

The Bell System Divestiture: Background, Implementation, and Outcome

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I. INTRODUCTION

The telephone industry in the United States started with the Bell patent in 1878. Telephones were introduced into many communities during the next twenty years. After the Bell patents expired, around the turn of the century, multiple telephone companies began operations in many cities. In many cases, these companies did not even interconnect, so people needed two or three telephone services in order to be in contact with all of their

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friends and customers. This chaotic situation also caused the carriers great financial difficulty.

In 1907, Theodore Vail, having been installed as president of AT&T after the “Panic of 1907,” proposed that telephone service in the United States be provided based on the philosophy of “one system, one policy, universal service.”¹ This concept involved monopoly provision of service, coupled with pervasive government oversight and regulation. It was promoted in advertisements from 1908 and formalized in the so-called *Kingsbury Commitment* of 1913,² when AT&T was allowed to operate without governmental interference, but agreed to stop acquiring telephone companies and to interconnect with others.

The Bell System followed that idea for half a century, fully integrating its systems and procedures to provide end-to-end service. In order to ensure a reliable supply of standardized equipment, it also designed and manufactured its own equipment. Bell Laboratories (Bell Labs)—created from a merger of the design department of the manufacturer, Western Electric, and the engineering department of the operator, AT&T—also embarked on an extensive and successful effort to perform the research necessary to promote technological progress in telecommunications.

Using this model, AT&T successfully expanded telephone service in the United States until the 1950s, when universal service was essentially achieved. During this period, the concept of “service” was the predominant value within the organization, becoming almost a religion. “Independent” telephone companies, mostly in rural areas, were made partners in the system, encouraged by generous “settlement” payments from long-distance service.

II. THE RISE OF COMPETITION

Starting in the 1960s, new technologies, many pioneered at Bell Labs, were stimulating competitive activities. There were four principal technologies that led to this: (1) large radio systems for carrying long-distance calls; (2) semiconductor devices built for computers that could be used for switches; (3) miniature connectors for telephones and other

1. See AT&T, 1907 Annual Report (1908); see also MILTON L. MUELLER, JR., UNIVERSAL SERVICE: COMPETITION, INTERCONNECTION, AND MONOPOLY IN THE MAKING OF THE AMERICAN TELEPHONE SYSTEM 4 (1996).

2. What is commonly referred to as the *Kingsbury Commitment* is a compilation of three letters memorializing an agreement between AT&T Vice President N.C. Kingsbury and Attorney General J.C. McReynolds. See LETTER FROM AMERICAN TELEPHONE & TELEGRAPH CO. TO ATTORNEY GENERAL, OUTLINING A COURSE OF ACTION WHICH IT HAS BEEN DETERMINED UPON; ATTORNEY GENERAL’S REPLY; [AND] PRESIDENT’S LETTER TO THE ATTORNEY GENERAL (Dept. of Justice, 1914).

terminal equipment; and (4) tone signaling, that allowed signals to be sent over the network after a connection was established.

Regulators, intent on limiting the rate of growth of the Bell System, tended to allow competitive entrance into various portions of the market, albeit slowly and unevenly. Competition began in the following areas:

- Large companies began building their own private microwave systems for internal communications;
- Telecommunications equipment manufacturers began building terminal equipment and customer switches that could be connected to the telephone network;
- Other manufacturers began trying, with some success, to sell equipment to the Bell companies; and
- MCI built a long-distance network using microwave radio systems, allowing people to make local calls to MCI's switches, and complete the calls by using tone signaling to get the necessary information to the MCI network. Others followed.

The last development was not based on new technology so much as on pricing distortions that had grown up over the years. For many years, technological advances had benefited long-distance services more than local services. In order to maintain the stability of local pricing, long-distance prices were allowed to remain well above cost, the difference being used to reduce the cost of local service. MCI's idea exploited this arrangement. It used its own long-distance network and paid Bell only the subsidized price for local access.

Bell objected furiously, guided in part by their sense of "service" and partly by financial considerations, but in a series of FCC and court decisions, Bell was gradually forced to give ground in a number of areas.

Terminal equipment—telephones, customer switches, etc.—was deregulated. Bell had strongly defended its "end-to-end service" mantra, but a series of FCC decisions (*Hush-A-Phone*³ and *Carterfone*⁴) weakened its position. It became apparent that customer-owned terminal equipment could be connected to the network without service degradation. The FCC finally adopted a set of interconnection standards and deregulated the provision of terminal equipment. Competition developed quickly, spurring innovation in that market. As a precursor of things to come, controversies quickly developed as to the location of the "network interface" where equipment was regulated on one side, and deregulated on the other side.

3. The FCC's initial order in the Hush-A-Phone matter is discussed in *Hush-a-Phone Corp. v. United States*, 238 F.2d 266 (D.C. Cir. 1956).

4. Use of the Carterfone Device in Message Toll Telephone Service, *Decision*, 13 F.C.C.2d 420 (1968).

This definition became increasingly difficult as more complex services evolved.

AT&T agreed to connect to MCI, and other long-distance carriers (e.g., Sprint). After strenuous complaints by AT&T and several court rulings, the FCC ordered MCI and others to pay the so-called Exchange Network Facilities for Interstate Access (ENFIA) rates for local access. These prices were higher than basic phone rates, but included less than half of the subsidy that AT&T's long-distance services contributed to local service.

Other manufacturers began to sell equipment to the Bell telephone companies. AT&T and Western Electric management attempted to suppress this, but some local Bell managers bought equipment from other manufacturers when they thought it superior to Western's.

In addition, data communications began to increase in importance. The line between computers and communications became increasingly blurred, but AT&T was prohibited from providing computer services by a 1956 consent decree.⁵ The FCC kept trying to draw bright lines between computers and communications without much success. In a series of *Computer Inquiries*,⁶ the FCC attempted to distinguish between "basic" and "enhanced" services, regulating the former and deregulating the latter. Despite many years of effort, these definitions were impossible to implement in a workable way. The major result was to prevent Bell from offering services that had "enhanced" components.

III. THE ANTITRUST SUIT

In 1973, the Federal government filed a lawsuit alleging that AT&T had: (1) illegally limited the kinds of connections and services MCI and others could get, and (2) illegally prevented other manufacturers from selling equipment to Bell companies.

The lawsuit wended its way through the legal system while all of the activities mentioned above were taking place, and finally came to trial in 1981. It should be noted that the allegation dealt principally with equipment provision and access for long-distance services, which were deemed competitive. The local exchange monopoly was recognized and accepted. The lawsuit was not intended to change that. In fact, the initial

5. *United States v. Western Elec. Co.*, 1956 Trade Cas. (CCH) para. 68,246 (D.N.J. 1956).

6. Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities, *Final Decision and Order*, 28 F.C.C.2d 267 (1970); Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), *Order*, 77 F.C.C.2d 384 (1980); Amendment of Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry), *Report and Order*, 104 F.C.C.2d 958 (1986).

settlement agreement (referred to as a Modification of Final Judgment, or “MFJ”⁷, which harkened back to the 1956 consent decree) attempted to draw a bright line between monopoly and competitive services, the former of which were to remain regulated, while the latter would be removed from regulatory oversight.

AT&T followed standard practice in dealing with the lawsuit, dragging it out with endless filings and hearings.⁸ When Judge Harold Greene took over the case, he vowed to move it along, and he did.

What were AT&T’s alternatives?

1. Fight the case to the end. If AT&T lost any significant part of the suit, it could lead to ruinous private litigation. AT&T initially did fight the case in court, but after comments by Judge Greene in response to a petition for dismissal in the summer of 1981, the company realized it probably could not prevail in court, and began to think about settlement.
2. Agree to some kind of injunctive relief that would have saddled AT&T with significant operational constraints. The injunctive relief scenarios proposed by the Department of Justice were so restrictive that the operations people at AT&T did not think that they could properly operate the business.
3. Give up Western Electric. This involved giving up most of Bell Labs, widely (if incorrectly) viewed as the crown jewel of the empire. Also, this did not solve the problem of MCI and long-distance competition. Finally, this was prominent in the minds of AT&T management, as it did not relieve AT&T of the restrictions from the 1956 consent decree preventing it from entering the computer business. They somehow believed that the computer business was the key to AT&T’s future, and that Bell Labs technology would allow them to become a major force in the industry.
4. Split off the monopoly telephone companies from the competitive long-distance and manufacturing businesses (divestiture), with the following implications, some positive and some negative:
 - Telephone service might be severely disrupted, which might take years to sort out and resolve. This loomed large in the minds of management and operations people who had spent their entire careers overseeing an

7. *United States v. AT&T Co.*, 552 F. Supp. 131 (D.D.C. 1982), *aff’d mem. sub nom. Maryland v. United States*, 460 U.S. 1001 (1983).

8. The Justice Department did its part here, as well, requesting information that required boxcars full of paper to provide.

integrated entity, and who placed great importance on service quality;

- AT&T would be freed from a restrictive consent decree dating from 1956, and would be allowed to enter the computer business;
- The local telephone companies would be prevented from offering long-distance services, so local and long-distance services could be effectively separated; and
- AT&T's long-distance services would be deregulated.

Obviously, alternative four was chosen. A number of difficult administrative, technical, and operational problems needed to be addressed and resolved.

A particularly difficult technical problem was defining the connection point between the long-distance and local companies. As in the case of terminal equipment deregulation, any conceptual line often ran through the middle of a piece of equipment, such as a switch. The long-distance companies wanted to be able to connect their lines to a so-called "Class 4" toll office, where their traffic could be concentrated before being delivered to the local telephone switch. AT&T asserted that these "Class 4" offices were the heart and soul of the long-distance network, and stripping AT&T of these assets would make it impossible for it to operate a long-distance network.⁹ The negotiations over the consent decree almost broke down over this issue, and it was finally resolved in AT&T's favor.

The number of regional companies needed to be determined. The MFJ did not specify this. If there were too few, it was feared AT&T would be accused of retaining its monopoly. If too many, the resulting entities might be too small to operate effectively. The balance was struck at seven. In the end it turned out to be too many, since subsequent mergers have reduced it to three.

The size and makeup of the local service areas—Local Access and Transport Areas (LATAs)—had to be determined. If they were too large, insufficient scope was left for the long-distance carriers, including AT&T. If they were too small, the local networks of the telephone companies would be disrupted.

Ownership of common switching and transmission systems needed to be determined according to rules that had yet to be developed. Much equipment was shared. It had to be assigned to one company and partially leased to the other, a particularly difficult task if competitive neutrality was to be maintained for long-distance carriers. All parties were very intent on

9. The underlying problem, which the lawyers negotiating the decree did not understand, was that in a fully integrated network, almost every toll switch was in part a "Class 4" and provided both toll switching and access to local switches.

owning as many assets as possible even though in some cases they did not need them all.

The local network switches had to be reconfigured to accommodate multiple interexchange carriers. This reconfiguration involved accommodating a different dialing plan, or allowing customers to pre-specify their interexchange carrier and routing the calls appropriately. Accomplishing reconfiguration required substantial software modifications to the electronic switches that served eighty percent of Bell's customers. The other twenty percent, still served by older electromechanical switches, could not access other interexchange carriers (except by using the old dial-up mode) until the switches were replaced.

Billing arrangements needed to be devised so that the local companies could bill AT&T's customers for long-distance services (as they had always done) without competitive disadvantage to other long-distance carriers.

Private line provisioning had always been done cooperatively between local telephone companies and AT&T Long Lines. After divestiture, this relationship needed to be formalized. This was the first major failure; it took a year for private line provisioning to return to an acceptable process.

The planning took two years, and divestiture may well have cost the \$20 billion that AT&T had been saying it would when defending the suit, but by then, who was counting?

IV. NEAR-TERM RESULTS

The conceptual framework envisioned in the MFJ did not survive the implementation of divestiture for very long. The monopoly/competitive distinction broke down almost immediately. Yellow Pages and cellular telephone service, both competitive businesses, were assigned to the "monopoly" telephone companies. This happened because the perception in the minds of most people at the time, including Judge Greene, was that AT&T had the better of the deal, and the local companies had been short-changed. The assignment of Yellow Pages and cellular to the local companies was an attempt to even the scales.

AT&T retained its dominant position in the long-distance market, albeit with declining market share. Despite the fact that long distance was now competitive, the FCC retained its jurisdiction and continued to regulate AT&T.

Nevertheless, the separation was accomplished successfully. All entities were able to operate and the American telecommunications system still worked, except for private line installations, which took a year to straighten out.

The local telephone companies were not content to stay in the local business and began agitating for relief almost immediately. They succeeded with the Telecommunications Act of 1996,¹⁰ where they traded their local monopoly for permission to enter the long-distance market.¹¹ Under the Act, access pricing was to be “cost-based,” setting the stage for years of controversy as to just what that meant.

V. LONGER-TERM RESULTS

After the 1996 Telecommunications Act, the FCC struggled mightily to force competition into the local markets by requiring the local Bell companies to lease their lines to others at regulated low prices. This effort ultimately failed, as might have been foreseen. Any arrangement that requires a provider of goods or services to rely on a competitor whose prices are arbitrarily set by a regulator at levels that the competitor believes are below cost is not a recipe that can long survive.

AT&T failed in its attempts to enter the computer market. It tried desperately, first by developing its own product, based on controllers that had been designed for telephone switching systems, and then by several ill-conceived acquisitions. It squandered billions of dollars on these ventures, under the misapprehension that its allegedly superior technology would overcome its lack of understanding of the computer market.

New technologies, in the form of digital cable systems and cellular services, ultimately provided effective competition in local markets.

Long-distance service was not viable as a stand-alone business. The long-distance carriers were ultimately absorbed by the local telephone companies, which also merged with each other. The original seven Regional Bell Operating Companies combined to form three companies (two large and one small).

The manufacturing arm of AT&T was unable to succeed without its captive telephone company market. Part of the reason was that the local telephone companies increasingly viewed AT&T as a competitor (which it was) and were reluctant to buy equipment from it. Finally, the unit was split off as Lucent Technologies.

Enormous investments were made, and much money lost, in building excess long-distance transmission capacity using fiber-optic cables. Technological changes made the conventional switching systems manufactured by the giant telecommunications equipment companies obsolete. The result of these forces was that Lucent Technologies and other

10. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) (codified as amended in scattered sections of 47 U.S.C. (2000)).

11. As should have been foreseen, this was a bad deal for them. The crown jewels of the Bell system were not Bell Labs—they were the local monopolies.

major telecommunications equipment companies found their main businesses disappearing. As of this writing, it is not clear how many, if any, of these companies will survive.

VI. CONCLUSIONS

The telecommunications environment in the United States has been so transformed by new services and technologies in the past twenty-five years as to be almost unrecognizable. It is, on balance, competitive and many new services have appeared. It is likely, however, that had divestiture never happened, the industry would have landed in much the same place:

- Terminal equipment, which could clearly be supplied competitively and easily connected to the network, had been deregulated and became competitive before divestiture;
- Manufacturing has been decimated by competition and technological changes unrelated to divestiture. AT&T, which had retained control of its captive manufacturer, was ultimately obliged to spin it off for business reasons;
- Long-distance services have become almost free, thanks to low-cost fiber-optic transmission systems;
- Local competition for basic telephone service is thriving, based on technologies that barely existed in 1982 (digital cellular and voice over IP on cable);
- Data communications has finally become a significant market, thanks to the Internet; and
- Video services are no longer separate from telecommunications, and are now fully part of the mix.

Every one of these changes happened as a result of technological change, not organizational rearrangement (although some regulatory changes would have been necessary to allow them to develop). Two of the three remaining Bell Operating Companies offer a full range of services, including wireless and high-speed Internet access, and are rapidly deploying equipment that will allow them to provide video services as well, putting them in full competition with the cable companies. Wireless services are also dominated by the two large Bell Operating Companies, now called AT&T and Verizon.

The national telecommunications organizational structure now involves more services than wireline telephony (Internet access, wireless, and video) and is essentially a duopoly instead of a monopoly. It has several regional companies on both sides, and manufacturing is not controlled by any of the service providers. The amount of regulation is significantly reduced, as most markets are now thought of as competitive.

The penetration of high-speed Internet access, although still growing, lags behind a number of other countries.

For all that, an enormous amount of money and effort was spent: operationally, on modifying the telephone network; administratively, on lawyers and consultants in regulatory proceedings and lawsuits; and financially, in investments that ultimately failed to deliver a return. All of this for little long term benefit. Perhaps, as a nation, we should think long and hard before imposing government-sponsored restructuring on major industries, even for apparently laudable objectives.