The Data Transfer Industry: Communications Regulation for the Next Century

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The Data Transfer Industry: Communications Regulation for the Next Century*

by

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I

Introduction

The advance of technology is knocking down barriers between the different modes of communications in this country.1 Wired and wireless, cable and broadcast, telephony and cellular, the growing number of available communications services has played havoc with the established regulatory order.2 The telephone and cable industries are at the forefront of a phenomenon referred to as “convergence.”3 These two industries are evolving towards a unified market of communication services that should more appropriately be called the data transfer industry.4 The data transfer industry will eventually encompass all traditional communications services and new advanced services created by the advance of technology and investment.5 The total market for this industry has been estimated to encompass eventually a trillion dollars annually.6

Digitization and interactivity are dramatic developments in the advance of communications technology.7 The potential for five hun-

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4. Data transfer describes the full range of information, entertainment, and communication services that will be provided by a single entity in a more open and competitive communications environment. Whether these companies are carrying telephone conversations, transmitting movies to homes, or engaged in a more futuristic service, they will ultimately transfer data at the consumer’s request.
   This industry has the potential to become the most important American industry in the next century. The move to this integrated market has only begun. Mary E. Thyfault, It's Your Call—A Second Communications Revolution Will Offer Business True Freedom of Choice, INFORMATION WEEK, Jan. 3, 1994, at 12.
5. Joseph Kraemer and Paul Travis, Behind the Convergence Buzz, INFO. WEEK, Nov. 29, 1993, at 50.
   [The data transfer market] will be an environment where the difference between telecommunications and cable companies will be difficult to discern. You're going to have a combination of telecommunications with an interactive video system. In most cities you'll end up with two competing interactive broadband networks, both operated by some combination of what used to be a telephone company and what used to be a cable company.
   Id. (quoting Joseph Kraemer, Director of Telecommunications and Electronic Services at Deloitte & Touche).
6. Id.
7. “Digitization” refers to the conversion of various forms of information to an easily transferable binary code. Digitization also allows for compression which has greatly increased the carrying capacity of communications systems. While not an exact term, “inter-
dred channel cable systems exists because of digitization and the carrying capacity of broadband networks. With the conversion from analog to digital standards, information can be transmitted via all means of transport including cable, fiber optics, microwave, satellite, and electromagnetic spectrum. This new flexibility in the transfer of information is the key to versatility of an integrated data transfer system.

The convergence of traditionally distinct communications media brings the possibility of freer competition. A single provider could serve the entire nation providing information services ranging from high definition television to telephony to electronic mail using a mix of technologies. Others could compete with their own mixture of services and technologies.

Consider one scenario involving a local cable and a local telephone company. When both have wired a community with broadband fiber optic cable and installed the equipment necessary for operation at the end points of the network, both companies could compete for the community's telephone and cable service, on a subscriber by subscriber basis. However, either company could also pursue a wireless strategy involving cellular or PCS services, or a mixture of both to provide telephone equivalent services. Both companies could also employ wired and wireless platforms together to deliver all of its services in the most efficient manner. For example, a company could provide traditional cable services and operate a high definition broadcast active" refers to communication that provides for real time, two-way use, like the telephone. A fully interactive shopping service would allow the consumer to purchase items directly through the system that provides the service. Currently, most "home shopping" networks use a cable delivery system for display and the telephone system for ordering and other interaction.

8. Johnathan M. Kraushaar, Fiber Deployment Update, End of Year 1991, 1992 FCC LEXIS 1454, at 69-89. Fiber optic cable has been a major development in the larger capacity of the nation's communications infrastructure. Fiber optic cable uses light to transmit data through thin strands of glass in a single fiber. The transmission technology currently used is capable of producing data transmission rates ("throughput") in the gigabit (billions of bits per second) range. The highest capacity systems use a single optical wavelength and operate at a one or two gigabit range. Systems capable of data transmission rates of up to 27 gigabits are reportedly in development at AT&T and Bell-core. Development of halide based fiber technology could dramatically reduce transmission loss. Id.

9. Some analysts estimate a data transfer company will need the following elements to provide full service to the consumer: local and long distance telecommunications, cable systems, and a wireless network based on some mix of PCS (Personal Communications Service) and cellular. Subrata N. Chakravarty, Nimble Upstart, FORBES, May 8, 1995.
signal for television but employ some of that signal's frequency for telecommunications purposes.\textsuperscript{10}

With the introduction of more competition in communications, there are two challenges that need to be addressed in the reorganization of government regulation. The first challenge will be to create a regulatory environment that favors free and open competition with a level playing field for all entrants. This action will create greater diversity and access than is possible under restrictive government control. More importantly, it will separate the message from the medium allowing data transfer companies to make the most efficient use of their resources in meeting the communications needs of the nation. The second challenge will be to move towards this new set of rules in a manner that minimizes the potential for anti-competitive harm from the transition itself. This process demands regulatory change that facilitates an ordered shift from local monopolies to integrated competitive markets.

The current regulatory environment presents formidable obstacles to convergence. Restrictions on the two primary building blocks for the data transfer industry—telecommunications and cable companies—are spread among the federal courts, the Federal Communication Commission (FCC), Congress, state regulatory bodies, and local entities. There is a gathering consensus to eliminate many of these barriers and Congress may yet overcome its own institutional gridlock to pass needed reform.\textsuperscript{11} Regardless of what action government takes, the data transfer industry is coming. The real issue remains whether this industry will develop in a disjointed manner in spite of the regulatory environment, or whether it will be encouraged to flourish in a unified national marketplace.

The rapid pace of technical advancement and entrepreneurial spirit are driving communications past the existing regulatory barriers. The government has traditionally regulated new means of communication by analogy to existing technology.\textsuperscript{12} Telephones were similar to


\textsuperscript{11} In 1994, the 103rd Congress considered, but did not pass, several bills on telecommunications reform: (1) The Antitrust Reform Act, H.R. 3626, 103rd Cong., 1st Sess. (1993); (2) The High Performance Computing and High Speed Networking Applications Act, H.R. 1757, 103d Cong., 1st Sess. (1993); (3) The National Communications Competition and Information Infrastructure Act, H.R. 3636, 103d Cong., 1st Sess. (1993); and (4) The Telecommunications Infrastructure Act, S. 1086, 103d Cong., 1st Sess. (1993). For discussion of bills considered in 1995, see infra \S\ II.C.2.

the telegraph, television was similar to radio, and in both cases existing rules were extended to cover the new medium.\textsuperscript{13} With the explosion in the advance of communications technology, it is not in the public interest to maintain the status quo by attempting to pigeonhole various aspects of new technology into existing regulatory schemes that are based on obsolete concepts.

The future is nearing where former cable and telephone companies will become capable of delivering an unprecedented variety of communications services to homes and workplaces, schools and hospitals, and anywhere there is a need for the exchange of information. A uniform federal data transfer regulatory act must replace the mix of regulatory schemes that exist for different communications industries and pre-empt the myriad of state and local rules that impede competition.\textsuperscript{14}

The act must eliminate barriers and streamline regulation at the federal level. Both legislative and judicial control—such as the Modified Final Judgment (MFJ)\textsuperscript{15}—must be simplified to provide the stability that the new market will need. It must also pre-empt state and local authority to regulate access to the data transfer industry. State utility commission control over telecommunications and local control over cable franchises favor the entrenched service provider, preventing new entrants to both markets from providing competition. The act must ultimately provide symmetry in its application to all competitors in the data transfer market.

The mandate for universal telecommunications access also needs to be revisited. Today, the term "universal service" means providing access to telephone service in every home.\textsuperscript{16} The cost of providing this access has been accomplished by shifting costs through the use of internal subsidies.\textsuperscript{17} The Clinton Administration supports expanding

\textsuperscript{13} Message in the Medium, supra note 12.

\textsuperscript{14} See Kim Robert Scoville, An Introduction to the Regulation of Telecommunications 3-4 (1985).

\textsuperscript{15} United States v. AT&T, 552 F. Supp. 131 (D.D.C. 1982) (the MFJ directed the end of the former Bell System monopoly by separating AT&T from its local operating companies).

\textsuperscript{16} Commonly referred to as "POTS" or "plain old telephone service," this definition of universal service has been the communications policy of the nation since the passage of the Communications Act of 1934.

\textsuperscript{17} An internal subsidy is the support of some services provided by a company by increasing the cost of other services provided. For example, rural users of telephone service have long had their rates subsidized by money diverted from rates charged in higher use areas like urban centers.
the concept of universal service to include some or all of the services of the "electronic superhighway" of the data transfer industry.\(^7\) In addition to creating a new definition of universal service, the cost and method used to subsidize access should be examined. The continued use of internal subsidies in a competitive marketplace will be increasingly difficult to maintain amongst the growing number of individual companies. Other possibilities, such as a direct tax on access, or a federal low interest loan program are more appropriate and effective methods of providing universal access because the cost of these subsidies will be separated from the actual cost of services offered in the marketplace.

II

Background

A. Industries

The two key building blocks of the data transfer industry are the cable and the telephone industries. They have had dramatically different histories. The telephone industry was heavily regulated and national in corporate structure, while the cable industry has been entrepreneurial and local in nature. Both possess varying degrees of monopoly power. Presently, the telephone market has become more competitive while loosening the bonds of regulation. At the same time, cable companies labor under new regulation and face increasingly consolidated market control among industry leaders. As the nation moves into the next century, these two mediums are merging together into a single communications industry.

1. Cable

The cable industry developed as a technology to extend the reach of broadcast television before evolving into an entertainment alternative.\(^9\) The cable systems of today bring a variety of programming to the viewer.\(^10\) Cable television is available to approximately ninety-six

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20. Cable systems currently have an average capacity for forty channels, but this is likely to increase. Cable provides a range of programming, consisting in part of seventy-eight national cable networks. Chesapeake and Potomac Tel. Co. v. United States, 830 F.
percent of the nation’s homes, and approximately sixty percent of that number actually subscribes.\textsuperscript{21} The success of the cable industry in wiring much of the nation is the primary reason that there is a credible alternative to the local phone companies for the competitive paradigm of a data transfer industry.\textsuperscript{22}

The FCC asserted regulatory authority over cable in the 1960s on the basis that the Communications Act implicitly authorized it to do so.\textsuperscript{23} The Supreme Court approved, holding that the Act’s language, “all interstate and foreign communication by wire or radio,” justified regulatory action by the FCC.\textsuperscript{24}

The FCC has focused mainly on protecting local broadcasters from increasing competition created by the cable industry.\textsuperscript{25} The resulting impact has been to contribute to the overall “balkanization” of communications services with cable segregated from the broadcast industry. For example, the “must-carry” rule\textsuperscript{26} forced cable systems to carry the signals of all local broadcasters because the FCC wanted cable to maintain a “supplemental role” in the total communications picture.\textsuperscript{27} However, because of this approach, cable systems were per-
mitted for the most part to re-transmit broadcast signals without charge or the consent of the originating broadcast entity.\(^28\)

In 1984, the United States Supreme Court ruled that the FCC had exclusive authority to regulate the content of cable television and that its authority could pre-empt state and local regulation.\(^29\) Less than four months after that decision, Congress passed the Cable Communications Policy Act of 1984 (Cable Act of 1984).\(^30\) The Cable Act of 1984 was intended to establish a national policy to ensure that cable could compete in the larger media marketplace. However, it preserved a restricted role for state and local authorities to regulate cable franchises.\(^31\)

The Cable Television Consumer Protection and Competition Act of 1992\(^32\) was passed by Congress in an effort to bring cable industry price increases and service complaints under control.\(^33\) Among its many provisions, it authorized the FCC to implement must-carry rules and rate regulation.\(^34\) Other rulemaking proceedings necessitated by the Act included: (1) program carriage agreements, (2) restrictions on indecent programming on PEG channels, (3) home wiring requirements, and (4) customer service standards.\(^35\) Most of the Act’s provisions were immediately attacked with challenges in the judicial


\(^{35}\) *Id.* at 306 n.2.
System. In addition, attempts to repeal or modify parts of the law continue in Congress.

The must-carry rules and rate regulations have had a dramatic impact on the cable industry. The must-carry rules allowed broadcasters to choose between must-carry and retransmission consent. The must-carry option forced a local cable system to carry the signal of any local broadcaster that cast a grade B contour over a cable system’s principal headend. This option resembled the traditional role of cable as a supplement to broadcast television. The retransmission consent option gave broadcasters a right to deny cable systems the right to carry their signal. In effect it gave broadcasters a pseudo-copyright royalty for cable use of their signal. Other multichannel distributors of programs (like DBS, satellite, wireless cable) were automatically forced into the second option because, for these alternative technologies, broadcasters could not choose the must-carry option for them.

The FCC conducted two rounds of rate regulation to reduce the rate of basic cable. It established benchmarks for cable system rates by reference to markets that had actual competition between cable operators. The second round of rate reduction forced cable systems that faced no competition to cut their basic rates seventeen percent. Reregulation of rates has been of great concern to cable companies attempting to enter the greater data transfer industry.

The new regulatory environment created by the 1992 Cable Act highlights the need for actual competition to bring fair prices to consumers. Since the intended purpose of federal legislation and rate regulation was to benefit consumers, the real test of rate reduction should be determined by the actual benefit to the average consumer. As long as cable operators can maintain their monopoly status, they

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36. Id. at 307 n.3.
38. Allard, supra note 34, at 333-35.
39. Id.
41. Id.
42. Mary Lu Carnevale & Mark Robichaux, FCC Votes to Require Cable Rate Cuts and This Time Claims It Will Prevail, Wall St. J., Feb. 23, 1994, at B1. The FCC voted unanimously for a seven percent reduction in cable rates in addition to the ten percent cut ordered the year before. Id.
43. Id. Time Warner Chairman Gerald Levin stated, “This already outdated regulatory scheme will not help foster the necessary investment this country needs in new technologies.” Id. Cable operators estimate that last year’s rate reduction has already cost them two billion dollars in lost revenue. Id.
will have an incentive to increase revenues by circumventing government regulations. 44

2. Telecommunications

The telephone industry has changed dramatically from the once monolithic “Ma Bell” system. 45 Prior to the 1982 Modified Final Judgment (MFJ) entered against American Telephone & Telegraph Co. (AT&T), the Bell System provided telephone service to all parts of the United States and connected our nation to the rest of the world. 46

After the MFJ, telecommunications have been subject to the continuing jurisdiction of United States District Judge Harold H. Greene. 47 Since 1984, AT&T has been divested of its local telecommunications carriers which were organized into seven companies that are collectively known as the regional bell operating companies (RBOCs). 48 RBOCs act as local exchange carriers carrying telephone traffic in the local loop. 49 The MFJ restrictions that are most relevant here are rules preventing the RBOCs from entering the long distance market and from providing video services in their home markets. 50

44. Mark Robichaux & Mary Lu Carnevale, Will the FCC's Cable Rate Cuts Slow Traffic on Information Superhighway?, WALL ST. J., Feb. 25, 1994, at B1. Consumers are likely to get a lower quality cable package at a lower price. "[Since] cable companies are still a monopoly in their local markets, [rate reduction] will have the effect of squeezing a balloon—wherever pressure is applied, equal efforts will be made to extract revenue elsewhere." Id. at B6 (quoting Thomas Hazlett, former chief economist for the FCC).

45. In 1910, AT&T (then merged with Western Union) described itself as "One system with a common policy, common purpose and common action; comprehensive, universal, interdependent, interconnecting like the highway system of the country, extending from door to door, affording electrical communication of every kind, from every one at every place to every one of every other place." ITHEIL DE SOLA POOL, TECHNOLOGIES OF FREEDOM, 29-30 (1983).

46. United States v. AT&T, 552 F. Supp. 131 (D.D.C. 1982). The MFJ was entered as a settlement of the Justice Department's antitrust investigation of AT&T. It required AT&T to divest itself of all twenty-two of its local telephone operating companies. These were later consolidated into the seven Regional Bell Operating Companies or RBOCs. The RBOCs were restricted to providing only local telephone service. They were also required to provide equal access to all interexchange, or long distance, carriers to promote competition in that market. Scoville, supra note 14, at 16, 30-31.

47. Judge Greene accepted the entry of the MFJ and maintains jurisdiction over the original parties under its terms.


49. The local loop is defined as the circuit from the central office of the local exchange carrier to the end user and back. Erin M. Reilly, Telecommunications Industry in 1993: The Year of the Merger, 2 COMM. L. CONSPECTUS 95 (1994). See Policy and Rules Concerning Rates for Dominant Carriers, Memorandum Opinion and Order, 8 F.C.C. Rcd. 7474.

50. Another important aspect of the convergence trend is occurring entirely within telecommunications. The post MFJ separation between local and long distance carriers is under increasing pressure from both sides. RBOCs have recently won permission to buy
Under the Cable Communications Policy Act of 1984 telephone companies are prohibited from providing video programming to subscribers within their service areas. This ban on ownership of cable systems has prevented providers of local telephone service from introducing video on demand in their own markets. The FCC has interpreted this statute to restrict telephone companies from providing video programming that is equivalent to broadcast television. The restriction on entry by telephone companies into the cable market has been supported by the cable industry, which argues that telephone companies will use their monopoly base of subscribers to unfairly gain market share through predatory pricing and other anti-competitive tactics. In addition, the cross-ownership ban works to prevent "cross-subsidization." Cross-subsidization by a telephone company would involve shifting costs from its competitive cable business to its monopoly telephone service customers. This practice would lead to higher telephone rates and predatory profits for the telephone companies, which might ultimately lead to telephone companies forcing competing cable television operators out of the market.

The first cracks in the restriction on cross-ownership began both at the FCC and in the courts. The FCC video dialtone report permitted RBOCs to provide video programming in their service area, but only as a nondiscriminatory service provider and not as an independent provider of content. In their efforts to provide video services, the RBOCs have gone to court, arguing that the cross-ownership restrictions of the 1984 Cable Act are an illegal restraint of their First Amendment freedoms of speech and press.

In *Chesapeake & Potomac Telephone Co. v. United States*, Bell Atlantic challenged the 1984 Cable Act restriction as a violation of

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53. 47 C.F.R. § 63.54 (1994). This ban applies to all common carriers and any of their affiliates. *Id.*
55. FCC Policy on Cable Ownership, A Staff Report, Nov. 1981, at 153, 158.
their First Amendment rights. Absent the legislative restriction, Alex- 
dandria, Virginia was willing to consider granting a cable franchise to 
Bell Atlantic to compete against Jones Intercable, the existing cable 
television operator. The district court employed the intermediate 
level of First Amendment review, finding that the rule was not nar- 
rowly tailored to the justification offered by the government. Judge T.S. Ellis III held that Congress could have adopted less restrictive 
measures than a complete ban to achieve its legislative goals. Each 
RBOC has since filed suit in its own individual service areas.

Reversing its historic position, the FCC recommended the end of 
cross-ownership restrictions and allowed local telephone companies to 
provide video programming directly to subscribers in their telephone 
service areas. In light of the growth of the cable industry, the FCC 
concluded that the potential for anti-competitive conduct by the tele-
phone companies was outweighed by the potential benefit to the pub-
lic interest. The FCC found that the elimination of the cross-
ownership restriction would promote increased competition in the 
video marketplace, spur investment in advanced infrastructure, and 
increase the diversity of service to the public.

B. Data Transfer: The New Communications Paradigm

The "Information Superhighway," the "National Information In-
rastructure," and the "Celestial Jukebox" are all terms thrown about 
in conversation over the future of telecommunications. They are

58. 830 F. Supp. at 910-11. The opinion includes a discussion of the evolution of the ban on cross-ownership of cable companies by telephone companies. Id. at 912-16.
59. Id. at 911.
61. Chesapeake, 830 F. Supp. at 931-32. The government argued that the ban worked to promote diversity of media ownership, a non-speech interest. Id. at 927. The court rejected this view, finding that the cable industry is dominated by local monopolies. Id.
62. Id. at 929-32.
63. 33 Television Digest 5, Dec. 20, 1993. BellSouth alleged in its complaint that the ban on cross-ownership within a telephone company's service area has failed to meet its stated policy—the prevention of local media monopolies. It also charged that Congress admitted in the findings of the 1992 Cable Act that ownership in the cable industry remains highly concentrated despite the ban on cable ownership by telecommunications companies.
64. In re Telephone Company-Cable Television Cross-Ownership Rules, Second Re-
65. Id. at 5848-49.
66. Id. at 5849-50.
67. Another metaphor describing data transfer is "cyberspace," a term introduced by science fiction author William Gibson in his novel Neuromancer. Cyberspace describes communications networks as completely artificial places where humans interact in a fash-
ion similar to the real world with the aid of a communications device.
also misleading and ultimately limiting in their attempt to describe the scope of a post-convergence communications future. A decidedly less glamorous addition to the lexicon of telecommunications, "data transfer," may not have the mass appeal of popular metaphors, but it is probably a better description of reality. Convergence in our telecommunications infrastructure is about exploding the limits on the forms communication can take. When all communication can be reduced to digital form, then all information will move freely around the country and the globe. The result of the convergence phenomenon will be to free up companies to move information in the most efficient and effective manner the market allows.

The data transfer industry will emerge from combinations between cable and telephone companies. The benefits of merger between these industries is more than the capital requirements necessary for building an infrastructure capable of bringing data transfer service to the consumer. A tremendous amount of "synergy" exists between cable and telephone because their technology and expertise complement each other.

Essential to a data transfer system is the technical expertise necessary to handle the two way transit of very large amounts of information. Telephone companies bring their knowledge of switching equipment and telephone operating systems. Time Warner, a cable operator, touted this expertise as one of the benefits of its joint venture with US West, a telecommunications company. The traditional cable system only transmits data one way—from operator to consumer—and maintains all control at the operator.

Much like the traditional telephone system, a full service data transfer network must handle the transmission of data in various directions and do so at the request and control of the end users. Services such as video on demand, home shopping, and telecommuting, among others, require a network to handle the transmission of data in various directions.

68. Switching is performed by the Local Exchange Carrier (LEC), where a signal (phone call) is routed from one terminal located in a central building in each community and connected to another terminal. Phillip Moeller, *The Age of Convergence*, AM. JOURNALISM REV., Winter 1994, at 26; See generally Frank G. McKay, New Wave Coming in Data Voice Switching, TELECOMMUNICATIONS SWITCHING, TELEPHONE ENGINEER & MGMT., Oct. 15, 1984, at 71.

Switching equipment utilizing technology such as asynchronous transfer mode will be necessary to direct the traffic of data on a network. Several companies are experimenting with trials of interactive systems to test the delivery of existing and advanced communications and entertainment services. Along with these trials, companies continue to invest in the necessary infrastructure to deliver on the data transfer revolution.

The telecommunications and cable industries are joining resources to take advantage of the current technological, economic, and regulatory environment. The overriding factor, however, remains the regulatory environment which prevents the data transfer marketplace from most efficiently directing available resources.

The most significant attempt to meld together the elements of a data transfer company was the failed merger between Bell Atlantic and Tele-Communications, Inc. (TCI). The merger was an opportunity to create a full service company capable of competing in all aspects of the data transfer industry. The strategic arguments for this type of combination are still valid.

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70. Terry Sweeney, Sonet Takes Center Stage at Telecom '91, Communications Week, Oct. 14, 1991. Critical to the large capacity of broadband networks and the intended multimedia use envisioned for them is Asynchronous Transfer Mode (AST), “a cell based switching technology that uses fifty-three byte cells, without regard for whether the cell information is voice data or video.” Id. at 62.


72. In northern California alone there are several cable companies building fiber optic networks designed to provide interactive services like home shopping and video on demand. John Carman, Future TV Comes to the Bay Area, S.F. Chron., Feb. 1, 1994, at E1. In addition, California based RBOC Pacific Bell intends to upgrade its entire telephone network of 11 million homes by the year 2010. It too has targeted some northern California communities for immediate construction. John Eckhouse, Pac Bell Plans Information Superhighway, S.F. Chron., Nov. 12, 1993, at A1.


Current efforts to bring together the pieces of a data transfer company have involved mostly joint ventures and alliances. Cable and telephone company executives continue to expound on the opportunities for synergy and staking a claim to this emerging market. Colorado-based RBOC US West acquired a twenty-five percent interest in Time Warner, a media conglomerate owning broadcast and cable properties. Together the two companies plan to spend billions of dollars in a joint venture to create a full service network capable of providing telephone, entertainment, and other information services.

Sprint, a long distance telephone company, has invested in a joint venture with several cable companies including TCI. The joint venture plans to provide a range of services both through the companies' wired networks and through new wireless services. MCI, another long distance rival, will invest two billion dollars into a partnership with NewsCorp which owns media content and distribution systems around the world as well as the FOX broadcast television network in the United States. The two will form a 400 million dollar joint venture to produce programming and other services for their combined networks. The deal could greatly expand the number of MCI services, evolving it beyond a traditional telephone company.

However the combination of elements is brought together, the momentum to build broadband networks continues to accelerate. New telecommunications infrastructure will provide competition to formerly monopolistic cable system operators and local exchange area telephone providers.

C. Government Initiatives

Reform of the nation's communications policy has become an important and visible area of national concern. Two-thirds of the na-
tion's workers are in information related jobs, and the rest are in industries that rely heavily on information. Strategic use of information is essential to maintaining America's competitive position in the global marketplace.

1. The National Information Infrastructure

The Clinton Administration made the future of telecommunications a highly visible issue in its first year in office. Support for several initiatives was collected under the banner of the National Information Infrastructure. Vice President Al Gore and the Commerce Department took the lead in pushing for new projects. The administration recognized that a new kind of communications service provider was emerging—one that could offer a wider range of services than the traditionally distinct telephone and cable companies.

An integrated data transfer company would have to obey regulation from two different parts of the Communications Act, specifically Title II for common carriers and Title VI for cable communications. The administration responded by proposing a Title VII to the Communications Act that would unify the regulatory environment for these new companies in exchange for their agreement to act as common carriers in at least some respects. Companies would have the option of choosing this alternative regulatory model. "The nation would thus be assured that these companies would provide open access to information providers and consumers and the benefits of competition, including lower prices and higher quality services to their customers."

The danger in this proposal is leaving such a choice up to the individual companies, creating the possibility of piecemeal conversion to a merged market. This creates the potential for various companies and industries to gain significant, if temporary, advantages dependent on whether they choose this new regulatory option. This approach

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84. Id.
86. Vice President Al Gore, Speech on Telecommunications Policy to the Academy of Television Arts and Sciences (Jan. 11, 1994), along with White House background paper and statement on "Telecommunications Policy Reform" January 12, 1994 (Wed.) Daily Report for Executives, Bureau of National Affairs, Inc. "[R]egulation must be based on the services that are offered and the ability to compete—and not on corporate identity, regulatory history or technological process." Id.
87. Id.
88. Id.
cannot help but generate chaos in a time when stability and a level playing field are needed.

2. Congressional Action

In 1995, both Houses of Congress passed different comprehensive telecommunications reform bills. In September, a single conference committee will attempt to work out the differences between the bills. Under the current Republican leadership, competition and deregulation are at the top of the communications agenda. Both bills include revisions to many aspects of the current regulatory environment with changes to the Communications Act of 1934 as well as the Cable Acts of 1984 and 1992.

The Senate bill, S. 652, intends "to provide for a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition." It includes sections detailing the transition to competition, removal of statutory and judicial (the MFJ) restrictions, and a level playing field for a competitive marketplace. The House bill, H.R. 1555, covers the development of competitive communications markets, with separate sections for telephone, cable, and broadcast reform. It is also explicitly meant "to promote competition and reduce regulation in order to secure lower prices and higher quality services . . . and encourage the rapid deployment of new telecommunications technologies."

The continuing bipartisan interest in a major telecommunications revision ensures that such an effort should eventually succeed. Both bills presently under consideration incorporate many elements of failed bills from the 103d Congress. While there are differences between the Senate and the House bills, both are firmly committed to the concepts of competition and an environment with simplified regulation. Any act passed by Congress must achieve these goals and address the many specific problems inherent in the transition to

competition and the future marketplace beyond. Some of these problems, like content control, investment, and universal access, are discussed here. Others that are more technical or financial in nature are equally important, but unfortunately, beyond the scope of this article.93

III

Analysis: The New Industry

In the cable industry, the delivery of video services has remained a monopoly in almost every community.94 In 1991, cable television system operators faced competition from another operator in less than one percent of the local markets served by cable.95 Competition, in the few markets in the cable industry where it exists, has brought lower rates and better service.96

The facts in Chesapeake & Potomac97 provide a vivid example of the impact competition can have in the cable market. Alexandria, Virginia is served by one cable provider, Jones Intercable.98 In Alexandria, Jones Intercable offers a package of forty-four channels for $24.65. In a similar marketplace with a competing cable provider—Anne Arundel County, Maryland—Jones Intercable offers a package for $21.20. Additionally, the higher rate of cable subscribership in Anne Arundel versus Alexandria—seventy percent to fifty-seven per-

93. For example, one technical issue is how to enforce open access to interconnection on local networks. Financial issues range from restrictions on corporate form to potential antitrust violations. The very nature of convergence and technological advance ensures that the scope of relevant issues for communications reform is a dynamic and evolving thing, difficult to capture in a single discussion.


95. Chesapeake and Potomac Tel. Co. v. United States, 830 F. Supp. 909 (1993) (citing Joint Stip. of Facts at 28). Cable revenues in 1992 were over twenty-one billion dollars. Forty percent of cable subscribers are served by the five largest Multiple System operators—essentially chain operators of multiple cable systems. The largest, Tele Communications Inc., had 9.6 million subscribers in 1991 with revenues of $3.8 billion. The next largest, Time Warner, had 6.8 million subscribers, with total corporate revenues of $12 billion (from sources other than cable). Comcast, Continental, and Cox make up the rest of the big five. Id.

96. Id.


98. Jones Intercable is the eighth largest multiple system operator in the nation. Joint Stipulation of Facts, supra note 57, at 32.
cent—may indicate better customer service and value in a competitive marketplace.99

A. Investment & Competition

Under the 1992 Cable Act, the FCC conducted two rounds of rate reduction for basic cable service that has arguably led to reduced revenue for the cable industry.100 Any reduced ability of cable companies to invest in network infrastructure adds to the need to create, by merger or acquisition, companies that are capable of the investment necessary to build full service data transfer networks. Both telephone and cable companies will need substantial capital to upgrade their networks.101

The telecommunications industry is larger in economic resources than the cable industry.102 On an individual corporate level, cable giant TCI had revenues of less then $4 billion per year, compared to telecommunications giant AT&T which had revenues sixteen times higher.103 The difference in capital levels between industries is another factor favoring the competition of full service companies comprised of component companies from both industries, rather than expecting smaller cable companies to effectively compete directly against larger telecommunications companies. Cable companies are legitimately concerned about the larger size of RBOCs in demanding equal access to the telecommunications market as telephone companies begin to introduce video on demand services.

In the move to a data transfer market, there is concern that the transition to competition be managed. Advocates of control want competition to come in stages with government safeguards against anti-competitive actions.104 The elimination of the various current restrictions should be timed so as to prevent the members of one industry from gaining an unfair advantage. The FCC might continue to

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99. Id. at 34-35.
100. Christopher Stern, FCC: Cable’s in Fine State, Broadcasting & Cable, Apr. 3, 1995, at 80. See Besen & Woodbury, supra note 40.
103. Id.
104. Harry A. Jessell, NCTA Wants Restrictions On Telco Entry, Broadcasting & Cable, Sept. 20, 1993, at 43. “The telcos (telephone companies) have the size and the strength to effectively kill the competition in any market they enter. It would be disastrous to simply throw open the video marketplace to telephone overnight.” Id.
regulate those markets where viable competition\^{105} is not possible because of a lack of infrastructure or actual competitors. These would probably include rural and lower income areas.

B. Control of the Platform

Each individual corporation providing data transfer service will most likely do so on a system or "platform" composed of many elements—both wired and wireless. These platforms will make a powerful presence in society not only because of their economic impact, but in their potential to promote or inhibit communication—whether it is speech, entertainment, or information. A competitive data transfer market will create new issues for society. Will competition among several national, regional, and local platforms be enough to promote diversity of expression and the transmission of unpopular speech, or must society act through government intervention to do so? What degree of control should a data transfer company be allowed to exercise over content?

Traditionally, there has been a distinction between the rights and responsibilities of a "publisher\^{106} and those of a "common carrier."\^{107} Regulated as a common carrier, the telephone industry has separated control of "speech" from ownership of the carriage.\^{108} As a traditional publisher, newspapers have not had this type of separation of control, owning the distribution, production and content itself. Somewhere in between exists the "broadcaster\^{109} who has control over content but is limited by FCC regulation.\^{110} Cable television has

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105. Viable competition would be defined as a percentage of homes reached by a competitor in the market. Although an expert agency could determine an exact number, initially close to 25% would appear to be sufficient.

106. The most traditional form of a "publisher" is the newspaper which receives the fullest protection of the First Amendment. Newspapers cannot have their editorial control restricted by government regulation. Miami Herald Publishing Co. v. Tornillo, 418 U.S. 241 (1974).

107. A common carrier—such as your traditional phone company—has to carry all messages regardless of the content. 47 U.S.C. § 700 (1991).

108. Burt Neuborne, *Speech, Technology and The Emergence of a TriCameral Media: You Can't Tell the Players Without a Scorecard*, 17 Hastings Comm/Ent L.J. 17, 19 (1994). One approach to government regulation of speech is to separate the "speech" from the "amplification" or technology used to transmit the speech to the hearer. *Id.*

109. Television or radio broadcasters have editorial control over their content but are regulated by the FCC to broadcast in the "public interest." Red Lion Broadcasting Co. v. FCC, 395 U.S. 367 (1969).

110. The Internet, bulletin boards, and other computer networks also probably fall somewhere in between. However, the government has never attempted to regulate personal computers or network communications. Until now, this form of exchange has developed absent government regulation. See Eric Schlachter, *Cyberspace, the Free Market and*
generally been successful in establishing itself closer to the model of publisher.\textsuperscript{111}

The Clinton Administration favors open access to ensure that data transfer companies do not create an entirely new communications monopoly. The Administration has proposed that the FCC be authorized to regulate new hybrids of companies.

We will grant the FCC the future authority, under appropriate conditions, to impose non-discriminatory access requirements on cable companies. As cable and telephone service become harder and harder to distinguish, this provision will help to ensure that labels derived from past regulatory structures are not translated into inadvertent, unfair competitive advantages.\textsuperscript{112}

Private ownership and control of data transfer platforms could result in concentrated control of media content. Such control could lead to abusive interference with content and communication by the owners themselves. Censorship could be motivated by financial interest or simply the desire to restrict certain viewpoints. Regardless of the motive involved there could be an adverse affect on the amount of information available to the public.

The success of programming is based in large part on its ability to be seen. The costs involved with the production of cable programming or with the operation of a cable network require that a certain number of subscribers be reached to maintain viability.\textsuperscript{113} That number of subscribers is generally known as the "clearance" required for a successful program or channel launch. TCI, for example, has sufficient market share to achieve clearance in most cases by carrying programming on its own systems.\textsuperscript{114} Though TCI denies it, industry analysts have charged the company with manipulating its market percentage to gain control or financial interest in new channels of pro-


\textsuperscript{114} TCI is the largest cable TV system owner and with its now merged sister company, Liberty Media, it owns substantial interests in cable networks in every major category. 60 Minutes With the Honorable Janet D. Steiger, Chairman, Federal Trade Commission; Panel Discussion, Antitrust L.J., Sept. 22, 1994, at 77. TCI's ownership of such market power raises fears that TCI could raise subscription fees for consumers or programming fees for cable operators, and increase entry barriers into subscription TV distribution. \textit{Id.}
The same concern with clearance will still exist in the data transfer market.

C. Universal Service

The universal service mandate refers to the policy of the federal government to ensure that all of America was wired for telephone service, in much the same way it ensured that electricity reached all of America through the Rural Electrification Agency (REA). Since the break up of the Bell System, however, the concept of universal service has not been addressed in a significant fashion. The investment in infrastructure and the development of new services leads to the issue of whether the mandate for universal service needs to be updated and redefined to incorporate new services.

The Clinton Administration has called on government to expand the definition of universal service to ensure that information resources are available to all at affordable prices. “Because information means empowerment—and employment—the government has a duty to ensure that all Americans have access to the resources and job creation potential of the Information Age.” It has directed the FCC and state regulatory agencies to redefine universal service through a proposed joint federal-state board.

The most pressing issues concerning universal service are not just a new definition, but how to pay for it and through what means. The

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115. The opening words of Viacom’s lawsuit to block QVC Network’s rival bid for Paramount vividly describe John C. Malone, CEO of TCI. “In the American cable industry, one man has, over the last several years, seized monopoly power. Using bully-boy tactics . . . that man has inflicted antitrust injury on . . . virtually every American consumer of cable services and technologies. That man is John C. Malone.” 1993 Year in Review, Advertising Age, Dec. 20, 1993, at 10.

116. A major purpose of the 1934 Communications Act was “to make available, so far as possible, to all the people of the United States a rapid, efficient, nationwide and worldwide wire and radio communication service with adequate facilities at reasonable charges . . . .” Scoville, supra note 14, at 14.

117. When “cable companies move into the phone business,” consumers could rank cable-offered services, including Internet access, as important as basic telephony and demand access to them. Sharon Watson, A World of Opinions on Universal Services, Telephony, Nov. 28, 1994, at 7 (quoting Brian Adamik of the Yankee Group).


119. Id.
Administration has not addressed the manner in which the federal government will continue to ensure universal access in a marketplace environment. It has suggested a proportional tax on the members of the new industry to replace the internal subsidies currently in place. Telecommunications companies would be required to contribute, but the FCC would scale payments based on the size of the company as well as allow exchanges of service instead of direct cash subsidies.  

IV

Some Regulatory Proposals for the Data Transfer Industry

A data transfer statute should employ a single approach to broadband network based communication and information services. The regulatory scheme must address the transition to competition in the emerging marketplace. It must address the issues of content control and ownership and determine the extent of common carrier status for these companies. Finally, it must answer the concerns of government and advocacy groups over the status of universal service and access to the full range of communication services.

In fashioning such a statute, considerable attention should be paid to the method in which the separate elements of the eventual data transfer industry are currently regulated. It is important that the legislation recognize that the different aspects of data transfer companies be regulated according to their functions. Perhaps the most effective way to do so will be to break down the different parts of a data transfer company and apply the most effective method of regulation that was applied to that part alone. This will allow for the integration of the different personalities that data transfer companies will possess in different service areas and provide a regulatory environment that does not impose conflicting demands on the company as a whole.

120. Id.
121. This idea builds on an approach introduced by Eric Schlachter in Cyberspace, the Free Market and the Free Marketplace of Ideas: Recognizing Legal Differences in Computer Bulletin Board Functions, 16 Hastings Comm/Ent L.J. 87 (1993). Schlachter attempted to break the computer bulletin board into various “pieces” that were more or less like other traditional forums to analogize them to existing law. Only after this exercise can we attempt to integrate an effective system of law that adequately deals with all aspects of such revolutionary new technology. Id.
A. Competition

Competition is the primary force that seems to drive the emerging data transfer market. Where it already exists, it has benefited the communications industry, but the vast majority of the telecommunications and cable industries are dominated by monopolies. A significant example of the benefits of competition is the consent decree that broke up the Bell System, separating AT&T from its Bell Operating Companies, and spurring competition in areas where there was none. Further progress came from new market entrants like MCI and Sprint. This competition brought greater investment in infrastructure, and faster progress in technology.

Competition is essential to the growth and development of a full service data transfer market. It will occur by removing several regulatory and statutory restrictions. The legislative restriction preventing a telecommunication company providing video services in its own service area must be eliminated. The restrictions on local area telephone service must be reduced to allow competition across current service areas. This would also allow cable companies to provide these telecommunications services. As controls on local telecommunications services are lowered the restrictions on long distance service placed on the RBOCs should be ended.

On the other side of the convergence phenomenon, telecommunications companies could enter the video services market by enactment of federal statute and accompanying regulation. The FCC should evaluate several factors in establishing a time table for this transition. Regulation should reflect a transitional period to ensure that other substantial restrictions are also successfully eliminated. The FCC must consider the effectiveness of efforts to reduce all barriers to an open data transfer market, but not the relative economic positions of companies competing in the newly competitive marketplace. The FCC will likely be given authority to regulate in this area, so it must overcome its own institutional history and allow the market to determine the public interest. Since the scarcity doctrine does not apply to broadband based services, there is no justification for the FCC to attempt to control entry to the market under the guise of the "public interest."


B. Control and Access

The distinctions used by courts and Congress to determine the legal status of communications entities are disappearing. The status retained by a data transfer company will have an impact on several related legal questions. It will affect the company’s ability to control what is sent over its broadband network, and whether it will have to provide the use of its “platform” to third parties. The status will determine legal liability for what is sent across the network by end users beyond the control of the company itself. The potential for liability will have a tremendous impact on what services such companies choose to develop.

Should a data transfer company be forced to accommodate itself to one status or the other or can the different aspects of its network be separated between the two possibilities? The most obvious distinction would be to continue the separation between services that involve two-way communication as opposed to those services that are one-way in nature. Two-way communications, however, can be further broken down into those that involve one user to one user, one user to many users, or many users to many users. While one-way communication appears to be primarily within the one-user to many users category, the possibility remains that now unforeseen services will be developed that are only one-way but fall within a separate subcategory. In addition, it is even more likely that true one-way communication, where the viewer—the receiver—has no opportunity to respond to what she receives, will fade from view.

The issue of programming viability will continue to depend on clearance. While the potential for mega-channel systems with upwards of five hundred channels ensures a much larger platform for the delivery of programming to the public, control over content may still be concentrated in the owners of the networks. If the industry is composed of large corporations that operate systems in multiple markets across the country, then there is the potential for these companies to attempt to leverage access to any of their systems for an ownership interest in that programming. This is essentially what TCI has accomplished in the cable industry through its control of roughly a quarter of the cable subscriber base. The Clinton Administration has discussed requiring the owners of the data platform to provide a quarter of the channel space for other non-affiliated programmers. This pro-

124. TCI has monopoly status for 25% of cable TV viewers and owns or controls more popular cable programming than any of its competitors. Hearing on Antitrust, supra note 115.
posal is similar to the leased access channel requirements imposed on the cable market by the FCC.

While such a requirement might possibly be justified on a transitional temporary basis, it is dubious as a long term solution. In moving to a competitive paradigm that supports a much larger amount of access, such a broad government regulation is probably unnecessary to protect the marketplace of ideas and access to distribution of ideas. The leased channel requirements were imposed on an industry that is almost a complete monopoly, where every community is primarily served by one system. In a non-competitive cable market, the system operator could have effectively kept ideas and expression from being produced and exhibited independently. In contrast, viable competition in single markets and among larger companies in multiple markets across the country will afford a much greater opportunity for access. In an environment with open competition, even with an oligopoly, there is no reason to believe that there will be collusion between these companies. Such monopolistic behavior would run afoul of already existing law.\textsuperscript{125}

However, to avoid the uncertainty of antitrust law enforcement and apply the existing expertise of the FCC, anti-competitive regulations should be established specifically for the data transfer market. Any one company should not directly or indirectly operate more than one data transfer network in a geographical market. Second, concentrations of control in the overall national market would be subject to regulatory limits, much like individual media markets are today.

C. Universal Service

The call for a new definition of universal service is misplaced. It is one thing to require data transfer companies to bring services to schools, universities, and hospitals; it is another concept entirely to argue for the same mandate that drove the expansion of the nation's phone system to include all potential citizens. It simply will be harder to implement this concept with a diverse set of competing companies.

There are really two problems with the new competitive data transfer industry that need to be addressed by government involvement. One is access to the services provided by the upgraded networks. The other involves bringing upgraded infrastructure to all areas of the nation. Universal access is really about upgrading the communications infrastructure, allowing all Americans to participate

in any new services. Rather than try to contort the concept of universal service to try to make it fit a competitive marketplace, it would be better to look to a different model for implementation. The FCC should copy the legislation used to authorize the Rural Electrification Agency (REA)\(^\text{126}\) and its program of providing low interest loans to subsidize the construction of electrical power systems to rural areas where it was more difficult to maintain operating profit. The REA is one of the few federal programs considered a true success.\(^\text{127}\) In fact, current criticism directed at the agency is aimed at the agency's continued existence in spite of successful completion of its mission.\(^\text{128}\)

The use of long term subsidies should provide the incentive for data transfer companies to expand into areas they otherwise would not choose to enter. The further advantage of such an approach is that it removes the government from an internal role in the dynamics of the data transfer marketplace. Rather, the government acts only as an agent in the marketplace.

The other half of the issue involves deciding what services should be guaranteed to subscribers. The state of the art on the data transfer platform should change as technology improves and creativity inspires new services. Instead of determining one definition of universal service, Congress should use a proportional tax on data transfer companies to provide assistance to low income users to pay for services both Congress and the users decide are useful. This assistance to low income users could then come in the form of tax credits or exemptions for using various services offered by data transfer. Additionally, subsidies to public facilities such as libraries could provide additional access to data transfer platforms. This approach would allow companies to continue to experiment with a variety of services and empower all consumers to access those services they actually want to use.

Any effort to define which services are essential would be self-defeating. The rapid change in the industry as well as the wide spectrum of services will lead to different individual consumer choices. If we use the marketplace to improve service and reduce prices, we should also attempt to make use of the marketplace to ensure wide access to these services for all Americans. Again, while there will be resistance to such a tax, an external means of subsidizing universal service is essential to a functioning marketplace. A tax will explicitly reveal how much is being spent to subsidize various levels of service.


\(^{128}\) Id.
and provide further information to society in deciding what services should be provided.

V

Conclusion

The rapid change in both the telecommunication and cable industries is pushing towards a convergence of markets. A comprehensive regulatory scheme will encourage the transition to the data transfer industry, and ensure the continued development of advanced communication services. The emergence of competition between companies providing the full range of existing and potential data transfer services will provide better communication and information service to the public. Passage of a single act that provides for the basic principles of open competition among owners of broadband networks will successfully update a significant part of the nation's communications law, and create the administrative ability to adapt to the rapid pace of technological change.