

*Article**The AT&T Antitrust Consent Decree: Should Congress Change the Rules?**By Lawrence A. Sullivan* †*And Ellen Hertz* ††**table of Contents**

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I. Introduction

The telecommunications industry in this country was long dominated by AT&T, a fully integrated provider of telecommunications services. Western Electric manufactured equipment; the Bell Operating Companies ("BOCs") provided local exchange service; AT&T provided interexchange (long distance) service that linked the local exchanges into a national and international system; and Bell Laboratories researched future industry developments. The antitrust history of the industry has been played out not only in the courts, regulatory agencies, and related settlements, but also in Congress. The most significant single event was the entry in 1982 of a consent decree that separated AT&T, Bell Labs and Western Electric from the BOCs, which were in turn restructured into independently owned and operated Regional Bell Operation Companies ("RBOCs"). The RBOCs were to provide local exchange services and were allowed to sell customer premises equipment, but were restrained from providing interexchange service, manufacturing telephone equipment, providing information services, and, except with court approval, engaging in other unregulated non-telecommunications businesses. The RBOCs are restive under these "line-of-business restrictions," particularly the prohibition against manufacturing telephone equipment. They argue that allowing them to enter this business would make manufacturing more competitive, not less. Having failed to persuade the courts to eliminate the principle line-of-business restrictions,¹ the RBOCs have turned to Congress for relief.²

In this Article we consider whether legislation loosening the manufacturing restriction would be sound competition policy.³ Our inquiry indicates that local exchange service remains a natural monopoly, and that markets for manufacturing telephonic equipment are workably competitive. So long as these two conditions prevail, there would be grave risk of serious competitive harm and little possibility of significant competitive advantage in allowing the RBOCs to enter telecommunications manufacturing markets.⁴ We conclude that under the conditions now prevailing in the industry, the case for legislative relief has not been made.

Section II provides a brief overview of the facts and legal history leading up to the 1982 consent decree. Section III examines changes in industry conditions which have occurred since the decree. In Section IV, we present an analysis of (A) the competitive harms likely to flow from lifting the restriction, (B) the potential benefits from RBOC participation in manufacturing, (C) the possible effects on R & D in telecommunications, (D) the existence of less onerous alternatives to the manufacturing restriction which might be used to obtain potential benefits, and (E) the possible effects of lifting the restriction on the United States' balance of trade. Section V reviews our conclusions.

II. The Relevant History

The 1982 consent decree represented the culmination of more than forty years of executive, judicial and legislative efforts to deal with the formidable anticompetitive harms caused by AT&T's monopoly over all aspects of the telecommunications industry. The details of this history have been thoroughly aired elsewhere,⁵ but the technological and social factors leading to the decree, and the theory underlying the decree's structural remedy, can be profitably reviewed here.

Industry observers had long assumed that the entire telecommunications industry would remain a monopoly. Local exchange service and long distance operations were assumed to be natural monopolies while other segments such as equipment manufacturing, though potentially competitive, were thought to function most efficiently when linked to the two monopoly segments within a single firm. Under this reasoning, a single integrated system would assure the most reliable and effective national telecommunications network.⁶

In the 1960s, this assumption was challenged from two directions. The first was technological; with the discovery that microwaves could be substituted for telephone wires in long distance service, AT&T's monopoly in this sector was no longer natural. Without duplicating either the switching system or the enormous network of wires controlled by AT&T, a number of firms could compete in the provision of microwave transmission.

The second challenge was socioeconomic in nature. At mid-century, the United States initiated a major monopoly case against AT&T that was settled with limited relief by a consent decree in January, 1956.⁷ However, beginning in the late 1960s, the Federal Communications Commission was deluged by complaints from small central office and user-premise equipment manufacturers claiming to produce efficient, high quality products which AT&T refused to buy, or even to permit end-users to buy.⁸ The Commission struggled throughout the 1970s to enact regulations which could monitor AT&T's relationship with these competitors, but by the end of the 1970s it was apparent that its relatively small staff could not keep up with the various technological, accounting and pricing strategies which AT&T could devise to limit competitive incursion by other manufacturers.⁹

In 1974, nearly a quarter of a century after the first suit was brought, and while the first decree was still in effect, the government sued again.¹⁰ It alleged that AT&T had used its lawful monopoly over local exchange services, operated by the BOCs, to also monopolize interexchange (long distance) services and telephone equipment manufacturing by restricting and eliminating competition from other long distance companies and suppliers of telephone equipment. Coinciding as this did with a growing awareness among economists, government policy-makers, and the public at large of the limits to regulation, the groundwork was laid for the deregulatory solution adopted in the 1982 antitrust decree.

After lengthy discovery, the trial began in the District Court for the District of Columbia before Judge Greene. The government's evidence tended to show that AT&T had planned and executed strategies to foreclose market access to telephone equipment and long distance services offered by others, including services and equipment that were as good or better than those AT&T provided. It imposed barriers on other long distance companies seeking to link with the BOCs, caused all the BOCs to buy from Western Electric, and obliged BOC customers to use Western Electric equipment.

Defendants moved to dismiss at the end of the government's case. In denying that motion, Judge Greene summarized the situation as follows:

The government's evidence has depicted defendants as sole arbiters of what equipment is suitable for use in the Bell System—a role that carried with it a power of subjective judgment that can be and has been used to advance the sale of Western Electric's products at the expense of the general trade. First, AT&T, in conjunction with Bell Labs and Western Electric, sets the

technical standards under which the telephone network operates and the compatibility specifications which equipment must meet. Second, Western Electric and Bell Labs ... serve as counselors to the Operating Companies in their procurement decisions, ostensibly helping them to purchase equipment that meets network standards. Third, Western also produces equipment for sale to the Operating Companies in competition with general trade manufacturers.

The upshot of this "wearing of three hats" is, according to the government's evidence, a rather obviously anticompetitive situation. By setting technical or compatibility standards and by either not communicating these standards to the general trade or changing them in mid-stream, AT&T has the capacity to remove, and has in fact removed, general trade products from serious consideration by the Operating Companies on "network integrity" grounds. By either refusing to evaluate general trade products for the Operating Companies or producing biased or speculative evaluations, AT&T has been able to influence the Operating Companies, which lack independent means to evaluate general trade products, to buy Western. And the in-house production and sale of Western equipment provides AT&T with a powerful incentive to exercise its "approval" power to discriminate against Western's competitors.¹¹

Judge Greene further concluded that the essential facility doctrine mandated that AT&T give competitive long distance companies reasonable, non-discriminatory access to BOCs.¹² Under that doctrine, as he viewed it, BOCs would have a duty to release technical information and compatibility specifications to all would-be suppliers.

The defendants responded that antitrust liability cannot be based on failure to release trade information to the general public, citing *Berkey Photo, Inc. v. Eastman Kodak, Co.*¹³ Berkey Photo alleged that Kodak had attempted to monopolize the market for processing film by introducing, without advance notice, a new film which could be processed only with equipment procured from Kodak, and by refusing to disclose the chemicals used in the new photo finishing process. The Court of Appeals for the Second Circuit held that a decision to withhold information from competitors would constitute an antitrust violation only if it involved abuses of market power rather than aggressive competition on the merits.¹⁴ Convinced that Kodak had done no more than take advantage of its integration across possible market boundaries, the court concluded that Kodak's conduct was merely aggressive, competitive behavior.¹⁵

AT&T's behavior, by contrast, looked to Judge Greene much more like market power abuse than competition on the basis of a new, improved product. Kodak's conduct had increased Berkey's costs, but Berkey had still been able to process the new film despite Kodak's non-disclosure. By contrast, AT&T's non-disclosure was far more harmful:

No piece of equipment can be interconnected with the country-wide public switching network unless it conforms to the compatibility standards set by Bell. An inability to obtain Bell technical information/compatibility standards thus constitutes an insuperable barrier to entry to the market (and the record does not show a reasonable basis for defendants' having withheld this type of information).¹⁶

During the pendency of the government's suit, William Baxter had become Assistant Attorney General in charge of the Justice Department's Antitrust Division. Viewing antitrust through the lens of neo-classical microeconomic theory, Baxter was convinced that AT&T had an incentive to cause regulated BOCs to pay Western Electric hidden premiums on its equipment, to get monopoly profits where it faced little competition, and to subsidize markets where there was political pressure to keep prices low.¹⁷ Although earlier settlement negotiations had focused on possible conduct remedies, Baxter supported a plan to break up AT&T.

As viewed by Baxter, the 1982 decree was necessary because AT&T's control over the natural monopoly segment of the industry, local exchange service, had placed it in the position to leverage its power into other industry segments which depended on the local exchange network. For example, AT&T could leverage power by denying local service access to competitors, or discriminating in the quality of such access. AT&T's 1960s and 1970s behavior in long distance service and manufacturing utilized this strategy to some degree. Other leveraging devices, possibly used against manufacturing competition, included: (1) foreclosing opportunities of competitors either through direct self-dealing or through the more subtle means of product differentiation, price discrimination, delayed notification of changes in design, etc.; and (2) cross-subsidizing its competitive products and services by shifting costs incurred in competitive activities to its regulated local exchange monopoly, thereby breaking the link between price and cost in both the competitive and regulated markets. As regulatory oversight had failed to control these practices adequately, Baxter believed that the decree's structural solution was required. The relevant opinions make clear that the district and reviewing courts accepted essentially this conception of the decree.¹⁸ Even AT&T saw the wisdom of Baxter's approach after Judge Greene denied AT&T's motion to dismiss. The expense and risk of litigation made a consent decree more attractive for AT&T. Some eight years after litigation began, a settlement was reached and the consent decree entered.

The decree relied on the theory that separation of local exchange service from industry segments vertically linked to the local exchange network was essential.¹⁹ This separation resulted, on the one hand, in an AT&T divested of its power over the local

exchange market, and, on the other, in seven RBOCs,²⁰ forbidden from entering manufacturing, long-distance, and other related markets. As Judge Greene took pains to demonstrate in considering the RBOCs' 1987 motion to modify the line-of-business restrictions, these restrictions were not ancillary to the deregulatory solution adopted in 1982, but went to the very "root [of] the problem of claimed monopolistic conduct in telecommunications."²¹

III. Post-Decree Industry Developments

Since the decree, a number of technological and business developments have occurred, some as a direct result of divestiture, others not. While many of these changes have enhanced competition in segments such as manufacturing and interexchange service, none of them alters the basic division of the industry into a natural monopoly in the provision of local service and competitive markets in other industry segments.

The natural monopoly in local exchange services remains intact. While it would be perilous to predict long-range industry developments, industry analysts agree that it will remain impossible to organize competitively the core of that monopoly—the millions of wires providing the initial link between a residence or business and the first switch joining this user to the local network—at least until as yet unforeseen technological changes²² and accommodating regulatory responses²³ have become realities. A few large, high-volume users have invested in the equipment needed to bypass the local exchange through multi-site private networks or by connecting with an interexchange carrier directly. There has also been a gradual growth of competition within some Local Access Transport Areas ("LATAs") for the carrying of calls from the first switch to other points within the LATA. The potential for this kind of competition arises not because local exchange natural monopolies are eroding, but because some LATAs, serviced by a single RBOC, are large enough in area and dense enough in usage so that different regions within one LATA could support competitive microwave connectors. An example is competitive connections between local exchanges in two cities in separate parts of a LATA. But even this development, which leaves the basic natural monopoly undiluted, is tentative, limited both by scale and scope economies and by regulatory hesitancy.²⁴ To the extent feasible, intra-LATA competition should be encouraged and regulators discouraged from restricting it.

To the extent that any RBOC's local exchange service natural monopoly is narrower than a LATA serviced by that RBOC, users should have the benefit of available competitive options, just as they do for inter-exchange service. But further development of such intra-LATA competition would not deprive RBOCs of their natural monopolies. In order to pose a genuine threat to the natural monopoly of user-to-switch wiring, it must be technologically possible and economically feasible for large numbers of users to bypass the initial exchange link. A number of factors militate against the large-scale use of bypass.²⁵ First, with present or foreseeable technologies, there remain substantial economies of scale and scope in local exchange telecommunications, making bypass prohibitively expensive for almost all users.²⁶ Second, from the point of view of the consumer, bypass only substitutes dependence on the local exchange network for dependence on the interexchange network to which one establishes a link. In order to avoid dependency altogether, a user must establish links with a number of competing services, wastefully duplicating costs.

In other telecommunications segments, by contrast, competition has thrived since the decree. There are now a number of significant interexchange carriers. Competition in the equipment manufacturing market is even healthier. Both the customer premise and the transmission equipment segments are occupied by numerous suppliers, small and large.²⁷ The most concentrated portion, the private branch exchange ("PBX") market, has three major and many smaller suppliers that compete effectively.²⁸ In central office equipment, the market for many products is vigorously competitive,²⁹ while in the only segment that remains at all concentrated, central office switches, there is, at worst, a decidedly rivalrous international oligopoly.³⁰ As could be expected, prices for customer premise equipment have dropped significantly.³¹ Innovation in equipment design and service, such as voice-instructed machines, in-coming call display, and call filtering devices, has dramatically improved.³² It is noteworthy, however, that competition in the manufacturing industry comes largely from foreign firms, often powerfully positioned in their own countries through government subsidy or integration with exchange services, thereby facilitating self-supply at high prices which are passed on to consumers in their own countries.³³

IV. Analysis of the Manufacturing Restriction

Deciding whether or not it would be wise to lift the restriction on RBOC participation in telecommunications manufacturing requires a weighing of the risks of anticompetitive injury against any potential benefits from RBOC entry. Separate consideration should be given to the effects of lifting the restriction on R & D in the telecommunications industry as a whole. One must inquire whether less onerous alternatives to the current blanket restriction exist. Finally, one must examine the foreseeable impact of lifting the manufacturing restriction on the United States' balance of trade. In other words, given the history and current conditions of the industry, is the remedy embodied in the 1982 consent decree still appropriate?

A. Competitive Harms Likely from a Lifting of the Manufacturing Restriction

As the review of current industry conditions suggests, despite slightly improved possibilities for bypassing local exchange networks, erosion of the natural monopoly in local exchange operations has been minimal, and the possibility for significant competition in these operations seems quite remote. Given this conclusion, the overwhelming competitive harm of lifting the manufacturing restrictions would be to provide an RBOC with both the capacity and the incentive to leverage its monopoly power into the manufacturing sector. Such power could be used to cross-subsidize its manufacturing operations with returns from its regulated monopoly and to coordinate local exchange services with manufacturing so as to prefer its own equipment and foreclose possibly more efficient competitors from access to the RBOC as a buyer. A variety of undesirable scenarios is imaginable under either the cross-subsidization or foreclosure strategy.

The principal feature facilitating cross-subsidization in the telecommunications industry is the high degree of common or joint costs of operation; that is, costs which cannot be clearly attributed to one industry sector because of the complex interdependence between wiring, servicing, switching and equipment functions.³⁴ This feature, intensified by the dynamic nature of technological change in many sectors of the industry, allows for costs from manufacturing to be subsumed under the local exchange cost umbrella in ways which are extraordinarily difficult to detect in a timely fashion.

If an RBOC entered manufacturing, cross-subsidization would allow it to market equipment at prices competitive with, or below,³⁵ those of other firms in the market, while covering some of its own actual manufacturing costs under its regulated local exchange rates.³⁶ Such cross-subsidization, unless plainly *de minimis*, would distort competition in the manufacturing market in which the RBOC's activities were being subsidized. By insulating the RBOC from the rigors of competition, cross-subsidization would enable it to attract market share from more efficient firms, thus distorting the allocation of resources in the manufacturing market. This distortion, which would always be present to some degree, would be significant where the subsidized RBOC had significant market share, and might be acute in markets like central office switches and transmission equipment, where the RBOC would likely be its own primary customer, and thus would be able to raise prices and earn monopoly profits in manufacturing at the expense of local rate payers.³⁷ Over time, of course, an RBOC could gain power in a market in which it originally had none, not by virtue of efficiency but through cross-subsidization.³⁸ Alternatively, monopoly returns from cross-subsidization might take the form of excessive payments to management, labor, or other factor suppliers, or potential profits might simply be dissipated through waste which remained sheltered from competitive pressures, thus distorting resource allocation not only in manufacturing but in related input markets as well. Such cross-subsidization would also "tax" local service rate-payers, and frustrate the regulatory goal of keeping local exchange service rates properly related to costs.

Similarly, were RBOCs to enter manufacturing, they would have a variety of strategies at their disposal for foreclosing the business opportunities of competing manufacturers and self-preferring in purchasing telephone equipment. As under the pre-decree AT&T regime, RBOCs could delay the release of local service design information, thereby handicapping competitors in the timely production of new equipment.³⁹ Furthermore, RBOCs would now have an incentive to make unnecessary or inefficient changes in local service technology to facilitate self-preference, to the ultimate detriment of the consumer who pays for such needless innovation.

In their 1987 motion to eliminate line-of-business restrictions, the RBOCs argued that none of them, acting alone, could foreclose more than 15% of the national market in equipment and, consequently, that any self-preference in purchasing could have only limited anticompetitive effect.⁴⁰ It seems likely, however, that were one RBOC to prefer itself in the manufacturing market, others would follow suit, whether for "corporate image" reasons, as Judge Greene suggests,⁴¹ or simply because they learn how to increase profits from one another's behavior. If RBOCs self-preferred in an interdependent manner, they could achieve, by conservative estimates, an aggregate foreclosure of as much as 70% of the market.⁴² The further possibility of explicit or tacit "live and let live" relationships developing between the structurally similar RBOCs cannot be dismissed; after entry into manufacturing, RBOCs might quickly learn that they have much to gain by not competing aggressively among themselves and by jointly pricing significantly above cost.

As Judge Greene points out, the problems posed by the pre-decree AT&T regime were not essentially problems of size; hence, the 1982 division of the single national firm into seven regional firms did not diminish the basic risk of anticompetitive behavior which follows when a regulated monopolistic market and other competitive markets are combined under unitary control.⁴³ RBOCs can, and from a stockholder's point of view should, decide complicated issues of accounting, design and marketing strategy to their own advantage.⁴⁴ One need not assume dark-heartedness to recognize that leveraging monopoly power from the local exchange sector into manufacturing is far more than a speculative possibility. It is a likely outcome of eliminating the structural separation of local exchange service monopolies from competitive markets embodied in the 1982 decree.⁴⁵

B. Competitive Benefits Possible from a Lifting of the Manufacturing Restriction

But for the line-of-business restriction, RBOCs would be potential entrants into telephonic equipment manufacturing. The principal benefit which could flow from lifting the restriction, then, would be the addition of seven potential entrants to the market. However, given (1) that the customer premise, transmission, and some portions of the central office equipment submarkets are already highly competitive, and (2) that the central office switching market is at worst an increasingly rivalrous international oligopoly, the addition of these potential competitors seems of modest significance.⁴⁶

The RBOCs' presence as potential competitors might be helpful to discipline the pricing and strategic behavior of manufacturing firms, but as there are already sufficient firms in the market to assure market discipline, this theoretical benefit is superfluous at present.⁴⁷ Even actual entry by RBOCs would lack significance because there are already enough firms in manufacturing to yield effectively competitive results. Furthermore, in manufacturing segments other than central office switching, there are many potential entrants besides the RBOCs,⁴⁸ and there may be some in the central office switching segment as well.⁴⁹ If the manufacturing markets RBOCs might enter were presently non-competitive rather than already workably competitive, the addition of seven potential entrants would be a counterweight tending to offset the competitive risks that arise from the possibility of leveraging monopoly power from the local exchange service market to the manufacturing market. But given the already competitive condition of the manufacturing markets, there is little benefit to offset the risk of monopoly leveraging that would follow from lifting the manufacturing restriction.

The significance of the RBOCs as potential entrants is further reduced by the likelihood that in central office switching, the only segment where performance might be noticeably improved, RBOC entry would be achieved through vertical joint venture relationships with foreign manufacturers already in the market.⁵⁰ Such entry would do nothing to deconcentrate the central office switching industry, and might not even yield new capacity. Indeed, its most probable consequence is to harm competition further by encouraging the newly integrated unit to try to foreclose other manufacturers and by stabilizing market shares. In any event, there is a high probability that foreign firms would further displace domestic firms in the manufacture of crucial central office equipment. It is conceivable that a particular RBOC might in the future show an interest in entering the central office switching market *de novo* by investing in new capacity rather than by entering into a joint venture and likely preferred customer relationship with one of the firms already in that market. If this occurred, that RBOC could still seek focused relief from the manufacturing restriction to allow for such entry. The court, at that point, could then evaluate the current state of the central office switching market and weigh any apparent benefit from entry against leveraging risks. Although having the court review the RBOC's investment plans would be awkward, it is certainly preferable to a blanket lifting of the restriction on the strength of the unlikely possibility that *de novo* entry might occur and that, if it did, it would be on balance competitively helpful.

Finally, the possibility of integrative efficiencies in establishing manufacturer-RBOC links must be examined. Such efficiencies could include facilitating information flow between industry sectors, and cooperative planning among local service providers and manufacturers for the future technological and marketing directions of the industry. However, not only are such efficiencies notoriously difficult to measure, but also any effort to attain them gives rise again to the dangers of cross-subsidization and foreclosure discussed above.

C. The Effects of Lifting the Manufacturing Restriction on Telecommunications R & D

The effect of lifting the manufacturing restriction on the locus, direction and volume of R & D is to some extent imponderable. Some distinctly unfavorable effects seem likely, as do some favorable ones. Some effects are not predictable with any confidence, as perhaps is inevitable when considering the dynamic consequences of significant structural change in a complex industry. Nonetheless, certain tendencies and incentives can be identified, and industry history utilized, in an effort to evaluate possible outcomes.

Before any effort was made to stimulate competition through antitrust or regulatory means, a vertically integrated AT&T was an inaccessible market to other manufacturers, who thus had no incentive to invest in innovation that would improve AT&T's performance. During this period, AT&T, being fully integrated and unencumbered by regulation, had strong incentives for innovation since it could exploit economies of scale and scope, capture the profit from any innovation produced by its research, and exploit interactive relations between segments doing R & D and segments using equipment.

Beginning with *Carterfone*,⁵¹ the structural conditions for R & D took on a second configuration which may well have represented the worst of all worlds for innovation. Manufacturers other than the integrated AT&T, while encouraged to compete with AT&T, could hardly be confident of having consistent access to necessary information in comparison to AT&T's own manufacturing arm. Thus, the R & D incentives of these manufacturers, while improved, were not maximized. At the same time, regulatory efforts to make the playing field level, such as the FCC's highly complex *Computer II* requirements⁵² and threats of even more complicated information flow regulations, adversely affected the R & D incentives of AT&T itself, since AT&T could no longer count on being able to appropriate all of the returns from its R & D. Also, because of regulatory constraints, its transaction costs rose, and its potential for information-flow and learn-by-doing efficiencies in product development were reduced.

Divestiture under the consent decree set the current stage in motion. There is no doubt that divestiture has had positive effects on the level of telecommunications innovation in the short run, and these effects are apparently continuing. Virtually all segments of manufacturing have been broadened to near global dimensions, and this competitive energy has led to new, better and greater varieties of products for user premises, interexchange and local exchange services.⁵³

Most importantly, the incentives for all major actors are now free of conflict. RBOCs, so long as they remain out of manufacturing and "captive market" joint ventures with foreign suppliers, have strong incentives to study the equipment offerings of all suppliers, to inform those suppliers about their needs, and to encourage non-restrictive open interface standards and compatibility among alternative suppliers in order to avoid lock-in problems in the future. These ends are advanced by the standard-setting and clearinghouse activities conducted by the RBOCs through Bellcore. AT&T, in turn, has incentives to innovate on interexchange products where integration efficiencies are available. In local exchange products, AT&T's incentives as a potential seller are also clear. Like other suppliers, it must seek to learn about RBOC needs from Bellcore and from individual RBOCs, must innovate to meet those needs, and must keep RBOCs informed about its product development programs. Moreover, its performance is spurred by the presence of other competing manufacturers who now do perceive a level playing field. All competing manufacturers, none of whom needs now worry about an in-house advantage for AT&T,⁵⁴ have fresh incentives to innovate for the RBOC market.

If the manufacturing restriction were lifted and RBOCs independently entered manufacturing markets, those RBOCs would gain R & D incentives they do not now have. RBOCs, hoping to meet their own equipment needs and to benefit from the information flow and interactive advantages of their vertical integration, would no doubt engage in product development activities. But these newly gained incentives would likely be offset by the reduction in incentives for all other manufacturers, since existing manufacturers would no longer expect equal access to the integrated RBOCs as buyers. Moreover, the new incentives for RBOCs would not be maximized. The RBOCs' potential for attaining the kind of integration advantages AT&T possessed before regulation would be diluted by the inefficiencies resulting from inevitable and necessary, but imperfect, regulatory attempts to keep the playing field level. Regulatory efforts to assure information flow to competing manufacturers would put manufacturing RBOCs in the same unhappy situation AT&T faced before divestiture but after regulations to stimulate competition were enforced. Inevitably, RBOCs would be motivated to evade these regulatory requirements, and knowing that, the R & D incentives of competing manufacturers would be weakened. Finally, if the RBOCs entered manufacturing by linking with existing foreign suppliers, incentives might be even more distorted, thereby increasing the likelihood of regulatory evasion and weakened competition.

In most respects, the balance of incentives to integrate would likely be the same as it was shortly before divestiture. One might expect marginally fewer inefficiencies to result from regulation now than from pre-divestiture regulation due to improved regulatory techniques. But in one important respect the situation might be even worse. Under the current regime, RBOCs have an incentive to standardize in ways that facilitate both nationwide system harmony and wide access by competing manufacturers. When AT&T was the single integrated firm, even if it made efforts to hamper competition by design changes, those efforts did not endanger system-wide standardization. But if seven separate RBOCs are each trying to design away from competition, they may also be designing away from the standardization needed for an effective, integrated national telecommunications system.⁵⁵

In sum, though some of the outcomes are speculative or imponderable, there seems little likelihood that aggregate telecommunications innovation could be improved by lifting the restriction and considerable reason to fear the opposite result.

D. Are There Less Onerous Alternatives to the Line-of-Business Restrictions?

There are two conceivable ways to protect against the harms noted in sub-section (A) above: (1) controlling against cross-subsidization and foreclosure by regulation; and (2) relying on market forces, such as the counter-strategies of adversely affected firms, to deter these competitive harms.

The RBOCs have argued that these dangers can be addressed through regulatory means. It must not be forgotten that the history of the 1982 decree is a history of failure to regulate effectively these delicate intra-enterprise problems. The FCC's failure was extensively documented at the trial leading to the 1982 decree,⁵⁶ and was an integral consideration in the design of the decree's structural remedy. A regulatory agency must attempt to penetrate RBOC accounting systems and pricing strategies, to evaluate the utility of new devices, and to try independently to weigh the reasons given for releasing or refusing to release specific information to other segments of the industry. It cannot be expected that a regulatory body, with limited access to the internal planning decisions of the RBOCs, will achieve such objectives in an effective and timely fashion. If this was true at the time of the decree, it seems more likely now when regulatory agency staffing has been cut, and when the target of regulation would no longer be one large integrated company but seven large integrated companies. It may take years for regulators to uncover and prove cross-subsidization or other distorting strategies, making effective remediation for consumers or competitors nearly impossible.⁵⁷ The likelihood of a satisfactory regulatory solution is

further diminished by the change of regulatory philosophy over the past few years and, perhaps, by a faltering determination by regulators to deter such practices.⁵⁸

The unaided market will similarly fail to provide effective protection against cross-subsidization and self-preference. Because of the additional profits inherent in the RBOCs' control over local monopolies, the only counter-strategy likely to occur to competing manufacturers without a current RBOC link is imitative vertical integration with another RBOC and self-preference. Thus, if one RBOC linked itself with a major foreign equipment manufacturer, foreign equipment manufacturers and AT&T itself would be pressured to seek out links with other RBOCs. But such steps would not be solutions; from the point of view of the public, they would simply exacerbate the problem. As Judge Greene explained, "Regional Company [RBOC] claims of wishing only to participate with others in ... restricted businesses on a level playing field obscure the fact that there is no level playing field when one of the participants holds an unassailable franchise on the goal lines."⁵⁹ Moreover, any attempt to encourage market forces by regulation would most likely require the repartitioning of the accounting, design and marketing functions of the two segments of the vertically integrated RBOC, thereby reducing, if not eliminating altogether, precisely those efficiencies which might be obtained through the RBOC's vertical integration.⁶⁰ Unfortunately, no regulatory approach seems adequate to overcome the dangers posed by allowing the monopolistic local service sector of the industry to join forces with the competitive manufacturing sector.

E. Balance of Trade Concerns

Finally, the effect of RBOC entry into manufacturing on America's international trade and balance-of-payments is not sufficient to justify lifting the manufacturing restriction. If RBOCs entered manufacturing on their own, and conducted their manufacturing operations in this country, lifting the manufacturing restrictions would increase America's share of aggregate world production. However if, as is more likely in the central office switching segment, RBOCs entered the market through vertical integration, there would probably be a geographic division of labor, with product-oriented research and development and basic parts manufacturing performed offshore, leaving only assembly to be performed in the United States.⁶¹ The result would be to increase America's technological dependence on foreign countries. On balance, the possibility of benefits for America's balance-of-payments is speculative at best.

V. Conclusion

The lessons of ten years of experimentation with deregulation in this industry and others are relatively clear. Significant gains can be achieved by freeing regulated industries from the expensive and cumbersome constraints of regulatory agencies if, and only if, the antitrust laws are subsequently applied with vigor. As experience in the airline industry demonstrates,⁶² little is gained when lax antitrust enforcement allows the newly liberated marketplace to be dominated by the anticompetitive strategies of a tight, and perhaps interdependently cooperative, oligopoly. In the telecommunications field, where technological and organizational limits on competition set by the local service natural monopolies are so evident, the case is even stronger for conscientious and assiduous antitrust oversight aimed at maintaining a structure in which competition is the principal protector of the public interest.

At the present time, the risks of competitive harms likely to follow from RBOC entry into manufacturing are manifest and substantial, while the benefits of potential competition are both more speculative and less weighty. If technology and regulatory responses developed to the point where local exchange service itself became workably competitive, then the need for the current constraints would end. But today, there are simply no realistic and effective alternatives to the structural separation of markets embodied in the 1982 consent decree.

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1. United States v. Western Electric Co., 673 F. Supp. 525 (D.D.C. 1987) [hereinafter AT&T II], *aff'd in relev. part*, United States v. Western Electric, 900 F.2d 283 (D.C. Cir. 1990) [hereinafter Western Electric]. AT&T II reaffirmed the manufacturing and interexchange service restrictions, while lifting or modifying some of the other line-of-business restrictions.

2. Senate Concurrent Resolution 34 proposes that Congress consider allowing the RBOCs "to compete with other companies to provide information services, . . . to conduct research, to design, develop and market software, and to design, develop, manufacture and market customer premises and other telecommunications equipment." 135 CONG. REC. S5047 (daily ed. May 9, 1989); *see also To Permit the Bell Telephone Companies to Conduct Research on, Design, and Manufacture Telecommunications Equipment and for Other Purposes: Hearings on S. 1981 Before the Subcomm. on Communications of the Senate Comm. on Commerce, Science and Transportation*, 101st Cong., 2nd Sess. (1990).
3. We do not address the question whether it would be appropriate or even lawful for Congress to restructure a judicial decree under separation of powers doctrines.
4. The senior author was retained to evaluate the likely competitive effect of a lifting of the manufacturing restriction, and gave essentially this opinion to AT&T in the spring of 1990.
5. *See* AT&T II, *supra* note 1, 673 F. Supp. at 529-32 (reviewing consent decree under the terms of the decree's triennial review provision); *Western Electric*, *supra* note 1; P. TEMIN, *THE FALL OF THE BELL SYSTEM: A STUDY IN PRICES AND POLITICS* (1987); S. COLL, *THE DEAL OF THE CENTURY: THE BREAKUP OF AT&T* (1986); *see also* G.W. BROCK, *THE TELECOMMUNICATIONS INDUSTRY: THE DYNAMICS OF MARKET STRUCTURE* (1981).
6. The Department of Defense expressed opposition to breaking up AT&T on this ground. *See* S. COLL, *supra* note 5, at 186-88.
7. *United States v. Western Electric Co.*, 1956 Trade Cas. (CCH) ¶ 68,246 (D.N.J. 1956).
8. *See, e.g.*, *Matter of Carterfone*, 13 F.C.C.2d 420 (1968).
9. The FCC's failure effectively to regulate AT&T was thoroughly examined during the eleven months of trial that completed the government's case in chief and that led to the 1982 decree. AT&T II, *supra* note 1, 673 F. Supp. at 530-32; *see also* R.G. NOLL & B. M. OWEN, *The Anticompetitive Use of Regulation: United States v. AT&T* in *THE ANTITRUST REVOLUTION*, 290-337 (J.E. Kwoka & L.J. White eds. 1989).
10. This summary of the 1974 suit draws on the material in E. FOX & L. SULLIVAN, *ANTITRUST* 202-05 (1989).
11. *United States v. AT&T*, 524 F. Supp. 1336, 1372 (D.D.C. 1981).
12. *United States v. Terminal R.R. Ass'n*, 224 U.S. 383 (1912); *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973). The essential facility cases teach that a vertically integrated firm with a lawful monopoly at one vertical level arising from ownership of a unique and essential resource that cannot be duplicated is guilty of monopolization if it exploits that resource to its own advantage at the next level by denying any access to the monopolized facility or by granting it only on terms that put its competitors at an arbitrary or invidious disadvantage. *See* L. SULLIVAN, *ANTITRUST* 131 (1977).
13. 603 F.2d 263 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980).
14. *Id.*
15. *Id.*
16. *United States v. AT&T*, 524 F. Supp. at 1375.
17. For discussions of the economic analysis that lay behind the consent decree, see R. G. NOLL & B.M. OWEN, *supra* note 9, and Brennan, *Why Regulated Firms Should Be Kept Out of Unregulated Markets: Understanding Divestiture in United States v. AT&T*, 32 *ANTITRUST BULL.* 741 (1987).
18. *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983) [hereinafter AT&T I]; AT&T II, *supra* note 1; *Western Electric*, *supra* note 1. Cross-subsidization is perhaps the least obvious of the possible leveraging devices. Here is a hypothetical example: suppose personnel from *Western Electric* and AT&T BOCs worked

together to plan new switching equipment. The BOC was a lawful, regulated monopolist; it could recover all its costs plus a reasonable return from local rate payers. Western Electric sought to sell switching equipment not only to AT&T BOCs but to others also, and faced competition from foreign manufacturers. If planning and development costs that should be assigned to Western Electric could be successfully assigned to the BOC, these costs would be covered by the regulated returns from the monopolized segment. Western Electric, appearing to have lower costs than it actually experienced, could price down to its apparent costs when encountering foreign competition without appearing to have engaged in predatory, below-cost pricing. *See infra* note 36.

19. *See Competitive Impact Statement on Settlement with AT&T*, 1052 ANTITRUST & TRADE REG. REP. (BNA) 401 (1982).

20. The initially twenty-two (local) Bell Operating Companies were reorganized into seven Regional Holding Companies in 1983. *United States v. Western Electric Co.*, 569 F. Supp. 1057, 1062 (D.D.C. 1983), *aff'd sub nom. California v. United States*, 464 U.S. 1013 (1983).

21. *AT&T II*, 673 F. Supp. at 600.

22. One must be cautious in predicting future technological developments, or the lack thereof. It is conceivable that cellular phone technology will reach the point where users could connect through cellular devices to alternative, competitive microwave switching centers, thus ending the natural monopoly status of local exchange service. Knowledgeable observers, not foreseeing any such development in the near future, expect the natural monopoly to continue for some time. Separate reports by the Department of Justice and its independent consultant, Peter Huber, were submitted to the court in connection with *AT&T II* and concurred in this conclusion. *See DEPARTMENT OF JUSTICE, REPORT AND RECOMMENDATIONS CONCERNING THE LINE OF BUSINESS RESTRICTIONS IMPOSED ON THE BELL OPERATING COMPANIES BY MODIFICATION OF FINAL JUDGMENT 97-98* (1987) [hereinafter *DEPARTMENT OF JUSTICE REPORT*] (cited in *AT&T II*, 673 F. Supp. at 538); P. HUBER, *THE GEODESIC NETWORK: 1987 REPORT ON COMPETITION IN THE TELEPHONE INDUSTRY* 3.44-3.46 [hereinafter *HUBER REPORT*]. Of course, if local service did at some future date cease to be a natural monopoly, and competitive options became generally available, there would no longer be a rationale for the line of business restrictions.

23. There is a massive literature on the character and effects of traditional regulation. *See, e.g.*, *TELECOMMUNICATIONS POLICY FOR THE 1990S AND BEYOND* (W. Bolter, J. McConnaughey, & F. Kelsey eds. 1984). Thoughtful commentary, such as R.C. HARRIS, *A REPORT TO THE CALIFORNIA ECONOMIC DEVELOPMENT CORPORATION* (1988), suggests moderate, incremental movement away from traditional regulation toward regulation better adapted to market forces. Such change could lead, in the course of time, to regulatory devices for sharing productivity gains between rate-payers and shareholders, or to other modes of mimicking markets more effectively than does traditional regulation. However, we are aware of no serious commentator who thinks all rate regulation of the local exchange sector of the telephone industry can or should be abandoned, given the current stage of technological development.

24. Most LATAs, extended metropolitan areas, are probably adequately configured to serve as markets of appropriate scale for regulated, local exchange service by a single carrier. Some, however, are much larger. While regulators in some states have accommodated some intra-LATA competition, others have not or have moved slowly. After divestiture, the California Public Utilities Commission, for example, decided against intra-LATA competition except for high-speed data services, and is only now exploring the possibility of facilitating other forms of intra-LATA competition that have long been technologically feasible. Keppel, *Local Phone Companies Feeling Heat*, *L.A. Times*, Jan. 5, 1990, at D1, col. 3.

25. *See supra* note 22. The Court of Appeals reaffirmed the district court's assessment that "only a minute percentage of telephone users can bypass the local exchange carriers for any of their calls." *Western Electric*, 900 F.2d at 295.

26. *See AT&T II*, 673 F. Supp. at 538; *see also HUBER REPORT, supra* note 22, at 2.2.

27. *See Kahn, Deregulation: Looking Backward and Looking Forward*, 7 *YALE J. ON REG.* 325, 328 (1990); *see also R.G. NOLL & B.M. OWEN, United States v. AT&T, An Interim Assessment*, in *FUTURE COMPETITION IN TELECOMMUNICATIONS*, 172-86 (S. Bradley & J. Hausueon eds. 1989).

28. *Western Electric, supra* note 1, 900 F.2d at 304. A private branch exchange is the equipment used by a telecommunications customer, such as a corporate office or a law firm, to switch incoming calls from the local exchange to individual extensions within the customer's premises.

29. AT&T's share of various transmission equipment and media segments now ranges from 17% to 49%, and RBOCs now make about 40% of their aggregate purchases from firms other than AT&T. HUBER REPORT, *supra* note 22, at 15.4-15.6.

30. Before the decree, AT&T used its vertical integration to supply all of its own needs in this segment until 1980. In that year it approved Northern Telecom as a supplier. Post-decree changes have been profound. As a result of new entry and investment stimulated by the decree, AT&T's share of central office switches fell from over 95% to 50%. HUBER REPORT, *supra* note 22, at 14.9 & Table CO.6 Competition, moreover, has resulted in the price per line of some central office switches falling by as much as 50%. *Federal Telecommunications Policy Act of 1986: Hearings on S. 2565 Before the Senate Comm. on Commerce Science, and Transportation*, 99th Cong., 2d Sess. 94, 96 (1986) (Statement of Douglas H. Ginsburg). One firm, GTE, has withdrawn, but several other firms capable of supplying central office switches (Siemens, Ericsson and Plessey) have already entered in addition to Northern Telecom. Other capable competitors, such as Alcatel-Thomson, CGE-ITT, Italtel/Telettra, Telenoka, NEC, Fujitsu, and Hitachi, are currently probing for opportunities to supply RBOCs.

31. DEPARTMENT OF JUSTICE REPORT, *supra* note 22, at 162-63, 171-73 (cited in AT&T II, *supra* note 1, 673 F. Supp. at 560 n.159).

32. AT&T II, 673 F. Supp. at 601, n.330.

33. A Commerce Department study, released in August of this year, attributes indications that American firms are decreasingly competitive in telecommunications equipment to foreign market barriers faced by American firms and to the lack of a "skilled American work force." Bradsher, *U.S. Lag in Phone Trade Seen*, N.Y. Times, Aug. 17, 1990, at C3, col. 4. To the extent that America's disadvantage as an exporter is attributable to protectionist policies, these disadvantages may diminish over time, at least in Europe. Despite some American concerns that European integration may be adverse to American economic interests, initiatives aimed at making the EEC market a level playing field for all EEC suppliers of telephone equipment by breaking down member-state policies that favor their own suppliers may also make it easier for non-EEC suppliers to reach EEC markets. Millard & King-Johnson, *Recent Developments in Telecommunications Regulation in the EEC*, CLIFFORD CHANCE EC NEWSLETTER, Aug. 1990, at 1-6. See also *ABA Focuses on Various Issues Presented by European Integration*, 1479 ANTITRUST & TRADE REG. REP. (BNA) 278 (1990), which catalogs possible adverse effects of integration on American business.

34. Both the district court and the Justice Department noted the problem of common costs at various junctures. See AT&T II, 673 F. Supp. at 531 n.15, 568; *id.* at 531 n.16 (citing the Justice Department's memorandum of Aug. 16, 1981, at 46-47, 125, 161-62, 281-82, 285, 372).

35. By enabling an RBOC to price below its actual manufacturing costs but above apparent manufacturing cost as reported to the regulator, cross-subsidization disguises and thereby facilitates a form of predatory pricing which would be extremely difficult to detect under current antitrust tests for predation. Current predatory pricing law focuses almost exclusively on the relationship between price and cost first discussed by Profs. Areeda and Turner in *Predatory Pricing and Related Procedures Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697 (1975). See, e.g., *Matsushita Elecs. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 585 (1986). Profits gained from cross-subsidization could also be used to support other modes of predation, such as excess capacity, and predatory advertising.

36. Traditional rate regulation sets a target rate-of-return on an estimated rate base plus allowed expenses consistent with levels of investment, expenses and service. See generally A. KAHN, *THE ECONOMICS OF REGULATION*, Vol. 2 (1971). Any costs successfully shifted from manufacturing activities to the regulated natural monopoly would be paid for by users of the regulated service. Rationalized regulation, toward which some regulators are moving, would maintain these basic elements, but would attempt to rationalize the rate design process by pricing all services in reference to their own costs and by specifying performance objectives. Eventually, incentive regulation might be attempted by some regulators. If so, greater reliance would be placed on sharing productivity gains between the utility and its customers when the utility found ways to reduce costs. See R.C. HARRIS, *supra* note 23, at 34-35.

The possibility for cross-subsidization does not depend on regulators continuing to use traditional rate-of-return regulation. Under rationalized regulation RBOC incentives and opportunities for cross-subsidization and discrimination would be only marginally reduced. Nor would such a system necessarily be better at uncovering leveraging; that would depend more on the density, thoroughness and skill of the regulatory staff than on the regulatory philosophy. Incentive regulation would alter incentives. Costs shifted from a competitive segment to the regulated segment would still be covered by the rate-payers, but if the RBOC removed those costs again and if the regulators characterized the removal as a productivity gain under the incentive system, then the RBOC could still keep rates somewhat higher than its new, lower cost. This, presumably, would not reduce the incentive to shift costs in the first instance, but would perhaps reduce the RBOC's incentive to continue the cost shift over as long a period as it would have under a

traditional or rationalized system.

37. *See* 3 P. AREEDA & D. TURNER, ANTITRUST LAW ¶ 726e (1978). The regulatory objective and the skill of the regulatory staff would effect the extent to which distortion would occur. *See supra* note 36.

38. The Court of Appeals recently implied that, under the language of Section VIII (C) of the decree, such distortion is not relevant to the "Triennial Review." *See supra* note 5; *Western Electric, supra* note 1, 900 F.2d at 296-97. Under the Court's view, cross-subsidization would be cognizable under the Section VIII (C) procedure only when an RBOC possessed or threatened to obtain market power in the market it was seeking to enter.

The coverage of Section VIII (C) of the decree is not, however, the only question relevant to whether Congress should lift the manufacturing restraint. Regardless of the construction of the decree, cross-subsidization would do competitive harm whenever it sent distorting market signals in the non-regulated market, and that might well occur even if the RBOC entered with a relatively small market share and relatively little market power. The question of competitive concern is whether power in one market is being used to distort competition in another; if it is, competitive injury is manifest. *See* P. AREEDA & D. TURNER, *supra* note 37, at ¶ 726e. Moreover, distortion of price-cost relationships to the disadvantage of local rate-payers was a factor in structuring the decree. *AT&T II*, 673 F. Supp. at 556. Consequently, cross-subsidization may well violate the decree irrespective of the way in which Section VIII (C) is construed. Indeed, conventional analysis under Section 2 of the Sherman Act makes clear that leveraging power from a monopolized market to a vertically adjacent market violates Section 2 whenever that practice distorts competition in the adjacent market, and regardless of whether monopoly is obtained or threatened in the second market. *Berkey Photo, Inc. v. Kodak Co.*, 603 F.2d 263 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980); *see also* *Kerasotes Michigan Theatres, Inc. v. Nat'l Amusements, Inc.*, ___ U.S. ___, 109 S. Ct. 2461 (1989); *Sargent-Welch Scientific Co. v. Ventron Corp.*, 567 F.2d 701, 711-13 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978). Therefore, whatever a court concludes about the limits of the Section VIII (C) procedure, or the coverage of the consent decree, use by a RBOC of its local exchange natural monopoly power to distort competition in another market would independently violate Section 2. Sound competition policy requires that Congress give due consideration to all these factors when considering whether to lift the decree's ban on manufacturing.

39. *See* *AT&T II*, 673 F. Supp. at 553.

40. HUBER REPORT, *supra* note 22, at 1.15, 14.8, 14.13-14; JUSTICE DEPARTMENT REPORT, *supra* note 22, at 74-75, 169-70 (cited in *AT&T II*, 673 F. Supp. at 556).

41. *AT&T II*, 673 F. Supp. at 557.

42. *Id.* at 558.

43. *Id.* at 547; *see also* *Western Electric, supra* note 1, 900 F.2d at 299.

44. The business literature of the last decade is replete with publications that essentially amount to training manuals for management in ways to gain and exploit positions of power by sophisticated strategic moves. *See, e.g.*, M.E. PORTER, *COMPETITIVE ADVANTAGE: CREATING AND SUSTAINING SUPERIOR PERFORMANCE* (1985); F.E. WEBSTER, *INDUSTRIAL MARKETING STRATEGY* (1979); Caves & Porter, *From Entry Barriers to Mobility Barriers: Conjectural Decisions and Contrived Deterrence to New Competition*, 91 QUART. J. ECON. 241 (1977).

45. The counter-argument is that an RBOC, dependent as it is on the good will of regulators and political actors, would have a strong incentive to avoid even the appearance of socially harmful, inappropriate conduct. A similar argument might have been made about *AT&T* prior to the consent decree, but the history of *AT&T*'s pre-decree strategies do not lend the argument much force. A comparable example, perhaps, is the cross-subsidizing by *NYNEX* recently challenged by the FCC. *See* Order to Show Cause and Notice of Apparent Liability for Forfeitures, F.C.C. Docket No. 90-57, 5 F.C.C. Rcd. 866 (1990). In essence, *NYNEX* (which owns both New York Telephone and New England Telephone) was charged with self-dealing with unregulated subsidiaries in ways that enabled it to pass on overcharges to local exchange customers through access charges for connections to interexchange operators. *See* Andrews, *Settlement for NYNEX and F.C.C.*, N.Y. Times, Oct. 5, 1990, at C1, col. 3 (reporting that *NYNEX* agreed to pay a \$1.4 million fine and to lower access charges by \$35.5 million for one year in order to settle the FCC charge that *NYNEX* had "bought equipment at inflated prices from an unregulated *NYNEX* subsidiary"). That charges of leveraging against *NYNEX* will cost it regulatory and political good will as well as penalties can hardly be doubted. Indeed, New York State's Public Service Commission recently recommended that the agency consider forcing *NYNEX* to divest itself of its local exchange monopoly in order to preclude

leveraging. *See* Verhovek, *State Urged to Consider Removing New York Telephone from NYNEX*, N.Y. Times, Oct. 4, 1990, at A1, col. 5.

46. In reviewing the consent decree, the Court of Appeals takes the fact that the equipment market is already competitive as an argument for, not against, allowing entry; in its view, entry should be denied only when it will distort competition in the market entered, and the existence of competitive conditions may make such distortions less likely. *Western Electric*, 900 F.2d at 300. However, for reasons similar to those reviewed in sub-section (A) above, the court found that distortion was likely if RBOCs were permitted to enter manufacturing, even given existing structural conditions in manufacturing markets today. *Id.* at 56-67. Congress, of course, is not bound by the terms of the consent decree. It could give appropriate weight to whether there would be significant competitive benefit from allowing entry into manufacturing, a competitive benefit that might counterbalance the apparent competitive harm. *See supra* note 38.

47. *See* Steiner, *Economic Theories of the Effect of Potential Competition* in *ECONOMIC ANALYSIS AND ANTITRUST LAW* 342-46 (T. Calvani & J. Siegfred eds., 2d ed. 1988).

48. One might argue that other firms would be less likely to enter the manufacturing market than would RBOCs. However, those features which highly motivate RBOCs to enter are precisely the features which pose risks of competitive harm. *See supra* subsection IV. A.

49. Foreign firms that could enter are mentioned *supra* note 30. In this country, IBM would seem to have the skills and resources needed to enter the central office switching market, and might be motivated to do so if it could earn supra-competitive returns.

50. *See* AT&T II, *supra* note 1, 673 F. Supp. at 556 n.135, 561-62. No RBOC has thus far shown an interest in *de novo* entry into central office switching manufacturing and the Department of Justice, and the Huber Report, imply that entry, if it occurred, would be in the form of joint venture relationships. Industry observers generally assume that the technological changes that have been increasing the market share needed to attain efficient scale will continue to reduce the likelihood of *de novo* entry. The Huber Report points to economies of scale in the switching market such that even the largest RBOC buys less than the minimum switching equipment necessary to turn a profit. HUBER REPORT, *supra* note 22, at 14.8-14.16. It also notes that many foreign manufacturers have set themselves specific goals of an approximate 10% share of the U.S. market, making the likelihood of "dancing partner" relationships between the RBOCs and foreign firms even higher. *Id.* at 14.16-14.17. It may well be that direct *de novo* entry on a profitable scale in the central switching industry is not currently possible for any RBOC, and that vertical linkage (with foreclosure) is the only conceivable means by which even the largest RBOCs could enter this market.

51. *Matter of Carterfone*, 13 F.C.C.2d 420 (1968). Prior to *Carterfone*, telephone companies provided customers with access to the local exchange through a cable link and with the telephone that made the use of the link possible. Though there might be extra charges for special phones (touch tone, colors, etc.) or for other end-line equipment (amplifying devices, etc.), basic telephone rates covered the connection and the phone. *Carterfone* was the primer case in which FCC regulations sought to break this bundling and open the end-line equipment market to competitors. Although the issue was hard fought by AT&T, as cases after *Carterfone* were decided it became increasingly clear that AT&T could no longer successfully leverage its local service monopoly by tying end-line equipment to service provision. *See* *Litton Sys., Inc. v. Southwestern Bell Tel. Co.*, 539 F.2d 418 (5th Cir. 1976); *North Carolina Util. Comm. v. FCC*, 537 F.2d 787 (4th Cir. 1976). For commentary on these developments as they were occurring, see generally, the symposium, *Antitrust and Monopoly Policy in the Communications Industry*, 13 ANTITRUST BULL. 871 (1968); Note, *FCC Computer Inquiry: Interfaces of Competitive and Regulated Markets*, 71 MICH. L. REV. 172 (1972).

52. Imposed in *Second Computer Inquiry*, 77 F.C.C.2d 384 (1980), *recon.*, 84 F.C.C.2d 50 (1981), *further recon.*, 88 F.C.C.2d 512 (1981), *aff'd sub nom.* *Computer and Communications Indus. Ass'n v. FCC*, 693 F.2d 198 (D.C.C. 1982), *cert. denied*, 461 U.S. 938 (1983).

53. *See supra* notes 27-33 and accompanying text.

54. AT&T has some remaining advantage, no doubt, since so much of the installed base of RBOCs is AT&T equipment.

55. An RBOC integrating into manufacturing would have to decide whether to design a proprietary system tending to lock out manufacturing competitors or to use open standards specifying an interface system for all elements that competing manufacturers could meet. Since the consent decree there has been movement toward wider use of open systems. This is due, in part, to the vertical disaggregation achieved by the decree and, in part, to the growing internationalization of telecommunications technology. *See* S.

BESEN & G. SALONER, COMPATABILITY STANDARDS AND THE MARKET FOR TELECOMMUNICATIONS SERVICES, (Rand Corp. Paper P-7393, Management in the 1990s, Sloan School of Management, MIT May, 1988). Nonetheless, a firm deciding between proprietary and open standards faces complex tactical and strategic issues for which there are no obvious answers. *Id.*; see also Braunstein & White, *Setting Technical Compatibility Standards: An Economic Analysis*, 30 ANTITRUST BULL. 337 (1985). The movement toward open standards might prove fragile if significant structural change occurs in the industry.

56. See *supra* note 9.

57. A recent example of the delay in regulatory remedies can be seen in the FCC's six-year battle to force NYNEX to stop the cross-subsidizing that came to the agency's attention. See *supra* note 45; see also Burgess, *FCC: NYNEX Padded Millions in Profits; Agency Proposes Refunds, \$1.4 Million Fine*, The Washington Post, Feb. 9, 1990, at G1, col. 5.

58. See *supra* note 35.

59. AT&T II, *supra* note 1, 673 F. Supp. at 601.

60. New regulatory schemes can always be devised, of course, as is evidenced by the FCC's regulatory efforts in this industry. See *supra* note 52. But as the history of the industry also suggests, when the incentives to cross-subsidize are significant, new regulatory strategies beget new evasive strategies. Particularly now, in this era of deregulation, when regulatory resources and regulatory initiatives are being reduced, it would be risky to suppose that regulatory inventiveness could succeed in staying ahead of evasion strategies.

61. As competitive American markets become increasingly international, all participants, foreign and domestic, are under pressure to operate in ways that take advantage of global labor to minimize cost. Consequently, activities such as the manufacture of small electronic or telephonic equipment and standardized parts for more complex equipment are often performed abroad because labor costs are relatively low. Before competitive entry, AT&T's phone manufacturing was performed in the United States. After competitive entry, AT&T continued manufacturing here until price competition from foreign manufactures made movement offshore necessary. AT&T continues to do R & D and more complex manufacturing functions in this country. Foreign manufacturers linked with RBOCs would presumably have even fewer incentives than American firms to perform manufacturing or management functions in the United States.

62. See Kahn, *Deregulatory Schizophrenia*, 75 CALIF. L. REV. 1059 (1987).