ISSUES IN TELECOMMUNICATIONS REGULATION AND COMPETITION: EARLY POLICY PERSPECTIVES FROM THE STATES

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Program on Information Resources Policy

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

• With the implementation of the Modification of Final Judgment, the relationship between state and federal jurisdictions of telecommunications underwent a major shift. The divestiture of the Bell operating companies from AT&T has placed state regulators in a new and perhaps expanded world of authority and responsibility.

• With a new level of autonomy for decision making given the local telephone operating companies, as well as the service possibilities being made available by improving compunications technologies, it is reasonable to assume that state commissioners will be asked to deal with a broader range of decisions than approving tariffs for relatively straightforward local telephone services.

• More players than ever are likely to see that they have stakes in the outcome of the decisions made at the state level. Among these players are: large users of telecommunications; AT&T and other long distance providers; the former Bell operating companies and the independent local exchange companies; the growing number of providers of information services via electronic conduits, including banks, publishers, and retailers; and small business and residential users.

• A survey of 18 state commissoners, all members of the Communications Committee of the National Association of Regulatory Commissioners (NARUC), indicates that in the early days of this new era the states were not of like mind in either understanding the problems and issues they expected to have to face nor in formulating the solutions that might be appropriate.

. Among the findings from the survey are:

- Most commissioners believed that their colleagues were either poorly informed about telecommunications issues or that the degree of knowledge was highly variable among states;

- A 100% or 200% increase in local rates in the next few years would definitely or probably jeapordize universal telephone service and that the maintenance of low rates should be a high or top priority of commissions.

- To help maintain low rates, a majority of those interviewed favored use of local measured service rates. Other options, such as a new separations formula or direct state subsidies, did not evoke widespread support.

- There was skepticism or uncertainty about the advisability of promoting intraLATA competition.

- Commissioners were overwhelmingly in favor of regulation of common carrier regulation for both data and voice carriage performed by cable television companies. If forced to forebear from such regulation, they favored an access charge or tax on cable bypassers.

• Among the areas in which there may be considerable state-to-state variations in regulatory approaches are:

- the means to resolve the tension between maintaining healthy local operating companies and the pressure to keep basic service rate affordable;

- the variations in conditions promoting the feasibility of economic bypass;

- the general decisions on when to forebear or regulate.

• When asked to describe the "single biggest policy dilemma" their PUC will face in telecommunications in the next few years, most respondents focused on the need to find a balance among competing goals, such as competition, new technology, access charges, operating company health, and low basic rates.

• Commissioners had an open mind on allowing former Bell operating companies to participate in the market for new telecommunications services. Most supported either no regulation or regulation only in the case of abuses.

• State commissioners viewed the costs and benefits of regulation in socio-political as well as narrow economic terms. The PUC members saw the benefits of competition to small users as relatively limited, with most gains accruing to business users. Some members saw such gains to business users as ultimately helpful to consumers, but many did not agree.

INTRODUCTION

The current direction of federal telecommunications policy, as expressed in decisions of the Federal Communications Commission (FCC) and Federal District Court Judge Harold Greene, is to move from regulated monopoly to regulated competition. How much federal regulation will diminish remains to be seen. But much regulatory authority will continue in the state jurisdictions. And arguably, if federal regulation is reduced, the major locus of regulatory power could reside at the state rather than federal level. State public utility or public service commissions (PUCs or PSCs) will confront new regulatory dilemmas, complexities, tradeoffs, and, perhaps, contradictions.

Among the resulting uncertainties are: How quickly, if at all, will competition come to each of the various submarkets (e.g., intrastate voice, local data, terminal equipment)? Will the state and federal regulatory bodies sharing authority over telecommunications policy act in concert or at cross-purposes? What is the likelihood of state regulatory actions that, from some perspectives, might encourage deviations from cost-based pricing and efficient allocation? Will the federal policy changes open the door to rapid diffusion of innovative information, data, and other services?

State utility commissions will strongly influence the outcomes of such telecommunications questions. Yet little has been known about the commissions' orientations to the specific changes called for in the court's AT&T divestiture order and the FCC's Computer II dockets. This report is designed to establish a benchmark of perceptions, attitudes,

priorities, and options of the state PUCs in 1983 as they began to confront these new policy mandates and potentially more competitive markets.

DIVERGENT PERSPECTIVES

Recent FCC majorities have generally taken a national perspective. They have sought to move toward more competitive markets that they believe will promote efficiency, innovation, and enhanced consumer welfare. Judge Harold Greene has also favored increased competition. Although some of their decisions may conflict, both the commission and the judge are relatively insulated from direct electoral pressure and other political influences. PUCs, more directly involved in politics, may tend to see policy options differently. In some states, for example, the public may blame rising local rates on competition, and view any benefits of deregulation as abstract and distant. In addition, some groups that have enjoyed subsidies under the existing regulatory regime may lose them under the new rules. PUCs may experience some pressure to focus on the particular and immediate costs, risks, and dislocations competition might bring to their states, even if they agree that ultimately it would yield benefits.

For two reasons we might expect state politics to play an unusually large role in telephone deregulation. First, the substantial authority afforded states by the 1934 Communications Act makes telecommunications deregulation distinct from airlines, securities, or banking deregulation. In those cases the federal government has most of the authority. Second, in areas such as trucking and bus transportation, where states do enjoy some power, their decisions are visible and salient to only a small segment of the population. Federally regulated telephone rates affect

virtually everyone through an explicit monthly charge. Securities and banking rules may affect many citizens through interest rates on savings, for example, but the linkage between government action and its effects is not overt as it is with phone rates. The origin of airline ticket prices is similarly obscure. In any case, the average citizen has little hope for input or even knowledge of the workings of the Civil Aeronautics Board (CAB), Securities and Exchange Commission (SEC), or Interstate Commerce Commission (ICC). State utility commissions, on the other hand, receive media coverage, hold public hearings, and otherwise generate public attention.

Adding to the complexity, this study found that some state regulators felt saddled with what they believed to be inherently contradictory missions. Regulators want to maintain local phone rates as low as possible, yet keep local exchange companies financially healthy. While many PUCs may have welcomed the introduction of new communications services and technologies that enhance the productivity of the state's businesses, they may also have feared that the local company would lose its biggest customers if such new competitors thrive. Some PUCs may experience pressure to protect the independent (non-Bell) telephone companies when the independents' interests collide with the former Bell operating companies (BOCs); yet pressure may also be brought to nurture BOCs. All the while the state will be subject to federal rulings, which could conflict with any of the above goals.

STUDY PURPOSE

The goals of this report are:

1. To identify the major issues that increased competition and divestiture present to state utility commissions.

2. To probe in particular the following three phenomena:

a. Points of conflict between policies pursued at the federal level and those being considered by the states.

b. Areas in which state actions may be at odds with some players' views of the elusive principle of cost-based telecommunications pricing. Groups frequently justify their policy preferences as contributing to economic efficiency by bringing prices in line with costs. With stakes in regulatory determinations of costs and prices often quite high, controversy frequently surrounds attempts to equate costs and prices.

c. Some of the regulatory options available to states that might influence the competitiveness of specific telecommunications submarkets for the rest of the decade. These submarkets include local voice and data communications, intrastate and interstate message toll service, enhanced and information services, and customer premises and network equipment.

The term "BOC" will be used generically to mean all local phone companies, unless the context clearly refers only to Bell local companies.

CONTEXT

This study comes during a period of great ferment for industry managers and policymakers. Both groups have been functioning under considerable time pressure. Divestiture became a reality less than a year and a half after Judge Greene's Modification of Final Judgment (MFJ) was entered.[1] Uncertainty is unusually high because the changes are so vast.[2] Moreover, unusual political pressure and public attention continue to surround PUC deliberations and telephone company actions.

As an illustration of potential political dilemmas for state regulators, consider the CBS Evening News report (June 25, 1983) on Southwest Bell's request for a $1.7 billion rate increase. Explaining the filing, Dan Rather noted it would "triple" the "average basic monthly rate." After mentioning the divestiture of the 22 operating companies, Rather explained that the sharp increase was requested "to offset increasing labor and other costs." The striking aspect of this report is that it specified only a relatively minor and uninteresting, albeit familiar, factor behind rate increases. It implied that divestiture was another cause of the rate hike. It neglected possible rate decreases for long distance service, potential savings for customers purchasing telephones, and expectations of innovative services. And it relegated all the complexities of this report to two vague words -- "other costs." Of course Rather could hardly do justice to these factors even in his entire 22 minutes. But this sort of mass media coverage could heighten public concern and constrain utility commissioners.

INITIAL RESPONSES OF PUC MEMBERS

State regulators' initial responses to the changes in regulatory policy were generally unfavorable. A resolution unanimously passed by the California PUC on August 3, 1983, is fairly representative. It states that FCC and court actions "will cause dramatic increases in basic rates for telephone service, which will jeopardize the universal affordability of telephone service . . ."[3] and calls on Congress to pass legislation that would essentially modify or overturn many recent FCC decisions. Among the suggested policies would be assessment of access charges on interconnect and bypass carriers; affirmation of state jurisdiction over all intrastate services; state authority over

depreciation; state authority over end user access charges, both inter- and intrastate; authorization of the FCC to regulate only interstate transmission; and removal of restrictions on BOC provision of enhanced and information services.[4]

This resolution elucidates many of the major points of contention between federal and state jurisdictions. It also shows the major strategy that PUCs may believe they will be forced to follow to advance their most-favored policy choices: appealing for Congressional legislation.

The key implicit point is that, however reluctantly, states seemed to recognize that their ability to halt the advance of competition on their own was limited. A major finding of this study is that while many commissioners would subscribe to the California resolution, most would also acknowledge that competition is quite possibly inevitable, and that it might well be beneficial in some respects.

Thus, in the months immediately preceding the actual implementation of the MFJ, commissioners did not generally appear intent on using their state powers to block or delay the emergence of competitive markets. They were concerned, however, that values other than those of economic efficiency and innovation be weighed in the decision process. As one commissioner remarked in response to an interview query, "What breaks my heart is that America had the finest telephone system in the world and the people in Washington had to mess with it; they have destroyed the wonderful system we had." He was disturbed by the policy changes. But in other responses he clearly revealed a willingness, if not enthusiasm, to adjust to a new regulatory regime. For example, he supported the creation of an intrastate access charge that parallels the interstate charge mandated by the FCC. (See Chapter 6.)

METHODS

This study relies heavily upon a survey of members of the Communications Committee of the National Association of Regulatory Utility Commissioners (NARUC) and of its Subcommittee on the AT&T Divestiture. NARUC is comprised of all utility commissioners in the United States. Its headquarters is in the ICC building in Washington and it has ongoing working relationships with the FCC. The group divides itself into specialized committees that make studies and recommendations to the full membership on such regulatory matters as trucking, natural gas, electricity, and telecommunications. The Communications Committee and the NARUC Subcommittee on the AT&T Divestiture have 22 members who are PUC commissioners (there are three non-commissioner observers). Seventeen commissioners were interviewed for this study, mostly by telephone; an additional interview was conducted with a staff member delegated by a state commissioner to speak for him. Four members could not be reached. In addition to the main survey, case studies of the North Carolina, New York, and California commissions were conducted. Most members of these commissions were interviewed and, where pertinent, their responses are discussed. The main interview questionnaire is attached as the Appendix. Interviewees represent a cross section from states in diverse circumstances. Responses to the open-ended questions were coded by the author in categories that are listed as each question is discussed.

AUDIENCES FOR THIS STUDY

Each of the following chapters describes the issues about which commissioners were queried, issues selected for their relevance to a wide range of telecommunications players. The chapters address the

perceptions and preferences of state commissioners as revealed by the interviews and by other evidence, and they probe the policy implications. It was expected that in the months following the interviews -- as the effects of the break-up and Computer Inquiry II were manifest, and as the commissioners themselves gained more experience -- their opinions, attitudes, and actions would change.

Among the players whose interests will be affected by state actions -- and to whom this report is addressed -- are the following:

o Large users of telecommunications services. Many business and public organizations are potential beneficiaries -- or victims -- of changes in telecommunications regulation and markets. Some are considering or have decided upon the establishment of their own telecommunications systems that will bypass, at least in part, the local telephone exchange. Others face new choices in procuring long distance telephone services; telephone equipment for their offices; and data transportation, video conferencing, electronic mail, and other innovative services. Large telecommunications customers may find that availability and prices of such services are affected by state actions.

o AT&T and other long distance providers. Much of the state policy debate revolves around how and whether government should intervene in markets where the established (and dominant) long distance carrier, AT&T Communications (AT&T-C), operates. Numerous competitors have arisen in recent years, some with extensive network facilities of their own, others leasing facilities and reselling long distance service. State commissions have direct and indirect authority over all these operations. PUCs set rates for intrastate toll calling; they can certificate competitive long distance carriers (or decline to); they regulate the local companies with which the long distance providers must connect.

o BOCs and independent local exchange companies. Local phone companies are under pressure to adapt to changing market and regulatory conditions. State commissions not only consider local rate requests; they also help determine the permissible scope of BOC and independent activity in emerging telecommunications markets, and the degree of regulation in those arenas.

o Providers of information services and local distribution. A number of new, or newly applied, technologies are emerging to challenge the BOC's heretofore "natural" monopoly in local exchange communication. Among these are two-way cable television, digital termination systems, and cellular mobile radio. Exactly how much competition with the established local carrier will be permitted, which players (perhaps including the BOC) will be allowed to enter which new local markets, and what prices and service structures prevail will all be within the purview of state regulators. New or relatively young entities are offering innovative or enhanced services via these channels. The conditions of entry, and the prices and regulatory restrictions they face, will be markedly affected by state regulatory decisions. Those corporations that employ telecommunications to deliver their services -- for example, newspapers launching videotex offerings, banks providing in-home financial transactions, data bases such as The Source^{R} -- will similarly find their business options influenced by state regulatory decisions.

o Small business and residential users. Costs and service options for smaller consumers are changing. For example, there is already pressure to increase the price of flat-rate local service in most states; options for measured service may become attractive to these customers.

The long distance market should offer more choices, a variety of levels of service, and perhaps lower prices. State regulators will play a larger role in determining how much the smaller users' burden of supporting fixed costs of the telephone system will increase. The mix of local services, prices, and providers available to homes and small businesses will, again, be affected substantially by state regulators.

o Federal officials. In the executive branch and independent agencies, policymakers may experience conflicts between their goals and perceptions and those of state regulators with whom they share jurisdiction. These conflicts will shape some of the future policy questions that come to federal attention. Members and staff aides in Congress may decide on legislative action based in part on likely state actions or perceived needs. An example would be pricing local telephone service, a matter of considerable political salience. States' perceptions may condition the options that make legislative sense.

o State officials. This report analyzes policy questions, issues, and implications of PUC members' views. Its findings will reveal to state legislators and other policymakers those areas where their commissions appear to match general state trends and where they diverge. The report also probes opposition to, or pitfalls of, particular state options.

While the report does not delve deeply into every concern the above players might have about state regulation, it does attempt to suggest the general dimensions of issues that states will consider.

CAVEATS

This study was primarily conducted during the early stages of state deliberation on most of the new issues, May through August 1983.

Consequently the commissioners readily admitted that their thinking on many matters had not fully evolved. Further, the core data come from a survey of 18 commissioners selected because of their membership on NARUC communications committees. The results may not fully reflect the sentiments of their brethren who do not specialize in communications issues. But the state case studies, including interviews with six of seven commissioners in North Carolina and New York, revealed no such dichotomy between members knowledgeable in communications and those whose major interests lay elsewhere. Perhaps the most significant limitation of the information presented here is that it relies on commissioners' private responses to interviews conducted several months before proceedings -- and the political environment and constraints -- had fully developed. The behavior of PUC members, after plans, requests, data, and political pressures become clearer, could diverge from their early opinions expressed to this researcher.

Nonetheless, a study at an early stage can serve as a baseline from which to study and measure subsequent policy. Many of the questions raised and issues identified will remain alive for years, even as specific attempts are made to address them at the state and federal levels.

NOTES FOR CHAPTER 1

1. Modification of Final Judgment in United States v. American Telephone and Telegraph, Civil Nos. 74-1698 and 82-0192, 552 F. Supp. 331, 47 Fed. Reg. 40, 392.

2. It is assumed that readers are familiar with the general outlines of the AT&T divestiture and the FCC's major deregulatory decisions.

3. California Public Utilities Commission, Resolution, August 3, 1983.

4. The NARUC Committee on Communications passed a 13-point resolution urging Congress to pass a bill including these and other provisions. See NARUC Bulletin (Washington, D.C.: National Association of Regulatory Utility Commissioners, September 26, 1983), pp. 11-12.

2

THE SCOPE OF STATE AUTHORITY AND KNOWLEDGE

CHANGES FROM TRADITIONAL STATE-FEDERAL ROLES

The 1934 Communications Act codified a dual-level regulatory regime for what was then seen as a natural monopoly telephone industry. The federal government, through the Federal Communications Commission (FCC), regulated those aspects of the industry providing interstate phone service. The states, through their utilities commissions, regulated provision of local and in-state toll calls.

Conflict between state and federal jurisdiction of telecommunications regulation is inherent in telephone technology. Many facilities (e.g., buildings, switches) are shared between local, in-state toll, and interstate toll use, as are telephone handset and other customer premises equipment (CPE). Long distance calls use both local exchange loops and toll switches and trunks. A single call may therefore pass through the purview of both state and federal regulation. With the onset of toll and equipment competition, the built-in tension has grown. When the entire system was a single, integrated monopoly, disagreements (e.g., on the size and specific distribution of settlements flowing from one jurisdiction to the other) could be handled internally. Competition and recent FCC rule changes have altered this situation. The changes produce uncertainty, and the potential for conflict between the state and federal jurisdictions has expanded.

Recent disputes between state and federal jurisdictions include, but are not limited to, disagreements about:

- Jurisdiction over consumer premises equipment.

o Rates of depreciation.

o Competition and regulation of in-state toll calling.

o Apportionment of the burden of non-traffic sensitive costs between interstate and in-state jurisdictions and suggestions to charge flat rate fees to end users to recover these costs.

o Regulation of alternatives, some resulting from newer technologies that might compete with the local telephone company for local distribution.

Contention has generally arisen when the FCC issues findings and orders that simultaneously expand its jurisdiction and enhance the potential for competitive markets to replace regulation. For example, in Docket 79-105 the FCC preempted state control over depreciation rates. It cited the need to ensure optimal investment in innovative equipment and the danger that different depreciation policies in each state might pose to that goal. The states responded with a lawsuit filed by the National Association of Regulatory Utility Commissions (NARUC).

Depreciation methods and rates are crucial to investment decisions of regulated corporations and the degree to which they adopt technological innovations. With longer depreciation periods and specific methods of categorizing fixed assets for depreciation purposes, it takes companies longer to recoup their investment in the equipment. Shortening the average asset's depreciation time provides faster payback to the company and frees up capital to procure the latest equipment. It therefore also raises expenses, hence rates. Regulatory commissions have often provided for rather slow depreciation cost recovery, helping to keep prices lower.[1] While that practice may not have been incompatible with a little-changing monopoly telephone system, it places increasingly

severe constraints on the diffusion of innovation as technology advances. The trend of court and FCC rulings on CPE preemption and deregulation is unfavorable to the states' position.[2] In June 1983 the U.S. District Court for the District of Maine denied a motion for a temporary restraining order against the Maine Public Utilities Commission.[3] The commission had defied the FCC in assessing New England Telephone's (NET) intrastate depreciation revenue requirements. NET claimed it was thereby deprived of $1.7 million for 1983. Another U.S. District Court, however, enjoined the Louisiana Public Service Commission from denying implementation of the FCC depreciation rules.[4] The matters are pending at this writing.

IMPLICATIONS OF JURISDICTIONAL DISPUTES

For many state commissioners the dominant issue is often jurisdiction itself. Most commissioners believe they know what is best for their states, that they need flexibility, and that blanket federal edicts ignore important differences in needs and circumstances.[5] They often assert that they sue or petition the FCC to protect current procedures, not to derail the substantive goal of competition. For its part, the FCC evidences an equally firm commitment that for competition to flourish throughout the industry, companies and their investors must have flexibility. That means freedom from widely varying and constantly shifting regulations in different states. In virtually all recent cases, federal courts have sided with the FCC.

The process of FCC preemption, followed by state opposition in the form of petitions, suits, or pressure on Congress, could have a significant impact on the evolution of telecommunications submarkets. Pending court cases can discourage investment, for example. At a minimum, addi-

tional uncertainty may be introduced in the corporate planning process.

Competition and innovation may be dampened in those telecommunications activities more likely to experience jurisdictional disputes -- for example, new local distribution systems such as cellular radio and digital termination systems (DTS). Where jurisdictional disputes persist they may affect the market structure. Established companies may be better situated to gain a foothold in the new markets despite uncertainties engendered by jurisdictional debates. The newer players, those with less reserve capital (and investor confidence), may be handicapped and discouraged from entry. In markets such as CPE, where the issue seems resolved in favor of deregulation, competition should take hold more readily. Other controversies have arisen, however, over what constitutes CPE (and is thus deregulated) and where the distinction between deregulated CPE products or hardware and still regulated telecommunications services should be drawn. (See Chapter 4, Conclusion.)

A key question for future developments is whether the courts will draw a definitive line between state and federal jurisdictions. The courts' position has been that the (shared) facilities are vital to a viable interstate network. Thus, the FCC's jurisdiction and the preemption have been upheld. In some ways the conceptual lines between jurisdictions are indeed blurring as technology evolves. The rationale for separate state regulation is diminishing. However, as currently written, the 1934 Communications Act does grant jurisdiction over in-state services to the states. It is unclear how far the courts would be willing to go to eliminate this distinction even if they believe technology and market evolution have rendered it obsolete.[6]

LIMITS OF STATE POWER

Numerous aspects of the AT&T breakup and of FCC deregulatory edicts affect local rates. Public service commissions (PUCs) are indeed inundated by decisions and scenarios to consider, not to mention their electricity, gas, and other oversight duties. But their ability to affect outcomes -- their scope of control -- is unclear in several areas. Among those mentioned by respondents to the survey reported herein were:

o What impact will the AT&T reorganization and division of assets have on Bell operating companies (BOCs)? Many of the commissioners surveyed expressed concern about post-divestiture BOCs being left with the less desirable assets, hence in weakened condition. Some wondered whether the states' ability to approve or disapprove rate bases would enable them to have any effect on the BOCs' asset positions.

o Will states be able to assist in enforcing the Modification of Final Judgment (MFJ), especially regarding such matters as availability of patents and technical information to BOCs, if neither the Greene court nor the FCC is active in this respect?

o Where there are joint-use facilities or services that fall under both state and federal jurisdictions, which agency will regulate?

o How much control will PUCs be able and inclined to exert over BOC diversification? How much will BOCs seek to expand their offerings beyond plain old telephone service (POTS) or even telecommunications? The role of the seven regional holding companies that will own the 22 BOCs could be decisive; state authority over them is unclear.

o How active and effective will state consumer groups be? If public interest associations can capture media attention and point to dramatic negative impacts on consumers, PUC choices could be constrained.

Also, new coalitions of users and competitors with interests in information services -- retailers, newspapers, and banks -- could arise to pressure PUCs. A state's legislature and political leadership have equal potential for affecting a PUC's practical power.

o Just what is the likelihood of further preemption by the FCC or Congress? Gary Epstein, then FCC Common Carrier Bureau Chief, predicted in June 1983 that the chances for further commission preemption were under 20%.[7] But the evolution of circumstances and FCC personnel could alter that assessment. More preemption could be in the offing if Congress passes a bill on access charges -- as many state regulators themselves favor (but without preemption) -- or if PUCs begin acting in strong contravention to FCC goals. Preemption could even occur if only a few states that comprise significant segments of the total national market violate FCC desires.

THE EXTENT OF PUC KNOWLEDGE AND CAPACITY

A recurrent theme of discussion with state utility commissioners was their lack of staff resources, data, and time to make optimum decisions. Among the specific questions PUC members raised were:

o Just how informed were PUCs in 1983? The NARUC Communications Committee members surveyed responded to a request to rate the level of understanding and knowledge possessed by their fellow commissioners as follows:

How well informed are state commissioners on telecommunications issues? (In mid-1983)	Responses
Very well informed	3
Sufficiently, under the circumstances	4
Degree of knowledge highly variable between states and commissioners	7
Poor	3
Not ascertained	1

These results are inconclusive. Presumably, those surveyed are among the best informed PUC members, but they disagree greatly among themselves about how much their colleagues know. Perhaps commissioners' standards for judging another "well informed" vary widely. Or perhaps commissioners are not well informed about the knowledgeability of their colleagues.

o How much trouble will PUCs have in obtaining answers to the right questions? One commissioner interviewed for this study said: "Just getting data from [the BOC] and AT&T on the number of employees, salaries, license contracts, and the like is a horrendous job. They give you tons of indecipherable data, then you spend hours and hours going through it. It's like a shell game. They are a company and they have a responsibility to stockholders." This commissioner said she believes that part of the profit maximizing strategy of the phone companies may be to withhold data from PUCs, or to inundate them with poorly organized information. This assumption might not be correct in all circumstances. Long dialogues with PUCs on data submissions can delay proceedings, which is not always in the companies' interests, especially under current rapidly changing conditions. Also, the BOCs themselves may not always have all the information PUCs demand.

o Will a shortage of useful information lead PUCs to delay their decisions, thus slowing the emergence of competition? Or will that uncertainty lead PUCs to yield to the apparently inexorable momentum of the competitive market? Under the latter scenario PUCs would stand aside and allow entrants to invest and prosper or fail without close oversight. In answer to the interview question about the biggest single policy dilemma, one commissioner said, "The policy <u>process</u> is the policy

problem. The whole metamorphosis of telecommunications will be very rapid, yet regulation is so slow, with the hearings, 'due process' to the point of sickness. . . . If the process bogs down, regulators will be pushed out of the way entirely -- which may or may not be good."

o How widespread were simple misconceptions? And how many telecommunications players act on them? At a 1983 NARUC Communications Committee staff meeting[8] at least two examples surfaced. Several PUC staff members mentioned that under FCC decisions the BOCs' CPE inventories were frozen as of January 1, 1983. The staffers assumed this meant that if an item were out of stock the BOC could not and would not offer it anymore. BOC representatives at the meeting informed them that existing rules said nothing of exchanging reconditioned phone models among BOCs to replenish inventories. (There was a constant two-way flow of instruments being returned and going out of BOC inventories.)

The second example was related by a representative of an interexchange carrier who described the trouble his long distance company was having compelling AT&T to reveal the location of the 18% of its exchanges that then used electronic switching. He said the company had filed two court motions to pry the information out of AT&T. Some staff members then informed him that every PUC has that information for its state as a matter of public record; there was no need to sue. Some measurable amount of PUC energy and resources will probably be expended over the years, either engaging in these sorts of misunderstandings or straightening them out. The same applies to other telecommunications actors.

These and other questions will be probed further in subsequent chapters.

NOTES FOR CHAPTER 2

1. Alfred Kahn, The Economics of Regulation, vol. I (New York: John Wiley, 1970), p. 118.

2. Bruce Carruthers, Ellen Deutsch, William Garrison and John Williams, Report on the Study of Telephone Use, Rates, and Regulation (Raleigh: North Carolina Agency for Public Telecommunications, 1983), pp. 254. This report was commissioned by the North Carolina Utilities Commission and written by the consulting firm operated by the four authors named. The authors had previously held positions at the National Telecommunications and Information Administration or the FCC. Although largely focused on North Carolina, the findings can be generalized. Cf. the history of some of the lost cases in The Washington Report from NARUC for 1983 and in the Annual Convention Proceedings of NARUC for previous and succeeding years.

3. NARUC Bulletin, July 4, 1983, pp. 1-3.

4. Telecommunications Reports, 49 (July 4, 1983), p. 21.

5. Points made in personal interviews with Deborah Dupont, attorney with Southern Pacific Communications, June 15, 1983; Charles Gray, NARUC attorney, May 11, 1983; and John Williams, consultant, May 11, 1983.

6. Interview with Henry Geller, Director, Washington Center for Public Policy Research, May 11, 1983.

7. Remarks at Conference on The New Telecommunications Marketplace, Washington, D.C., June 15, 1983, Hotel Madison.

8. NARUC Communications Committee staff meeting, Washington, D.C., March 7, 1983, Hotel Washington.

3

THE ONCE AND FUTURE BOCS

Among the major concerns and interests of state regulators surveyed is the viability of universal telephone service at affordable rates. Many regulators, along with other observers, worried whether Bell operating companies (BOCs) can maintain high quality local phone services at relatively low rates without the protective presence of the AT&T corporate umbrella. This chapter discusses state commissioners' perspectives on regulating BOCs, revealing the high priority most PUC members place on allowing ample room for BOCs to prosper. A general desire to loosen regulatory restrictions on BOCs characterizes the interviews. The resulting policy issues and implications for BOC customers, suppliers, and competitors are assessed.

UNIVERSAL SERVICE

1. The Universal Service "Mandate"

a. PUC views

Public utility commissioners (PUCs) tended to regard the maintenance of "universal service" as a central part of their mission. However, the meaning of this concept is unclear. To some commissioners surveyed it connotes charging a low flat rate for an unlimited number and duration of local calls, a price low enough that virtually any individual who can afford shelter can afford a phone. To others it means the ability to place a few local calls at a low fixed rate with per call charges for the excess; this would ensure everyone access to the phone-as-necessity (for emergencies and essential business) but not to the phone-as-social-instrument (for leisurely chats with friends). Both of these views imply

a subsidy for local service. But to a few commissioners, universal service only means having a phone line pass by every home, with all installation and usage priced at the full cost of providing service.[1]

Among the commissioners interviewed for this study the first two views predominated, with a general, if sometimes reluctant, tendency to view the days of inexpensive flat rate service as a fast-disappearing luxury. Virtually all commissioners wanted to keep local rates as low as possible and to provide some low-cost options for access to a few outgoing (and unlimited incoming) calls.

Asked whether universal service (as they define it) would be jeopardized if local rates double or triple in the next few years, the Communications Committee members responded as follows:

Universal Service Jeopardized?	Respondents
Definitely	6
Probably	6
Possibly	3
Unlikely	1
Unsure, it depends	2

Most respondents believed that rate increases will have some significant effect on subscribership, especially among low income households.

Respondents were also asked how significant a priority low local rates should be to their commissions:

Low rates' priority?	Respondents
The top priority	8
High priority	5
Must be balanced vs. need to protect BOCs and deter bypass	5

Here we see more diversity, with 8 putting low rates alone at the top of their list and 10 acknowledging other priorities. Although seeking to minimize immediate rate hikes, many of those in the latter group acknowledged the inherent tension between keeping rates down in the short

run and possibly damaging the finances and customer base of BOCs, which would necessitate larger rate increases in the longer run. This group also mentioned allowing customers access to the benefits of new technologies and services as an important consideration.

In sum, most of the interviewed commissioners value both universal service and low local rates. But by no means do they exhibit a monolithic consensus or rigid insistence on either an inflexible definition of "universal" or on continuation of subsidized pricing for flat-rate local service. This is one point favoring an optimistic view of the future financial condition of BOCs. However reluctantly, state regulators realize the old era is changing.

b. Analysis

Available data do not provide clear evidence on the nature of consumer response to price increases for phone service. Elasticity estimates are imprecise guides, partly because rate increases implied by new industry structure and federal regulatory moves are unprecedented in most locales. Further, they come after a long period of inflation in such necessities as electricity, food, and gasoline. Most of the population may be conditioned to adjust to rising rates, especially when the monthly charge in 1984 was still well under $25 in most jurisdictions. Placing the pending local rate increases into historical context also helps to predict future consumer responses. Pacific Telephone points out that in 1950, local rates in California averaged $4.75; in 1982, using constant 1950 dollars, the rate averaged $1.64. The average hours of labor by a manufacturing worker needed to pay for local service dropped from 3.0 to 0.8 over the same period.[2] The implication may be that most Americans faced with rates climbing to 1950 levels (in 1984 dollars) would be able to absorb the hike.[3]

Most state regulators surveyed agree with this analysis of the average household's response. Many PUC members are, however, specifically concerned that any drop-off would be concentrated among the very poor or the very rural. They believe local phone calling must remain affordable even for families on welfare or in remote, high cost locales. The question for these members becomes, at least in part, one of income distribution effects as much as impact on universal phone penetration or BOC fiscal soundness. That is, if average penetration only drops from 97% to 90%, it would be neither a calamity for BOCs nor a crushing blow to the integrity of the public network. Rather, it would mark a serious loss of utility for poor citizens, who would account for most of the drop. Abstractions such as economic efficiency and willingness to pay pale in significance for some commissioners whose concerns focus on the poor. These commissioners believe the poor may not have the funds to pay an extra $5 or $10 for a phone when the increase means losing food, money, or carfare. And they worry that rural dwellers whose cost-based local phone bills could eventually climb to $100 might find it difficult to adjust even with a middle class budget.[4]

2. Local Measured Service

a. PUC stances on the issue

Commission majorities may attempt to minimize local rate increases. For this study commissioners were queried about options they would endorse to diminish the size of local rate increases. Asked if they favor local measured service (LMS), they responded:

Favor LMS	Respondents
Completely favor	5
Generally favor	7
Unsure, it depends	2
Generally oppose	3

Although LMS was not defined in the question, most commissioners volunteered they would favor some form of per-call charge. Time of day, distance, and duration charges were less popular. Most wanted to keep LMS an optional rather than mandatory offering. LMS already exists in some form in at least 44 states, where it is usually voluntary.[5] Mandatory LMS generates political flack in most places. For many users flat rate unlimited calling is an inexpensive service. For them LMS would yield either an increase in phone bills or a decrease in phone usage. Few things are flat priced this way (one fee for all you can use), and many consumers will rationally consider the loss of unlimited calling an immediate decrease in their welfare. (There is some evidence, however, that residential subscribers spend less actual time on the telephone than they believe. In many cases users might actually save money by switching to LMS.)

One difficulty the PUCs might encounter in the future, then, is the political heat generated by a switchover to mandatory LMS. One interviewed commissioner told of receiving a petition against LMS signed by more than 200,000 people and said "so of course we turned it [LMS] down." The Washington, D.C. public service commission (PSC) rejected a voluntary LMS plan on grounds that it was "not supported by proper cost data, elasticity of demand information, or local network traffic patterns showing peak load conditions." The commission also feared it would deter phone use by fixed income groups.[6] Conversely, the Illinois Commerce Commission ordered Bell to file a comprehensive plan for statewide implementation of LMS.[7] States will vary in their responses to LMS, in part depending on whether they have had substantial previous experience with it.

b. Analysis

For now, a nationwide switch to mandatory LMS is precluded by the technical incapacity of many central offices to measure calling.[8] In addition, for political purposes it may seem wiser to offer LMS first as an option. Gradually LMS should become increasingly attractive for many subscribers relative to ever higher flat-rate service fees.

The frequent support shown LMS by commissioners surveyed may be a positive sign for BOCs. In addition to providing a way to maintain near-universal access to the network, LMS offers a theoretical means of enhancing efficient allocation. Depending on the elements measured, LMS can reduce demand for service at times of peak use as well as induce conservation generally. In these ways, LMS can pare costs.[9] LMS may also offer an opportunity to have deaveraged local rates, which could benefit both poor users and downtown businesses in high density urban areas, assuming both of these groups call mostly among themselves. Another form of equity that LMS might promote is between high volume and low volume callers; with flat rates, many infrequent callers have to pay higher rates to cover costs imposed by frequent callers. LMS would save them money and impose costs on the high volume user.

The equity implication of LMS contains two potential problems. First, some commissioners wondered whether the costs of measurement may exceed the benefits of increased efficiency, and suspect LMS is primarily a way to increase BOC profits.[10] The second, more serious complication is that LMS, by imposing on high volume users higher prices for local calls, might stimulate them to bypass the BOC's public network. If this were to happen, LMS might not assist in maintaining universal access after all, for bypass would raise the share of fixed costs each remaining

subscriber must bear. If IMS comes to be viewed as a stimulus to bypass, both BOCs and PUCs could reject it.

3. Analysis of "Lifeline" Options

An alternative for preserving access is the "lifeline" rate. Theoretically this service can target poor people, those in high cost areas, or virtually anyone.[11] Lifeline usually involves a low basic fee permitting unlimited receipt of calls and a few outgoing calls. Additional calls are billed on a per-message basis. In the past most states have allowed anyone to take lifeline service due to the high cost of implementing income tests. Lifeline rates can be used by wealthy professionals who are rarely home (and use their work phones for personal calls), or as a second line for incoming calls while another line with flat rate service is used for calling out. Although information on who takes lifeline service is not definitive, industry executives believe the subsidies might be primarily going to the non-poor.[12] Pacific Telephone's study "shows that 82% of those customers with a household income of less than $5000 purchase our flat rate, 'premium' service while only 14% purchase lifeline," indirectly supporting this belief.[13]

The actual distributional impacts of lifeline may be less significant to the behavior of regulatory commissions than the perceived. Instituting a lifeline rate may be a key to making sharp rate hikes politically palatable and feasible for PUCs. And mandates for a lifeline rate may prove the most attractive option for state legislatures seeking to demonstrate concern and involvement. For the phone companies, a lifeline rate may provide a vehicle (or in some states a wedge) for the introduction of local measured service to replace flat local charges.

With standard rates escalating, lifeline might become the preferred

alternative of many more citizens, poor and non-poor. In that event, the deviation from cost-based pricing that lifeline apparently entails (since the rates usually do not cover all fixed costs) could become more significant than it was in 1983 when regular rates were relatively low and lifeline was less attractive. If too many people chose lifeline service, BOCs could face a revenue shortfall. Foreseeing this, BOCs might craft a much narrower lifeline option, perhaps with only a one- or two-call allowance. It is uncertain whether this path would eliminate enough potential middle-class lifeline subscribers to prevent lifeline service from cutting too deeply into revenues.

A final area of uncertainty involves the technical/financial capacity for providing a measured lifeline service. In many areas the telephone company does not have equipment to measure the calls. This could prove a particularly nettlesome issue in rural places served by high-cost independent telephone companies. Remote companies might need LMS to provide lifeline but be unable to fund the new equipment. Depending on individual circumstances, PUCs might approve more generous (flat rate) lifeline service in rural high-cost areas without LMS capacity than in urban low-cost areas. In this way urban users could come to subsidize rural users, and deviations from some actors' definitions of cost-based pricing might occur.

4. Other Means of Maintaining Low Local Rates

a. PUCs on the options

The commissioners were asked an open-ended question for other options they might favor for keeping local rates down:

Option for Keeping Rates Down*	Respondents
Subsidy of local rates from general state revenues	3
Allow BOCs to enter new markets, garner new revenues to support local rates	3

Tax long distance calls, proceeds to local	2
Revise new separations formulas to maintain a local subsidy	2
Place toll restrictions on phones and charge less for local-only service	2
Miscellaneous other responses	8

*More than one response permitted

Among the miscellaneous responses mentioned by only one commissioner were a general tax on all communications services (including, for example, cable television), disaggregating non-traffic-sensitive (NTS) costs within states so that low-service-cost urbanites could have lower prices than high-cost rural residents, keeping the BOCs' overhead and expenses to a minimum, and reducing the BOCs' rate of return. (The latter two options would probably work against the objective of preserving fiscally robust BOCs.) Three other options sometimes cited (or feared) are preventing in-state toll competition to maintain monopoly revenues that could be used to subsidize local calling, loading more charges onto business lines to keep home service lower, and extending depreciation schedules to minimize depreciation expense. None of these options was mentioned by those surveyed in response to this question. (However, the idea of taxing intrastate long distance to subsidize local service received serious consideration in California Assembly Bill 1348 [March 2, 1983] and may do so elsewhere.)

b. Analysis

The answers exhibited a general sense of resignation to the inevitability of considerably higher local rates. In particular, commissioners were sensitive to the dangers of encouraging bypass that lurk in most cross-subsidy schemes. Only a few suggested any policy that might be construed as placing greater direct burdens on large users and thus encouraging them to bypass the local exchange. Offering further

solace to BOCs is the possibility that local companies can enhance their circuits, often for relatively reasonable sums, to meet the bypass threat at least in part.[14] BOCs themselves might be able to offer some of the broadband or higher bit rate data services that might initially attract large users to bypass systems. On the other hand, if lower price is the key attraction bypass can offer, BOCs could lose some customers -- especially if a BOC implements LMS and its competitors do not.

THE BOCS IN COMPETITION FOR VOICE COMMUNICATION

1. Competition and the LATA

a. The issue

Little noticed at first, recent developments in regulation and technology render the once-inviolable monopoly of local telephone companies quite vulnerable. As part of the divestiture, AT&T and BOCs have created local access and transport areas (LATAs) "generally centering upon a city or other identifiable community of interest. Most simply, a LATA marks the boundaries beyond which a former Bell Operating Company may not carry telephone calls."[15] Under the divestiture's terms, interLATA traffic will be carried by AT&T and other long distance common carriers. Within the LATA, traffic will be carried by the BOC. Some calls within LATAs will be local, others toll.

Judge Harold Green said in his opinion of April 20, 1983, that it would be "intolerable" for there to be no intraLATA toll competition.[16] He said the federal government does not have jurisdiction over intraLATA traffic but that he expected virtually all states to allow intraLATA toll competition. Greene required BOCs to file a commitment to offer equal access to the local exchange to competitive inter and intraLATA carriers. (InterLATA competition is the focus of Chapter 6.)

b. PUC views of competition within the LATA

The National Association of Regulatory Utility Commissioners (NARUC) sample was asked if they would favor intraLATA toll competition. For several, this notion broached unfamiliar territory; few had set views. There was no consensus except the belief that it is too early to predict potential impact of intraLATA competition or to know policy issues it could spawn.

Should intraLATA competition be allowed?	Responses
Completely favor	1
Generally favor	2
We have no choice but to allow it	3
It is unlikely to be profitable for more than one telco to offer local service	2
Unsure	7
Not ascertained	3

Commissioners are generally unenthusiastic about intraLATA competition; the modal response was uncertainty. For some users, intraLATA toll competitors will offer an incentive and means of bypassing (say a company with offices at several locations in a large metropolitan area), deepening the threat intraLATA toll competition poses to BOCs. This issue could well prove among the most vexing, controversial, and time-consuming problems PUCs will encounter.

As of fall 1984, relatively few states were proving hospitable to competitive intraLATA facilities. According to a NARUC study, just 9 states had approved competition from intraLATA carriers, 23 prohibited it, and 18 states had not yet decided. Thirty states did allow resale of intraLATA toll services.[17]

c. Analysis and further issues raised by intraLATA competition

IntraLATA toll competition raises numerous complexities for state regulators. First, maintaining a monopoly for the BOC within the LATA

would provide a potentially large source for subsidy of local exchange service. Many LATAs contain high volume toll routes -- for example, San Francisco-San Jose or Raleigh-Durham. Under Judge Greene's ruling, maintaining monopoly does not seem to be an option. As just noted, however, many states appear to be unimpressed by Judge Greene's position.

Other issues raised by intraLATA toll competition include:

o The questionable equity of continuing a carrier of last resort obligation on the BOC only. The BOC would desire pricing flexibility if forced to compete in local exchange areas and intraLATA toll. A possible result would be deaveraging of local service and/or access charges, with customers farther from central offices paying more for calls.[18]

o Difficulties of network planning might be compounded for BOCs. If BOCs could not be sure that when new concentrations of office buildings are erected incoming tenants would use BOC service, the BOCs might be unwilling or unable to fund new line construction to the complexes.[19]

o The BOC might have few incentives to cooperate in inter-connecting direct intraLATA competitors. And indeed the scenario and the regulatory difficulties would closely parallel those surrounding the pre-divestiture AT&T's interconnection of interstate other common carriers (OCCs) with its local systems. Complaints of unfair practices abounded on both sides.[20] Yet in some ways the intraLATA problems will likely be less amenable to solution. The separation of BOCs from AT&T should ultimately result in the latter's receiving no special interconnection treatment over other interLATA carriers. But at the LATA level there is no entity that can be similarly divested. According to one account[21] the FCC was virtually powerless to compel the pre-divestiture AT&T to accord equal treatment by its local operating companies to interexchange competitors. Will PUCs be able or willing to

perform an analogous function? The states' willingness is questionable because PUCs have a strong interest in maintaining financially robust BOCs in order to hold down local rates. Therefore, some PUCs might be less than assiduous in requiring BOCs to cooperate with competitors.

o Rate and service definitions might become quite a complex issue for PUCs if intraLATA competition takes hold. Within the LATA the boundary between "toll" and "non-toll" traffic is somewhat arbitrary. The distinctions may become even fuzzier where local calls are measured and charged by time and distance.

Thus a "toll" carrier competing with the BOC within a LATA could, if operating very efficiently on high density "local" call routes, charge "tolls" lower than LMS non-toll message rates. Or the competitor could offer a package of 60 minutes of intraLATA calling at a flat rate that would be less expensive than the BOC's rates for "non-toll" message units. Such offerings could prove potent competition for BOCs. The competitors could, in fact, be led by the new AT&T or by independent telephone companies already operating within the IATA.

Some BOCs may have difficulty in meeting the competition while maintaining a subscriber base heavily weighted with low-profit residential users of plain old local telephone service (POTS). There may be an analogy here to the reluctance of many major cable television companies to wire low-income areas in large cities. Companies fear that families in these locales would not subscribe to the pay TV services that provide the profit margin to most cable operations. In the BOCs' case, though, the wire and investment would already be in place.

Under these circumstances, and given the PUCs' incentives to favor the BOCs, some states will seek to delay or prevent intraLATA toll competition.[22] Policies other than outright prohibition could include

stiff charges for the carrier's access to the BOC network within the LATA, definitions of "toll" that favor the BOC, and implicit or explicit subsidies to the BOC. Any of these actions could create prices that deviate from some views of efficiency pricing.

o Devising revenue divisions and settlements between BOCs and independent local exchange companies operating within the same or adjoining LATAs may loom a larger problem for PUCs than sheer dollar amounts might indicate.[23] Independent companies tend to serve the more rural areas. If BOCs are under more competitive pressure -- perhaps including competition from the very same independents -- they might become less evenhanded in settlement negotiations than in the past. PUCs may be called in to arbitrate. If so, again, they will face difficult competing claims. Some independents may experience unprecedented upward pressure in revenue requirements as toll subsidies diminish and the true (and often quite high) costs of servicing rural areas become visible. Yet BOCs too will be under pressure.

These settlement negotiations could prove nettlesome for all parties. Some BOCs and their PUC regulators may find it advantageous and feasible to continue generous settlement policies for a time. Depending on the specific conditions in a state, that strategy might prove the least damaging politically, even if it means higher rates for hard-pressed BOC customers. The BOCs will, however, continue to be constrained in such moves by intraLATA toll competition and bypass potential.

The complex pressures experienced by PUCs are illustrated by Judge Greene's dictum strongly backing intraLATA toll competition.[24] Moreover, policing a prohibition of intraLATA competition might be rendered physically impossible in many cases by the ease and low cost of

transporting messages through enough switches and trunks that they technically qualify as interLATA.

One development that raises the prospect of competition is AT&T's plan to offer intraLATA data and teleconferencing services. In its petitions to several state commissions, the company asserted that it does not have any plans for intraLATA message toll service. Still, AT&T's intentions could become more expansive in the future. The presence of AT&T, even in this limited market, indicates the potential of intraLATA services that might compete with BOC offerings.[25]

Finally, arguing for the emergence of intraLATA toll competition despite potential regulatory barriers is the possibility of robust and effective responses by some BOCs. The BOCs have a number of advantages in any competition, including their size and asset base; their recently improving capital recovery positions;[26] the possibility that they could offer a variety of service "tiers" (again like cable television) -- including a somewhat inferior grade of local voice service as well as a variety of enhanced services -- unmatched by other companies; and customers' ability to dial them with fewer digits than needed for accessing competitors. Of course the BOCs may need to be given some freedom to price and market in response to competition, something PUCs could find troublesome. And they will require the funding to construct facilities for equal access.[27]

THE BOC IN OTHER COMPETITIVE MARKETS

1. Should BOCs Be Allowed to Compete?

a. The PUC response

The potential problems of the BOCs elicited much sympathy from state regulators. This orientation became apparent in their responses to questions about allowing the BOCs to compete in areas previously closed

to them. Those queried on whether the BOC should be allowed to enter the market for new telecommunications services (see question #11 in the Appendix), were overwhelming affirmative: 14 said yes, only 1 no, and 3 unsure.

Perhaps even more telling were the responses (to question #8) on allowing the BOCs to compete with AT&T and the OCCs in the interLATA in-state long distance market. The AT&T divestiture judgment explicitly precludes such competition. BOC entrance would raise the very specter of anticompetitive practices in the intrastate toll market that the divestiture was designed to eliminate. Yet 11 commissioners endorsed the idea and not a single one said no. A final index of the sanguinity with which PUCs seem to view BOC entry into new fields comes from the case studies of the North Carolina and New York commissions. Of the 12 commissioners polled, none indicated serious concern about potential anticompetitive practices by the BOCs. Most said any problems in this regard could be detected and corrected by the commissions, but that they did not anticipate difficulties.

b. Analysis: BOCs and potential anticompetitive behavior

From a policy perspective these findings can be viewed in two ways. They indicate that state regulators were not holding on tenaciously to the view of local telephone companies as providers of plain old (voice) telephone service (POTS) that need to be closely regulated in that realm and prevented from straying into others. Yet the survey also suggests that the BOCs' competitors may find relatively little sympathy if they bring complaints to the states, justified or not, about anticompetitive actions by the BOCs.

Competition may reduce incentives for the BOC to engage in cross subsidies from the regulated local phone service to the BOC's competitive

activities. The latter is only tenuously a monopoly now and there are many pressures on profits. It seems unlikely, from this perspective, that BOCs could generate monopoly rents with which to subsidize their new equipment and service offerings. In fact, PUCs seek just the opposite: support for local voice service from revenues generated by new BOC activities. While a subsidy burden could weaken BOCs in the competition, it could also pose a problem for competitors. Consider the strong PUC backing for both the financial health of the BOCs and their entry into new markets. There is also the difficulty of establishing regulatory control over anticompetitive practices.[28] With many PUCs wanting the BOCs to be strong enough in new markets to have new revenues to subsidize local phone service, competitors may find relatively little sympathy for allegations of BOC misconduct.

The result may be that sometimes BOCs will be able -- if they choose, which is by no means certain -- to make it more difficult for competitors to succeed. State regulators will likely face complaints from BOC competitors regarding this problem. The commissioners will confront pressure to balance the desires to allow competition and innovative services, to keep the BOCs healthy and happy, and to keep local rates low.

The U.S. Department of Justice appears more concerned about anticompetitive possibilities. In an FCC filing, it argued that BOCs should be required to form separate subsidiaries to offer cellular radio, enhanced services, and customer premises equipment (CPE). State regulators who filed comments opposed such a blanket rule and asked for authority to make separate subsidiary decisions on a case by case basis.[29] The general efficacy of separate subsidiaries at accomplishing their ostensible goal has been unclear. They can make it more difficult

to engage in cross subsidy, but not impossible, given the impenetrabilities of accounting. In the particular case of CPE, the BOCs are allowed only to sell, not manufacture; sales are through partially separated subsidiaries.[30] Independent companies (except GTE), however, are allowed both to manufacture and sell without separate subsidiaries. In this light the argument for requiring a separate subsidiary of BOCs that only sell CPE, in a market that is already very highly competitive, seems weaker to some observers.[31]

2. The Regional Holding Companies

a. Analysis and issues

With divestiture, the 22 former BOCs are owned by seven independent Regional Holding Companies (RHCs) rather than by AT&T. Each BOC continues to operate in its former state(s) but as a subsidiary of the area's RHC. Several of the commissioners surveyed believe that the regulatory authority of states over these holding companies remains undefined.

The RHCs themselves are technically unregulated in either the state or federal jurisdiction (although their businesses all operate in states that regulate many aspects of telecommunications). The RHCs are not subject to rate base rate of return or other such close scrutiny. While most of the activities of their BOC subsidiaries are regulated, RHCs may have substantial freedom to enter into new, unregulated markets. In addition some of the activities separated from AT&T, including the Yellow Pages and cellular radio, may be centralized by the RHCs rather than operated by the local companies. This could eliminate the possibility for revenue from some of the new products and services being used to subsidize local rates, a subsidy, as noted, that some commissioners would like to see.

A few commissioners mentioned the possibility that revenues from local monopoly services will subsidize the RHC's unregulated offerings. Cross subsidies in this direction would be anathema to PUCs. Yet, as indicated, the PUCs may have great difficulty in discerning cross subsidizing, let alone regulating it.

The most potent force guarding against cross subsidies from the local BOC may be potential and actual competition rather than regulation. Even if states cannot successfully eliminate all anticompetitive cross subsidizing, the pressures of private bypass and the entry of competing intraLATA public carriers could diminish it.

If the PUCs approve local service prices above apparent costs so that cross subsidies to the RHC are available, local market entry could occur, particularly in the more densely populated areas. If PUC-influenced prices are set below costs, cross subsidy is not as likely -- unless the RHC decides to let its subsidiaries' local exchange services deteriorate in order to build up its newer services. That seems an unlikely course for most RHCs, since the wire into every home and business is perhaps their greatest asset.

3. Innovation and Competitive Entry by the BOCs

a. PUC views and analysis

Most state regulators surveyed endorsed BOC entry into virtually as many new areas as they desire. Commissioners desired a financially robust company whose local rates can be kept down in part by revenues from new activities. As noted, these commissioners hope for cross subsidization from the new markets back to the old. But if other markets are indeed competitive, they may not provide high profit margins for BOCs to use in cross subsidizing local phone rates.

Perhaps a more realistic hope for telecommunications competition is

for a quickened pace of innovation rather than chimerical cross subsidies for local service.[32] For BOCs, however, barriers to innovation in competitive markets remain. The BOCs' prices are constrained by regulation in a way most of their competitors' are not. BOCs lack a tradition of research and development, having depended upon Bell Laboratories and Western Electric. Still, a number of potential markets may be open to BOCs and amenable to innovation. Among these are installing and possibly leasing such facilities as satellite earth stations, local area networks, teleport links, and broadband or video cable systems; providing least cost routing services for long distance calls; financing major CPE installations; and transmitting local data and mobile radio.[33]

The Modified Final Judgment (MFJ) provides that AT&T is to share research and development innovations and new patents with the BOCs for a period of five years. This measure is expected to cushion the separation shock for the BOCs and also compensate their customers, whose payments helped fund the Bell Labs and Western Electic developments. If AT&T freely shares information and patents, they will presumably be useful in the BOCs' innovation efforts. However, enforcing this provision may prove difficult. Historically AT&T has employed control over patents as a potent competitive tool.[34] It is not clear how the existence of information covered by the decree provisions could be proved and made available to BOCs quickly enough to be useful if AT&T interpreted that information as <u>not</u> covered by the decree. Although state regulators will have predominant jurisdiction over new BOC activities, they will have few resources to compel AT&T to interpret such provisions in ways that may disadvantage AT&T -- which could be competing with the BOCs in new markets.

States will be able to affect BOC innovativeness and entrance into new fields in several ways. In theory, PUCs could try to prevent entrance in order to preclude the BOC from being distracted from its main mission of local voice service. Or PUCs might fear BOCs will siphon funds to risky investments whose failure would put additional pressure on basic rates.[35] PUCs seem unlikely to restrict the BOCs in this way, given responses to the survey.[36] But sentiments could change.

Over the long term, given dissolving distinctions between types of telecommunications services and geographical boundaries, restrictions could prove damaging to the BOCs' local voice telephone offerings. To stay healthy in this dynamic context, BOCs will probably require relatively loose reins or regulatory protection. Otherwise their strength as a whole could falter. Given this, state regulators could choose to regulate closely the other market participants. The rules could potentially take the form of high charges for access to the BOC's public network, taxes, geographical limitations, price regulation, and even rate base rate of return regulation. Such rules might afford the BOCs an advantage but could also eliminate some of the dynamism and creativity an open market would bring. The fate of regulation in the new telecommunications facilities and services markets is the subject of the next two chapters.

NOTES FOR CHAPTER 3

1. This view was expressed by several regional Bell holding company representatives at a meeting with NARUC subcommittee on the AT&T divestiture, Washington D.C., June 16, 1983. cf. Telecommunications Reports, May 9, 1983, p. 6.

2. Responses of Pacific Telephone to Questions Raised in OII 83-02-01, Before the Public Utilities Commission of the State of California, Investigation on the Commission's own motion into the effects of competition upon local and toll exchange service, including the issues of intra and inter-LATA competition, access charges, bypass, and methods of regulating competitive markets, in The New Telecommunications Marketplace (New York: Law and Business, Inc., 1983), p. 352.

3. See Lewis J. Perl, "Residential Demand for Telephone Service, Preliminary Results of a New Model," National Economic Research Associates, December 13, 1983; and article on an FCC study of local rate impacts, Telecommunications Reports, December 26, 1983, pp. 1-4.

4. The FCC has concluded that universal service is not threatened by competition in telecommunications. See Telecommunications Reports, December 24, 1984, pp. 5-8.

5. National Regulatory Research Institute (NRRI), An Inquiry on State Responses To Regulatory Changes in the Telecommunications Industry (Columbus, Ohio: NRRI, January 1982), p. 28. See also State Telephone Regulation Report, 2 (Arlington, Virg.: Capitol Publications, Inc., November 8, 1984), pp. 1-4, and testimony of Colorado PUC chair Edythe Miller before the House Subcommittee on Telecommunications, Consumer Protection, and Finance, in NARUC Bulletin, March 28, 1983.

6. In the Matter of the Application of the Chesapeake and Potomoc Telephone Company, Formal Case No. 777, Order No. 7616, July 20, 1982.

7. Docket 81-0478, May 26, 1982.

8. The FCC estimated that an LMS option was available to 70.2% of BOC residential customers in 1983. Telecommunications Reports, December 26, 1983, p. 4.

9. Bridger M. Mitchell, "Economic Issues in Usage-Sensitive Pricing," Rand Paper Series, P-6530, September 1980 (Santa Monica, Calif.: The Rand Corporation, 1980). A New York PSC staff member maintained, however, that the calling rates by measured and flat service customers are about equal.

10. The Wisconsin PSC rejected LMS on these grounds by a vote of 2-1; NARUC Bulletin, October 31, 1983, p. 17.

11. Leland Johnson, Competition and Cross Subsidy in the Telephone Industry (Santa Monica, Calif.: The Rand Corporation, 1982), pp. 56-62.

12. Based on remarks at NARUC Divestiture Subcommittee meeting, June 16, 1983, Washington, D.C., by regional Bell holding company executives.

13. Pacific Telephone in The New Telecommunications Marketplace, p. 354.

14. Bruce Netschert, "The Bypass Threat and Access Charges," in The New Telecommunications Marketplace (New York: Law and Business, Inc., 1983), pp. 80-82.

15. U.S. v. Western Electric and AT&T, Civil Action No. 82-0192, U.S. District Court for the District of Columbia (April 20, 1983) (hereafter Greene LATA decision), pp. 4-5; see also Telecommunications Reports, October 11, 1982, p. 10.

16. Ibid., pp. 33-34.

17. Paul Rodgers, Genevieve Morelli, and Karen Hochstein, Intrastate Telecommunications Competition (Washington: NARUC, November 15, 1984), pp. 7, 9.

18. Bruce Carruthers, Ellen Deutsch, William Garrison and John Williams, Report on the Study of Telephone Use, Rates, and Regulation (Raleigh: North Carolina Agency for Public Telecommunications, 1983), p. 189; Pacific Telephone, The New Telecommunications Marketplace, p. 336.

19. Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, p. xviii.

20. See Gerald W. Brock, The Telecommunications Industry, The Dynamics of Market Structure (Cambridge, Mass.: Harvard University Press, 1981), Chapter 8.

21. Ibid.

22. See Rodgers et al., Intrastate Telecommunications Competition, pp. v-viii, 7-11.

23. See letter of April 14, 1983 from Gerald Irwin, Director, Communications Division, Michigan Public Service Commission, in The New Telecommunications Marketplace, pp. 301-302.

24. Greene LATA decision, pp. 33-34.

25. See State Telephone Regulation Report, 2 (Arlington, Virg.: Capitol Publications, Inc., September 13, 1984), pp. 5-6.

26. Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, p. 161.

27. Telecommunications Reports, August 8, 1983, p. 21.

28. Brock, The Telecommunications Industry, The Dynamics of Market Structure, Chapter 8.

29. Telecommunications Reports, May 2, 1983, pp. 20-28. A related question, on which Justice took a similar stand in comments to Judge Greene, is whether the BOCs should be allowed to provide cellular and other public radio services beyond their LATA boundaries. The Department of Justice (DOJ) said it should be shown that BOCs will not act anticompetitively if granted such an exception to the divestiture decree. Telecommunications Reports, May 16, 1983, p. 24.

30. See Telecommunications Reports, November 28, 1983, pp. 1-3.

31. NRRI, An Inquiry on State Responses to Regulatory Changes in the Telecommunications Industry, p. 35.

32. See, e.g., Brock, The Telecommunications Industry, The Dynamics of Market Structure, p. 309 and FCC CC Docket 78-72, pp. 11-12.

33. Telecommunications Reports, December 20, 1982, p. 29; also Winston Himsworth, "Players in the Telecommunications Business of the Future," in The New Telecommunications Marketplace (New York: Law and Business, Inc., 1983), pp. 119-25. It is unclear whether least cost routing is a service that the MFJ will permit BOCs to offer.

34. Brock, The Telecommunications Industry, The Dymanics of Market Structure, pp. 173-174.

35. Some of these issues were raised in the context of GTE's acquisition of the Sprint long distance company, in hearings before the California PUC. See Telecommunications Reports, April 4, 1983, pp. 24-27.

36. The Department of Justice as well as some PUCs have raised concerns with Judge Harold Greene about BOC or Regional Holding Company entry into new lines of business. See Communications Daily, March 27, 1984, p. 2. Interpretation of the MFJ and considering applications for waivers from its restrictions make the court of Judge Greene a continuing player in telecommunications policymaking.

THE NEW TELECOMMUNICATIONS FACILITIES AND SERVICES

Among the new telecommunications services that may emerge as significant over the next decade or so are teletext, videotex, and other forms of data transmission; digital termination and digital electronic message services (DTS/DEMS); cellular radio; and two-way cable television. In each of these the regulatory role of the state public utility commissions (PUCs) is nascent; in each, definitional and jurisdictional issues will affect the course of competition. While respondents to the survey grouped cellular, cable, DTS, and the rest as potential "bypassers" of or competitors to the local phone company, here it will be worthwhile to consider them separately. First, a brief discussion of the sometimes foggy notion of bypass.

LOCAL BYPASS

1. The Concept of Bypass

The concept of bypass has not received a clear, widely accepted definition. Here it is used to encompass any distribution of voice, information, or data that could go over Bell operating company (BOC) lines but uses alternative means. In theory, "uneconomic bypass" occurs when voice, information, or data are distributed over non-BOC facilities even though the true economic cost of BOC carriage would be lower. However, what the true cost might be will remain a matter of considerable dispute. As a result, determining when bypass is uneconomic is equally problematic.

Four potential methods of local bypass are readily identifiable.

The first would be a system, parallel to the local phone company's, that distributed signals throughout a city via, for example, cable TV lines or cellular radio. Whether attempts at a full coverage system would be profitable is another matter. The second method would be trunking together several separate locations of a single user located in the same general area, again perhaps via cable TV coaxial lines, cellular, or DTS. A third bypass method might involve serving several clients located in contiguous buildings (e.g., a university) by a local area network using cable or microwave. A final type could provide only for local connection to a toll network, such as a satellite dish directly linked by trunk lines or microwave to an on-premise private branch exchange (PBX).[1] Only the first bypass method is comprehensive (and very expensive and risky to assemble) competition for the BOC. But a more realistic concern is that the other three would prove attractive to the largest corporate and institutional users and in aggregate siphon off BOC revenues. Policymakers fear that if large users desert public networks in great numbers, fixed costs of maintaining the system would fall on fewer and fewer customers remaining on the system. Resulting price increases could drive still more businesses to bypass, and some residential subscribers to cancel service. The value and financial viability of the BOC network could be jeopardized.

2. Economic vs. Uneconomic Bypass

a. PUC views

In the National Association of Regulatory Utility Commissions (NARUC) sample five commissioners rated the threat of bypass as great, five said a moderate threat exists, and five said the BOC is in little danger. (Three were unsure.) There was no consensus among PUCs on this

question, according to the survey. If anything, the dominant feeling was that AT&T and the BOCs may be exaggerating the danger so that they may continue moving toward regulatory parity with their current or potential competitors.

Some interviewees considered virtually all bypass undesirable, even if it appears economically efficient. They emphasized the benefits of keeping all citizens on the phone system. If the regulated price structure includes cross subsidies, they implicitly asserted, any efficiency loss is outweighed by the social benefits of universally affordable phone service. They cited lives of crime victims saved through emergency calling, or lives of shut-ins enriched and prolonged by social contact. In truth, it is difficult to quantify the value of such benefits or determine how much will be lost due to deregulation. Despite their nonquantifiable nature, these benefits have genuine social value and are not, as some narrow economic interpretations imply, irrelevant to policy choice. Such arguments will likely be among those that opponents of deregulation will advance to the Congress and before the PUCs.

b. Analysis

The stated goal of the FCC[2] is to drive prices to cost to eliminate large users' incentive to engage in uneconomic bypass.

A major concern of both state regulators and consumer groups, however, is bypass itself. Some respondents to this survey implicitly suggested that the value to society of having a single network with near-universal membership is unaccounted for by the narrower goal of deterring uneconomic bypass. The two divergent views of bypass -- one based on economic criteria, the other on social criteria -- lead to confusion in policy discussion.

Clear differences on the correct policy response to the bypass phenomenon emerge from the definition of bypass chosen. By economists' standards, uneconomic bypass occurs when a user shifts from the BOC to alternative providers when the prices but not the true costs of the latter are lower. Presumably, faulty regulation -- especially prices that include subsidies -- would keep the BOC's prices above costs and thus encourage its customers to use bypass companies. Uneconomic bypass is an inefficient reallocation of resources, hence undesirable by economists' standards. It also threatens the BOC's health over the long term, as large users leave the system and costs must be shared among fewer remaining customers.

The July 28, 1983 joint Congressional hearings on universal phone service illustrate a contrasting, non-economic view.[3] Representative John Dingell (D.-Mich.) said the FCC's plan to assess flat access charges on all end users would increase the incentive of large users to bypass. Commissioner Mark Fowler argued (as have FCC reports and orders) that such access charges are imperative to deter bypass. For Fowler, "bypass" apparently means the "uneconomic" form, while Dingell apparently seeks to minimize all bypass. The implication of Rep. Dingell's viewpoint is that each per-line price increase is a further incentive to leave the system. Chairman Fowler's position leads to the belief that if the (cost-based) per-line access charge encourages users to go off the BOC, they must have found a cheaper way to conduct telecommunications. The Fowler position implies that as long as the access charge is cost-based, any such bypass of the system enhances economic efficiency, and benefits the entire economy.[4]

c. Uncertainties

Several unknowns are central to any discussion of bypass policy. First, costs are not easy to discern and agree upon in an industry permeated with joint costs, shared facilities, rapid technical change, and politically sensitive regulators. Determining prices that properly reflect costs is no easy matter. Second, and consequently, identifying whether bypass is uneconomic is problematic. Third, regulators and phone companies may calculate costs and prices in accordance with their policy biases, making consensus on bypass costs and prices elusive. Fourth, motivations beyond that of price drive large consumers' activities. The psychological forces of caution, habit, and inertia, on the one hand, may deter bypass. On the other hand, desire to innovate, to present a progressive image to clients, or to retain rather than distribute earnings may motivate managers to install a bypass system whose payback is uncertain.

This observation implies, fifth, that purveyors of bypass facilities will employ creative marketing techniques, not just lower prices, and develop innovative service packages like least cost routing and "smart" phones. If marketing and packaging prove significant, competently managed BOCs could conceivably be as successful as any company in the bypass business.

Finally, for some PUCs, the major goal in grappling with bypass may be preserving what they see as the health of the BOCs, not economic efficiency. PUCs may attempt to set prices to deter all bypass, not just uneconomic. But they will have to cope with the difficulties of discerning proper prices for bypass deterrence.

One possibility that has been suggested is that the BOCs will bypass

their own public network.[5] If such investment is profitable for the BOC, PUCs may want to encourage it. As noted earlier, PUC members surveyed are sympathetic to BOC expansion into new markets. Yet even if the bypass profits accrue to the BOC, they could represent a withdrawal of some direct support from the public network. Depending on where those profits ultimately go, they could threaten that network as much as bypass by an outside firm. Further, there is a possibility of cross subsidy of the bypass facilities by the public operation. Should that happen, residential and small business ratepayers could be subsidizing the undermining of their own phone service. Of course, it may be better, even for small users, if BOCs get that business rather than lose it to a non-BOC supplier.

Bypass is increasingly apparent. In a statement to Judge Greene the BOCs noted such examples as the Qube cable system in Columbus, Ohio; Manhattan Cable TV's data network; an MCI fiber optic link of several toll centers; and private microwave systems.[6]

There is evidence in the survey data that most commissioners were quite cognizant of both the bypass threat (at least in the long term) and the need to bring prices as near as possible to costs to promote the long-term viability of the BOC. But given the uncertainty that pervades this matter, several commissioners voiced a desire to wait and see how widely bypass spreads before imposing fixed end user access charges or other regulatory schemes designed to deter it. That desire conflicts with the general wish of the Federal Communications Commission (FCC) and much of the industry to implement the new telecommunications regulatory regime.

CABLE TELEVISION IN COMPETITION WITH THE BOC

1. PUC Views of Cable Competition

In the survey of NARUC committee members, state regulation of cable systems carrying either data or voice was overwhelmingly favored.

Should cable common carrier services be regulated	For Data Carriage	For Voice Carriage
Completely favor	8	9
Favor	2	5
Disfavor	1	1
Only if BOC data services are regulated	2	2
Unsure	4	1
Not ascertained	1	0

Commissioners believed cable was a significant bypass threat and would like to exercise regulatory oversight, especially if BOCs continue to be regulated closely. Laws in some states (e.g., New York and California) are, however, ambiguous as to whether PUCs may exert jurisdiction. And state authority over cable under fedral law is also unclear.[7]

If prevented from regulating cable as common carriers, states may still have tools to diminish cable's competitive strength. Some might choose to set high access charges or taxes on the systems. Asked if bypass systems should be assessed to support local phone systems, the commissioners responded as follows:

Tax or charge bypassers?	Responses
Completely favor	6
Favor	3
Disfavor	2
Unsure, mixed	5
Not ascertained	2

There was considerable, though not unanimous, sympathy for such charges. Whatever measures were tried could face preemptive challenge by the FCC or potential Congressional initiatives. It certainly appears from its recent record that the FCC would frown upon such state actions.

2. Analysis of Bypass Via Cable

Some observers[8] believe cable TV systems could provide competition to BOCs and offer a means of bypassing the public network. There may be some technical advantages: One estimate is that cable can carry 130,000 times more information at 100 times the speed of traditional twisted copper pair telephone lines.[9] If Congress were ever to free cable of all state regulation, a regulatory advantage (opposed by telephone companies) might also be codified. Proposed provisions that did not survive in the 1984 Cable Communications Policy Act would have prohibited state PUCs from regulating data services operating over cable TV coaxial lines.[10] Among the other services that could employ cable TV systems rather than BOC lines for distribution are security alarms, teletext and videotex, and linkage to interexchange services.

Cox Cable, for example, experimentally connected its two-way cable system in Omaha to the MCI network. MCI claimed that with the cable TV system already in place and designed to earn the bulk of revenue from TV entertainment, the incremental cost of adding the capacity for subscribers to connect to MCI via the cable system was just $40,000.[11] Most cable systems do not have reliable two-way capability. The expense of adding two-way switching capability to the one-way cable system is a matter of some disagreement. One significant question is whether the bypass service is for a single large user or for the entire cable subscriber universe. In the former case, bypass may primarily involve adding just a few two-way amplifiers along a line between the antenna site (headend) and an office building -- quick, inexpensive. To offer switched-voice capability to all subscribers would be much more costly; moreover, demand for such a service has not been demonstrated. However, as a

"creamskimmer" cable television might prove quite successful.[12]

Cable also faces some handicaps in competing against BOCs. Even the largest cable system operators are much smaller and poorer than any regional holding company. Only about 39% of TV households nationwide even had cable service by August 1984.[13] In many big cities cable faces the need to make very large capital investments and recoup them despite quite strict municipal regulatory oversight and competition from over-the-air TV. Cable companies have little experience with switched services or with the higher tolerances needed for reliable data transmission.

Cable presents an example of the difficulty involved in deciding whether bypass, should it occur, would be economic. Would the support of video subscribers constitute a cross subsidy that could artificially lower the cost of a bypass network using a two-way cable system? Or would this merely indicate an economy of the scale and scope of coaxial technology? Is it somehow unfair to expect telephone companies to compete with such systems? Some phone companies argue that it is because much of the competitive advantage of cable is due to regulatory, rather than technical, differences.

The FCC had before it in 1984 a petition by Cox Cable of Omaha to preempt the cable rules of states. The Nebraska Public Service Commission (PSC) had asserted jurisdiction over the Cox-MCI offering. The PSC ordered the cable company to cease and desist its MCI link until certificated as a telephone company. Telephone companies argue that freeing the cable offerings from regulation while maintaining BOC regulation could provoke uneconomic bypass because if unregulated, the BOC could offer services more cheaply than cable. AT&T, for example, wrote that

> the greatest competitive threat to the economic viability of operating telephone companies is the bypass of their local network by cable system telecommunications service. . . . An unregulated cable industry would avoid the costs and delay of regulation, while carrier providers constrained by regulation would be unable to compete speedily and effectively.[14]

While Congress has substantially reduced the regulatory power of cities,[15] state authority remains unclear.

TELEPHONE COMPANIES AND RESIDENTIAL BROADBAND SERVICES

1. Analysis of the Issues and Future Uncertainties

Telephone companies -- BOCs and independents -- can enter the business of broadband distribution themselves. Particularly if they can fund construction of new fiber optic trunks,[16] telephone companies will potentially be in a position to compete effectively with cable TV systems for broadband home delivery of services including video entertainment and information. But there are several "ifs."

The first uncertainty is whether local phone companies will have sufficient capital to engage in expensive construction projects. If they are busy trying to keep expenses down to ease pressure on local rates and to participate in the already competitive equipment market, BOCs may be unwilling or unable to risk expansion. However, such potential purveyors of services via telephone lines as newspapers and banks could spur BOC entrance if they are confident enough of success to make the capital investment attractive to the BOCs.

Second, regulatory restrictions could continue. Under current FCC regulations, telephone companies may not operate co-located cable TV systems.[17] Waivers may be granted for communities that could not support an independent community antenna television (CATV) operation and are under 30 homes per cable mile in density or 2500 in population. BOCs may be further restricted by the Modification of Final Judgment's (MFJ's)

classification of cable TV programming as information services, which BOCs are barred from offering.[18] A BOC can petition for removal of this restriction if it shows "there is no substantial possibility it could use its monopoly power to impede competition in the market it seeks to enter."[19] With CATV franchised in most cities by 1984, and with the possible growth of multichannel multipoint distribution services for video entertainment, such petitions might have merit. Yet the very conditions making for a successful petition might prove daunting for BOC management: Will it make sense to compete against these existing systems?

Instead, and this is the third factor, there is growing speculation that telephone companies and cable systems will find mutual advantage in cooperation. They may find a natural alliance against the non-wireline services.[20] Cooperation seems possible in such realms as leaseback of BOC-built video transport facilities, and serving as the return path for a hybrid interactive cable system. Pay-per-view programming, video games, and some other services require broadband downstream to the user but very simple messages upstream to the cable headend. For such services, going to the considerable extra expense of constructing full interactive residential cable systems may not be necessary.[21] Moreover, with some players asserting that the cable industry has overinvested in channel capacity, and with consumer willingness to pay for cable's extra TV channels somewhat lower than anticipated, the potential for profitable competing CATV and BOC video services seems limited.[22]

One force that would work against the cooperative scenario, however, is the prospect of usage-sensitive pricing for local calls. If the upstream connect time is billed at full local measured service (LMS) rates, some cable companies might find it advantageous to install two-way

amplifiers and switches after all.[23] Here again, LMS could work to the advantage of the BOCs' potential bypass competitors. Much depends on the average home consumer's interest in what two-way television can offer, an interest yet to be conclusively demonstrated.[24]

Should a joint understanding between cable and phone companies be effected, states will face unexplored regulatory complexities. For example, just how will PUCs oversee -- if they allow -- joint ventures between a regulated BOC and a largely unregulated cable company? The survey undertaken for this report indicates a widespread general sympathy for BOCs and antipathy for cable as a BOC competitor. If telephone and cable companies voluntarily join together, PUCs might well take a hands-off attitude unless the venture seems to be draining resources from the local phone system. Some potential exists for exertion of monopoly power based on control of bottleneck facilities by a telephone-cable combine. If competitors or users think abuses are occurring, state and federal regulators could again enter the picture. Cable companies have strongly (and most often, successfully) resisted state regulation as common carriers,[25] but if they are in fact acting as such in concert with a phone company, regulation might come. Precisely how it would be applied -- to deciphering the possibly Byzantine bookkeeping of a joint venture, for example -- remains unclear. And the mere possibility of regulation might act as a strong disincentive against cable companies entering such ventures, despite their apparent economic advantages.

DIGITAL TERMINATION SERVICES/DIGITAL ELECTRONIC MESSAGE SERVICES AND CELLULAR RADIO

1. The Issues and PUC Stances

Authority of the states over newer local distribution services such as DTS/DEMS and cellular radio is currently unclear. The FCC has declared DTS a technology to be minimally regulated. Thus it has

preempted state regulation that is "inconsistent" with commission desires on technical and market entry standards, and rate and tariff regulation. NARUC joined a suit against the preemption, arguing that DTS is not merely interstate radio, as the FCC alleges, but also an intrastate common carrier. The FCC has also preempted much state authority over cellular mobile radio, although it does leave certification and the possibility of rate regulation up to states.[26]

The state commissioners surveyed for this study preferred a regulatory approach. Asked whether new services like cellular radio and DTS should be regulated by the PUC, they responded:

Regulate cellular and DTS?	Responses
Completely favor	6
Generally favor	6
Generally disfavor	2
Regulate only if BOC health is threatened by the competition	2
Not ascertained	2

The contrast between the response to the innovative and nascent technologies and to cable television is worth noting. For the latter, two thirds of the respondents endorsed regulation without qualification. Here, while two thirds favored regulation, over half expressed at least some reservation. If developments warrant, and in particular if the BOC owns the system, some states may exert little regulatory power.

As previously noted, state regulators were also asked whether these new technologies should be taxed or assessed to contribute to local phone service. The response was mixed though leaning toward the assessment (see page 52). Heavy access charges would deter the spread of DTS/DEMS, especially in light of doubts as to its message-carrying capacity relative to coaxial cable.[27]

2. Analysis

Extension of digital technology to Integrated Services Digital Networks (ISDNs) seems likely. This is a technique that "will be capable of addressing the full range of customer communications needs [from telephony to high-speed data]."[28] Regulation of this new integrated medium will probably depend largely on who owns it and how many competitors offer it. ISDNs could potentially supplant local telephone and cable TV systems. Or those systems could be retrofitted to function as ISDNs. The BOCs may view full participation in digital technology as crucial to their future. They are likely to find sympathetic responses from the state regulatory commissions; the FCC has not taken a position on BOC ownership of DTS/DEMS or ISDN systems.

Cellular technology, at least currently, could be limited in potential by its expense and its reliance upon the already-crowded radio spectrum. Yet one estimate is that the 2100-square-mile Chicago market alone could support 300,000 mobile phones.[29] The FCC encouraged cellular by ruling against requiring prior state certification of applicants for FCC licenses. Once a cellular applicant obtains the license for a community, it will probably be difficult for states to deny certification.[30] The FCC's desire for diffusion of cellular technology may conflict with some states' fear of cellular as a bypass threat. The commission has indicated it will preempt states if they interfere with its goal, for example, through rate regulation or excess access charges. However, since BOCs will be participating in this market (as may not be true of DTS/DEMS) the likelihood of strict state regulation may be diminished.

One complication for states is that the FCC split each cellular

market, with Bell and other wire carriers obtaining half the local franchises and non-wireline companies getting the other half. Some states currently regulate radiotelephone common carriers (RCCs), while others do not. It would be anomalous for states to regulate only the radio and not the wireline providers of cellular.[31] FCC preemption could prevent this anomaly or states might decide to forbear, although survey responses indicated substantial interest in regulation, especially if BOCs appear vulnerable.

DATA TRANSMISSION SERVICES

1. Cable vs. Telephone Data Transmission: Issue Analysis

Controversies have erupted over the issue of compatible cable and BOC data service regulation in Oregon and New Mexico. Pacific Northwest Bell in Oregon has refused to grant Portland Cablesystems the pole access necessary to complete its institutional data network. The PSC had attempted to assert jurisdiction over cable institutional services but was rebuffed by the legislature.[32] Mountain Bell in New Mexico asked the state Corporation Commission for a cease and desist order against a two way data link established by Albuquerque Cable TV, Inc.[33]

Although information is sketchy and of questionable reliability, cable television apparently represents an extremely small proportion of the data transmission industry. Manhattan Cable President Jack Gault says his system's data service had revenue of $985,000 in 1982 compared to the $82 million garnered by New York Telephone's data service. Nationally just seven cable systems have data transmission services with total revenues of $3 million.[34] As a proportion of New York Telephone's $3.9 billion total revenue, Manhattan Cable's data operation was .0025%.[35] The cable industry cites such statistics in arguing that it

ought not to be regulated if it enters common carrier service markets. Further, the institutional networks that provide data (and potentially voice and interactive video) links might indeed prove essential to the fiscal health of cable, especially in the expensive newer urban systems.[36] If so, state PUCs (and Congress members considering cable deregulation) may have to choose between the interests of a nascent cable industry and those of a threatened local telephone company. Judging by state officials' reaction to cable deregulation bills in Congress during 1983-1984, the telephone companies were receiving greater sympathy.[37]

2. Analysis of Issues: Basic vs. Enhanced

According to one study, data traffic now accounts for about 8% of total telephone company revenues and 7% of traffic.[38] Data revenue was projected by the U.S. Department of Commerce to reach $10 billion in 1985 and to keep growing as businesses develop increasingly elaborate links, and home computing, electronic mail, and videotex spread.[39] Currently data traffic is growing an estimated three times faster than voice, although measurement and definitional problems make definitive statements on data transmission suspect.[40]

Whatever the volume, regulatory authority over this traffic is shared. The future locus of oversight is unclear, and definitional puzzles abound. The FCC Computer II rulings substantially deregulated enhanced voice and data services and preempted state regulatory authority. The Commission reasoned that enhanced services are inherently competitive. But states regulate the BOCs' exchange telecommunications services.[41] So a key issue remains: exchange telecommunications service basic or enhanced. BOCs may provide only basic services under state regulated tariff.

An illustration of the resulting policy dilemmas arose in a dispute that reached the FCC from Florida. IBM asked the Commission for a declaratory ruling that Southern Bell may offer its Local Area Data Transport (LADT) service only on an unbundled, detariffed basis. IBM said LADT, as an enhanced service (since it performs protocol conversion), is not subject to state tariff. IBM asserted that under the Florida PSC tariff the capability for simultaneous voice and data transmission over the local loop was available only to those users who subscribe to LADT and also obtain Southern Bell's equipment. LADT was being bundled and offered under tariff improperly, according to IBM; they asserted it should be available to all users. While the PSC staff had recommended against the tariff, the Florida commissioners overruled them.

The FCC will continue grappling with distinctions between enhanced and basic services and the proper regulatory regime for them. State involvement in such debates has been relatively limited. But the example of cable data transmission and LADT indicate that the states may be drawn in more frequently.

There is potential for jurisdictional friction. If, for example, a BOC were to file a tariff with a PUC for what it deems a basic service, it is unclear whether the FCC or the state would determine if the offering is basic or enhanced. Moreover, BOCs can offer enhanced services only if they are not "information" services. Whereas the FCC rules on whether a service is enhanced or not, Judge Greene appears to have the authority to define "information service."[43] Thus, applicable regulatory regimes and state authority may well become a matter for controversy, litigation, and even legislation. A "Computer III" inquiry may well become necessary,[44] and Judge Greene may have to revisit the

strictures of the MFJ. As competition in local voice and data communications erodes the perception that local service is a natural monopoly, federally-mandated changes may conflict with existing PUC preferences and powers.

CONCLUSION

State commissioners generally consider two key criteria in assessing whether to allow and how to regulate new market entrants or services. First, would the entrant significantly threaten the interests of the BOC? Second, is there any practical way to prevent competitors from entering? Technology propels entrants, and PUCs can do little to control it. Federal edicts also encourage entrants, and while PUCs can challenge the new federal regulations, the PUCs have not been notably successful in the courts. From the responses to the interviews, it appears that PUCs are most likely to accept offerings that do not endanger the BOC's prospects, or are essentially unpreventable outgrowths of technological advance or federal mandates. The degree and type of regulation PUCs would attempt to enforce seem to depend on the degree of competition they would pose to the BOC. Many commissioners appear to be willing to regulate new services and technologies minimally, however, if the BOC is allowed unregulated freedom as well.

The survey also indicated most commissioners had given little thought to the regulatory issues that may surround newer local distribution technologies. Perhaps this is as it should be. While this study was conducted, commissioners were being confronted with steep rate increase requests, numerous new rulings by Judge Greene and the FCC, petitions and certification applications by new telecommunications entrants, and growing political pressures. The major item on their

agenda had been the removal of the NTS cost contribution from the toll revenue requirements and structuring a replacement. These were concrete tasks having to do with the central mission many commissioners expressed: to preserve inexpensive switched-voice telecommunications. The need to decide was virtually immediate as the January 1, 1984 divestiture grew nearer. Under these circumstances it might have been an irrational allocation of limited resources for commissioners to be probing advanced technologies and the inchoate policy problems they may portend. This study reveals at least an initial PUC orientation toward protecting the existing local phone company, a fairly pronounced negativity toward competition with the telco from the cable TV industry, and a watchful wariness regarding up and coming technologies.

NOTES FOR CHAPTER 4

1. Bruce Carruthers, Ellen Deutsch, William Garrison and John Williams, Report on the Study of Telephone Use, Rates, and Regulation (Raleigh: North Carolina Agency for Public Telecommunications, 1983), pp. 179-83. An FCC report concluded that the "bypass" term properly applies to linking up with long distance networks via facilities other than those of the local public BOC system. See Telecommunications Reports, January 21, 1985, p. 5.

2. See, e.g., Federal Communications Commission, In the Matter of MTS and WATS Market Structure, CC Docket No. 78-72, Phase I, Released February 28, 1983, pp. 11-12.

3. Hearings before the U.S. House of Representatives, Committee on Energy and Commerce, on the Universal Telephone Service Preservation Act of 1983, July 28, 1983.

4. Cf. a report on the macroeconomic effects of telecommunications deregulation by Wharton Econometric Forecasting Associates, described in Telecommunications Reports, December 19, 1983, p. 3.

5. Bruce Netschert, "The Bypass Threat and Access Charges," in The New Telecommunications Marketplace (New York: Law and Business, Inc., 1983), pp. 80-82.

6. Statement of the Bell Operating Companies in Civil Action No. 82-0192, U.S. v. Western Electric Co., Inc. and American Telephone and Telegraph Co., to the U.S. District Court for the District of Columbia, in The New Telecommunications Marketplace, pp. 57-61. See also a survey conducted by Touche, Ross, described in Telecommunications Reports, January 23, 1984, pp. 17-19, which finds 25% of large users in 13 states engaging in bypass; and the FCC report mentioned in note 1, supra.

7. See comments of Lo-Co Cable Television Company Before the PUC of the State of California, Investigation on the Commission's Own Motion into the Effects of Competition upon Local and Toll Exchange Service, Including the Issues of Intra and InterLATA Competition, Access Charges, Bypass, and Methods of Regulating Competitive Markets, March 29, 1983, pp. 11-12. Regarding turf fights between the New York State Cable Commission and the PSC, see Proceeding on motion of the New York PSC as to private line service provided by Manhattan Cable, Case 27091, October 26, 1976; and "Midnight Negotiations Bring Results," Cablevision, July 4, 1983, p. 17. Also see Robert Pepper, Competition in Local Distribution: The Cable Television Industry (Cambridge, Mass.: Program on Information Resources Policy, Harvard University, 1983). The 1984 Cable Communications Policy Act, Public Law 98-549 98 Stat. 2779 (1984) 47 USC 601 et seq., fails to clear up ambiguity about states' rights to treat cable as a common carrier.

8. See Pepper, Competition in Local Distribution; Statement of Bell Operating Companies in The New Telecommunications Marketplace; and

Netschert, "The Bypass Threat and Access Charges," in The New Telecommunications Marketplace.

9. Comments of Lo-Co Cable, p. 3. There are also substantial maintenance economics to cable -- a damaged place in a single coaxial cable is easier to spot than in a telephone trunk, which has hundreds of individual lines (see p. 8).

10. See Telecommunications Reports, September 19, 1983, p. 30; June 13, 1983, p. 20; and July 4, 1983, pp. 8-9.

11. "MCI pleased with Omaha test linking phone net with cable," Multichannel News, May 16, 1983, p. 27. Also see Comments of Lo-Co, p. 5 and passim.

12. See Pepper, Competition in Local Distribution.

13. Cablevision, December 24, 1984, p. 36.

14. Telecommunications Reports, July 11, 1983, p. 16. On the Nebraska case, see Telecommunications Reports, August 23, 1983, pp. 15ff. Also see "Cable and Telcos Argue Regulation," Broadcasting, July 7, 1983, p. 36. Several PUCs publicly opposed the Senate deregulation bill. See Telecommunication Reports, May 9, 1983, pp. 16-17. In Nebraska a federal district judge enjoined the Nebraska PSC from enforcing its cease and desist order: "Court Allows Cox Cable to Operate Commline," Multichannel News, August 15, 1983, p. 5.

15. For a thorough overview of municipal regulation before passage of the 1984 Cable Act, see Robert M. Entman, "Ain't Misbehavin'? Cable Television Franchising and the Case for Local Deregulation," Working Paper, Institute of Policy Sciences and Public Affairs, Duke University, February 1983.

16. See Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, pp. 19-20.

17. See the discussion in Proceedings: State Regulatory Issues for the 80's in Common Carrier Telecommunications (Washington: NTIA, 1980), pp. 132-58.

18. Modification of Final Judgment, Section II (D). BOCs are not prevented from offering broadband delivery services. The FCC has ruled, for example, that Chesapeake and Potomac Telephone can build and maintain a broadband cable system for District Cablevision in Washington, D.C. Some aspects of the arrangement were, however, in litigation as of early 1985. Cablevision, February 4, 1985, p. 18.

19. Modification of Final Judgment, Section VIII (D).

20. Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, p. 239.

21. "Time for a Truce?" Cablevision, May 16, 1983, p. 20; "Cable and the Telcos: From Confrontation to Detente," Cablevision, August 1, 1983, pp. 42-56.

22. However, see Eli Noam, "Towards an Integrated Communications Market: Overcoming the Local Monopoly of Cable Television," 34 Federal Communications Law Journal 209 (1982). Noam argues the phone company should and could offer video and the cable system, switched voice.

23. Cf. ibid.

24. As an example of disappointing videotext penetration, see "Cabletext closes down, through venture Telepress, Knight-Ridder finds Lexington viewers would rather read a newspaper than a TV screen," Cablevision, August 15, 1983, p. 69.

25. About 11 states do regulate cable. Methods of oversight run the gamut from utility rate base regulation (Connecticut) to virtually pro forma rubber stamping of municipal franchises (New York). See Entman "Ain't Misbehavin'?" See also, Sharon Briley, "State Regulation: A Current Review," in N. Jesuale, ed., CTIC Cablebooks 2, A Guide for Local Policy (Arlington, Virg.: Cable Television Information Center, 1982).

26. See Telecommunications Reports, April 4, 1983, p. 29 and State Telephone Regulation Report, 2 (Arlington, Virg.: Capitol Publications, Inc., July 19, 1984), p. 12. Also Carruthers et al., pp. 235-73. Cf. a similar conflict over preemption of state authority over nationwide paging: Telecommunications Reports, May 16, 1983, p. 13. On the lack of clear state authority over DTS/DEMS see Carruthers et al., p. 72.

27. Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, pp. 13-17.

28. W. D. English, "Future OCC Service Directions," in The New Telecommunications Marketplace, p. 126.

29. Netschert, "The Bypass Threat and Access Charges," in The New Telecommunications Marketplace, p. 10.

30. NARUC Regulatory Report, May 2, 1983, p. 101.

31. Interview with Deborah Dupont, counsel, SPC Inc., Washington, D.C., June 15, 1983; cf. "Warner, telcos talking," Cablevision, July 11, 1983, p. 15.

32. "Oregon Legislature Rejects PUC Regulation of Cable," Multichannel News, July 18, 1983, p. 27.

33. "Challenges New Mexico Op on Data Services," Multichannel News, June 27, 1983, p. 4.

34. Telecommunications Reports, June 20, 1983, p. 2.

35. "Now the House," Cablevision, July 4, 1983, p. 70.

36. For a discussion, see Entman, "Ain't Misbehavin'?"

37. See Telecommunications Report, May 8, 1983, pp. 1-6. The Oregon Public Service Commission estimated a long run impact of "cream skimming" by cable systems of $1.00 per month on local rates. Also note that many if not most of the cable industry's institutional networks were the grudging concessions of companies competing for city franchises. These cable "giveways" may prove valuable. See "Noncommercial link," Cablevision July 11, 1983, pp. 136, 138.

38. Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, p. 56, citing the 1981 and 1982 U.S. Industrial Outlook published by the U.S. Department of Commerce. The accuracy of these estimates has not been established; they should be taken cautiously. See Pepper, Competition in Local Distribution.

39. Ibid.

40. Ibid., p. 59.

41. Ibid., p. 233.

42. Personal communication from Mary Anne K. Angell, Telecommunications Consultant, IBM, January 14, 1985. Also see Telecommunications Reports, July 4, 1983, p. 28; and August 8, 1983, pp. 24-25.

43. Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, p. 233. Mary Anne K. Angell, Computer Inquiry II vs. MFJ, unpublished ms., November 30, 1984, explicates distinctions between enhanced and information services.

44. Winston E. Himsworth, "Players in the Telecommunications Business of the Future," in The New Telecommunications Marketplace (New York: Law and Business, Inc., 1983), p. 121. See also Telecommunications Reports, September 5, 1983, p. 1.

DEREGULATION AND TELEPHONE EQUIPMENT MARKETS

Deregulation of telephone equipment markets has been a major component in federal preemption of state regulatory authority. The Federal Communications Commission (FCC) and the Modification of Final Judgment (MFJ) each had substantial impacts. In brief, the FCC acted to remove new customer premises equipment (CPE) from the regulated monopoly rate base. Effective January 1983, all new CPE was deregulated. New customers can now purchase their own phones, either from AT&T or other companies. AT&T, after divestiture, owns the old, previously-installed, "embedded" CPE, and will continue to lease or sell it through 1985 under partial regulation. After that there will be, according to the FCC, "a completely deregulated CPE marketplace."

The embedded CPE is being phased out of the interstate rate base over a five-year period that began January 1983; that CPE was eliminated from state rate bases with divestiture. The BOCs may now sell CPE, but not manufacture it, through partially separated subsidiaries.[1] The MFJ directed the BOCs [Section II(B)(i)] not to discriminate in procurement of network and other system equipment between AT&T (Western Electric) and other manufacturers.

The purpose of these changes is to open the market to competition among the numerous suppliers of telephone equipment, both American and foreign, that now exist.[2] Indeed, it is the worldwide nature of equipment competition that makes the case for genuine deregulation, that is, the replacement of government mandates by private market

decisions, so compelling in this submarket. In no other telecommunications area has government so closely approached actual deregulation. (In no other is there such a complete absence of a dominant holder of market share like AT&T or BOCs.)

States might be able to affect further growth of competition in two major ways: (1) by monitoring new CPE sales by both BOCs and independents, and (2) by monitoring new equipment procurement.

CPE SALES

The Department of Justice (DOJ) raised the possibility that BOCs could use their control over the local network to influence large customers of complex CPE to buy BOC-marketed equipment. The BOC might, for example, expedite integration of its own complex CPE into the local loop while delaying installation of competitors' CPE. It could also limit equipment inventory to only one or two manufacturers, discriminating against others and exacting favorable wholesale prices. And the relationship of the local phone company to the equipment sales organization may provide a built-in psychological advantage to the BOC. All these factors, the DOJ feared, could diminish the competitiveness of complex CPE markets.[3]

A further possibility cited by some observers is cross subsidy. For example, the BOC might assign costs to the post-divestiture regulated entity that, pre-divestiture, would have been due CPE and thus should go to the unregulated CPE division -- expenses such as marketing, a portion of overhead, salaries, and fringe benefits.[4] Of course, anticompetitive practices would likely bring lawsuits from the harmed parties as well as from the DOJ itself.

North Carolina and New York public utility commission (PUC)

members in the preliminary version of the survey were asked whether they feared BOC anticompetitive practices. Few did. Generally, commissioners had confidence in their ability to detect abuses and in the efficacy of private and DOJ antitrust actions. This a role reversal. Federal officials have been more sanguine than state regulators about the vibrancy of competition. Here, the DOJ voiced the fear of market failure.

One interpretation of this divergence is that PUCs are more dedicated to the vigor of the BOC than to the strength of competition, while the reverse is true for the DOJ. Another explanation may be that state regulators are close enough to the industry's day-to-day workings to see a flowering of both simple and complex CPE competition.

TELECOMMUNICATIONS EQUIPMENT

The other major issue in addition to new CPE sales is the BOCs' procurement of telecommunications equipment (switches, trunks, and the like) from manufacturers. This might prove a lucrative growth market, with expansion enhanced by significant BOC investment in network upgrading. Some fear the regional holding companies that own the individual BOCs might, out of habit or inertia, gravitate to Western Electric equipment despite the divestiture.[5]

Another advantage to AT&T might have accrued from the separation of assets at divestiture, for example, through failure to spin off sufficient warehousing and distribution facilities to the BOCs.[6] Noting the size of Bell Communications Research, the central services organization created by the seven regional holding companies, some believe that organization could narrow competitive procurement.[7] The need for standardization to make all equipment compatible for

interconnection purposes could also dampen competition, although standards also provide benefits. The FCC has urged the National Exchange Carriers Association, formed to work out interexchange carriers' access tariffs and pools, to determine interconnection standards. The DOJ has filed comments pointing out that association standards could diminish innovation or create inefficiencies, and it warns that standard setting activities would not be immune to antitrust action.[8]

Although the PUC members sampled were not asked directly about equipment procurement by the BOCs, none spontaneously raised it as an issue. In the interviews and other encounters, commissioners evinced a fair degree of confidence in their ability to thwart anticompetitive practices through their evaluation of rate base expenditures. If network equipment of inferior quality or inflated price were procured, PUC members believed they could put an end to the practice by disallowing the investments. Whether quality or fairness of price could be easily and objectively determined by PUCs is another question, however.

PUCs might find themselves under some cross pressure. Weighing against close scrutiny, to contest major capital expenditures would be time-consuming and expensive for PUCs and BOCs. And the marginal impact on any individual ratepayer of, say, the BOC buying equipment at a price 25% too high (assuming the "correct" price were determinable), would probably be small. The PUCs' desire to minimize unnecessary rate increases would encourage closer appraisal.

State commissions will probably assign different levels of priority to various aspects of procurement depending upon individual commissioners' interests. It is also quite conceivable that the seven regional companies will vary in their procurement behavior, some

being more responsive to non-AT&T sources than others. Further, individual BOCs within each region might develop different suppliers. Under these circumstances it is difficult predict the effect of state commissions on the emergence of competition in telecommunications equipment markets.

But enduring market forces may prove more significant than PUC actions. Several major suppliers now compete with Western Electric in the telecommunications network equipment market. There is also presumably a strong need for the BOCs to keep their costs down and their efficiency growing. These incentives may be sufficient to dominate BOC behavior. Moreover, the DOJ's antitrust division will presumably be monitoring the situation; private antitrust suits with their treble damage potential may also be invoked against serious abuses. But the openness and vigor of market competition already evident in equipment distribution -- unlike other telecommunications areas -- may obviate the need for much government intervention.

NOTES FOR CHAPTER 5

1. See Telecommunications Reports, November 28, 1983, pp. 1-6. The quote is from an FCC press summary of its action taken November 23, 1983, cited by Telecommunications Report on p. 4.

2. The original FCC order was in FCC Docket 20828, Second Computer Inquiry, Final Decision, adopted April 7, 1980. The most complete discussion of the CPE deregulation issues is in National Regulatory Research Institute, Issues and Options for the Deregulation of Customer Premises Equipment and for the Divestiture of a Bell Operating Company (Columbus, Ohio: NRRI, December 1982). FCC deliberations on these issues are described in Telecommunications Reports, November 28, 1983, pp. 3-6 and February 4, 1985, pp. 1-6.

3. Telecommunications Reports, cf. May 2, 1983, pp. 20-21.

4. National Regulatory Research Institute, Issues and Options for the Deregulation of Customer Premises Equipment and for the Divestiture of a Bell Operating Company, p. 3.

5. A Minnesota CPE trade group has charged AT&T's equipment division with anticompetitive cooperation with Northwestern Bell. The group said AT&T obtained detailed information on most Northwestern Bell business CPE customers with 35 lines or more in Minnesota and parts of Iowa. They asserted the information is "highly proprietary and extends a substantial competitive advantage" to AT&T. Further they said this alleged incident illuminates the difficulties of deregulating CPE and the "thinness of the separate subsidiary walls between [AT&T] and the BOCs." Telecommunications Reports, August 29, 1983, p. 16.

6. See Telecommunications Reports, February 21, 1983, pp. 27-29. Also see New York PSC memorandum, January 17, 1983, pp. 9-12.

7. Ibid., p. 12. From the interviews, PUC concerns about the CSO seem to center more on its cost and the possibility that the individual BOC's ratepayers will be subsidizing a bureaucracy with an uncertain mission.

8. Telecommunications Reports, August 15, 1983, pp. 12, 13. Standards might have benefits offsetting the risks of anticompetitive impacts, of course.

6

LONG DISTANCE COMPETITION AND END USER ACCESS CHARGES

A major rationale for the AT&T divestiture and for changes in telecommunications regulation has been the emergence of competition in long distance service. Public utility commissions (PUCs) must grapple with the questions raised by possible competition in the intrastate long distance market: should new entrants be allowed, should the market be regulated, and how should non-traffic sensitive (NTS) expenses previously covered by assessments on the monopoly intrastate carrier be allocated? On the latter question the state regulators' position diverges substantially from that of the Federal Communications Commission (FCC), which endorsed a fixed end user access charge in the interstate jurisdiction. In 1983, most states rejected applying that scheme to their jurisdictions. This chapter probes the PUC members' orientations to intrastate interLATA (local access and transport area) competition and to access charges and other matters of cost allocation that arise from changing long distance market conditions.

As in previous chapters, a primary focus will be on the perception of market distortions caused by departures from what some players consider cost-based pricing. Many concerns about state regulation come together in PUC deliberations on how to approach in-state, interLATA toll competition and its impacts on cost allocations and Bell operating company (BOC) revenues.[1]

This chapter assumes that Congress will not pass a bill that substantially alters the FCC's imposition of flat, per-line access charges. If Congress does so legislate, many specifics in this chapter would

require modification. But the general thrust would still apply. In fact, the House passed such a bill but the Senate defeated it in 1984 after the FCC voted to delay the charges until mid-1985.

BACKGROUND: THE CHANGE IN TOLL COST ALLOCATION

Under the system effective prior to January 1, 1984, an increasing portion of NTS -- essentially fixed -- costs of the telephone network had been allocated to the interstate toll jurisdiction. In 1970, the proportion was 16.7%; in 1980, 26.1%. Another way of looking at this is to observe that in 1972, NTS costs assigned to the interstate jurisdiction represented 28% of AT&T's interstate MTS/WATS revenues; in 1978, 34%; and in 1983 an estimated 41%.[2] Thus there had been a growing dependence on long distance revenues to shoulder the NTS cost burden. The FCC estimated the size of this revenue requirement for Bell and independent local companies (in 1984) at around $8.5 billion.[3] On a per-line basis, one estimate of the NTS allocation to interstate toll was $6.93/month (in 1981); the corresponding figure for intrastate toll was $4.39.[4] In California alone, Pacific Telephone asserts that $700 million flows from in-state toll revenue to cover local access costs. Another $500 million goes to private line costs; thus toll apparently subsidizes a form of bypass of the local exchange in California.[5]

The FCC wrought a major change in telecommunications by concluding that "a substantial portion of fixed exchange plant costs that are assigned to interstate services should ultimately be recovered through flat per line charges that are assessed upon end users."[6] The FCC rested this decision on several goals. Most important, perhaps, was its desire to avoid encouraging large users to leave the public switched network because they are compelled to subsidize individual local access

lines through their long distance charges.[7]

The FCC has asserted full jurisdiction over its interstate customer access line charge (CALC).[8] State petitioners have proven ineffective in prodding the FCC to alter the basic thrust of the order on reconsideration. The Commission did delay the effective date, originally set for January 1, 1984, to mid-1985. The FCC also reduced the initial change, with substantial input from the Federal/State Joint Board on Separations.[9]

The significant question is how the states will respond to the FCC's suggestion that they adopt a similarly structured CALC plan to replace the intrastate toll contribution to NTS costs, which in some states may be larger (but in others, smaller) than the interstate.[10] Among the possible outcomes of states creating greatly different price structures are:

o Uneconomic bypass of the local exchange.

o Deterioration of the public network as revenue from large users diminishes.

o Administrative complexities arising from the disjunction of interstate and intrastate rates.

o Higher rates for potentially poorer service to small users who would be burdened with the increasing fixed costs previously paid by the now departed large users.

o Routing in-state calls over state lines and back to evade extra charges; widespread violation of state regulations.

INTRASTATE TOLL COMPETITION AND ACCESS CHARGES

Although it might seem logical to abandon the interstate/intrastate distinction in favor of interLATA/intraLATA, this course does not appeal to the states. One study predicts that state commissions will continue

to exert authority over the long distance traffic that stays within a state.[11] The survey undertaken here indicates strong PUC support for continued state oversight. While the FCC could attempt to preempt state jurisdiction, that action would contradict the 1934 Communications Act and might be difficult to sustain in court.[12] (Congress could amend that act, however.) The states now face two decisions, one transitory and the other of longer term import: whether to allow intrastate toll competition and whether and how to structure an intrastate CALC.

1. PUC Views on Intrastate Toll Competition

States retain authority over in-state toll calling. Asked (interview question #7) whether they would favor (interLATA) toll competition in their state, most commissioners responded affirmatively, if not enthusiastically. Two favored it strongly, six generally supported it, and six said they had no practical choice but to allow it. Two expressed doubt that more than one carrier would want to serve their rural states, but regarded competition favorably.

Perhaps surprisingly, state regulators surveyed for this report were not disposed toward regulation of a competitive intrastate toll market. Only three called for rate base or price regulation. Six favored certifying carriers and monitoring their activities but forbearing from close oversight, two endorsed complete deregulation, and five were unsure. These responses indicate some faith in the efficacy of competition -- even between AT&T and new, smaller competitors -- to discipline the previous intrastate monopolist.

The California PUC experienced intensive public debate whether to allow competitive toll carriers such as MCI to carry in-state calls. The PUC initiated an investigation of the subject in June 1983.[13] In its

order the commission was somewhat reserved, saying "applicants must demonstrate a substantial probability that any adverse consequences from their entry will be outweighed by . . . benefits."[14] The commission explicitly asserts that a potential tradeoff exists between universal service subsidized by monopoly in-state toll rates and competition. Yet if price decreases stimulate increased toll calling, AT&T and the OCCs could have additional traffic sensitive access charge revenue to share with the local operating entities. In Texas, MCI asserts, intrastate toll competition significantly increased traffic.[15] For that reason Pacific Telephone has urged the state to maintain the monopoly.[16] Nonetheless, the commission approved competition, authorizing 14 new interLATA carriers. And the PUC forbade, at least initially, intraLATA toll entrance.[17]

Many of the commissioners interviewed expressed doubts about the feasibility of enforcing a policy of non-competition. The OCCs' interstate networks can often be used to route and terminate in-state calls. To comply with the letter of the law, a call can be transmitted over a state border and switched back in. It would take a major technical effort by states -- if it were feasible at all -- to trace the paths of calls to prevent this tactic. Pacific Telephone suggested analyzing the interstate carriers' "billing tapes . . . to determine the extent to which carriers are providing unauthorized and illegal intrastate services."[18] But constant oversight of this sort could be expensive and difficult to audit for accuracy. And, as indicated, if the calls are routed over the border they may not be illegal in many states.

Intrastate toll competition will probably be a natural adjunct of interstate. As of the latter part of 1984, according to a NARUC study,

29 states allowed either (or both) resale or facility-based interLATA carriers besides AT&T-C. Four states prohibited competition outright. Seven states have only one LATA, and Delaware and Washington, D.C. are parts of other LATAs; the interLATA question is moot in these places. The remaining eight sates were undecided. As for regulation, an earlier study showed six states had instituted a two-tiered scheme with AT&T-C facing close control and the competition receiving only minimal oversight. These states were California, Florida, New York, Ohio, Texas, and Washington. Not surprisingly, AT&T-C opposed the lack of regulatory parity while MCI and Sprint applauded it.[19] Quite possibly the larger issue for states will be how to regulate rather than whether to allow intrastate, interLATA toll competition.

2. The Response of the States to the FCC Access Charge

a. Variety of Options

With the interLATA toll monopoly apparently on its way out, states must decide how to distribute the allocated NTS costs. As noted, the FCC's original interstate plan involved a phased-in flat rate interstate access charge on each end user line. It left states free to set their own intrastate access charge policies.

The survey reveals the greatest divergence between state commissioners and the FCC on this issue of an intrastate CALC. More than one response was coded for each commissioner.

What should states do about intrastate access charges?*	Responses
Press for federal legislation to change the FCC concept	6
Follow the FCC model	4
Tax interLATA or toll carriers	4
Will not have intrastate CALC since one-LATA state	3
Pressure the FCC to reconsider	2

Establish a lower, toll-restricted CALC for exclusively local callers, who would not be able to make toll calls	2
Miscellaneous others	3
* More than one response permitted	

Only four responses suggested obeisance to the FCC's implied mandate. The most popular single option, besides pressing for changes at the federal level, was assessing interLATA carriers instead of end users.

The interview transcripts are replete with such comments as:

- o The FCC Docket 78-72 "is full of lousy microeconomics."
- o "The FCC should shove it."
- o "There's nothing that says we have to have that charge; the revenue is already there buried in local rates or intrastate toll."
- o "We're states righters. As a policy we'll challenge everything that preempts our authority."

The National Association of Regulatory Utility Commissions (NARUC), the state of California, and others have challenged the FCC access charge in Federal District Court.[20] NARUC asserted that in effect the FCC is imposing intrastate charges in violation of the precedents established since Smith v. Illinois Bell (282 U.S. 133 [1930]). This case mandated that costs be reasonably apportioned to federal and state jurisdictions relative to use in each area. The plaintiffs argue that the FCC access charge is intrastate in effect because all end users, even if they make no interstate calls, must pay it to have a phone at all.[21] They say the FCC has no jurisdiction to impose a de facto intrastate charge. The other major NARUC argument is that the FCC acted primarily on the basis of "speculation" about the dangers of bypass, without sufficient factual basis.[22]

Iowa Public Utilities Commissioner Christine Hansen's Congressional testimony on access charges and rural concerns also applies to the urban poor, and reflects the tenor of many of the interviews:

> The FCC has stated that: "The implementation of access charges is not a rate increase, it is a rate restructure. Increases in access rates will be matched dollar for dollar by reductions in per message interstate charges."
>
> The Commission believes that this statement by the FCC is a prime example of the inadequate consideration given to the effects of the FCC's decision on rural telephone subscribers. To tell these rural subscribers that their rates have not been increased, but merely "restructured," when those subscribers must pay an additional $4 to $8 per month for obtaining telephone service, makes little sense. These charges will increase in the future. The combined intrastate and interstate access costs are in the range of $9.00 to $11.00 per residential customer. Regardless of the exact amount, substantial increases in phone bills will result.
>
> Furthermore, the Iowa State Commerce Commission is aware of no plan to require either AT&T or other interexchange carriers to reduce interexchange rates such that there is no net increase in revenues to the interexchange carrier. Unless such rate reductions are ordered, there is simply no truth to the FCC's statement that the implementation of access charges is not a rate increase. In fact, even if such increases do come about, they cannot be expected to help the rural telephone subscriber. Although calculation of break even points is impossible without knowing the reductions in toll rates which might be required, two items are nearly indisputable. First, most rural telephone subscribers cannot be expected to regularly reach the break even point. Even at the lowest possible interstate access charge ($4 per month) and assuming a 20 percent decrease in interstate toll rates, the local subscriber would need to make $20 worth of interstate toll calls per month in order to break even under the FCC's plan. This is a level higher than that reached by most rural residential telephone subscribers.
>
> Moreover, whatever reductions in interstate toll rates may take place are not likely to be over the routes used frequently by rural telephone subscribers. Reductions by interexchange carriers can be expected over those routes which are most competitive, and not over the routes used by subscribers in relatively less populous areas. Thus, one can expect that the FCC's prescription of access charges will result in higher charges for toll service in rural areas such as Iowa while more densely populated areas of the country served by numerous interexchange carriers will have lower toll rates.[23]

These beliefs and circumstances might lead to considerable diversity in states' responses to the intrastate access charge option.

Asked if they believe they have sufficient information to make a proper decision on the CALC, most interviewees cited such serious unknowns as the potential cost and growth of bypass systems, the possible import of insufficient data provided by telephone companies, and the uncertain ability of many companies to assess their own costs sufficiently well to determine the correct access price. A typical response was that the PUC does not know enough but will muddle through and make the most accurate determinations that it can.

Another question indicated the pervasiveness of limited information on this matter. Asked to cite their own area of greatest uncertainty, six said they wondered just how access charges will work. The CALC was the most frequently mentioned issue.

Among possible alternatives to the CALC offered by the interviewees (in addition charging the interLATA carriers) are the following:

o A continued monopoly in intrastate interLATA toll that obviates the need for an intrastate access charge. As previously discussed, however, this does not appear to be a realistic choice for most states.

o A toll-restricted option for local users. According to Telecommunications Reports, Idaho issued "the first order by a state regulatory commission directing a telephone company to give customers the option of designating some or all of their access lines for intrastate service, blocking the lines from interstate access."[24] An analogous order might be feasible for intrastate toll access. As previously noted, Iowa considered such an option.[25]

b. Carrier charges in lieu of CALC

The NARUC sample was asked how they would handle a carrier access charge (question #7). Six said they would definitely favor a significant assessment on toll carriers, two said they might, six were unsure and one was against a carrier assessment. Four were not asked this question. Most commissioners' sentiments on the issue had not fully crystallized at the time of interview.

Carrier access charges may remain an item of great contention, for they offer PUCs a partial way out of the pressure on local residential rates. If PUCs require toll carriers to bear local NTS costs through carrier access charges, another deviation from what some would view as cost-based prices could arise.

By the end of 1983, anti-CALC sentiments had been reflected in many PUCs' actions. In one group of 10 states, 9 decided to reject intrastate CALCs: Idaho, Arkansas, Florida, North Dakota, New Jersey, Alabama, Michigan, North Carolina, and Texas. The nine placed charges on interexchange carriers or otherwise avoided assessing individual local subscribers the access fee. New Mexico was the one state that approved a CALC. [26]

In 1984, Florida regulators came up with the "St. Louis Plan." In essence, the plan (named after the city where it was approved by NARUC members) would give states control over both interstate and intrastate access charges. The idea would be to give states flexibility in meeting the revenue requirements of their telephone companies within guidelines established by the FCC. In comments before the FCC, virtually the entire telecommunications industry criticized the proposal. Most urged the FCC to press on with its own plan. That course, however, does not settle the question of intrastate access charges.[27]

c. Implications of state failure to assess a CALC

If the majority of states resist fixed end user access charges over the long term, a number of questions and issues may arise:

o If the FCC's interstate CALC is implemented in mid-1985, will the lack of a parallel intrastate charge in most states significantly accelerate uneconomic bypass? If the CALC is not in place, interexchange carriers may have to continue paying a large share of NTS costs through carrier access charges. According to one report, AT&T-C has considered bypass an option "if states keep carrier access charges at high levels." AT&T-C would build lines for large customers to access its interexchange lines directly.[28]

o Is the volume of uneconomic and economic bypass enough to cause significant pressure on local company revenues? If yes, the interview responses indicated that most PUCs will be amenable to implementing a CALC if they are convinced it would help stem the tide of bypass.

o Administering revenue divisions and settlements could become complex. Will interexchange carriers have incentives to shift calls over state lines to evade intrastate carrier charges? Bookkeeping and auditing would be arduous. Calculating proper reimbursements would be difficult, and political pressures might surround PUC decisions on particular settlements. Independents and rural companies may find it more difficult to obtain disproportionate settlements from interLATA carriers when urban companies are facing bypass by large users.

o What would be the effect on the emergence of interLATA competition within states? In the absence of a CALC and presence of carrier charges, long distance providers might find it less attractive to enter or stay in the intrastate market and compete with AT&T. If MCI and its OCC brethren

were to stay (or be kept) out of interLATA service within states, their overall competitive strength against AT&T could be diminished since many users make more toll calls within their state than outside of it.

All of this, of course, is speculative and intended only to suggest issues that might confront PUCs if they maintain a different price structure than the federal jurisdiction does.

PROBLEMS OF IMPLEMENTING AN INTRASTATE CALC

1. Political Analysis

Should PUCs decide to mandate CALCs, all problems will not disappear. Political considerations may influence the time span for phasing in the charges, with options ranging from 100% immediately, to a multi-year plan like the FCC's. Transition periods can require complex PUC calculations and detailed oversight. Yet, at least in higher than average cost states, an immediate switch of all NTS costs to a CALC seems unlikely.

Another administrative burden would be created by the wide range of cost variation among different local companies, and even within companies (like most BOCs) that serve a diverse set of communities. It is possible that both political and administrative feasibility could dictate initially having a single, averaged intrastate CALC with pooling and distributions similar to current distribution.

A third area that may prove politically problematic is the process of adjusting any announced CALC to changes in technology and cost. It is possible, for example, that regulators might approve increases in the intrastate CALC to help fund investment in local plant upgrading. These enhancements might primarily benefit large business users of sophisticated new services. Not immediately apparent to residential

users as improvements in quality, and coming on top of other increases, such CALC adjustments may generate opposition.

Another possible reason to alter a CALC, one that may indeed prove the most compelling, is to discourage uneconomic bypass. As state regulators and telephone companies move up the learning curve, experience might well indicate that initial cost estimates were wrong. Yet historically the process of adjusting rates has often been controversial and lengthy.

Moreover, bypass might occur <u>despite</u> commissioners' implementation of a cost-based CALC. This is to be expected based on economic theory. But political pressure could arise to alter the CALC in order to discourage bypass. Some might want to lower the CALC with the assumption that it would make staying with the BOC cheaper when, in fact, bypass would still be economically efficient and less expensive for larger users. Others argue that low CALCs mean higher <u>carrier</u> access charges, which in turn might provide carriers with an incentive to build bypass systems and serve large users directly. If, as the FCC believes, NTS cost allocations will be a crucial element in large users' calculations on whether or not to bypass, the CALC could be subject to upward or downward manipulation and bear only partial relation to actual best estimates of NTS costs. The financial health of local companies could be negatively affected if the size of the CALC is not a properly calibrated component of revenue.

2. <u>Analysis of Deaveraging of Access Charges</u>

Intrastate end user access charges, if they are to be cost based, will necessarily differ across states. Currently states vary considerably in average costs.[29] In some Great Lakes states, a BOC

representative has reported, the savings on CPE rental resulting from CPE deregulation may compensate for a residential intrastate CALC set at the originally suggested $2.00 per month.[30] In other states, of course, the CALC may be higher. For example, in North Carolina the estimated intrastate NTS revenue requirement would be $4.13.[31] Access charges filed by the BOCs as of 1983 varied somewhat. In California the proposal was for $1.00 home and $3.00 business; in Florida, $1.92 and $3.82; in Pennsylvania, $2.00 and $4.00.[32]

Deaveraging below the state level appears to be a logical extension of cost-based pricing. Presumably such pricing is necessary to prevent uneconomic bypass, since costs may vary substantially from sparse rural to dense urban communities. Averaging could go to the LATA level, or work company by company, or even exchange by exchange.[33]

Deaveraged intrastate CALCs could lead to opposite incentives for urban and rural bypass. According to several PUC members surveyed, the largest users located in relatively rural areas might be led to bypass by deaveraged rates.[34] In North Carolina, for example, many furniture, lumber, textile, and paper concerns are situated in non-urban communities often served by independent companies. While bypassing these companies might be economically efficient, it could also raise residential rates in rural communities already faced with higher than average prices. However, bypass systems could cost more than the deaveraged rural BOC or independent public network charges, in which case this fear would be moot.

In urban centers deaveraging might discourage bypass. Large urban users could experience substantial drops in their local and long distance telephone bills under local access rate deaveraging and toll competition.

These decreases could be large enough to dissuade them from making the effort to bypass unless the bypass carrier offers even larger savings. Such a scenario would actually mark an end to the historical result of averaging: urban users subsidizing rural users. And that implication might render the scenario of deaveraging less plausible, for the desire to promote well-being in rural areas continues to attract much support in some state PUCs and legislatures.

The following Congressional testimony of Iowa PUC member Christine Hansen illustrates concerns some PUCs may have about rural bypass:

> The FCC's actions have been prompted by the perceived problem of "bypass." However, the FCC's solution is not likely to aid Iowa in this regard. It is not atypical for an independent phone company operating in Iowa to have over 25% of its revenues from a single customer via the current toll separations process. If such a customer would elect to by-pass the system, the company could suffer financial collapse. It is not apparent how the access charge docket 78-72 will correct this situation. Since the customer is located in a rural area, his toll costs will still be higher due to overall low volume high cost usage while the access charge has also gone up. The situation would seem to further push the user toward bypass than to keep them on line.
>
> In an attempt to avoid the problem of "bypass," (a problem which is largely non-existent in Iowa) the FCC has formulated a system of access charges which will benefit primarily two groups. Large users of interstate toll services on competitive routes will benefit because decreased toll rates will likely offset the access charges which the user must pay. Interstate carriers (primarily AT&T) will benefit because billions of dollars currently paid out through the separations process will simply no longer be paid. The real loser under this system is the telephone customer in a low density rural area, who will be faced with ever increasing costs for access [to] a system which provides essentially the same service as in the past.
>
> In order to alleviate this problem, the Iowa State Commerce Commission is currently considering rules which would allow a customer to opt out of toll service and thereby avoid paying the toll access charge.[35]

3. The Issues of Equal Access

One major requirement of the Modified Final Judgment (MFJ) is that BOCs provide interLATA carriers other than AT&T-C equal access to the local exchange. While the OCCs'access remains inferior, they will be assessed lower carrier access charges by the BOCs. But by September 1, 1986, BOCs will be required to offer equal access to all their local exchanges (with minor exceptions noted in MFJ Appendix B, sections A(1) and (2)). In the past OCCs have claimed that the "line-side" rather than "trunk side" access they are provided is a significant competitive disadvantage.[36] Not only is the quality of voice signals often degraded, but the 60% of phone users without Touchtone(R) phones have not been able to use an OCC; moreover, customers' calls cannot be verified by the OCC. PUCs will effect the development of equal long distance access through regulatory oversight of the transition, with jurisdiction over several issues.

A matter of possible contention is that there will be a period during which AT&T-C will be assessed higher charges in the interstate jurisdiction for access to the local exchange than OCCs will pay. The differential, at least initially, is 45%;[37] it will narrow until equal access is achieved.

This interstate story is relevant to state considerations. The uncertainty that pervades federal-level discussion will inevitably suffuse PUC deliberations as well. How much of a discount, if any, should OCCs obtain for inferior intrastate access? Will the states have any better information for decision making than the FCC, which changed its mind about the differential twice within a year?[38] Will the increase in access costs faced by OCCs reduce their competitive strength? Or

does the increase merely remove an advantage OCCs had because they were not forced to bear the NTS subsidy burden that AT&T Long Lines did?

Moreover, debates on whether "equal" access has indeed been attained, and on how to administer it, are inevitable. For example, the MFJ calls for unbundled access services so that OCCs can choose the quality of interconnection they want. But the BOC interconnect configuration could still force upon the OCCs a type and cost of access they do not want. Southern Pacific (now GTE/Sprint) argued that AT&T's equal access plans would involve interfacing via two-wire analog switches that will create noise, echo, and loss on OCC calls but not on AT&T-C's.

Other examples: early experiences with equal access switchover brought complaints from OCCs that the transition was taking too long. The practice of making AT&T the default carrier for customers who do not actively choose a preferred service also became controversial. When equal access comes to states that forbid intrastate toll competition, those states may find themselves in confrontation with the OCCs. The attractiveness of competitors' services will diminish if OCC customers only have equal acces to interstate but not intrastate long distance.[39]

Further, after the transition, AT&T-C or an OCC may <u>want</u> inferior access at lower cost. The BOCs could be unable or refuse to provide it. Or they might offer lesser access at a price the interLATA carrier deems unfair. Some PUCs may be asked to evaluate and set carrier access charges in these circumstances.

Even seemingly simple matters of billing create potential conflict for state regulators and between PUCs and the FCC. Toll carriers, for example, assert that carrier access charges improperly include assessments for the time customers take to dial the number (whether or

not the number is correct or busy), and for the time the phone rings but is not answered. As another example, AT&T-C has decided to set up its own billing inquiry centers rather than contracting with the BOCs to handle billing complaints. The result may be to raise the BOCs' intrastate revenue requirements significantly; the New York PSC estimated the change could add a dollar a month to access line costs.[40]

THE NATIONAL EXCHANGE CARRIERS ASSOCIATION AND INTERSTATE RIVALRY

Interstate access charges may vary among the states because of different cost recovery needs. This could raise complications.

States with low interstate toll usage have previously been recovering a relatively small proportion of their NTS costs through interstate settlements -- even if those states were high cost. These high cost, low toll use states could be faced with much larger interstate CALC tariff filings. Such requests in turn may generate political controversy that would constrain PUCs. Low cost, high toll use states, on the other hand, have probably been subsidizing the higher cost states through the settlement pool. They could find their CALC is fully implementable in just one year,[41] and at substantially lower levels than in other states.

States' interests may also be at odds in the FCC's plans to establish an interstate National Exchange Carriers Association (NECA). This NECA is dual-purposed. For recovery of NTS costs assigned to carriers, membership is mandatory; BOCs and independents will file tariffs, then pool and distribute their revenues in a process similar to current separations and settlement practice. However, for the carriers' traffic sensitive costs, pool membership is voluntary. Pooling generally requires low cost states to subsidize higher cost states. According to

some commissoners surveyed, BOCs and independents from low cost states will have little incentive to join this pool. Indeed, in 1983, the Illinois Commerce Commission forbade its telephone companies to join.[42]

NECA filed interstate access tariffs with the FCC on September 30, 1983. While 1540 companies were participating in the mandatory pool, only 1425 (including 10 BOCs) filed tariffs for the voluntary traffic sensitive access charge pool. Thus there could be some revenue shortfall for local companies anticipating revenue from that voluntary pool. And, as the Illinois Commission expected, the end user access charges filed in 1983 (before the postponement until 1985) varied considerably from state to state, although for business lines only. All states had the FCC maximum of $2.00 residential access tariffs. But business access charges under the filing would be under the FCC maximum $6.00 in 26 states, with the lowest charges being $2.90 in Pennsylvania, $3.00 in Michigan, $3.26 in Ohio, and $3.42 in Illinois.[43] The relatively low business CALC in these "frostbelt" states may be a NECA attempt to avoid having low cost states bear a subsidy burden. Only time will determine whether the voluntary carrier tariff pool that ultimately emerges can generate sufficient revenue for local companies.

The obvious place for states to compensate for any gap would be in intrastate carrier access charges. But there are strong reasons for making state and federal traffic sensitive carrier charges equal within a given state. As the U.S. Independent Telephone Association (now U.S. Telephone Association) has pointed out, exchange companies cannot determine, with line side access, whether calls are intrastate or interstate. Therefore they would not know what to bill the interexchange carriers for their minutes of use; and the interexchange carrier would

have incentive to shift or claim most minutes in the cheaper category.[44] In this event, a revenue shortfall could still occur.

There is a strong possibility for uncertainty and conflict between states and the FCC over pooling and recovery of traffic-sensitive costs. In this instance there is the added complexity of conflict among the states. With high and low cost states at odds over some aspects of pooling, NARUC may find it difficult to develop an effective position at the FCC or Congress. For the competitive interexchange carriers there is potential for confusion and uncertainty about cost variation among states. This situation could discourage market entrance and investment.

CONCLUSION

InterLATA competition is far from thorough entrenchment, especially within states. While the technology permits it, and the FCC and MFJ seek to enhance its prospects, state PUCs have concerns beyond and in conflict with establishing competitive long distance markets. Many interviewees believe toll callers are predominantly well-to-do businesses or individuals. They believed that monopoly toll calling has subsidized local toll calling and that this was a beneficial policy. But the difficulty of stifling intrastate entry once interstate carriers are allowed in heightens competition. The interviewed PUC members acknowledged the need to be flexible if developments such as widespread evasion of a prohibition against in-state competition warrant. Indeed, a large majority of respondents favors or accepts the inevitability of intrastate interLATA toll competition. Whether regulated competition will yield to a true, deregulated market in interLATA long distance within states remains to be seen.

As for access charges, commissioners are skeptical that bypass is

an immediate danger and that fixed access charges can prevent it; some even believe a CALC would accelerate bypass. Pressure within many states to keep rural rates in line with urban rates is also strong, and it works against subsidy-free price structures. But if intrastate interLATA toll competition penetrates most states, access charges may become more acceptable to PUCs and consumers, as lower in-state tolls compensate in part for the higher local charge, and as AT&T-C loses revenue once used for local NTS costs.

NOTES FOR CHAPTER 6

1. A slight flaw in the interview questionnaire on the subject of interLATA toll competition should be mentioned. Question #7 (Appendix) does not explicitly ask for opinions on interLATA competition, only "intrastate," which could include intraLATA toll as well. I believe the context of the question made it clear that interLATA was the focus. Moreover, question #8 specifically asks about intraLATA toll. If commissioners had thought this was included in the previous question, they would presumably have said so. Their responses to both questions indicated they had in mind intrastate, interLATA toll competition in answering question #7. IntraLATA toll competition and the responses to question #8 were discussed earlier (pp. 31-36).

2. Federal Communications Commission, In the Matter of Amendment of Part 67 of the Commission's Rules and Establishment of a Joint Board, CC Docket No. 80-286, Order Requesting Further Comments, Released November 15, 1982, p. 5.

3. FCC CC Docket 78-72, Phase I, released February 28, 1983, p. 10. J. Ordover and R. Willig assert that this figure is "arbitrary," although it seems to have been accepted by survey respondents. See "Pricing of Interexchange Access," a paper presented at the Eleventh Annual Telecommunications Policy Research Conference, Annapolis, Md., April 1983, p. 4.

4. Bruce Carruthers, Ellen Deutsch, William Garrison, and John Williams, Report on the Study of Telephone Use, Rates, and Regulation (Raleigh: North Carolina Agency for Public Telecommunications, 1983), p. 115.

5. Pacific Telephone, in The New Telecommunications Marketplace (New York: Law and Business, Inc., 1983), p. 322.

6. FCC Docket 78-72, op. cit. p. 3.

7. Ibid., p. 11.

8. Ibid., p. 21-22. NARUC challenged this action in the U.S. District Court for the District of Columbia. See Telecommunications Reports, July 18, 1983, p. 14.

9. See Telecommunications Reports, August 1, 1983, p. 4, on FCC order issued July 27, 1983; and January 23, 1984, pp. 1-5, on the delay until 1985; and November 19, 1984, pp. 1-4, on the final plan.

10. Leland Johnson, Competition and Cross Subsidy in the Telephone Industry (Santa Monica, Calif.: Rand, 1982), p. 51; also see Anthony G. Oettinger with Carol L. Weinhaus, Basic Data on the Politics and Economics of the Information Evolution: Telecommunications Costs and Prices in the United States; 4. The Traditional State Side of

Telecommunications Cost Allocations (Cambridge, Mass.: Harvard Program on Information Resources Policy, 1980).

11. Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, pp. 218-19.

12. This is the assessment of Henry Geller, former Assistant Secretary of Commerce and Administrator of the National Telecommunications and Information Administration, personal interview, May 16, 1983.

13. Order Instituting Investigation to Determine Whether Competition Should be Allowed in the Provision of Telecommunications Transmission Services Within the State, OII 83-06-01, June 29, 1983.

14. Ibid., p. 5.

15. MCI Comments to the Ohio PUC in the Matter of the Commission Investigation Relative to Establishment of Interstate Access Charges, in The New Telecommunications Marketplace, p. 369.

16. Order Instituting Investigation, OII 83-06-01, pp. 7-8.

17. Telecommunications Reports, January 16, 1984, p. 23.

18. Pacific Telephone, in The New Telecommunications Marketplace, p. 315.

19. The figures on allowing intraLATA competition come from Paul Rodgers, Genevieve Morelli, and Karen Hochstein, Intrastate Telecommunications Competition (Washington, D.C.: NARUC, November 15, 1984), p. 2. The figures on regulation are from State Telephone Regulation Report 2 (Arlington, Virg.: Capitol Publications, Inc., March 15, 1984), pp. 5-6.

20. NARUC vs. F.C.C. and United States, 737 F2d 1095 (U.S. Dist. Ct., D.C. Cir., 1984). NARUC has appealed the adverse decision in this court to the U.S. Supreme Court.

21. Conceivably some forms of "lifeline" rates could include subsidies or toll restrictors that would allow lifeline users to avoid the charge.

22. Telecommunications Reports, July 18, 1983, p. 14. The California PUC also appealed the charge to the D.C. federal district court, in People of the State of California and the Public Utilities Commission of California v. Federal Communications Commission, Case No. 83-1439. The same two groups also appealed the FCC decision authorizing intrastate resale and sharing of MTS and WATS services in Case Nos. 83-1354 and 83-1360, U.S. District Court for the District of Columbia.

23. Hansen testimony in NARUC Bulletin, March 28, 1983, p. 25.

24. Telecommunications Reports, August 8, 1983, p. 17; also see NARUC Bulletin, November 14, 1983, pp. 25-26.

25. NARUC Bulletin, March 28, 1983, p. 26.

26. See, Telecommunications Reports, April 11, 1983, p. 28, on a controversy over proper assessment of competitive interLATA carriers in New York state.

27. State Telephone Regulation Report, 2 (Arlington, Virg.: Capitol Publications, Inc., October 11, 1984), pp. 3-4. On the plan itself, see Telecommunications Reports, May 5, 1984, pp. 6-9.

28. Report on AT&T, 2 (Arlington, Virg.: Capitol Publications, Inc., March 19, 1984), pp. 1-2.

29. This can be inferred from the figures reported in Oettinger with Weinhaus, Basic Data, on variations in intrastate message toll prices for the same distance, time, and length of call. See note 10, above, and cf. "Local Telephone Rates: Issues and Alternatives," Staff working paper, Congressional Budget Office, January 1984, Appendix C.

30. Remarks of Carl Horn, Great Lakes Regional Bell Holding Company (Ameritech, Inc.), President Designate, at meeting of NARUC Communications Subcommittee on the AT&T Divestiture, Washington, D.C., June 16, 1983.

31. Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, p. 115.

32. Telecommunications Reports, October 31, 1983, p. 22; July 4, 1983, pp. 16, 21; and April 4, 1983, p. 20.

33. See, for example, Carruthers et al., Report on the Study of Telephone Use, Rates, and Regulation, p. 68, and Pacific Telephone, in New Telecommunications Marketplace, p. 323. "Local Telephone Rates," op. cit, pp. C-8 and C-11, argues that there is little evidence of a relationship between telephone company size, population density, and cost of delivering service.

34. Pacific Telephone estimated toll competition and deaveraging in California could lead to as much as a $50 rate in rural areas versus $20 in urban areas. The company notes that the existing rate structure provides subsidies from toll revenues to rural users. See ibid., pp. 320-24.

35. Quoted in NARUC Bulletin, March 28, 1983, pp. 25-26.

36. See Oettinger with Weinhaus, Basic Data, vol. 1, for a clear description of the mechanics of interconnection.

37. Telecommunications Reports, January 23, 1984, p. 4. The need to recover the considerable costs of converting offices to equal access has engendered controversy in at least one major jurisdiction. The New

York PSC has considered a NYNEX tariff that would impose substantial per line fees on interexchange carriers to pay for equal access conversion. Telecommunications Reports, January 21, 1985, pp. 13-15.

38. See FCC CC Docket 78-72, op. cit., and Telecommunication Reports, April 8, 1983, p. 5; July 25, 1983, p. 7; and August 1, 1983, p. 5.

39. See, on Sprint's complaints, Telecommunications Reports, February 21, 1983, p. 10; cf. Telecommunications Reports, August 15, 1983, p. 12, on the problems of enforcing equal access standards; Communications Daily, January 31, 1985, p. 3, on delays in the transition and the default to AT&T-C.

40. On charging by access minutes, see MCI comments to Ohio PUC, in New Telecommunications Marketplace, pp. 383-84. On AT&T-C's billing inquiry centers, see State Telephone Regulation Report, 2 (Arlington, Virg.: Capitol Publications, Inc., December 20, 1984), pp. 3-4.

41. Remarks of Carl Horn, Great Lakes Regional Bell Holding Company (Ameritech, Inc.), at meeting of NARUC Subcommittee on the AT&T Divestiture, Washington, D.C., June 16, 1983.

42. Telecommunications Reports, April 18, 1983, p. 12. (AT&T has voiced fears that the interstate pool's Universal Service Fund will grow so large as to encourage bypass [since the fund comes from usage-sensitive fees]; Telecommunications Reports, October 31, 1983 p. 23.)

43. Telecommunications Reports, October 3, 1983, pp. 8, 30-31.

44. Telecommunications Reports, August 8, 1983, p. 18.

7

VARIATION AMONG THE STATES

1. The Effects of Different Actions in Different States

Regulatory conditions vary widely among states. So too, of course, do costs and preferences. This variation will probably be reflected in telecommunications policy decisions. Three examples of areas in which significant state-to-state differences may arise, assuming no preemption of state regulatory power, follow.

First, the means of resolving the tension between a healthy Bell operating company (BOC) and low local rates may vary. Some states may attempt to keep rates below costs. The result could be differences in BOC rates of return that affect their ability to raise capital and to meet competition through updating facilities and innovating. Some states could experience deteriorating phone systems and services and higher capital costs. Over time such differences might dissipate as states move to allow the companies to earn adequate returns.

Second, the economic feasibility of bypass systems will vary substantially within as well as across states. The more densely populated and commercially active corridors will generally receive the initial attention.

The rate at which innovative products and services diffuse could differ enough to lead to noticeable inequalities in state telecommunications development. This situation could lead to pressures for federal involvement such as averaging, subsidies, and its panoply of interventionist tools. If, as is widely predicted, the U.S. economy becomes increasingly information-based, the stakes will be high. States

may even decide to subsidize telecommunications development or infrastructure themselves, just as they already support industrial parks, freeways, universities, and the like.

Third, decisions to deregulate will vary noticeably. There is no unequivocal indicator of when a market has become sufficiently competitive to allow deregulation, and some commissioners place more trust in market forces than others. Philosophical variations combined with differences in the strength and makeup of political constituencies ensure diversity in the regulatory landscape. Investment and other business decisions may be made more difficult by this lack of consistency; that could lead to further pressure for federal preemption, for example, of intrastate, interLATA (local access and transport area) regulation. Yet there is enough communication among states, through the National Association of Regulatory Utility Commissions (NARUC) and other means, that overregulating (or underregulating) states should be made aware of their mistakes and attempt to correct them eventually.

2. Contrasts Between New York and North Carolina

For the initial phase of this study, case studies of two state commissions were conducted.[1] This process illuminated key issues to probe in the national study and refined the questions for the interview protocol.

Below are some key contrasts and similarities, based on the commissions' dominant sentiments. Of course, each member is an individual and the following summary cannot cover every commissioner's precise thoughts. In general, however, the findings of these two case studies support the themes of this report. Commissioners are not monolithically opposed to competition or determined to maintain

lower-than-cost pricing for local service. Public utilities commissions (PUCs) are disturbed by what they perceive as federal intrusion and neglect of residential customers' interests, and are willing to fight or disregard the Federal Communications Commission's (FCC's) preferences where necessary.

o New York's commissioners generally seem more concerned with the preemption of depreciation and customer premises equipment (CPE) regulation by the FCC than do North Carolina's. But both groups were equally perturbed by the customer access line charge (CALC).

o Both states' officials expressed strong interest in formulating an intrastate CALC independent of the FCC. They did not believe it necessary to follow the structure of the interstate CALC to recover the non-traffic sensitive (NTS) costs now assigned to in-state toll. No pattern emerged from each state's responses, except that North Carolina members were somewhat less precise about the alternatives they are considering. By early 1984, neither state had established a preferred approach.

o In both states, maintaining low local rates is not an overarching goal. In both states about half the commissioners said it was the top or very high priority, half said other needs (chiefly BOC health), are equally significant. This split is likely to recur in other states. It may be related to philosophical stances regarding income distribution. PUC debate on specific policy decisions that indirectly affect local rates such as handling cable TV or intraLATA competition may be influenced by ideological differences within commissions.

o There was no consensus about the threat to universal service posed by recent policy changes. In both states some commissioners

believe universality is definitely threatened, some believe it will probably be threatened, and some believe it probably will not.

o A clear difference between the states emerges in response to local measured service (LMS). Measured service is already widespread in New York and accepted by commissioners. It is rare in North Carolina, where opposition in public hearings, even to optional LMS, has been intense. Some North Carolina commissioners favor it but most do not, citing negative public sentiment. This contrast suggests that where states have little experience with LMS and a commission seeks public input, LMS may be difficult to implement.

o Neither commission fears for the financial future of BOCs. No member rated the threat as great, and most believed its BOC can stand up to competition quite well. This could mean commissioners will be less sympathetic toward BOC rate increase requests than BOC management might like. But BOCs enjoy a great deal of empathy and sympathy from many commissioners.

o Many commissioners in both states believed the FCC, AT&T, and the BOCs overplay the bypass threat somewhat. Only a few believe bypass poses an immediate and large danger; the rest believe if bypass occurs, it will probably happen on a smaller scale and over a longer period than the FCC envisions.

The implication for policy decisions is ambiguous. On the one hand, if bypassers are not seen as seriously and immediately endangering BOC health, commission treatment of early bypass activities could be laissez-faire. On the other, a commission might seek to fulfill its prophecy of little early bypass threat by treating pioneer bypassers unsympathetically. Subsequent handling of bypassers, if they do begin to

impinge upon BOC viability, is also unclear. Both commissions are most concerned about residential phone rates, but they also care explicitly about keeping the state's telecommunications infrastructure modern and its business climate attractive.

o In what might contradict sentiments on bypass in the abstract, both commissions exhibited a near-consensus on the need to regulate cable TV systems that compete with BOCs in voice transmission. The members viewed cable transmission of data as less needful of regulation. The form of regulation they most often mentioned was loose monitoring of prices and services, rather than rate base rate of return. A few commissioners indicated they would prefer to deregulate both the BOC and cable if the latter truly became a significant competitor of the former. This alternative could become a serious option since none of the commissioners exhibited a fondness of regulation for its own sake.

o On intrastate toll competition, the New York commission's views ranged from definitely favoring to mixed to definitely opposing. However, the state has already authorized some new intrastate toll services. North Carolina commissioners generally look upon in-state competition with some distaste and turned down an OCC's application. But they believe that eventually they will have no choice, that monopoly cannot practically be maintained. The North Carolina group may have been influenced by a major consultants' study,[2] which concluded that attempts to prevent intrastate competition would prove futile.

o Contrast emerged in response to the question about the benefits of competition and deregulation. New York officials stressed less expensive CPE as the chief benefit to most subscribers and said the bulk of benefits will accrue to business users. North Carolina members,

perhaps because of the emphasis then-Governor James B. Hunt had given to making the state a high technology leader, more frequently mentioned the potential benefits to all citizens of market-driven technical innovation.

o Commissioners in both states believed there would be a moderate degree of political pressure and public concern attending their telecommunications deliberations. In general they did not believe the pressure would equal that surrounding the energy cost hikes of the past decade. Several expected Congress to be the focal point of major legislative initiatives.

There was probably more variation within the two state commissions than between them. Except for orientation to LMS, the commissioners of these two quite different states[3] showed little distinctive state orientation. Generally the results mirror the national survey. This finding should lend credence to the conclusions of the national study. While competition and its promised beneficent outcomes are regarded skeptically by most members, most seem resigned to deregulation and more reliance upon markets. The points of greatest disagreement within the groups seem to be exactly what to do about intrastate competition and access charges, and -- closely related -- just how threatened universal service will be and how important low rates are to achieving the goal of providing affordable universal service. In the latter realm philosophical or ideological sentiments may well play a role in the policies ultimately chosen.

NOTES FOR CHAPTER 7

1. Although I obtained interviews with four of the five California commissioners, one of the four declined to answer most of the questions because of the pending nature of the proceedings that make the state interesting. Since only three of the five commissioners provided useful responses, I have used California information primarily as background and do not cite the results in the text.

Six of the seven North Carolina commissioners were interviewed; one was going off the commission the month I conducted the interviews and I believed interviewing the yet-to-be-seated new one would not be useful. Six of the seven New York commissioners were interviewed; one was unavailable during my site visit.

2. Bruce Carruthers, Ellen Deutsch, Williams Garrison, and John Williams, Report on the Study of Telephone Use, Rates, and Regulation (Raleigh: North Carolina Agency for Public Telecommunications, 1983), p. 254. The state legislature passed a bill allowing intrastate toll competition during its 1984 session.

3. For example, in North Carolina independents are a much more significant factor. Whereas Bell served 56.7% of the land area of New York State in 1981, it served only 24.3% of North Carolina. Telephone Area Serviced by Bell and Independent Companies in the United States. NTIA Report 82-97. (Washington: U.S. Department of Commerce, 1982), p. 13. As of January 1, 1981, there were 11.81 million Bell phones in New York, 1.16 million independents; in North Carolina these figures were 2.24 and 2.02 million respectively. Statistics of Communications Common Carriers (Washington, D.C.: Federal Communications Commission, 1982), p. 70; figures based on AT&T Comptrollers-Accounting Division data, June 1981.

8

THE IMPLICATIONS OF STATE PERCEPTIONS AND PREFERENCES

The primary conclusion of this study is that state regulators' initial sympathies and their policy responses to changes in telecommunications may diverge. Public utilities commission (PUC) members are accustomed to regulating a monopoly phone system and generally believe it has served the community well. But they also understand that the scope, momentum, and implications of technical change affect public policy. Most interviewees are not enamored of regulation for its own sake. While they may be somewhat skeptical of competition, they do not deny its possible benefits. While they want to maintain universally affordable phone services, they realize that the price for flat-rate service will probably rise and that some citizens may have to accept reduced local calling privileges. While disturbed by the Federal Communications Commission's (FCC's) preemption of numerous decisions previously controlled by the states, most have tacitly acknowledged the commission's sovereignty -- and that of the economic and technical forces which propelled the FCC.

Consider the wide range of response to the final interview question, to identify "the single biggest policy dilemma" the PUC will face in telecommunications over the next few years. (The question was deliberately phrased to elicit each member's top policy priority).

Biggest policy dilemma?	Responses
Deciding proper mix of regulation and competition	3
Need to balance BOC health vs. keeping local rates down	3
Designing proper access charge	3
Determining how to preserve universal service	2
Resolving the conflict between state and federal jurisdictions	2

Need to balance low cost phone service vs. encouraging new technologies	2
Need to convince public cost increases are not PUC's fault	1
Not ascertained	2

Most noteworthy is that these responses indicate that the terms of the commissioners' thinking have been set by the FCC, the industry, and the deregulatory climate in general. Only two respondents focused exclusively on maintaining low cost universal service. Most of the others saw a need to find a balance among goals. And most of these goals (competition, new technology, access charges, Bell operating company [BOC] health) are shared by the FCC and the industry.

Many of the most articulate critics of divestiture and deregulation are state commissioners active in the National Association of Regulatory Utility Commissions (NARUC). But these commissioners also recognize the growing momentum behind policy changes and the need to adjust to them.

Commissioners' responses to the question, should the BOCs be regulated if they participate in the market for new telecommunications services?, demonstrate this new orientation. Only one commissioner endorsed extension of rate base rate of return regulation into this realm; one favored price regulation. Fully eight supported monitoring activities but little or no direct regulatory involvement unless abuses develop, and two opposed any regulation. Two were unsure, one said the law compelled regulation, and three were not asked this question. It might be speculated that a few years earlier, most PUCs would have automatically extended close regulation of all of a Bell company's activities. But by 1983, the clear majority rejected such oversight and seemed willing largely to trust the market to keep prices and quality in line.

SUMMARY

Advances in technology as well as rulings by the FCC and Judge Greene have each imposed a certain degree of competition on telecommunications. Competition does not equate with deregulation in most cases. The emerging scenario is one of extraordinary variation in the degree of regulation characterizing telecommunications activities. There is differentiation in the degree of regulation by company: AT&T and the BOCs remain closely regulated in their core, public voice communications services and constrained in their new activities; other providers face less regulation. There is also considerable variation in regulation by submarkets. Telecommunications network equipment will likely experience deregulation, once it is classed as equipment rather than a "service," and vigorous competition.

Customer premises equipment is already quite far down that road, although some regulation remains. Every other aspect of telecommunications appears, for the present time, a mixture, an awkward combination of unanswered questions, unclear possibilities. For example, long distance is competitive business, but AT&T Communications' rates remain directly regulated, and its pricing and other options are indirectly affected by state and federal decisions on cost allocations, access charges, and the like. Simultaneously, MCI and other toll carriers face no direct federal rate regulation but also find themselves strongly affected by FCC decisions on cost allocations and state determinations on market entry and other matters. Nascent services and technologies might confuse competition and regulation issues even more.

Variation in regulation also occurs among states. In some senses, such variety is a natural, even laudable consequence of our federalist

system. But from the perspective of industry, it could create barriers to business development. One implication of the present research is that states will affect the degree to which AT&T and other companies experience regulatory parity among themselves, and the extent to which the various telecommunications submarkets reach fully deregulated competition. According to this study, in confronting these responsibilities, state commissioners' initial orientations can be summarized as follows:

o State commissioners were well aware of the implications of federal regulatory changes and rising competition.

o Most commissioners recognized the momentum of competition and the futility of attempting to regulate or prevent all new entrants, especially when technology seems to make regulation infeasible.

o State commissioners viewed the costs and benefits of regulation in a different, social-political light from those who apply narrower economic analysis. The PUC members saw the benefits of competition to small users as relatively limited, with most gains accruing to business. Some members saw business's boon as ultimately helpful to consumers and workers; many did not.

o State commissioners acknowledged that regulators can make mistakes and agreed that, in some cases, market competition can be superior to regulation. But many did not give unregulated market competition the benefit of the doubt as do many federal regulators, industry players, and economists; they had to be convinced that in any given instance the market is preferable to regulation.

o State regulators sought to keep some form of local phone service affordable to virtually all citizens and were protective of BOCs. Other goals may be significant, but these two were paramount for the majority.

IMPLICATIONS FOR PLAYERS

The introduction to this study identified a number of groups with interests in state telecommunications policy. This concluding section assesses overall implications of the findings for each group. It is, of course, impossible to detail every aspect for each player without redundancy and excessive length; thus the following highlights some of the key issues and conflicts that the findings imply.

1. Large Users of Telecommunications Services

a. Bypass

Most of the telecommunications consumption decisions made by large users will be influenced by state regulators. Whether these customers find it attractive to establish private telephone links will be conditioned in part by regulatory action. If states prove reluctant to implement fixed end user access charges and fail to devise an alternative with the same economic efficiency properties, large users may elect to bypass the public network. In addition, hefty increases in rates for local lines or local measured service could make economic bypass of the network more desirable where alternatives are less expensive.

However, the interviews revealed considerable PUC sentiment for assessing bypassers to contribute to the cost of the local public network (nine to two in favor, five unsure). Such assessments might conflict with FCC goals and call forth preemption; but if taxation occurred, it might depress the amount or rate of bypass. The tax would contribute only a portion of the price of bypass, however, and price is not the only determinant of bypass. Consequently, it is unclear how greatly large users' bypass decisions would be influenced by state taxation.

b. Long distance

Beyond the local area large users could face quite a varied set of long distance services and prices, with marked differences from state to state. Rate disparities for in-state and interstate toll calls may grow if an interstate but not intrastate customer access line charge (CALC) is implemented. In-state toll rates may become more expensive for equivalent distances. Evidence points to the emergence of intrastate toll competition, however, and that could ultimately lead to intrastate CALCs and toll rates less burdened with apparent subsidies. If the FCC were to delay or modify the interstate CALC again, pressure on states to introduce a CALC might ease. In that event, neither interstate nor in-state long distance calling would be as inexpensive to large users as it probably would with both CALCs in place.

c. Equipment

States may be able to affect availability of customer premises equipment and of network equipment to BOCs and competitive service providers. As noted in Chapter 4, some fear anticompetitive practices by BOCs in equipment marketing and procurement, worries not generally shared by state regulators. A laissez-faire state attitude could allow such offenses to occur. But federal and judicial remedies do exist, and the market itself (with strong competitors to AT&T and BOCs already in place) could prove a powerful deterrent.

d. Enhanced services

Data transmission and enhanced services will be influenced by state actions, particularly by the way PUCs treat BOC entrance into new service markets, and whether they strictly regulate new telecommunications technologies. Because of their intrastate authority, states will be a

potent force whether or not the Modification of Final Judgment or Computer Inquiry II restrictions on AT&T and the BOCs are eased. The interviews revealed substantial sentiment to allow BOCs to offer new services, which should ensure easy availability to large users. If states do oversee non-BOC entrants closely, however, the market may not realize its competitive and innovative potential. The range of services may be restricted and the prices raised if state regulation is as close as some interviewees desired. On the other hand, the FCC could preempt some authority here, as it already has in the instance of digital termination services (DTS). And technological momentum could neutralize PUC resistance in any case.

e. State variation and business location

One conceivable scenario would show a much more diverse regulatory and market landscape across the states than existed prior to divestiture. Diversity would be the product of both regulation and deregulation. States could show marked variation in the degree of regulatory intervention, with concomitant differences in telecommunications prices, services, and products. And if federal and state deregulation yield more efficient markets, the more closely cost-based prices presumably faced by large users could vary widely, reflecting cost differences. In some sparsely populated areas, for example, advanced transmission systems such as integrated services digital networks (ISDNs) may be delayed in availability or more expensive than in urbanized states. Long distance calling too could be more expensive.

Whether such differences in telecommunications prices and availability would be of sufficient magnitude to affect business location choices is unknown. Presumably, they would be most crucial for

information-based industries such as banking and for geographically dispersed organizations. Self-reinforcing clusters of information and telecommunication-intensive businesses may arise in locales with optimal combinations of state regulation and cost. To a degree, of course, this has been occurring throughout the past decade in such high-growth, high-technology centers as Santa Clara County, Calif., Austin, Texas, and Research Triangle Park, N.C.

2. Federal Officials

Policymakers at the FCC and the Justice and Commerce Departments, as well as in Congress and the judiciary, have all played signficant roles in the recent evolution of telecommunications regulation. While it is oversimplifying a bit, the thrust of Congress has been the least deregulatory; the rest have endorsed the general push for less federal intervention. However, political and hence policy winds can and do shift. Each institution has its specific and dynamic interests and goals, but all will likely share in the consequences of substantial variation in state policy for competition and deregulation.

a. Market structure evolution

Diversity in state policy choice could affect the evolution of state market structure independently of federal policy. If enough states limited competitive interLATA service, for example, OCCs' strength could be impaired. If some states tax or heavily regulate local distribution technologies, or place heavy restrictions on BOC or AT&T diversification, competition from a national perspective would be affected. A possible outcome of state variation, and particularly of many restrictive state regulations, might be pressure at the federal level to preempt the

states. In some cases the FCC will be able to preempt and deregulate on its own; in others it may take federal court edicts; in still others, congressional action. It is premature to predict specifically which policy realms would call forth preemption moves. In addition, states could resist preemption.

State impacts on market structure could also affect other demands on federal regulators. If, for example, state regulation does diminish the competitive strength of OCCs, the FCC may be more reluctant to deregulate AT&T-Communications (AT&T-C).

b. Continued federal intervention

Another possibility, in addition to or instead of preemption, would be maintenance of federal intervention and negotiation with state regulators. For example, political sentiment for aiding rural, high cost subscribers could well remain strong. Federal subsidy schemes (pooling, settlements) could continue or even grow as deregulation takes hold and raises rural service prices closer to apparent costs. The actions of state regulators will condition demands for federally mandated local-rate subsidies, both at the FCC and in Congress. Some states might "take care of their own"; others may seek federal assistance. In addition, federally mandated rural subsidies themselves could become large enough to stimulate bypass.

The federal government might also intervene to undo the effects of state rigidity. Some states' policy could be encouraging uneconomic bypass, for example. If, despite indications in this study, some PUCs seem unwilling to alter such policies, federal officials may be called upon to devise ways to "bypass" the effects of state policies.

c. More competitive scenarios

Quite a different scenario can also be posited. If states do adjust to new entrants and act to deregulate where appropriate, the effects on small users could well be minimal. If so, political pressure could ease at both the state and federal levels. It is possible that, as in the case of airline competition, the role of regulators could shrink significantly. Conflict between jurisdictions could diminish and an era of benign government neglect of telecommunications could ensue. The findings of this study lend some support to this possibility. But no firm prediction can be offered because there are so many unknowns.

One other scenario should be mentioned. It is possible that the outcome of varying costs, regulatory actions, and technological and market developments might be a mixture of competition and government involvement. Competition might dominate, but some direct subsidies to certain users from general tax revenues -- rather than internally as currently -- could also be part of the system. While many economists might view such a system as an improvement in efficiency, others might question whether it is an overall gain. For under such practices, a self-supporting telecommunications system will have been exchanged for one dependent in some measure on the public treasury.

3. AT&T and Other Long Distance Providers

The key state policy questions for long distance carriers involve competition and access. If PUCs resist intrastate competition, it will harm OCCs' ambitions for parity with AT&T, especially if AT&T's rates go down with the advent of the CALC. OCCs would have less of a price advantage and, despite equal quality access to local exchanges, they would still not offer in-state interLATA (local access and transport

area) toll service as does AT&T. Their overall market position could suffer from the disparity.

If PUCs accept intrastate competition, their role in monitoring it could be significant. The PUCs have jurisdiction over the behavior of the BOCs and AT&T-C. Regulators may affect the OCCs'ability to benefit from equal local interconnection. And commissions may be called upon to ensure that AT&T-C's dominant position in the intrastate market does not lead the BOCs to discriminate in AT&T's favor.

End user access charges may be especially difficult to assign. If PUCs reject them and load charges onto interLATA carriers, toll rates may not go down as originally envisioned, overall demand might not increase as forecast, and the opportunities for OCCs to get a toehold could be diminished. If states do accept intrastate competition and some form of CALC, contention could arise over deregulating AT&T-C's toll offerings and allowing a more freely competitive market to operate.

4. BOCs and Independent Local Exchange Companies

State commissions face contradictory pressures, both internal and external, regarding policy for local phone companies. They believe in low local rates and feel pressure to maintain them; yet they also value high quality service and fiscally healthy companies. The findings here indicate their awareness of the contradictions -- for example, of advantages bypass offers versus the danger that it might ultimately cause higher local rates. Generally, the commissioners worked through the contradictions by endorsing the BOCs' freedom to pursue new markets, while retaining plans to keep some form of subsidy to local rates, at least in the short run. The interviewees did not manifest inflexiblility. Rather they indicated that when and if BOC were to be

undermined by the absence of a CALC, policy could change. But knowing when bypass is uneconomic and setting proper prices to bring bypass to an optimal level could well prove a highly vexing and conflictive task for PUCs.

Some states could, however, cling to low flat rates for residential service while subsidizing the rates through in-state toll settlements or high business phone rates. In this event, a gradual deterioration in the financial condition, service quality, or facilities of the local companies might ensue. If this decline is apparent to consumers and they indicate through the political process a preference for lower cost, lower quality, even obsolete local networks, perhaps it would not be an inefficient outcome. Telephone companies might see the situation differently, of course.

On balance, local companies appear to have strong allies in the PUCs, allies willing to allow the companies to adjust to evolving circumstances. One complication is that the interests of Bell companies and independent local companies might conflict. PUCs could be caught in the middle. History indicates a bias toward rural users that could work against the more urbanized BOCs in many states. But details of such conflicts, perhaps involving intraLATA toll competition, are too conjectural to allow further analysis.

5. Providers of Information Services and Local Distribution

State decisions on the regulation of local distribution technologies, from the BOC exchanges to cable television, digital termination systems (DTS), and cellular, will bear on the development of electronic information services. If the federal government allows states to follow a tight regulatory approach, the outlets that alternative

technologies provide for new services could be constrained. That could raise prices and diminish consumer appeal of such services as residential use of data banks, tele-shopping, and financial transactions.

If PUCs simultaneously go easy on the BOCs, service providers could find themselves dealing with something akin to a bottleneck facility. Yet, once again, the FCC could preempt regulatory jurisdiction, and the technologies do have their own momentum — users may clamor for access to them. Lower cost or enhanced services could be attractive enough to influential users to make restriction a politically hazardous course for PUCs to follow. Further, BOCs (and allies on the PUC) may prove quite amenable to carrying new services on BOC lines at reasonable terms, in which case new services could do well even without access to other local distribution channels. Finally, the interviews revealed considerable sentiment for less regulation of new technologies, especially if BOCs can also be less restricted. If this comes about, alternative distribution technologies could be widely available to enhanced service providers. 6.

6. Small Business and Residential Users

PUC members generally viewed the interests of small consumers and local exchange companies as congruent. As repeatedly noted, the most widely shared commitment among state regulators is to these groups. However, the interest of small users is largely perceived to be in low-cost local voice service. That may not be a complete accounting. If homes and small businesses have potential interest in competitive electronic information data or long distance voice services, PUCs that restrict competition may not be acting as protectors of small consumers. Again, policy failures may be self-correcting to a degree. As households and businesses in neighboring states enjoy desirable new

telecommunications options, pressures on PUCs could change and their vision expand. If lifeline or other measured service options prove acceptable means of maintaining universal service, the potency of such a "demonstration effect" could heighten. Moreover, most commissioners have at least some appreciation for potential benefits to industry, commerce, and even households that might help compensate for higher local rates.

7. State Officials

PUCs and state legislatures may experience pressure to adapt policy in order to keep their state attractive to new industry and commerce, just as tax policy is shaped to encourage favorable location decisions by firms and institutions.

Large users and telecommunications companies often exercise political clout. If users believe PUC actions are harming their ability to partake of new communication services and facilities, thereby adversely affecting their productivity or investment, they could join with potential or existing telecommunications players to press for less regulation. If the expected technology advances and benefits of competition and innovation then appear, the large users' case could become even more persuasive. But not all large users have identical interests. Some, for example, may seek low cost local calling as a higher priority than cheaper long distance voice or enhanced services. The existence of different mixes of interests, hence political coalitions, could produce greater diversity among the states.

Telecommunications companies may start practicing an unanticipated form of "bypass." Dissatisfied with PUC decisions, they may "bypass" the commissions and go to state legislatures for relief. As an example,

Mountain Bell asked the Colorado legislature for deregulation of its competitive services. These offerings include paging and data transmission. The BOC also asked the legislature to establish regulatory standards for determining when new BOC services are competitive enough to merit deregulation.[1]

The PUCs are not necessarily powerless when confronted with "legislative bypass," however. According to one report, after the Kentucky legislature passed a bill to deregulate cellular services, the PSC persuaded the governor to veto it.[2] In Illinois, pro-competitive common carrier legislation was written with the assistance of the Commerce (utility) Commission.[3] Thus, "legislative bypass" is not an infallible means of escaping from the influence of PUCs. In any case, state legislatures may find themselves increasingly involved in decisions about communications regulatory policy.

As for PUC members themselves, the findings of this study indicate considerable sophistication and self-consciousness among commissioners about the social goals of regulation and subsidies. Where there is increasing evidence that the benefits of market competition might be superior, this study suggests PUCs will respond sympathetically to deregulation. Furthermore, one state's actions can influence the thinking and action of others. If states that accommodate to competition seem to gain and those that resist apparently suffer, PUCs should be stimulated to rethink their policies. Of course gains and losses may not be obvious. Or some groups may win, others lose, making for a complicated PUC decision problem. And the effects of deregulation in some states could come to be viewed negatively, in which case states might seek to reregulate.

Without venturing to predict likely outcomes, it can be concluded that, on most questions, the PUCs' views of what is possible are not too distant from the FCC's and Judge Greene's stated policy goals. The result may well be the emergence of substantial competition in many telecommunications submarkets. Competitive markets spawn their own policy issues; states are likely to continue exerting significant influence in telecommunications even as competition develops.

NOTES FOR CHAPTER 8

1. State Telephone Regulation Report, 2 (Arlington, Virg.: Capitol Publications, Inc., December 20, 1984), p. 12.

2. State Telephone Regulation Report, 2 (Arlington, Virg.: Capitol Publications, Inc., July 19, 1984), p. 11.

3. State Telephone Regulation Report, 2 (Arlington, Virg.: Capitol Publications, Inc., October 11, 1984), pp. 11-12.

APPENDIX

Telecommunications and the States -- Questionnaire

1. Are there any aspects of recent FCC rulings or of Judge Greene's edicts in the AT&T divestiture that conflict with the future of telecommunications you'd like to see in your state?

2. What general benefits do you think telecommunications deregulation and increased competition will bring to residential and business phone users? Probe.

3. What should the state do about the apparent federal mandate for intrastate end user access charges to be in place by January 1, 1984? Do you feel you have enough information to make a proper decision on the charges?

4. How significant a priority should keeping low phone rates be to your commission? What other goals would you like the commission to pursue in overseeing the big changes in telecommunications? Probe: Do these other goals conflict at all with keeping local rates double or triple over the next few years?

6. Should the state implement local measured service as one way of maintaining universal service? Are there other options the state might consider for keeping local rates as low as possible?

7. Some observers feel state commissions ought to maintain the current monopoly market in intrastate long distance in order to decrease pressure on local rates; others stress that competition would bring lower toll rates. Do you think the commission should approve intrastate competition? If yes, how should access charges for the intrastate carriers be set? Should ATTIX have to pay a premium for superior access to the local exchange? How should intrastate toll competition be

regulated, if at all? If no, why not? Probe: Precisely what's going on with this issue in your state right now?

8. How about intraLATA competition? Should competition by MCI and the others with the BOC for toll traffic inside the LATA be encouraged? If there is competition, should it be regulated? Would you favor allowing the BOC to compete with ATTIX and other carriers for interLATA, intrastate long distance if others are allowed to compete with the BOC for intraLATA toll?

9. To what degree do you think the financial health of the BOC will be threatened by the possibility of bypass of the local exchange by large users? What should or can the state do about this possible problem?

10. Is there anything the state commission can and should do about the special problems of rural, high cost areas served mostly by the independent telephone companies? Probe: what are those problems (local? toll deaveraging?) Should your state's local telephone companies join the FCC-sponsored exchange carrier's association as one way of helping high cost areas?

11. Should the BOCs be allowed to enter new service markets like least cost routing services, teleport and cable TV construction, provision of direct broadcast satellite installations? If so, should the BOC be regulated or unregulated in those new markets?

12. Should the commission regulate cable TV systems if they act as common carriers offering data transmission via the cable? What if the cable company offers switched voice service, say in combination with an interstate long distance carrier like MCI?

13. Should new telecommunications companies that provide information and data services be regulated in any way by your commission? I mean,

for example, the new cellular radio or DTS services offered by non-Bell companies. Would you favor any sort of tax on these "bypassers" of the local exchange, or some form of access charges, or any other means of having the new services contribute to the cost of basic local phone service?

14. How well-informed do you believe your commission colleagues are on recent telecommunications developments and policy problems? Are there any widespread misconceptions or uncertainties? What about you, what are your own biggest uncertainties?

15. How much political pressure and public attention do you think will be aroused by commission decisions in the telephone area? Do you expect the state legislature to become involved, or are there already any legislative initiatives in this area?

16. Summing up, what in your view is the biggest single policy dilemma the commission is likely to face in telecommunications over the next few years?

Thanks very much for talking to me. If there are any documents -- hearing transcripts, inquiry orders, and the like -- that would give me a better understanding of any of the issues we have discussed, I'd greatly appreciate your arranging to have them mailed to me. Thanks again.