nation's leading supplier of PCS technology.[180] PCS, according to Motorola, will offer consumers "reliability and security comparable to conventional telephone service, [in addition] to the option of pedestrian mobility."[181] It will provide "wireless loop services"[182] allowing "subscribers to use existing telephones, answering machines, facsimile machines and modems while enjoying voice quality and grade of service comparable to existing wireline service."[183] One of the authors of the AT&T/MCI Report has made, or at least strongly implied, the same point in other writings.[184]

Intelligent Network. These capabilities include * * * features and quality comparable with the wireline network." Request for a Pioneer's Preference at 11, *In re* Request of AT&T for a Pioneer's Preference Concerning Personal Communications System, No. 90-314 (F.C.C. May 4, 1992). Al Grimes, president of APC, a partner in an MCI PCS trial, was quoted in an MCI press release as saying that" PCS will demonstrate it provides the high quality, accessible service the American consumer deserves." *MCI and APC to Launch National PCS Test*, PR NEWSWIRE, June 28, 1993. Speaking of its PCS consortium, MCI's President and COO Daniel Akerson explained, "Such a network would offer a new form of high-quality, digital wireless voice and data communications." *MCI Proposes Consortium for National Personal Communications Network; Files with FCC for Commercial Service by '94/Repeating Release for Points Needed*, PR NEWSWIRE, Nov. 9, 1992.

[180]*Motorola to Showcase Local Access Technologies at Wireless '94 CTIA Show*, PR NEWSWIRE, Feb. 24, 1994.

[181]*Ibid.*

[182]*Ibid.*

[183]*Ibid.*

[184]As recently as July 1993, Mr. Hatfield predicted "that, in the future, consumers will increasingly want to get the same services *** from their radio-based systems as they get from their landline system." Dale N. Hatfield, *Future Success in Wireless Communications Will Depend on Intelligence in the Network, in* WIRELESS COMMUNICATIONS FORUM 51, (J. Sharpe Smith ed., 1993).

III. CONSUMER DEMAND

The AT&T/MCI Report purports to find little consumer interest in switching to wireless or cable alternatives.[185] "In theory," the Report declares, "consumers express interest in new services that may be offered by a phone/cable TV company * * * [b]ut actual demand for most of the new features is very low, despite long term availability."[186] Consumers, in short, don't want competitive alternatives to existing phone service -- they are perfectly content with what they have now.

While flattering to incumbent telcos, it is somewhat surprising to find such a conclusion in this particular Report. After all, this is the same Report that insists that incumbent telcos refuse interconnection, delay service, engage in all sorts of anticompetitive conduct and jack up rates by cross-subsidizing money-losing ventures in adjacent competitive markets.[187] One might have supposed that such anticompetitive behavior would spur healthy demand for alternatives.

At least one of the two authors of the AT&T/MCI Report has reached that same conclusion, though he sets it out in a different publication. In a July 1993 article in the *Wireless Communications Forum*, Mr. Dale Hatfield unequivocally declared:

> [T]he public has already spoken very clearly -- voting with their hard earned dollars -- that it prefers wireless or tetherless access to the existing network services. It seems equally clear that the public will also want * * * advanced services * * * delivered to them on a wireless basis as well * * * [f]rom an economic or marketplace standpoint * * * the wireless industry is probably on a collision course with the wireline network. There is inevitably going to be more competition among landline and wireless providers.[188]

As noted above, both AT&T and MCI are betting billions of dollars on the same conclusion -- that demand for competing local exchange services will be robust and develop rapidly. The $17.5 billion AT&T has offered to pay for McCaw is surely backed by optimistic projections of how many people want wireless. Just days after the release of the AT&T/MCI Report, MCI Chairman and CEO, Bert Roberts, declared:

---

[185] AT&T/MCI REPORT at 115.

[186] *Id.* at 112-113.

[187] *Id.* at 193. ("There are, in fact, a large number of situations in which actions pursued by BOCs and/or their corporate affiliates for purposes of benefitting or gaining competitive advantage in an adjacent market have the effect of imposing costs and/or other burdens upon customers of the BOC's core monopoly services").

[188] Dale N. Hatfield, *in Future Success in Wireless Communications Will Depend on Intelligence in the Network*, WIRELESS COMMUNICATIONS FORUM 53-54 (J. Sharpe Smith ed., July 1993).

"Wireless communication is becoming an integral part of our daily lives, and demand is growing rapidly * * * Customers have been asking us to provide a totally portable communications service that meets their needs any time, anywhere."[189] As discussed above, other interexchange carriers, out-of-region telcos and wireless and cable concerns have reached identical conclusions. Indeed, today, far more new investment capital is flowing into local exchange competition than into long-distance competition. It is hard to justify all this activity with the argument that few consumers really want the service.

The AT&T/MCI Report doesn't justify it. The Report relies on a superficial analysis of an equally superficial consumer survey.[190] According to the survey findings, 84.1 percent of those sampled said that they were "satisfied" or "extremely satisfied" with their local telephone company; this figure was only 46 percent when applied to consumer satisfaction with the local cable television provider.[191] Consequently, the survey discovered that only 8.7 percent of those polled would be willing to switch to a cable company for the provision of their local telephone service.[192] Wireless companies generated only 28 percent interest,[193] and "one-

---

[189]*MCI Will Invest $1.3 Billion in Nextel to Offer Nationally Branded Wireless Services,* PR NEWSWIRE, Feb. 28, 1994.

[190]The survey, "Consumer Demand for Alternative Local Telecommunications Services," polled exclusively residential customers, and its results are neither published as a completed survey nor tabulated on a question by question basis. Additionally, the report often neglects to explain exactly which questions pertain to which graph (pp.107, 108, 110, 112, 113) and what answers place the respondent in the broad categories of satisfied, dissatisfied, loyal or disloyal. The survey also fails to show a margin of error, which cannot be independently calculated without the results of each question. There is no suggestion, except in one case (p. 106) of how many people actually responded to each question, leaving the reader to assume the impossible, that each respondent provided an answer to each question. The survey itself essentially establishes a dichotomy between local telephone service providers and cable operators. Its scope is so narrow, in fact, that it devotes no fewer than 13 of its 37 questions and seven of its nine charts (pp. 107-119) solely to the evaluation of the local cable operator. Thus, although the survey purports to "provide information about the *supply* characteristics of alternative scenarios" (p. 105), very few questions address such alternatives. The authors themselves question the basic validity of the survey: "These results were calculated using those who responded 'definitely' to the question. If the 'probably' responses were included, the percents were higher, for example 8.7% said they would definitely consider switching, while 45.3% said either 'definitely' or 'probably.' This reflects the vagueness of the answers with respect to 'probably consider'." (AT&T/MCI REPORT at 117 n.143).

[191]AT&T/MCI REPORT at 107, Figure 4.1.

[192]*Id.* at 110, Figure 4.3. This percentage is somewhat higher when the cable company offers price discounts as consumer incentives.

[193]*Id.* at 116, Figure 4.7.

wire" services, whether provided by the local telephone company or by others, were of interest to slightly more than 20 percent of those polled.[194]

Surveys of this kind are notoriously unreliable in the best of circumstances; the AT&T/MCI Report represents the art form at its worst. The sample is inadequate, results of individual questions are not published, and no margin of error is given. At a more fundamental level, however, the consumer survey in the AT&T/MCI Report makes the mistake that such surveys make all too often: it assumes that consumers can make intelligent choices about technologies they haven't yet seen. If no other lesson has been learned from the wireless experience of the last decade, that one should have been.

When the Bell divestiture was announced in 1982, AT&T was projecting that as many as 1.5 million customers might subscribe to cellular service by 1990.[195] In fact, by 1990 there were 5.3 million;[196] there are 14 million subscribers today.[197] Another 11,000 Americans sign up for cellular service every day.[198] Cellular subscribership alone is now projected to reach 35 million in the next decade,[199] while the FCC (joined by MCI's own CEO) cites estimates of over 60 million PCS users in the United States within 10 years.[200] Arthur D. Little predicts that PCS revenues will approach $40 billion, almost 40 percent of current total revenues of local telcos.[201] Overall, it is estimated that there will be approximately 86 million users of wireless services (voice, data, cellular or otherwise) by 1998.[202]

---

[194]AT&T/MCI REPORT at 116.

[195]Hardin, *Cellular Mobile Phone Fight Starts*, ELECTRONICS, Jan. 13, 1982, at 97. According to a 1993 article, experts at AT&T predicted "about a decade" ago that there would be 900,000 mobile telephones in use nationwide by the year 2000. Ervin S. Duggan, *in The Future of Personal Communications Services*, WIRELESS COMMUNICATIONS FORUM 13 (J. Sharpe Smith ed., July 1993).

[196]CTIA, THE WIRELESS SOURCEBOOK 5.

[197]Leslie Cauley, *Telecommunications (A Special Report): The Bottom Line*, WALL ST. J., Feb. 11, 1994, at R20.

[198]CTIA, DATA SURVEY 1 (Oct. 12, 1993).

[199]Aaron Zitner, *Cutting the Cords: Area Firms Scramble to Become Players in New Wireless World*, BOSTON GLOBE, Aug. 24, 1993.

[200]*In re* Amendment of the Commission's Rules to Establish New Personal Communications Services, 7 F.C.C. Rcd 5676, 5688 (1992) (internal citation omitted).

[201]CONNECTICUT RESEARCH, CONNECTICUT RESEARCH REPORT ON COMPETITIVE TELECOMMUNICATIONS, Dec. 1, 1993, at 2.

[202]G. Christian Hill, *Look! No Wires! The Cord Has Been Cut, and Communications May Never Be the Same*, WALL ST. J., Feb. 11, 1994, at R1.

As *The Wall Street Journal* recently noted, the "demand for mobility and for quick access to information has proved far vaster than expected."[203]

Demand for landline-based alternatives is likely to evolve equally fast. As discussed earlier, consumers in the one market (Britain) in which regulators have already unleashed cable telephony have responded eagerly. About 70 percent of U.K. households that subscribe to cable, and have the option of buying cable telephony, do so. In the United States, this currently would equate to 56.5 million subscribers, for a 41 percent penetration rate for all U.S. households.

There is no need to speculate dolefully about demand for CAP services. The AT&T/MCI Report is wisely silent on that subject. As we have seen, CAPs have initially targeted the very largest telecommunications users. There is every indication that demand will continue to grow rapidly. A survey by Andersen Consulting found that 45 percent of medium-sized business customers will use an alternative local exchange provider when given the choice.[204] Much of the demand analysis in the AT&T/MCI Report is simply a grab-bag of tiny issues, pumped up to make them look big. Several of the points raised support precisely the opposite conclusion to the one advanced by the Report. The Report reasons, for example, that brand loyalty will keep consumers faithful to incumbent telcos. This analysis simply ignores the basic fact that consumers are *already* served by more than one telecommunications company. Sixty percent of households subscribe to both cable and telephone. And as discussed above, AT&T and MCI are, or soon will be, offering competing local exchange services under their own names. AT&T serves roughly 101 million

---

[203]G. Christian Hill, *"Wanna Bet? Some Predictions for the Wireless Age -- and Our Odds That Those Predictions Will Come True*, WALL ST. J., Feb. 11, 1994, at R12. In response to a question before the California PUC regarding economies of scope, Hatfield in part responded that "I think the telecommunications industry, the information industry is changing so rapidly, and so forth, that static efficiencies sometimes are maybe not quite the way to look at the problem." Testimony of Dale N. Hatfield at 3819, In the Matter of Alternative Regulatory Frameworks for Local Exchange Carriers, No. I 87-11-033, (Cal. PUC Jan. 26, 1989).

[204]DEAN WITTER, TELECOMMUNICATIONS INDUSTRY: THE ERODING MONOPOLY 1 (Mar. 20, 1991).

customers,[205] about five-and-a-half times as many as Bell Atlantic, the largest BOC.[206] MCI alone serves 21 million customers,[207] more than any BOC.[208]

AT&T plans to market McCaw's cellular service under its own name.[209] In many surveys, consumers *already* rank AT&T as the best or second best cellular carrier -- even though AT&T does not yet offer cellular service.[210] In other reports prepared in support of different policy issues, AT&T has in fact emphasized the high "churn" of telecommunications users.[211] In an article discussing local bypass opportunities, two analysts note that MCI and Sprint at first estimated they would need a 20 percent price advantage to capture customers from AT&T. But "[a]s public perception of MCI's and Sprint's quality grew, this differential was steadily reduced."[212] Today, price competition has all but ended.[213]

---

[205]The figure associated with the term "customers" here more accurately refers to the number of presubscribed lines served by AT&T as of December, 1992. INDUSTRY ANALYSIS DIV., FCC, LONG DISTANCE MARKET SHARES: THIRD QUARTER, 1993, at 11, Table 4 (Dec. 1993).

[206]As of December 31, 1992, Bell Atlantic Corporation served 18.2 million access lines. USTA, PHONE FACTS 1993, at 21.

[207]Again, the figure here associated with the term "customers" more accurately refers to the number of presubscribed lines served by MCI as of December, 1992. INDUSTRY ANALYSIS DIV., FCC, LONG DISTANCE MARKET SHARES: THIRD QUARTER, 1993, at 11, Table 4.

[208]USTA, PHONE FACTS 1993, at 21.

[209]U.S. INDUSTRIAL OUTLOOK 1994, at 29-12.

[210]*AT&T/McCaw Merger Designed to Reduce Potential Conflicts*, MOBILE DATA REPORT, Aug. 30, 1993. The AT&T/MCI Report's own survey found that satisfaction with a customer's long-distance company is higher (86.2 percent) than for the local phone company (84.1 percent). AT&T/MCI REPORT at 107.

[211]*See, for example,* Michael A. Porter, Competition in the Long Distance Telecommunications Market 7, *attached to* Motion for Reclassification of American Telephone & Telegraph Company as a Nondominant Carrier, In the Matter of Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor, No. 79-252 (F.C.C. Sept. 22, 1993). ("customers feel free to change and are not impeded either by ignorance or switching costs; * * * changing improves customers' welfare, meaning that a competitor has made them an offer that is superior in price or value; * * * firms are indeed competing for customers' dollars rather than resting contentedly with their lot").

[212]Grandon Gill et al., *Bypass of Local Operating Telephone Companies: Opportunities and Policy Issues, in* FUTURE COMPETITION IN TELECOMMUNICATIONS 267 (S.P. Bradley and J.A. Hausman, eds., 1989).

[213]After all three long-distance carriers raised their rates in the summer of 1993 (one of several recent increases), MCI issued a statement that "[w]e do believe that competition has moved away from price. We think there is price stability in the industry now." Carla Lazzareschi, *AT&T Rate Hike Takes Aim at Businesses; Telecommunications: The Proposal, Which Requires FCC Approval, Would Have*

The AT&T/MCI Report further argues that customers will not switch to alternative local carriers because they will not want to change their telephone numbers. But people change phone numbers on a regular basis; some 17 percent of the U.S. population moves each year,[214] students go to college, children get married and people get divorced. Indeed, one obvious advantage of wireless service is that it makes numbers as portable as the phones themselves.[215] The suggestion that customers might lose their directory listings is equally weak. There are many private means of distributing directory information today, particularly given the Supreme Court's recent denial of copyright protection to telco white pages.[216]

Another of the Report's arguments for the supposed lack of demand for local competition seems to be that consumers prefer stand-alone equipment to network-based services.[217] This is simply a non-sequitur. Whether stand-alone equipment increases demand for network services or reduces it, there will still be demand. Consumers will still have to choose whether to stick with the incumbent phone company or switch to an alternative.

And of course, the record of direct competition between stand-alone equipment and network services proves that customers are quite willing to switch brands and to replace LEC services when it suits them. On business premises, the demand for private branch exchanges is much higher than that for LEC-provided Centrex alternatives. While local telcos have poured new funds into services like Centrex, private exchanges still far outpace and outperform central-office alternatives. The installed base of PBX lines and key telephone systems grew from about 20.5 million to 29.5 million and 20 million to 39 million, respectively from 1984 to 1993, while

---

Little Effect on Residential Calls, but Could End the Industrywide Price War, L.A. TIMES, July 20, 1993, at D1. In a similar statement, Sprint announced that "customers are looking for more than price * * * Sprint's approach is to differentiate itself through product and service offerings, not merely price." *AT&T seeks a hike in rates; Move follows years of phone-bill cuts*, BOSTON GLOBE, July 20, 1993, at 1. And the New York Times wrote: "now instead of slashing prices, the carriers have resorted to a contest of advertising muscle and clever marketing gimmicks in which specific discounts are offset by higher prices elsewhere." *Company Reports; Long-Distance Giants Find Strength Amid Price Wars*, N.Y. TIMES, July 23, 1993, at D1.

[214]U.S. BUREAU OF THE CENSUS, STATISTICAL ABSTRACT OF THE UNITED STATES: 1993, at 32 Chart No. 34 (1993).

[215]*New Medium, New Message*, THE ECONOMIST, Oct. 23, 1993, at 18.

[216]Feist Publication Inc. v. Rural Telephone Service Corp. Inc., 111A S. Ct. 1282, 1285 (1990).

[217]AT&T/MCI REPORT at 112-113. Using this logic, the authors would presumably claim that the virtual ubiquity of VCRs is conclusive evidence that consumers have no interest in cable television at all.

Centrex service only grew from 5 million to 8 million lines during the same period.[218]

One should note, finally, that the errors in the AT&T/MCI Report are circular and mutually amplifying. By assuming that there will be little demand for competing services, the Report guarantees that the projected costs of those services will be high. The Report arbitrarily assumes a 10 percent penetration rate for competing technologies, for example. Cellular telephony has already reached that penetration level *today*; far higher penetrations are now projected for the next generation of wireless services.[219] The Report's estimates of the costs of cable telephony likewise assume 10 percent penetration; but about 70 percent of the homes subscribing to cable in the U.K. have chosen cable telephony when it is available. By skewing demand estimates down, the Report skews costs up. Indeed, a conservative estimate on one side of the ledger (*e.g.*, demand) can easily trigger a spiral of pessimism, with costs over-estimated and demand then revised even further downward, and so on, until the last user on the network pays everything and gets nothing. That the authors of the AT&T/MCI Report readily fall into this trap is not surprising. As discussed in Chapter 2, they are quite convinced that everything in sight is a natural monopoly.

---

[218]NBI, U.S. PBX AND RELATED MARKETS: 1993, at 26 (1993).

[219]Using the projected 60 million subscribers or approximately 30 percent penetration rate that the FCC has predicted for PCS by the end of the decade, reduces the cost per subscriber figure by 15 percent, which for the business case would bring it down to $876 (not correcting for any other assumptions).

IV. HOW FAST DOES COMPETITION DEVELOP?

Much of the introductory summary of the AT&T/MCI Report and major parts of the body of the text address the pace at which competition evolves. The Report offers several time lines to prove how slow the evolution of competition really is. It is not altogether clear why this analysis is needed, since the Report also argues that local competition is economically impossible. If competition is not coming at all, it seems like overkill to spend time proving, in addition, that competition is not coming fast.

Overkill aside, the first and most striking feature of all the time lines in the AT&T/MCI Report is that they ignore the impact of divestiture. The Report baldly declares that "[e]ach of the seven regions is essentially in the same position today as the consolidated Bell System was at the time of the break-up."[220] The implication is that, so far as the possibility of competition and its pace of development go, nothing much really changed when the largest corporation in the world was broken into eight pieces in 1984.

Few independent observers agree. Divestiture in fact transformed the face of the industry. Pre-divestiture experience under a regulatory regime that in large measure accepted and endorsed closed networks and monopoly service contrasts greatly with post-divestiture experience under a regulatory regime that demands equal access and competition.

Before divestiture, any potential new entrant faced not only the largest corporation in the world, but an intricate regulatory regime that assumed, as do the Report's authors, that competition was inimical to the public interest. Divestiture changed that structure completely. In 1980, the old Bell System controlled 81 percent of local landlines;[221] today, a single Regional Bell controls between 9 and 12.6 percent.[222] GTE, a non-Bell that was not even a party to the Bell breakup litigation, is now the fourth largest provider of local telephone service in the nation, with 11 percent of domestic access lines.[223] And, unlike the RBOCs, GTE is not

---

[220]AT&T/MCI REPORT at 59.

[221]*Telecommunications in Transition: The Status of Competition in the Telecommunications Industry: A Report by the Majority Staff of The Subcommittee on Telecommunications, Consumer Protection, and Finance of the Committee on Energy and Commerce*, 97th Cong., 1st Sess. 208 (1981).

[222]In terms of access lines, the largest RBOC is Bell Atlantic which holds 12.6 percent of U.S. access lines, the smallest, Southwestern Bell has less than 9 percent. USTA, PHONE FACTS 1993, at 21.

[223]*Id.* at 21. If one includes GTE local access lines in Canada and Latin America (4.6 million access lines), GTE serves more local lines (21.4 million), than the largest BOC (Bell Atlantic 18.2 million). GTE, 1992 REPORT TO SHAREHOLDERS 8, 20 (1993); USTA, PHONE FACTS 1993, at 21. Much of its

barred from either manufacturing telecommunications equipment or providing long-distance services. Its aggregate telephone and non-telephone revenues far exceed those of the largest Regional Bell.[224]

Outside of the AT&T/MCI Report, these basic differences between market conditions before and after divestiture are always emphasized. Judge Greene has emphasized the fundamental difference between the "vast, vertically integrated"[225] Bell System of old and the post-divestiture BOCs. The old Bell System, Judge Greene notes, had "few powerful competitors;"[226] the BOCs, by contrast, are "faced with the most potent conceivable competitor: AT&T itself."[227] The D.C. Circuit Court of Appeals concurs: "[T]he BOCs are not AT&T, but seven independent and potentially competing companies."[228] As one of the AT&T/MCI Report's own authors has acknowledged in other writings, the breakup of AT&T was the "seminal telecommunications *policy* event in our generation."[229]

No such acknowledgment can be found in the AT&T/MCI Report, however. The Report consistently attributes acts by the pre-divestiture AT&T to post-divestiture BOCs.[230]

---

service area is rural, but the GTE Operating Companies (GTOCs) also serve such cities as Long Beach and West Los Angeles, California; Tampa and St. Petersburg, Florida; Lexington, Kentucky; Fort Wayne, Indiana; Erie, Pennsylvania and the entire State of Hawaii. 1 MOODY'S PUBLIC UTILITY MANUAL 1836 (1989).

[224]GTE, 1992 ANNUAL REPORT 23 (1993); USTA, PHONE FACTS 1993, at 21.

[225]United States v. AT&T, 552 F. Supp. 131, 187 (D.D.C. 1982).

[226]*Ibid.*

[227]United States v. AT&T, 552 F.Supp. at 1987. As the FCC's chief appellate counsel has remarked, AT&T "knows where all the bodies are buried, because it invented the game." Transcript of Hearing at 47-48, United States v. Western Elec. Co., No. 82-0192, (D.D.C. Apr. 18, 1991) (statement of Mr. Ingle). And as a practical matter, regulation today is much more effective because AT&T itself now plays the role of a "huge whistle blower." *Ibid.*

[228]United States v. Western Elec. Co., 993 F.2d 1572, 1579 (D.C. Cir. 1993).

[229]LEE L. SELWYN ET AL., THE STATE OF COMPETITION IN TELECOMMUNICATIONS, AFTER THE BREAKUP: ASSESSING THE NEW POST-AT&T DIVESTITURE ERA 155 (1991) (emphasis in original).

[230]For example, the Report explicitly blames the RBOCs for the slow development of interconnection and equal access: "[a]s they did prior to divestiture, the RBHCs will have the ability to leverage their essential services monopoly into these adjacent markets." AT&T/MCI REPORT at 5. The Report also states, more subtly this time, "[e]mploying litigation and political tactics, the Bell system (before divestiture) and the Regional Bells (after divestiture) have delayed -- if not blocked altogether --numerous pro-competitive initiatives." *Id.* at 6. In the CPE context, the Report states, "[t]he MFJ required that the BOCs divest themselves of *embedded* (i.e., in-place) CPE, and that these be transferred to AT&T at the time of the divestiture." *Id.* at 26 (emphasis in original).

Long Distance. -- Many readers will be surprised to learn from the AT&T/MCI Report that competition in the long-distance industry is now thirty-five years old. That, in any event, is what the Report's long-distance time line declares. The Report supplies 1959 as the start of long-distance competition -- the year that the FCC permitted large businesses to begin using private microwave systems.[231] The Report then informs the reader that it was not "until the 'equal access' process was substantially completed in 1989,"[232] that the transition to competition was completed.

No independent observer would take this chronology seriously. The authors of the Report have some trouble with it themselves. Their time line is marked by a curious little zig-zag at the year 1984. This too is said to mark the beginning -- the *second* beginning, apparently -- of long-distance competition.[233]

The real chronology is simpler. The FCC's 1959 ruling simply allocated spectrum to private microwave users -- who could use it for end-to-end private connections in *both* local or long-distance markets.[234] There was only one beginning to long-distance competition in the way that ordinary people use the term. It came much later -- in 1978 -- when the D.C. Circuit Court of Appeals ruled in the case known as *Execunet II*.[235] Before that, the FCC had consistently sheltered AT&T's monopoly over switched long-distance service. Only after the D.C. Circuit's ruling did the FCC hand MCI and others the right to interconnect with Bell exchanges. The divestiture decree signed in 1982 affirmed that sharp change and established a fast schedule for implementing equal access across the board.[236] Conversion to equal access was essentially complete in 1988 -- exactly ten years after Execunet and

---

[231] *Id.* at 6.

[232] *Ibid.*

[233] *Id.* at figure 1.4.

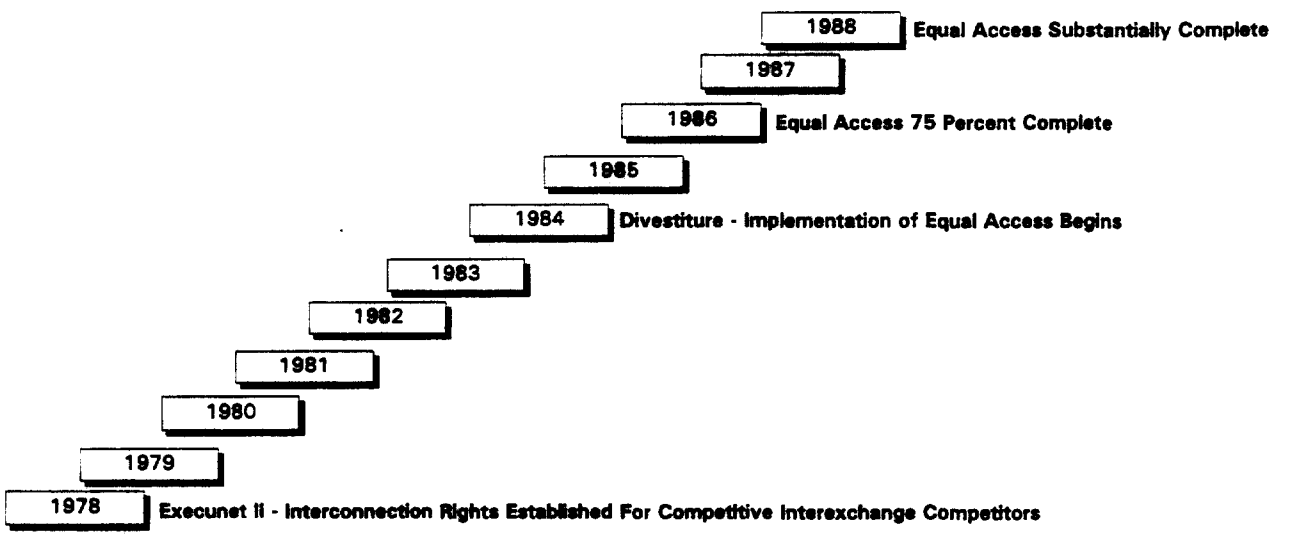
[234] Allocation of Microwave Frequencies Above 890 Mc, 27 F.C.C. 359 (1959), *recon. denied*, 29 F.C.C. 825 (1960). Prior to that time, the FCC's general policy had been to license microwave systems only to common carriers and other special entities like the military, right-of-way companies (railroads, pipelines and power companies) and state and local governmental agencies involved in police, fire and highway maintenance activities.

[235] MCI Telecommunications Corp. v. FCC, 580 F.2d 590 (D.C. Cir. 1978) ("Execunet II"), *cert. denied*, 439 U.S. 980 (1978).

[236] Almost immediately, AT&T began proclaiming that competition had arrived. In 1984, AT&T's Annual Report stated, "[t]he markets we serve are highly competitive and subject to rapid changes in technology and customer needs" and "[the long distance] market has become intensely competitive." AT&T, 1984 ANNUAL REPORT 5. In their 1987 Annual Report, AT&T characterized competition in the long-distance and telephone equipment markets as "vigorous." AT&T, 1987 ANNUAL REPORT 3 (1988). The 1988 Report said that "[c]ompetition in the long distance business is sufficiently strong that we should be no more regulated than our competitors." AT&T, 1988 ANNUAL REPORT 3 (1989).

and scarcely four years after divestiture.[237] The road to competition (such as it now is) in the long-distance market was not long and winding. It was short and straight. It lasted almost exactly ten years. FIGURE 3.

Figure 3. The Short Path to Equal Access



That is, of course, unless one is to believe the other writings of one of the authors of the AT&T/MCI Report, which repeatedly declare that AT&T's long-distance monopoly has never been seriously undercut at all.[238] FIGURE 4.

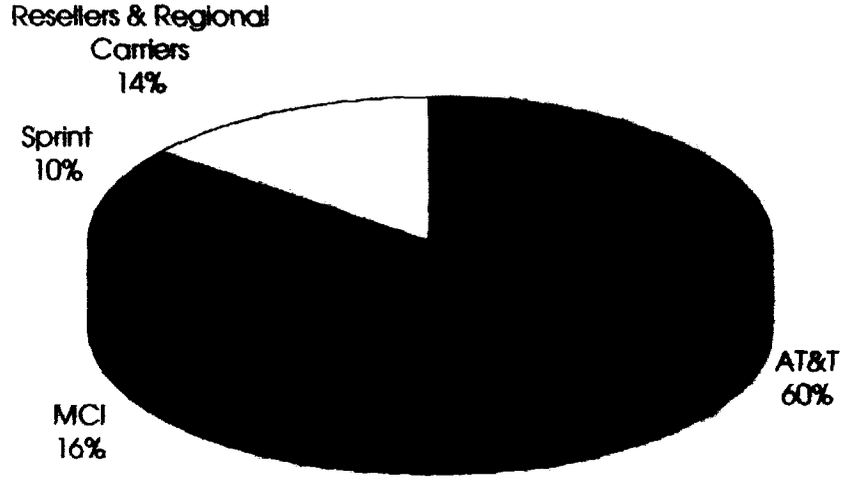
---

[237]Final Report of the United States Concerning BOC Schedules for Providing Equal Access in Response to MCI's Requests and Memorandum in Support of Motion for an Enforcement Order Requiring NYNEX to Accelerate Its Provision of Equal Access at 69, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Jan. 29, 1988).

[238]In 1984, for example, while AT&T was proclaiming that "the long distance market had become "intensely competitive," (AT&T, 1984 ANNUAL REPORT 7), Lee Selwyn warned that, "[t]he provision of intercity switched services is traditionally, and continues to be, characterized by significant economies of scale and scope. In fact, as a consequence of major advances in network transmission and switching technologies, economies of scale and scope may actually be increasing in magnitude." Lee L. Selwyn and Patricia D. Kravtin, *Long-Run Regulation of AT&T: A Key Element of a Competitive Telecommunications Policy*, TELEMATICS, Aug. 1984, at 12. Selwyn also predicted that "AT&T may maintain its position of considerable market power and dominance for some time to come." *Id.* at 11.

Figure 4

Long Distance Market Shares 1992 (Revenues)



Source: FCC, Statistics of Communications Common Carriers, 1992/1993 Edition at 7, Table 1.4. Note: There is some double counting due to the inclusion of resellers. See P. Kravtin and L. Selwyn, Long-Run Regulation of AT&T: A Key Element of a Competitive Telecommunications Policy, Telematics, at 13 (Aug. 1984).

Intralata Toll. -- The AT&T/MCI Report's treatment of intraLATA toll competition is stranger still. The Report indicates that most states have not yet decided to promote intraLATA toll. The Report says nothing of how fast competition can evolve in this market once authorized. The time line here is no line at all -- it is simply a list of states that have considered or adopted competitive policies.[239]

The debate here has nothing to do with technology or markets and everything to do with deliberate regulatory policy. Until 1984, most states chose to subsidize local service from intraLATA toll, just as the FCC for many years chose to subsidize local service from interstate revenues. To that end, most states deliberately limited competition in the intraLATA toll market. As one of the authors of the AT&T/MCI Report has noted elsewhere, these subsidies were maintained not by any antitrust conspiracy, nor by economic forces, but rather by deliberate policies to promote universal service.[240]

In the aftermath of the 1984 divestiture, those policies began to change. By August 1986, sixteen states had decided to permit intraLATA competition.[241] As of October 1993, 39 states allowed intraLATA toll competition.[242] FIGURE 5. As every independent observer recognizes, the time line for intraLATA toll competition depends entirely on regulatory choices made by individual states. There are no powerful technological or economic forces in play here; there is no long and winding road. There is only a simple choice of policy, which in these intrastate markets is made by state authorities.

Customer Premises Equipment. -- The AT&T/MCI Report's chronology of competition in markets for customer premises equipment (CPE) bears little relation to historical fact. The time line which the Report offers indicates that CPE competition emerged for the first time in 1984, at divestiture -- sixteen years after the FCC tried to launch it with its 1968 *Carterfone* decision.

---

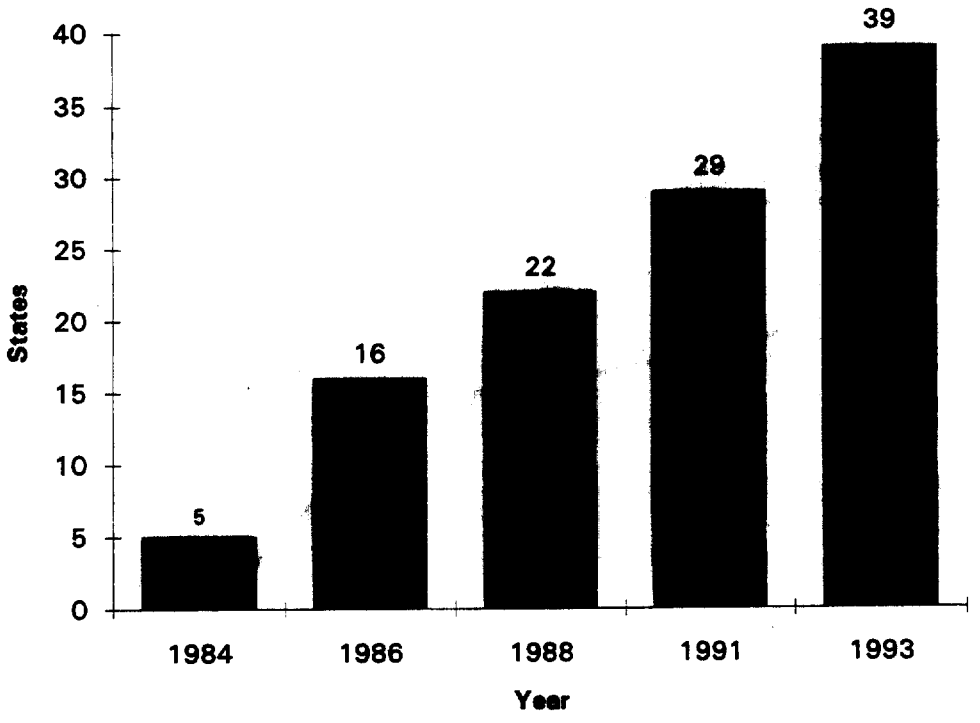
[239]AT&T/MCI REPORT at 11.

[240]As early as 1984, Hatfield noted that "[t]he costs of providing access services to individual subscribers or groups of subscribers are not recovered on that basis; rather they are broadly averaged in various ways." Dale N. Hatfield, *Solving the Last Mile Problem, in* TELECOMMUNICATIONS ACCESS AND PUBLIC POLICY: PROCEEDINGS OF THE WORKSHOP ON LOCAL ACCESS, 4 (1984). "These departures from cost-related pricing," Hatfield acknowledged, "have been justified primarily on the basis that they contribute to the achievement of universal service * * *" *Ibid.*

[241]Semilof, *IntraLATA Competition: Lata Barrier Falls*, NETWORK WORLD, Aug. 25, 1986, at 11.

[242]NARUC, REPORT ON THE STATUS OF COMPETITION IN INTRASTATE TELECOMMUNICATIONS 165-167 (Nov. 9, 1993).

Figure 5. States Allowing IntraLATA Toll Competition, 1984-1993[243]



In fact, the FCC did not promulgate standards for interconnecting CPE until 1975.[244] As every manufacturer of telephones, modems and fax machines knows, it was *those* standards -- Part 68 of the FCC rules -- that kicked off competition in CPE markets.[245] AT&T's market share declined *rapidly* thereafter -- well before

---

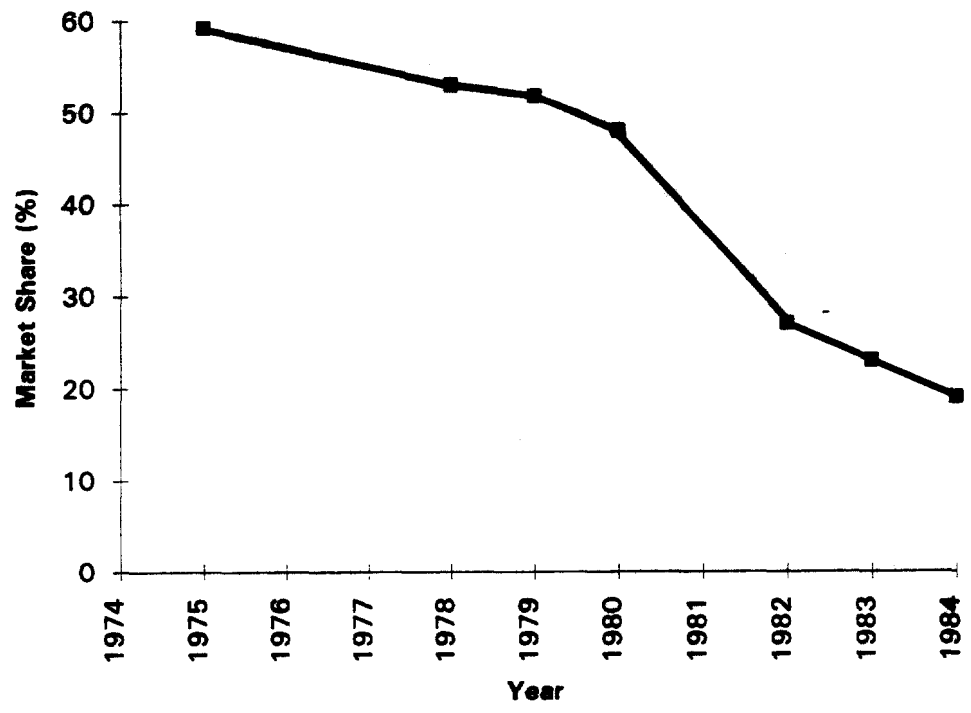
[243]Source: Alan Pearce, ***Plenty to Get Steamed About***, COMPUTERWORLD, June 6, 1984, at 12; Margie Semilof, ***Intralata Competition; Lata Barrier Falls***, NETWORK WORLD, Aug. 25, 1986, at 11; INDUSTRY ANALYSIS DIV., FCC, THE EFFECT OF COMPETITION AND REGULATION ON AT&T'S INTRASTATE TOLL PRICES, AND OF COMPETITION ON BELL OPERATING COMPANY INTRALATA TOLL PRICES 6-8, 12 (June 22, 1988); Semilof, ***IntraLATA Competition: Lata Barrier Falls***, NETWORK WORLD, Aug. 25, 1986; DONALDSON, LUFKIN & JENRETTE, INDUSTRY REPORT NO. 1226863, LOCAL TELEPHONE COMPETITION 13, Table 1 (May 18, 1992); NARUC REPORT ON THE STATUS OF COMPETITION IN INTRASTATE TELECOMMUNICATIONS 165-167.

[244]AT&T's Proposed Tariff Revisions in Tariff F.C.C. No. 263 Exempting Mebane Home Telephone Co. of North Carolina from the Obligation to Afford Customers the Option of Interconnecting Customer-Provided Equipment to Mebane's Facilities, 53 F.C.C.2d 473 (1975). Initially, this Registration Program did not include PBXs, key telephone systems, regular handsets or coin telephones, the program was extended to all forms of CPE the following year. The new regulations were affirmed in North Carolina Util. Comm'n v. FCC, 552 F.2d 1036 (4th Cir. 1977).

[245]Final transition to a fully competitive CPE marketplace, required one last important step: CPE sales by Bell and other carriers had to be "detariffed," so that these companies could compete on equal terms. The Commission did just that in its Second Computer Inquiry in 1980. Amendment of § 64.702 of the Commission's Rules & Regulations, 77 F.C.C.2d 385, 498-499 (1980).

divestiture. FIGURE 6. Indeed, competition in CPE markets was so well established before divestiture that the decree did not even bother to address "equal access" for CPE providers. CPE competition was already so secure that Judge Greene decided that BOCs, too, should be permitted to provide CPE in the post-divestiture market.[246]

Figure 6. AT&T PBX Manufacturing Market Share 1974-1984[247]



Central Office Equipment. -- The authors of the AT&T/MCI Report offer no time line at all for the other principal market addressed at divestiture -- the market for central office telecommunications equipment. Here there was no ambiguity about when the competitive kick-off occurred. Until divestiture, Bell and other major telephone companies relied largely on captive suppliers of equipment. Divestiture put an end to that cleanly, on the stroke of midnight on December 31, 1983.

---

[246]552 F. Supp., 131, 192-193.

[247]Source: *Telecommunications in Transition: The Status of Competition in the Telecommunications Industry: A Report by the Majority Staff of the Subcommittee on Telecommunications, Consumer Protection, and Finance of the Committee on Energy and Commerce*, 97th Cong., 1st Sess. 184-185 (1981); PETER HUBER, THE GEODESIC NETWORK: 1987 REPORT ON COMPETITION IN THE TELEPHONE INDUSTRY 16.4 (1987). Figures for pre-1984 are for Western Electric.

In 1982, AT&T sold 70 percent of the central office switches in the United States.[248] By 1992, its share had declined to 42 percent.[249] FIGURE 7. Before divestiture, AT&T's share of the Bell central office market was over 90 percent,[250] in 1992 AT&T's share of RBOC central office digital local line purchases was 53 percent.[251] Thus, here again, a sharp change in market conditions came in a very short period of time -- well under a decade.

Cellular Telephony. -- Cellular telephony is another market ignored in the time-line analyses of the AT&T/MCI Report. In 1984, when divestiture occurred, the cellular telephone market was in its infancy. Only 32 systems had been licensed; they served some 92,000 customers. Today more than 14 million Americans subscribe to cellular service.[252] FIGURE 8. Cellular carriers are signing up new subscribers faster than their landline counterparts.[253] As discussed in more detail below, growth has vastly exceeded even the most optimistic original projections.

---

[248]PETER HUBER, THE GEODESIC NETWORK: 1987 REPORT ON COMPETITION IN THE TELEPHONE INDUSTRY 14.7.

[249]NATA, 1993-1994 TELECOMMUNICATIONS MARKET REVIEW AND FORECAST 199-200.

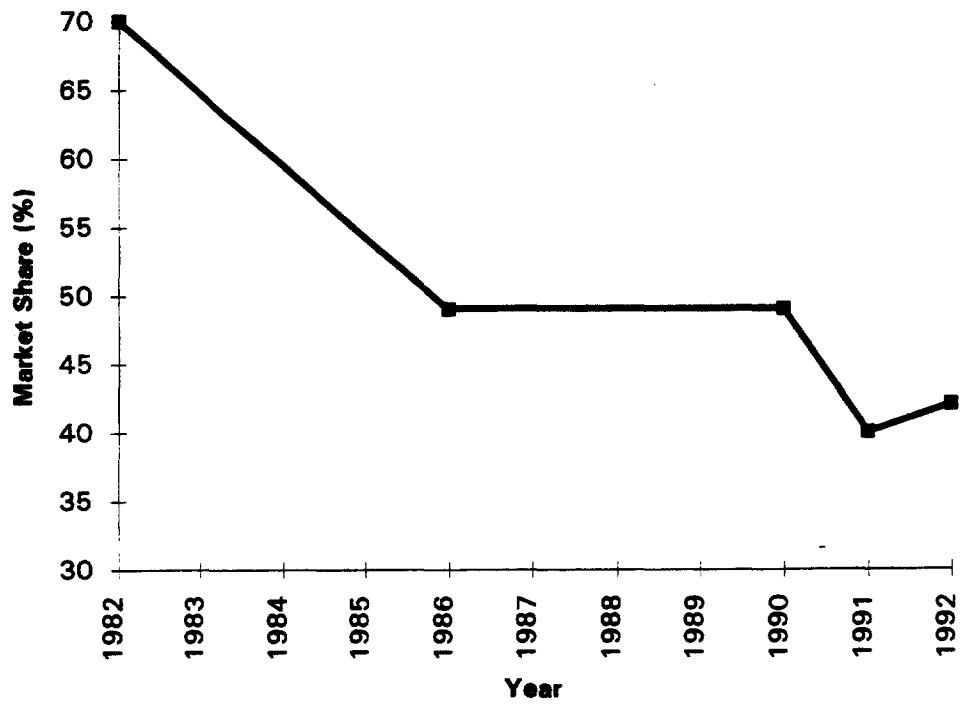
[250]*Telecommunications in Transition: The Status of Competition in the Telecommunications Industry: A Report by the Majority Staff of the Subcommittee on Telecommunications, Consumer Protection, and Finance of the Committee on Energy and Commerce*, 97th Cong., 1st Sess. 183 (1981).

[251]NBI, U.S. CENTRAL OFFICE EQUIPMENT MARKET 137, Exhibit 7-2.

[252]Leslie Cauley, *Tied to the Past? The Baby Bells Have Based Much of Their Business on Wired Services; Now What Do They Do?* WALL ST. J., Feb. 11, 1994, at R20.

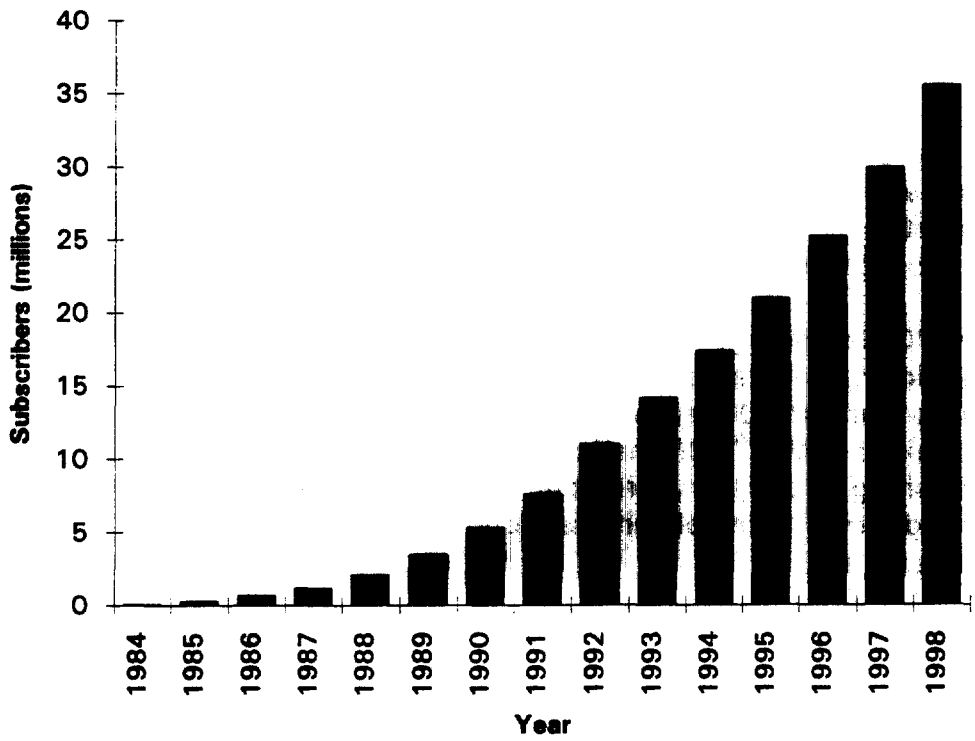
[253]CTIA, STATE OF THE CELLULAR INDUSTRY 4. O. Corr, *McCaw Strikes it Big Again -- Deal with AT&T Transforms Industry*, SEATTLE TIMES, Nov. 5, 1992 at A1.

Figure 7. AT&T Central Office Equipment Market Share 1982-1993[254]



[254]Source: PETER HUBER, THE GEODESIC NETWORK: 1987 REPORT ON COMPETITION IN THE TELEPHONE INDUSTRY 14.7, Table CO.4; NATA, 1992 TELECOMMUNICATIONS MARKET REVIEW AND FORECAST 78; NATA, 1993-1994 TELECOMMUNICATIONS MARKET REVIEW AND FORECAST 199-200.

Figure 8. Cellular Subscribers[255]



Equally telling is the fact that cellular licenses were issued to telco affiliates several years before they were issued to independent competitors like McCaw.[256] Yet by 1987, most independent licensees had overcome the headstart of their competitors.[257] Today, RBOC affiliates, even if taken together, serve only about

---

[255]Source: CTIA, THE WIRELESS SOURCEBOOK 5 (Summer, 1993); G. Christian Hill, *Look! No Wires! The Cord Has Been Cut, and Communications May Never Be The Same*, WALL ST. J., Feb. 11, 1994, at R1.

[256]In 1984, the FCC concluded that its two license policy had "resulted in a highly competitive market structure in which two carriers with different histories and different approaches vie with one another in the marketplace." In the Matter of Amendment of the Commission's Rules To Allow the Selection from Among Mutually Exclusive Competing Cellular Applications Using Random Selection or Lotteries Instead of Comparative Hearings, 98 F.C.C.2d 175, 196 (1984).

[257]EMCI, U.S. CELLULAR MARKETPLACE 1993, at 96.

half of all cellular subscribers. In every service area, non-wireline carriers have proved capable of competing with the local telco.

Here again, the time line proves a simple proposition. Once the regulatory decision is made to open a new telecom market to competition, competition can develop very fast indeed.

Competition in Other High Technology Markets. -- The AT&T/MCI Report neither acknowledges nor discusses the pace of change in other related markets driven by rapid technological change. In 1982, only 6 percent of families had VCRs in their homes; ten years later the figure had passed 80 percent.[258] **FIGURE 9A.** In 1980, almost no one owned a personal computer; by 1993, PCs were in place in over 31 million households or 35 percent of American homes.[259] **FIGURE 9B.**

The PC chronology is particularly relevant to any discussion of how quickly high-technology markets can change. In 1982, on the same day that it announced the Bell divestiture, the Department of Justice abandoned its thirteen-year-old antitrust fight to break up IBM.[260] IBM had been charged with bundling, closing its interfaces and establishing proprietary architectures. In 1984, IBM still towered over the computer industry. Some observers thought the road was clear for IBM to take over the market entirely.

They were wrong. IBM reached its zenith in 1987 when its stock hit 175 7/8.[261] But in the decade since 1984, more than 99 percent of all computing power has migrated out of mainframe computers and into dispersed, desktop machines.[262] **FIGURE 10.** Driven entirely by market forces, IBM has since extensively unbundled its products and services. In 1991, the company divided itself into thirteen separate and autonomous divisions.[263] IBM has spun off its printer and keyboard division (Lexmark) and has entered into numerous joint ventures with former rivals. "The idea of open systems -- that computers should easily share things and basically behave like friends -- is what everyone is aiming for," IBM's advertising now declares.[264] IBM's OS/2 is struggling with limited success against industry-dominant Microsoft Windows.

---

[258] BLOCKBUSTER, 1991 ANNUAL REPORT 8 (1992).

[259] U.S. INDUSTRIAL OUTLOOK 1994, at 26-17.

[260] DELAMARTER, BIG BLUE: IBM'S USE AND ABUSE OF POWER 24-25 (1986).

[261] *The Toughest Job in American Business*, THE ECONOMIST, Jan. 16, 1993, at 23.

[262] John Verity, *Deconstructing the Computer Industry*, BUSINESS WEEK, Nov. 23, 1992 at 90.

[263] *Ibid.*

[264] *IBM Advertisement*, FORBES, Nov. 23, 1992, at 202.

Figures 9a and 9b.[265]

Figure 9a. VCR Penetration, Percent of U.S. Households

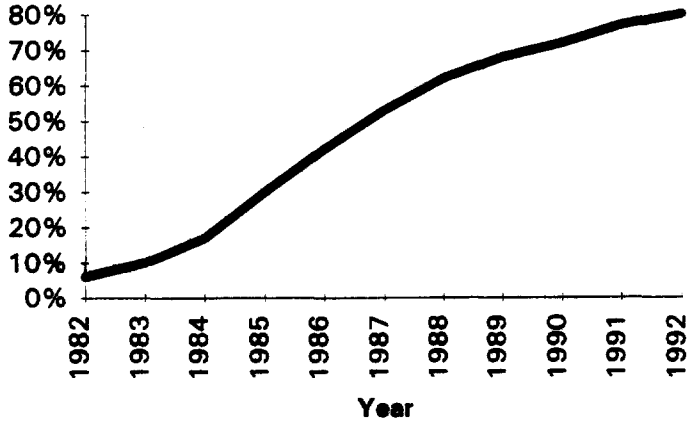
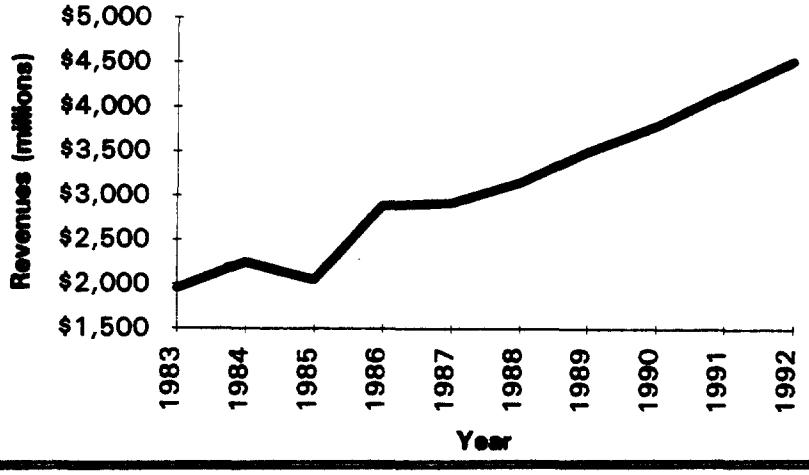


Figure 9b. Personal Computer Market

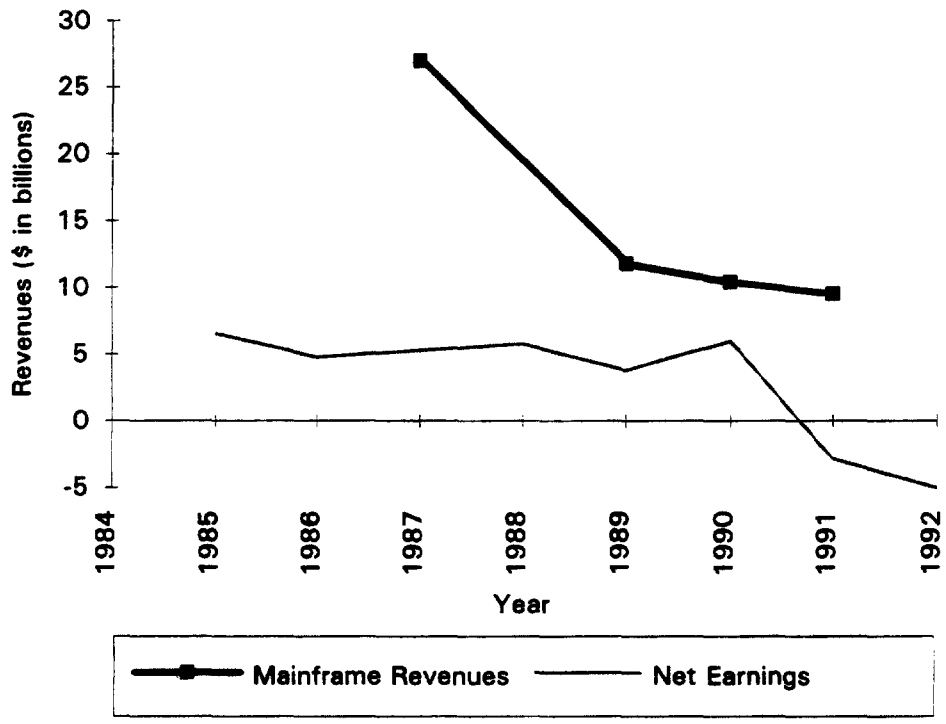


The lesson of IBM is important. Monopolies can disintegrate quickly when market forces or the regulatory environment change fundamentally. The market alone transformed the computer industry. The telecommunications industry is being

[265]Source: ELECTRONIC INDUSTRIES ASSOCIATION, ELECTRONIC MARKET DATA BOOK at 36 (1993); BLOCKBUSTER, 1991 ANNUAL REPORT, at 8.

transformed by equally powerful market forces unleashed by technology, divestiture and a fundamental shift in regulatory policies.

Figure 10. IBM Mainframe and Net Earnings for 1984-1992[266]



[266]Source: SHEARSON LEHMAN BROS., COMPANY REPORT NO. 817411, IBM (July 27, 1988); NOMURA RESEARCH INST., COMPANY REPORT NO. 1250632, IBM (Aug. 27, 1992); IBM, 1989 ANNUAL REPORT 1 (1990); IBM, 1991 ANNUAL REPORT AT INSIDE COVER (1992); SALOMON BROTHERS INC., COMPANY REPORT NO. 1386309, IBM (Nov. 8, 1993).

V. BOC ENTRY INTO ADJACENT MARKETS

The policy questions that the AT&T/MCI Report attempts to influence do not turn, in the end, on what degree of market power may still exist in the local exchange. As the AT&T/MCI Report itself concedes, the ultimate question is not market power, but whether market power can be extended.[267] The Report maintains that competition is sustainable only in adjacent markets from which BOCs are completely excluded.[268]

Chapters 6 and 7 of the AT&T/MCI Report present a familiar litany of charges that local telcos are prone to lie, cheat and steal, and regulators cannot catch them. Chapter 6 of the Report describes how BOCs will surely cross-subsidize their way into market dominance.[269] The Report's jargon here is as solemn as it is opaque -- there are bound to be "inter-temporal cross-subsidy flows,"[270] and "non-book" cross-subsidy flows.[271] Chapter 7 of the Report presents a lengthy list of other ways in which BOCs are sure to recapture the world without attracting the notice of any regulator.[272] There is much theory. There is almost no discussion of real-world experience.

But BOCs have in fact been involved in interexchange and adjacent markets for years. They already compete directly -- *today* -- against AT&T and MCI in two

---

[267] "[T]he relevant question," according to the Report, is whether the market power that they have permits BOCs to extend that power to dominate adjacent markets. AT&T/MCI REPORT at 33.

[268] *Id.* at 22-28.

[269] *Id.* at 187.

[270] *Id.* at 194-212. "Implicit cross-subsidy flows" include: disjunctions between regulated/unregulated activities (*e.g.*, BOC provision of digital central office switches, digital interoffice transport and SS7 while delaying introduction of ISDN); use of local exchange resources to facilitate future entry into an adjacent market (*e.g.*, the "official services" exception and BOC development of administrative intra-company traffic fiber plant); "personnel transfers" between regulated and nonregulated RBHC organizations; R&D benefits accruing to non-regulated activities, while R&D costs are charged to regulated activities and usage-based (rather than purpose-based) cost allocations (*e.g.*, acquisition of resources for strategic purposes while costs are allocated to regulated activities).

[271] *Id.* at 196, 212-14. "Non-book cross-subsidy flows" include: transfer prices designed to shift costs into, or to keep revenues out of, regulated LEC services, and use of customer proprietary network information (CPNI) and BOC marketing resources to aid activity in adjacent markets.

[272] *Id.* at 218. These include: "outright prohibition and highly restrictive interconnection policies; access discrimination -- denial, delay, overpricing and inferior access"; extensive capital and liquidity to fund BOC responses to competition; strategic use of depreciation and capital budgeting processes to supply capital for entry into future adjacent markets; flexible pricing of "competitive" BOC services; restrictions and prohibitions against resale of services and strategic pricing targeted at services subject to actual or potential entry.

specific markets. BOCs have also been permitted to provide some information services directly since 1988. At Judge Greene's insistence, BOCs have been permitted to market and distribute CPE since divestiture. BOCs have also been permitted to enter or remain in markets for wireless services and pay phones.

In short, there is already plenty of real-world experience bearing on BOC participation in adjacent markets. The Report's theories have been tested. The exam has already been graded. And the candidate failed. There is no evidence *at all* that BOCs have successfully leveraged any market power they might have into any of these adjacent markets. In all of these markets, prices have dropped, output has increased and competition has flourished with BOCs participating alongside unaffiliated competitors.

Corridor traffic. -- BOCs already compete today directly against AT&T and MCI in two specific interexchange markets. On April 13, 1983, Judge Greene allowed New York Telephone, New Jersey Bell and Pennsylvania Bell to provide interexchange service in these two geographic corridors,[273] one between New York City and northern New Jersey, the other between Philadelphia and Camden, New Jersey.[274]

What has happened in the eleven years since? By 1989, Pennsylvania Bell, New Jersey Bell and New York Telephone had converted 100, 98.7 and 94.8 percent of their lines, respectively, to equal access,[275] as directed by the Decree. (Nationwide, by comparison, BOCs had converted only 94.7 percent of their lines.)[276] The switched access rates charged by the BOCs offering corridor service were in general no higher than the rates charged by other BOCs in comparable markets. FIGURE 11. And the BOCs had *not* captured any dominant, or even very substantial, shares of this corridor traffic.

This body of real-world experience -- wholly ignored in the AT&T/MCI Report -- is remarkably informative. One need not speculate about what would happen if BOCs competed in interLATA markets against AT&T and MCI: such competition has been tried. And it has thrived. The record is as simple as that. A theory about what *should* happen in such markets that is flatly contradicted by what *has* happened is a theory that is just plain wrong.

---

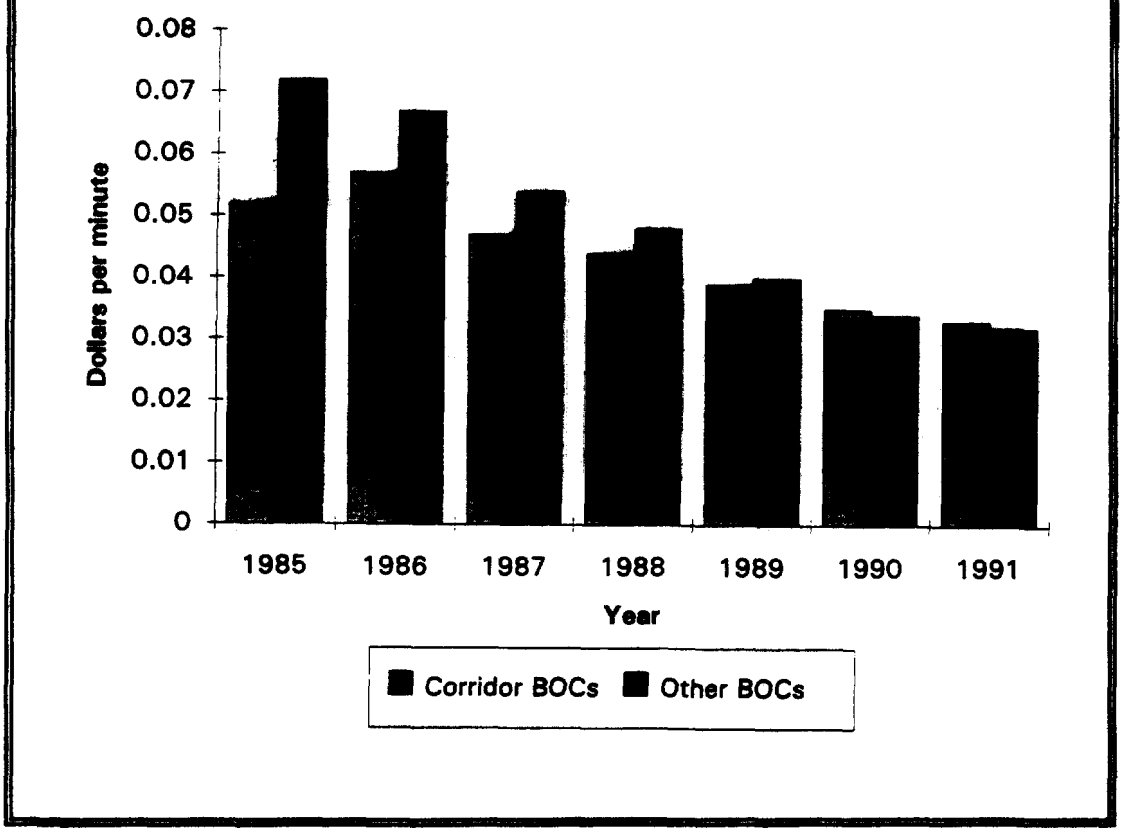
[273] *See* United States v. Western Elec. Co., 569 F. Supp. 990, 1018, 1021 (D.D.C. 1983).

[274] These corridor exceptions were approved so that existing customers could maintain the benefits of the Bell System's efficient network arrangements in the eastern corridors. *See Id.* at 1018 n. 142.

[275] FCC, TELEPHONE LINES CONVERTED TO EQUAL ACCESS 7-8, Table 4 (June 1990).

[276] *Ibid.*

Figure 11. Interstate Switched Access Revenues Per Minute, Corridor BOCs vs. Other BOCs[277]



Information Services. -- The theory of the AT&T/MCI Report has been tested a second time, in markets for information services. Since 1988, the BOCs have been permitted to provide videotex gateway, audiotex, and voice-mail services.[278] The information-services restriction was then lifted completely in 1991.[279]

---

[277]Corridor BOCs are New York Telephone, New Jersey Bell, and Bell of Pennsylvania. Sources: FCC, STATISTICS OF COMMUNICATIONS COMMON CARRIERS, 1985-1992 (revenues); minutes from FEDERAL-STATE JOINT BOARD, FCC, MONITORING REPORT (May 1993).

[278]United States v. Western Elec. Co., 714 F. Supp. 1 (D.D.C. 1988).

[279]United States v. Western Elec. Co., 767 F. Supp. 308 (D.D.C. 1991); United States v. Western Elec. Co., No. 82-0192, slip op. (D.D.C. Oct. 9, 1991). Information services include the assimilation and delivery of text and data through videotex gateways, audiotex or "pay-per-call" services, messaging which include voice mail, E-mail and fax, alarm services and financial services which include credit history, credit card verification and electronic funds transfer.