

accessing interstate or foreign websites.”⁹⁷ Indeed, the “Internet extends beyond the boundaries of any of the states.”⁹⁸

As an interstate information service, cable Internet service is exempt from state and local regulation.⁹⁹ In enacting the 1996 Act, Congress created the category of “information services” and defined it in Section 3(20). Congress, however, did not set up an explicit regulatory regime for this new category of wire or radio communications, as it had for wireline common carrier services in Title II, spectrum-based radio and broadcast services in Title III, or cable communications in Title VI. Moreover, in contrast to the Section 2(b) reservation to the states of authority over intrastate communications radio or wire carriers, there is no corresponding reservation to the states of regulatory authority over intrastate information services. The reason is simple: Congress intended that this new category of communications services remain largely unregulated. That unregulated status must be honored not only at the state level but, in the case of the cable Internet service, at the local franchising level as well.

In Section 230(b), Congress expressed its crystal clear intent that the Internet and interactive computer services should flourish with as little regulation as possible. According to that provision, “[i]t is the policy of the United States . . . to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services,

⁹⁷ Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Inter-Carrier Compensation For ISP-Bound Traffic, *Declaratory Ruling in CC Docket No. 96-98 and Notice of Proposed Rulemaking in CC Docket No. 99-68*, 14 FCC Rcd 3689, 3702 (1999), *vacated and remanded*, *Bell Atlantic Telephone Co. v. FCC*, 206 F.3d 1 (D.C. Cir. 2000).

⁹⁸ Dan L. Burk, *How State Regulation of the Internet Violates the Commerce Clause*, 17 CATO L.J. at <<http://www.cato.org/pubs/journal/cj17n2-2.html>>.

⁹⁹ See, e.g., 47 U.S.C. §§ 152(a)-(b); The Public Utility Commission of Texas; The Competition Policy Institute, IntelCom Group (USA), Inc. and ICG Telecom Group, Inc., AT&T Corp., MCI Telecommunications Corporation, and MFS Communications Company, Inc.; Teleport Communications Group, Inc.; City of Abilene, Texas; Petitions for Declaratory Ruling and/or Preemption of Certain Provisions of the Texas Public Utility Regulatory Act of 1995,

unfettered by Federal or State regulation.”¹⁰⁰ Congress thus expressly recognized that intervention by any level of government into the provision of Internet-related services would unnecessarily stifle the marketplace. This sentiment extends, of course, to the imposition of common carrier obligations on information service providers. Indeed, as the courts have recognized, “[i]f Congress had intended to include interactive computer services or information service providers . . . in the definition of common carrier, it would have so indicated.”¹⁰¹

It is thus entirely consistent with Congressional intent that cable (and other) Internet services should remain subject to minimal regulation. Classification as a Title I information service best achieves this goal. Yet the Commission is not deprived of all jurisdiction and authority over broadband information services as a result of this classification. To the contrary, a determination that Internet over cable should be classified as a Title I information service will leave the Commission with adequate ancillary jurisdiction to impose regulatory requirements in the broadband area that may become necessary as a result of future market conditions.

Any exercise of the Commission’s ancillary jurisdiction, of course, must be in support of a specific statutory requirement, and may not be inconsistent with other provisions of the Act.¹⁰² Thus, as the Supreme Court held in *Midwest Video*, the Commission cannot impose a new regulatory scheme through an exercise of ancillary jurisdiction.¹⁰³ The Commission could,

Memorandum Opinion and Order, 13 FCC Rcd 3460, 3547 (1997) (“Congress’ intent, in adopting section 1 of the Act, [was] to centralize authority over interstate and foreign communications in the FCC.”).

¹⁰⁰ 47 U.S.C. § 230(b)(2).

¹⁰¹ *GreatDeals.*, 49 F. Supp. 2d at 856.

¹⁰² See, e.g., *FCC v. Midwest Video Corp.*, 440 U.S. 689, 708-09 (1979) (“*Midwest Video*”) (holding that the Commission lacked authority to require channel set-aside via ancillary jurisdiction); 47 U.S.C. § 154(i).

¹⁰³ *Id.* at 709 (The Commission may not impose a set of common carrier regulations on cable operators without specific authorization from Congress).

however, exercise ancillary jurisdiction in support of its explicit statutory obligations.¹⁰⁴ For instance, to the extent that the Commission were to determine in the future that self-provisioning of telecommunications by information service providers threatened the stability of universal service funding, it would have the power to address that issue using its ancillary jurisdiction through Section 254 of the Act. Similarly, should the Commission become concerned about the impact of IP telephony on universal service, it again could invoke its ancillary jurisdiction to redress the situation. As the Commission recognized in the *Report to Congress*, it “may require any provider of interstate telecommunications to contribute to universal service mechanisms if the public interest requires,”¹⁰⁵ even if the provider is not otherwise subject to Title II. This power is available because it supports the Commission’s specific authority over universal service.

VI. CABLE THIRD-PARTY CARRIAGE OFFERINGS MAY RAISE CLASSIFICATION ISSUES THAT ARE DISTINCT FROM THE ISSUES RAISED BY CABLE INTERNET SERVICE OFFERED TO END USERS.

Following expiration of their current exclusive agreements with their joint venture Internet partners, some cable operators, including Cox, will have it in their business interest to provide their customers a choice of third-party Internet service providers on a non-exclusive basis. The provision of such ISP choice may fall under the statutory definition of “telecommunications.” Nonetheless, in light of the statutory distinction between the offering of “telecommunications” and the provision of “telecommunications service,” it is evident that offering a telecommunications capability would not automatically turn the cable operator into a

¹⁰⁴ *Id.* at 706 (noting that where the Commission’s regulatory effort at issue is consistent with the Act because “it had been found necessary to ensure the achievement of the Commission’s statutory responsibilities,” exercise of ancillary jurisdiction is appropriate).

¹⁰⁵ *Report to Congress*, 13 FCC Rcd at 11516.

common carrier. Indeed, the fact that Congress defined the term “telecommunications” separately from “telecommunications service” demonstrates that it did not expect that the underlying facilities used to provide information services would necessarily and automatically be available for access by third parties on a common carrier basis (or necessarily even available to third parties at all).¹⁰⁶

Thus, where an information service provider owns the underlying facilities and decides to offer telecommunications capacity on that facility to a third party, it could well be functioning like a private carrier, as that classification has been defined by the Commission and the courts.¹⁰⁷ The hallmarks of private carriage are that the carrier chooses its customers on an individual basis and determines in each particular case “whether and on what terms to serve.”¹⁰⁸ A cable operator that offered telecommunications facilities to selected third parties pursuant to individualized negotiations would fall squarely in the “private carrier” category, and thus would

¹⁰⁶ This represents an important difference between the definitions of “information service” under the Act and “enhanced service” under the Commission’s *Computer II* and *Computer III* rules because the Commission’s term refers to the provision of enhanced services over a *common carrier* network and the statutory term does not. The distinction between enhanced and information services is also important because it demonstrates that Congress did not adopt one monolithic model – the common carrier model – for communications-related services offered to the public. The Act recognizes information service as an alternative and distinct non-common carrier mode of communications service.

¹⁰⁷ As one commentator on this issue has observed, “while ISPs across the country are attempting to demand “Forced Access to cable broadband,” *i.e.*, “they want AT&T, Time Warner, and other cable television companies to be forced to offer consumers cable broadband from any Internet Service Provider . . . for exactly the same price that the consumer can buy cable broadband from the cable company’s own Internet Service Provider,” it is plain that “[i]n a market economy, AOL, Mindspring, and other ISPs are perfectly free to sit down with the cable companies and negotiate terms to be included in the cable companies’ broadband offerings.” Indeed, “[n]othing today prevents any ISP from entering into a freely negotiated arrangement with any cable television company.” See David B. Kopel, *Access to the Internet: Regulation or Market?* HEARTLAND POLICY STUDY NO. 92, September 24, 1999, at <<http://www.heartland.org/studies/kopel-ps.htm>>.

¹⁰⁸ *NARUC II*, 533 F.2d at 609. The legislative history of the 1996 Act indicates that the 1996 Act preserves the private carrier distinction. Specifically, the Joint Explanatory Statement states that the definition of telecommunications service “recognizes the distinction between common carrier offerings that are provided to the public . . . and private services.” H.R. Conf. Rep. No. 104-458 at 116 (1996).

not be subject to Title II common carrier regulation.¹⁰⁹ Alternatively, the arrangement between the cable operator and the third party could be treated as a lease of excess capacity¹¹⁰ or, depending on the business plan, the provision of “dark fiber.”¹¹¹ Notably, like other private carriage agreements, neither of these types of arrangements is regulated under Title II.¹¹² And, to the extent that standalone offerings go beyond the “dumb pipe” model and include features such as protocol processing or other advanced capabilities, they may more properly be classified as information services in any event, like the integrated end user cable Internet service.

¹⁰⁹ The Commission acknowledged this distinction in *Computer II*, where it noted that enhanced service providers did not comfortably fit within the common carrier definition because “[i]nherent in the offering of enhanced services is the ability of service providers to custom tailor their offerings to the particularized needs of their individual customers.” *Computer II Final Decision*, 77 F.C.C.2d at 431. While “vendors of enhanced services . . . have the ability, if they so desire, to provide these services on an indiscriminate basis” and, “[p]resumably, some do,” this capability was not viewed by the Commission as “a sufficient basis for imposing the burdens that go with common carrier status.” *Id.* (citation omitted).

¹¹⁰ *Universal Service Order*, 12 FCC Rcd at 9178 (“private network operators that lease excess capacity on a non-common carrier basis” are not telecommunications carriers under the 1996 Act because they are not “common carriers.”).

¹¹¹ “Dark fiber” service is the provision and maintenance of fiber optic transmission capacity between customer premises where the electronics and equipment necessary to “light” the fiber are provided by the customer. The terms “dark fiber” and “dry fiber” are synonymous. In contrast the Commission has considered “lit fiber” to be the “provision of fiber optic transmission service between customer premises where the electronics are provided by the LEC at both ends of the fiber.” See *Southwestern Bell Telephone Company, et al., Application for Authority Pursuant to Section 214 of the Communications Act of 1934 to Cease Providing Dark Fiber Service, Memorandum Opinion and Order*, 8 FCC Rcd 2589, 2589 (1993) (citing *Local Exchange Carriers’ Individual Case Basis Service Offerings, Memorandum Opinion and Order*, 4 FCC Rcd 8634, 8645 n.7 (1989)).

¹¹² In 1994, the Court of Appeals for the District of Columbia Circuit reversed the Commission’s determination that it had common carrier jurisdiction over dark fiber provided by incumbent LECs. Looking to the nature of the dark fiber offerings, the court concluded that whether an entity is to be considered a common carrier or a private carrier depends on the particular *practice* under review. If a carrier chooses its customers on an individual case basis and determines in each particular case “whether and on what terms to serve” and there is no specific regulatory compulsion to serve all indifferently, the entity is a private carrier for that particular service and the FCC cannot subject the carrier to regulation as a common carrier. *Southwestern Bell*, 19 F.3d at 1481 (citing *NARUC II*, 533 F.2d at 608-09). Pursuant to that decision, the mere provision or leasing of unlit *fiber* would not automatically subject an entity to common carrier regulation for that particular offering.

VII. MANDATED OPEN ACCESS OBLIGATIONS WOULD VIOLATE CABLE OPERATORS' FIRST AMENDMENT RIGHTS

It is well settled that cable operators are speakers subject to the protections of the First Amendment.¹¹³ And it is now clear that cable operators are entitled to the full measure of First Amendment protection traditionally accorded print publishers, not the more limited protection afforded over-the-air broadcasters.¹¹⁴

Regardless of whether an “open access” requirement is viewed as a content-based regulation of speech, subject to strict scrutiny under the First Amendment,¹¹⁵ or as a content-neutral regulation, subject to somewhat less rigorous intermediate scrutiny,¹¹⁶ government mandated open access offends the First Amendment. As the Supreme Court held in *Miami Herald Publ'g Co. v. Tornillo*, “an enforceable right of access . . . brings about a direct confrontation with the express provisions of the First Amendment.”¹¹⁷

¹¹³ *Leathers v. Medlock*, 499 U. S. 439, 444 (1991). The issue of the “speaker” status of ISPs, cable and otherwise, and the inconsistency of cable open access mandates with the First Amendment was recently analyzed by Professor Raymond Shih Ray Ku, of Seton Hall University School of Law. Professor Ku presumes that all ISPs are speakers and that open access therefore represents a policy of accommodating competing First Amendment claims. After testing the rationales for open access against the Supreme Court’s decision to uphold must carry rules, he concludes that, given the critical differences between cable’s provision of Internet access and its provision of broadcast television programming, open access for ISPs violates the First Amendment. A copy of Professor Ku’s article is attached as Exhibit A. Raymond Shih Ray Ku, *Open Internet Access and Freedom of Speech: A First Amendment Catch-22*, 75 *Tulane Law Rev.* 87 (2000) (“*A First Amendment Catch-22*”). While Professor Ku examines various models for considering free speech rights in this context, the appropriate model, as discussed below, follows the reasoning in *Miami Herald v. Tornillo*, 418 U.S. 241, 254 (1974), consistent with the holding of the U.S. District Court in the Broward County access case.

¹¹⁴ *Turner Broad. Sys. Inc. v. FCC*, 512 U.S. 622, 639 (1994).

¹¹⁵ Content-based regulations are presumptively invalid and can survive constitutional review only if they promote a compelling governmental interest and employ the least restrictive means to further the articulated interest. *See, e.g., Sable Communications v. FCC*, 492 U.S. 115, 126 (1989).

¹¹⁶ Even a content-neutral restriction on speech will survive First Amendment scrutiny only if (1) it furthers an important or substantial government interest, (2) the interest is not related to the suppression of free expression, and (3) the means chosen do not substantially burden more speech than is necessary to further the government’s legitimate interest. *United States v. O’Brien*, 391 U.S. 367, 377 (1968).

¹¹⁷ 418 U.S. 241, 254 (1974). *Tornillo* held unconstitutional a Florida statute that granted a candidate for elective office a right to reply to criticism appearing in a newspaper.

Mandated open access cannot withstand strict scrutiny because there is no “compelling” government interest to support it. The Commission has repeatedly found that the markets for the provision of business and residential Internet services are competitive and show no signs of developing into either monopoly or duopoly structures. Anyone with an Internet connection has access to all of the information made freely available on the Internet. Cable operators do not maintain bottleneck control over the Internet or the services available over the Internet. Mandated open access to the Internet through proprietary cable systems can hardly be considered the “least restrictive means” of furthering any government interest in providing consumers a choice of Internet service providers since consumers have plenty of choices already and emerging technologies only promise more alternatives.

Even if mandated open access were to be viewed as content-neutral regulation, it would be unconstitutional for similar reasons: there is no substantial government interest that would be furthered by forcing cable operators to permit all comers to offer Internet access over their proprietary facilities. Consumers are already able to access the Internet via ample alternative means, both narrowband and broadband. Requiring cable operators to open their proprietary facilities to ISPs providing fully redundant Internet access cannot be justified as a narrowly-tailored means of furthering a substantial governmental interest.

This is precisely the conclusion recently reached in *Comcast Cablevision of Broward County, Inc. v. Broward County, Florida*, in which the court invalidated, on First Amendment grounds, the local cable open access ordinance enacted by Broward County, Florida.¹¹⁸

¹¹⁸ No. 99-6934-Civ-Middlebrooks (S.D. Fla. filed Nov. 8, 2000) (*Broward County*).

Although the court concluded that strict scrutiny was the proper standard of review, it also analyzed the ordinance under the less exacting intermediate scrutiny test.

The court's determination that open access is not content-neutral regulation and therefore that strict scrutiny must be applied was supported, first, by its conclusion that, much like a newspaper publisher, a cable operator makes an editorial decision when it decides to partner with an ISP.¹¹⁹ The court likened the operator's process of choosing an ISP to its process of choosing which video and other programming content to include in its traditional cable service. As the court observed, "[e]ach [ISP] selection offers distinctive programming and format," and an operator's decision to carry a particular ISP thus "reflect[s] a choice based upon content."¹²⁰

The court also found that "the ordinance fails content-neutral scrutiny."¹²¹ Relying on the FCC's own analyses of the competitiveness of the broadband marketplace and the pace of deployment of advanced telecommunications capability, the court rejected the county's argument that open access was necessary to ensure competition and diversity in cable Internet offerings by providing ISPs access to the "essential facility" operated by cable operators. This assertion, the court observed, was flatly inconsistent with the Commission's findings that the preconditions for monopoly appear absent in residential broadband markets, and that there is no foreseeable risk of the consumer market for broadband becoming a sustained monopoly or duopoly.

The *Broward County* court's conclusion is compelling:

The imposition of an equal access provision by operation of the Broward County ordinance both deprives the cable operator of editorial discretion over its programming

¹¹⁹ Indeed, just as a newspaper publisher decides not only which articles to print but also which sections to include in its paper, a cable operator exercises editorial discretion not only when it decides to include a particular channel in a particular service, but also when it decides how much spectrum on its network to allocate among a range of different services.

¹²⁰ *Id.* at 18.

¹²¹ *Id.* at 24.

and harms its ability to market and finance its service, thereby curtailing the flow of information to the public. It distorts and disrupts the integrity of the information market by interfering with the ability of market participants to use different cost structures and economic approaches based upon the inherent advantages and disadvantages of their respective technology.¹²²

VIII. MANDATED ACCESS RAISES FIFTH AMENDMENT CONCERNS

The principle that “private property” shall not “be taken for public use,” without just compensation,” U.S. Const. amend. VI, is a fundamental tenant of our jurisprudence. A mandatory open access requirement that has the effect of commandeering some portion of the spectrum on a cable network for use by third-party ISPs raises concerns under the Fifth Amendment’s “Takings Clause.”

Under long-standing precedent articulated by the Supreme Court in *Loretto*, a permanent physical occupation of property is always a taking.¹²³ In the case of mandated access, some portion of the cable operator’s physical plant would be set aside for use by third parties, thus depriving the cable operator of the ability to occupy that capacity with services of its own choosing. Consequently, whether open access is mandated through a separate 6 MHz channel set-aside, or the “sharing” of spectrum within the 16 MHz channel dedicated to high-speed Internet services by the cable operator, the set-aside or sharing would clearly fall within the realm of a permanent physical occupation and would thus constitute a taking. Moreover, the loss is a substantial one, as the cable operator would not only incur the costs of accommodating additional Internet service providers on its network, but would also lose the opportunity “to possess, use and dispose of” that spectrum capacity.¹²⁴

¹²² *Id.* at 16-17.

¹²³ *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 421 (1982) (“*Loretto*”).

¹²⁴ *United States v. General Motors Corp.*, 323 U.S. 373, 378 (1943).

Even if the spectrum occupation required to comply with an open access mandate were not considered a “per se” taking, it would be a taking under the *Penn Central* standard.¹²⁵ The factors under *Penn Central* that have “particular significance” in determining whether a government action is a taking are: (1) “the economic impact of the regulation of the claimant;” (2) “the extent to which the regulation has interfered with distinct investment-backed expectations;” and (3) “the character of the government action.”¹²⁶ Because mandated open access would impose inordinate economic burdens on the cable operator, and because it singles out the cable operator to bear the burdens of a government action that benefits only others, imposition of such a mandate would constitute a taking of the cable operator’s property.¹²⁷

¹²⁵ *Penn Central Transportation Company v. City of New York*, 438 U.S. 104, 124 (1978).

¹²⁶ *Id.*

¹²⁷ See *Armstrong v. United States*, 364 U.S. 40, 49 (1960) (It is necessary to examine where the burdens and benefits of the government regulation fall, since the Takings Clause “was designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole.”).

IX. CONCLUSION

For all of these reasons, Cox requests that the Commission act in this proceeding in accordance with these comments.

Respectfully submitted,

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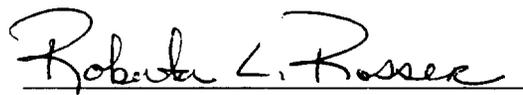

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EXHIBIT A

Open Internet Access and Freedom of Speech: A First Amendment Catch-22

Raymond Shih Ray Ku*

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* Associate Professor of Law, Seton Hall University School of Law; Director, Institute of Law, Science & Technology; A.B. Brown University; J.D. New York University School of Law; Fellow, Arthur Garfield Hays Civil Liberties Program (1994-95). This Article is the first in a three-part series examining the First Amendment rights of Internet service providers. An earlier version of this Article was published as part of *Stanford Technology Law Review's* working papers series at <http://stlr.stanford.edu>. Questions or comments can be e-mailed to kuraymon@shu.edu. I would like to thank Professors Arthur J. Cockfield, K.J. Green, Marybeth Herald, and Kenneth J. Vandeveld, as well as Kenneth Schagrín from the NTIA, for their insightful comments and suggestions on earlier drafts of this Article. I would also like to thank the faculty of Seton Hall University School of Law where an earlier version of this Article was presented, and Preston Gralla and James Kurose for helping to sort the multiple layers of Internet architecture. Special thanks also to my wife Melissa for her constant support and encouragement.

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I. INTRODUCTION

The Internet may well be the greatest innovation in speech since the invention of the printing press, but is everyone on the Internet a speaker? If not, how do we differentiate speakers from nonspeakers? These are just two of the questions posed by the first legal issue involving the structure of the Internet itself: whether government (local, state, and federal) can require owners of broadband¹ networks to open their private networks to competing Internet service providers (ISPs).² As cable companies begin to fulfill the promise of the information superhighway by providing residences with broadband access to the Internet, ISPs, including America Online (AOL) and Mindspring, have lobbied for what they euphemistically call "open access," or the opportunity to compete for residential subscribers over the cable system.³ Supporters claim that open access is necessary to preserve competition in the Internet access market and to promote

1. The Federal Communications Commission (FCC) defines "broadband" as "having the capability of supporting, in both the provider-to-consumer (downstream) and the consumer-to-provider (upstream) directions, a speed (in technical terms, 'bandwidth') in excess of 200 kilobits per second (kbps)," which is fast enough to allow users to change webpages as fast as changing pages in a book and is capable of transmitting full-motion video. *Inquiry Concerning the Deployment of Advanced Telecomms. Capability to All Americans in a Reasonable & Timely Fashion, & Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecomms. Act of 1996*, 14 F.C.C.R. 2398, 2406, ¶ 20 (1999) (report) [hereinafter *Advanced Servs. Report*].

2. See *AT&T Corp. v. City of Portland*, 43 F. Supp. 2d 1146, 1149 (D. Or. 1999) (upholding a local ordinance requiring cable companies to open their cable networks to competing Internet service providers), *rev'd*, 216 F.3d 871 (9th Cir. 2000) (holding that open access requirements are preempted by federal law); see also Denise Caruso, *Digital Commerce*, N.Y. TIMES, Jan. 31, 2000, at C5 (discussing the concerns raised "about the future of broadband and how best to ensure that no single company abuses its control of the Internet's infrastructure").

3. During the writing of this Article, AOL announced its intention to purchase Time Warner, owner of the second largest cable system in the United States. See *infra* note 62. Not surprisingly, AOL has ended its participation in the lobbying efforts for open access, though it publicly claims to remain "strongly committed to open access." Reuters, *AOL Gives Up Fast-Access Fight*, WIRED NEWS, Feb. 14, 2000, at <http://www.wired.com/news/print/0,1294,34334,00.html>.

freedom of speech on the Internet.⁴ In response, local municipalities across the nation are taking steps to require cable companies to provide competing ISPs with open access.⁵ At the national level, Congress is considering legislation that would preempt state and local law and require open access either as a matter of federal antitrust law or by denying cable companies editorial control over their networks.⁶ These efforts to regulate cable ISPs clearly raise First Amendment concerns on both sides of the issue.⁷ However, in addressing one such effort by the City of Portland to force AT&T, TCI Cablevision, and their ISP, TCI@Home,⁸ to provide access to competing ISPs, a federal district court dismissed the cable operators' First Amendment claims.⁹ The court simply concluded that there was no free speech violation because there was no evidence that "cable subscribers accessing the Internet through AT&T's cable modem platform would associate AT&T with the speech of unaffiliated ISPs."¹⁰ On appeal, the Ninth Circuit avoided the First Amendment issues by concluding that open access is preempted by Congress.¹¹

This summary conclusion hardly does justice to the complexity of the First Amendment issues presented by open access. The district court's decision does not even begin to address, let alone answer,

4. See *AT&T*, 43 F. Supp. 2d at 1150; Marcus Maher, Comment, *Cable Internet Unbundling: Local Leadership in the Deployment [sic] High Speed Access*, 52 FED. COMM. L.J. 211, 221-23, 229 (1999).

5. See John Borland, *Living up to the Broadband Hype*, CNET NEWS.COM, July 28, 1999, at <http://news.cnet.com/news/0-1004-201-343780-0.html>.

6. See H.R. 2637, 106th Cong. § 3 (1999) (authorizing the FCC to require cable operators to open their networks "on terms and conditions that are fair, reasonable, and nondiscriminatory"); H.R. 1686, 106th Cong. § 102 (1999) (prohibiting anticompetitive contracts by broadband access providers); H.R. 1685, 106th Cong. § 502 (1999) (same); see also H.R. 2420, 106th Cong. § 3 (1999) (requiring local exchange carriers to provide Internet users with the ability to subscribe to the high-speed ISP of their choice); S. 877, 106th Cong. § 3 (1999) (same).

7. See *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 214 (1997) [hereinafter *Turner II*] (recognizing that efforts to force cable operators to give access to broadcast networks implicates the free speech rights of the cable operators); *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 626 (1994) [hereinafter *Turner I*].

8. Hereinafter collectively referred to as AT&T.

9. *AT&T*, 43 F. Supp. 2d at 1154.

10. *Id.*

11. *AT&T Corp. v. City of Portland*, 216 F.3d 871, 877-79 (9th Cir. 2000); see also *MediaOne Group, Inc. v. County of Henrico*, 97 F. Supp. 2d 712, 717 (E.D. Va. 2000) (concluding that open access is preempted on different statutory grounds). Given the disagreement among the courts, the preemption issue remains unsettled. See Christopher E. Duffy, Note, *The Statutory Classification of Cable-Delivered Internet Service*, 100 COLUM. L. REV. 1251, 1262 (2000). Moreover, the FCC is currently reexamining the open access issue. See Kalpana Srinivasan, *FCC Mulls Regulating Cable Internet*, WASH. POST, Sept. 28, 2000, at http://www.washingtonpost.com/wp-s...ne/20000928/aponline165445_000.html.

questions such as: Are cable ISPs speakers for the purposes of the First Amendment? If so, how is open access consistent with our First Amendment tradition against compelled speech? If cable operators do not have free speech rights under these circumstances, why not? Correspondingly, since access claims are usually based upon the free speech interests of those seeking access, is open access justified as an effort to protect the free speech of competing ISPs? Aside from failing to address these questions, the decision ignores an important reminder—when regulating emerging technologies like the Internet, we must take care “because even commonly understood terms [and legal concepts] may have different connotations or parameters in this new context.”¹²

As we enter the twenty-first century, the Internet is fast becoming an important part of our commercial, political, and social lives.¹³ As one jurist observes, the Internet is the “most participatory form of mass speech yet developed.”¹⁴ It is also big business.¹⁵ Not surprisingly, given the Internet’s explosive growth and financial rewards, the struggle over who will control the information superhighway is well underway.¹⁶ Nowhere is this more clear than in the competition to provide the public with access to the Internet.¹⁷ While the Microsoft antitrust suit demonstrates that the question of who will provide the software that allows us to surf the Net is a high stakes contest,¹⁸ the

12. *ACLU v. Reno*, 929 F. Supp. 824, 865 (E.D. Pa. 1996) (Buckwalter, J., concurring), *aff’d*, 521 U.S. 844 (1997); see also INFORMATION INFRASTRUCTURE TASK FORCE, A FRAMEWORK FOR GLOBAL ELECTRONIC COMMERCE 5 (1997) (“We should not assume . . . that the regulatory frameworks established over the past sixty years for telecommunications, radio and television fit the Internet.”), available at <http://www.iitf.nist.gov/electcomm/ecom.html> (last visited Aug. 25, 2000).

13. See NAT’L TELECOMMS. & INFO. ADMIN., U.S. DEP’T OF COMMERCE, FALLING THROUGH THE NET: DEFINING THE DIGITAL DIVIDE 77 (1999) [hereinafter *FALLING THROUGH THE NET*].

14. *ACLU*, 929 F. Supp. at 883 (Dalzell, J., concurring).

15. For example, in 1998, the market revenue for ISPs alone was projected to grow from \$4 billion in 1996 to \$18 billion in the year 2000. Federal-State Joint Bd. on Universal Serv., 13 F.C.C.R. 11,501, 11,532, ¶ 65 (1998) (report) [hereinafter *Universal Serv. Report*]. Similarly, revenue from e-commerce is estimated to grow from \$23 billion to \$1.5 trillion by 2002. See Arthur J. Cockfield, *Balancing National Interests in the Taxation of Electronic Commerce Business Profits*, 74 TUL. L. REV. 133, 152 (1999). Slow connections jeopardize an estimated \$4.35 billion a year in online sales. Borland, *supra* note 5.

16. See Borland, *supra* note 5.

17. See *id.*

18. See *United States v. Microsoft Corp.*, 65 F. Supp. 2d 1 (D.D.C. 1999).

question of which companies will hard wire us to the Internet itself is just as controversial.¹⁹

Who will provide us with access to the Internet, and how, becomes especially compelling when one recognizes that many individuals have yet to participate in the Internet revolution.²⁰ While commentators have noted the Internet's potential to radically transform the way we behave as individuals, citizens, and consumers,²¹ a rift has developed between the Internet haves and have nots.²² This digital divide separates real space from cyberspace based upon race, income, education, and geography.²³ The digital divide can be largely attributed to one simple fact—accessing the Internet requires money.²⁴ It requires hardware and software capable of interacting with the Internet, such as a personal computer, Microsoft's Internet Explorer, or WebTV; it requires paying for a pipeline or connection to an ISP, such as a telephone line, cable, or satellite hookup; it also requires subscribing to an ISP whose computer network provides the gateway to the information superhighway.²⁵ While companies may provide parts of this package for free or at reduced prices,²⁶ someone always has to be paid in order to utilize the Internet.²⁷ With respect to broadband Internet access, this means that while the wealthy and educated in this nation are able to access a universe of information with the click of a mouse, communicate with political candidates by e-mail, trade stocks on-line, watch the state of the union address live on their computer, and eventually vote for political candidates over the

19. See Borland, *supra* note 5; Caruso, *supra* note 2, at C5; Sandeep Junnarkar, *AT&T to Open up High-Speed Network*, CNET NEWS.COM, Dec. 6, 1999, at <http://news.cnet.com/news/0-1004-200-1480975.html>.

20. See FALLING THROUGH THE NET, *supra* note 13, at 9; Katie Hafner, *We're Not All Connected, Yet*, N.Y. TIMES, Jan. 27, 2000, at G1.

21. See, e.g., Eugene Volokh, *Cheap Speech and What It Will Do*, 104 YALE L.J. 1805, 1806-07 (1995) (describing how the Internet will change our lives); Cass R. Sunstein, *The First Amendment in Cyberspace*, 104 YALE L.J. 1757, 1758-59 (1995) (noting the changes promised by the Internet).

22. See generally FALLING THROUGH THE NET, *supra* note 13 (describing the digital divide); Hafner, *supra* note 20 ("If . . . the Internet is on its way to becoming the dominant mode of information exchange, then it is no longer a luxury but, like the telephone, a necessity. Anyone without it is in danger of being shut out.")

23. FALLING THROUGH THE NET, *supra* note 13, at xv.

24. *Id.* at 33, 38-39 (noting that cost is the second leading reason why people who own computers do not have Internet access and the leading reason for discontinuing access).

25. *Id.* at 77 ("While competition has made computers and the Internet increasingly affordable, these technologies still remain beyond the budget of many American households."); see also *infra* Part II.B (describing fees for Internet access).

26. See *infra* notes 40, 53.

27. See *infra* Part II.A.

Internet, the less affluent and less educated will be shut out.²⁸ Because of the digital divide and economic barriers to Internet access, federal and local governments have been particularly concerned about monopolization and market dysfunction with respect to Internet related services.²⁹ In fact, Portland justified its actions as necessary to ensure that the market for providing Internet service would remain competitive in light of the new cable technologies.³⁰ The underlying policy assumption at both the federal and local levels has been that competitive markets will create the conditions necessary for the greatest degree of access to the Internet.³¹ However laudatory these purposes may be, efforts to regulate the Internet to ensure competition cannot ignore the limits upon government embodied in the First Amendment.

While we have readily incorporated the Internet into our daily lives, incorporating it into our laws has been significantly more difficult.³² This Article examines the degree to which open Internet

28. For example, in response to the Arizona Democratic Party's intention to conduct the "first-ever legally binding public election over the Internet," the Voting Integrity Project filed suit to block the plan, alleging that "online voting would discriminate against those without access to computers and the Internet." *Lawsuit Challenges First Election to Be Conducted Via the Internet*, 68 U.S.L.W. 2440, 2440 (Feb. 1, 2000); see also Associated Press, *Governors Speak on Internet Voting*, N.Y. TIMES, Jan. 21, 2000 (noting that the Governor of California believes that Americans will be voting over the Internet in five to seven years), at <http://channel.nytimes.com/library/tech/00/01/biztech/articles/22vote-side.html>.

29. See Applications for Consent to the Transfer of Control of Licenses & Section 214 Authorizations from Tele-Communications, Inc., Transferor, to AT&T Corp., Transferee, 14 F.C.C.R. 3160, 3205-07, ¶¶ 92-96 (1999) [hereinafter *Transfer Order*]; *Advanced Servs. Report*, 14 F.C.C.R. 2398, 2447, 2449, ¶¶ 94, 100-01 (1999); Maher, *supra* note 4, at 219-26.

30. AT&T Corp. v. City of Portland, 43 F. Supp. 2d 1146, 1150 (D. Or. 1999) ("The Commission found that @Home had no viable competitors in the local retail market for residential Internet access services."), *rev'd*, 216 F.3d 871 (9th Cir. 2000).

31. See S. REP. NO. 104-230, at 1 (1996) (describing Congress's goal in passing the Telecommunications Act of 1996 as establishing 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"); *Advanced Servs. Report*, 14 F.C.C.R. at 2401-02, ¶ 5 ("[The FCC is committed to the rapid deployment of broadband] while also promoting the deregulatory and procompetitive goals of the 1996 Act. Our role is not to pick winners and losers, or to select the best technology to meet consumer demand. We intend to rely as much as possible on free markets and private enterprise."); FALLING THROUGH THE NET, *supra* note 13, at 78 (stating that "further competition and price reductions will be vital to making information tools affordable for most Americans").

32. For example, the legal community has been debating for years over whether or not it is even possible to regulate the Internet. See, e.g., LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 1-6, 43-60 (1999) (arguing that the law must recognize the role that computer code plays in regulating the Internet); Jack L. Goldsmith, *Against Cyberanarchy*, 65 U. CHI. L. REV. 1199, 1200-01 (1998) (arguing that the Internet can be regulated); David R. Johnson & David Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 STAN. L.

access raises free speech concerns for the cable ISPs, who own the networks and are subject to open access requirements, as well as the competing ISPs seeking access. As we will see, determining whether open access is consistent with our First Amendment traditions depends upon whether and to what degree ISPs are speakers entitled to First Amendment protection. Part II of this Article briefly describes the Internet's architecture to explain how we access the information superhighway, and the various technologies that transport us. Part II demonstrates that open access is not about access to the Internet as a whole, but is instead, a claim for access to what is commonly referred to as the "last mile"—the physical pathways connecting the home from the curb.³³ Part III examines the regulatory context in which the Internet and ISPs operate, and concludes that imposing open access requirements upon cable ISPs is inconsistent with the existing regulatory regime. Assuming that all ISPs are speakers and that open access, therefore, represents a policy of accommodating competing First Amendment claims, Part IV examines whether open access is consistent with the United States Supreme Court's decisions in *Turner Broadcasting System, Inc. v. FCC* in which the Court upheld mandated access to cable television.³⁴ Part IV argues that critical differences between the Internet and cable television lead to the conclusion that open Internet access violates the First Amendment. Part V questions the assumption that ISPs should always be treated as speakers, and outlines three approaches for evaluating the speech rights of ISPs under the First Amendment. Part V demonstrates that open access is caught in a First Amendment catch-22. If we adopt a First Amendment approach that does not recognize cable ISPs as speakers with respect to open access, we must conclude that competing ISPs are not speakers either. Consequently, either ISPs are considered speakers and open access is inconsistent with the First Amendment, or ISPs are not speakers and open access cannot be justified by the First Amendment.

II. INTERNET SERVICE PROVIDERS AND THE INFRASTRUCTURE OF THE INTERNET

In essence, the Internet is simply a collection of computers, a network, in which the computers are capable of communicating with

REV. 1367, 1375 (1996) (arguing that the architecture of the Internet makes it practically impossible and illegitimate to enforce regulations based upon geographical boundaries).

33. See *Advanced Servs. Report*, 14 F.C.C.R. at 2404, ¶¶ 12-13.

34. *Turner II*, 520 U.S. 180, 224 (1997); *Turner I*, 512 U.S. 622, 668 (1994).

each other.³⁵ What makes the Internet special is its reach as the largest network in the world. In fact, it is a global metanetwork linking tens of thousands of other networks together.³⁶ Through this network you can send e-mail to friends and colleagues, do research, play computer games with people from around the world, shop, read the *New York Times*, listen to radio stations, and watch video programming.³⁷ All of this is made possible by shared communication protocols such as the Transmission Control Protocol (TCP) and Internet Protocol (IP) or TCP/IP, which allow information to be transmitted quickly from computer to computer³⁸ and the hardware that links the computers together. This Part outlines the limitations upon access to the Internet imposed by the architecture and hardware of the Internet.

A. *On and Off Ramps to the Information Superhighway*

As the Internet exists today, one cannot simply plug a personal computer into the Internet through a telephone or cable line any more than one can obtain telephone or cable television service by plugging a telephone into an outlet or hooking your television up to coaxial cable. Just as you contract with the telephone or cable company for telephone and cable service, to connect to the Internet you must have an ISP. Currently, four different groups provide the vast majority of Americans with access to the Internet: federal, state, and local governments; schools; private employers; and private service providers.³⁹ While government, businesses, and schools provide many individuals with access outside of the home, most do not provide service to the general public or to residential users, who must contract with a private provider.⁴⁰ Understanding why an Internet service provider is necessary requires a brief explanation of the Internet's

35. See Steve Bickerstaff, *Shackles on the Giant: How the Federal Government Created Microsoft, Personal Computers, and the Internet*, 78 TEX. L. REV. 1, 44 (1999).

36. See *Reno v. ACLU*, 521 U.S. 844, 849-50 (1997); PRESTON GRALLA, *HOW THE INTERNET WORKS* 5 (1999).

37. See *ACLU*, 521 U.S. at 850-53.

38. The TCP/IP protocols break down information transmitted on to the Internet into packets and reassemble it at its destination. GRALLA, *supra* note 36, at 13-15. This allows the Internet to operate as a packet-switched network where the various data packets may travel different routes to reach the same destination. *Id.* This design allows information to be transmitted through the Internet at faster speeds than circuit-switched networks, where, once a connection is made, that part of the network is dedicated only to that connection. *Id.*

39. *Id.* at 5; FALLING THROUGH THE NET, *supra* note 13, at 34-37.

40. Approximately twenty-two percent of all Americans access the Internet from home, and seventeen percent access it from a site outside of the home. FALLING THROUGH THE NET, *supra* note 13, at 34-37. A small percentage of users, representing approximately nine percent of those Americans who obtain Internet access outside the home, utilize the free access to the Internet provided by libraries and community centers. *Id.* at 36.

architecture and the method by which information is transmitted across this global network of networks.

Accessing the full resources of the Internet from a personal computer requires passing through multiple layers of hardware and telecommunications services. Imagine you are sending a friend an e-mail. First, you must prepare the e-mail on your personal computer or handheld device, and that device must typically be connected to a local area network (LAN).⁴¹ The connection can be established either through local wiring, as in an office, or through telephone, cable, or similar services to a local ISP.⁴² When connecting through an ISP, the ISP acts as your LAN.⁴³ Once connected to the LAN, your computer interacts with the LAN's internal router/server, a more powerful computer and switching device capable of interacting with the multiple computers in a LAN simultaneously and translating different data formats.⁴⁴ The server acts as a repository for various data and applications that allow the user to send and retrieve information on the Internet.⁴⁵ In the case of e-mail, the server translates your e-mail through the TCP/IP protocol and sends it as various data packets.⁴⁶ The LAN's server, in turn, must be connected to a router. Routers connect networks and direct the flow of data on the Internet.⁴⁷ The router looks at the Internet addresses in the data packets and sends them on the best path to the recipient.

Through routers, LANs are connected into midlevel networks or regional networks.⁴⁸ To communicate with other LANs, each LAN must be linked together through privately leased communication services such as telephone lines, T1 lines, Integrated Services Digital Network (ISDN) lines, Digital Subscriber Lines (DSL), coaxial cable, satellite, microwave, or fiber-optic cable.⁴⁹ These types of connections are often leased from local exchange carriers such as Pacific Bell or MCI WorldCom.⁵⁰ If the recipient of your e-mail is within the

41. GRALLA, *supra* note 36, at 9-11.

42. *Id.*

43. *Id.*; see JAMES F. KUROSE & KEITH W. ROSS, *COMPUTER NETWORKING: A TOP-DOWN APPROACH FEATURING THE INTERNET* § 1.8, at 47-50 (preliminary ed. 2000).

44. GRALLA, *supra* note 36, at 9-11.

45. *Id.* at 41-43.

46. *Id.* at 85-93.

47. *Id.* at 37.

48. *Id.* at 9-11.

49. See *infra* Part II.B.

50. See *Advanced Servs. Report*, 14 F.C.C.R. 2398, 2404, ¶ 12 (1999); *Universal Serv. Report*, 13 F.C.C.R. 11,501, 11,532, ¶ 66 (1998); Bickerstaff, *supra* note 35, at 46-47. Local exchange carriers are defined by the Telecommunications Act of 1996 as "any person

midlevel network, a router or series of routers delivers the e-mail message to the recipient's local network server where it is reassembled and eventually downloaded onto the recipient's personal computer.⁵¹ If the recipient is outside the midlevel network, the data packets are sent to a Network Access Point (NAP) where they are sent along high-speed backbones, capable of transmitting data at speeds of 155 Mbps (megabits per second) and higher, to another NAP and regional network, either across the country or around the world.⁵² Consequently, what people think of as the Internet is, in reality, computer equipment and telecommunications connections representing three different layers of networks.

Given the multiple layers of the Internet, it may already be apparent that in order to access what people commonly think of as the Internet one must have access to all three layers of networks: local, regional, and national/international. More importantly, given the current architecture, access fees are inescapable. Individual users must pay an ISP to be connected to a local network.⁵³ Local ISPs must pay regional ISPs, such as MidWestnet or EastCoastnet, for connecting at the regional level, and regional ISP's must pay National Backbone Providers (NBPs) such as MCI WorldCom or PSINet for national and international access.⁵⁴ While some users—for example, universities and large corporations—avoid local ISP fees by purchasing the necessary equipment, such as a router and a modem pool, thereby

that is engaged in the provision of telephone exchange service or exchange access." 47 U.S.C. § 153(26) (Supp. III 1997).

51. GRALLA, *supra* note 36, at 90-91.

52. *Id.* at 9-11.

53. Some ISPs will connect individuals to the Internet for free, including free DSL service, and in some cases even give away computers in exchange for the right to gather data about the individual or to subject the individual to advertisements that they cannot avoid. See *AOL Europe Mulls Free Service*, WIRED NEWS, June 21, 1999 (discussing Free-PC giveaway and free Internet access), at <http://www.wired.com/news/print/0,1294,20328,00.html>; Kathryn Balint, *The Cost of 'Free' Stuff*, UNION-TRIBUNE (San Diego), Feb. 1, 2000, at 6 (discussing offers of free Internet service); John Borland, *Free DSL Takes Step Closer to Market*, CNET NEWS.COM, Feb. 15, 2000 (discussing free DSL service), at <http://news.cnet.com/news/0-1004-200-1550803.html>; *ExciteAtHome Does Free Access*, WIRED NEWS, Jan. 6, 2000 (discussing free Internet access over telephone lines in exchange for advertising), at <http://www.wired.com/news/print/0,1294,33471,00.html>; NetZero, *Free Internet Access and Free E-Mail Forever* (offering free Internet access in exchange for the ability to advertise to the user), at <http://www.Netzero.com> (last visited Sept. 4, 2000); Andy Patrizio, *AltaVista Joins Free ISP Brigade*, WIRED NEWS, Aug. 12, 1999 (discussing Alta Vista's decision to provide free Internet access), at <http://www.wired.com/news/print/0,1294,21251,00.html>; Matt Richtel, *Plan for Free PC's Has a Few Attachments*, N.Y. TIMES, Feb. 8, 1999, at C8 (describing a plan to offer free computers in exchange for purchasing other services). It is estimated that by the end of the year 2000, between 8.8 and thirty million Americans will use free Internet access. See Balint, *supra*.

54. KUROSE & ROSS, *supra* note 43, § 1.8, at 47-48.

becoming their own ISPs, they must ultimately pay to tap into a regional ISP.⁵⁵ Similarly, while regional ISPs may avoid paying fees to NBPs by tapping into NAPs directly, they must then pay the NAP, which is typically run by a Regional Bell Operating Company.⁵⁶ Therefore, given the Internet's current topography, tolls on the information superhighway are unavoidable.

Under this framework, the business of ISPs is to provide the public with access to the Internet by providing access through proprietary networks.⁵⁷ As such, TCI@Home and would-be competitors like AOL, Mindspring, and Microsoft Network are functionally identical. They all compete to provide Internet access to residential users by creating computer networks connected to other networks: local, regional, and backbone.⁵⁸ The only current difference between ISPs such as TCI@Home or AOL is the technology used to connect the "last mile"—the actual connection to the residential user.⁵⁹ As discussed below, the "last mile" has generally been the most bandwidth-constrained, and the ultimate factor in determining whether a residential user will have broadband access to the Internet.⁶⁰ Cable companies such as TCI and Comcast have invested billions of dollars upgrading their cable systems to make two-way, high-speed data transmission to the home possible.⁶¹ In contrast, companies such as Mindspring and AOL, which do not own a physical conduit into the home,⁶² must rely on traditional telephone access, enter into arrangements with the companies that do own such connections, or bridge the "last mile" with broadband technologies of their own.⁶³ Ultimately, the controversy in Portland and other

55. *Id.* at 49.

56. *Id.*

57. *Id.* at 49-50.

58. *Id.*

59. See *Advanced Servs. Report*, 14 F.C.C.R. 2398, 2422, ¶ 45 (1999) (discussing the methods of providing an Internet connection to a residential user); see also Allen S. Hammond, IV, *Regulating Broadband Communications Networks*, 9 YALE J. ON REG. 181, 194-96 (1992) (discussing the debate over the importance of wiring the "last mile").

60. See *Advanced Servs. Report*, 14 F.C.C.R. at 2422, ¶ 45; *infra* notes 88-95 and accompanying text.

61. See *Advanced Servs. Report*, 14 F.C.C.R. at 2418, ¶ 37.

62. AOL announced its intention to purchase Time Warner in January 2000. See Seth Schiesel, *A Rush to Provide High-Speed Internet Access*, N.Y. TIMES, Jan. 12, 2000, at C1. In addition to providing AOL with a new source of content for the Internet, the purchase will make AOL the owner of one of the largest cable systems in the nation, and, therefore, its own cable system for providing broadband access to the Internet. See *id.*

63. See *id.*; see also *Advanced Servs. Report*, 14 F.C.C.R. at 2419, ¶ 42 (noting that Bell Atlantic and AOL formed an alliance to offer Internet service though DSL); Bickerstaff, *supra* note 35, at 87-88 (discussing alliances formed by AOL, Microsoft, Qwest, AT&T, GTE, and the Bell Operating Companies).

municipalities is precipitated by the desire of noncable ISPs to force cable companies to give them access to their networks to take advantage of that "last mile" of broadband connection, instead of deploying broadband technologies of their own.⁶⁴

B. *Linking the Internet*

In addition to the limitations upon access imposed by the Internet's architecture, access to the Internet is limited by the technology used to transmit data and connect us to the Internet. Typically, the computers and computer networks of the Internet are physically connected together through copper wire, coaxial cable, or fiber optics.⁶⁵ Computers can also be connected through a variety of technologies that do not require direct physical connections.⁶⁶ The type of connection between computers and networks determines the maximum speed at which information may be transmitted. For example, regular telephone lines typically transmit data at a maximum of 56 Kbps (kilobits per second).⁶⁷ Special leased telephone lines are capable of transmitting data at even higher speeds. For example, ISDN lines can carry data at 128 Kbps and DSL can carry data at 1.5 Mbps;⁶⁸ T1 lines can carry data at 1.5 Mbps and T3 lines can carry data at 44 Mbps;⁶⁹ and fiber-optic cable can carry data at 600 Mbps.⁷⁰ Similarly, cable typically transmits data at 3 Mbps.⁷¹ In the near future, high-speed wireless systems promise data speeds up to 100 Mbps.⁷²

All of this speed and greater connectivity comes at a price for residential users. A second telephone line costs about ten dollars a month, plus an additional twenty dollars for an ISP.⁷³ Cable access can

64. *AT&T Corp. v. City of Portland*, 43 F. Supp. 2d 1146, 1150 (D. Or. 1999), *rev'd*, 216 F.3d 871 (9th Cir. 2000); Borland, *supra* note 5 (discussing conflicts between ISPs and cable companies in various cities and counties).

65. See *AT&T*, 43 F. Supp. 2d at 1149; Hammond, *supra* note 59, at 189.

66. See *Advanced Servs. Report*, 14 F.C.C.R. at 2424, 2428, ¶¶ 49, 57.

67. See *id.* at 2431 chart 2.

68. See *id.*

69. See GRALLA, *supra* note 36, at 10.

70. Jeff Hecht, *Fiber Optics to the Home*, *TECH. REV.*, Mar./Apr. 2000, at 49, 49-50.

71. See *Advanced Servs. Report*, 14 F.C.C.R. at 2431 chart 2.

72. See Maher, *supra* note 4, at 215; see also Corey Grice, *The Next Wave in Fast Net Access*, CNET NEWS.COM, July 28, 1999 (describing the development of new broadband technologies including wireless and satellite), at <http://news/cnet.com/news/0-1004-201-34378309.html>; *It Came from Outer Space*, WIRED NEWS, Feb. 16, 2000 (describing a joint venture between Microsoft and Gilat Satellite Networks to provide broadband Internet access via satellite), at <http://www.wired.com/news/business/0,1367,34384,00.html>.

73. See *Advanced Servs. Report*, 14 F.C.C.R. at 2444 chart 3 (showing a total of \$680 in the first year); Brian L. Clark, *Wired for Speed*, MONEY, Aug. 1999, at 153, 153.