
Relaxing the Regulatory Stranglehold on Communications

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It is fashionable in some quarters to suggest that deregulation in the 1970s and 1980s was a mistake. Some deregulation may have been a good idea, the argument goes, but the deregulators simply went too far. Many of the purported excesses of deregulation are to be found in the banking, savings and loan, trucking, and airline industries, but the dramatic changes in the regulation and structure of the communications sector are also targets for the regulatory recidivists.

Some of the most controversial deregulatory actions in the communications sector have been the breakup of the Bell System, the liberalization of competition in long-distance services, the repricing of local telephone rates, the deregulation of cable television, and—most recently—allowing local telephone companies to compete with newspapers. In addition, the Federal Communications Commission has reduced or eliminated many of the regulatory requirements on radio and television broadcasting, including the "Fairness Doctrine," and has substituted market forces for regulation in determining the content of broadcast programming.

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Despite those rather dramatic changes, U.S. telecommunications remains a heavily regulated sector. No one can offer any kind of radio-based communications service without a license from the FCC. Local and long-distance telephone service is still regulated by state commissions or the FCC. Broadcasters continue to be regulated in a variety of dimensions, including cross ownership, multiple-station ownership, ownership of program rights, copyright licenses to cable systems, and minority participation. Only cable television and telephone terminal equipment were deregulated, and Congress has now moved to reimpose rate regulation on cable television.

Does cable reregulation presage a trend towards more government intervention in a dynamic sector in which regulation can only retard progress? In this article I conclude that attempts at reregulation in telecommunications will fail because rapid technical change creates too many fissures in old political coalitions. There is no diminution in the demand for regulatory protection; it is simply too difficult for the politicians to deliver it in such a rapidly changing sector.

Regulation and Monopoly

Regulation of telecommunications in the United States began within various state governments in

the early years of this century. Regulation by the federal government initially resided in the Interstate Commerce Commission in 1910—the result of the Mann-Elkins Act, legislation that the American Telephone and Telegraph Company, the parent of the Bell System, supported. In fact, AT&T actively encouraged regulation during that period because its major patents had expired and competitive local telephone companies were growing rapidly. Ironically, regulation was not a response to monopoly but rather to the messiness of the new competition that developed between AT&T and its new rivals, who controlled nearly 50 percent of all local telephone lines.

In 1912 Congress passed the Radio Act, the first law for the domestic regulation of radio communications. Because that act did not anticipate commercial broadcasting, in 1927 Congress passed the Dill-White Radio Act, which established a new Federal Radio Commission to control the use of the electromagnetic spectrum. The Communications Act of 1934 transferred that responsibility and the federal regulation of telephone service to the Federal Communications Commission. Regulation of the spectrum was initiated because there were no well-established property rights in the “people’s resource,” not because of the necessity to deal with monopoly power.

Telephony. Once the major Bell telephone patents expired, competition in the provision of basic telephone service began to develop with remarkable speed. Many large cities had more than one local telephone company at the beginning of the century, but AT&T continued to have an advantage over those new competitors because of its patents governing long-distance transmission. Even when the latter patents expired, however, it was unlikely that competitors would enter the long-distance business. Thus, it is unclear how the telephone industry would have developed without regulation before World War II. Whether competitive local carriers could have been denied access to AT&T’s long-distance circuits, given an antitrust “bottleneck” or “essential facilities” doctrine, is unclear. Had such access been denied, the telephone industry might have developed into an AT&T monopoly—precisely as it did under the helpful eyes of federal and state regulators.

After World War II the FCC and the courts began to take actions that would lead to an unraveling of AT&T’s monopoly. Private users were

allowed to obtain licenses for their own microwave networks after 1956. Subsequently, from 1969 to 1971, new “specialized carriers” were given FCC licenses (and spectrum allocations) to provide private lines to smaller businesses that could not justify investing in their own networks. During the 1960s and 1970s the courts forced the FCC to allow subscribers to attach their own equipment to the telephone company’s lines and thus ended the carriers’ total monopoly on terminal equipment. Throughout that period the state regulators remained generally opposed to any potential competitive incursion into intrastate telephone service.

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While the telephone industry was a regulated monopoly, no one paid very close attention to the *structure* of telephone rates until after World War II. As long as AT&T and the independent telephone companies, which controlled about 20 percent of the nation’s local lines, did not obviously gouge their subscribers, regulators were content to lead the quiet life. Ironically, the FCC and state regulators began to worry about the relationship of local rates to long-distance rates just as competition in interstate long-distance service began to appear on the horizon. Their collective concern spawned a series of moves designed to keep local access rates low by requiring AT&T to overcharge for long-distance service. Those steps obviously whetted the interest of potential new competitors in long-distance services, such as MCI, and increased AT&T’s incentive to keep its long-distance monopoly.

Once the FCC admitted competitors into a limited slice of long-distance service—dedicated business private lines—it began to lose control of its entire regulatory enterprise. Now it would be forced to determine whether AT&T’s response to that entry was lawful, but the commission had no

way of measuring AT&T's (or MCI's) cost of each service. Because of the joint and common costs of delivering various services across the AT&T network, the FCC could not possibly disentangle the costs of providing switched residential long-distance calls between St. Louis and Chicago from AT&T's cost of dedicated business circuits between those two or other cities. In essence, regulating individual telephone service rates became a nightmare. Indeed, the FCC could not even prevent MCI from using AT&T local circuits to offer regular, switched long-distance services even though MCI had no license to do so.

Once the FCC admitted competitors into a limited slice of long-distance telephone service—dedicated business private lines—it began to lose control of its entire regulatory enterprise. The commission's primary function in regulating broadcasting from the 1950s through the early 1980s was to arbitrate among competing claims for licenses at their triennial renewal.

In 1974 the U.S. Department of Justice filed a massive antitrust suit against AT&T for behaving unfairly towards its new competitors. Justice sought and eventually obtained the divestiture of all of AT&T's local operating companies from its long-distance, manufacturing, and research operations. The FCC thus lost control of the policy process towards the telephone industry, and Congress sat by and watched the courts dictate the industry's future.

The antitrust decree that broke up the Bell System in 1984 contained provisions limiting the divested Bell operating companies from entering manufacturing, long-distance services, and content-based information services, such as electronic yellow pages. Those restrictions have been a constant source of controversy. The Bell operating companies understandably want to be relieved of those limitations; their current and potential competitors want the limitations to be retained—for ever, if possible. Recently, the U.S. Court of Appeals concluded that the information services restriction was not justified by the lower court's

reasoning, and the Bell operating companies have now been allowed to enter the brave new world of videotex, computer data bases, electronic yellow pages, and electronic want ads.

Broadcasting and Cable Television. For decades, the FCC regulated the broadcast media under the rationale that local broadcast services were to be subsidized from national programming. While early spectrum allocation decisions permitted rather vigorous competition in radio broadcasting, particularly after AM-FM receivers became widespread, television frequencies were limited in most major markets to three VHF allocations and a number of inferior UHF allocations. In return for that government grant of monopoly power, television broadcasters were supposed to "ascertain" their viewers' local programming needs and air programs directed to those needs—if only at 3 A.M. or 4 A.M.

From the 1950s through the early 1980s broadcasters earned enormous monopoly rents from those television licenses—rents that would serve as a signal for entry in an unregulated private market. But entry did not occur because the political power of the major license holders paralyzed the FCC, and it therefore could not redesign its spectrum allocation plan. The commission's primary function in regulating broadcasting in those years was to arbitrate among competing claims for licenses at their triennial renewal. Licensees had to demonstrate that they had surveyed their viewers' local programming needs and were actively addressing them.

There were numerous challenges of broadcast licensees' fitness to continue in operation—either in the form of petitions to deny renewal or outright competing applications for the license. In virtually every case the commission allowed the incumbent to keep its license, but Washington communications lawyers and a few challengers earned large fees from attacking those incumbents and squeezing a variety of concessions from them—including even private "settlements" involving millions of dollars on occasion.

It was not until cable television developed as a retransmission medium that television broadcasters began to understand what the word *competition* actually means. At first, cable was little more than a medium for transmitting local broadcast signals into Pennsylvania or West Virginia "hollows." Once the basic cable plant was built, however, the cable operators began to look for more programming.

When cable systems started to import “distant” broadcast signals in the 1960s and even to investigate the possibility of separate pay channels for sports and motion pictures, the FCC moved to protect local broadcasters, in large part through restrictions on the use of microwave licenses for importing the competing programming. The excuse for that protection, particularly in the largest 100 markets, was that competition from new or nascent UHF stations could not be expected to develop if cable television offered a myriad of program options. That rationale was both unfounded—cable carriage would actually help UHF stations overcome their technical reception problems—and logically indefensible. Why limit the immediate competition from twelve- or twenty-four-channel cable systems to increase the number of broadcast competitors from three to perhaps four or five in a few years?

The limitations on pay cable, and indeed all pay television, were equally indefensible. Fortunately, those restrictions were thrown out by the Court of Appeals in 1977, never to be revisited by the FCC. The FCC also dropped the rules limiting cable imports of distant broadcast signals in 1979, three years after the passage of a new copyright law mandating a compulsory copyright license for cable system imports of distant broadcast signals.

The final step in the deregulation of cable was the Cable Communications Policy Act of 1984, which limited the ability of municipalities to regulate subscriber rates in markets the FCC deemed to be effectively competitive. Initially, the commission decided that all markets in which there were at least three local broadcast signals were “competitive” under the standards of that act and thereby effectively deregulated cable rates in all but the smallest markets. In 1991 the commission raised that effective-competition standard to six local stations.

The 1984 cable act also prohibits local telephone companies from offering cable television service in their telephone franchise areas. Thus, cable was deregulated and provided protection against entry at the same time. It was hardly surprising that by 1990 Congress began to worry that such a combination of policy actions had induced cable systems to raise rates towards their monopoly levels.

Spectrum. A much neglected aspect of federal communications policy is the FCC’s approach to licensing the electromagnetic spectrum. All broadcasting, land-mobile, cellular telephone,

and microwave services require FCC spectrum allocations. Thus, the FCC is in a position to control the output of many services by limiting the availability of a primary input to their production. As we have seen, the FCC exercised that control with a vengeance in the early days of television broadcasting.

The allocation of spectrum among its myriad potential uses is a complex task that one might expect a market to achieve effectively. Given changing technology and communications markets, the efficient allocation of spectrum today may prove to be quite inefficient tomorrow. Over time, new technology has allowed the use of ever higher frequencies. But for decades the FCC essentially allocated those higher-frequency bands of usable spectrum through an administrative process that largely eschewed economic analysis. Once allocated to a given use—such as a nationally uniform band for land-mobile uses in the forest-products industry—that spectrum was unavailable to others, even if those potential claimants could use the spectrum without interfering with any other transmissions.

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The prospects for competition in most communications markets depend in part on the availability of spectrum for new technologies. Cable television would not have grown to its current importance without satellite (or microwave) distribution of its programming. Competition in local access-exchange telephone markets is not likely to come from new wire-based carriers, but from cellular and personal communication networks that transmit through the spectrum. Long-distance telephone competition was originated by microwave-based services, such as MCI. Traditional and new high-definition television services may soon be beamed directly to the home by direct-broadcast satellites.



In recent years there has been a great deal of interest in allowing the government, through the FCC, to auction spectrum licenses to the highest bidder. Those proposals have typically focused on spectrum freed up from government or other uses for new uses, such as cellular communications,

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and are motivated in part by revenue and equity concerns. Critics are driven by a belief that government grants of valuable property rights should not be given to private interests rather than by a concern for efficiency in allocating spectrum among its many competing uses.

The idea that potential spectrum users should be able to bid spectrum away from existing users has traditionally been anathema to communications regulators and to Congress. But economists at the FCC are now pressing a proposal to allow new spectrum users to bid away spectrum from current licensees for "emerging technologies." As long as the incumbents are willing to cede their spectrum allocations in a market transaction, and if no other users are damaged by interference created by the new uses, an improvement in resource allocation should result.

The Telephone Industry: Deregulation or Regulatory Reform? The divestiture of AT&T from its local operating companies was based on an antitrust theory of the bottleneck facility. By divorcing the bottleneck monopoly—the local telephone company that provides access to household and business subscribers—from long-distance services, information services, and equipment manufacture, divestiture was designed to allow the latter markets to be totally deregulated and fully competitive. As long as local access-exchange service was a bottleneck monopoly, the provider of that service was not to be permitted to enter the competitive markets for fear that it would use the leverage of its local monopoly to gain control of those other markets as well.

The extension of monopoly argument rests almost entirely on the fact that the bottleneck monopoly is *regulated*. Because regulators may not be able to separate the costs of providing different services, they cannot be sure that a regulated local telephone company will not hide some of the costs of competitive long-distance or information services in the accounting costs of local services so that regulated local rates can cross subsidize the competitive services. The answer to the problem, of course, is to encourage competition in local services as well and thereby allow deregulation of local service.

Unfortunately, regulation is a political excise, often more concerned with income redistribution than with efficient pricing. In the telephone industry federal and state regulators have erected a complicated system of cross subsidies that benefit residential subscribers in small communities at the expense of business subscribers, large-city subscribers, and long-distance customers. Competition in the long-distance market has eroded some of those subsidies, but small-town residential rates are still far below the incremental cost

of service. As a result of those artificially low rates, local telephone companies are likely to face very little competition for a large share of their subscriber base. Yet the case for continuing to limit local telephone companies' expansion into competitive services is that they are still the bottleneck monopoly.

The FCC recognizes that fundamental dilemma, and as a result it has tried to "rebalance" local and long-distance rates to reflect costs more accurately. It has not, however, attempted to deregulate interstate long-distance service entirely. As now structured, FCC regulation of long distance allows new competitors to file their tariffs without further review. Thus, MCI, Sprint, NTN, Cable & Wireless, and the other smaller competitors are essentially unregulated. AT&T, however, remains fully regulated under the commission's dominant carrier rule. The theory of that rule is that a "dominant" carrier could exercise predatory power over its smaller rivals—driving them from the market and subsequently raising rates.

There is some doubt that the FCC has the authority to deregulate AT&T under the Communications Act of 1934, even though it clearly should do so. The argument that AT&T could engage in predatory tactics is curiously reminiscent of the 1960s view that General Motors could drive out all of its competitors through aggressive pricing. As long as AT&T's prospective predation is not subsidized by cost-based regulation, there is no more reason to fear predation from AT&T than from GM.

The FCC has recently reduced the probability of AT&T predation by substituting price caps for cost-based regulation—a change motivated in large part by the desire to increase AT&T's incentives for efficient operation. Price caps allow AT&T to retain the fruits of productivity improvements in excess of 3 percent per year, while cost-based regulation would require the company to adjust rates to reflect the lower costs.

Intrastate long-distance and local services are regulated by state commissions that have traditionally been hostile to substituting competitive forces for regulation. Those state commissions resisted the FCC's liberalization of terminal equipment in the 1970s, generally opposed the FCC's policy of reducing interstate long-distance rates, and slowly admitted competition into short-distance, intrastate long-distance service. But now even state commissions are beginning to change, because they recognize the need to encourage

efficiency among the local telephone carriers. By 1991 forty-two states had allowed at least limited intrastate long-distance competition, a remarkable change in the fifteen years since they filed suit to attempt to block the FCC's decision to force them to allow competition in terminal equipment.

Since the mid-1980s, states have begun to experiment with new forms of telephone company regulation. Traditionally, the states used rate-of-return regulation, which established a maximum allowable return on equity or invested capital. As long as a carrier's rates did not produce returns above the prescribed level, they would be presumed lawful. A number of states are now allowing telephone companies to share in any excess over that allowed rate of return through a variety of "profit-sharing" arrangements. A carrier may keep, say, half of the first two or three percentage points over the specified rate of return, but must return the rest by reducing rates.

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Many states have deregulated those services for which there is active competition, such as paging services, mobile or cellular services, private networks, and enhanced services. Basic service rates, however, generally remain tightly regulated. Only Nebraska has totally deregulated all rates, but it continues to require uniform distance pricing of long-distance rates, and it prohibits entry into local access and exchange services.

The rapid technological change in radio-based telephone services, such as cellular or personal-communications networks, would seem to provide hope that competition could soon replace regulated monopoly in local telephone service. But state regulators are not likely to allow local rates to move towards costs and thereby make entry attractive only for service to large customers in major urban markets—entry that is now occurring through fiber-optic "metropolitan area networks" such as New York's Teleport. If technological change continues to be more rapid in the radio-based mobile telephone service than in traditional

wire-based terrestrial systems, entry will eventually occur even in the smaller communities. While such entry will create new problems of network interconnection, it may relieve telephone companies of the burden of bottleneck-monopoly regulation.

Cable-Telephone Competition?

The development of fiber optics has presented telephone companies with the opportunity to deliver an enormous array of services over their networks. The electronics revolution has reduced the cost of forcing an incredible amount of information—billions of bits per second—through a silicon fiber. If those fibers and associated electronics are extended all the way to each subscriber's premises, the telephone company could deliver hundreds of channels of television, videotex services, home banking, yellow pages, as well as ordinary voice telephone to all subscribers.

The threat of competition between telephone companies and cable systems is not unidirectional. Large cable systems are now investigating the possibility of installing antennas along their cable networks to communicate with portable telephones. At present, cable faces no legislative or regulatory hurdles in entering the telephone industry.

That new potential for telephone companies remains largely unexploited for a number of reasons. First, extending fiber optics to the ultimate subscriber would require at least \$1,500 in new investment per subscriber or about \$200 billion. It is not clear that households and businesses would find the increment in service to be worth that added cost.

Second, the 1984 Cable Communications Policy Act forbids telephone companies from offering cable television service in their franchise areas. A very large share of the immediate potential of a telephone fiber-optics service would surely derive from television services that are now delivered by cable systems and broadcasters. As long as telephone companies are barred from that market, fiber optics to the home would appear to be uneconomic.

Third, the cable television industry is obviously opposed to allowing telephone companies to compete with them. Arguing that such competition would pose the potential for unfair cross subsidization, those cable companies join newspaper and directory publishers in opposing any extension of local telephone company operations.

Surprisingly, the threat of competition between telephone companies and cable systems is not unidirectional. Large cable systems are now investigating the possibility of installing antennas along their cable networks to communicate with portable telephones. That is one variant of the personal communications network various manufacturers and service providers are now developing. Were cable companies to invest in remote antennas and some switching equipment, they could offer an alternative to traditional telephone service for virtually the entire country. With the FCC increasingly receptive to flexible policies for allocating spectrum, firms wishing to offer those new telephone services may find that they have fewer regulatory obstacles than previous innovators have faced.

At present, cable faces no legislative or regulatory hurdles in entering the telephone industry, a luxury that telephone companies do not have with respect to cable service. A recent FCC ruling, however, offers the prospect of a substantial increase in competition in the delivery of video signals over the telephone lines. In July 1992 the FCC voted to allow telephone carriers to offer "video dial tone"—a broadband service to the home that prospective program suppliers could use to feed programming to households in competition with cable television. The telephone companies would not be allowed to provide the programming; they would simply be common carriers offering a distribution service to prospective programming services. That ruling may allow for entry of competitors to cable that do not have to pass through the municipal franchising process and that do not run afoul of the 1984 cable act's prohibition of direct telephone company entry into cable television service.

Cable Regulation: Back to the 1960s?

Since 1980, cable has flourished. The number of households subscribing to cable television systems has increased from 18 million to more than 55 million. The average number of channels offered by those systems has increased from fewer

than twenty to more than thirty-five. Since deregulation, however, the average rate paid by cable subscribers for basic cable service has risen substantially. A recent survey by the General Accounting Office found that the average rate for basic cable service rose by about 40 percent between 1986 (when deregulation became effective) and 1989—far more than the average rate of inflation over the period. Despite those rate increases, the average penetration rate for cable systems (subscribers divided by homes passed by the cable) has continued to rise, presumably because of the increase in programming services.

Nevertheless, the increase in rates has spurred the drive for a reregulation of rates for basic cable service. As this article was written, Congress passed a bill to allow municipalities or the states to reinstitute rate regulation for basic services and prevailed over President Bush's veto.

Whether the rate increases since the mid-1980s are evidence of cable operators' exploiting their monopoly power or are simply a reflection of prices' moving closer to the costs of an ever-expanding service is still being debated among economists. It is clear, however, that rate regulation of a service that is so highly differentiated and whose potential is growing steadily is likely to suppress incentives to develop new diverse programming services. The major cable system owners have not only expanded channel capacity, but they have undertaken major, risky investments in basic cable programming that might have been much less attractive if rates had been under continuing municipal regulation.

Fortunately, the FCC and Congress appear to have rejected pleas that cable systems be prohibited from owning interests in various cable program networks, such as The Family Channel, Arts and Entertainment, or Cable News Network. The legislation recently passed requires that those program services be offered to noncable distribution media—satellite services and (microwave) multipoint distribution services—at nondiscriminatory rates, but otherwise the vertical integration remains intact.

If cable operators enjoy and exploit market power, they do so in part because Congress has chosen to insulate them from the potential of telephone company competition. Surely, a reexamination of the restriction on telephone companies should precede any return to the unfortunate practice of regulating a growing new technology. Once rate regulation is enacted, one can easily

envision its extension in a variety of other dimensions dealing with programming, pay-per-view services, mandatory carriage of the signals of failing broadcasters, or technical standards for HDTV. The likelihood that such regulatory actions would be welfare-enhancing is slim indeed.

Broadcast Deregulation

Perhaps the most encouraging sign of the changing mood at the FCC is to be found in its decisions to reduce the regulatory burdens on radio and television broadcasters. As recently as the mid-1970s, the FCC required television broadcasters to defend their programming choices in triennial license renewal proceedings. Radio broadcasters were often challenged by narrow interest groups for changing their formats from, say, classical music to "classic rock." Licensees were limited to a total of seven television licenses, seven AM radio licenses, and seven FM radio licenses nationwide—the "7-7-7" rule—for no good reason other than a bland populist notion of restricting "economic power." That restriction could not restrain market power since ownership of a radio station in Dubuque, Iowa, could not add to the power of the owner of a VHF television license in Waco, Texas.

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In the 1980s the FCC dramatically reduced its regulation of broadcasters. The commission no longer collected and published financial statements and dropped programming requirements. The FCC also extended the length of the license from three to five years for television stations and to seven years for radio stations. The commission liberalized the "7-7-7" rule to a "12-12-12" rule, although the latter has as little policy rationale as

the former. Recently, the FCC raised the limitation on the total number of AM and FM stations that a single licensee may own to thirty.

A major failure of the FCC's policy towards broadcasting during the past twenty years has been its inability to eliminate rules that limit broadcast-network interests in programming. The failure of the FCC to abolish the Financial Interest and Syndication Rules is lamentable because the rules impede the networks' ability to adjust to the new realities of broadcast-cable-satellite-telephone competition.

Perhaps the most controversial change by the Reagan FCC was the 1987 abandonment of the "Fairness Doctrine" that required broadcasters to air conflicting views on an issue. That doctrine was criticized as stunting the incentives of broadcasters to air controversial programs for fear of having to broadcast a host of dissenting views at a substantial economic loss. When the FCC attempted to discard the doctrine, however, several prominent congressmen mounted a strong opposition. The Fairness Doctrine was codified in a bill passed by Congress that President Reagan vetoed, and the issue has not yet been revisited.

A major failure of the FCC's policy towards broadcasting during the past twenty years has been its inability to eliminate rules that limit broadcast-network interests in programming. The Financial Interest and Syndication Rules that prohibit networks from selling reruns of their programs to domestic or foreign television stations ("syndication") and from obtaining a financial interest in the profits from those subsequent exhibitions were enacted in 1970 in response to complaints from various Hollywood interests that the networks were exploiting their suppliers. Those complaints were not justified by any theory or evidence, nor could the rules they spawned possibly limit the alleged network exploitation of suppliers if it actually existed.

Twice in the past ten years the FCC has reopened the network program-ownership issue. The staff has recommended repeal of the rules, a recommendation supported by the antitrust enforcement agencies, but the political power of the motion picture industry—particularly in the

Reagan years—prevented the FCC from abolishing the rules. That failure is lamentable, given the declining fortunes of the commercial broadcast networks, because the rules impede the networks' ability to adjust to the new realities of broadcast-cable-satellite-telephone competition.

Newspapers versus the Telephone Companies

The decision by the U.S. Court of Appeals to invalidate the AT&T consent decree's restriction on the Bell operating companies' participation in the information services markets has aroused fierce opposition from newspapers and directory publishers. Those latter companies are understandably opposed to any entry into their markets. In this case they argue that the prospects of cross subsidies and other unfair practices by regulated local telephone companies make their entry into electronic yellow pages, want ads, and other on-line information services a threat to fair competition. It now appears that Congress may sympathize with the newspaper and directory publishers, although the administration would probably veto any legislation barring telephone companies from entering the information services markets.

Once again, the obvious alternative to further balkanization of the communications industries would be the removal of the impediments to competition. In this case a change in state regulatory practices would eliminate any possible policy rationale—other than naked protection of the print media—for restrictions on the Bell operating companies or other telephone companies. If states were to replace the current cost-based, rate-of-return regulation of telephone companies with more "incentive-compatible" regulatory forms, such as price caps, there would be much less incentive for the telephone companies to cross subsidize new competitive services. In addition, if local telephone rates were closer to the marginal cost of service, particularly in smaller communities, new competition for local telephone service might develop. That new competition might eliminate the pretext for restricting the services offered by local telephone companies that would no longer be monopoly "bottlenecks."

A Concluding Perspective

Anyone who has participated in the communications policy process for the past twenty years must surely be surprised by the degree to which the

government's heavy hand has been lifted from this sector. In 1972 there was one long-distance company that one could access only through a telephone company telephone. State commissions did not even consider regulatory flexibility or worry about the incentive effects of rate-of-return regulation of telephone companies. Cellular telephones did not exist, and few believed that competition from non-telephone-company mobile telephones was a serious possibility.

No one would have believed that the FCC and state commissions would allow new local telephone companies to string fiber-optics systems under major city streets. Spectrum allocations were tightly controlled to protect incumbent interests. Cable television was largely a twelve-channel local retransmission medium that was not allowed to grow because it might reduce the flow of rents to television broadcasters. Pay cable or pay-per-view were unknown. Electronic yellow pages were not even under discussion as a consumer service.

Today, competition among telephone companies, cellular services, cable television systems, broadcasters, satellite companies, newspapers, and other print media is expanding rapidly. Regulation has not disappeared, but the use of regulation to block competitive entry is becoming a more difficult art. The FCC was unsuccessful in blocking long-distance competition and pay cable. The commission is now not even very responsive to pleas for such regulatory protection of incumbents in telecommunications markets. The venue for that type of protection has shifted to Congress, which has been more sympathetic to incumbents' interests. But except for its 1984 deregulation and recent reregulation of cable television, Congress has been remarkably inactive in telecommunications regulation.

The current mood at the FCC is to permit much greater flexibility to entrants into new technologies—firms that obviously compete with those that offer the older technologies. The FCC has also led the way in moving away from cost-based, rate-of-return regulation. The states are following, perhaps reluctantly and at a much slower pace. The trend is most assuredly towards fewer regulatory intrusions into technical standards, program content, rate structure, and market segmentation.

The explosion of technology has created a number of new players and has allowed the old players—such as telephone companies and cable television operators—to begin invading each other's markets. The MCI, terminal equipment, and pay

cable examples demonstrated how difficult it can be for regulators to deny those types of competitive entry if the courts are insistent that regulators adhere to a public-interest standard. It therefore seems unlikely that the FCC will even try to prevent the development of fiber-optics television service by telephone companies, personal communications networks by cable companies, or electronic information services by any of a number of companies. Congress may attempt to set some limits on basic cable programming services, but it is much less likely to try to prevent those cable companies from offering inexpensive mobile telephone service.

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Competition is much more easily controlled when technology is stagnant and sunk costs are large. The current electronic revolution is creating new possibilities for communications that do not fit easily into existing regulatory schemes, and it is decimating the value of the once-sunk costs. AT&T had to write off billions of dollars in obsolete terminal equipment at the end of 1983 when that equipment was taken out of the rate base. Those costs were no longer sunk—they had dissolved. Impediments to competition are dissolving with those sunk costs, and regulators seem much less willing to try to reverse this trend.

Selected Readings

Crandall, R.W. *After the Breakup: U.S. Telecommunications in a More Competitive Era*. Washington, D.C.: Brookings Institution, 1991.

Crandall, R.W. and Flamm, K., eds. *Changing the Rules: Technological Change, International Competition, and Regulation in Communications*. Washington, D.C.: Brookings Institution, 1989.