Fetter, argue that modern regulation is more than capable of controlling anticompetitive behavior.[11] In short, they believe that regulation is capable of the intricate and

[11] Ameritech's witnesses also advance a straw man. They argue that Ameritech is unlikely to achieve market power or dominance in the interLATA business given regulatory constraints on anticompetitive behavior and the alleged implausibility of inducing the exit of any of the major incumbent long-distance carriers. But discriminatory behavior would be socially inefficient even if

detailed regulation that would be necessary to prevent a regulated firm from following the profit motive and engaging in the anticompetitive behavior that is so uniquely profitable for regulated monopolists. In contrast, we believe that competition is far better able than regulation to protect consumers and that delaying BOC entry until local competition has developed will reduce the necessity for detailed regulation in the future. It is troubling that, after regulation has been largely removed from the long-distance business, BOC entry into long-distance service is being considered while the BOCs' regulated local bottleneck remains almost completely intact. Even the BOCs' advocates recognize that the BOCs' near-term entry requires the reintroduction of detailed regulation of their long-distance activities in order to control their anticompetitive incentives to leverage market power. AT&T has only recently been deregulated. The BOCs' entry, even according to its advocates, reintroduces the ability to play the regulation game as an important determinant of competitive success in long distance. This would be truly unfortunate. Even remotely effective regulation would be very expensive. Moreover, there is strong reason to believe that regulation, as practiced, will not effectively prevent anticompetitive behavior.

18. Regulators face severe limitations in attempting to prevent Ameritech from acting on its anticompetitive incentives. For one thing, regulators are often unwilling or unable to impose

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it did not result in a high enough long-distance market share to suggest Ameritech had obtained market power in interLATA service. Discrimination is a way of exercising local market power (by evading the regulators' limits on the prices or profits allowed in the local monopoly). This exercise of market power is privately profitable but socially harmful to long-distance consumers (by reducing output and raising price) even if the BOC is unable to, in addition, obtain market power in long-distance service.

penalties sufficient to dissuade a LEC from refusing to obey the regulator's procompetitive orders in a timely fashion. The status quo then favors the LEC in competition with other telephone companies. As long as the LEC earns more money from disobeying a clear regulatory directive than it stands to lose from disobeying the directive, procompetitive orders will be ignored. The primary recent examples are the states, such as Minnesota and Michigan, where BOCs have ignored Commission directives to implement one-plus dialing parity for intraLATA toll service. Rather than implement the directives subject to appeal, the BOCs have sometimes simply refused to obey the orders while they appealed. Thus, at a minimum, the BOCs can profitably delay implementation of Commission orders they do not like.

19. A minor variation on this theme entails taking the narrowest possible interpretation of one's legal obligations. Thus, for example, a BOC might declare that a particular form of subloop unbundling is not technically feasible, even though it knows it is feasible. When caught, it may then obey Commission orders to inform customer-competitors who ask that the unbundling is feasible. At that point, however, the customer-competitor still may not have procured the necessary unbundled network elements due to further BOC foot dragging. Rather, negotiations may then proceed to other issues, where the BOC may take a similarly narrow view of its legal obligations to negotiate in good faith.[12]

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[12]This example is not hypothetical. In negotiations with a new CLEC, BellSouth claimed that the particular form of subloop unbundling the carrier requested was not technically feasible. Several months later, the same CLEC was surprised to find that BellSouth's proposed SGAT in Georgia offered precisely the form of subloop unbundling that BellSouth had earlier declared infeasible on technical grounds. When the CLEC's witness complained about this apparent failure

20. Even where an active regulator might hope to prevent many affirmative misdeeds or overt acts of commission, regulators will find it almost impossible to enforce a nondiscrimination standard against omissions or failures to act. For example, it would be difficult to detect Ameritech's failure to treat unaffiliated and affiliated companies the same with respect to R&D projects, or failure to fund capital projects that benefit a long-distance rival at the expense of Ameritech's own long-distance affiliate.

21. Consider, for example, what would happen when an IXC needed the technical cooperation of Ameritech to introduce technical changes in long distance, either in the form of capital expenditures by Ameritech, or collaboration with Ameritech on technical interconnection issues. So long as Ameritech viewed a ban on its participation in interLATA toll as likely to be in place over the foreseeable future, it would have had an unambiguous financial incentive to cooperate with the IXC, since improved quality or lower prices for long-distance service would increase the demand for access and thereby benefit Ameritech. Once Ameritech integrates into long distance, however, its calculation would change. Any new competitive success by the IXC would come, in

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to negotiate in good faith, counsel for BellSouth proudly told the Georgia Commission that once it and two other state commissions had ordered BellSouth to stop telling CLECs that the requested unbundling was infeasible, they obeyed the orders and no longer told CLECs that the requested unbundling was technically infeasible. See cross-examination testimony of Julia Strow of Intermedia Communication Inc., February 27, 1997, Before the Georgia Public Service Commission, In the Matter of: consideration of BellSouth Telecommunications, Inc. Services pursuant to Section 271 of the Telecommunications Act of 1996, Docket 6863-U, Transcript at pp. 2252-2256. The incident is also discussed in Ms. Strow's direct testimony before the Georgia Public Service Commission filed Feb. 13, 1997, at pp. 18-20.

part, at the expense of Ameritech's long-distance unit, reducing or eliminating its financial incentives to cooperate with the IXC in facilitating efficient innovation.

22. Even in the absence of conflicting incentives, companies at successive stages are still sometimes unable to reach agreement on technical collaboration, perhaps because they have differing views on the technical merits of a project, or on costs to be borne by each party. Because technical collaboration often breaks down even when none of the players have anticompetitive incentives, it would often be impossible to determine with certainty in a given instance that Ameritech's decision not to cooperate with an IXC was due to anticompetitive motivation rather than to an ordinary commercial disagreement. Such uncertainty is particularly important because it could prevent the regulator from imposing tough penalties on Ameritech if and when the regulator does decide that the company probably has behaved anticompetitively. In the terminology of law and economics, a high probability of a "false positive" (behavior is deemed anticompetitive when in fact it is not) means that behavior that is not always detected and punished cannot be efficiently deterred using large penalties. Significantly greater regulatory oversight and expenditure is required in such cases since, absent penalties, anticompetitive behavior can only be deterred by reducing the probability of a "false negative" (an incorrect finding of no anticompetitive behavior) to a minimal level. Translated into common terminology, this means that if you do not severely punish bad behavior, you have to catch almost every violation.

23. Regulation of access and interconnection will be especially prone to failure when technology is changing rapidly. Even if reasonable requirements were established for the old technology, those regulations would soon become obsolete, along with that technology. Consumers of access services and regulators must then examine anew whether the restrictions Ameritech is attempting to place on transactions with its rivals are reasonable or not. As we discuss below, this makes the regulatory progress prone to reversibility; i.e., regulations that worked well yesterday won't work well tomorrow.

24. Perhaps the best historical examples of the effects of information limitation on regulators are from the equipment side of the AT&T case. AT&T committed to various regulators that it would not discriminate against independent equipment suppliers. However, the Bell System found a whole series of seemingly plausible excuses for purchasing from Western Electric. Regulatory oversight of the Bell System's procurement practices was ineffective. Antitrust action, with extensive after-the-fact discovery, was necessary to prove that there were in fact abuses. But only divestiture — with the associated rapid fall in the share of the BOCs' purchases from Western Electric — could really establish the existence and strength of the bias toward internal purchase in the integrated AT&T.

F. Examples of discrimination by LECs against their competitors

25. There are many examples of LECs behaving anticompetitively in markets that depend on access to their bottleneck facilities.

a) In Michigan, Ameritech has repeatedly challenged (and sought to overturn or delay) the PSC's orders to provide intraLATA one-plus presubscription. Ameritech's refusal to accommodate market-opening regulations has seriously slowed the development of intraLATA toll competition.

b) Ameritech initiated "PIC freezes" in three of its five states, just when those intraLATA markets were opened to presubscription.[13] Moreover, the PIC-freeze solicitations were found, at least in Illinois and Ohio, to be anticompetitive.

c) The growth of local competition in Grand Rapids, Michigan was blunted by Ameritech's interconnection tariffs, which were rejected five times by the Michigan Public Utilities Commission.[14] The growth of the local entrant, US Signal (now Brooks Fiber), fell far short of plan, and its legal fees in the first year of operation far exceeded its revenues.[15]

d) Bell Atlantic delayed introduction of ISDN capability for PBX trunks until over a year after it had introduced the ISDN feature for its competing CENTREX service.[16]

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[13]The PIC freezes raise the costs of changing carriers which, given Ameritech's large share of intraLATA traffic, inflicts far greater costs on its rivals than on itself.

[14]In Georgia, ACSI raised similar objections to BellSouth's behavior. It filed a complaint with the Commission that BellSouth failed to install requested services needed for local service in a timely fashion.

[15] Douglas Bernheim and Robert Willig, The Scope of Competition in Telecommunications, AEI Studies in Telecommunications Deregulation, Oct. 1996, at pp. 85-6.

[16] Ibid., Chapter 4 at p. 95.

e) In cellular service, Bell Atlantic resisted testing new service implementation with McCaw until the new features had been tested and implemented for its own cellular operation in Pittsburgh.[17]

f) SNET has already achieved significant market shares in interLATA long distance (various press reports attribute to SNET 25-34% of customers and a much smaller percentage of revenues). That share cannot be readily explained by pricing since SNET's prices are not lower than the calling plans other long-distance carriers are offering. SNET's current share itself may be the result of discrimination. SNET terminated its billing arrangement with AT&T after its own interLATA entry and began advertising that customers could now receive one bill through SNET but not AT&T.[18] Absent incentives to discriminate against (or to withhold cooperation from) rival IXCs, SNET's decision to terminate its billing arrangement for AT&T is puzzling. Although AT&T had plans to bill on its own in the future, it would have been profitable for SNET, absent an incentive to discriminate, to continue to bill for AT&T until AT&T was ready to make the switch. Instead SNET abandoned the profits it was earning on billing for AT&T. Why? Ending the billing arrangements with AT&T must have resulted in an increase in profits in other markets that more than offset the profits lost from ending the billing arrangement.

g) BellSouth strategically altered the timing of unbundled network features in an effort to favor its own Memorycall service.[19]

h) The Kentucky and Florida Public Service Commissions found that BellSouth had engaged in anticompetitive business office practices to disadvantage its intraLATA rivals. Such practices are quite difficult to monitor.

i) For almost ten years US WEST resisted successfully orders from the Minnesota regulator to provide one-plus intraLATA dialing.

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[17] Ibid., at chapter 4, pp. 94-5.

[18]SNET's market share has come predominantly from AT&T. SNET has continued to bill for other long-distance carriers, so the other IXCs were able to continue "one-bill" service to their customers after SNET's entry.

[19]Bernheim and Willig, op. cit., pp. 97, citing In the Matter of the Commission's Investigation Into Southern Bell Telephone and Telegraph Company's Provision of MemoryCall Service, Order of the Georgia Public Service Commission, docket No. 4000-U, May 21, 1991.

26. It is especially important to note that all of these actions were done in the face of regulation by state commissions. Moreover, to the extent these actions were caught by state commissions, it was only after the fact -- in many cases, well after the competitive harm had already been done. The BOCs retained the benefits of the past anticompetitive behavior whenever, as is usually the case, the only penalty for being caught was an order to cease the offending behavior.

III. ACCESS PRICING

27. The Federal Communications Commission recently announced its decision on access price reform. This decision has implications for the proper timing of BOC long distance entry. The Commission decided against prescriptively reducing access prices to economic cost. The access revenues of the LECs will be reduced, but not by anything close to the amount necessary for the revenues collected to be commensurate with the economic costs of access. The Commission also decided to restructure access prices so that non-traffic-sensitive costs will gradually be recovered through fixed charges rather than through per-minute charges. In particular, certain traffic-sensitive costs that were formerly recovered through per minute charges to the IXCs will gradually be recovered through a monthly, per-customer charge paid by the IXCs. This restructuring will gradually reduce the competitive pricing advantage the BOCs will have in long distance service. However, because the restructuring occurs only gradually, the near-term entry by a BOC into interLATA service will give it a competitive pricing advantage for long distance

service (and for bundled services that include long distance) unrelated to the cost efficiency of its long distance operations. The BOCs' pricing advantage is discussed in detail below.

28. The restructuring of access payments by the IXCs is inefficient for another reason.[20] The new monthly fixed charge paid by IXCs, the PICC or primary interexchange carrier charge, will have perverse consequences. The PICC charge will raise the cost for IXCs of serving low-volume customers. Ironically, the Commission's stated rationale for placing the new fixed charges on the IXCs rather than the end-users was a fear that too many users may discontinue phone service if the fixed monthly cost for service increased. Instead, the Commission decided to

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[20]The Commission recognizes that for end-users, efficient pricing requires that non-traffic sensitive (fixed) costs should not be recovered through traffic-sensitive prices. As an example, a two-part price schedule, with a per-unit (traffic-sensitive) payment to recover variable (traffic-sensitive) costs and fixed payment to cover all other costs, is the efficient way to price to end-users. However, the same principle does not apply with respect to products sold to intermediate buyers such as IXCs, who buy access from LECs and then sell their product to final consumers. Two-part pricing of inputs sold to intermediaries is often not efficient. The fixed or lump-sum payment raises the fixed costs of downstream companies and can reduce downstream output by reducing the number of viable competitors downstream. (See Janusz Ordover and John Panzar, "On the Nonlinear Pricing of Inputs," *International Economic Review*, October 1982.) Indeed, two-part pricing of inputs, such as the FCC is proposing for PICC charges paid by IXCs, is often not only inefficient, it can be anticompetitive and exclusionary as well. (See Kenneth C. Baseman, Frederick R. Warren-Boulton and Glenn A. Woroch, "Microsoft plays hardball: the use of exclusionary pricing and technical incompatibility to maintain monopoly power in markets for operating system software," *Antitrust Bulletin*, Summer 1995.)

In this case, the exit induced at the downstream level by the lump-sum payment is not the exit of the entire firm but rather the exit of downstream firms from particular market segments (e.g. low volume customers). Where direct or deliberate exit is not politically feasible (that is, an IXC may not be allowed to discontinue service to customers who presubscribe to it, but on whom it loses money), the PICC charge still reduces the incentives of IXCs to compete aggressively to serve the unprofitable segment. If the IXCs are allowed to flow through directly the per-line charges they pay as per-line charges to consumers, then the effect on universal service is the same as if the per-line charge were placed directly on consumers in the first place.

place the fixed monthly charge on the IXCs. But this merely increases the customer-specific fixed costs for the IXCs to reach these customers. When low-volume customers become less profitable to serve, the financial incentive for the IXCs to compete to serve them is reduced. Indeed, because very low-volume customers are now unprofitable for IXCs given the current level of customer-specific fixed costs, the PICC charge will only exacerbate the problem. It is indeed ironic that the FCC is raising the costs for the IXCs to serve low volume customers, while the BOCs are arguing that they should be allowed into long-distance service in order to correct a perceived lack of competition for the patronage of low volume customers. To the extent the BOCs' allegations that more competition is needed for low volume customers have any merit at all, the last thing the Commission should do is increase the costs the IXCs must bear to serve these customers.

A. Access prices should be reduced to economic cost before Ameritech is allowed to provide interLATA service.

29. Reducing access prices to economic cost is highly desirable, especially to the extent that widespread, effective local competition is not in place prior to the time when Ameritech is permitted to provide interLATA service. First, reducing prices to cost is economically efficient. With the advent of local competition, access reform also provides proper cost signals to the entrants. With access prices well above cost, inefficient entry could be attracted. This is undesirable. Society does not benefit from entry for entry's sake. Entry by efficient firms improves welfare. Entry by inefficient firms might do so, but only by accident. The FCC

correctly stressed the importance of establishing the proper "make versus buy" incentives when it published its preference for cost-based pricing of unbundled network elements. Exactly the same logic applies to access charges. Access charges set well above cost induce inefficient firms to enter and "make" their own access, rather than buy access from lower cost suppliers.

30. Second, as we noted above, under current and future access policies where IXCs must pay per minute access charges far in excess of the LECs' economic costs, a LEC integrated into interLATA service would have several advantages in competing against other long-distance companies that are unrelated to its cost efficiency or the quality of its products. When a LEC provides long-distance service, its private marginal cost of access is the same as the true economic marginal cost of providing access (the social cost): the regulated price of access determines only the transfer price between its local exchange and long-distance divisions. For an independent IXC, however, the private marginal cost of access is the regulated access price as long as it must pay access charges to the LEC. In several important circumstances, the LEC's private calculation of the "opportunity costs" of taking business away from an IXC will not include the full access profits they would have earned had the business stayed with the IXC.

a) The LEC can profitably engage in a variety of non-linear pricing strategies (e.g., volume discounts or multi-part declining tariffs) that independent IXCs cannot profitably match. Because the LEC's private marginal cost of access is far less than an IXC's private marginal cost of access, it can profitably offer non-linear pricing packages for its long-distance service (or for bundles that include long-

distance and local services) that includes deeper discounts for marginal long-distance usage than can the IXCs, which cannot internalize (and thus eliminate) the distortion created by above-cost prices for access. This ability to profitably offer more attractive nonlinear price schedules to consumers means that Ameritech could succeed in long-distance competition even though, on all aspects of competition other than price structure, its offering is inferior.[21]

Economists have long supported reform of access pricing. The ability to price more efficiently should not be limited to the LECs, however, but that is

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[21]To see how the BOCs' strategic advantage from nonlinear pricing can arise, consider the following simple example. Suppose that before BOC entry, access prices were 10 cents per minute, the marginal cost of access was zero, the economic marginal cost of long-distance service was 10 cents per minute, and the price of long-distance service was 20 cents per minute. Consider a customer whose volume was 100 minutes per month.

Now allow BOC entry without access reform. Suppose demand is linear, with an arc elasticity of minus one, over the 10-20¢ price range. Since access payments within the BOC are a wash, the BOC's marginal cost of LD is only 10 cents per minute (the economic marginal cost of long distance). The BOC can offer a variety of very attractive deals. Consider this one: customers can pay $14.99 per month plus 10 cents per minute. A customer who accepts will purchase 200 minutes of long-distance service (since the demand elasticity is one.) The customer's total payments are $20 (200 minutes * 10 cents) + $14.99 = $34.99. The customer is better off with the BOC's deal because the $14.99 monthly fee is less than the $15.00 increase in consumer welfare from paying 10 cents a minute rather than 20 cents a minute. (The increase in consumer welfare is 10¢ per unit on the original 100 units, plus an amount per unit on the next 100 units that declines linearly from 10¢ per unit to zero (i.e., another $5.00).

The IXCs cannot match this plan even if they are equally efficient in long distance. Their marginal costs are still 20 cents per minute, so their total costs for 200 minutes are $40. The plan is profitable for the BOC even if it must "impute" the $10 in access fees the IXCs would have received from the customer at the old, 20 cents per minute price of long distance. The "opportunity cost" of the 200 units would be the economic cost of long distance of $20.00 plus the foregone access profits of $10.00, resulting in an total cost of $30.00. The BOC makes a profit before imputation of $14.99 on the customer ($34.99 revenue minus $20 in long-distance costs), and retains a profit of $4.99 after imputing $10 in access charges. In contrast, the IXC that matched the BOC price would lose $5.01 on the customer.

exactly what would occur if BOCs are allowed to enter long distance before state and federal access price reform is completed. The profitability of nonlinear pricing depends on the level of access charges and of economic marginal costs and the percentage of long-distance calls that are completed within the RBOCs' territory.

If fully exploited, this competitive advantage due to the nonlinear pricing advantage Ameritech derives from access mispricing can be equivalent to about 10% of average long-distance revenues excluding access payments, or about 6-7% of per unit revenues including access charges for calls that both originate and terminate in Ameritech's territory.[22] This is hardly a modest advantage, especially since long-distance profit margins are less than 10%.

b) The BOCs will have a competitive advantage in competing to provide switched service for the patronage of a customer for whom special access is a serious option. The BOC faces no access opportunity cost, since if the customer

[22]This calculation is based on a demand elasticity of -0.7 to -1.0 for long-distance service, an average long-distance price of 15 cents per minute, and access profit margins at both ends totaling 5 cents per minute. (Demand elasticity measures the sensitivity of consumers purchases to price. Demand is said to be inelastic when the elasticity is between 0 and -1.0.) For linear demands (demand curves that when plotted are straight lines) with these arc elasticities (the elasticity calculated between two points on a demand curve when the elasticity is not the same at all points), the BOC's cost advantage is 12.5% with unitary elasticity, and 8.75% with a demand elasticity of -0.7 The equivalent cost disadvantage is larger for lower long-distance prices and higher access prices, and a LEC's cost advantage is roughly one-half as large when it only controls one end of the phone call.

The BOCs' artificial advantage is greater than that of smaller LECs because of the greater frequency with which the BOCs service both ends of a call. This advantage increases when BOCs merge.

chooses special access, the BOC will earn no access revenues. Nonetheless, an IXC faces a private marginal access cost if it contemplates trying to compete with a switched service offering. As a result, the BOC will be uniquely positioned to win customers when the economic cost of switched access is less than that of special access.[23]

c) The BOC will sometimes find it profitable to charge its affiliate lower de facto access charges than it charges independent IXCs, if for regulatory purposes the BOC's access profits are assessed over the combined contributions of its long-distance affiliate and the IXCs, and if either federal or state access prices are subject to cost of service regulation or any price cap scheme with formal or informal profit-sharing.[24] In particular, if access profits are close to the point where regulators would be inclined to reduce the access rate, then waiving access fees for the affiliate but not for independent IXCs will be profitable. Access profits go down as the affiliate takes business away from independent IXCs, thus removing the threat that regulators will force an across-the-board access price

[23]See Franklin M. Fisher, An Analysis of Switched Access Pricing and the Telecommunications Act of 1996, submitted as Attachment 1 to Reply Comments of MCI Telecommunications Corporation, CC Docket No. 96-98, filed with the FCC on May 30, 1996.

[24]That is, even though the affiliate "pays" the same access charge, on an integrated basis the true payment is less than the "hard costs" actually paid by the IXCs. The affiliate loses money but, in the circumstances described in the text, the discrimination is profitable on an integrated basis.

reduction. Further, the BOC's long-distance affiliate derives a competitive advantage: its costs for the most important input are in fact lower than the costs paid for access by the IXCs. In effect, the BOC is able to take profits via waiving access fees for its affiliate that it could not realize directly through access profit margins.

31. Note that these are not "price squeeze" arguments. In a price squeeze the competitive harm arises because the upstream monopolist effectively charges a lower price for its monopoly input to its own affiliate than to unaffiliated downstream competitors, thereby squeezing the margins of downstream competitors. The Federal Communications Commission and the Department of Justice, while acknowledging the possible theoretical validity of such arguments, have declined to base (or recommend basing) public policy on the possibility that BOCs will engage in price squeezes.[25] In each of the cases described above, the LEC obtains a competitive advantage because it alone is permitted by regulation to price most efficiently. Tilting the playing field to so favor the LEC is inefficient and violates the recommendation of Schwartz and Farrell that the playing field be leveled at a higher level.[26] That would require pricing access at cost so that all long-distance carriers could price efficiently. Absent such reform, the LEC can succeed in

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[25]For example, see Affidavit of Marius Schwartz for DOJ, "Competitive Implications of Bell Operating Company Entry into Long-Distance Telecommunications Services", May 14, 1997 at paragraph 125.

[26]Schwartz Affidavit at paragraph 71.