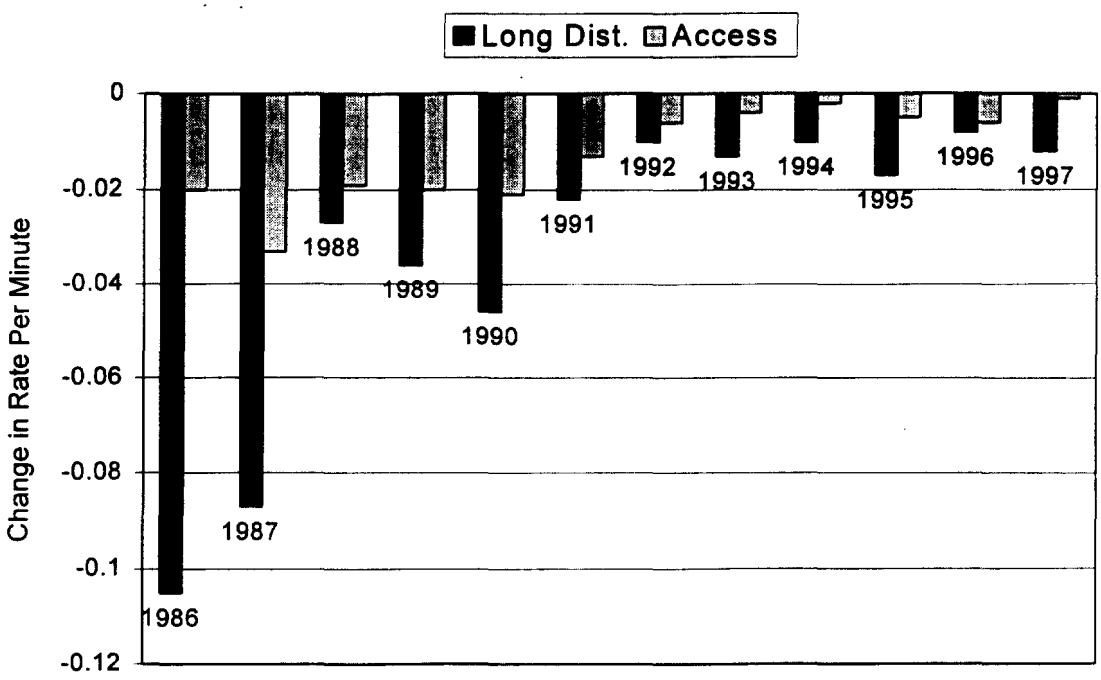
Table A3. 1996 Earnings[78]

1996 RBOC & GTE	Net Revenue	Operating Cash Flow	Operating Cash Flow Margin
Local	$45B	$9.8B	21.8%
Access	$27.6B	$19.2B	69.4%
IntraLATA Toll	$9.3B	$5.9B	63.2%

The Commission need not be concerned that prescribing access to cost will shift large profits from the ILECs to the IXC industry. As history has shown, and as the table below demonstrates, long distance carriers continually have passed through at least the amount of access reductions, if not more, in their long distance rates.

[78] Based on 1996 ARMIS data.

Table A5. Change in Long Distance Average Revenue Per Minute and Average Access Rates Per Minute[79]



[79] Data from Declaration of Robert E. Hall, In the Matter of Applications of WorldCom, Inc., for Transfer of Control of MCI Communications, CC Docket No. 97-211.

APPENDIX B:
DECLARATION OF A. DANIEL KELLEY

DECLARATION OF A. DANIEL KELLEY

I have prepared this Declaration at the request of MCI Telecommunications Corporation ("MCI"). The purpose of the Declaration is to examine the economic consequences of waiting for market forces in local telecommunications markets to bring access charges to cost. I conclude that it will take at least several years for competition in local markets to effectively constrain access charges to cost. During this time, consumers will suffer substantial welfare losses.

The Declaration is organized as follows: Section I contains a brief description of my qualifications. Consumer benefits of access charge reductions are discussed in Section II. Section III describes the current state of competition in local access markets. Section IV is a discussion of the likely timing of entry and growth of competitors. The relationship between long distance competition and access charges is discussed in Section V. The relationship between the growth of local competition and access charges is discussed in Section VI. Section VII addresses the consequences of access charge reductions for local telephone rates. The Summary and Conclusions are presented in Section VIII.

I. QUALIFICATIONS

My professional experience began in 1972 at the Antitrust Division of the U.S. Department of Justice where I analyzed mergers, acquisitions and business practices in a number of industries, including telecommunications. While at the Department of Justice, I was a member of the U.S. v. AT&T economics staff. In 1979, I moved to the Federal Communications Commission ("FCC") where I held positions as Senior Economist in the Common Carrier Bureau

and the Office of Plans and Policy, and also served as Special Assistant to the Chairman. After leaving the FCC, I was a Project Manager and Senior Economist at ICF, Incorporated, a public policy consulting firm. From September 1984 through July of 1990, I was employed by MCI Communications Corporation as its Director of Regulatory Policy. My current position is Senior Vice President of HAI Consulting, Inc (formerly Hatfield Associates, Inc.). I conduct economic and policy studies on a wide variety of telecommunications issues, including local exchange competition, dominant firm regulation, and the cost of local service. I have advised foreign government officials on telecommunications policy matters and have taught seminars in regulatory economics in a number of countries.

I received a Bachelor of Arts degree in Economics from the University of Colorado in 1969, a Master of Arts degree in Economics from the University of Oregon in 1971 and a Ph.D. in Economics from the University of Oregon in 1976.

I have testified on telecommunications issues before this Commission, the California, Colorado, Connecticut, Florida, Georgia, Hawaii, Maryland, Massachusetts, Michigan, New York, Oregon, Pennsylvania and Utah Commissions, as well as the Federal-State Joint Board investigating universal service reform. Much of my testimony in recent months has dealt with the issue of access charge reform. A copy of my resume is attached.

II. CONSUMER BENEFITS

Reducing access charges to cost will provide consumers with enormous benefits. Allocative efficiency, productive efficiency, and dynamic efficiency will all increase. The

Commission is well aware of the benefits that would be provided by access charge reductions.[1] Nevertheless, for completeness, I will briefly review those benefits below.

A. Allocative Efficiency

If prices do not reflect underlying costs, scarce resources are misdirected. Prices that are above cost lead consumers to forego consumption, even though they would be willing to pay a cost-based rate. Social welfare is reduced as a result. The markup of access charges over cost is not simply a transfer of wealth from consumers to incumbent local exchange carriers (ILECs). Consumers lose more than a dollar of social welfare for every dollar of markup because of the reduced efficiency in the market.[2]

MCI's recent experience with its Five Cent Sunday offering is instructive. This service enhancement was made possible by the last round of access reductions, which reduced MCI's average per minute access charge to less than five cents. The consumer response has been significant. MCI now carries more traffic on Sundays than it used to carry on Mother's Day. Consumers are making millions of calls that would not have been made without the access charge reductions. Prior to the introduction of the service, consumers obviously valued the minutes, but did not make the calls because access charges, and thus the rates consumers had to pay for the service, were too high. The calls being made now that were not made prior to the reduction are tangible evidence of the welfare benefits due to access charge reductions.

The Commission must consider the following question: how would consumers benefit if access charges were reduced all the way to cost? Weekday business and residential rates would

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[1] In the Matter of Access Charge Reform, CC Docket 96-262, First Report and Order, FCC 97-158 (released May 16, 1997). ("Access Charge Reform Order")

be reduced substantially as a result of true access charge reform. The allocative efficiency gains would undoubtedly be enormous.[3] Each day of delay represents foregone opportunities for consumers.

B. Productive Efficiency

Productive efficiency measures the degree to which goods and services are provided in a cost-minimizing way. There are three ways in which pricing access at cost will stimulate more efficient provision of access services. First, if rates are set at economic cost, ILECs will have an increased incentive to take steps to become more efficient. Price Caps have arguably been doing that.[4] However, as the results of forward-looking cost models show, telephone company costs are still well above economic costs.[5] Second, as is well known, high switched access charges promote service bypass of the local exchange and provide false signals to facilities-based entrants.[6] If switched access were priced at cost, the added expense of providing dedicated connections to customers who could be served more efficiently on the switched network could be avoided.

Finally, high access charges are leading to the use of potentially inefficient service delivery mechanisms. There is currently a burgeoning interest in, and use of, telephone calls

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[2] See Access Charge Reform Order, para. 42 and note 47.

[3] One might argue that Five Cent Sundays demonstrate the wisdom of the FCC's rate structure versus rate level approach to access reform. The reality is, however, that the increased SLCs and PICCs must be recovered from other customers. Reducing rates for those customers will stimulate demand and increase allocative efficiency.

[4] While price cap appear to create an incentive to reduce prices by reducing cost through greater efficiency, the effectiveness of that incentive is limited. See, Economics and Technology, Inc./Hatfield Associates, Inc., The Enduring Local Bottleneck: Monopoly Power and the Local Exchange Carriers, 1994, Section 7.

[5] The HAI Model v.5.0a shows that access costs are a small fraction of current charges. Most cost models, including those of the ILECs, show that access costs are far less than access charges.

[6] Service bypass refers to the substitution of dedicated circuits for switched access due to high switched access charges.

carried on the Internet. This service is referred to as voice over IP or IP telephony, recognizing the Internet Protocol as the underlying routing mechanism in the Internet.

The current Internet protocol is not optimal for carrying telephone calls. This is true for three reasons: 1) IP adds overhead in the form of packet headers, thereby increasing the bandwidth required to deliver voice of the same transmission quality as a voice network does today; 2) due to the sharing of transmission and switching capacity on a packet switching network, IP cannot guarantee other aspects of voice quality important to customers, such as minimal delay, in the same fashion an existing circuit switched network can; and 3) packet switching is not inherently designed to carry voice or other forms of "synchronous" communications in which regularity in the delivery times of successive bits is critical, leading to a less-than-optimal carriage of the data services for which it was specifically designed.[7]

In the future, after further refinements of IP or another fast packet switching technology, IP telephony may be justified by the ability to efficiently integrate all forms of communication – voice, data, video, and various types of broadband communication. However, it is clear that, at present, the major motivation is the avoidance of access charges on the part of internet service providers ("ISPs") offering the service.

The transmission capacity needed to carry IP telephony requires investment dollars that could be used to develop other internet applications. Substantial investment is being made in additional customer equipment to carry IP telephony calls. Finally, the means currently being used to provide access to dial-up IP telephony providers is less inefficient than Dial 1 access.

The only way to have a true market test of the proposition that IP telephony is the better future choice is to eliminate the distortion caused by high access charges.

C. Dynamic Efficiency

Dynamic efficiency, which measures the ability of a firm, industry or economy to innovate and adopt technological changes, may well have been sacrificed as well. The high costs imposed on the use of interexchange carrier ("IXC") networks by excessive access charges have undoubtedly deterred the use of productivity enhancing innovations on the part of telephone users. Free inbound toll calling, or 800 service, changed the face of retailing by unleashing tremendous productivity in marketing and distribution. This transformation would have taken place earlier and much more rapidly with cost-based access charges. No one can predict what additional productivity enhancements driven by new or more extensive uses of long distance networks will be unleashed by the significant long distance price reductions that access charge reductions will make possible.

III. LOCAL COMPETITION

Contemporary economic analysis uses game theory to assess competitiveness in markets.[8] For present purposes, it is useful to assess local exchange competitiveness with the traditional Industrial Organization tool of structure, conduct and performance analysis.[9] The first step is to define the market or markets to which the analysis is applied.

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[7] Regarding Internet Telephony Clark states: "In the long run, the use of Internet (or packet switching in general) does not appear to lead to greatly reduced per-minute costs for carrying a call." Clark, David D., "A Taxonomy of Internet Telephony Applications," Internet Telephony Consortium, Massachusetts Institute of Technology, p. 5.

[8] See, e.g., Drew Fundenberg and Jean Tirole, Game Theory, Massachusetts Institute of Technology, 1991.

[9] F.M. Scherer and David Ross, Industrial Market Structure and Economic Performance, Third Edition, 1990. The U.S. Department of Justice Merger Guidelines are based on this paradigm.

A. Market Definition

This analysis focuses on the exchange access market. Exchange access is the provision of connections between IXC customers and IXCs. The geographic scope of exchange access markets is local, and perhaps even smaller. That is, exchange access facilities in Richmond, Virginia are not substitutes for exchange access facilities in Northern Virginia, and exchange access facilities in Alexandria are not a substitute for exchange access facilities in Reston. It will not be necessary to look at individual markets to perform a competition analysis. The characteristics of supply and demand do not differ greatly among individual geographic markets.[10]

B. Structure

The ILECs and their economists have been arguing that the local market is competitive as long and as vigorously as they have been arguing that the long distance market is not. In other words, ILECs have been predicting that local competition is "just around the corner" for more than a decade. The reality is quite different.

The accompanying MCI Report provides a great deal of data on the extent of actual competition.[11] Established competitive local exchange carriers ("CLECs"), such as competitive access providers ("CAPs"), who provide alternative exchange access services for large businesses and IXCs in mostly business sections of large cities, often report their progress in terms of markets or cities served. The reality is that CLEC market penetration gains are most

[10] For a more detailed market structure analysis it might useful to distinguish among rural, suburban and urban markets. However, as noted below, even in the most dense urban market – LATA 132 in the New York City area – competition has not moved access charges to cost.

[11] "Absence of Competition In The Exchange Access Market," May 7, 1998. ("MCI Report")

usefully measured on a building-by-building basis.[12] In terms of total national market penetration, the CLECs are today approximately where the competitive long distance providers were in 1978. They are providing some dedicated services and are only in the early stages of providing switched services.[13]

C. Conduct and Performance

Viewing the market from the perspective of conduct and performance confirms that the monopoly structure is leading to monopoly results. Unlike customers and suppliers in competitive markets, access providers and their long distance customers frequently find themselves in adversarial relationships. For example, ILECs seldom cooperate with their IXC customers when requests are made for new or more efficient forms of interconnection. The ILECs do not voluntarily reduce prices when their costs fall. Regulators must order reductions. This is demonstrated by the fact that access charges are typically set at the maximums allowed by price cap plans. This is even true in LATA 132 in New York, supposedly the most competitive access market in the nation.[14]

ILEC profits dramatically exceed any reasonable estimate of a competitive cost of capital. The most recently prescribed interstate rate of return was 11.25 percent. A study completed in 1996 shows that the appropriate return then was less than 10 percent.[15] Interest rates have

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[12] See MCI Report.

[13] Section IV below discusses the experience with long distance competition.

[14] A New York Public Service Commission Administrative Law Judge rejected Bell Atlantic New York claims that competition is adequate to reduce access charges to cost. See Recommended Decision by Administrative Law Judge Eleanor Stein, Case 94-C-0095, January 23, 1998. ("Stein Recommended Decision")

[15] See "Statement of Matthew I. Kahal Concerning Cost of Capital," In the Matter of Rate of Return Prescription for Local Exchange Carriers, File No. AAD95-172, March 11, 1996.

declined dramatically since that time. The most recent reports filed with the Commission show that the price cap carriers are earning 15.52 percent.[16]

The ILECs might argue that this performance is due to the fact that price caps provide incentives for cost reductions. It is true that price caps are a contributing factor to the enormous returns. But other factors that may be just as significant as, or more significant than, price caps contribute to the excessive ILEC returns. For instance, access demand is growing due to the access charge reductions the Commission has imposed in the past, and due to competition in the long distance market. Costs are falling due to advances in switching and transmission technology that are affecting all high-technology companies. More significantly, in a competitive market, there would be pressure to reduce access charges when profits are as high as those being experienced by ILECs. If competitive firms experienced such decreases in costs and increases in demand, they too might see dramatic increases in profitability, but such levels of profit would be transitory. They would quickly be competed away.

IV. THE ENTRY PROCESS

The lack of competition in the exchange access market was documented in Section III. The Commission's Access Charge Reform Order recognizes that the market is not competitive today. Nevertheless, the Commission is relying on rapid growth of competition to bring access charges to cost.[17] The likely development of competition is discussed in this section. Section A discusses the evidence from the long distance market while Section B discusses barriers to entry and expansion in local telephone markets.

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[16] See April 14, 1998 *ex parte* letter from Mary Brown to Mr. Richard Metzger, Chief Common Carrier Bureau. Filed in CC Docket 94-1, In the Matter of Price Cap Performance Review for Local Exchange Carriers.

A. Evidence From Other Markets

The long distance market provides a historical example of how long it takes to bring competition to a monopoly market. AT&T's first major long distance competitor, MCI, received authority to provide private line services in 1969.[18] Competitors were allowed to provide switched services as a result of the Execunet Decisions in 1977 and 1978.[19] At that time AT&T controlled over 95 percent of the long distance market.[20] By the time of divestiture, six years later, AT&T still retained a 90 percent market share,[21] well above the level considered by the Commission to confer dominance status on AT&T.[22]

Even if the appropriate starting point for dating the transition from monopoly to competition in long distance is set at divestiture on January 1, 1984, the transition to competition was a long one. AT&T's requests for non-dominant status were rejected by the FCC, and even the AT&T Price Cap Order established strict limits on AT&T pricing of its core services.[23] AT&T was declared non-dominant only in 1995.[24] Thus, whether dated from 1978 or 1984, the transition to full competition in the long distance market stretched out for at least a decade.[25]

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[17] Access Charge Reform Order, *supra.*, note 1.

[18] In re Application of Microwave Communications, Inc. for Construction permits to Establish New Facilities in the Domestic Point-to-Point Microwave Radio Service, Docket Nos. 16510-16519, 18FCC 2d. 953 (1969).

[19] MCI Telecommunications, Inc.. v. Federal Communications Commission, 561 F2d. 365 (DC Cir. 1977) (Execunet I) and 580 F2d. 590 (DC Cir. 1978) (Execunet II).

[20] See Telecommunications in Transition: The Status if Competition in the Telecommunications Industry, Majority Staff Report, Committee on Energy and Commerce, U.S. House of Representatives, November 3, 1981, p. 105.

[21] See FCC, Trends in Telephone Service, August 7, 1991, p. 37.

[22] In the Matter of Policy and Rules Concerning Rates for Competitive Carrier Services and Facilities Authorization Therefore, CC Docket 79-252, 85 FCC2d. 1 (1980).

[23] In the Matter of Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, Report and Order and Second Further Notice, 4 FCC Rcd 2873 (1989) (AT&T Price Cap Order).

[24] In the Matter of Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier, Order, 11 FCC Rcd. 3271 (1995).

[25] The ILECs and their economists argue, without merit, that competition is yet to be achieved in long distance, a full twenty years after MCI received authority to provide switched services. See, e.g., William E. Taylor and Lester

It is also important to note that during the early competitive era in the long distance market, new entrants were receiving substantial Commission ordered discounts on access charges. That is, they paid less for access than did AT&T. Even after equal access was ordered as part of the Modification of Final Judgement,[26] substantial discounts were available to the new entrants because it was recognized that it would take a long time to implement equal access. No such discounts are available, or, apparently, anticipated, for new entrants into local markets.[27]

If anything, competition in the local market is developing less rapidly than it did in long distance. The Regional Bell Operating Companies ("RBOCs") have been claiming that local markets are competitive since they were formed in 1984, despite the fact that the CAPs didn't even begin building fiber rings in major metropolitan areas in the mid-1980s. Today, over ten years after they entered the access service business, the CAPs still measure their progress in terms of each additional building served.

B. Barriers to Entry and Expansion

Section III and the MCI Report indicate that local markets are far from competitive. Nevertheless, it is valid to ask whether the passage of the 1996 Act and implementation of its provisions by the Commission have set the stage for imminent realization of ILEC competition prophecies. The answer is no.

D. Taylor, "Postdivestiture Long-distance Competition in the United States," American Economic Review, May 1993, pp. 185-190. These arguments are refuted by Robert E. Hall, Long Distance: Public Benefits from Increased Competition, October 1993.

[26] United States v. American Telephone and Telegraph, et al., 552 F.Supp. 131 (D.D.C. 1982).

[27] Pricing UNEs at economic cost and providing wholesale discounts are not equal to asymmetrical advantages for new entrants. These measures can, however, if properly implemented, place new entrants and incumbents on an equal footing, at least with respect to the cost of using basic elements of the network.

The Commission's procompetitive implementation of the Act has been sidetracked by litigation by the ILECs. Combinations of unbundled network elements are unavailable in most states.[28] As discussed below, even where state Commissions may have ordered ILECs to provide combined elements, as a practical matter they are unavailable for widespread commercial use. The lessons of history do not bode well for the success of UNE provisioning. It has proven quite difficult to obtain the cooperation of bottleneck monopolists when they have no economic incentive to cooperate.

There is another flaw with the Commission's market-based approach to access charge reform. Even assuming that UNEs are available at economic cost in commercially significant quantities, that wholesale rates are set at appropriate discounts, and that cable and wireless competition are technically and economically feasible, the competition necessary to discipline access charges would likely take years, not months, to develop. In the meantime, consumers will pay too much for long distance services as a result of overpriced access.

Section 1 below describes the reality of the entry and expansion process for a facilities-based carrier. Section 2 does the same for a UNE-P or partially facilities-based carrier. Section 3 discusses the marketing issues that are common to both.

1. Facilities-based entry

The practical reality of entering local markets is that, even under the best of circumstances, it will take substantial time. The job of physically building a network is a

[28] Resale is an alternative entry vehicle for facilities-based carriers. There are two problems with resale as a competitive threat in the access market. First, the wholesale discounts are inadequate to allow significant resale competition in most states. Second, resale does not provide access competition because all toll minutes on resold services use ILEC-provided access.

difficult and time-consuming one. A new entrant in a local market must acquire capital, achieve state certification, obtain a municipal franchise, arrange for rights-of-way, acquire space with the floor loading, power and other specifications required to handle switching and other heavy electronics equipment, including an uninterruptable power source (UPS), or the space and specifications that will permit an UPS to be installed, and then build transmission facilities.

Each step can consume time. Reasonably priced rights of way may be difficult to obtain. The physical job of installing the transmission paths will be time consuming. Construction crews must be assembled and the laborious job of digging up the streets and installing facilities completed.[29] Human capital must also be acquired and trained. Finally, after a network is built, it must be connected to buildings. Owners of office buildings and multi-tenant dwellings are often reluctant to allow entry into their buildings by competitors without extracting a substantial price, which they often cannot impose on the ILECs.

Having facilities in city A may help a firm in entering city B. However, the process described above must be duplicated city by city. A study provided to me by MCI indicates that even when MCI has a building in place it takes at least nine months from the decision to provide local service to the time when customers can be served.[30] The tasks that must be completed within this period include all aspects of planning, designing, equipment ordering and installing

[29] CLECs have encountered many practical problems in their effort to expand. For example, it is not uncommon for cities to place moratoriums for up to five years on any digging of newly paved streets or alleys. In such situations, CLECs have been forced to find and negotiate agreements to lease conduit space and rights-of-way with utilities already in place. Such agreements often, if not usually, must be negotiated with the ILEC, who, as noted previously, has no economic incentive to cooperate. In instances where such agreements cannot be negotiated, the CLEC must find alternate, and perhaps less efficient, transmission routes for their network facilities.

[30] The analysis on which this estimate is based is a going forward one. That is, the time line does not include the substantial delays associated with obtaining the initial interconnection agreements.

interconnection facilities (local, intralata, interlata, 911, etc), call through testing (inbound and outbound to ensure that NXXs are loaded), billing testing, and alpha testing.

If the entry vehicle is cable telephony, the path may be eased, but is by no means simple or easy. Cable companies generally began the process of upgrading preexisting networks from all coaxial to fiber rich networks in the 1980s. Yet, current estimates are that cable networks are now only 20 percent two-way active.[31] And even those few cable networks that are two-way active will require significant, and expensive, enhancements before the network is ready to provide telephony services.[32] In any event, most cable companies seem to be focusing their efforts on digital video and data services.[33]

Wireless competitors face similar challenges. The dramatically higher offered loads on a wireline service imply that a wireless company must make substantial incremental investments in radios and cell cites. In addition to the substantial difficulties of making PCS the technical equal of wireline telephony, PCS companies are encountering problems in acquiring and managing radio sites.

Studies done by my firm in 1994 and 1997 demonstrate that the business case for installing telephony capability in pre-existing cable and wireless networks is marginal.[34] We know of no breakthroughs in technology or market economics that would change these analyses.

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[31] See National Cable Television Association, 1997 Year End Review (http://www.ncta.com/yir1.html). Activated two-way plant allows for the deployment of interactive on-line services and telephony. The actual deployment of these services is minimal.

[32] To provide telephony services, a cable network that has already achieved two-way active capability will require such upgrades and additional equipment as switching equipment, power to customer premises, telephony-compatible customer interface units, and headend telephony interface equipment. In addition to this are the back office systems needed to service customers.

[33] The economics of serving the residential customers that cable companies primarily serve are more challenging. Local service rates are significantly lower than business rates.

Consistent with the conclusions reached in these studies, there does appear to be some interest in cable telephony on the part of some systems, but the number of customers being served is quite small.

2. Partially facilities-based entry

UNE competitors can skip some of the steps described above. Nevertheless, the process of entering and competing will be an arduous one, even assuming that the ILECs cooperate in delivering the facilities. When entering each new city, the UNE competitor must lease facilities, acquire switching capability, and begin marketing them. The UNE process does allow entrants the possibility of identifying high revenue customers, but the getting-started costs will still be high. Moreover, the UNE competitor is at the mercy of the ILEC for service delivery and quality. Dependency on one's largest competitor for the facilities and services required to convince potential customers that they should switch from the local telephone service currently being provided by the CLEC supplier/competitor is, at best, a risky proposition. As of today, there is no evidence that ILECs will be able to deliver UNE facilities to competitors with the volume or quality that will be necessary to make an impact on access charges.

The recent announcement by Bell Atlantic that it will provide combined network elements does not change this analysis.[35] First, the agreement does not take effect unless Bell Atlantic receives 271 authority.[36] Second, there is a significant six dollar per month non-cost

[34] See The Enduring Local Bottleneck, *supra.*, note 4, and The Enduring Local Bottleneck II, April 30, 1997.

[35] Pre-Filing Statement of Bell-Atlantic – New York, filed with the New York Public Service Commission in Case No. 97-C-0271, April 6, 1998. ("Bell Atlantic Statement")

[36] According to the Bell Atlantic Statement, "If Bell Atlantic-NY receives authority to provide interLATA services pursuant to the granting of an application under Section 271, the Company will keep the commitments set out herein . . . ." p. 2. This obviously creates a timing problem. The commitments are necessary to provide for competition. It would be premature to grant Bell Atlantic 271authority until that competition materializes.

based "glue" charge associated with purchasing combined network elements. Third, the UNE combination will only remain in effect for four years in major urban areas. Fourth, the UNEs themselves are high in New York. The New York Commission adopted UNE rates based on a mix of input assumptions from the Hatfield Model v2.2.2 and the Bell Atlantic model.[37] As a result, the UNEs are based on a level of fiber investment that is justified only for provision of broadband services. The result is that loops in Manhattan cost $12.49 per month, or $18.49 if they are provided as part of a platform with a $6 glue charge. The forward-looking cost estimated by the Hatfield Model is $4.64 for the highest density zone.[38] Fifth, the combined UNEs will be unavailable in Bell Atlantic offices where there are two collocated customers. Finally, there is very little evidence that unbundled loops or combined UNEs can be provisioned efficiently in New York or anywhere else in the country. To date, few orders have been placed and fewer have been filled.

There appears to be a substantial risk that the network unbundling required by the 1996 Act will suffer the same fate as the unbundling required by the Commission in the Computer III Proceeding. Open Network Architecture failed to achieve any significant unbundling. LEC resistance as well as high prices provide the explanation.[39]

3. Acquiring Customers

Acquiring facilities, either by building or leasing, is only the first step. Customers must be induced to leave their existing supplier. Marketing local exchange services to end users will

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[37] New York Public Service Commission, Case 95-C-0657, Opinion and Order Setting Rates for First Group of Network elements, Opinion No. 97-02, April 1, 1997.

[38] The NYPSC accepted NYNEX claims that the forward-looking network should include capacity and technology for services beyond voice grade.

be difficult and will take substantial time.[40] There will be substantial customer inertia. Consumers must have confidence that the new providers will deliver quality, uninterrupted service.

Another problem with necessarily limited geographic scope of CLEC offerings is that it makes mass marketing of service difficult. If CLECs have facilities in geographically limited areas within a marketing region, it is expensive to use mass media to advertise. Moreover, customer confusion and ill will result when advertised services are unavailable to a significant portion of the market.

Local number portability (LNP) is an important element of CLEC marketing, without it, it is quite universally accepted, CLECs cannot hope to obtain significant local telephone service market penetration. Yet, after years of negotiations and technical discussions, full, opposed to "interim," LNP is only just being deployed in a number of metropolitan areas. Moreover, ILECs do not always have adequate capacity to provide interim number portability in all end offices serving CLEC customers.

V. ACCESS CHARGES AND LONG DISTANCE COMPETITION

Excessive access charges represent subsidies from the long distance carriers to local telephone companies. These subsidies will provide an artificial and anticompetitive advantage to RBOCs if they are still in place when they enter the interLATA market. These artificial advantages are not the result of efficiency or innovation by local telephone companies. They are the result of their position as the incumbent local exchange carrier, with the consequent ability to

[39] The failure of the ONA unbundling policy is described in Hatfield Associates, Inc., "ONA: A Promise Not Realized – Reprise," April 6, 1995.

charge competitors high prices for access. One significant problem is that local carriers can place their long distance competitors in a price squeeze.

Under a price squeeze, a firm supplying monopoly inputs incurs less cost for the monopoly input than it charges its competitors. As a result, the competitors are unable to earn a profit even though they may be as efficient or more efficient than the monopolist. Modern economic theory also recognizes the anticompetitive nature of such price squeezes. Raising the price of an essential monopoly input is a "raising rivals' cost" strategy.[41]

Imputation rules do not solve this problem. Under imputation, the monopolist charges itself or its affiliate toll provider the same rate for the monopoly input, i.e., access, as it charges its competitors. But this does not change the fact that the cost of access to the competitors is the price charged by the monopolist while the monopolist's real cost is not the price it charges its affiliate, but the actual cost of providing access. This artificial cost advantage can reduce or eliminate competition. For example, if the monopolist's affiliate charges a long distance price equal to the price of access plus the incremental cost of the non-access components of long distance (e.g., long distance transport and marketing), the monopolist will still be profitable because it is making profits on access. An equally efficient competitor would have to operate at a loss in order to attract market share from the incumbent.

Experience in administering the imputation rules shows that these rules are hard to enforce in the face of incentives for the local monopoly telephone companies to abuse them -- and the incumbent telephone companies do indeed have these incentives. At the request of

[40] Excessive non-recurring charges present another marketing issue.

[41] See, Salop, S. and D. Scheffman, "Raising Rivals' Costs," American Economic Review, 73, May, 1983.

AT&T and MCI, I reviewed imputation of access charges by New York Telephone ("NYT") for its toll and Regional Calling Plan ("RCP") services. I concluded that despite the Commission's imputation rules and policies, many NYT intraLATA toll services were priced too low to allow competing interexchange carriers to make a profit. The NYT imputation analysis contained unrealistically low costs of administration and marketing. As a result of this and other problems I identified, NYT has placed its competitors in a price squeeze. Although the NYPSC intervened to solve some of these problems, it is still true that imputation as a competitive safeguard is flawed in both theory and practice. As a New York Public Service Commission Administrative Law Judge recently pointed out: " . . . the difficulties in policing imputation, and the accompanying delays in rectifying transgressions, gives the incumbent local exchange carrier an unfair competitive pricing advantage."[42]

Excessive access charges provide incentives for abuse. It is very difficult for regulation to overcome these incentives. With the introduction of local competition, the resources of regulators will be stretched even further. The evidence in the interLATA market is that there will be a variety of pricing plans and frequent service innovations. At best, regulators will be able to perform cursory imputation reviews of telephone company offerings. By the time reviews are completed, plans that fail an imputation test may have already damaged competition. As my experience in New York demonstrates, this problem is exacerbated by the fact that the issues surrounding a proper imputation can be quite complex. The bottom line is that pricing access at economic cost is an essential competitive safeguard. If local telephone companies are not

[42] See Stein Recommended Decision, *supra.*, note 14.

earning excessive profits on access, they are less able to earn low or negative margins on the non- access portion of toll rates.

Incumbent local exchange carriers have argued that they have no incentive to discriminate against long distance competitors because they would lose the profits they are making on access as a result. There are three responses to this argument. First, the monopolist will have incentives to offer volume discounts or other types of discount plans that long distance competitors cannot match. On minutes of use stimulated by such plans, the long distance carrier will still pay full access charges, but the telephone company will recognize that its marginal cost of access is less than a long distance carrier's marginal cost of access. It will therefore be able to profitably offer consumers deeper discounts. These discounts are not due to efficiency or innovation, but are due simply to the fact that access charges are priced above cost for competitors.

Second, if a high-volume long distance customer is considering a competitive long distance service that uses special access, the ILEC will have an artificial advantage in competing for the patronage of that customer. In this case, there is no opportunity cost when the local telephone company offers these customers steep discounts for a long distance service using switched access. Third, if the monopoly telephone company is subject to an explicit or implicit profit cap from regulators, it will not perceive the same cost of discriminating against competitors as when this is not the case. In other words, pricing its own long distance services without regard to access charges may be profitable. Its access profits will fall, but it may avoid a

general rate reduction. In addition, it will gain a competitive advantage against its long distance rivals.

VI. ACCESS CHARGES AND LOCAL COMPETITION

Some CLECs argue that high access charges will actually stimulate local competition. There is reason to be skeptical of this argument. Competition is not desired for the sake of competition. Competition is desired because it will bring benefits to consumers by improving economic efficiency.

There is no guarantee that the entry encouraged by high access charges will be efficient. In other words, competitors with costs below the inflated access charges, but above ILEC costs, may enter. If this is the result, it will cost society more to produce telephone services -- not less. However, I am skeptical that high access charges will be the factor that induces local exchange entry.

Smart investors will not sink millions of dollars into investments that depend on regulators keeping rates above costs for their viability. New entrants will make their decisions based on likely post-entry prices. If new entrants are basing their entry decisions on today's prices, it must be because they do not believe their entry will have a substantial impact on ILEC pricing decisions. Further, it is preferable to eliminate a huge artificial profit advantage for the incumbent that can be used to deter the entry of more efficient firms through strategic selective price cutting. The opportunity to protect access profits provides the incumbent telephone companies with tremendous incentives to impede the growth of local competition.

VII. ACCESS CHARGE REDUCTIONS AND LOCAL RATES

ILECs seem to favor some access charge reductions only if the reductions are made in the context of a "rebalancing" of local rates. Rebalancing is necessary from an economic perspective only to the extent that there are local rates that are below cost. There is no question that rates are below cost in certain areas and for certain services. It is less clear, however, that the interstate jurisdiction is subsidizing the intrastate jurisdiction. For example, a New York Public Service Staff Report recently found that basic service rates in New York State are not subsidized.[43] The conclusion is that access charges can be reduced to cost without any immediate consequences on universal service or on the economic viability of ILECs.[44] To the extent universal service funding is required from the interstate jurisdiction, the proper way to do it is through a competitively neutral universal service fund.

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[43] Stein Recommended Decision, *supra.*, p. 12.

[44] ILECs are economically viable to the extent that forward-looking revenues exceed forward-looking costs.