

# Reforming Telecommunications Regulation

A Report of the  
Nineteenth Annual Aspen Institute  
Conference on Telecommunications Policy

Robert M. Entman  
*Rapporteur*



THE ASPEN INSTITUTE

*Communications and Society Program*  
Charles M. Firestone  
Executive Director  
Washington, DC  
2005

*To purchase additional copies of this report, please contact:*

The Aspen Institute  
Fulfillment Office  
P.O. Box 222  
109 Houghton Lab Lane  
Queenstown, Maryland 21658  
Phone: (410) 820-5326  
Fax: (410) 827-9174  
E-mail: [publications@aspeninstitute.org](mailto:publications@aspeninstitute.org)

*For all other inquiries, please contact:*

The Aspen Institute  
Communications and Society Program  
One Dupont Circle, NW  
Suite 700  
Washington, DC 20036  
Phone: (202) 736-5818  
Fax: (202) 467-0790

Charles M. Firestone  
*Executive Director*

Patricia K. Kelly  
*Assistant Director*

---

Copyright © 2005 by The Aspen Institute

**The Aspen Institute**  
One Dupont Circle, NW  
Suite 700  
Washington, DC 20036

Published in the United States of America in 2005  
by The Aspen Institute

All rights reserved

Printed in the United States of America

ISBN: 0-89843-428-9

05-006

1466CSP/05-BK

# Contents

**FOREWORD**, *Charles M. Firestone* .....v

## **REFORMING TELECOMMUNICATIONS**

**REGULATION**, *Robert M. Entman* .....3

    Technological Progress and the  
    Compelling Need for Regulatory Reform.....5

    The Investment Conundrum.....9

    Toward a New Telecommunications Act.....12

    The Broadband Solution .....30

    Conclusion.....31

    Notes .....32

## **APPENDIX**

    Acronym List .....35

    List of Participants .....37

    About the Author .....41

    Previous Publications from the  
    Conference on Telecommunications Policy .....43

    About the Communications and Society Program.....47

*The reader should note that this report is written from the perspective of an informed observer at the conference. Unless cited to a particular person, none of the comments or ideas contained in this report should be taken as embodying the views or carrying the endorsement of any specific participant at the conference.*

# Foreword

The 2004 Aspen Institute Conference on Telecommunications Policy met in Aspen, Colorado in August 2004—an ominous time in the telecommunications field. The once-staid telecommunications industry was recovering from a lengthy period of rapid technological change, volatile economics, changing markets, new consumer demands, and burst stock market bubbles. Technological convergence and innovative services had resulted in cross-platform competition, new capital requirements to build out broadband and wireless networks, intercarrier rivalry, and inevitable calls for cheaper prices. Amid this turmoil, the industry was in the process of restructuring itself as the regulatory structure was lagging behind.

For several years, the Aspen Institute Conference on Telecommunications Policy has explored the need to move beyond the regulatory silos telecommunications competitors have found themselves in or have been attacking. The cumbersome apparatus of the Communications Act—particularly Title II, which governs telephony, and Title VI, which deals with cable—and the myriad regulations that oversee wireless, Internet, satellite, broadcasting, or other variations of telecommunications access and transport (and the relationships among carriers and among jurisdictions) has led to anomalous results. Competitors for the same customers and services sometimes are governed by completely different laws and regulations and often are taxed or subsidized differently.

Accordingly, it was a good time for leaders and experts from government, the various telecommunications industries, academia, finance, and the consumer sectors to gather in Aspen. There they began to develop a framework for a regulatory system that would recognize new technological and economic realities and foster innovation, new investment, efficiency, fairness, and universality.

The uncertainty of deliberating in a presidential election year allowed the parties to look at the longer term—at what the law *should* be, not what each party thought it could get. The summer session was successful enough that participants met on another morning in

November in Washington to follow up and solidify the points raised in August. The results are the beginnings of a new telecommunications scheme; although not everyone will subscribe to this scheme, the participants believe that it constitutes a fair beginning for deliberations.

North Carolina State University communications professor Robert M. Entman has been the rapporteur of these conferences since their inception 19 years ago. In this volume, Entman summarizes and characterizes the conference participants' arguments and recommendations in his very accessible manner. Our aim is that this volume will be used by policymakers as a launching point for thinking about how we might revise the Communications Act—what we would call the Telecommunications Recovery Act of 2006—or regulatory equivalents. Entman was given leeway to draw his own interpretations from the discussion, so the text of the report should not be ascribed to any particular participant, sponsor, or employer unless specifically attributed to them. This document is not a consensus; it explores a route toward a new regulatory regime that made sense, however, to many of the people in attendance.

Generally, the group found that the current system has certain faults—such as the legacy subsidization system, based on long distance—that ultimately will be unsustainable, especially as we move to a broadband and voice over Internet world. Accordingly, the group's discussions centered on the goals of promoting consumer welfare, maintaining technology neutrality, and providing for competitive services such as the availability of at least three broadband pipes to the home, while taking precautions to avoid scaring off legitimate investors from financing the telecommunications sector.

As in other years, there was enthusiasm by many (again, not all) participants for significant deregulation in the telecommunications field—a return to the Title VII deregulatory approach that was floated but not passed in the 1990s. Of course, the difficulty is in the details of transitioning to such a deregulatory world: protecting consumers who do not have competitive services available to them, providing for incumbent rural telecommunications companies to compete in the new world of wireless broadband, overhauling intercarrier compensation, and modifying the universal service scheme to target subsidies only to people who actually need them.

There is no question that there is much to be done. First, we need to come to full agreement on the goals of new legislation and/or regulatory schemes; second, we need to flesh out the details of reform relating to the thorny issues of universal service, rural telecommunications, broadband competition, and consumer protection, to name a few; and finally, we need to develop a fair and rational transition from the current system to the newly designed one. This report is a first step that will be continued at the 2005 Aspen Institute Conference on Telecommunications Policy and, we hope, other venues.

### **Acknowledgments**

The conference is made possible by the generous contributions of its sponsors. We gratefully acknowledge and thank the following competing companies for their support of the 19th Annual Aspen Institute Conference on Telecommunications Policy: American Express, AT&T, BellSouth, Cablevision Systems Corporation, Cisco Systems, Comcast Corporation, Cox Enterprises, Credit Suisse First Boston, Intel Corporation, QUALCOMM, Legg Mason, National Association of Broadcasters, Nextel, Regulatory Source Associates, SBC Telecommunications, Time Warner, Verizon Communications, and the Walt Disney Company.

We also thank Robert Entman, our rapporteur, for his excellent representation of the conference deliberations as well as his assistance in developing the participants' background readings. We are particularly thankful to our conference participants (listed in an Appendix to this document) for their openness, constructive attitude, and willingness to grapple frankly and honestly with the issues inherent in the discussions. Finally, I extend a special thanks to our staff—Mridulika Menon, project manager, and Tricia Kelly, assistant director—for working behind the scenes to bring the conference and this report to fruition.

Charles M. Firestone  
Executive Director  
Communications and Society Program  
The Aspen Institute  
March 2005





**REFORMING  
TELECOMMUNICATIONS  
REGULATION**

*Robert M. Entman*



# Reforming Telecommunications Regulation

*Robert M. Entman*

Driven by compelling realities of technology and the marketplace, this year's Aspen Institute Conference on Telecommunications Policy reached an unusual degree of consensus. At two meetings—one at Aspen in August and a November follow-up in Washington—not only did participants agree on the urgent need for reform, almost all agreed on the outlines of new policy. Participants concurred that if nothing is done to fix the system, technology and market developments will so far outstrip the regulatory apparatus as to threaten a kind of financial meltdown for the industry. On the other hand, an immediate flashcut to total deregulation, attractive as that might be on some grounds, threatens to leave some consumers and firms in undue peril. Most, though not all, participants agreed that policy-makers should address this situation through new legislation: a Telecommunications Restructuring Act of 2006 that would provide a planned transition to a minimally regulated system that matches the realities of technology and markets. Key points of consensus or near consensus were as follows:

- The rapid spread of mobile phone service and Voice Over Internet Protocol (VoIP) is rendering distinctions between interstate and intrastate telephony obsolete. Yet the structures of economic and social regulation—in particular, the Universal Service Fund (USF) and other subsidies—are based on that very distinction.
- The current regulatory system therefore is unsustainable.
- Policy must help the incumbent local exchange carriers (ILECs)—both the rural independents and the large regional/national carriers sometimes still misleadingly called “Baby Bells”—in making the transition to this new world. At the same time, telecommunications policy must remain technology-neutral and emphasize above all the goal of promoting consumer welfare, not protection of any particular sector or company.

- A proposed Telecommunications Restructuring Act of 2006 should be passed to provide a relatively short transition period to a minimally regulated competitive market. The objectives of the new regulatory system would be as follows:
  1. Assuring affordable rates for consumers who have no competitive alternatives to traditional ILEC service.
  2. Allowing rural local exchange companies (RLECs) a fair shot at competing in the telecommunications market.
  3. Meeting the first two goals without maintaining the unsustainable implicit subsidy structures that now distort and hobble the industry as a whole. Meeting this objective means overhauling the traditional system of universal service funding to emphasize specifically targeted subsidies for individual users in need, while tying eligibility for high-cost carrier subsidies to willingness to serve as carrier of last resort.
  4. Minimally regulating competition in broadband voice, video, and data service under a new Title VII of the Telecommunications Act.
  5. In the long term, encouraging near-ubiquitous access to higher-speed (>10 Megabits/second) broadband services and availability of three or more competitive broadband “pipes” to as many homes as possible. Because broadband makes VoIP possible, ensuring wide availability of broadband also promotes competitive alternatives in voice telephony.

Underlying these goals is an assumption that fixing universal service funding mechanisms and ensuring rural wireline carriers a fair shot at adapting to competition will help to ensure the political feasibility of serious policy reform. After all, participants reasoned, there is truly little choice but to do something to bring the policy regime into alignment with rapidly evolving technologies and markets. Even as ILECs and others are unleashed to compete and deploy newer technologies, consumers who remain on older copper wireline network facilities—and those who want to reach them (i.e., terminate calls on this network)—must be protected from rate shock or confusion that could flood the political system with complaints.

Within this consensus, there was disagreement concerning the speed and precise nature of transition to the new regime. Some participants inclined more toward a sharp “flashcut” that would include general pre-emption of state regulation and rapid dissolution of the existing regulatory apparatus; others favored a more gradual adjustment period, retaining more substantial federal and state regulation. This report lays out a transition plan that attempts a synthesis and compromise among the varied points of view that emerged about the specifics. The report also describes participants’ disagreements about the inherent tension between reaping the efficiencies, enhanced innovation, and other benefits of deregulation, on one hand, and the danger, on the other, of scaring off the investment community, which can put its resources into industries facing less technological disruption and economic uncertainty. Without in any way minimizing the importance of wholesale rate regulation, competition in enterprise users, and many other issues, the report concentrates on policy problems surrounding retail, residential customers, carriers, and services.

### **Technological Progress and the Compelling Need for Regulatory Reform**

Robert Pepper, chief of policy development for the Federal Communications Commission (FCC), presented data demonstrating the obsolescence of traditional regulatory categories. Traditionally, regulation has assumed that the core product of telecommunications is voice telephony, which should be measured in terms of minutes of use and geographical location and distance. Such assumptions cannot survive for long. Already, he reported, the United States has 155 million mobile phones—more than the number of residential fixed line phones—and total revenue for the former exceeded that for the latter in 2004. Meanwhile, Vonage, AT&T Callvantage, and some cable television companies, including Time Warner, Cox, and Comcast, are rolling out VoIP telephony services that promise to make rapid inroads with consumers.

The rate structures for mobile and VoIP telephony bring about “the death of distance,” said Pepper. For most users, the “local calling area” is the continental United States. Many cell-phone calling plans offer 1,000 minutes of calls, anytime, anywhere in the country, plus virtually

unlimited calling on nights and weekends, for \$40–50 per month. For many users, then, wireless becomes a viable substitute for plain old telephone service (POTS) over the wireline network. VoIP providers offer a flat-rate service at around the same price for unlimited calls, anytime and anywhere in the country.

VoIP, which uses broadband Internet technology, also allows users to create virtual phone numbers anywhere they would like. For instance, a former resident of Paris, France, can use VoIP to create “local” phone numbers in Paris that will ring anywhere in the world where the user can obtain a broadband Internet connection. The subscriber’s Parisian friends and business associates therefore will be able to call the Paris number and never pay international long distance charges even if the subscriber actually is in the United States or Hong Kong. As Kevin Kahn, director of Intel’s Communications Technology Laboratory, pointed out, VoIP in particular begins to render the entire concept of originating and terminating numbers almost meaningless for regulatory purposes.

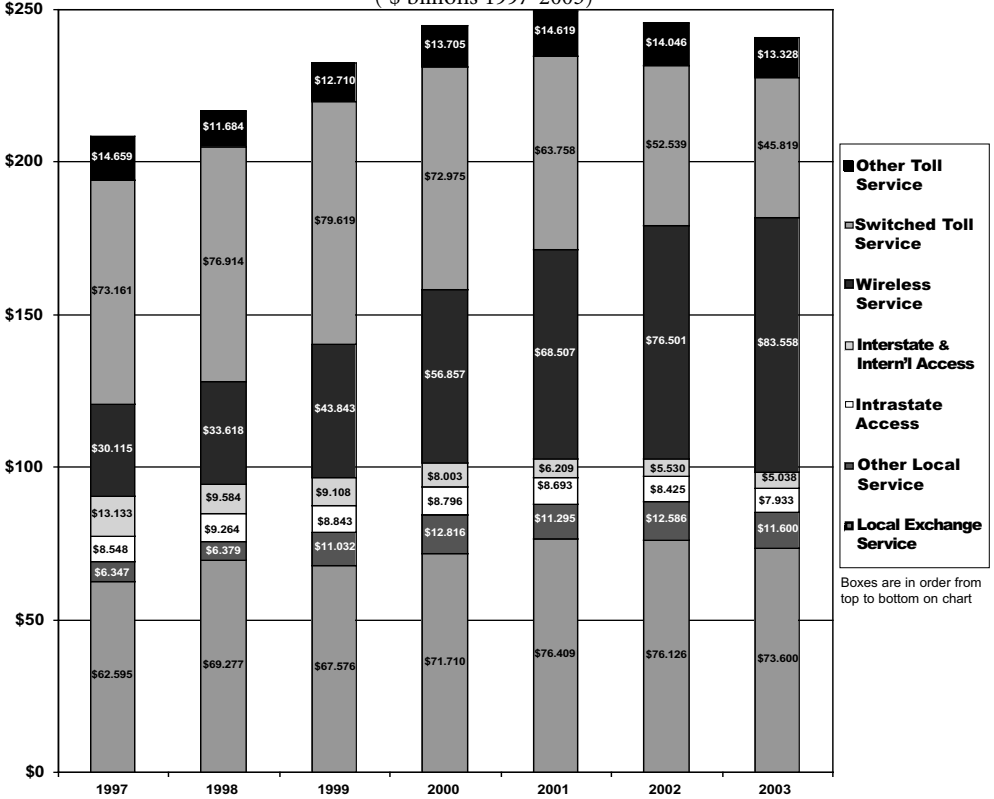
**Long distance is just a brand name and a billing system.**

*Robert Pepper*

The “anywhere” features have transformed the character of the once-thriving long distance phone business to the point that, as Pepper puts it, long distance is “just a brand name and a billing system.” Consequently, revenues decline for “interstate access”—a term that begins to sound quaintly old-fashioned, even while minutes of use and revenues for wireless are soaring (see Figure 1, provided by Pepper). Yet it is precisely the revenue pool for switched access charges (interstate and intrastate) that provides an important source of universal service subsidies.

**FIGURE 1: CHANGING STREAMS OF REVENUE**

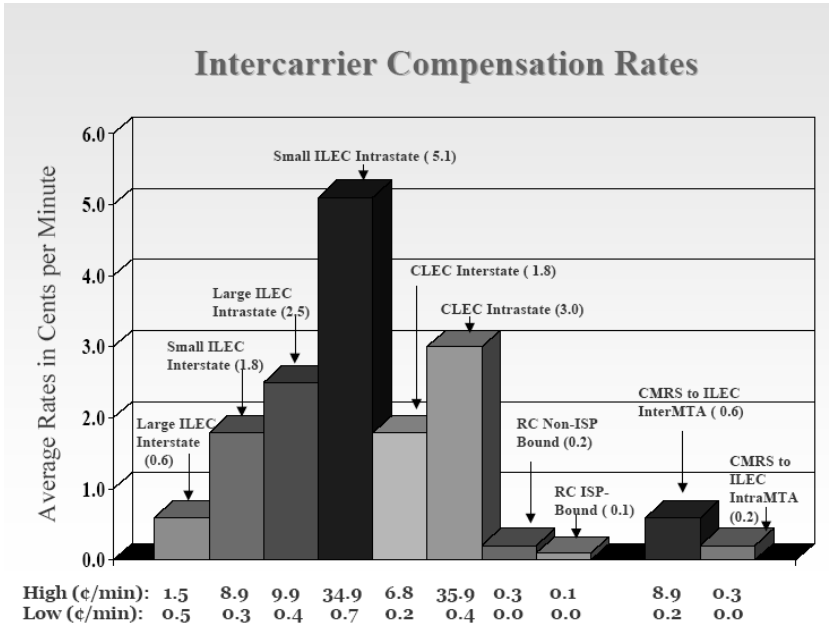
Total End User Revenues by Type of Service  
 (\$ billions 1997-2003)



Source: Robert Pepper, Federal Communications Commission

This situation leads to enormous rate disparities that encourage arbitrage and further stimulate users to substitute wireless or VoIP for traditional ILEC wireline service. One participant reported that in some extreme cases, rural phone companies are still charging in excess of 30 cents per minute for intrastate switched access and nearly 9 cents per minute for interstate (see Figure 2, put together by Latham and Watkins for the Intercarrier Compensation Forum). California Public Utilities Commission (PUC) member Susan Kennedy observed that the mélange of access charge policies is analogous to imposing varying taxicab charges on passengers arriving at San Francisco Airport and going downtown: one for those who flew in from New York and another for those arriving from Los Angeles.

**FIGURE 2: CRAZY-QUILT OF INTERCARRIER COMPENSATION RATES**



Source: Latham and Watkins for the Intercarrier Compensation Forum

As this example suggests, the traditional federalist regulatory regime faces grave challenges because it is based on classifying telephone calls as intrastate or interstate, with the former regulated by state government and the latter by federal officials. The system is experiencing a vast increase in the numbers of different carriers that need to interconnect and major disparities in intercarrier access charges, depending on jurisdiction. One result is an explosion of litigation and contract disputes. These disputes serve nobody's interests in the long run. Joel Lubin, vice president for federal government affairs of AT&T, presented to the conference a proposal for thorough reform in the intercarrier compensation plan. Since the conference, other proposals have been generated, and it appears likely that the FCC will indeed decide to rationalize intercarrier compensation rates. This report therefore assumes FCC action on this issue will take place in the short term and that this action will



help to remove some of the more immediately distorting features of existing subsidy structures. This short-term action, however, does not obviate the need for further policy change.

### The Investment Conundrum

Adding to the complexity of choices facing officials who must adjust policy to the new technical and market realities is pressure from an investment community that fears too much competition and innovation. This situation sets up a tension between the longstanding policy goals of competition and innovation and the need for a healthy flow of investment capital.

Robert Gensler, vice president and portfolio manager at T. Rowe Price, observed that telecommunications is a healthy, growing industry overall. As a whole, balance sheets and free cash flow are good. Annual investment in the industry for transport, intelligence, and access, including consumer investment in equipment, exceeds \$100 billion. On the other hand, some companies are taking business from others, making corporate restructuring inevitable. Furthermore, a lack of pricing power is reducing the rate of revenue growth for some firms. Table 1 illustrates in general terms the growth rates in various sectors.

**TABLE 1: TELECOMMUNICATIONS REVENUE, BY SECTOR**

<b>Telecom Revenue Buckets</b>	
Enterprise LD & Data	– \$80B, Flat at Best
Enterprise Local Voice	– \$40B, Flat at Best
Consumer Fixed Voice	– \$80B, Shrinking 2%-5%
Consumer Broadband	– \$15B, Growing Rapidly
Wireless	– \$100B, Growing 8%-10%
Video	– \$50B, Growing 5%

Source: Robert Gensler, T. Rowe Price

Three somewhat ironic forces may be undermining corporate incentives to invest in telecommunications. The first is the Wall Street investment “community”—a name that rings somewhat hollow for some telecommunications firms. According to Gensler, many telecommunications companies fear that investors will actually punish them for making capital investments! The reason: Investment reduces free cash flow, even if it is likely to benefit the firm in the longer term. Gensler said that as a mutual fund stock analyst he concentrates on projecting firms’ free cash flow from two to five years in the future. However, he said, the public stock market’s time horizon is a mere 90 days. Stocks move on anticipated quarterly earnings reports.

Gensler called the stock market’s short-term focus on current earnings momentum a “disaster” for firms that need to make heavy up-front investments that take time to pay off. In essence, from the perspective of stock market investors looking at near-term free cash flow and gauging the momentum of a stock, “all investment is bad.” As Lara Warner, director at Credit Suisse First Boston, said, “people want return on *their* investment, not on the firm’s investment.”

A second problem for investment is growing competition. Again, there is some irony in light of the fact that encouraging competition has

**“People want return on *their* investment, not on the firm’s investment.”**

*Lara Warner*

been the central goal of telecommunications policy for 20 years or more. As one industry participant observed, we may now be experiencing some regret that we are actually getting what we wished for. In light of the stock market’s orientation, Columbia University finance and economics professor Eli Noam said, it would appear that competition in a commoditized market with high fixed costs and low marginal costs leads to prices that are low and unprofitable, creating disincentives for

investment. Investors seek firms with pricing power, which competition reduces or eliminates. Firms in this environment therefore gravitate toward consolidation and oligopoly.

Anna-Maria Kovacs, president of Regulatory Source Associates LLC, said that the problem is especially acute for ILECs, which have a high degree of operating leverage and are regulated, yet face competition from wireless and VoIP that reduces their pricing power. Current regulation undermines the basic financial positions of these carriers, burdened as they are by high fixed and sunk costs (much of it in an aging copper network), declining market share, and shrinking ability to cover carrier-of-last-resort obligations. These forces are “totally redoing the economics of the industry,” according to Kovacs. Indeed, said Jeff Brueggeman, vice president of external affairs for SBC Telecommunications, these forces place ILECs in a double bind. Regulations require them to invest in maintaining the public switched telephone network (PSTN), yet the stock market and consumer markets tell ILECs to focus investment dollars on new technology.

One additional handicap for the ILECs arises from taxation. According to Joe Waz, vice president for external affairs and public policy counsel at Comcast, 20–30 percent of the average consumer’s phone bill consists of taxes—some implicit, some explicit. Bob Blau, vice president for executive and federal regulatory affairs for BellSouth, provided more specific estimates: 18 percent of the bill goes for local and state taxes, 3 percent for the federal excise tax, and 3 percent for universal service obligations. Add to these amounts the taxes implicit in carrier access and other charges, and the total tax bite averages at least 25 percent. The federal excise telephone tax alone yields \$6 billion—just about the size of the USF. The remainder of the telephone taxes presumably go to implicit subsidies and general government revenue. This conversation is prelude to the problem identified by Blau: If we exempt VoIP service from most taxes while ILEC customers must pay the 25 percent, the price differential will drive customers away from the latter. Said Blau: “We have to get this problem handled soon. Otherwise the ILECs are in never-neverland.”

The one participant who dissented somewhat from this portrait of vulnerable ILECs was Laurel Kamen, vice president for government and consumer affairs of American Express. She reported that as a large enterprise user, Amex looks out on a world of reduced compet-

itive choice. From her vantage, she sees corporate consolidation that will result in future higher prices. For financial businesses such as Amex (and many others), VoIP holds interest but raises security issues that have not yet been addressed. Thus, Kamen said, “we see the ILECs as in the catbird seat”—buying up long distance carriers or entering long distance markets themselves and taking advantage of regulation to maintain pricing power. Although the conference did not debate Kamen’s dissent, it is worth noting again that almost all the dialogue focused on the residential consumer rather than the enterprise market.

**“Technological change is usually the incumbents’ enemy.” It brings forth new products and new winners but renders obsolete other firms’ investments in old technology.**

*Robert Gensler*

This point brings up the third irony: New technology itself discourages some investment. As Gensler said, “Technological change is usually the incumbents’ enemy.” It brings forth new products and new winners but renders obsolete other firms’ investments in old technology. Warner observed that the rapid pace of technological change means that investors have difficulty predicting winners and losers. Growing numbers of investors are saying, “Until I can figure out where technology is taking us and who will win, I am not investing in telecommunications.”

Although there is no clear, simple fix for the investment conundrum, surely one place to start is rationalization of the regulatory system. Bringing policy into line with the market and technological conditions of today will create more transparency and predictability—and that alignment reassures investors.

### **Toward a New Telecommunications Act**

Enacting new legislation offers the obvious and perhaps only way to resolve the investment conundrum while also dealing with the need to give ILECs, including those in rural areas, fair opportunities to partici-

pate in competitive markets. All conference participants seemed to agree that legislation should incorporate the following principles:

1. There must be a definite transition period for ILEC deregulation to prevent rate shock and allow for planning;
2. Economic and social policies must be separated, with the latter—especially universal service—fulfilled through explicit subsidies; and
3. Regulation must be harmonized across platforms to make public policy neutral with respect to technology and supportive of economically justified competition (as opposed to uneconomic competition stimulated by market distortions).

Concretely, this consensus yielded the idea of legislation, perhaps dubbed the Telecommunications Restructuring Act of 2006, to address the technological trends and policy issues discussed earlier by incorporating a new Title VII into the existing Telecommunications Act.

Jeff Brueggeman of SBC Telecommunications set the tone for the discussion by observing, à propos of the ILECs, that “our company doesn’t even realize how much regulation pervades everything we do. It immeasurably impacts and paralyzes us.” He added, “We need to be able to act like companies in a competitive market, because we are.” To transcend the current regulatory morass, he continued, ILECs and everyone else in the industry will have to compromise, accepting trade-offs and provisions they may not like.

Bill Bailey, senior majority counsel of the Senate Commerce Committee, reported that Congress may indeed consider new legislation in 2005–2006. Congress also could leave the issue to the FCC and muddle through a few more years before outright crisis in the USF forces action, although the case for legislation seems strong enough to propel consideration of a new bill.

Along these lines, the group seemed to reach general accord on a new Title VII designed to recognize and encourage the movement toward a generally unregulated market for broadband and related technologies such as VoIP. Broadband is defined as always-on,

Internet Protocol enabled (IP enabled) voice, video, and data service connected at speeds of 200 Kilobits or greater from the residence upstream as well as downstream from the provider to the residence. This is the operating definition of broadband used by the FCC today, although undoubtedly it will eventually change to incorporate higher speeds.

The intent of Title VII would be to move most such broadband service outside of most regulation, *whether delivered by wire or wireless and no matter which firm provides it*. Regulation of cable, cell phone, and

**The intent of Title VII would be to move most broadband service outside of most regulation, whether delivered by wire or wireless and no matter which firm provides it.**

other providers of broadband, including ILECs, would be placed under Title VII as of a date certain, after a brief transition. There would be a longer transition period for the legacy PSTN overseen by ILECs (the former Bell companies and RLECs). The goal would be to encourage investment by both the ILECs and newer entrants in the provision of broadband and innovative IP services. This law would preserve the ability of ILECs to compete; in addition, ideally it would speed investment in third and fourth broadband “pipes” to complement the cable modem and digital subscriber line (DSL) facilities now available in most

places. These new broadband pipes might include broadband via electric powerlines or wireless spectrum. The latter might require reallocating spectrum from frequencies currently assigned other uses, particularly broadcast (see the report on the 2004 Aspen Institute Roundtable on Spectrum Policy, *Challenging the Theology of Spectrum*).

The following specific provisions were discussed:

1. The federal government would preempt state and local regulation of broadband. Policy would then migrate broadband (as defined above) out of the existing regulatory regime into a new Title VII providing for minimal regulation. This migration

would occur over a fairly brief transition period with respect to *all* broadband providers, including broadband service provided by ILECs.<sup>1</sup>

2. The federal government, as well as states or localities, could develop their own new universal service programs specifically for broadband service, but these programs should be funded from general tax revenues rather than from within regulated telecommunications price structures. Title VII would require that universal service funding for access to broadband be technology-neutral, with subsidies going to consumers rather than firms. If this new universal service support does come from charges on telecommunications rather than from general tax funds, the charges should be explicit and should come from as broad a base as possible rather than targeting any specific technology or type of carrier.
3. The transition to unregulated service even for ILEC providers of legacy POTS would involve maintenance of retail rate regulation for perhaps five years, to prevent rate shock and protect consumers who wish to stick with POTS for a while. Most participants appeared amenable to having the FCC assess the need to maintain retail rate regulation of POTS (but not the ILECs' broadband or other new services) under Title II at the end of the transition period. Assuming sufficient competition, such regulation could be minimized.
4. Universal service subsidies for access to POTS would be reformed to minimize economic distortions.
5. With respect to interconnection and access, the new law would include the principle and presumption of network neutrality. Action would be mandated only for findings of discriminatory or predatory conduct.

*Technology-neutral USF that preserves access to POTS for rural consumers—and competitive opportunities for RLECs*

One crucial factor in political and policy calculations as the regulatory system is changed to meet the realities of the 21st century is the need to deal with rural local exchange companies (RLECs). Typically regulated under traditional rate base/rate of return regulation and heavily reliant on subsidies from the USF, these companies, which are independent of the old Bell system, enjoy substantial political clout. If the financial basis of the USF changes, as indeed it

**“Protecting Aunt Tillie does not require us to protect bad business models.”**

*Michael McKeehan*

must, there are compelling political and policy reasons for ensuring that reforms offer RLECs a reasonable chance to survive. This principle, of course, does not mean any kind of guarantee or uneconomic subsidy. On the contrary, the point is to integrate the goal of economic efficiency with fair treatment of the RLECs. Participants at both the August and November meetings agreed that

policy makers must find a politically feasible fix that accommodates the RLECs. Accomplishing these goals in the short term will pave the way to necessary larger reforms in the regulatory system.

The political reality is that owners and executives of rural telephone companies often have close relationships with their members of Congress and justify their continued demands for subsidies by asserting that these subsidies provide the only means to protect rural Americans’ access to POTS. Heather Hudson, professor of telecommunications management and policy at the University of San Francisco, urged participants in the telecommunications policy community to counter this argument by getting policymakers to focus directly on rural consumers and to reject the argument that “what’s good for incumbent companies is good for consumers.” Others echoed Hudson’s sentiments. Michael McKeehan, director of internet and technology policy for Verizon, observed that “protecting Aunt Tillie does not require us to protect bad business models,” and Bob Blau of BellSouth urged, “You don’t let that [RLEC] tail wag the rest



of the dog” and damage the rest of the PSTN. Presumably all of these arguments should have force with regulators and legislators.

After all, even in the most remote areas, wireless technologies are coming online that can provide competitive telephone service for customers. For example, Hudson cited a company currently serving rural Alaskans with satellite-based technology that is charging reasonable rates and making a profit. Furthermore, Robert Pepper of the FCC questioned complaints by some rural residents. Fully, 88 percent of U.S. households pay \$40-\$50 or more monthly for satellite or cable television. These services are hardly necessities. If they can afford HBO, presumably many rural Americans can afford a market-set rate for local phone service.

Pepper reported on an important development in technology occurring in Grand Haven, Michigan. A wireless internet service provider (WISP) has installed a Wifi “cloud” over the rural resort town (full-time population 12,000, with 2 million visitors annually) to provide broadband access, including VoIP. The service does not use the facilities of the RLEC, which in this case happens to be SBC. For 512 Kilobit data service, customers pay \$40 per month, and for \$30 more per month, they get not merely VoIP but *wireless* VoIP with unlimited calling anywhere in town to numbers throughout the United States and Canada.<sup>2</sup>

According to Pepper, the company (Ottawa Wireless) claimed that it will take a mere 18 months to move from concept to break-even operation, and there have been no interference problems to date. Not only does such a technology pose obvious competitive threats to incumbent wireline carriers, it also illustrates that there may be vanishing need for subsidies to most users in many parts of rural America.

On the other hand, Dale Hatfield, former associate administrator of the National Telecommunications and Information Administration and currently adjunct professor at the University of Colorado, observed that policymakers should avoid placing undue faith in “very speculative hopes that broadband over power line [BPL] and wireless broadband technologies will come to the rescue” of local service competition. Hatfield bemoaned the lack of attention to the other main component

of the competitive equation: the wireline facilities-based competitive local exchange carriers (CLECs). He noted, “The evidence of the difficulties that CLECs face in competing in the local market is clear from the scores of failures over the past few years.... I am very uncomfortable with the disproportionate focus that is placed on the health of the incumbents. The CLECs are so weak that, in my opinion, they are now under-represented in the policy debates, and our analysis/recommendations seem to reflect that unfortunate situation.”

Nevertheless, although the specific experience of Ottawa Wireless in Grand Haven may not be transferable to every small (and large) town, and the service’s long-term reliability and quality in comparison with fiber and copper wire systems remains unproven, analogous innovative solutions may yield similarly attractive price/service options. Therefore, the policy goal for Congress, the FCC, state regulators, and others should not be protecting rural ILECs but protecting telephone access for rural households in unusually dire financial straits or in unusually high-cost areas. A combination of subsidies for firms serving the highest-cost areas and direct subsidies to the poorest consumers, to be spent on their carrier of choice, would assure such protection.

Heather Hudson outlined the basic shape of a new USF mechanism for support of POTS in high-cost areas that would minimize distortions in the market. Under this model, all telephony carriers would contribute to a unified USF. Competitive firms offering telephony in a high-cost area served by an RLEC could apply for USF high-cost funds if they agree to assume carrier-of-last-resort obligations. The size of the subsidy would be partly determined by the number of needy subscribers (those demonstrating financial inability to pay the market-set price). RLECs probably would lose subscribers to VoIP and cell phone providers (as well as WISPs and possibly others) in the rural market. However, policy could hold the RLEC’s collection from the USF constant for a transition period, allowing the RLEC to adjust over time to other carriers getting a share of USF subsidies as they win customers from the RLEC.

Pepper reminded attendees at the November meeting that some seem implicitly to assume that a “wire [is] so important that if some-

body isn't getting phone service with a wire that's a failure." He added, "Let's make this explicit: You *don't* need a wire. To be technology-neutral is to stop being wed to wires." Furthermore, Jeff Brueggeman of SBC noted, the major ILECs, including his own firm, would benefit if they were allowed to fulfill their carrier-of-last-resort obligations by using any technology they chose; that would enable them to reduce the costs of meeting the obligation. Charles Firestone, director of the Aspen Institute Communications and Society Program, asked what would happen, however, if in practice no carrier agreed to become a carrier of last resort in return for eligibility to obtain high-cost-area funding. Deputy Assistant Secretary of Commerce for Telecommunications and Information John Kneuer, of the National Telecommunications and Information Administration (NTIA), suggested that the USF could engage in a kind of reverse auction, with the USF bidding up the subsidy level until it became sufficient to attract a carrier. (Such a system would have to be policed to prevent collusion among carriers, however.)

Although some observers might argue that this subsidy program could help drive RLECs out of business, and the RLECs themselves might oppose government support for their competitors, the fact is that RLECs can seek to keep their customers and continued access to the USF. RLECs already have the installed base and established customer relationships—hardly trivial advantages in the marketplace. In any case, as Robert Pepper noted, some rural areas already have competition: Cable companies are offering broadband, which means VoIP is or will be available, and cellular carriers also serve many rural markets. One benefit of this proposal is that wireless carriers and others could deliver broadband and VoIP on a bundled basis to rural areas and still have access to the USF. This arrangement, in turn, gives rural areas timely access to the advanced telecommunications technology that is vital to their continued economic health.

One participant pointed out that per-line USF subsidies could be geographically de-averaged in rural areas to take account of the fact that densities (and costs) vary greatly. Any in-town subsidy could be relatively low, whereas carriers serving more isolated sites outside of town might receive higher subsidies. Thus, if a new carrier entered only the

in-town market, it would receive a smaller USF payment per needy subscriber. This arrangement would reduce unfair competitive threats to RLECs while encouraging them to serve outlying areas and receive the higher USF subsidies.

There is a possibility that WISPs such as that in Grand Haven will not even ask for USF funds and therefore will escape any carrier-of-last-resort obligations. Bob Blau of BellSouth pointed out that this possibility could produce a situation in which WISPs take, say, 80 percent of the customers from an RLEC—the in-town subscribers—while stranding the 20 percent who live in more remote and presumably high-cost locales. Pepper responded that in this scenario, the market would be defining precisely which users need a subsidy. Policymakers could then

**Public policy should not subsidize an antiquated infrastructure, but there must be a transition period to allow a gradual phasing out of the old copper-based network.**

*Kathleen Abernathy*

deal directly with that requirement. Furthermore, Pepper said, RLECs are free to install the same low-cost new technology as new entrants for in-town subscribers and thus might not lose many customers at all.

As Lara Warner of Credit Suisse First Boston remarked, running fiber to get broadband connectivity to every cabin in the woods is not economically viable. If we decide as a matter of social policy that we want the most remote 20 percent of consumers to have broadband and other advanced technology, then those consumers are the users who can get subsidized. Assuming this scenario, then, with 80 percent of rural customers served by WISPs operated by the RLEC or competitors, the total cost of the universal service mandate will decrease. As important, the serious economic distortions induced by the current system of USF subsidies would be eliminated.

Furthermore, maintaining the old PSTN for rural customers without alternatives remains important not only to those subscribing to an

RLEC but to everyone else who wants to reach those subscribers. FCC Commissioner Kathleen Abernathy argued that public policy should not subsidize an antiquated infrastructure but that there must be a transition period to allow a gradual phasing out of the old copper-based network. Clearly in the long run we cannot expect RLECs (or any ILECs) to keep two networks running—one built around old-fashioned circuit-switched copper and the other using newer wireless and fiber technology. As this section suggests, proper policy can facilitate a final transition to the new technology that benefits consumers and carriers alike.

*Preemption and deregulation by a date certain—with caveats*

Under the proposed regime, all broadband-to-broadband communication would be exempted from most regulation. For example, if a Vonage VoIP customer called a Time Warner Cable VoIP telephony customer, the call and charges for it would be covered by the new Title VII and thus unregulated. The same would be true for a customer of a VoIP service operated by an ILEC who calls a Vonage customer. On the other hand, calls from, say, a Vonage customer terminating to a PSTN user would remain largely unregulated, although there would be a transition period for intercarrier compensation.

Key to any transition plan is preemption of the states. The discussion of technological developments made clear that the concepts of “interstate” and “intrastate”—the foundation of the federal/state jurisdictional divide—no longer make much sense. As intercarrier compensation and USF funding are inevitably reformed, the roles of the states will have to change and, frankly, shrink.<sup>3</sup>

As Pepper observed, Title II of the existing statute ties ILECs to state regulatory authority. The proposed Telecommunications Recovery Act of 2006, on the other hand, would permit ILECs to move from Title II (and Title VI) to a minimally regulated Title VII for their broadband services and eventually (following a lengthier transition period) for their legacy PSTN operations as well. Exactly what role the states might play requires clarification. Pepper suggested a national policy with states overseeing implementation. As detailed below, the most significant component of this state role might be as referees of interconnection disputes.

Although states could resist preemption, California PUC Commissioner Susan Kennedy observed that this proposal is all about preserving universal service—presumably the central goal for most state regulators. In the face of rapid and inexorable technological change, Kennedy said, “We have to do something to keep universal service alive”; if the proposed new Act is framed as the best solution, most state regulators will be amenable to compromise.

Another participant further suggested that a political solution will involve figuring out the “politically necessary” local POTS rate and then designing a transparent, explicit, competitively neutral subsidy system to ensure a low rate that would be universally available for users who simply desire old fashioned cheap local service. This approach, he suggested, would be vastly preferable to the self-immolating, unsustainable system currently in place. Most participants seemed to concur, and they agreed that a politically feasible compromise is attainable.

The most energetic discussion at the conference concerned exactly how to structure and time the preemption of state regulation and transition to a mostly deregulated future. With respect to broadband-to-broadband communication, most participants appeared comfortable setting a date certain in the immediate future. Views clashed on the matter of ILEC deregulation. Some participants argued for a flashcut on a date certain. Others pushed the need for a less definitive deadline—some because they fear that any stated deadline would be ignored, others because it could be too rigid if competitive conditions did not arrive by the deadline. These positions are not irreconcilable, however. Discussion revealed wide agreement on a flexible transition regime that would involve regulatory oversight and tests for whether particular markets had met the requirements for deregulation by stated deadlines. By the end of the discussion, the group seemed largely to coalesce around what might be called “date certain with checks.”

On one hand, Kennedy put the case for setting a date and sticking to it: “Regulation will never wither on the vine. If we have to go code by code, section by section, there will always be people there objecting; groups will press us from every angle, and we’ll take the path of least resistance and maintain the old regulations.” The way to prevent this

situation, she argued, would be to have a real sunset and start from scratch with a presumption of no regulation.

On the other side stood John Kneuer of the NTIA, who pointed to the digital television (DTV) transition as an example of a flashcut deadline that has not worked. The DTV deadline of 2006 will pass without being fully enforced. In the real world, Kneuer said, “There will never be a date certain.” Such deadlines, in his view, merely postpone the inevitable: “The fight will start all over around the time a penetration standard or flashcut time deadline approaches.” He continued, “Rather than planning a date certain that becomes a train wreck, it’s better to set up a framework whereby all this regulation becomes irrelevant.” In such a scenario, Kneuer argued, the market and technological realities would swamp the remaining regulatory apparatus, rendering most regulation so marginal as to make gaming regulators, maneuvering in the courts, and other staples of the current era largely beside the point.

Robert Pepper and others countered the DTV example by pointing to successful flashcuts. Pepper recalled deregulation of commercial mobile radio service—now generally known as cell phone service. “Congress passed a law, the FCC preempted state regulation, prices went down, more bands were allocated, and the rest is history,” Pepper said, with consumers enjoying wide choice, improved service, and lower prices. Joe Waz of Comcast cited the flashcut deregulation of “expanded basic” cable rates, which occurred in 1999, as provided in the 1996 Telecommunications Act. By most accounts, this provision has worked well for consumers and firms.

Furthermore, Pepper pointed to the far less happy experience of *not* setting a date certain, citing the deregulation of AT&T’s long distance rates. The idea was put into rules in 1989 without a date certain, and the FCC did not essentially deregulate AT&T long distance rates until the late 1990s—well past the time when competition and technology had substantially and permanently lowered prices and put them beyond AT&T’s control. Over that decade, “the inertia of the statute, lobbying, state regulation, and gaming of existing processes kept the regulation from withering.”

All this said, a transition from a largely copper-based, circuit-switched PSTN to entirely new networks that are based on new technologies (wireless, VoIP, and perhaps more) is a larger undertaking than any of the previous, narrower transitions cited. As discussion continued, it became clearer that a compromise involving a date certain *with* checks and escape hatches would make sense.

Charles Firestone of the Aspen Institute called for a transition scheme that would include a definite trigger date for a flashcut, based on the assumption that competition would be safely entrenched by that time—but with an escape clause in case the expected competitive conditions specified in the legislation do not develop. There would be a “reverse burden of proof”: In other words, a flashcut state preemption and deregulation of ILECs at the end of the five-year period would occur *unless* it could be proved that a market is not experiencing genuine

**A flashcut state preemption and deregulation of ILECs at the end of the five-year period would occur *unless* it could be proved that a market is not experiencing genuine competition.**

competition. Sandy Wilson, vice president for public policy at Cox Enterprises, noted that the cable industry has faced the opposite situation in the regulation of basic cable rates—a presumption against competitiveness and a burden of proof on the industry to substantiate it—and said that this burden has afflicted her firm and other cable companies for years. She endorsed the idea of the reverse presumption and suggested applying it to cable as well as to other telecommunications carriers.

John Kneuer and others at the November meeting pointed to the continuing need for data collection and analysis in deciding and implementing this sort of new policy. Kneuer cited as an example the frequent claim that there are multiple competitive cell phone carriers almost everywhere. Some observers accept this assumption and believe consumers should not fear that RLECs might go out of business. Yet we do not have precise data on



how much competitive service actually is available in all markets, large and small, across the country. The government should collect, analyze, and make such data available to Congress and other participants as deliberations on—and implementation of—reforms go forward.

Anna-Maria Kovacs of Regulatory Source Associates had a different take on the need to gather more data. She contended that waiting through a five-year transition before ending retail rate regulation of the ILECs merely delays the inevitable. Given current trends, she said, it is virtually certain that ILECs will face significant competition in most markets within five years. Bob Blau of BellSouth similarly observed, “There’s never been a premature deregulation of an industry in American history. It’s always too late.” Without citing a particular time period, they endorsed a rapid transition to ILEC deregulation. Charles Firestone noted in response that at minimum the five-year transition would benefit public officials, giving the Department of Justice (DoJ) and the FCC time to gather data and obtain a clearer picture. These steps are necessary if Justice is to make reasoned decisions about competitive conditions on a market-by-market basis in hundreds of communities around the nation.

**“There’s never been a premature deregulation of an industry in American history. It’s always too late.”**

*Robert Blau*

If contentions of anticompetitive actions or noncompetitive conditions arise, DoJ’s Antitrust Division could initiate an inquiry. Only if DoJ indeed rebuts the presumption of competitiveness would the FCC take regulatory action. The proposed new Act also would assume that the FCC implements a solution to the intercarrier compensation issue because the current jumble of varied intercarrier compensation rates is unsustainable. If the Commission does find such a solution, it would offer a precedent—proving that developing a rational transition plan that solves a complicated and politically charged problem in telecommunications regulation while providing clarity and predictability is possible.

Furthermore, the new Title VII could include an incentive for even more rapid switchover to unregulated markets. Assuming that broadband access is equivalent to ability to subscribe to a VoIP provider,<sup>4</sup> Blair Levin, managing director at Legg Mason, suggested, penetration levels of broadband might be used as a metric. If a market area reached 80 percent penetration, for instance, the ILEC might then opt out of regulation. Such a standard would give the ILEC a strong incentive to build out DSL or other broadband technology more quickly, before the end of the five-year transition period.

Levin argued that this incentive would make the transition embodied in the proposed new Telecommunications Restructuring Act superior to the unhappy experience of DTV. Under the 1996 Telecommunications Act, broadcasters have little incentive to increase penetration of digital sets and considerable incentive to stall. That arrangement has made the “date certain” of 2006 a dead letter. With the kind of penetration trigger Levin proposed, ILECs would have strong incentives to move the process along as rapidly as possible. Thus, he argued, DTV offers an instructive lesson for what not to do and points toward a better way in a new Act.

By the same token, some other, much lower, figure for broadband penetration might be used as an indicator *against* the legislation’s presumption of competition. If only 10 percent of a market’s households subscribed to broadband, for instance, DoJ might use that finding in assessing any petitions for regulatory intervention. As Anna-Maria Kovacs observed, “It is essential to create a market-specific mechanism for transitioning out. We’ll get protests either way, but a market-by-market test could keep them to a more manageable level.”

In markets that fail to reach the criterion, the date for transition to a deregulated market would be delayed. At the end of the five-year transition, there would not be an instant nationwide flashcut. Not only would such an idea be difficult to justify given the variety of competitive conditions across the nation, it also would make a new Act far more difficult to enact in Congress—and it would guarantee howls of protest by those who want to stay behind with the old technology.

This said, there remain issues that the conference highlighted without resolving. Levin raised this question: What if a competitor formally complains that market power exists, and after weighing evidence DOJ refuses to intervene on the complaint? This possibility appeared to create an irresolvable tradeoff. Under the proposal on the table at the conference, the competitor would have to rely entirely on DOJ and would have no other path to protect its interests. Levin warned, “I wouldn’t want to invest in any firm that was counting on DOJ to intervene.”

**“Technology will  
outrun any Act we  
can think of.”**

*Anna-Maria Kovacs*

In other words, providing only this one way of protecting a competitor’s interests might discourage investment in competitive firms. On the other hand, opening more avenues for complaint by competitors alleging noncompetitive conditions leads down the slippery slope the new Act is designed to avoid. More ways of claiming the need for continued regulation mean more ways to game and delay the system—which also would be likely to discourage investment.

Moreover, the problem does not end there. Robert Pepper of the FCC raised still further issues. For instance, would American Express or another larger user have standing before DOJ to claim that the competitive test has not been met in a particular product or geographic market? Regardless of standing issues, would DOJ have to respond to *any* complaint by launching an investigation? Could such a requirement not open the way to gaming and delays? Recall that the conference began with a compelling demonstration that the availability of VoIP, cell phones, WISPs, and other future marvels suggest, as Anna-Maria Kovacs said, that “technology will outrun any Act we can think of.” No new policy will be perfect.

Participants did not explore in great detail exactly what the world would look like after uneven deregulation that would occur if DOJ finds some markets competitive and others not. This scenario suggests that SBC, BellSouth, and the other ILECs might well be deregulated in

some markets but not others. History suggests such firms will contest these decisions and have trouble predicting them. One question that requires further consideration is how such conditions would affect the ILECs' planning and finances.

We return to the minimal need for a degree of certainty in the transition—if not a date certain, then a test certain. Robert Pepper recalled the subscriber line charge (SLC), which originally was introduced at about \$2 per month and carried considerable negative publicity and gradually rose to its present level of about \$6.50. The SLC represents another transition that worked. It was politically difficult but economically necessary. “People bit the bullet,” Pepper remembered, and they were able to do so because there was a transition plan with irreversible momentum. That kind of plan is needed once again—only more so.

#### *Network neutrality and interconnection*

The proposed new law would contain the potential for regulation to enforce network neutrality, but it would start from a *presumption that in competitive markets, firms would have neither the incentive nor the market power to discriminate*. Thus, the proposed law would assume that broadband providers would not discriminate in allowing users to reach content offered by competitors and that broadband providers would find it advantageous to negotiate interconnection with competitive carriers in good faith.

Professor Dale Hatfield of the University of Colorado added an important aspect of network neutrality that generally is not addressed: “Some broadband technologies or architectures suffer from latency/jitter problems, making them largely unsuitable for normal voice services. In order to offer competitive quality VoIP services, such technical problems must be held within reasonable bounds.” Thus, independent providers of VoIP such as Vonage may need to get access to quality-of-service (QoS) and other technical capabilities in cable modems to avoid excessive latency/jitter and offer a fully functional VoIP service. Merely subscribing to broadband may not be enough to give consumers access to an alternative voice telephony service if QoS and other functionality in the cable modem system (or DSL or other broadband equivalent) is denied to competitors. To the extent that policymakers are now

depending on broadband to support competitive voice services, Hatfield argued, assuring access to bandwidth alone may be technically inadequate to guarantee a competitive outcome.

Thus, during and perhaps even after a transition, some regulatory oversight probably would be required for interconnection. Pepper pointed out the need for an *expedited* process to deal with any interconnection disputes on matters such as termination. There would have to be a mechanism to settle these disputes quickly, or the old habits of gaming and delays might return and persist. The goal would be rules and prices governing interconnection in a manner that is as transparent and certain as possible.

One partial solution to regulatory lag was dissected during the November meeting: granting states authority to settle specific interconnection disputes with ILECs. Sandy Wilson of Cox Enterprises emphasized the need above all for speedy settlement of grievances; she said state regulators had responded expeditiously and reasonably to her own firm's interconnection complaints. This idea garnered general assent but not consensus. Dissenters argued that all firms have strong market incentives to interconnect. Citing fears of further delays and gaming, they recommended private arbitration or reliance on antitrust over reliance on state regulators. Wilson demurred, saying that availability of a knowledgeable regulator to intervene quickly in interconnection disputes serves as an important check on unreasonable behavior and is essential to ensuring that competitive telephone providers have a place to go to expeditiously remedy problems that adversely affect their provision of service to customers. Failing to interconnect on reasonable terms is anticompetitive, but working through antitrust procedures takes entirely too long to offer a practical remedy, she argued. On the other hand, there did appear to be consensus that consumer demand will drive interconnection among the rest of the carriers in the industry, including cable and wireless service providers. This demand should render state involvement in their interconnection practices unnecessary.

## The Broadband Solution

President Bush has articulated a goal of universal and affordable access to broadband in the United States by 2007. Not only would achieving this goal boost the economy in general and help the United States catch up to nations where broadband penetration is far higher, it might simultaneously offer a potential solution to maintaining universal affordable voice telephony service.

One innovative idea floated among participants at the November follow-up conference was to reallocate money now raised by various taxes and fees within the telecommunications system for both universal service and the E-rate. This amount is estimated at \$8–12 billion per year in implicit and explicit interstate and intrastate subsidies. That money could be used to launch a 10-year, \$100 billion plan to build a new state-of-the-art, noncopper broadband network, using mostly WISPs and

**One innovative idea floated among participants ... was to reallocate money now raised by various taxes and fees within the telecommunications system for both universal service and the E-rate.**

other wireless technologies. This network could be given to RLECs in exchange for phasing out of their copper facilities. RLECs would then be expected to run the new networks without subsidy. In the ideal, those networks would deliver VoIP and data to virtually every corner of the nation at prices roughly comparable to those paid by consumers in more densely populated areas.

Although this plan may seem radical, it has some real virtues. RLECs might lose their subsidies, but they also would be freed of dependence on aging, obsolete copper networks while gaining possession of a modern network with new possibilities for revenue. Consumers could be switched over to VoIP in seamless fashion and presumably would enjoy affordable voice service comparable to that already available to those with Vonage and its cousins, including free long distance—which might be particularly attractive to consumers in more remote areas. There are

some downsides to this proposal, of course. For one thing, some RLECs—especially those accustomed to assured and large rates of return—might object even to this seemingly large gift because of the uncertainty and exposure to competition it entails. In addition, potential competitors who have to raise capital and make investments themselves might object to deeding publicly funded broadband networks to incumbent RLECs. On the other hand, right now those potential competitors face incumbent RLECs that are receiving essentially the same amount of subsidy, often to maintain artificially low rates that make it unattractive for the competitors to enter. Hence on balance, one could argue, competitors would be no worse off. Participants urged that states consider experiments along these lines with a few rural carriers in their jurisdictions to test the feasibility of the basic concept.

## **Conclusion**

What the conference demonstrated beyond any doubt is the urgent need for policy reform. It may have taken more than 60 years for a major rewrite of the original Communications Act of 1934, but the pace of technological change simply demands that the Telecommunications Act of 1996 be revisited. That law focused heavily on opening up the ILECs' local circuit-switched networks to CLECs. Although these competitive wireline carriers still must be considered, the very acronyms are becoming archaic as fewer and fewer calls go through a "local exchange" and as the distinction between local and long distance calls becomes increasingly obsolete in the marketplace. This year's Aspen conference concentrated on finding a politically feasible solution to move forward that incorporates the needs and positions of diverse and politically powerful players ranging from state officials and rural carriers to Wall Street and the cable industry. Most participants eschewed the word "crisis" in speaking about the need for reform, but none disputed that the need is compelling and pressing.

## Endnotes

1. Although VoIP would be unregulated, there might have to be a partial exception: a transition period for intercarrier compensation where VoIP traffic touches the PSTN. This report does not delve into the highly technical details of intercarrier compensation.
2. Details are available at <http://www.ottawawireless.net/index.html>.
3. After the August 2004 Aspen conference, the FCC exerted federal jurisdiction over VoIP services and preempted state authority, to keep such services free of legacy telephone regulation.
4. See the caveat from Dale Hatfield, below, however, noting that not all broadband is equal with regard to its ability to deliver acceptable quality voice service.



# APPENDIX

---



# Acronym List

CLEC – Competitive Local Exchange Carrier

DSL – Digital Subscriber Line

FCC – Federal Communications Commission

ICF – Intercarrier Compensation Forum

ILEC – Incumbent Local Exchange Carrier

POTS – Plain Old Telephone Service

PSTN – Public Switched Telephone Network

RLEC – Rural Local Exchange Carrier

USF – Universal Service Fund

VoIP – Voice Over Internet Protocol

WISP – Wireless Internet Service Provider



Nineteenth Annual Aspen Institute Conference  
on Telecommunications Policy

***Restructuring Telecommunications:  
Roadmap for the Future***

Aspen, Colorado  
August 15-18, 2004

**List of Participants**

**Kathleen Abernathy**

Commissioner  
Federal Communications  
Commission

**Bill Bailey**

Majority Senior Counsel  
Committee on Commerce,  
Science, and  
Transportation  
United States Senate

**Robert Blau**

Vice President  
Executive and Federal  
Regulatory Affairs  
BellSouth

**Jeffrey Brueggeman**

Vice President External Affairs  
SBC Telecommunications, Inc.

**Jeffrey Campbell**

Director, Technology and  
Communications Policy  
Government Affairs  
Cisco Systems

**Colin Crowell**

Telecommunications Policy  
Analyst  
Office of U.S. Representative  
Edward J. Markey

**Robert M. Entman (*Rapporteur*)**

Professor  
Department of Communication  
North Carolina State University

**Charles M. Firestone**

Executive Director  
Communications and Society  
Program  
The Aspen Institute

**Robert N. Gensler**

Vice President and Portfolio  
Manager  
Media and Telecommunications  
Fund and Global  
Technology Fund  
T. Rowe Price

Note: Titles and affiliations are as of the date of the conference.

**Dale N. Hatfield**

Independent Consultant  
and  
Adjunct Professor  
Interdisciplinary  
Telecommunications Program  
University of Colorado–Boulder

**Heather E. Hudson**

Director  
Telecommunications  
Management and  
Policy Program  
School of Business  
and Management  
University of San Francisco

**Kevin Kahn**

Intel Senior Fellow  
and  
Director  
Communications Technology Lab  
Intel Corporation

**Laurel Kamen**

Vice President  
Government Affairs  
American Express

**Susan P. Kennedy**

Commissioner  
California Public Utilities  
Commission

**John Kneuer**

Deputy Assistant Secretary of  
Commerce for  
Communications and  
Information  
National Telecommunications  
and Information Administration

**Anna-Maria Kovacs**

Founder and President  
Regulatory Source Associates, LLC

**Blair Levin**

Managing Director  
and  
Telecom and Media Analyst  
Legg Mason

**Joel Lubin**

Vice President  
Federal Government Affairs  
AT&T

**Marsha MacBride**

Executive Vice President  
Legal and Regulatory Affairs  
National Association of  
Broadcasters

**Jennifer McCarthy**

Vice President  
Regulatory and Market  
Development  
QUALCOMM, Inc.

**Michael McKeehan**

Director of Internet and  
Technology Policy  
Verizon Communications

**Eli Noam**

Director  
Columbia Institute for Tele-  
Information  
and  
Professor of Economics and  
Finance  
Columbia Business School  
Columbia University

**Preston Padden**

Executive Vice President  
Government Relations  
The Walt Disney Company

**Robert Pepper**

Chief  
Policy Development  
Federal Communications  
Commission

**Bob Rowe**

Chairman  
Montana Public Service  
Commission

**Lee Schroeder**

Vice President  
Government and Regulatory  
Strategy  
Cablevision Systems Corporation

**Douglas C. Sicker**

Assistant Professor  
Computer Science Department  
Interdisciplinary  
Telecommunication  
Program  
University of Colorado at  
Boulder

**Steven Teplitz**

Vice President and Associate  
General Counsel  
Time Warner, Inc.

**Lara Warner**

Director  
Credit Suisse First Boston  
Corporation

**Joseph Waz**

Vice President  
External Affairs  
and  
Public Policy Counsel  
Comcast Corporation

**Alexandra M. Wilson**

Vice President  
Public Policy  
Cox Enterprises, Inc.

*Staff:***Mridulika Menon**

Project Manager  
Communications and Society  
Program  
The Aspen Institute





## About the Author

**Robert M. Entman**, professor of communication and political science at North Carolina State University, received a Ph.D. in political science from Yale and an M.P.P. in policy analysis from the University of California at Berkeley. His research and teaching interests focus on political communication and communication policy.

Among Dr. Entman's books are *Democracy Without Citizens: Media and the Decay of American Politics* (Oxford University Press, 1989); *Mediated Politics: Communication in the Future of Democracy* (Cambridge University Press, 2001; edited with W. L. Bennett); and *The Black Image in the White Mind: Media and Race in America* (Chicago University Press, 2000; with A. Rojecki). *The Black Image in the White Mind* won the Mott/KTA prize for best book from the Association for Education in Journalism and Mass Communication; the Lane Award for best book in political psychology from the American Political Science Association; and the Goldsmith Book Prize from Harvard University. Professor Entman's most recent book, *Projections of Power: Framing News, Public Opinion, and U.S. Foreign Policy*, was published by the University of Chicago Press in 2004, and he is working on a new book about media bias and scandals.

A former National Science Foundation Graduate Fellow and National Institute for Mental Health Post-Doctoral Fellow, Dr. Entman was the Lombard Visiting Professor at Harvard University during the fall 1997 semester, and he taught previously at Duke and Northwestern. With Lance Bennett, he edits the book series *Communication, Society and Politics* for Cambridge University Press.



## **Previous Publications from the Conference on Telecommunications Policy**

*The following publications were all authored by Robert M. Entman*

### *Spectrum and Network Policy for Next Generation Telecommunications (2004)*

The report of the 18th Annual Aspen Institute Conference on Telecommunications Policy offers policy alternatives in both spectrum and network policy to achieve new gains for the telecommunications field. The first essay suggests new management approaches to encourage more efficient uses of the spectrum while preserving the commitment to reliability of service and public safety values. The second essay debates the competitive structure of the telecommunications industry and its implications for building Next Generation Networks (NGN) and identifies three areas to encourage optimal development of the NGN: (1) operate the NGN on a price deregulated basis and begin addressing access regulation issues, (2) secure intellectual property rights of content suppliers, and (3) adjust the system of subsidized pricing to bring about competitively neutral pricing. 2004, 92 pages, ISBN Paper: 0-89843-394-0, \$12.00

### *Balancing Policy Options in a Turbulent Telecommunications Market (2003)*

This report assesses the future of communications regulatory paradigms in light of desirable changes in spectrum policy, telecommunications market environments, and regulatory goals. It suggests four models of regulation, including government allocation, private spectrum rights, unlicensed commons, and a hybrid system of dynamic spectrum access. It also addresses how changes in spectrum and other telecommunications policies, and new business realities, might affect current regulatory regimes for the telecommunications industries. The publication includes an essay on spectrum management, "The Current Status of Spectrum Management" by Dale Hatfield. 79 pages, ISBN Paper: 0-89843-370-3, \$12.00

*Telecommunications Competition in a Consolidating Marketplace* (2002)

In the telecommunications world, what would a fully competitive environment look like? What communications initiatives should policy makers develop—considering the ultimate warfare of the consumer to implement change in the regulatory climate? This report explores ways to reshape the current regulatory environment into a new competitive space. It addresses competition not only within but across separate platforms of communications such as cable, wireline telephony, wireless, satellite, and broadcast. This publication also includes an essay on an innovative approach to wireless regulation, “Opening the Walled Airwave,” by Eli Noam. 64 pages, ISBN Paper: 0-89843-330-4, \$12.00

*Transition to an IP Environment* (2001)

This report examines a “layered approach” to regulation. By viewing telecommunications in four separate layers—content, application, network, and data link—policy discussions can address concerns in one layer without negatively affecting useful existing policy in other layers. Also presented are beliefs that the growth of broadband should prompt a new discussion of universal service reform. The report also includes “Thoughts on the Implications of Technological Change for Telecommunications Policy,” by Michael L. Katz. 78 pages, ISBN Paper: 0-89843-309-6, \$12.00

*Six Degrees of Competition: Correlating Regulation with the Telecommunications Marketplace* (2000)

This report addresses the basic conceptual questions of what should be the nature of regulation in a competitive, broadband future. It also examines how fundamental policy questions such as interconnection, mergers, spectrum allocation, jurisdiction, universal service, and consumer protection should be handled in the interim. The report also includes “Regulation: The Next 1000 Years,” by Michael L. Katz. 65 pages, ISBN Paper: 0-89843-279-0, \$12.00

*Residential Access to Bandwidth: Exploring New Paradigms* (1999)

This report explores policy initiatives that would encourage the widespread deployment of residential broadband services throughout the United States. It identifies our regulatory system as one of the chief obstacles to achieving ubiquitous broadband deployment and offers a

new regulatory model to overcome these barriers. 35 pages, ISBN Paper: 0-89843-256-1, \$12.00

*Competition, Innovation, and Investment in Telecommunications* (2002)

This report considers how public policy can foster investment, competition, and innovative services in local exchange telecommunications. The volume also includes "An Essay on Competition, Innovation, and Investment in Telecommunications," by Dale N. Hatfield and David E. Gardner. 1998, 52 pages ISBN Paper: 0-89843-235-9, \$12.00

*Implementing Universal Service After the 1996 Telecommunications Act*

This report summarizes the conference's suggestions for universal service policy options, generally, and financing options for schools and libraries, specifically, which were submitted to the Federal-State Joint Board on Universal Service in September 1996. The report includes an appendix with sections of the Telecommunications Act of 1996 that relate to universal service. \$10.00

*The Communications Devolution: Federal, State, and Local Relations in Telecommunications Competition and Regulation* (1996)

In the context of landmark communications legislation, this report examines the forces shaping the competitive world of telecommunications, and offers federal, state, and local regulators a roadmap to resolving jurisdictional disputes and promoting effective competition. 64 pages ISBN Paper: 0-89843-190-5, \$10.00

*Strategic Alliances and Telecommunications Policy* (1995)

The report examines the underlying trends and motivations in the emergence of strategic alliances in the provision of telecommunications. It then explores the implications of these alliances, suggests tools and methods of analysis for viewing these alliances, and addresses, from a public policy perspective, what remedies and actions might be advisable in the near and long-term future. 26 pages ISBN Paper: 0-89843-170-0, \$10.00

*Local Competition: Options for Action* (1993)

This report sets forth the compromise universal service funding plan arrived at by conference participants. It also describes approaches to removing barriers to local competition and addresses issues associated

with competition in other fields by incumbent carriers. It includes an essay by Eli Noam entitled, "Reforming the Financial Support System for Universal Service in Telecommunications." 38 pages ISBN Paper: 0-89843-150-6, \$10.00

*Competition at the Local Loop: Policies and Implications* (1993)

This report examines the trend toward greater competition in telecommunications, with new competitors such as cellular telephone, paging, cable television, private telecommunications providers, personal communications service experiments, satellites, and long-distance providers. It seeks to develop sound options for future public policies and addresses issues of universal service and jurisdictional control and preemption. 28 pages ISBN Paper: 0-89843-130-1, \$10.00

# About the Communications and Society Program

[www.aspeninstitute.org/c&s](http://www.aspeninstitute.org/c&s)

The Communications and Society Program is a global forum for leveraging the power of leaders and experts from business, government, and the nonprofit sector in the communications and information fields for the benefit of society. Its roundtable forums and other projects aim to improve democratic societies and diverse organizations through innovative, multidisciplinary, values-based policymaking. They promote constructive inquiry and dialogue and the development and dissemination of new models and options for informed and wise policy decisions.

In particular, the Program provides an active venue for global leaders and experts from a variety of disciplines and backgrounds to exchange and gain new knowledge and insights on the societal impact of advances in digital technology and network communications. The Program also creates a multidisciplinary space in the communications policymaking world where veteran and emerging decision makers can explore new concepts, find personal growth and insight, and develop new networks for the betterment of the policymaking process and society.

The Program's projects fall into one or more of three categories: communications and media policy, communications technology and the democratic process, and information technology and social change. Ongoing activities of the Communications and Society Program include annual roundtables on journalism and society, international journalism, telecommunications policy, Internet policy, information technology, and diversity and the media. The Program also convenes the Aspen Institute Forum on Communications and Society, in which chief executive officers of business, government, and the nonprofit sector examine issues relating to the changing media and technology environment.

Conference reports and other materials are distributed to key policymakers and opinion leaders within the United States and around the world. They also are available to the public at large through the World Wide Web.

