Deregulating Telecommunications

Sorting Out Mixed Signals

Stanley M. Besen

WE SEEM TO BE on the eve of major changes in the ways in which we communicate with one another. In the next few years, vastly expanded communication services—ranging from improved methods of information transfer between business firms to first-run movies in the home—are likely to become available. Offices may become information processing and transfer facilities, and where once there was only a television set there may be a home information center.

Along with these developments—partly their cause and partly their result—two fundamental sets of changes are taking place. One is in the structure of the telecommunications industry. The American Telegraph and Telephone Company (AT&T), having dominated point-to-point communications for years, now confronts a small army of terminal equipment and specialized communications firms competing in markets previously closed to them. And the dominance of television by advertiser-supported over-the-air broadcasters is being challenged by a nascent industry providing services over cable in return for direct payments from viewers. The other set of changes is in the regulatory environment. In a large number of important cases, the Federal Communications Commission (FCC) has relaxed barriers to entry into the telecommunications industry and, in its efforts, has had almost total support from the courts. Nevertheless, much unnecessary and undesirable regulation remains.

Stanley M. Besen, professor of economics at Rice University, has served as Brookings economic policy fellow, Office of Telecommunications Policy.

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While predicting the future course of policy is never easy, two conclusions seem clear. First, the entry of new firms into many previously "closed" industries will continue. Second, it will be a long time before the FCC finally decides the terms on which firms may "compete" with one another. Competition will continue to be "managed" rather than "free."

Regulated Competition in the Telephone Industry

Let us first take a look at evolving FCC policy on telephone terminal equipment (telephones, switchboards, et cetera) and on specialized common-carrier services (private-line long-distance communications).

Terminal Equipment. The great watershed in the regulation of telecommunications terminal equipment supply is the FCC's decision, *In the Matter of Use of the Carterfone Device in Message Toll Telephone Service* (1968). Before this decision, AT&T's rules and those of other telephone companies forbade the "interconnection" to the telephone system of any equipment unless it was supplied (and, usually, manufactured) by the companies themselves. The basis for these restrictions was the argument that the "systemic integrity" of the telephone system required unitary responsibility for service from end-to-end. Unless a single entity controlled the entire system, it was argued, it would be difficult to assign responsibility for disruptions in service—which would

mean that incentives to prevent disruptions would be reduced. Rules against the use of "foreign attachments" were so stringently enforced that some regulatory agencies interpreted them to exclude customer-supplied plastic covers for telephone directories and even shoulder rests for telephones.

The Carterfone was a device by which operators of private radio systems could connect their users directly to the telephone network. After some initial legal skirmishes in which the Carter Electric Company sought relief from telephone company rules by bringing a private antitrust suit, the FCC found that the rules were unreasonable as applied to the Carterfone since they failed to distinguish between attachments that posed no threat to the integrity of the system and those that did. Moreover, holding that it would be improper for this ruling to apply only to the Carterfone, the commission struck down the rules entirely. In doing so, it invited the telephone companies to establish new policies to prevent technical harm to the system without limiting the use of harmless attachments.

In response to the *Carterfone* decision, AT&T began to permit interconnection of terminal equipment manufactured by independent suppliers as long as its own "interface devices" were used with them. This policy was justified as protecting the technical integrity of the system when customers chose non-AT&T equipment, inasmuch as the devices would cause a malfunctioning piece of equipment to disconnect. One of the effects, however, was to limit severely the use of customer-supplied equipment since the price charged for using the protective devices was often greater than the savings gained by purchasing equipment from independent suppliers.

Since the promotion of new sources of equipment was a commission objective—the FCC had argued in *Carterfone* that the entry of new firms into the equipment market would encourage technological innovation—and since the rules requiring protective devices seemed to interfere with that objective, the commission has sought other ways to provide for system protection. It now permits terminal equipment certified as not potentially harmful to be employed without interface devices. While the certification program has gone more slowly than some had hoped—standards have not yet been set for some important classes of equipment—this policy, when fully carried out, will eliminate an important barrier to the entry of new firms into the industry.

In appealing the *Carterfone* decision and in the running legal battle that has ensued, the telephone companies have advanced an argument in addition to the now-rejected claim that the integrity of the system requires unitary end-to-end service and have asserted that the profits from selling terminal equipment to business users (where the threat from competitive suppliers is greatest) are needed to subsidize residential telephone rates. Thus, it is argued that if new firms are permitted to provide terminal equipment, residential rates would have to be raised.

In *Carterfone* and in a number of subsequent decisions, the FCC concerned itself almost entirely with questions of potential technical harm. Economic issues, where they were treated at all, tended to be dismissed summarily. Thus the commission stated in *Carterfone* that economic effects might well be a public interest question to be decided on the facts, but it saw no need to answer the question at that time. More recently, the commission concluded that the matter could no longer be ignored and began an inquiry into the economic effects of competition. Since the inquiry also dealt with the matter of competition from specialized carriers, we will defer the question of competitive impact until after the discussion of specialized carrier policy.

Specialized Carriers. As in the case of terminal equipment, the specialized carrier controversy began with an application by a private firm—MCI Communications—to provide a service that had previously been a near-monopoly for the telephone companies. In an earlier decision (*Allocation of Microwave Frequencies Above 890 MC*, 1959), the FCC had permitted firms to construct long-distance communications networks for their own use, but MCI was seeking permission to construct such networks to provide services to others. Like Carter Electric Company, MCI had the support of a number of business users who were unable to obtain the service they desired from existing carriers.

MCI offered to provide business users in a number of cities with private-line service (usually telephone service connecting branches

of the same company in different cities) of a new and different type and at lower than prevailing rates. The response of the existing telephone companies was, in almost all respects, identical to the tack they took with respect to the Carterfone. Their argument was as follows: End-to-end service by a single firm was required to preserve the system's technical integrity. While MCI's proposed rates were below those of the existing telephone companies, its costs were higher. And, the only reason that MCI's prices turned out to be lower was that the telephone companies were employing the excess profits derived from providing these services to subsidize rates on ordinary long-distance telephone services and on private-line services for low-traffic routes.

Moreover, an additional issue was raised. The telephone companies argued that, if the commission permitted competition in this area, they should be able to respond by lowering prices on their private-line services to the level of their costs. The controversy surrounding the pricing of private-line telephone service had already arisen in the case of AT&T's Telpak service (AT&T's competitive response to the commission's decision to allow businesses to operate their own private-line systems). But the MCI decision permitting the entry of the new firms (*In Re Microwave Communications, Inc.*, 1969) gave special urgency to this issue.

As in the *Carterfone* case, the commission did not restrict this decision to the firm asking for the right to provide the new service. Instead, it launched an inquiry into the entire specialized carrier question, at the conclusion of which it decided to permit relatively free entry of private-line carriers (*Specialized Common Carrier Services*, 1971). According to the commission, the new firms would provide services not previously available through the telephone companies and would stimulate (indeed, already had stimulated) the companies to offer better service at lower cost.

In reaching this decision, the FCC found that the new entrants would probably capture such a small part of AT&T's market that the lost revenues would have no effect on the rates charged to other users. The commission said it would allow "full and fair" competition so that the existing telephone companies would be permitted to respond to the new entrants by adjusting their own prices. Since so much of the subsequent controversy surrounding competition in the telephone industry flowed from the *Specialized Carrier* decision, we should point out that the FCC, in that case, found it unnecessary "to speculate concerning the manner in which existing carriers may seek to respond to competitive conditions," but indicated that there "should not be any protective umbrella for the new entrants or artificial bolstering of operation that cannot succeed on their own merits."

What Does the FCC Mean by Competition? The question of what constitutes competition hardly arose in the case on interconnection and was avoided in the *Specialized Carrier* decision. But it could not be put off forever. The problem stems from the telephone companies' claim that, when faced with competition, they should be free to reduce their own prices in order to compete effectively. Their would-be competitors counter that if the telephone companies are totally free to set prices they will engage in predatory pricing to drive these competitors out of business.

There are two arguments here. One is that the telephone companies have an incentive to set prices below their "incremental costs" (the additional cost of providing a service) in order to thwart competition. The second is that the prices charged by the telephone companies should be sufficient to cover their "full costs" (incremental costs plus a share of overhead) on each of their services; otherwise, their behavior would represent unfair competition. For those who hold this view, even telephone company prices shown to cover incremental costs should not be permitted. Clearly, competitors who would be eliminated if incremental cost pricing were permitted might well survive if prices were set at full cost.

The FCC's views on these matters are now clear. Following the commission's decision to allow business firms to construct their own private-line systems, AT&T had introduced Telpak, a service offering lower prices for private-line service to customers who contracted for the use of multiple circuits. The objective was, of course, to discourage firms from developing their own systems. In the Telpak case (*In the Matter of American Telephone and Telegraph Company, Long Lines Department*, 1976), the

commission rejected AT&T's contention that it should be permitted to respond to competitive pressure by reducing prices to (but not below) incremental cost. AT&T had argued that price reductions would enable it to retain the business it would otherwise lose to competitive suppliers even when its costs were lower than theirs, while also ensuring that other users would not be "burdened" by higher prices as a result of the competitive response. The FCC held, however, that AT&T's prices could not be set below "fully distributed cost" (another name for full costs). In other words, AT&T's prices for these services would have to include a "fair" share of the system's overhead costs.

Interestingly, one reason given for denying the use of the long-run incremental cost standard was that the commission would have difficulty monitoring its use. That is, the FCC believed it was not able to determine whether the long-run incremental costs claimed actually reflected the additional costs of providing service. But that determination is precisely what would be required to ensure that AT&T's prices on these services not be so low that other users would have to pay higher prices. The commission therefore adopted a policy that probably runs the risk of new carriers' entering markets where their costs are higher than AT&T's. Thus the *Wall Street Journal* was correct when it reported (September 24, 1976) that the decision would result in *more* competition and *higher* prices—correct, that is, if we recognize that "more competition" is being defined entirely by the number of firms.

Our second piece of evidence on the manner in which the commission is deciding the terms of engagement between existing firms and newcomers is found in a 1976 FCC report on the effects of competition in the terminal equipment and specialized carrier markets.[1] There, the FCC found "no convincing evidence" that AT&T's rates on terminal equipment and private lines covered full costs.

This conclusion is perfectly consistent with the commission's decision in the Telpak case. It does not require a belief that telephone carriers are providing services (either local or private-line) to business users at prices below incremental cost—only that their prices do not reflect incremental costs plus a share of overhead costs.

The commission began with a laudable goal—to open previously monopolistic markets to competition. But it failed to realize that eventually it would have to decide what competitive responses existing firms would be permitted to make. When the issue was finally faced, the commission held that telephone companies' prices are too low when they fail to cover some arbitrarily defined "full" cost. So, in the end, the FCC may have done what it said it would not do—establish an umbrella that protects the entrants it has encouraged.

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Without for a moment underestimating the difficulty of regulating a monopoly faced with competition in some of its activities, the FCC can be criticized for not realizing that, once it opened the industry to new firms, it could no longer avoid this problem of determining the permitted competitive responses. It is a bit peculiar that, in the Telpak case, the FCC rejected incremental cost pricing partly because "standard accounting systems (including the ones used in the telecommunication industry) typically do not provide . . . data [on marginal costs]," when the commission could have had the companies provide that data.

One result of the commission's actions may be to reduce the benefits that can be obtained from competition. But might there not be an alternative that would overcome the commission's inability to regulate effectively and still preserve the benefits of competition? Since the problems troubling the commission arise because the same firm provides both competitive and monopoly services, one might consider separating the firm into its competitive and monopoly parts.[2] Of course, this alternative is attractive only if there are no cost advantages from combining the two services in one firm. Of the two areas in which competi-

[1] *Economic Implications and Interrelationships Arising from Policies and Practices Relating to Customer Interconnection, Jurisdictional Separations and Rate Structure*, 1976.

[2] The FCC has adopted this approach in regulating the provision by the telephone companies of certain data transmission services.

tion has been permitted, such advantages appear less likely with interconnection than with private-line services. In fact, one of the objectives of a current antitrust suit brought by the Department of Justice against AT&T is to force the divestiture of the company's manufacturing arm, Western Electric. If there are no cost or other advantages from combining the provision of telephone service and telephone equipment—AT&T argues to the contrary—then divestiture would permit the commission to leave the equipment market unregulated. While we cannot now judge the desirability of this approach, it is one that deserves consideration.

Competitive Entry in Television

Here we examine FCC policy on pay-TV (where viewers pay directly for programs provided via cable or occasionally over the air), cable-TV (whose primary service is to retransmit programs from broadcast TV), and the allocation of the radio frequency spectrum to television.

Pay Television. American commercial television has, since its inception, been financed almost entirely through revenues obtained from advertisers. An early attempt to develop a pay-television system in California was thwarted by the passage of a referendum banning such systems in the state. The referendum, which had substantial backing from both theater owners and over-the-air broadcasters, was later declared unconstitutional.

In the late 1950s, the FCC proposed a large experiment to test the desirability of pay-television systems, but was soon forced to retreat from this ambitious undertaking. Instead, it permitted a far more modest experiment in a single city—on the basis of which it concluded that pay television, if restricted so that it did not threaten free television, would be a "beneficial supplement." The commission then promulgated a series of rules severely restricting the kinds of programming that could be offered by over-the-air pay television. The rules, which limited the movies and sports that could be carried and banned series programming entirely, were eventually extended to pay-television systems that used cable to transmit programming.

Despite these restrictions (and others), pay-television operations that "piggyback" on existing cable-television systems have experienced modest growth by exploiting a gap in the rules permitting new films to be shown. Recently, the FCC relaxed these rules to permit the carriage of movies up to three years old (*Subscription TV Program Rules,* 1975)—the previous limit had been two—and to permit series to be shown.

Not content with this outcome, one of the major firms in the industry, Home Box Office, asked the courts to overturn the entire set of programming restrictions on pay-cable TV. And, in *Home Box Office* v. *FCC* (1977), the Court of Appeals for the District of Columbia struck down all the rules—holding, in effect, that the FCC had failed to provide substantial evidence that the rules served the public interest: "Even if the Commission had jurisdiction to promulgate its . . . rules there is no evidence in the record supporting the need for regulation." The commission had argued that unless pay television was restricted in what it carried, it would "siphon" programs from advertiser-supported television and that this would reduce the quality of what viewers could receive over the air. But the court held that those who would impose regulation needed substantial evidence to support that imposition and that they had failed to present that evidence. Rather than simply accede to the commission's expertise in this matter, the court chose instead to examine the record for evidence of the benefits that would arise from the regulations and, having found none, sent the regulations back to the commission.

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The Supreme Court has refused to accept appeal of the lower court decision. Thus there are at present no remaining regulatory barriers to pay television and—unlike the situation in the cases of terminal equipment and specialized carriers—decisions on the future shape of the industry can be left to the marketplace. Any further restrictions will have to be obtained either through legislation or through

an FCC policy for which the courts find "substantial evidence."

Cable Television. A superficial look at the regulation of cable television over the last decade or so might lead one to conclude that the barriers to the development of cable are being slowly but surely removed and regulation gradually reduced. The rules adopted in 1972 (*Cable Television Report and Order*, 1972) provide that cable systems in major markets may "import" distant signals where previously they could not, and the recent elimination of the "leapfrogging rules" (which limited importation to signals from the closest markets) has a similar effect (*Leapfrogging Rules–Cable Television*, 1976). Indeed, relying on the fact that the 1976 General Revision of the Copyright Law made cable systems liable for copyright payment when they retransmit programs originally provided by a TV broadcaster, the National Cable Television Association has asked the FCC to remove all remaining restrictions on what cable systems can carry. Combined with the elimination of restrictions on pay cable, these changes promise substantial growth for cable television. Unfortunately, however, the manner in which the copyright revision treats cable TV suggests that regulation of this industry may merely be shifting from the FCC to the newly created Copyright Royalty Tribunal.

The new law creates a compulsory licensing arrangement under which cable systems may carry all signals currently authorized by the FCC upon payment of fees into a fund to be distributed among program suppliers. Apart from the fact that the fee schedule seems low when compared with the prices that would have emerged from negotiations between cable systems and program suppliers, the provisions for changing the schedule in response to changes in FCC rules are quite troublesome. The new copyright act requires that the Copyright Royalty Tribunal revise fees whenever the FCC changes its cable rules and that the fees are to be "reasonable," but does not tell the tribunal how reasonableness is to be judged.

The imposition of full copyright liability—an alternative that could have eliminated the need for restrictions on signal importation and provided for adequate compensation to program suppliers—was rejected by the Congress. As a result, the level of the fee schedule is likely to provide the FCC with a convenient excuse for continuing some restrictions. But, even if the restrictions should be removed, the controversy would simply shift to the Copyright Royalty Tribunal, which would then have to consider changing the fee schedule.

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Here, clearly, is a missed opportunity. Whereas full copyright liability could have provided a basis for ending all restrictions on cable, the adoption of a system of compulsory licensing virtually guarantees continued regulation.

The VHF Drop-In Plan. In 1973, the Office of Telecommunications Policy (OTP), the agency then charged with formulating regulatory policy in communications for the executive branch, recommended that additional VHF television stations be "dropped into" (created in) portions of the frequency spectrum previously thought unusable because of potential interference with other stations. OTP argued that technological improvements since 1952 (when the FCC's television frequency allocation plan was adopted) had made these so-called drop-ins feasible. Since UHF stations find it difficult to compete with VHF stations, OTP's plan would have increased television competition, whether UHF stations switched to VHF or new VHF stations entered the market. These developments might even have contributed to the prospects for a fourth network.

The response of the television industry was predictable. It argued that many of the proposed stations would provide an unacceptably high possibility of electronic interference. The FCC, agreeing in part, rejected a large number of the proposed drop-ins on technical grounds. Of greater interest, however, is the commission's treatment of those drop-ins it judged to be technically feasible.

The industry had argued that, even if stations could be added without causing interference, the new stations would threaten the economic viability of existing stations, particularly those in the UHF band. (It is especially in-

teresting that one of the groups arguing most vociferously for the protection of UHF stations is composed almost entirely of VHF stations.) Accepting this argument, the commission held that a new VHF station should be permitted in a market only if it demonstrably would neither force an existing UHF station off the air nor threaten the viability of a UHF station that might be likely to go on the air *in the next ten years* (*TV Broadcast Stations, Adding of New VHF Stations in the Top 100 Markets*, 1977). With this stringent requirement, only four drop-ins were proposed and the FCC is currently entertaining comments on their desirability.

The commission's action is not surprising. Having created and nurtured UHF television, it reacts in a predictable fashion against any threat to that system. The restrictions on cable and pay television demonstrate the FCC's solicitude for its children. However, there is an important difference between these restrictions and the FCC's treatment of the drop-in proposal. The restrictions are defended on the grounds that expansion of pay and cable television would reduce the amount of free over-the-air TV—to the detriment of viewers too poor to afford either. Moreover, the growth of cable might jeopardize the commission's longstanding policy of supporting local stations.

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But the VHF drop-ins pose none of these threats. They would operate over the air, would be advertiser-supported, and would be local stations. At worst, their introduction would merely displace one local station with another. Nonetheless, the commission continues to protect UHF television without having substantial evidence that this benefits viewers. (The only evidence that the commission examined was on the impact the drop-ins would have on the *number* of UHF stations.)

In this case, contrary to those involving Carter Electric, MCI, and Home Box Office, no firm has come forward to protest commission policy. The Department of Justice has filed objections, however, arguing that new VHF stations found to be technically feasible should be authorized "on demand."

Conclusion

The ideal candidate for deregulation is an industry that would otherwise have operated in a competitive manner but that, having fallen into the clutches of a regulatory agency, has fewer firms, charges higher prices, and offers a poorer array of products than could be expected under competition. The solution to the problem, in these cases, is simply for the government to "go away." This is essentially the solution proffered by advocates of deregulation of natural gas production, interstate trucking, and domestic airlines.

A more difficult case for the deregulator arises in industries where there are elements of natural monopoly and where even a neutral observer might argue that regulation of some kind could increase consumer welfare. Thus, we hear little talk about deregulating the local distribution of natural gas or electricity.

The most difficult case arises where competition seems feasible in part of an industry but where elements of monopoly seem unavoidable in other parts. One might "go away" and leave the industry and its consumers to their own devices, but if one wishes to regulate the monopolistic part of the industry, then leaving the putatively competitive part alone may not be the best alternative. A more complex deregulation strategy may be required in this case.

The communications industry contains examples of all three situations. Cable television and pay television offer opportunities for the government simply to go away. In pay TV, the opportunity is about to be seized, but in cable it is likely to be ignored. Local telephone service, a natural monopoly (because, with the technology used thus far, duplication of services is wasteful), is unlikely to be deregulated any time soon. However, there may be instances of improved regulation through basing more rates on marginal costs and tailoring prices so as to smooth out the peak and off-peak loads on the system. The most difficult cases for deregulation come in the long-distance telephone and terminal equipment markets, with their blends of monopoly and competition. Here, it may not be feasible for government regulation simply to disappear. In any event, it is unlikely that it will disappear soon. ■