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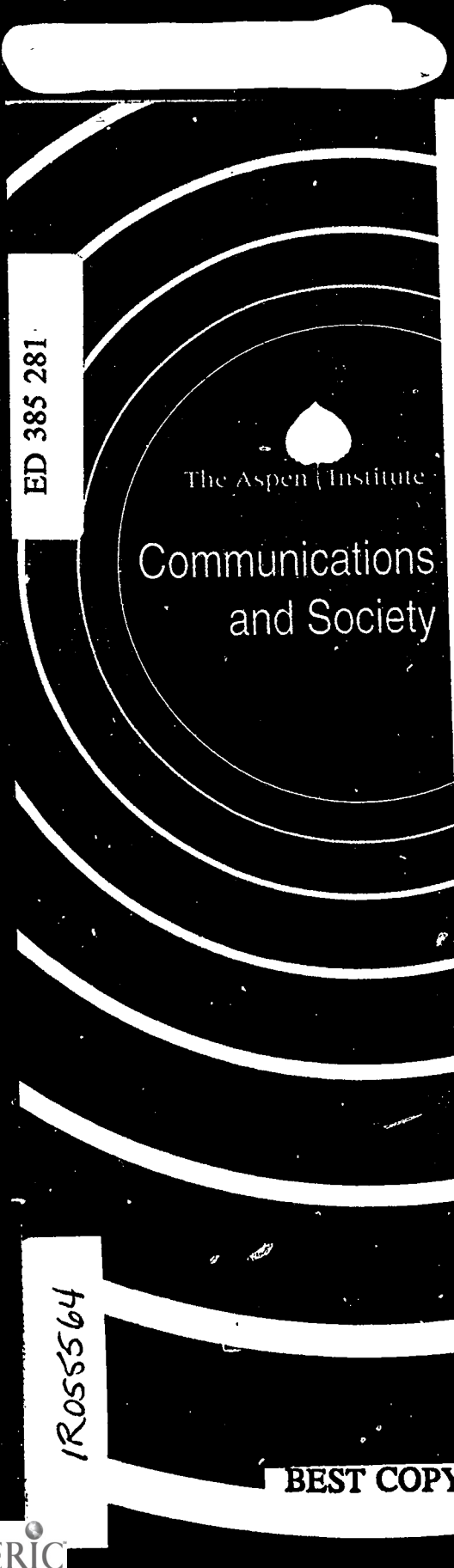
ABSTRACT

This conference explored the policy issues surrounding the growth of strategic alliances among telecommunications firms and explored the forces stimulating (and discouraging) alliances. It asked how alliances might affect public policy goals or create problems such as anticompetitive behavior or excess market power. It also explored how alliances might affect three markets: in telecommunications transmission and switching, customer premises equipment, and content. The conference was divided into three working groups paralleling these markets. Each produced a draft report analyzing issues arising out of strategic alliances in their areas and recommending possible policy solutions. A revised, integrated version of these reports form the main body of this report. After defining what is meant by "strategic alliances," and identifying underlying factors affecting companies' decisions to combine in different forms, public interest goals that these alliances might affect, both positively and negatively, are explored. The arsenal of tools that governments have to address these positive and negative traits, and the appropriate time to use them, are considered. An appendix lists conference participants. (MAS)



Strategic Alliances and Telecommunications Policy

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Strategic Alliances and Telecommunications Policy

A Report of
The Ninth Annual Aspen Institute
Conference on Telecommunications Policy

Aspen, Colorado
August 7–11, 1994

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Foreword

Throughout the globe, telecommunications and information industry participants are increasingly aligning with others, within or outside their industries, to explore new ventures and markets. While there appear to be many causes and drivers of these alliances, two stand out: technological convergence (and thus market convergence) and globalization.

In the few years preceding the 1994 Aspen Conference on Telecommunications Policy, the communications industry saw the announcements of bolder and more spectacular business marriages: General Electric—NBC, Time Warner—US West, MCI—British Telecom, Bell Atlantic—TCI, Viacom—Paramount—Blockbuster, and on and on. Some have succeeded from a business standpoint, some have not. Others did not even get to the altar.

For one thing, each new announcement drew larger gasps from onlookers. If not governmental officials or public advocates, then competitors were heard loud to complain. Vertical integration, some said, could lead to restricting markets, eventually higher prices and fewer consumer choices. Advocates for the transactions suggested, to the contrary, that they would enable the new entity to compete globally and enter new markets. Horizontal integration, subject to more familiar antitrust standards, was also the subject of intense governmental and public scrutiny.

The trend toward strategic alliances appears to be with us for considerable time to come. While the move to conglomerate businesses is not new, the context of an increasingly competitive and global telecommunications marketplace is. Accordingly, in designing the Ninth Annual Aspen Institute Telecommunications Policy Conference, the sponsors and organizers sought to analyze these phenomena from a telecommunications public policy perspective.

Goals of Conference

When the 27 participants gathered from August 7–11, 1994 at the Aspen Institute's conference center in Aspen, Colorado, they set as their goals:

- To identify the underlying trends and motivations in the emergence of strategic alliances and combinations in the provision of telecommunications;

- To explore the implications of these alliances for the telecommunications and information sectors (including consumers, large users, and competitors), and to sort out the potential and perceived advantages and ills arising from such combinations;

- To devise tools and methods of analysis for viewing these alliances; and

- To address, from a policy perspective, what remedies and actions, if any, are advisable in the near and long-term future.

After defining what is meant by "strategic alliances," and identifying underlying factors affecting companies' decisions to combine in different forms, participants looked to the public interest goals that these alliances might affect, both positively and negatively. They also considered the arsenal of tools that governments have to address these positive and negative traits, and the appropriate times to use them. They discussed both market failures and governmental failures, and ways to prevent either. And they outlined some of the most likely venues of governmental action.

The conference then broke into working groups to address three contexts or markets where strategic alliances might be of greatest concern: the most significant potential bottlenecks in telecommunications in the mid-1990s. Working groups consisted of a cross-section of participants, viz., representatives from local, alternative, interexchange, and international telecommunications

carriers, cable operators, large users, content providers, consumer representatives, and state and federal officials. They considered strategic alliances at these pressure points:

- The Conduit: bottlenecks, present and potential, in the communications conduit system.

- Content Providers: particularly those seeking to produce, access, and distribute their products or messages.

- Customer Premises Equipment: the interface between the customer and the communications conduit, specifically the set-top or other devices at the subscribers premises.

In the end, while concern for maintaining competition and diversity was always expressed in general terms, and always to the issues inherent in the conduit system, which is in constant flux as it moves more and more to a competitive marketplace, the most animated discussion and analysis came with respect to the emerging market and policy for set-top boxes. It is there that the more general points can be applied to concrete factual situations that one can foresee in the imminent future.

In the ensuing Forum Report, rapporteur Dr. Robert Entman, Communications Professor at North Carolina State University, once again sets forth his analysis of the deliberations and discourse that occurred during the conference. The report is not intended to provide a blow-by-blow account of the meeting, but rather, to discern the key points and analysis that surfaced among the representatives of competing communications and information businesses, users and consumers, federal and state government officials, and academics. While participants were given an opportunity to review a draft of the report and correct any opinion mistakenly attributed to them, unless such an attribution does appear, readers should not assume that those who attended hold any particular view expressed in this document. Nevertheless, it does reflect the general flow of analysis and discourse of the meeting.

Acknowledgments

The Aspen Institute Communications and Society Program would like to thank and acknowledge those who made this conference and the report possible. First, the participants, listed at the end of the report, gave generously of their time and insights. Some also gave generously as sponsors of the project. They are:

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Electronic Data Systems
France Telecom
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Teleport Communications Group
US West

Finally, we express our gratitude to rapporteur Robert Entman, who has consistently generated succinct and insightful reports of these sessions, Amy Garmer, Program Associate, who supervised the operation of the conference, and Danny Wright, who supervised the production of the report.

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

Strategic Alliances and Telecommunications Policy

INTRODUCTION

The Ninth Annual Aspen Institute Conference on Telecommunications Policy, meeting in Aspen, Colorado August 7–11, 1994, explored the policy issues surrounding the growth of strategic alliances among telecommunications firms. The conference explored the forces stimulating (and discouraging) alliances. It asked how alliances might affect public policy goals or create problems such as anti-competitive behavior or excess market power. And it explored how alliances might affect three markets: in telecommunications transmission and switching, customer premises equipment, and content. The conference was divided into three working groups paralleling these markets. Each produced a draft report analyzing issues arising out of strategic alliances in their areas and recommending possible policy solutions. A revised, integrated version of their reports form the heart of this document.

What is a "Strategic Alliance?"

Cooperative activities between separate firms can be arrayed on a continuum that runs from short-term joint ventures—perhaps a combined effort between a telephone company and a newspaper—to complete ownership and management integration that forms a single new entity. For the purposes of this report and policy concern, the concept of "strategic" alliance encompasses a significant portion of this continuum, specifically including:

1. Outright mergers between firms, or acquisitions of one firm by another.

2. Joint ventures by firms under separate ownership in which each contributes funds to launch a new entity that they intend to be a permanent market participant. This excludes temporary agreements to perform short-term market tests or experiments.

3. Investments by one firm in another's operations which give the investing firm shared control over some aspects of the recipient's activities.

4. Combinations that do not involve investment but rather cooperative agreements by firms to use one another's products or services in bringing an offering to market. While a typical marker for a strategic alliance may be the investment of money and sharing in profits (or losses) by all partners in the venture, this is not inevitable. An alliance may involve a single firm's investment, with one or more others just supplying a good or service for payment rendered by the first firm. What distinguishes such an arrangement from a traditional relationship whereby a firm simply purchases a production input from another? While there is no bright line or established definition, it appears to be the way the enterprise is managed: a high degree of joint planning and close cooperation in shaping the final product or service, along with the intention to maintain the relationship for an extended period likely to involve refinement of the offering in reaction to the developing market responses.

5. A trial arrangement of two or more firms limited in time and purpose.

These five combinations can quickly evolve, of course. What starts as a cooperative agreement to use one another's services, or even a limited marketing trial, can become a full-fledged joint venture. The path can go the other way as well: a joint venture or shared control investment can change to a less intense cooperative purchasing agreement. Other combinations might arguably also

fall under the rubric of "strategic alliance," but the above list suffices for this report. Most readers can probably tell a strategic alliance when they see one.

General Public Policy Goals

The conference generally seemed agreed on three overarching policy goals:

- Full and effective competition in all aspects of the communications marketplace.
- Minimizing barriers to providing information and other services to the public.
- Parity in regulatory treatment of telecommunications firms, consistent with the degree of market power they exert.

Possible Policy Problems

The group identified several potential harms that might arise from strategic combinations of conduit, equipment, or content providers. These involve chiefly the exercise of undesirable market power or acting anticompetitively. Thus a strategic alliance might attain a sufficient market share to exact monopoly rents or restrict economic output. Some types of alliances might also yield a reduction of head-to-head competition among independent firms. Perhaps most disturbing along these lines is the possible diminution in the number of "pipes" entering the customer premises; in the main, conference participants support a vision of competitive conduits.

Alliances could in theory use market power to create barriers to entry — for example, restricting access to their customers by unaffiliated content providers (which of course means limiting customers' access to diverse content providers). Where an alliance includes a regulated firm with captive ratepayers, revenues from the regulated firm could be used to subsidize the alliance's activities, allowing it unfairly to underprice competitors. This possibility looms from a more global perspective: leverage of monopoly or market power enjoyed in their home bases by foreign

partners, to the detriment of competition in United States. A final anticompetitive impact of alliances could arise from their setting technical standards that diminish the interoperability of networks. This could diminish the ability of competitors to connect their customers to the alliance's customers.

Note that these are potential pitfalls that might not actually materialize. All of these problems can arise without strategic alliances, and even where alliances exist they are not necessarily the culprits. And for most of these potential risks there are conceivable benefits. For example, it is easy to imagine that an alliance between two relatively weak market participants could yield an entity strong enough to give real competition to a large, entrenched firm, diluting its market clout and heightening competitiveness. A combination of two previous competitors could also yield significant production efficiencies, more than compensating for a reduction in the number of market participants. In a similar way, strategic alliances might well enhance rather than disrupt interoperability. Hence the growth of strategic alliances should in no way be equated with the inevitable expansion of monopoly profits, diminution of competition, difficulties in interoperability, or other undesirable outcomes. As this report suggests, furthermore, good public policy can prevent or mitigate risks and problems.

GOALS AND OVERALL SOLUTIONS

Conference participants generally agreed that, with rare exceptions, the marketplace will determine which alliances make economic and market sense. Government's major role will be to examine proposed strategic alliances and mergers for the potential of public interest harms or benefits, and, recognizing that there may be risks or costs, make an on balance judgment as to the overall public interest impacts. This assessment may lead government to apply safeguards that protect or promote the public interest. In some cases, government might even forbid alliances it deems contrary to the overall public interest. In the more frequent cases where government approves the alliance but proposes certain

policy safeguards, parties to the planned merger will of course be free to decide if proposals continue to be viable under that policy regime. A final potential part government might play is to encourage cooperative activities among private firms where they seem likely to be beneficial.

In recommending overall goals for policy, conference participants emphasized six major points:

Government Review

Government does and should continue to have the authority to examine proposed strategic alliances and mergers to seek an appropriate balance between potential public interest harms and benefits, including impacts on competition. Only if there is an initial finding of potential harm should such a balancing analysis be undertaken. Given the dynamism of products and alliances in this industry, several participants suggested a standard that government not intervene unless it finds a danger that competition will be impeded or social welfare seriously harmed.*

If it makes that suggested finding, a government agency should be able to approve, prescribe safeguards, or deny alliances, as appropriate. In doing this, government should minimize the opportunity for strategic manipulation of the decision-making process (or "gaming")—for example, a party's deliberate prolonging of the approval process simply to delay entrance of a competitor.

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* This differs somewhat from current practice by the Department of Justice and Federal Trade Commission, both of which enforce the antitrust laws in the United States. Section 7 of the Clayton Antitrust Act prohibits inter-corporate mergers, joint ventures, or other arrangements that "may tend substantially to lessen competition in any line of commerce in any section of the country." Both the Antitrust Division of the Department of Justice and the Federal Trade Commission enforce this law. Additionally, the Antitrust Division enforces Sections 1 and 2 of the Sherman act, which proscribe, respectively, "contracts, combinations, and conspiracies in restraint of trade" and "monopolization and attempted monopolization." Under the Hart-Scott-Rodino Antitrust act, all mergers and similar arrangements between firms with a minimum of $100 million and $10 million in annual revenues are subject to "pre-merger notification" and review by the Justice Department and the FTC. Either agency can request information in addition to the voluminous information otherwise required, and forestall consummation of the transaction until that information is provided.

Establishment of an Integrated National Policy with Clear Delineation of Regulatory Authority

National goals and guidelines should be established, including a clear statement of the appropriate roles, if any, for all levels of government (national, state, local, foreign, and international). In this way, government policy can effectively manage the evolution of competitive markets in which strategic alliances are significant players, and the public interest will be protected.

The conference examined with particular care the matter of local governmental jurisdiction over alliances. Most of those present concluded that jurisdiction should reside almost exclusively at the federal and state levels. Many expressed concern that regulation by the 30,000 or more municipalities in the U.S. could require telecommunications firms to conform with conflicting and shifting regulations. Such conditions would render investment decisions riskier and more complicated, retarding growth of the industry. Kevin O'Hara, Senior Vice President of MFS Communications Company, noted that his firm alone is negotiating with nearly 300 separate local entities, many lacking needed technical expertise and each with different desires. Gail Garfield Schwartz, Vice President of TCG, Inc. described similar frustrations.

Fear was also expressed that local governments might be tempted to erect entry barriers. Whatever their stated purposes, such limitations can have the same anticompetitive impacts as entry barriers arising from private market actions.

Some sentiment was expressed for explicit statutory limitations on local government authority. Robert Pepper, Chief, Office of Plans and Policy at the Federal Communications Commission, for example, suggested states might take it upon themselves to pre-empt local authority. The local jurisdiction problem is so serious, in his view, that "The current regime will not work; it's going to collapse and the current legislation [being considered in the 1994 Congress] won't help." Preemption would mean that local governments could not discriminate among telecommunications providers or require the provision of communication services to public agencies in return for access to local rights of way. The widespread critique of local jurisdiction did not mean participants rejected completely the idea of partnerships between local gov-

ernments and private firms—as long as such alliances were entered voluntarily and did not arise from coercion.

Many also viewed state jurisdiction skeptically. A perennial concern at the Aspen conferences is pre-emption of state government regulation. Some group members proposed removing state authority whenever a state regulation frustrates the full effectuation of federal policy. Laurel Kamen, Vice President-Government Affairs for American Express, said that large firms seeking to offer new services across state lines strongly favor preemption and a national telecommunications policy that would rationalize the lines of authority. Other participants responded that states play a valuable role in a federalist system and should not be overly restricted. A specific concern voiced with respect to strategic alliances is that state attorneys general are becoming more active in attempting to enforce the states' antitrust standards. Many participants believe these elected state officials are inappropriate participants in essentially federal antitrust policy, which should be made by the traditional federal agencies.

A Transition to Regulatory Parity

While regulatory parity tends to receive endorsement in the abstract, details cause consensus to break down. Conference members concurred that parity should be sought consistent with the evolution of a competitive marketplace and other public interest requirements. Among the specific applications of this idea, the most controversial pertains to applying common carrier obligations to conduit firms. Some participants believe telephone companies should continue to face common carrier requirements while cable television systems, even if they offer telephony services, should not. They cite First Amendment interests as commending asymmetric regulation as long as asymmetric market power persists. Other participants believe cable systems that become switched broadband facilities should share common carrier obligations with telephone companies. This issue will grow more complicated as other types of conduits—from broadcasters to electric utilities—enter the competitive fray.

Harmonizing Regulation Internationally

Many alliances are international and these pose a host of potential issues. Klaus Grewlich, Director General, International Affairs for Deutsche Telekom, the German PTT, observed that different nations pursue different antitrust and other policies. Alliances could try escaping to "regulatory havens" in order to evade the authority of unwanted regulators. As noted earlier, a U.S.-foreign alliance might receive subsidies for the American venture from monopoly profits (or government subsidies) supplied by the foreign partner. Tom Kalil, a telecommunications policy specialist on the staff of the National Economic Council, argued for reciprocity in treatment across national boundaries. This means pressing for open, competitive markets and comparable regulatory treatment beyond U.S. borders. James Graf, Vice President, Government Relations for British Telecommunications (BT), described an example of how this standard might work. He cited the Department of Justice's evaluation of the strategic alliance between his firm and MCI Communications. The antitrust division looked into whether BT, the dominant supplier of local telephone service in Britain, would discriminate in favor of MCI (and against other U.S. firms) when interconnecting to international carriers. The regulatory regime in the United Kingdom generally favors competition, and this factored into the conditions the U.S. government set in approving the alliance.

Making Universal Service Compatible with Competitive Markets

Participants seemed in general agreement that subsidies and other supports for universal service must be extended in a competitively neutral manner that allows the orderly evolution of competition in telecommunications markets. The task will grow more difficult as the variety of communication services expands; there will be arguments about what belongs in a universal service package. But whatever the inclusions and exclusions, and the means for supporting universal service, the conference recommends careful attention to the impacts on economic efficiency and competitiveness.

Rationalizing the Process of Policymaking

The group also emphasized the need to enhance the process of policymaking. They urged that governments at all levels perform their duties in a manner which provides for timeliness, clarity, predictability, quality and reliability in the networks, and competitiveness. As some participants noted, such traits are difficult to attain under conventions of the Administrative Procedures Act which offers many possibilities for delays and may encourage policy zigzagging as agencies are buffeted by petitions and counter-petitions. The slow pace of policymaking can become a serious impediment to the formation of beneficial strategic alliances as much as to solutions for any problematic alliances. More generally, cumbersome and slow government procedures hinder the ability of telecommunications entities to bring the fruits of rapid technological change to the marketplace. Yet government policy can also contribute to the development of innovative, competitive markets; government will not and should not disappear entirely, at least not any time soon. All this makes reform of the telecommunications policy and decision-making process as important as any specific policy decision. Some participants endorsed one specific reform: setting deadlines for agency action. For example, if a deadline were to pass with no action taken by responsible agencies, a merger might be deemed acceptable. Others thought such action-forcing deadlines could contribute to overly-hasty or unwise decisions.

SPECIFIC POLICY TOOLS

In assessing how to grapple with any negative effects of strategic alliances, policymakers must balance the risk of "market failure" against that of "government failure." Market failure could occur if firms or coalitions of firms are able to engage in anti-competitive or anti-consumer behavior, and frustrate the development of an open information marketplace characterized by vigorous competition in equipment, information services, and transmission. Government failure can occur if government (a) makes the wrong decisions; or (b) delays technological progress. This last

point is particularly important because the information infrastructure increasingly represents the convergence of the telecommunications and computer industries. Consumers have benefited greatly from the rapid improvements in price and performance in the computer industry, which has faced little or no regulation (and enjoyed many suppliers and few if any significant barriers to entry). One can imagine the negative impacts on markets and consumers if Intel had to get approval to introduce a new generation of microprocessor, or justify expenditures on new plant and equipment. Of course Intel has never enjoyed a government-chartered monopoly, so the analogy is not perfect.

Continuum of Governmental Policies on Telecommunications Conduits

That said, the conference identified a continuum of policy options that government might consider in order to attain public interest goals and ameliorate or eliminate potential problems. The spectrum runs roughly from least to most interventionist. The actions are not mutually exclusive. It is important to note that different options, or combinations of them, could be appropriate for different goals, markets, or conditions. Although the conference considered general rules or circumstances that might guide policymakers in the application of these tools, there was no consensus on exactly what kinds of alliances or situations should invoke the options. The following suggestions arose initially in the discussion of conduits, but clearly have applicability beyond this relatively narrow classification.

Minimalist. Beginning with the least activist government responses, which might be called the "minimalist" tier, the first option listed was doing nothing. The reasoning: competition in the evolving market can handle any new problems. While appealing to some as an ideal vision, most participants seemed to view this notion as impractical. A slightly less minimalist approach would employ moral suasion. This means communicating goals to industry and relying on voluntary, industry-led actions to prevent or correct any abuses arising from strategic alliances. In some cases, such an appeal might be all that is needed to bring about a desirable change.

Traditionalist. Moving on to more interventionist activities, a second tier of approaches might be labeled "traditionalist." Included here would be authorizing the Federal Communication Commission (FCC) to monitor developments in the marketplace and employ its residual authority to correct anti-competitive abuses if they occur. Congress could reiterate Commission authority over strategic alliances by statute in order to give teeth to this option. An example of such an FCC action would be a requirement that telecommunications providers disclose any relationships they have with product vendors. For example, if a telephone company starts a cooperative venture with a particular financial institution to offer banking at home, that connection should be explicitly labeled for consumers.

A more active version of the traditionalist tier would be to ensure that the FCC, Federal Trade Commission (FTC) and Department of Justice (DoJ) vigorously enforce the letter and spirit of antitrust law. Many participants saw this as the best way to prevent the kinds of traditional anti-competitive abuses reached by the antitrust laws—product tie-ins, predatory pricing, and combinations in restraint of trade—that could well arise from some strategic alliances. Among the specific tools that might be employed to achieve this objective in telecommunications markets are requiring divestiture of overlapping facilities; enforcing equal access with non-discriminatory prices; requiring unbundled access elements to ensure interconnectivity and interoperability of multiple networks; imposing limitations on the scope and duration of joint enterprises; mandating separate subsidiaries; and enforcing affiliate transaction rules, including non-structural safeguards such as accounting rules. This list incorporates many of the tools that the FCC has already employed in overseeing the growth of competition in telecommunications markets during the last two decades. The FTC and DoJ would naturally be enlisted in this effort and might well play a dominant role, given their statutory mandates in antitrust.

Another, less-used tool is exemplified by the strategy the FCC adopted for high definition television (HDTV). In such cases, the government would establish specific goals, and convene groups representing industry and other interested parties to develop plans

to meet the aims by a date certain. For example, the FCC could act as a catalyst in the formation of bodies that would set open interface standards for connections between the network and the information appliance. By this means, government helps industry solve collective action problems which otherwise hinder single industries or firms from meeting a joint goal (such as setting standards) in a timely, pro-competitive and pro-social way.

Because of the increasingly global nature of telecommunications markets and players, a certain amount of international activism by the U.S. government is inevitable. For example, technical standards should generally be set by industry, with government playing the above-mentioned facilitative role. But the government will probably need to act as liaison to help ensure that technical standards established in the U.S. mesh with those created by international standards bodies. At the same time, to prevent problems caused by unequal regulatory treatment of foreign partners in international strategic alliances that operate within the U.S., American agencies should conduct bilateral and multilateral negotiations aiming for greater liberalization of international telecommunications markets.

Activist. What might be considered a third tier of government activism is "market shaping." The conference discussed two options in this area. One involves government funding for creation of prototypes and market tests. In these cases government actually encourages the formation of cooperative ventures, although they are not strategic alliances in the terms defined here. A previous project that funded tests of the gigabit networks has proven effective at promoting technological progress and inter-industry cooperation. A new arena for this approach is establishing testbeds for interoperability. One government agency has already received nearly 40 industry responses to its request for proposals to create testbeds that would help to work out standards and procedures.

An extremely interventionist market-shaping option discussed at the meeting was to employ government procurement in a conscious effort to spur technological progress and diffuse innovations. The government can be a large enough consumer of telecommunications and information to stimulate the formation or growth of new markets. Indeed, in at least one state, government

is an investor in new facilities for an upgraded public network. While the government can be a beneficial and influential first customer or investor, however, conference attendees also recognized the pitfalls of relying on government for these functions. Pork barrel politics and inefficiencies or irrationalities of official decision-making can lead to the very sort of wrong decisions that mark "government failure."

The working groups on equipment and on content also identified some goals, issues, and solutions more specific to their markets. The next two sections summarize their contributions.

The "Set-Top Box"

In the future, consumers will use a wide variety of information appliances to access services delivered over networks. For example, a computer based interface between the consumer and the telecommunications provider can turn the television set into a video-on-demand unit. How will strategic alliances among telecommunications firms shape the market for (a) the appliances themselves; and (b) the services that they bring to the consumer? What steps, if any, should the government, working with industry and other stakeholders, take to influence the evolution of this market?

Known colloquially as "set-top boxes," these appliances could become serious bottlenecks, restricting service providers' access to customers, or consumers' ability to obtain preferred services. Strategic alliances could in theory heighten this danger. For example, an alliance between an equipment manufacturer, service provider, and conduit owner might design an appliance that cannot receive other, competitive firms' services. On the other hand, the group recognizes that strategic alliances could well be pro-competitive, as discussed earlier. This will depend on the emerging market structure for set-top boxes.

The group assumed there will be a wide variety of information appliances, including the set-top box (an evolution of the converter boxes now used by most cable television systems), the personal computer, video-phones, personal digital assistants, cellular hand-sets, and other devices that have not been invented yet. The group further assumed that these units will be deployed

in a future characterized by broadband, digital switched networks. Based on recent history they also presumed that information appliances will—like personal computers (PCs) continue to get smaller, faster and cheaper.

Technological change far outpaces both normal regulatory decision-making and knowledge of consumers' shifting tastes. The life-cycle of most communication and computer products and services is perhaps two years—much faster than the regulatory process. And a high degree of uncertainty characterizes the marketplace. Will the dominant device be the personal computer (PC) or the set-top box? If the latter, what functionality will it have? For example, different companies are arguing that the video server will be clusters of PCs (put forth by Microsoft), workstations (asserted by Hewlett-Packard among others), or massively parallel supercomputers (claimed by Oracle and others). The market is still immature and speculative, lacking data on the services that customers are actually willing to pay for.

The group discussed several kinds of alliances in the equipment area that could frustrate public interest policy objectives. They fall broadly into two categories: horizontal and vertical combinations.

- *Horizontal:* A network service provider, equipment manufacturer, and software developer might team up to deploy a set-top box that is effectively part of the network. Because of the lack of open interfaces, customers might have no choice but to purchase the set-top box chosen by the alliance. No competitive market for these appliances would develop—leading to slower innovation, barriers to entry by competing information service providers, monopoly rents, and less customer choice.

- *Vertical:* A network service provider with a video programming affiliate might team up with a set-top box manufacturer. Because the company does not want its service offerings to be merely one among many, it could use its control over the menu and the navigation system to disadvantage competitive information service providers.

Customers could be denied access to an unbiased "menu of menus." Since the future will include such services as shopping and banking at home, potential problems are not limited to communication and information services. They could also encompass exclusionary deals between telecommunications ventures and retailers, banks, and other firms.

Policy Goals for Information Appliances. While the earlier discussion of general policy goals applies to the potential for undesirable vertical and horizontal effects in equipment markets, there are some concerns specific to this area:

1. Open interfaces should exist between networks and information appliances. For example, any customer can now buy a phone, plug it in, and have a high degree of confidence that it will work. This still leaves plenty of room for innovation and competitive differentiation in the market for phones. Similarly, a consumer should be able to use set-top boxes from competing manufacturers, as opposed to only being able to purchase the set-top box being marketed by their local cable or telephone company.

2. The directory or navigating system for services available to the consumer should not be restricted by the provider of network access to the consumer. A company that is providing both content and conduit should not be in a position to advantage its service offerings relative to other information providers. This stricture should not preclude ownership of a menu service by content or conduit providers; the goal, rather, is that end users not be captives of any one navigation system that could bias their knowledge or choice of services. One possibility for accomplishing this goal might be for conduit providers to offers an unbiased Tier I "menu of menus," with end users choosing among a set of Tier II menus, each offering distinctive approaches to navigating through the service offerings.

3. Policy should seek to maintain a continually updated universal service policy with respect to information appliances. As the telecommunications system moves far beyond plain old voice telephone service and becomes essential to the operation of the economy and other institutions and processes (such as health care and education), wide public access should be ensured. For example, if the typical box costs upwards of $500, as some estimate, many citizens could find themselves on the periphery of society's evolution, unable to participate. As a minimum interim measure, government should establish community access points at libraries, schools, and other locations that would enhance the ability of all citizens to access advanced telecommunications services. In the slightly longer term, costs of information appliances should drop, and government should take active steps to make equipment necessary for access to essential services available for all who need or desire it.

4. Policy should ensure that services are provided in an environment that protects consumer privacy, while offering companies the ability to prevent theft of service.

Issues of Content

What—if anything—ought government do to enhance the public-serving qualities of messages flowing over the telecommunications conduits? After all, the goal of policy in this area ultimately has more to do than simply ensuring economic efficiency in meeting consumer demands, however essential that aim. This arena of policy is also about securing and advancing the advantages of the free and open exchange of information and diverse public discourse in a democracy.

The conference had trouble coming to any kind of agreement in this area of content. In an era of increasing strategic alliances, fewer and fewer firms may come to serve an ever-increasing share of the telecommunications and information markets. For some observers, this is a troubling scenario, conjuring visions of media moguls or corporate bureaucracies censoring messages, reshaping

mass culture and dominating the political process. Others find the vision far-fetched, suggesting the future is likely to offer substantially more access to a diversity of messages and voices as communication outlets increase, competition for audiences grows, and costs diminish. The notion that government intervention can protect and enrich a diverse, open flow of ideas strikes the latter group as unwise given the likely development of the communication and information infrastructure.

Yet some insisted that the competitive market has failed and will continue to fail in supplying information and entertainment that serves important social needs, especially those of educational programming for children and other material. For example, although hundreds of interactive games are available for the millions of Sega Genesis or Nintendo video game units in American homes, there are hardly any educational game cartridges. For the many parents who can afford the $100 for a Nintendo but not the $1000+ for a multimedia personal computer, there are virtually no creative, challenging alternatives to the mayhem and mindless hoopla of video game content—this nearly a decade after video games began diffusing into American homes. The market failure perceived by critics is not limited to the children's market. They feel educational, cultural, and informational content for adults, whether traditional television programming or multimedia packages, may well be slighted by firms seeking to maximize profit in the emerging marketplace.

What to do about all this is unclear. It is far from established that government has any general obligation to help content providers who use the telecommunications system as opposed to book or magazine publishers or movie producers who receive minimal, largely indirect support at best (e.g., the postal rate reduction for sending books and magazines). Yet two constitutional provisions argue for greater policy focus. First, there is the affirmative obligation to provide incentives for creators of scientific, literary and artistic works, which has been incorporated into our nation's patent and copyright laws. Second, given First Amendment goals of stimulating an energetic public discussion of current issues, and given the growing centrality of telecommunications to modern political life, government intervention might be

more justified than ever. Yet government involvement in content production, however indirect, raises First Amendment fears among many: the specter of government censorship overrides worries about a "vast wasteland."

One set of suggestions that did garner wide acceptance at the conference was a renewed focus on protection of intellectual property rights. Among the generally accepted proposals were that:

- To protect incentives of intellectual property producers, explicit and comprehensive "fair use" guidelines should be set by Congress, taking into account recent technological developments. Broadcast, cable, and non-commercial programmers all have different fair use standards for taping off the air (or cable) for educational use, and the confusion by school administrators is intimidating. This kind of anomaly should be corrected in statute, especially since case law is uncertain and underdeveloped.

- Content producers should have the right to encrypt their programming—to adopt "self-help" remedies for protection of their intellectual property.

- Firms operating video servers must have metering or some other device to protect intellectual property owners' rights. This does not mean content producers would have to charge subscribers according to subscribers' usage. This proposal would merely ensure that rights owners have the choice to be compensated for their intellectual property and enjoy some control over its distribution. The aim is to protect content producers in a world of video servers where program choices are enormous and intellectual property holders' rights may be easily violated, or transaction costs of individual enforcement are daunting. However, enforcing such protections could prove difficult in practice, as it has with the advent of other new technologies. As in other areas, the working of the marketplace may have some promising, if not all-inclusive, answers.

Suggestions of more direct government intervention to enhance content proved more contentious. Henry Geller, Markle Fellow and former head of the National Telecommunications and Information Administration, suggested that market failures mean government should actively promote strategic alliances between the commercial and the non-commercial sectors. These ideas met with considerable objection but some support as well. They are included here to illustrate the kinds of policy issues that will come up frequently, touching upon problems and solutions that make many Americans, steeped in First Amendment lore and law, instinctively nervous.

Geller's first suggestion is an alliance between public broadcasting television stations, cable companies, communities, and community groups to make better civic use of public educational and governmental access (PEG) channels. He proposes that public television stations use their facilities as complements to PEG channels, perhaps under the aegis of an alliance with local government agencies (e.g., city councils and school systems) and community groups. To promote such an outcome, the Corporation for Public Broadcasting (CPB) could establish guidelines for action by affiliated public broadcasters. If the public stations needed additional funding to accomplish this, Geller offered, they might seek it from the local government, which collects up to a 5 percent cable franchise fee. The station could also use some of the programming distributed over the PEG channels for broader dissemination over the air, to reach the 40 percent of households not on cable. Finally, Geller noted, if an entirely voluntary scenario were unsuccessful, federal mandating of action by the entities involved (other than community groups) might eventually be considered.

The notions of using the cable franchise fee and of mandating action were roundly attacked by several of the other participants, who argued among other things that much of the programming Geller supports is already available, some of it supported by the cable franchise fee. In other cases, extracting money from city coffers for programming struck conference participants as unlikely and, on First Amendment grounds, undesirable.

Geller's second proposal is an alliance between the Public Broadcasting System (PBS) and commercial television stations. The

1990 Children's Television Act requires the commercial broadcaster station to show at license renewal time that it has served the educational/information needs of the child audience, including programming specifically designed to do so. Many stations balk at the obligation, since it reduces profits. Geller suggests that each television station devote a modest sum, say 1 percent of its gross revenue over a 10 to 15 year period, to the independent production of children's programming. Stations joining in the agreement would be deemed to have fully met the Act's obligation.

This second proposal was also rejected out of hand by many participants. They opposed imposition of government fees as politically impossible or substantively undesirable, doubted the necessity of forcing such alliances when other paths to production and distribution of quality video and multimedia material are opening up, and questioned whether much of the money raised would—after filtration through the Washington political process—wind up in the hands of creative content producers.

As the communication system moves toward segmented, broadband multimedia, people will spend less time watching traditional broadcast programming. Some participants believe public policymakers should take a leadership role in shaping this new future and especially in maintaining some kind of shared public discourse as the audience fragments. Systematic examination of other nations' methods of encouraging diverse, high quality broadcast programming—such as the Canadian, British, and French—could help U.S. officials make wise choices. The group did not develop any proposals for ensuring consumer access to the enhanced video programming or multimedia content that might arise. Several participants did, however, speak of the need for a policy that would prevent a widening of the gap between information haves and information have-nots.

CONCLUSION

In sum, the conference sought to define "strategic alliances," place them in the context of a wide variety of governmental policies, examine the positive and negative attributes of the

creation of alliances and of governmental actions or inactions in response, and identify the most important pressure points of governmental involvement. In the telecommunications and information fields, these will likely be the areas of provision of communications services, the set-top devices, and content. Of those, the most specific and constructive dialogue centered on the set-top appliances, and it is in this area that we might expect the greatest governmental vigilance for the foreseeable future.

Appendix

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Communications and Society Program
Washington, D.C.

Strategic Alliances and Telecommunications Policy
Aspen, Colorado
August 7–11, 1994

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