

ESSAY

Communications Policy Leadership for the Next Century

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I. Introduction

We are in the throes of a revolution. This statement is not intended to be melodramatic, but rather descriptive of the breathtaking moment in which we in the communications field find ourselves. Indeed, it even may be an understatement. Profound changes in communications will bring dramatic and fundamental changes to every aspect of every person's life. These changes will transform how we communicate, to whom we communicate, and from where we communicate. And, in so doing, these changes will alter the very nature of human interaction.

Everyone has begun to see such changes. Congress heeded the warning signs, which rumbled like an approaching storm, and tried to prepare for what would follow by passing the Telecommunications Act of 1996 (Act or 1996 Act).¹ The statute is bold in its aspirations—it seeks to change forever the legal and regulatory structure that governs the communications industry as we now know it, change the fundamental economics that drive the industry's growth, and spur technological innovation, all in a way that does not trample the American consumer. Thus the Act presents momentous challenges for those of us charged with implementing its provisions and overseeing such dramatic change.

The 1996 Act is lengthy and complex. It will be difficult for us to implement fully and to give effect to the Act's some 750,000 words, and it will likely be quite some time before we realize fully the fruits of our efforts. Along the way, there will be dark moments: doubts, recriminations, defections, and even failure. Yet, there will assuredly be successes in the form of innovative breakthroughs, new choices, and new services. The critical point is that implementation will require a long campaign, and we cannot be distracted by tiresome discussions about whether the Act is a success or failure merely two years after its passage.² Revolutions rarely take place overnight. Policymakers' efforts to open long-distance markets began over a decade ago. Yet notwithstanding the procompetitive benefits of this deregulation, AT&T still serves at least half of all long-distance customers.³ The airline and rail industries have encountered their own problems in the difficult, yet beneficial, process of deregulation.⁴ In assessing our progress in implementing the Act, we must focus on what is working, and what is not, striving always to make sure that if we inadvertently take one step backward in our efforts, we take at least two steps forward soon thereafter. By doing so, we will stay focused on the ultimate objective and not get mired in short-sighted or irrelevant skirmishes along the way.

Communications policymakers must not be content to respond and react to the dynamic changes that are before us. The rough surf of change would undoubtedly smash us against the rocks were we to do so. Instead, as in any

revolution, we must *lead*—boldly and decisively. While lawyers will debate the details of regulations, economists the most efficient terms and conditions, and technologists the most advanced solutions for this new era, communications policy *leaders* must concern themselves with the most profound change required by this revolution—the change in culture and focus required of regulators, industry players, politicians, and consumers. We have spent the better part of our careers and lives in the context of a highly regulatory paradigm, and it will require great effort and courage for us to abandon this paradigm to navigate the swift current of change in communications that is being unleashed by market forces and deregulation.

In this Essay, let me address how I believe we regulators should change. How do we transform ourselves from managers of regulation to leaders of revolution? What principles should guide communications leaders? What should communications leaders focus on? In offering answers to these questions, I will set out my own guiding principles for leading in the communications revolution.

II. The Principles of Communications Leadership

To prevail in the communications revolution, those of us charged with leadership responsibilities must take to heart several critical principles. First, we must be well-schooled in the fields of economics and competitive analysis, and be truly committed to the belief that competition and markets will ultimately prove superior devices for managing change. Second, we must be "technology wise," respecting at once the promise, practicalities, and uncontrollable development of technology. Third, we must be decisive—driven by facts and ideas, not emotion or special interest politics. And, in character, we must be humble enough to admit our errors quickly and courageous enough to change course when events demand. Most importantly, we must, like the industries we regulate, be creative and innovative. Let me elaborate on these principles.

A. Promote Competition

In the communications policy arena, deregulation and competition are quickly approaching motherhood and apple pie as the things most deserving of our unfailing support. Yet, when we look carefully at "procompetitive" policies urged from different quarters, we see that not everyone means the same thing. Policymakers and advocates continue to advance rules that are derived from an unstated belief that regulators are better equipped to decide what is best for consumers rather than consumers making their own choices in a competitive market. Dressing up such regulation in "procompetitive" clothing does not eviscerate its flawed underlying premise.

I believe devoutly that this great communications revolution demands a much more committed and sincere faith in consumers and free markets. Several factors compel this conclusion. First, if nothing else, I believe Congress commanded in the 1996 Act that we move smartly from a regulatory model to a procompetitive, deregulatory environment.⁵ Second, in my mind, world economic history tells us quite clearly that industrial greatness flows from free and competitive markets. This is the most poignant lesson of the Cold War. Markets are far superior devices than central planning models for controlling prices, spurring innovation, enhancing quality, and producing consumer choice. Third, we must yield to competitive markets because the blistering pace of technological change will tolerate nothing else. It is futile for bureaucratic regulatory agencies to attempt to keep pace with the demands of high technology markets. We cannot possibly predict accurately the direction and impact of fast changing technology, nor are we able to guess correctly whether or not consumers will embrace one technology or another. Yet, too many regulators mouth the words of the procompetition catechism, while still attempting to "manage" competition and technological evolution. As communications leaders, we must instead accept and be guided by a few truths about competition.

1. Competition Means Winners and Losers

It is axiomatic that in any competition someone must win and others must lose. In a truly competitive market, the firms that win are, as a general matter, those that provide the greatest value to customers at the lowest cost. As technology, consolidation, and other forces change firms' cost structures and as customer tastes (i.e., what they consider valuable) evolve, it should not be surprising that firms that were once the winners sometimes begin to lose. Losing is not inevitable; a firm may adapt to changing circumstances and thus prevent, or at least postpone, its own demise. But in a competitive environment, the market ultimately punishes those firms that fail to provide value or

manage their costs, even if these firms are the richest and most established firms in the industry.

We must accept this fact and avoid the traditional tendency of regulators to protect firms or industry segments in exchange for promised results for consumers. It simply is not possible to offer every firm a soft landing, yet those that adapt and offer high value to consumers will undoubtedly survive. The paternalistic and protectionist instincts of regulatory agencies are easily illustrated. For example, the FCC's "must-carry" and retransmission obligations were imposed on cable system operators to minimize the threat of widely available cable service to the continued viability of free, over-the-air broadcast television licensees.⁶ Similar obligations have been considered for other fledgling multichannel video providers out of concern about the impact on a few broadcasting firms.⁷ What one observes is that regulated entities tend to favor competition to the extent that it allows them to enter new markets. But these same firms are heard to scream foul when it comes to allowing other firms with newer, cheaper, and/or better products and services into their markets. As has become the custom, these firms rush to Washington and to state capitals, demanding that policymakers save them from competition. And, all too often, policymakers respond to the cries of these firms by imposing this or that condition on their newer rivals, all in the name of promoting the public interest and preserving the complaining firms' ability to compete.

One reason that policymakers find it difficult, even after setting appropriate ground rules, to allow the market to run its course is, ironically, their fear of ceding control to the marketplace. The Act commands policymakers and industry to move away from the monopoly-oriented, over-regulatory origins of communications policy and toward a world in which the market, rather than bureaucracy, determines how communications resources should be utilized. Yet, so often, we cannot actually bring ourselves to let go—to jump off our regulatory perch. It is true that risks await in free markets: risk that the consumers will be harmed by anticompetitive conduct on the part of firms with market power; risk that communications companies may be acquired, downsized, or driven out of business; and risk that some individuals will not vie successfully for the many choice jobs that competition will create.

Though these fears are not inconsequential, they nearly always are overstated and tend to paralyze us from taking action that would allow markets to flourish and competition to grow.⁸ Instead, we speculate about possible anticompetitive effects and then adopt policies intended to protect new entrants and consumers from them. Rather than protect these interests, however, we more often, in practical effect, handicap the market and postpone the arrival of competition and consumer choice. Communications leaders must not give in to these fears so lightly, but instead must have the courage to trust the market. Besides, if feared anticompetitive conduct actually occurs, it usually can be adequately addressed by the antitrust authorities.

As communications policy leaders we must resist the understandable temptation to calm our fear of the risks inherent in competitive markets by giving in to firms' demands to save them from competition. These firms ask us not to promote competition, but rather protectionism. More specifically, by shielding mature industry participants from the pressures of having to adapt to the presence of new entrants, we merely prevent these new entrants from offering customers greater value at lower prices, while simultaneously rewarding incumbents for providing no new value to the economy other than income for armies of lobbyists. Succumbing too often to pleas for relief from competition, or cries for regulatory action to "level the playing field" between providers of old and new services, will short-circuit the deregulatory process by which markets replace regulators as the ultimate allocators of resources within the industry. Conversely, when we condemn incumbents to their existing lines of business and services we often stifle innovation by sophisticated firms that may be uniquely positioned to provide significant benefits to consumers.

2. Understand Business, Economic, and Market Realities

In a competitive environment, decisions are made by business people and consumers. Thus, in order to promote national policies in a free market system, regulators must understand fully business and economic realities. We must take account of the variables that inform decisions by company executives—the returns on investment, the cost of capital, the efficiencies and synergies of choices. Only by understanding these variables can we policy leaders make thoughtful choices about how to satisfy national goals in a manner that is consistent with competition, rather than in a manner that is at cross-purposes with it. Of growing significance is the degree to which our decisions affect the flow of capital. If we are slow in our deliberations or ambiguous in our pronouncements, we will introduce uncertainty into the marketplace and, consequently, expose those who invest the capital that drives the economic engine to additional,

unnecessary risk.

There is an equally important reason that policy leaders should understand the business perspective: if we do not, we will find it difficult to distinguish between when the concerns of interested parties are substantial and genuine and when these firms are acting like Chicken Little—crying unnecessarily that the sky is falling. To avoid this problem, we absolutely must take the time to learn how business people see the market, why a company is or is not willing to invest another dollar in a given initiative or market, and what barriers exist to entering new markets.

Understanding the business and economic realities of the communications market will allow policy leaders to accomplish several things that I believe are critical to promoting competition:

Channeling Firms' Self Interest. There is an unfortunate tendency in the communications realm to rely on policies that depend for their implementation upon a company or an industry acting against its own self-interest.⁹ This reliance is entirely misplaced. It is a first principle of micro-economics that any firm will act in its self-interest and seek to maximize profits.¹⁰ Indeed, competitive markets *depend* on firms adhering to that principle. Communications leaders must recognize this basic economic premise and craft policies that are consistent with it. That is, we must put aside the traditional tendency to impose regulations that are at cross-purposes with businesses' profit-seeking incentives and instead pursue our objectives in a way that will prompt firms to make decisions (in their self-interest) that ultimately facilitate our public policy goals.

Addressing Social Policy Goals in Context. Markets and competition are primarily the domain of economics—not social policy. That is not to say that we cannot pursue social good in a competitive market. It does mean, however, that we must do so in a manner that is consistent with bedrock economic principles or we will be ignoring the realities of the market.¹¹ Among other things, communications leaders should be highly skeptical of policies that appear to expect (or coerce) altruism from profit-maximizing entities. Rather, to accomplish social good, we must find ways to convince firms that being a good corporate citizen is good for business and offer firms economic incentives to reach our social policy goals.

The Dangers of "Big Guy Myopia." Policymakers, especially those inside the Beltway, exhibit an unfortunate tendency to lose sight of the efforts of smaller telecommunications companies to enter new markets. I refer to this tendency as "big guy myopia."¹² The value of our procompetitive policies cannot be measured solely according to whether the top three interexchange carriers favor or flourish under them, just as we cannot measure such value based solely on the experiences of the Bell Operating Companies. The same is true of all other sectors of the communications world. Often the most creative energy in any emerging, innovative market comes from small- to medium-sized firms infected with the American entrepreneurial spirit.¹³ In promoting competition we cannot focus narrowly on large firms that have profited heavily from (and are thus somewhat invested in) the regulatory system. To do so is to risk making policies based on the past rather than on the future.

By understanding the business and economic realities of the communications market, and using this knowledge to channel firms' self-interest, address social policy goals in the broader competitive context, and avoid "big guy myopia," policy leaders stand a much greater chance of instituting procompetitive policies that are effective and that do not distort or inadvertently forestall the development of competition.

B. Respect the Promise and Practicalities of Technology

The second bedrock principle of communications policy leadership is that we must respect the practicalities, promise, and uncontrollable development of technology. The promise of technology is, in the long run, infinite. It is unassailable that nearly every major development in the communications industry has come on the heels of a new development or application of technology. MCI challenged AT&T's dominance in long-distance through creative use of microwave technology.¹⁴ Fiber optic cable revolutionized and spurred competition in long-distance and is doing the same in local telephony and multichannel video markets.¹⁵ Advances in cellular and PCS technology have rapidly ushered in a new era of mobile communications.¹⁶ Satellite promises to do the same. Furthermore, even though many thought it a physical impossibility just a number of years ago, digital

television promises to completely transform that industry and the viewing experiences of consumers.¹⁷

The evolution of technology is awesome and inevitable. I often say that we must take account of the fact that at any moment there is a kid in a basement or garage somewhere working on some new technology that will revolutionize our understanding of what technology can and cannot do in the world of communications. We must keep that in mind and make sure that we are not prevented from utilizing such breakthrough technology because we have committed ourselves to something else, or conferred a competitive advantage to a specific type or use of technology. It is foolhardy to try to pick technology winners or to try to anticipate consumer responses to such technology.¹⁸ Markets always have proven to be better than regulators at empowering consumers to bring technology and services to their highest and best uses.

On the other hand, there are real practical limitations of technology. Some may remember the margarine commercial that ran in the 1970s that said: "It's not nice to fool mother nature!" Well, in making policies in which technology is involved, it is not nice (or ultimately possible) to cut against the limits of science and the constraints of time and money. We must guard against what I call "techno-euphoria." That is, policy leaders must not be swept along by overblown promises that technology is the immediate panacea for all of our ills. Failure to respect the limitations of science and technology leads to ineffective policies based on faulty assumptions and the risk that the weakness of such policies may create problems for related policies. For example, as we all know, the confidence surrounding the belief that local competition would arrive shortly after the Act was passed can be attributed, in part, to the faulty assumption that cable companies need only flip a switch to become instant phone companies.¹⁹ If policy leaders had fully understood the limits of existing technology, they would have realized that cable telephony had real short-term limitations because of the way cable networks were configured. Cable telephony was not going to happen overnight.²⁰

All this said, communications leaders must strive to be "technology-wise"—meaning that they should make a concerted effort to study the details of networks and emerging technologies so as to make more informed policy decisions. Such study should, to the extent possible, involve field trips to the facilities of those we regulate to see first-hand how things are working.

In addition, communications leaders must recognize that the availability of capital poses a real constraint on whether and when new technology will provide alternative avenues for firms to enter new telecommunications markets. Thus, in order to understand how policies may (or may not) encourage market entry, policy leaders must be sensitive to how the capital markets are evaluating our efforts and the efforts of companies that might use market-opening technology.²¹

Finally, in order to capitalize on the promise of technology, we also must respect the need for speed. Communications markets abhor uncertainty and demand timely responses. A decision by a firm or a regulator in these markets that is right, but too late, might as well not have been made at all. Moore's law holds that the maximum processing power of a microchip, at a given price, doubles roughly every eighteen months.²² Policy leaders would be well-advised to adopt the urgency that Moore's law suggests in formulating policies for fast-moving communications and high technology markets.

C. Be Courageous and Decisive

The third principle that I believe should guide communications leaders in a dynamic, fast-moving communications market is that such leaders should act courageously and decisively. These markets and the firms that are operating in them are extremely impatient. Opportunity may knock more than once, but it may only stay for a brief second. Such an environment demands that regulators issue clear and timely decisions. We no longer have the luxury we enjoyed with regulated monopolies to spend years reaching a decision on a matter. The opportunity and the capital will not wait. To be decisive will require courage, because there are always forces that have a vested interest in delay. There often are also real political and litigation consequences to decisions. We cannot let such considerations bog us down or paralyze us from getting decisions to market. Firms in these markets need answers; even unwelcome answers are better than being left in limbo. As we were fond of saying when I was in the Army: "Right or wrong, do something. You can die just standing still."

To be decisive, a communications leader must act on ideas, principles, and substance and not be buffeted by emotional rhetoric or special interest concerns. Only in this way can we act quickly and unambiguously, for then we will have the confidence that we have made the best decision we can, based on the facts and arguments presented to us. Too often we address the concerns of groups that, with the best of intentions, have asked us to impose, modify, eliminate, or even retain a particular policy simply because these groups would benefit from such action. Representatives of these groups may pay lip service to our statutory obligations, the broader policy implications, and the political and economic context. They may make poor judgments about what can realistically be accomplished in the foreseeable future, or no judgments at all. If we allow the policy agenda to be driven by special interests, in the end we will do no good. Policy leaders may be pleased when we establish some constituent's pet program, but if such programs are not thoughtful and well-reasoned, they will not endure.

Policy leaders and those who lobby them must fight with ideas, rather than emotions. They must be creative and resourceful. In the communications arena, there is an unfortunate tendency to become wedded to specific policy proposals. We must, of course, have policy priorities and goals, but all too often, policymakers and advocates alike are unwilling to consider new ways of achieving these goals—even after the efficacy of the established ways is temporarily or permanently undermined by legal, economic, or technological developments. Advocates and policy leaders at all levels must find the courage to step away from failed or seriously weakened policies and replace them with new ones better suited to new circumstances.

As you may know, I have attempted to offer creative solutions to problems in my role as Commissioner. For example, I offered my thoughts on reforming the process by which the FCC implements section 271 of the Act, under which Bell Operating Companies may obtain authority to provide long-distance service within their operating regions after satisfying section 271's "competitive checklist." In a White Paper I issued in January of this year, I offered my thoughts on how to flesh out what I termed a "collaborative, multidimensional approach" to interpreting and applying section 271.²³ The goal of this approach is to resolve many checklist compliance issues for a given state well before an application for that state is filed. I also have set out principles that I believe should govern our pursuit of the worthy goal of promoting the involvement of minorities and women in communications. Specifically, I have urged advocates and policymakers to (1) pursue race- and gender-neutral policies; (2) encourage private-sector initiatives; (3) jettison the self-evident rationales of the past; (4) pursue economics-based initiatives; and (5) look for "win-win" policies.²⁴ By sharing my thoughts on these and other subjects, I did not wish to suggest that my ideas should constitute the final game plan with respect to these subjects. Rather, I have found that offering detailed thoughts on a subject is often the most effective way to stir productive debate and, ultimately, work toward achievement of policy goals. I encourage other policymakers and interested parties to do the same.

III. The Focus of Communications Leaders

In light of the above principles, where should communications leaders focus their energies in the coming years? I have a few suggestions:

Innovation. A true communications policy leader will recognize that the only constant in the communications industry is change. Innovation breeds new markets, and shatters the entrenched advantages of incumbency, as the recent history of communications has shown.²⁵ As such, policy leaders must, even as they strive to correct short-term problems, work to avoid slowing the pace of innovation in technology and service offerings, and promote such activity as much as possible.²⁶

Regulatory and Technical Convergence. Communications historically has been regulated (or not regulated) according to the method of transmission: telephone companies are regulated under Title II of the Act, radio companies are generally regulated under Title III, cable companies are regulated under Title VI, and so on. Such regulatory balkanization was sustainable in the era before digitalization, when services offered via one method of transmission could not, as a general matter, be offered via a second method of transmission in a manner that would lead customers to view the two services as substitutes for each other. Policymakers, however, are fast approaching moments of truth in which we will have to decide whether services similar to those traditionally offered over one medium should be regulated in the same manner as new services offered over another medium—or whether new services should be

regulated at all. Should cable and Internet telephony be regulated in the same manner as traditional wireline telephony? Should we allow traditional wireline telephone companies to take root in the rich soil of deregulation to grow new innovative services as have Internet service providers? Should cable and direct broadcast satellite services be regulated in the same manner? Why or why not? As technology erases the differences between these services, communications policy leaders will need to reconcile conflicting regulatory approaches in a way that reinforces forward-thinking, procompetitive approaches and discards outdated approaches.

Enforcement. Communications policy has historically emphasized prospective, prophylactic regulation, whereby companies providing one type of service were regulated with respect to the way they provided that service and were legally precluded from offering other types of services. This approach has tended to preserve the arbitrary regulatory distinctions that technological innovation acts to eliminate. Antitrust law, however, illustrates an alternative approach—one that emphasizes performance measurement and vigorous enforcement rather than prospective regulation. Communications policy leaders should look to enforcement as a means to protect the public against certain identifiable harms without hindering companies from improving their existing offerings and entering new markets that lie outside their traditional regulatory boundaries.

Regulatory Efficiency. Regulators at the state and federal levels have come under increasing criticism because of the glacial pace that often characterizes the regulatory process. All too often, companies find themselves begging regulators to make a decision—any decision—in order to resolve uncertainty in the industry, even if that means adoption of a policy that disfavors the companies begging for such action. These companies would rather cope with an adverse result than watch their business plans deteriorate in the face of regulatory uncertainty. Communications policy leaders must always strive to create new ways to develop and implement policies that will lead more quickly to well-reasoned results.

I firmly believe that by focusing on these areas, communications policy leaders will be able to sidestep the many "red herring" debates that would keep them from devoting their full attention to the achievement of a fully competitive, innovation-driven market in telecommunications.

IV. Conclusion

We all recognize that the development of the telecommunications industry will remain critical to our economy. I believe that communications policy leaders should facilitate this development so as to (1) promote competition, (2) respect the practicalities and promise of technology, and (3) focus on ideas, rather than emotion, as I have said here.

But policy leaders are not indispensable. I firmly believe that, even if policy leaders do nothing, competition and technology will march on, though perhaps in inefficient ways. As technology evolves, even the most entrenched monopolists will, in the long run, find themselves supplanted by newcomers who can build a better or cheaper mousetrap. This does not mean that policy leaders should avoid the hard work of tearing down the market barriers that law, economics, or history have erected, just that we should not delude ourselves that our actions are more important than those of competitors in the marketplace.

As we policy leaders tackle the intellectually and psychologically draining task of facilitating telecommunications reform, we need to muster the courage to yield our regulatory primacy to the market. I firmly believe that if we accomplish this task, those who look back on our efforts years from now will be able to do so with admiration.

* Michael K. Powell is a Republican member of the Federal Communications Commission (FCC).

1. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified in scattered sections of 47 U.S.C.A. (West Supp. 1997)).

2. The observation that implementation will be a complicated and lengthy process appears to be valid with respect to countries other than the United States. For example, in its September 13, 1997 survey of the telecommunications industry, the *Economist* magazine noted the "experience in those countries that have already begun to dismantle their monopolies—including the United States . . .—shows how hard it is to create competition in telephone networks. The old telephone monopolies will almost certainly still be powerful companies . . ."

years from now." Frances Cairncross, *A Connected World*, *Economist*, Sept. 13, 1997, at S3; *see also* *Hearing Before the Subcomm. on Antitrust, Business Rights, and Competition of the Senate Judiciary Comm.*, 105th Cong. (Sept. 17, 1997) ("[T]he task of introducing competition to these historically closed markets is an enormous and difficult one that could not, even under the best circumstances, have been accomplished by now.") (testimony of Mark C. Rosenblum, AT&T Vice President).

3. The Commission's third quarter 1997 analysis of AT&T's percentage of the long-distance market—based on switched access minutes, presubscribed lines and revenue—indicates a market share hovering around 50%. *See* Industry Analysis Div., Common Carrier Bureau, FCC, Long Distance Market Share: Third Quarter 1997 (Jan. 1998). AT&T's percentage of access minutes for the third quarter 1997 was 52.3%. *Id.* at 3. Furthermore, the company's percentage of presubscribed lines (for December 1996) was 63.3%. *Id.* at 9. Finally, the percentage of revenue (based on operating revenues of long-distance carriers only) for 1996 was 47.9%. *Id.* at 16.

Prior to the antitrust consent decree (the so-called Modified Final Judgment or MFJ) entered by Judge Harold H. Greene in connection with *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd*, 460 U.S. 1001 (1983), AT&T supplied approximately 80% to 90% of all long-distance service. *See* Paul W. MacAvoy, *The Failure of Antitrust and Regulation to Establish Competition in Long-Distance Telephone Service* 8 (1996).

4. Many airlines endured a period of reduced earnings during the transition to competition. Several incumbent carriers, like Braniff, Continental, Eastern, Pan Am, as well as many new entrants were dissolved or went bankrupt. The elimination of regulation on the industry also allowed incumbent carriers "to abandon routes and change the time of individual flights, and lifted price controls so that the airlines could adjust fares to meet the competition." *See* J. Gregory Sidak & Daniel F. Spulber, *Givings, Takings, and the Fallacy of Forward Looking Costs*, 72 N.Y.U. L. Rev. 1068, 1113 (1997).

The rail industry experienced its own unique fits-and-starts; deregulation had a significant effect on rates and abandonments. *Id.* at 1114. The industry also underwent a period of major consolidation: The Chessie System and Seaboard Coast Line partnered to form CSX in 1980; the Burlington Northern merged with the Santa Fe; and the Union Pacific partnered with both the Southern Pacific and the Chicago and North Western Transportation Company. *Id.* at 1114-15.

5. In the text of the 1996 Act, Congress directed the Commission to "*promote competition and reduce regulation* in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies." *See* Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, 56 (preamble) (emphasis added). In addition, the legislative history of the 1996 Act reveals that Congress intended "to provide for a *pro-competitive, de-regulatory national policy framework* designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans *by opening all telecommunications markets to competition.*" *See* H.R. Conf. Rep. No. 104-458 at 113 (1996), *reprinted in* 1996 U.S.C.C.A.N. 124, 124 (emphases added).

6. In 1993, the Commission adopted must-carry and retransmission consent rules pursuant to the Cable Television Consumer Protection Act and the Competition Act of 1992, Pub. L. No. 102-385, 106 Stat. 1460 (codified in scattered sections of 47 U.S.C.); *see also* Implementation of the Cable TV Consumer Protection and Competition Act of 1992, *Brdcast. Signal Carriage Issues, Report and Order*, 8 FCC Rcd. 2965, 72 Rad. Reg. 2d (P & F) 204 (1993). The must-carry provision requires cable companies to carry the signals of commercial and noncommercial television broadcast stations that are in the same "local" television market as the cable service provider. *See, e.g.,* Turner Brdcast. Sys., Inc. v. FCC, 117 S. Ct. 1174 (1997) (affirming the must-carry provision because, *inter alia*, "Congress' interests of preserving benefits of free, over-the-air local broadcast television, promoting widespread dissemination of information from multiplicity of sources, and promoting fair competition in market for television programming were important governmental interests for First Amendment purposes."); Thomas G. Krattenmaker, *Telecommunications Law and Policy* 354-76 (1994). The retransmission consent provision prohibits cable service providers and other multichannel video programming distributors from transmitting the signals of local television broadcast stations without first obtaining their consent. *Id.* at 343-54. For a general description of policymakers' efforts to forestall the development of cable, *see* Ithiel de Sola Pool, *Technologies of Freedom* 156-60 (1983).

7. For example, under H.R. 3210, the Copyright Compulsory License Improvement Act introduced by Rep. Howard Coble (R-N.C.), satellite broadcast providers, including direct broadcast satellite (DBS) and direct-to-home (DTH), would be required to comply with the same regulations that cable service providers are obligated to follow. In relevant part, the bill would require satellite broadcast providers to comply with must-carry rules and other regulations. *See* H.R. 3210, 105th Cong., §§ 10-11 (1997).

8. The MFJ limited the BOCs, after divestment, to the "business of supplying local telephone service." *See* *United States v. AT&T*, 552 F. Supp. 131, 186-95, 225-34 (D.D.C. 1982) (establishing line of business restrictions on the Bell Operating Companies after divestment), *aff'd*, 460 U.S. 1001 (1983).

9. For example, some would argue that the FCC's proceedings to implement section 271 of the Act, according to which the BOCs may apply for authority to provide long-distance service within their regions, comprise one such policy. *See* 47 U.S.C.A. § 271 (West Supp. 1997). In order to gain authority to enter the long-distance market, BOCs must demonstrate to the FCC that they have taken sufficient steps to open local markets and thereby help would-be competitors in the local market steal away the BOCs' own customers. *See, e.g.*, 47 U.S.C.A. § 271(c)(2)(B)(i)-(ii) (requiring that incumbent local telephone companies provide competitors with interconnection and nondiscriminatory access to unbundled network elements). This policy assumes that BOCs have stronger incentives to get into the long-distance market than they have to keep competitors out of the local market.

10. Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions* 1 (1970) (citing I Adam Smith, *An Inquiry Into The Nature and Causes of the Wealth of Nations* 421 (Edwin Canaan ed., 4th ed. 1925) (1776)); *see also* Ernest Gellhorn & William E. Kovacic, *Antitrust Law and Economics* 48-50 (1994).

11. I, for example, have made clear my support for the universal service programs that the FCC has a duty to implement under the Act. *See* Federal-State Joint Bd. on Universal Serv., *Fourth Order on Reconsideration*, CC Dkt. No. 96-45, Access Charge Reform, Price Cap Review for Local Exchange Carriers, Transport Rate Structure and Pricing, End User Common Line Charge, *Report and Order*, CC Dkt. Nos. 96-262, 94-1, 91-213, 95-72, 1997 WL 797532 (Dec. 30, 1997) (separate statement of Commissioner Michael K. Powell). At the same time, however, I have said that we must diligently police the growth of universal service programs, which are funded by telecommunications companies, lest such growth imperil carriers' efforts to bring the benefits of competition and innovation to consumers. If subsidy programs get out of hand, they can dramatically raise competitors' costs and skew the economic incentives to enter markets. I also believe strongly that policies that assist and or promote minorities and women can be very good for business. *See* Michael K. Powell, *Lessons from the Underground Railroad*, Speech Before the Douglass Policy Institute, Washington, D.C. (Feb. 17, 1998) (transcript available at

<<http://www.fcc.gov/commissioners/powell/>>) [hereinafter *Lessons from the Underground Railroad Speech*]; Michael K. Powell, *Speech Before the NAB Radio Group Head Fly*, Washington, D.C. (Feb. 18, 1998) (transcript available at

<<http://www.fcc.gov/commissioners/powell/>>) [hereinafter *NAB Speech*].

12. *See, e.g.*, Michael K. Powell, *Speech Before the America's Carriers Telecommunications Association*, McLean, Va. (Dec. 15, 1997) (transcript available at <<http://www.fcc.gov/commissioners/powell/>>).

13. Many of these smaller companies are making competitive inroads by offering wireline, wireless, Internet access, and other services—sometimes in geographic areas outside what are generally considered to be the top markets. For example, the Association for Local Telecommunications Services (ALTS) reports that there are over 100 competitive local telephone companies which control 1.4 million access lines and which generate \$2.7 billion in revenues. *En Banc* Presentation on State of Local Telephone Competition Before the FCC 8 (Jan. 29, 1998) (statement of Heather Gold, President, ALTS) (transcript available at <<http://www.fcc.gov/enbanc/>>) [hereinafter *Telephone Competition Presentation*]. A company called RCN is providing facilities-based service to residential customers in at least three cities by offering a bundle of voice, video, and Internet access service. *Id.* at 33 (statement of Michael Mahoney, President and COO, RCN Corp.). Cox Communications, Inc. enjoys a 17% penetration rate in communities in which it has provided cable telephony for at least two months. *Id.* at 50 (statement of Alex Netchvolodoff, Vice-President, Cox

Enterprises, Inc.). ACSI generated nearly \$40 million in revenues for the first three quarters of 1997 by providing facilities-based service to business customers in small- and medium-sized urban areas in the South. *Id.* at 59 (statement of Jack Reich, President and CEO, ACSI). USN has the ability to serve small and medium-sized businesses in eighteen states through resale. *Id.* at 63 (statement of Dennis Dundon, CEO, USN Communications).

14. In 1963, Microwave Communications Inc., predecessor to MCI Communications Corporation, submitted an application to the Commission to construct microwave facilities to provide microwave radio service between Chicago and St. Louis, and along nine immediate points, which was approved six years later. *See Applications of Microwave Comm., Inc. For Construction Permits To Establish New Facils. in the Domestic Pub. Point-to-Point Microwave Radio Serv. at Chicago, Ill., St. Louis, Mo., and Intermediate Points, Decision*, 18 F.C.C.2d 953, 16 Rad. Reg. 2d (P & F) 1037, *reconsideration denied by Memorandum Opinion and Order*, 21 F.C.C.2d 190, 18 Rad. Reg. 2d (P & F) 226 (1970). MCI was the first microwave carrier to compete against AT&T for long-distance customers. *See Michael K. Kellogg et al., Federal Telecommunications Law § 12.3.2, 596-97 (1992).*

15. Sprint, the third of the large interexchange carriers, made use of another frontier technology when it began to invest heavily in fiber optics. Sprint, a partnership of independent local exchange carriers GTE and United Telecom, like its contemporary MCI, needed new technological capability to deploy advanced broadband services to potential long-distance customers. *See John M. Phelan et al., Panel III: Implications of the New Telecommunications Legislation*, 6 Fordham Intell. Prop. Media & Ent. L.J. 517, 531 (1996) ("Sprint was the first . . . long-distance company to have a nationwide fiber optic digital network. Sprint entered the market and became successful with 'pin drop' quality sound.").

Local exchange and cable carriers are also beginning to "lay fiber" rapidly in anticipation of the digital revolution and a panoply of interactive, multimedia applications. *See Joseph A. Pantoja, Note, Desirable Economic Cooperation Among High-Technology Industries: A Look at Telephone and Cable*, 1994 Colum. Bus. L. Rev. 617, 655 ("Both local telephone and cable companies intend to become full-service providers of everything from on-line shopping and movies on demand, to two-way communications services over fiber optic networks, to interactive games. Accordingly, both cable companies and telephone companies are investing heavily in fiber optics.").

16. *See William B. Garrison, Jr. & Leslie A. Taylor, Wireless Telecom Innovations: New Players, New Structures, New Regulation*, Comm. Lawyer, Winter 1994, at 1.

17. One of the greatest tributes to American technological leadership and enterprise was the race to develop high-definition television and ultimately digital HDTV. It is absolutely true that engineers in Japan, Europe and even the United States believed that the creation of digital, high-definition television was technologically, if not scientifically, impossible. Nevertheless, the device which could not be developed, was developed. A team of engineers in California created a digital, high-definition television platform. And in the aftermath, the analog MUSE system developed by the Japanese was rendered economically and technologically worthless. *See Joel Brinkley, Defining Vision: The Battle for the Future of Television (1997).*

18. History is filled with examples of failed predictions about technological innovation and progress. The *New York Times* editorialized in 1939 on the occasion of the introduction of television at the World's Fair that television "will never be a serious competitor for radio because people must sit and keep their eyes glued on a screen; the average American family hasn't time for it." Frances Cairncross, *The Death of Distance: How the Communications Revolution Will Change Our Lives* 59 (1997). Only a few short years ago many expressed with certainty that cellular telephones would remain a small niche market with only 900,000 users by the year 2000. *See Cellular Telecomm. Ind. Ass'n, Bringing Information to People, Celebrating the Wireless Decade* 45 (1993) (referring to AT&T market research). Today more than 54 million Americans subscribe to wireless services. *See Elizabeth Jensen, Wireless Carriers Try New Hook to Win Customers*, Wall St. J., Mar. 4, 1998, at B4.

19.

[M]eaningful facilities-based competition is possible, given that cable services are available to more than 95 percent of United States homes. Some of the initial forays of cable companies into the field of local telephony therefore hold the promise of providing the sort of local residential competition that has

consistently been contemplated.

H.R. Rep. No. 104-458, at 148 (1996), *reprinted in* 1996 U.S.C.C.A.N. 124, 160.

20. Decker Anstrom, President of the National Cable Television Association (NCTA), noted that the optimistic predictions were in retrospect "wrong . . . nearly everyone donned rosy glasses when we predicted how quickly competition would come. And I say, 'we' because the cable industry—me included—participated in these overly optimistic forecasts." *See NCTA, Cox Begin Lobbying Push for No Changes to Current Rules*, Video Competition Rep., Feb. 9, 1998, at 3. In this third year of the momentous transformation at the federal level to a competitive telecommunications regime, a handful of cable service providers are beginning limited trials or commercial deployment of cable telephony.

21. Take utilities as an example. Although utilities are an obvious candidate for providing phone service, they are inhibited by the fact that most Wall Street portfolio managers view them as a conservative investment that adds stability to their holdings and Wall Street seems loath to put capital at risk for such companies to enter new markets. Yet, Teligent, a new fixed-wireless start-up company seems to attract a phenomenal amount of capital with little more to their credit thus far than some spectrum and a good idea. *See Peter Haynes, Teligent's Test*, Forbes, Mar. 9, 1998, at 202. Conversely, Wall Street valuation may punish larger firms that are seen by many as steady dividend companies and not as entrepreneurial ones.

22. *See FCC, OPP Working Paper, Digital Tornado: The Internet and Telecommunications Policy* (authored by Kevin Werbach) 6 (1997).

23. There would be three dimensions to this collaborative process: (1) a national assessment conducted by the Commission, in collaboration with the States and Justice Department; (2) development of state-tailored and regional solutions to checklist compliance; and (3) evaluation of the application, once filed. *See Michael K. Powell, Essay, Wake Up Call: FCC Commissioner Michael Powell Calls For New Collaborative Approach to Section 271 Applications* (Jan. 15, 1998) <<http://www.fcc.gov/commissioners/powell/>>.

24. *See, e.g.,* Lessons from the Underground Railroad Speech, *supra* note 11; NAB Speech, *supra* note 11.

25. *See, e.g., supra* notes 14-15 and accompanying text. Traditionally distinct technology and services are poised to attack each other. Cable service providers are investing billions of dollars in capital improvements and technology so that they can offer high-speed, broadband Internet access, digital television and radio, and competitive local and long-distance telephone service. *See Bringing Competition to Local Telephony: The Department of Justice's Perspective, Hearings Before the Subcomm. On Antitrust, Business Rights, and Competition of the Senate Comm. on the Judiciary, 105th Cong. (1998)* (statement of Joel I. Klein, Assistant Attorney General DOJ Antitrust Division); *see also* Telephone Competition Presentation, *supra* note 13, at 43-51 (statement of Alex Netchvolodoff, Vice-President, Cox Enterprises, Inc.) (detailing Cox's provision of local and long-distance telephone service, high-speed data service, digital telephony, and digital television, and stating that Cox will offer these services to 85% of its cable customer base by the end of 1999). Telephone companies are testing cable services. Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, *Fourth Annual Report*, CS Dkt. No. 97-141, 1998 WL 10229 (Jan. 13, 1998). There is wireless cable, fixed wireless telephony, and wireless Internet. The Internet itself is one of the greatest examples of technological innovation.

26. In attempting to foster innovation, it is my view that communications policy leaders should, among other things, consider whether or not the firm responsible for making a particular innovation should be allowed to exclude other firms from receiving the benefit of that innovation. As one court of appeals explained:

It is the possibility of success in the marketplace, attributable to superior performance, that provides the incentives on which the proper functioning of our competitive economy rests. If a firm that has engaged in the risks and expenses of research and development were required in all circumstances to share with its rivals the benefits of those endeavors, this incentive would very likely be vitiated.

Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 281 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980).

