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Open Access and the Essential Facilities Doctrine: Promoting Competition and Innovation

Marissa A. Piropato†

I. THE CHALLENGE OF CONVERGENCE AND THE ESSENTIAL FACILITIES DOCTRINE

Convergence is the buzzword in the communications industry. Although synonymous with technological innovation, convergence generally describes the integration of several media into one system, delivering voice, entertainment programming, and high-speed data on one multi-function terminal.¹ Stock multiples soar as new and old providers tout their service as convergent. Leaders in the telephone, internet, cable, and wireless industries are investing billions of dollars to develop converged services.² The former monopolist, AT&T, and industry heavyweights America Online, Bell Atlantic, and MCI Worldcom have bought companies and developed infrastructure to enter the fray.³

The basic intuition that convergence requires innovation is accurate. Only a decade ago, the phone company delivered plain telephone service, the cable company offered cable, and internet service providers were little more than upstarts working out of the family garage. Now, firms such as AT&T serve many communications needs via broadband,⁴ including cable TV, internet ac-

† B.A. 1997, Dartmouth College; J.D. Candidate 2001, University of Chicago.
² See Direct Testimony of James O. Robbins, President of Cox Communications, Broadband and Consumer Access to the Internet, Fed News Serv (Apr 13, 1999).
³ See Andrew Kupfer, Mike Armstrong’s AT&T: Will the Pieces Come Together?, 139 Fortune 82, 82 (Apr 26, 1999) (noting that AT&T has spent over $70 billion on acquisitions and infrastructure development).
⁴ The FCC defines broadband as the capacity to support “in both 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) in the last mile.” Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such
cess, and both local and long-distance phone service. Broadband, however, is merely the first step in the evolution of the communications marketplace. Technological innovation is transforming the services consumers can obtain over one line.

Convergence strains traditional legal analysis. Because convergence permits one provider to offer many services across many media, courts and regulators find it increasingly difficult to neatly classify a bundle of services as cable, telephone, or data, or to determine whether to apply telecommunications or cable regulation to these services. Moreover, convergence promotes consolidation and discourages the entry of smaller providers, thus threatening competition. Courts must determine whether traditional antitrust principles adequately address the dynamic communications industry. The essential facilities doctrine particularly requires re-examination.

Under the essential facilities doctrine, a company that controls a facility that is "essential" for competition must provide its competitors with reasonable access to that facility. A popular articulation of the doctrine, the bottleneck theory, states that courts may require a monopolist to provide open access to its competitors, lest its control of an essential facility allow it to extend its monopoly power from "one stage of production to another, and from one market into another." For example, a computer company cannot use its dominant position in the operating system industry to gain market power in the internet browser industry. Similarly, a company may not use its control over cable access to consumer homes to secure a dominant position in the telecommunications and internet services market.

This Comment argues that courts are beginning to consider open access requirements inspired by the essential facilities doc-

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5 Compare AT&T Co v Portland, 216 F3d 871 (9th Cir 2000) (defining cable-delivered internet access as a telecommunications service), with MediaOne Group, Inc v County of Henrico, 97 F Supp 2d 712 (E D Va 2000) (defining cable-delivered internet services as cable services).
6 See notes 44-45 and accompanying text.
7 See Section II.
8 MCI Communications Corp v AT&T Co, 708 F2d 1081, 1132 (7th Cir 1983).
9 United States v Microsoft Corp, 87 F Supp 2d 30, 34-37 (D DC 2000).
10 AT&T v City of Portland, 43 F Supp 1146, 1150 (D Or 1999) (holding that a cable modem could be an essential facility).
11 As the Federal Communications Commission itself recognizes, there is not one accepted definition of "open access" in the advanced telecommunications sector. In a Notice of Inquiry regarding Cable Modem Services, the FCC noted that "[m]ost open access
trine for new and convergent services such as broadband via cable. The infrastructure investment, settlement agreements, mergers and acquisitions, and bargaining occurring in the shadow of the law are more important than the essential facilities doctrine itself. Indeed, because the doctrine, like many legal remedies, is a last resort for carriers seeking access to facilities, it may not provide relief quickly enough. In a time-sensitive industry such as telecommunications, competition requires general guidelines to curb anticompetitive behavior and to lower transaction costs.\textsuperscript{12}

The Federal Communications Commission ("FCC," "Commission") should articulate bright-line rules for open access claims inspired by the essential facilities doctrine. Although such guidelines would not be binding, they would provide courts with an interpretative roadmap. Under these new guidelines, open access would be necessary and a facility would therefore be "essential" only if competitors need the facility to compete effectively. If the company seeking access can reasonably innovate around the facility, install its own networks, or gain access to alternative facilities that provide a satisfactory substitute, the guidelines should discourage judicial intervention.\textsuperscript{13} Because an expansive reading of the essential facilities doctrine could stifle innovation, courts should mandate open access only when market forces alone cannot adequately foster competition.\textsuperscript{14} In effect, the Commission, not the courts, should be setting forth the general social, economic, and technological parameters for open access disputes.

Part I of this Comment considers recent dramatic changes in the technology and market structure of the communications industry, identifying how these developments may pose insurmountable barriers to entry for smaller communications providers. Part II reviews the legal backdrop for mandating access under the essential facilities doctrine, examining judicial application of the doctrine to traditional and high-tech communications proposals entail two broad requirements, providing unaffiliated ISPs with the right to: (i) purchase transmission capability; and (ii) access the customer directly from the incumbent cable operator." See Inquiry Concerning High-Speed Access to the Internet, GN Docket No 00-185 at 12 (2000).

\textsuperscript{12} Guidelines can lower transaction costs by applying open access requirements on incumbents' facilities. This would end much squabbling on the state and federal level about the duty to provide access in the first instance.


\textsuperscript{14} Id.
companies. Part III argues that federal regulators should promulgate guidelines in order to create a precise framework for open-access disputes involving an alleged essential facility. This Comment suggests three factors that the guidelines should emphasize in order to ensure competition in the converging digital and communications marketplace: (1) the location of, (2) possible alternatives to, and (3) market success of the facility at issue. In addition to creating a rudimentary framework for adjudicating essential facilities disputes, regulators should develop a licensing scheme that rewards innovation by providing a financial premium for infrastructure investment.

II. TELECOMMUNICATIONS: DYNAMISM, CONVERGENCE AND REGULATION

Regulation and judicial oversight have been permanent fixtures of the telecommunications landscape. Under the traditional view held by regulators and courts, the telephone system was a natural monopoly, making the telecommunications network an essential facility. The rise of new communications technologies and the concomitant deregulation of the long-distance and local phone markets have enhanced competition in the communications industry, thereby casting doubt upon the longstanding perception of the telecommunications market as one of natural monopoly. The challenge for courts and regulators is to adapt past regulation and precedent to the digital communications marketplace.

A. The Ancien Regime

In the past decade, technological and regulatory developments have transformed the telecommunications industry. Until that transformation, long-distance, local, cable, and cellular providers offered discrete services over distinct networks governed by different laws. Before a federal district court ordered divestiture in

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15 A natural monopoly occurs when the costs associated with producing a good or service decline as the demand for the good or service increases. In such circumstances, economies of scale dictate the efficiency of a single supplier of the good or service. Thomas G. Krattenmaker, Telecommunications Law and Policy 345 (Carolina Academic 2d ed 1998).

16 See MCI Communications Corp v AT&T Co, 708 F2d 1081, 1132–33 (7th Cir 1983).


1982, AT&T consisted of three distinct units: (1) local service companies; (2) domestic and international long-distance service providers; and (3) equipment manufacturers. After divestiture, the district court organized the local companies into seven Regional Bell Operating Companies ("RBOCs"). The divestiture forbade the RBOCs from offering in-region long-distance services, but granted the RBOCs individual monopolies over the sale of local services.

Two interrelated factors transformed the telecommunications landscape. First, the government's regional division of the local telephone market and the deregulation of the long-distance industry constituted crucial first steps toward a competitive marketplace. Second, technological innovations expanded the range of communications offerings. For instance, MCI developed a microwave-based service soon after the Bell divestiture. These two developments proved synergistic: the rise of competition in the long-distance market created the necessary incentives for competitors to invest in technological innovation.

Congress responded to the evolving communications market with the 1996 Telecommunications Act (the "Act"). Congress intended the Act to foster competition and lower consumer prices by deregulating the telecommunications market. By promoting competition and de-emphasizing government intervention, Con-
gress hoped to create a national policy framework that would support the development of new communications services.\(^2\)

The Act imposed open access requirements on the former Bell monopolies, requiring the RBOCs to permit their competitors to resell local services or to connect to RBOC networks.\(^3\) As the RBOCs often possessed the only wire link to most consumers' homes, the opening up of the local market was crucial to enabling other providers to offer integrated long-distance, local, and digital services. Despite its focus on the emerging digital communications marketplace in the Act, Congress deferred settlement of its policy towards advanced service providers who offer broadband, satellite, or other multi-media services. In fact, the Act followed the traditional regulatory framework: imposing different regulations on local, long-distance, cable, and cellular providers.\(^4\)

B. The Technological Transformation in Telecommunications

As telecommunications carriers rapidly develop new technologies and deploy new service offerings, telephone markets are no longer easily identifiable as discrete service segments.\(^5\) Through IP telephony,\(^6\) providers can route voice calls on internet-based networks.\(^7\) Broadband technology, like IP telephony, will enable


\(^3\) Section 251 of the Act imposed interconnection, unbundling, and resale requirements on the Bell monopolies and local exchange carriers ("LECs") who have access to end-users' homes. 47 USC §§ 251 et seq. Because the Bell monopolies control the copper wire running into most consumers' homes, the main rationale behind these mandates is that there are very few cost-effective alternatives for would-be local telephone companies. Moreover, this advantage was a product of the LECs' former state-granted monopoly. See generally Douglas C. Melcher, State Sovereign Immunity and Judicial Review of Interconnection Agreements under the Telecommunications Act of 1996, 8 Commun Law Conspectus 61, 61 (Winter 2000) ("In formulating the 1996 Act's common carrier provisions, Congress recognized the significant competitive advantages of incumbent local exchange carriers ("ILECs") and sought to reduce these advantages by imposing substantive obligations on all ILECs. One of the most important of these obligations is the duty of mandatory interconnection which the 1996 Act established by adding section 251 to the Communications Act.").

\(^4\) See Ramundo, 6 Alb L J Sci & Tech at 54 (cited in note 18) (arguing that the regulatory structure has not changed despite innovations).


\(^7\) In 1999, Qwest Communications and Cisco Systems announced their intention to build a comprehensive internet-based national communications network. This alliance was part of Qwest's business goal of moving customers from traditional telephone and
providers to offer voice, cable, video, and internet seamlessly to end-users through a single line. Although broadband technology is still in its infancy, providers are employing different technologies to deliver broadband service, including digital subscriber line ("DSL"), cable modems, utility fiber to the home, and satellite. No one technology has assumed a position of market dominance, and few companies are offering broadband services.

The latest technological developments also suggest a growing convergence between the communications and computer industries. Microsoft has developed partnerships with telecommunications providers in anticipation of combined telecommunications and computing applications. For example, Microsoft and Sprint jointly developed a platform that delivers voice and data services. Other technology firms are eager to sell the next generation of communications services. The CEO of America Online, Steve Case, stated in a 1999 earnings announcement that the company "want[s] to embrace every broadband technology." Intel acquired a standards-based computer telephony software developer for merged voice and data networks. The convergence of telecommunications and data networks illustrates the growth of computer-based telecommunications networks and the consequent reliance of carriers upon computer-based applications to control the transmission and receipt of voice and data.

The proposed merger of Time Warner and America Online is a product of the convergence of the computer and communica-

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35 DSL, or digital subscriber line, increases the speed of copper lines by sending different traffic (voice and data) over different networks. Utility fiber to home is fiber that is routed into consumers' homes through their utility connections. Cable modems are a type of communications hardware that offers end-users high-speed internet access. These technologies enable consumers to receive high-speed internet access or to run multimedia applications.


37 See Paul Krill, Microsoft Eyes Convergence of Telecom, Computing, InfoWorld Daily News (June 8, 1999), 1999 WL 10504247 (stating that Microsoft has partnered with Sprint and with Cisco to develop merged communications and computer applications).

38 See id.


The merged company, worth $300 billion, would comprise the world's largest internet dial-up network and the nation's second-biggest cable system. Consumer groups, concerned with the ramifications of such a colossal merger for consumer welfare, petitioned the FCC to block the merger in order to avert an "emerging AT&T-AOL duopoly" in broadband multimedia services. Underlying concerns about the merger is cable's success in the emerging broadband market. One of the major cable broadband providers, Excite@Home ("@Home"), has already signed up three times more broadband customers than the whole DSL industry. Although AOL has promised to provide open access to its networks, lawmakers and competitors have been skeptical that market forces alone could adequately promote competition. The Federal Trade Commission ("FTC") has even contemplated blocking the merger if both companies do not consent to open access conditions. To some extent, the AOL/Time Warner merger reflects the growing consensus that, given the current market conditions, only a few carriers will be able to endure in the twenty-first-century telecommunications industry.

C. The Economics of the New Technology

It is very costly to deploy broadband and other advanced services. In 1999 alone, the cable industry invested $10 billion in network upgrades to support the delivery of broadband services. The risks associated with these capital-intensive investments are high. Not only are providers unsure which technology consumers
will ultimately embrace, but carriers also confront a changing regulatory regime.\(^5^0\) The fast pace of technological change and an uncertain regulatory environment threaten the utility of infrastructure investment.

High-profile mergers and acquisitions reflect the high-cost structure associated with the modern telecommunications marketplace. AT&T has spent more than $70 billion (or 120 percent of its total assets) to buy a cable company, a local phone company, and a global data network.\(^5^1\) MCI WorldCom attempted to acquire Sprint for approximately $129 billion in order to provide an innovative broadband offering on the combined company's nationwide Multichannel Multipoint Distribution Service ("MMDS").\(^5^2\) Microsoft and Intel have also made strategic acquisitions to facilitate a smoother entry into the telecommunications marketplace.\(^5^3\)

Given the trend towards industry-wide consolidation, the barriers to entry for smaller providers are high. Newer entrants lack the financial and human capital necessary to develop and deploy broadband technology. While there is competition among different technologies, only a handful of smaller providers have managed to offer some type of bundled broadband service.\(^5^4\) The incumbent cable and local exchange carriers ("LECs") own far better networks than do upstart providers. LECs' historic monopoly over the local market has enabled them to charge high rates for basic service, giving them the capital and business record necessary to finance infrastructure investment today.\(^5^5\) Moreover, the incumbents are well-staffed and have greater brand-name

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\(^{50}\) See id (arguing that the mere suggestion of government regulation has a chilling effect).

\(^{51}\) See Kupfer, 139 Fortune at 82, 86 (cited in note 3) (noting that AT&T acquired cable company TCI and the local phone company, Teleport Communications Group). See also Julie Radler Cohen, *Europe Kept on Rocking M&A Boat: At End of Last Year, as at Outset, Europe Told the Hot M&A Story*, Mergers & Acquisitions Rep (Jan 3, 2000), 2000 WL 8336867 (describing the forthcoming $61 billion AT&T/Media One merger).

\(^{52}\) MMDS, or Multichannel Multipoint Distribution System, is a wireless cable service that transmits many television or multimedia signals to consumers. David Barboza, *New Alliance Will Promote Wireless Access to Internet*, NY Times C2 (Oct 26, 1999).


\(^{54}\) *Inquiry Concerning the Deployment of Advanced Telecommunications Capability*, 14 FCC Rec at 2404–05 (cited in note 4).

recognition.\textsuperscript{56} The FCC has acknowledged that "entry against telephone and cable companies is very difficult."\textsuperscript{57}

Several forces will continue to foreclose smaller carriers from the communications marketplace. The development of technology and infrastructure is vital to winning market share, but very few, if any, smaller providers can commit large sums of capital to anything but customer acquisition costs. Many small providers may not seek to compete on a large scale, and carriers typically must support substantial capital expenditures through aggressive growth strategies.\textsuperscript{58} Thus, the market will be heavily weighted against new entrants, making an oligopolistic system probable. Transaction costs are also high; negotiations between carriers require sophisticated statutory and regulatory analysis, leaving carriers with only tentative legal solutions and high lawyer's bills.

The market entry of several competitive carriers, however, would promote consumer welfare by depressing prices.\textsuperscript{59} To be competitive, the local market needs more than two or three competitors. A handful of carriers will probably not lead to lower prices or a greater degree of innovation.\textsuperscript{60} Although there are some limits to the number of carriers that each local calling area can support, the market is robust and growing.\textsuperscript{61} The local market's sustained growth since AT&T's divestiture suggests that the

\textsuperscript{56} Michael K. Powell, \textit{Local Competition \ldots CLECs In The Midst Of An Explosion}, <http://www.fcc.gov/Speeches/Powell/spmkp819.html> (visited May 1, 2000) ("CLECs are often relative newcomers to the telecommunications scene, and they are competing against well-known, entrenched competitors with tremendous capital reserves and most of the market's customers. Accordingly, CLECs consistently face a difficult battle to attract customers. It will take superior customer service to move revenue and customers into your "assets" column . . . And, it will just take time. Time to establish brand recognition, customer loyalty, and acceptance of CLECs' technologically advanced services and facilities.").

\textsuperscript{57} See \textit{In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996}, 1999 FCC Lexis 5663 at *103-04 (arguing that the advanced services industry is too immature to be controlled by one or two carriers) (cited in note 55).

\textsuperscript{58} See id at *108 (stating that smaller carriers must initially establish a brand name and create a customer base).


market can support more carriers than just the RBOCs, the cable companies, and AT&T.62

1. The uncertain regulatory response.

The FCC, however, has not clearly established whether, and in what manner, it intends to regulate advanced services. In February 1999, the FCC released the Section 706 Report on the Deployment of Advanced Services in order to address the development of new communications technology.63 The Commission concluded that the advanced services market was still embryonic and that intervention was unnecessary because providers were quickly introducing advanced telecommunications offerings.64 The Report suggested that the Commission's primary goal was to avoid aggressive regulation of the advanced services sector of the telecommunications industry.65

Six months after releasing the Section 706 Report and announcing its hands-off policy, the FCC adopted The Advanced Services Third Report and Order, which established guidelines to promote competition for advanced services.66 The Order required incumbent local exchange carriers to open the high-frequency portion of the local loop67 to competitive carriers in the data and internet industries.68 The FCC stated that by requiring open access it hoped "to ensure that as many companies as possible will be able to deploy new technologies on a faster, more cost-effective basis and [that the Order] should accelerate the ability of residential and small business customers to access competitive broadband services from their choice of providers."69 In other words, the FCC recognized that because of the high costs of network construction, many smaller carriers were not on an equal

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62 See id (table depicting the substantial growth of local telecommunications services since 1993).
63 Inquiry Concerning the Deployment of Advanced Telecommunications Capability, 14 FCC Rec at 2406 (cited in note 4).
64 Id.
67 A local loop is the copper wire that connects the local carrier to a consumer's home.
69 See id.
footing with the incumbents, and thus remedial regulation was necessary to promote competition.\textsuperscript{70}

The FCC's ambivalence about whether to regulate advanced telecommunications services reflects the complexities inherent in regulating an evolving industry. Open markets promote innovation, yet high technological innovation may exclude some smaller companies that lack know-how, capital, and intellectual property rights. In an industry where the pace of technological change across media is staggering, when and how regulators should intervene is a pressing issue. The essential facilities doctrine provides one avenue for regulators endeavoring to promote competition and innovation in the advanced services market.\textsuperscript{71}

III. THE ESSENTIAL FACILITIES DOCTRINE

Although there has been a long line of essential facilities cases, neither the judiciary, the FCC, nor the Department of Justice ("DOJ") has successfully articulated what precisely constitutes an "essential facility." Existing precedent is incoherent and inconclusive, providing courts with little more than patchwork guidance. Under one common articulation of the doctrine, a facility is essential if the competitor seeking access cannot reasonably duplicate the facility.\textsuperscript{72} According to another popular account of the doctrine, the bottleneck theory, a facility is essential if it enables a monopolist to control a downstream market or a different level of production.\textsuperscript{73} In some cases, a facility need not be unique or vital to invoke the doctrine, but merely important for competition in the relevant market.\textsuperscript{74} In other instances, the focus of the courts may be on how a denial of access will affect either competitors' costs or consumer welfare.\textsuperscript{75}

A. Supreme Court Jurisprudence

Although the Supreme Court has never explicitly adopted the essential facilities doctrine by that name, the Court first applied the paradigm for the doctrine in \textit{United States v Terminal Rail-}

\textsuperscript{70} See id.
\textsuperscript{72} See \textit{Twin Laboratories, Inc v Weider Health & Fitness}, 900 F2d 566, 568 (2d Cir 1990) (holding that the plaintiff must demonstrate that "duplication of the facility would be economically infeasible") (quotation marks and citation omitted).
\textsuperscript{73} See \textit{MCI Communications Corp v AT&T Co}, 708 F2d 1081, 1132–33 (7th Cir 1983).
\textsuperscript{74} See \textit{Hecht v Pro-Football}, Inc, 570 F2d 982, 992–93 (DC Cir 1977).
road Association of St Louis.\textsuperscript{76} In Terminal Railroad, an association of railroads controlled all means of railroad access through St. Louis, including all bridges, terminal facilities and railroad tracks.\textsuperscript{77} Although the evidence in the record did not establish conclusively whether the association pursued exclusionary tactics, the Supreme Court observed that the association charged monopoly rates that harmed non-member carriers.\textsuperscript{78} In addition to its concern that the Association was extracting unduly high rents, the Court articulated two reasons for requiring access: (1) it was virtually impossible for nonparticipating carriers to develop their own facilities; (2) and it was necessary for carriers desiring access to the railways surrounding the city to be able to pass through the St. Louis interchange.\textsuperscript{79} The Court entered a decree that mandated that the Association provide access to its competitors at reasonable terms.\textsuperscript{80}

The Supreme Court implicitly invoked the essential facilities doctrine in \textit{Otter Tail Power Co v United States},\textsuperscript{81} when it required an electricity monopolist to give competitors access to its wholesale electricity.\textsuperscript{82} The Court's principal concern was that competitors lacked an alternative power supply. Because the defendant was a natural monopolist already subject to regulation, the precedential impact of the decision may be quite limited.\textsuperscript{83} The \textit{Otter Tail} dissent recognized that the doctrine imposed access requirements without creating a protocol for enforcement.\textsuperscript{84} Rather, sporadic action by the courts would "work mischief" by encroaching on the power of the regulatory agency.\textsuperscript{85}

More recently, in \textit{AT&T Co v Iowa Utilities Board},\textsuperscript{86} the Supreme Court indirectly referred to the essential facilities doctrine. In \textit{Iowa Utilities Board}, the Court considered whether Congress under the Act authorized the FCC to set rates in the local market and whether local incumbents must offer every network element for individual sale rather than on an integrated platform.\textsuperscript{87}

\textsuperscript{76} United States v Terminal Railroad Association of St Louis, 224 US 383, 410 (1912).
\textsuperscript{77} See id at 391.
\textsuperscript{78} See id at 399–400.
\textsuperscript{79} See id at 391–92.
\textsuperscript{80} See Terminal Railroad, 224 US at 411–13.
\textsuperscript{81} Otter Tail Power Co v United States, 410 US 366 (1973).
\textsuperscript{82} See id at 382.
\textsuperscript{83} See id.
\textsuperscript{84} See Otter Tail, 410 US at 391–92 (Stewart concurring in part dissenting in part).
\textsuperscript{85} See id at 392 n 8.
\textsuperscript{86} AT&T Co v Iowa Utilities Board, 525 US 366 (1999).
\textsuperscript{87} See id at 376–77.
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Court held that while the FCC did have the authority to mandate prices, it had to establish some limiting standards on local open access requirements under § 251 of the Act. That section sets forth the "necessary and impairs" requirement, asking whether the access is necessary for the competitor and whether it would impair the ability of the incumbent to provide service to its customers.

In the Iowa Utilities Board majority opinion, Justice Scalia argued that the necessary and impairs standard is similar to the essential facilities doctrine. However, Scalia noted that the Court need not determine whether the "1996 Act requires the FCC to apply that standard; it may be that some other standard would provide an equivalent or better criterion for the limitation upon network-element availability that the statute has in mind." Justice Breyer, concurring in part, noted that while the Court had never officially adopted the doctrine, § 251 basically requires an essential facilities analysis. Although neither Justice Scalia nor Justice Breyer adopted the doctrine outright, the essential facilities doctrine was nonetheless the touchstone of their analyses in determining when and how the FCC may mandate open access requirements.

B. Lower Court Jurisprudence

Lower courts have been more forthright in their application of the doctrine. Decided more than six decades after Terminal Railroad, a D.C. Circuit case, Hecht v Pro-Football League, gave rise to the first judicial use of the term "essential facilities." In Hecht, the plaintiff alleged that public authority managing the

88 See id.
89 47 USC § 251(d)(2) (Supp 1998).
90 See Iowa Utilities Board, 525 US at 388.
91 See id at 428 (Breyer concurring in part and dissenting in part) ("And although the provision describing which elements must be unbundled does not explicitly refer to the analogous 'essential facilities' doctrine (an antitrust doctrine that this Court has never adopted), the Act, in my view, does impose related limits upon the FCC's power to compel unbundling. In particular, I believe that, given the Act's basic purpose, it requires a convincing explanation of why facilities should be shared (or 'unbundled') where a new entrant could compete effectively without the facility, or where practical alternatives to that facility are available.").
92 See Hausman and Sidak, 109 Yale L J at 436 (cited in note 59) (noting that the Supreme Court considered the "relevance of the essential facilities doctrine in antitrust law as a limiting principle for the FCC's current interpretation of the 'necessary' and 'impair' standards").
93 Hecht v Pro-Football League, 570 F2d 982, 992–93 (DC Cir 1977).
94 See id at 991.
only substantial football stadium in the greater Washington D.C. area controlled an essential facility.\textsuperscript{95} After a verdict for the defendants, the D.C. Circuit held that the lower court erred in failing to give a jury instruction that a public stadium could be an essential facility for the operation of a football team in Washington.\textsuperscript{96} The \textit{Hecht} court focused on two issues: whether the plaintiff could reasonably invest in an alternative stadium and whether the stadium was absolutely necessary for professional football teams.\textsuperscript{97} The court noted that it was unlikely that the defendant had a legitimate business justification for its refusal to deal.\textsuperscript{98}

In \textit{MCI Communications Corporation v AT&T},\textsuperscript{99} the court set forth the seminal articulation of the essential facilities doctrine as applied to the communications industry.\textsuperscript{100} The principal question before the \textit{MCI} court was whether AT&T had to open its monopoly in the long-distance and local telephone markets to competition.\textsuperscript{101} The \textit{MCI} court required four necessary elements in order to establish an essential facilities claim: (1) the monopolist must control an essential facility; (2) the competitor must be unable, given a reasonable expenditure of resources, to duplicate that facility; (3) the monopolist must deny a competitor access to that facility; and (4) the monopolist must be reasonably able to provide access to that facility.\textsuperscript{102} Although the court rejected MCI's claim that AT&T's long-distance network was an essential facility, it ruled in favor of MCI's attempt to win access to local facilities.\textsuperscript{103} By separating local from long-distance markets, the district court in \textit{MCI} attempted to establish a general rule that the law should prohibit regulated monopolies from operating in deregulated industries.\textsuperscript{104}

\textsuperscript{95} See id at 992.
\textsuperscript{96} See id at 993.
\textsuperscript{97} See \textit{Hecht}, 570 F2d at 992–93.
\textsuperscript{98} Id.
\textsuperscript{99} \textit{MCI Communications Corporation v AT&T}, 708 F2d 1081 (7th Cir 1983).
\textsuperscript{100} See id at 1131–33.
\textsuperscript{101} See id at 1132–33.
\textsuperscript{102} See id at 1132–33.
\textsuperscript{103} \textit{MCI}, 708 F2d at 1132–33.
IV. THE ESSENTIAL FACILITIES DOCTRINE AND ADVANCED TELECOMMUNICATIONS MARKETS

The MCI decision, rendered in 1983, set the standard for judicial intervention in the communications industry under the essential facilities doctrine.\textsuperscript{105} The MCI case was unique because the essential facility at issue was a state-created monopoly.\textsuperscript{106} In contrast, the telecommunications advanced services market is only loosely regulated.\textsuperscript{107} Market dominance in advanced services may be more the product of superior research and sound business planning than the artificial creation of regulation. Although currently many of the primary providers of advanced telecommunications services are former cable, long-distance, and local phone incumbents, these companies deployed broadband to remain competitive rather than to buoy monopoly power.

A. Judicial Application of the Doctrine to the Advanced Telecommunications Market

1. Voice mail and billing services.

Responding to the evolution of the telecommunications market, courts have held that communications services such as voice mail could be essential facilities.\textsuperscript{108} Plaintiffs demanding access to communications services may need access not only to a network, but also to a computer system for billing or voice mail services.

Courts have recognized the importance of new communications technologies and have extended the doctrine to the provision of services. In \textit{Sunshine Cellular v Vanguard Cellular Systems, Inc},\textsuperscript{109} the court held that a two-way billing services agreement was an essential facility.\textsuperscript{110} The court observed that the agreement was necessary for the plaintiff to compete effectively for cellular customers who wanted the freedom to call outside of


\textsuperscript{107} Deborah A. Lathen, \textit{Broadband Today}, 1999 FCC Lexis 5099, *86.

\textsuperscript{108} See generally \textit{CTC Communications Corp v Bell Atlantic Corp}, 77 F Supp 2d 124, 147–48 (D Me 1998) (finding that voice mail could be an essential facility).


\textsuperscript{110} Id at 497.
their calling areas. The decision in *Sunshine Cellular* reflects a broadening application of the essential facilities doctrine.

Other courts have likewise expanded the traditional scope of the doctrine to encompass communications-related services. The district court in *CTC Communications v Bell Atlantic* viewed voice mail services as an essential facility. Although it was unclear whether Bell Atlantic had a monopoly in voice mail services, the court found persuasive the fact that CTC's inability to provide voice mail caused a large volume of its business customers to switch to other carriers. Considering a similar issue, the federal district court in *American Telnet, Inc v GTE Corp* held that the plaintiff adequately alleged that the defendant’s billing and collection services constituted an essential facility.

Judicial expansion of the essential facilities doctrine to encompass services has vitalized use of the doctrine. As courts hear the first claims against a new generation of communications providers offering a full complement of integrated services, plaintiffs are attempting to employ essential facilities arguments to mandate open access. At least one court has been receptive to the doctrine, even though convergence means that consumers have a variety of options for communications services. In other words, the high likelihood of market concentration encourages courts to continue to be receptive to suits brought by competitor carriers. The high cost of building networks and developing technologies encourages courts to view access to facilities of the market leaders as essential to competition.

Regulators have similarly recognized the doctrine’s importance as a legal backdrop for some emerging advanced telecommunications disputes. The FCC’s counsel for advanced services, Jason Oxman, has implied that the essential facilities doctrine remains relevant in the advanced telecommunications service market, but should apply only to a technology that is serving as a bottleneck. He reasoned that the essential facilities doctrine should limit judicial or administrative intervention to only those

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113 Id.


115 *AT&T v City of Portland*, 43 F Supp 2d 1146 (D Or 1999).


117 See *Should We Open Access for Cable Networks? FCC Says No*, ISP Bus News (Sept 6, 1999), 1999 WL 6610367.
cases in which a facility is unequivocally necessary. Plaintiff would have to prove that the provider had a monopoly over a service or product and that the monopolist blocked free and fair access to the facility. Such an approach, however, would not really be a departure from current law, and would also place the burden on smaller carriers to prove monopoly power in the dynamic communications or software markets—a task that is arguably cumbersome and expensive. In practice, this would also squarely shift to courts the responsibility to define the relevant market and to determine market power, creating high administrative costs and little certainty.

2. Cable modem services.

Although the integrated services industry is still developing and no single technology predominates, courts have nonetheless applied essential facilities reasoning to this growing market. One of the seminal cases, AT&T v City of Portland ("Portland I"), grew out of a cable license transfer proceeding in which the local franchising authority deemed AT&T's cable modem to be an essential facility. The Portland regulators reasoned that cable's higher speed and lower cost would drive out of business smaller internet service providers ("ISPs"). The court agreed and rejected AT&T's arguments that open access, by requiring AT&T to modify its equipment for ISPs, would impose an undue burden.

One year later, a three-judge panel of the Ninth Circuit overturned the lower court's ruling on the grounds that federal communications law, rather than local authorities, should regulate broadband cable services ("Portland II"). The Ninth Circuit declined to rule on the open access or the essential facilities ques-

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118 See id ("As bypass networks and new technologies change the communications landscape, the Commission must be ever vigilant to prevent . . . bottlenecks that block free and fair access to essential facilities.").
119 See id.
120 See generally AT&T v City of Portland, 43 F Supp 2d 1146 (D Or 1999); American Telnet, Inc v GTE Corp, 1999 US Dist Lexis 9380 (N D Tex).
121 43 F Supp 2d 1146 (D Or 1999).
122 See id at 1150 (observing that the local regulatory authorities classified "AT&T's cable modem platform as an 'essential facility' to protect competition").
123 Id ("Representatives of unaffiliated ISPs told the Commission that the ISPs couldn't compete with @Home's higher speed, wide availability, and relatively low cost.").
124 See id at 1154 (finding that AT&T could support open access without any undue burden or hardship).
125 AT&T Co v City of Portland, 216 F3d 871 (9th Cir 2000).
tions, noting that it could not defer to the FCC because the Commission had not yet addressed the open access issue. Rather, it focused on the legal status of broadband cable services under the Act. The court found that @Home did not fit into the Communication Act of 1934’s definition of cable services because @Home did not provide “one way transmission of programming.” The Ninth Circuit reasoned that @Home instead provided a telecommunications service because it did more than lease lines and provide content like traditional ISPs, but rather it transmitted internet services over its own cable facilities.

As a telecommunications service, the court concluded that cable-delivered internet access was, like DSL, subject to the Act’s “dual duties of non-discrimination and interconnection.” Invoking principles used by the court below to justify its essential facility holding, the Ninth Circuit noted that these dual duties “produce a network architecture that prioritizes consumer choice, demonstrated by vigorous competition among telecommunications carriers. As applied to the internet, Portland calls it ‘open access,’ while AT&T dysphemizes it as ‘forced access.’” The Ninth Circuit further reasoned that the “principles of common carriage” applied to cable transmission. Although the Ninth Circuit did not explicitly follow the lower court’s holding by calling @Home’s cable broadband transmission an essential facility, the Ninth Circuit’s emphasis on common carriage has its roots in the traditional common law notion of an essential facility. However, the Ninth Circuit declined to go as far as the lower court by allowing the local Portland authorities to regulate broadband,

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126 Id at 876 (“The parties, and numerous amici, forcefully urge us to consider what our national policy should be concerning open access to the internet. However, that is not our task . . . We note at the outset that the FCC has declined . . . to address the issue before us. Thus we are not presented with a cases involving potential deference to an administrative agency’s statutory construction pursuant to Chevron.”).


128 Portland II, 216 F3d at 879.

129 Id at 878. In its amicus brief, the FCC, however, declined to define cable-delivered internet access as a communications service. The Commission noted that to date, the Commission has not decided whether broadband capability offered over cable facilities is a “cable service” under the Communications Act, or instead should be classified as “telecommunications” or as an “information service.” The answer to this question is far from clear. The statute itself does not provide a definitive answer. See Portland II, No 99-35609 (9th Cir 2000), brief for the Federal Communications Commission 19–20, <http://techlawjournal.com/courts/portland/19990816fcc.htm> (visited Sept 29, 2000).

130 Portland II, 216 F3d at 878.

131 Id.

132 Id.
holding that FCC has jurisdiction over telecommunications policy.\footnote{133}

Although the Ninth Circuit's ruling does provide some interpretative guidance, the open access debate remains unsettled. A federal appeals court is considering an open access ordinance similar to the one considered in \textit{Portland I & II}.\footnote{134} The FCC has begun proceedings to consider whether it should mandate open access for cable-delivered internet services.\footnote{135} Despite numerous appeals from ISPs for immediate action, the Commission has thus far declined to mandate any relief before conducting comprehensive proceedings on the open access issue. The Commission noted that "before we will take any regulatory action on this issue, we must first determine that open access is desirable as a policy matter and that market forces are insufficient to achieve this objective."\footnote{136}

At the local level, cable franchising authorities in San Francisco, California; Broward County, Florida; and the City of Fairfax, Virginia, have begun to consider requiring open access.\footnote{137} A San Francisco commission recently supported the \textit{Portland I} decision, but delayed for three years the implementation of similar open access requirements to enable cable operators to recover sunk costs.\footnote{138} In 1999, Broward Country and Fairfax both voted in favor of requiring the cable incumbents to provide open access to ISPs.\footnote{139} The Colorado legislature is considering a bill that would force cable companies to open their networks to competitors.\footnote{140} The \textit{Portland} dispute suggests that the essential facilities doctrine will be a popular avenue for companies seeking access to a new service or product offering.\footnote{141}

Courts have, however, placed some limits on the doctrine. While access to a cable modem may create a legitimate essential
facilities claim, courts have been less willing to view access to a customer base as necessary to competition. In a recent case against AOL, an online advertiser argued that under the essential facilities doctrine, it should have had access to AOL's customer base.\textsuperscript{142} The advertiser's reasoning for mandatory open access was that AOL "controls the essential facility for access to all persons who obtain access to the Internet through AOL."\textsuperscript{143} Although the court accepted that AOL controls an essential facility for access to AOL subscribers, it noted that there were many reasonable alternatives to AOL.\textsuperscript{144} The court observed, as an example, that a business needs to make only a small capital investment to become an ISP.\textsuperscript{145} An advertiser, the court reasoned, could affordably reach an on-line customer base, thereby undermining the plaintiff's essential facilities claim.\textsuperscript{146}

B. The Doctrine in the Information and Computer Markets

1. Convergence of the telecommunications and computer industries.

There are many significant similarities between the telecommunications and computer industries. The rapid pace of technological innovation places both industries in a continual state of growth and change. New or updated products and services emerge more regularly in telecommunications and data markets than in traditional industries such as oil and aluminum, undermining existing market power.\textsuperscript{147} In contrast to the early antitrust cases, where the alleged monopolist dominated a market for decades, the computer and telecommunications product lifecycle is generally quite different.\textsuperscript{148} For example, IBM dominated many segments within the computer industry in 1969, but only slightly

\textsuperscript{142} See America Online, Inc v GreatDeals.Net, 49 F Supp 2d 851, 856 (E D Va 1999).
\textsuperscript{143} Id at 862.
\textsuperscript{144} Id at 863 (observing that plaintiff admitted that it could access AOL customers through other means).
\textsuperscript{145} See id at 863 ("Anyone can acquire the computer equipment necessary to provide internet access services on a smaller scale with a relatively minor capital investment.").
\textsuperscript{146} See America Online, 49 F Supp 2d at 863; see also Compuserve Inc v Cyber Promotions, Inc, 962 F Supp 1015, 1025 (S D Ohio 1997) (finding that "Internet users are not a 'captive audience' to any single service provider but can transfer from one service to another").
\textsuperscript{147} See Pitofsky, Antitrust Analysis (cited in note 60) (observing that new generations of products appear more frequently in high-tech industries than in mature ones).
\textsuperscript{148} Id (arguing that the major players in traditional industries could expect to dominate a market for generations).
more than a decade later IBM had lost its market power across several industry segments.\textsuperscript{149} Similarly, a lower court held in 1984 that Data General had a monopoly over the chip market, yet, just ten years later, the alleged monopolist had descended into obscurity.\textsuperscript{150} Although market leaders presently dominate sectors of both the telecommunications and the computer industries, new technologies threaten to supplant the leading companies.

The first signs of convergence are apparent in the communications and computers markets, narrowing the analytical divide between the two industries. Sophisticated computer platforms will enable communications providers to deliver advanced telecommunications and data services.\textsuperscript{151} The major computer manufacturers have invested millions of dollars in telecommunications enterprises in anticipation of inter-industry convergence.\textsuperscript{152} On the consumer level, web-enabled phones running on computer operating systems are in the beta stages of testing.\textsuperscript{153} As advanced telecommunications services evolve, this convergence is likely to continue.

2. Network effects: the doctrine's relevance in the computer industry.

Although the traditional application of the essential facilities doctrine involved physical structures, some courts hold that information can be an essential facility if it is necessary for competition.\textsuperscript{154} This extension of the doctrine mirrors the shift in the American economy towards information-based businesses.\textsuperscript{155} The concept of an essential facility takes on a new meaning in infor-

\textsuperscript{149} See id (observing that while IBM had monopoly power in many computer markets in 1969, it faced competition thirteen years later).
\textsuperscript{150} Digidyne Corp v Data General Corp, 734 F2d 1336, 1341–43 (9th Cir 1984).
\textsuperscript{151} See $780 Million Dialogic Buy, 31 Software Industry Rep at 3, 1999 WL 9494351 (cited in note 40).
\textsuperscript{152} See id.
\textsuperscript{153} See Network Convergence Steals Cebit Limelight, PC Dealer 4 (Mar 24, 1999), 1999 WL 7760059.
\textsuperscript{154} See, for example, BellSouth Advertising & Publishing Corp v Donnelley Information Publishing, Inc, 719 F Supp 1551, 1566–67 (S D Fla 1988), revd on other grounds, 999 F2d 1436 (11th Cir 1993) (holding that updated information for telephone listings could be considered an essential facility); Great Western Directories, Inc v Southwestern Bell Telephone Co, 63 F3d 1378, 1384–88 (5th Cir 1995), partially revd on other grounds, 74 F3d 613 (5th Cir 1996) (discussing lower court finding that directory was an essential facility).
mation industries. Increasingly, competitors will seek access not to a physical structure, but to a technology. In this setting, regulators will have to pursue a complex balancing between intellectual property rights, access terms, consumer needs, and enforcement obstacles.

Despite these complexities, courts have sometimes invoked the essential facilities doctrine to mandate open access in the computer industry.\textsuperscript{156} Scholars often justify essential facilities arguments in computer markets on the grounds that the doctrine can respond to network effects.\textsuperscript{157} Network effects usually dictate a market structure that achieves efficiency with fewer competitors. On the producer end in network industries, the initial cost of building a network is high while the subsequent cost of maintaining the network is low. Each new customer adds to the carrier's profitability while only marginally adding to its costs.

On the consumer side, the network is more valuable to each consumer if many customers use the same network. Because both producers and consumers benefit from standardization of the network or products associated with the network, one network or product typically becomes the industry standard. Once a product or network achieves dominant status, a would-be competitor must convince many consumers to switch, imposing high transaction costs. Because of this phenomenon, network industries have substantial barriers to entry that enable the dominant player to exercise market power.\textsuperscript{158}

To take an oft-cited example, although it may be expensive to develop an operating system such as Windows, once that system becomes the standard, programmers will be more likely to write programs for Windows. Because most programs are for Windows, consumers will be more likely to purchase Windows products.

In the software industry, software development is a company's principal cost. User acceptance of this software increases the company's profits while imposing only negligible additional costs. A competitor may be unwilling to invest in computer program development in the first instance where another program or protocol has already become the industry standard. A facility can thus become essential by virtue of the fact that it has already

\textsuperscript{156} See United States v Realty Multi-List, 1982 WL 1878, *1 (D Ga).
\textsuperscript{157} See Lawrence White, US Public Policy Toward Network Industries (New York University Center for Law and Business) [on file with U Chi Legal F].
been accepted by users, rendering development and marketing of competing systems too costly.

However, it is not clear that network industries so uniquely threaten competition that they require judicial or regulatory imposition of the essential facilities doctrine. While consumers can become locked into a product or system, such inelasticity may be ephemeral in technology markets. For instance, consumers' migration from cassette tapes to CDs or from VCRs to DVDs evidences the weakness of network effects in the high-tech industry. The telecommunications and data markets may be different, however, in that consumers may be less willing to migrate to new services; an individual consumer wants to keep the same e-mail address, phone number and familiar software program. Because of the substantial barriers to entry, network effects may allow incumbent industry leaders to extract monopoly rents. In order to prevent excessive prices and foster competition, regulatory intervention can promote consumer welfare.

C. Judicial Application of the Doctrine to the Computer and Software Industry

1. Computer chips.

Although the software industry is still maturing, courts have applied the essential facilities doctrine to require the industry's market leaders to open access to their intellectual property. In Intergraph Corp v Intel Corp, an Alabama federal district court found that Intel's Pentium II computer chip was an essential facility. Intel had between 60 and 65 percent of the microprocessor market, leading the district court to find a dangerous probability of monopolization. Because of Intel's market power, the district court found samples of the Intel chips, and information on advanced technological design, necessary to the plaintiff's survival in the computer industry.

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159 See id at 147.
160 See id. See also Rodriguez, Cable Access Could be Pricey, 17 Bus J (Mar 3, 2000) (cited in note 44) (arguing that prices will be $10 to $15 higher if AT&T has a dominant position in the cable broadband market); Chairman Kennard Says Trend Shows Telecom Consumers Get More Choices, Lower Prices, 2000 WL 140542 (Feb 8, 2000) (observing that the prices of telecommunications services have fallen since the divestiture of AT&T).
161 3 F Supp 2d 1255 (N D Ala 1998) ("Intergraph I"), revd 195 F3d 1346 (Fed Cir 1999) ("Intergraph II").
162 See Intergraph I, 3 F Supp 2d at 1277–78.
163 See id.
164 Id.
On appeal, the Federal Circuit overturned the lower court’s ruling, noting that Intergraph failed to prove the criteria necessary for a viable essential facilities claim in that Intergraph and Intel were not competitors. The court observed that “[a]lthough the viability and scope of the essential facility theory has occasioned much scholarly commentary, no court has taken it beyond the situation of competition . . . in the field itself or in a vertically related market that is controlled by the facility.” Although the Federal Circuit noted that the firms did compete in one particular market, the graphics chip market, Intergraph’s claim still failed for Intel’s lack of monopoly power in that market. The court of appeals, then, did not reject the essential facilities doctrine, but rather reasoned that the presence of a competitive relationship was necessary before the court could intervene. This suggests that courts may apply the essential facilities doctrine cautiously.

The impact of the Federal Circuit’s ruling on Intel’s competitors has been negligible. A few months earlier, Intel had signed a consent decree with the FTC requiring Intel to give competitors access to its chips. The FTC sought the decree because, like the Intel trial court, it considered access to Intel’s chips essential to a competitive marketplace. In effect, the FTC recognized that, as the overwhelming leader in the microprocessor market, Intel commanded a unique opportunity to affect competition. Although the consent decree did not explicitly adopt the essential facilities doctrine, the reasoning of the decree does parallel the doctrine. Computer chips, then, like telecommunications connections, can be essential facilities. Even though computer chips are only small pieces of hardware, they are also conduits for information processing. The lack of accurate data about the Intel

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165 See Intergraph II, 195 F3d at 1356–58.
166 Id at 1357.
167 Id at 1360.
168 Id at 1357.
169 Intergraph II, 195 F3d at 1357.
171 See id.
172 However, a consent decree that resembles the essential facilities doctrine does not have the same precedential weight as a decision by a trial court to impose a duty to provide access to competitors. This case is nonetheless illustrative of the potential application of the doctrine in antitrust.
chip could preclude Intel's competitors from designing software or central processing units for mainstream markets.

2. Operating systems.

In a separate case, the DOJ characterized Microsoft's operating system ("OS") as an essential facility. A court of appeals hearing a monopolization claim against the software manufacturer noted that "Microsoft dominates the world market for operating systems software that runs on IBM-compatible computers."\(^{173}\) Because of the prevalence of Microsoft's operating system, competitors need the ability to integrate their applications with Windows. Although there are alternatives to Windows,\(^{174}\) Microsoft's OS is currently in almost every consumer's personal computer.\(^{175}\) Windows is the only operating system to have achieved widespread market acceptance. The emergence of Windows alternatives may have come late for many computer equipment manufacturers who view early market entry as necessary to create brand identity and consumer loyalty. Because Microsoft currently has a monopoly over OS integration, Microsoft may control an essential facility.

In the latest antitrust decision against Microsoft, United States v Microsoft\(^{176}\) ("Microsoft III"), Judge Jackson held that Microsoft violated the Sherman Act by abusing the software powerhouse's monopoly power through anticompetitive practices and by tying its internet browser to its operating system.\(^{177}\) Microsoft III stretched the definitional boundaries of monopoly power, applying the antitrust laws to Microsoft although it operates in a dynamic industry where market dominance is precarious.\(^{178}\) While not explicitly referring to the essential facilities doctrine, Judge Jackson emphasized that access to Microsoft's operating system was essential for the competitiveness of computer manufacturers and developers.\(^{179}\) Judge Jackson observed that

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\(^{173}\) United States v Microsoft Corp, 56 F3d 1448, 1451 (DC Cir 1995).


\(^{175}\) United States v Microsoft, 87 F Supp 2d 30, 36 (D DC 2000).

\(^{176}\) United States v Microsoft ("Microsoft III"), 87 F Supp 2d 30, 39–42 (D DC 2000).

\(^{177}\) See id.

\(^{178}\) See generally Mike France, Even if Microsoft Crashes, It May Not Get Burned, Bus Wk Online (Feb 26, 2000), <http:businessweek.com/microsoft/updates/up90226a.htm> (visited Apr 25, 2000) (describing the competitive pressures that are eroding Microsoft's market share).

\(^{179}\) See id.
"[n]either Microsoft nor its OEM customers believe that the latter have—or will have any time soon—even a single, commercially viable alternative to Windows." The lack of reasonable substitutes, Judge Jackson held, required that he apply the antitrust laws.

Microsoft III reflects the popular conception that competition promotes innovation and consumer welfare. Competitors heralded Judge Jackson’s decision as conditioning a competitive marketplace. Under this view, market dominance resonating of monopoly power, even in the volatile technological sector, depresses innovators’ potential return on their labors. As with the former Bell System’s control over telecommunications, Microsoft’s technological and physical control over the software market sty mies competition. The Software and Information Industry Association’s amicus brief noted that “without enforcement of the antitrust laws, it is unlikely that innovation in the telecommunications industry would have proceeded so quickly, and in such a multitude of directions.” By corollary, open access is one solution that will foster innovation. The essential facility doctrine is one legal instrument to promote such access.

V. PROVIDING A PRECISE FRAMEWORK FOR THE ESSENTIAL FACILITIES DOCTRINE

Given the significant cost of developing and commercializing new telecommunications technologies, regulators and courts are receptive to an open access requirement. However, the in-

180 Microsoft III, 87 F Supp at 37.
181 See id.
183 Lee Gomes, et al, Larger Firms Look for Lesson, Smaller Ones See an Opening, Wall St J A16 (Apr 4, 2000) (observing that companies in the computer industry “aren’t waiting to declare that brighter days might be just around the corner”).
184 See id (“One of the key lessons from the economics of technological change is the recognition that even in an undistorted market, innovators earn a private return on their efforts that is less than the social return. As a result, too little innovation takes place. This problem becomes much worse when a powerful player like Microsoft further depresses the return to outside innovators.”).
186 See id.
187 See Pitofsky, Competition Policy (cited in note 13).
creasing technological and economic complexity of communications services makes determining when access is essential to competition difficult for both regulators and courts. Currently, neither the FCC nor the DOJ has provided any meaningful guidance as to what constitutes an essential facility or when open access is necessary for a competitive marketplace. The case law is equally opaque. Given the lack of manageable standards, the FCC should promulgate rules to govern open access that are inspired by, but legally distinct from, the Sherman Act essential facilities doctrine. Such general rules would accomplish the complementary goals of providing courts with clarity and markets with certainty.

Because the communications industry is so complex and dynamic, a precise inquiry that considers the regional or local market, technology, and competitors when assessing the wisdom of government intervention will better reflect market dynamics. Courts and regulators will also need to closely examine the features of the service of question because the convergence of old and new media may make it unclear whether the service in question is a telecommunications service. The Telecommunications Act of 1996 and its provisions regarding access to local networks afford several possible approaches to the regulation of advanced services. For instance, the “necessary and impairs” standard suggests Congress' underlying policy for access disputes: a new entrant should gain access only when it is essential to competition and will not hurt consumers. As with the essential facilities doctrine, however, the necessary and impairs standard is too broad to provide regulators and courts with concrete guidance.

A. Regulatory Guidelines for Open Access and Essential Facilities Disputes

Because the Telecommunications Act does little to resolve the open access debate, the FCC should use its authority under the Act to promulgate guidelines addressing when a facility is essential and merits open access treatment. Although such guidelines would not bind the judiciary, courts would have to defer to

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188 Bell Atlantic-Delaware Inc v McMahon, 2000 US Dist. Lexis 440, *11 (D Del); see also notes 26–33 and accompanying text.

189 Consider AT&T Corp v Iowa Utilities Board, 525 US 366, 388–90 (1999) (observing that the necessary and impair standard is vague).

190 See id.
the Commission's interpretation of open access under the Act.\textsuperscript{191} At the very least, these guidelines would create a disincentive for courts to bend the essential facilities doctrine to marginal cases where antitrust principles have little relevance. Moreover, courts are relying on case law that reflects old industry paradigms. An articulation of open access standards by the Commission that embeds many of the principles of the doctrine could harmonize essential facilities cases with the advanced telecommunications marketplace. Finally, guidelines promote predictability and transparency, enabling carriers to make infrastructure investment and merger decisions with full information. To this end, three factors should be central to courts' analysis of open access claims inspired by the essential facilities doctrine: (1) the competitive condition of the relevant market; (2) any alternatives to the purported essential facility at issue; and (3) the market share of the facility at issue.\textsuperscript{192}

1. Geographic specificity.

The guidelines should first articulate standards requiring adjudicators to evaluate competition with respect to a defined geographic market.\textsuperscript{193} Because of economies of scale and demand variability, the cost of providing telecommunications service varies widely by geographic region.\textsuperscript{194} Densely populated regions are the most profitable and hence most likely to attract competition.\textsuperscript{195} Moreover, because of distance constraints, fixed wireless local services now primarily can accommodate developed suburban and urban areas. A facility, whether it be a local loop or a cable connection to end-users, is thus unlikely to be essential in a major metropolitan area.\textsuperscript{196} Moreover, if competition has already set prices efficiently, mandating open access will not increase economic welfare and may actually lead only to a wealth

\textsuperscript{191} See \textit{Iowa Utilities Board}, 525 US at 377–79 (arguing that § 201(b) of the 1934 Communications Act explicitly gives the FCC jurisdiction to make rules governing matters to which the 1996 Act applies, including the promotion of interstate competition and ratemaking); see also \textit{Food and Drug Administration v Brown & Williamson Tobacco Corp}, 146 L 2d 121, 120 (2000).
\textsuperscript{192} Id (holding that the FCC should consider whether there are alternative suppliers to the incumbent BOC before determining whether access is necessary).
\textsuperscript{193} Consider Hausman and Sidak, 109 Yale L J at 471 (urging the FCC to interpret the necessary and impair standard with temporal and geographic specificity) (cited in note 59).
\textsuperscript{194} See id at 472–47 (cited in note 59).
\textsuperscript{195} See generally id at 472 (cited in note 59).
\textsuperscript{196} See id.
transfer from the incumbent to competitive carrier.\textsuperscript{197} In such a case, consumers would not benefit because they would not receive improved or lower-priced services.\textsuperscript{198} Thus, the first step in an open access analysis for essential facilities claims is to consider the particular characteristics of the relevant market.\textsuperscript{199}

An open access analysis requiring geographic specificity does impose added regulatory costs. The application of a national rule declaring certain network elements or facilities to be essential would be less burdensome than a rule requiring a region-by-region analysis.\textsuperscript{200} While the conservation of regulatory resources is a legitimate goal, a nationwide policy for open access does little to expedite deregulation. A nationalized approach would ultimately force regulators to continue government oversight of open access until the market at large was ready for deregulation.\textsuperscript{201} In contrast, a geographic-specific approach permits regulators to remove access requirements as each market becomes competitive, speeding the transition to a deregulated market.

2. Plausible substitutes for the facility.

The guidelines' second line of inquiry should consider alternatives to the contested facility. Under many traditional interpretations of the essential facilities doctrine, the construction by competitive carriers of comparable facilities obviates the need for court intervention by providing the very foundation for a competitive market.\textsuperscript{202} Although clear, this reading of the doctrine is too simple in open access disputes. The presence of a single competitor offering a substitute product or service may not be enough to


\textsuperscript{198} See Hausman and Sidak, 109 Yale L J at 472 (concluding that open access in already competitive markets does not affect competition) (cited in note 59).

\textsuperscript{199} See id.

\textsuperscript{200} Consider \textit{In the Matter of Implementation of the Local Competition Provisions of the 1996 Telecommunications Act}, 1999 FCC Lexis 5663 at *162 (observing that the enforcement of a national list of network elements that LECs must make available to competitive carriers would necessitate spending significant amounts of regulatory resources) (cited in note 55).

\textsuperscript{201} See, for example, \textit{Conference: Harvard Electricity Policy Group: Regulatory Decisionmaking Reform}, 8 Admin L J Am U 789, 910 (1995) (arguing that regulators in smaller jurisdictions have more flexibility and are thus better able to respond to changing circumstances).

\textsuperscript{202} See Hausman and Sidak, 109 Yale L J at 504 (arguing that an alternative facility supplied by a non-incumbent carrier would create the necessary foundation for a competitive market) (cited in note 59).
ensure robust competition. For instance, the substitute may have geographic limitations or have a history of customer service or transmission quality problems. In drafting the 1996 Telecommunications Act, Congress implicitly agreed: under the Act, incumbent LECs must provide cable companies access to their networks in spite of the fact that those cable companies have begun to offer local services.

Regulators must principally consider not whether a competitor exists, but whether the competitor has viable alternatives to the incumbent's network. The hardest cases will be those in which the facility in question is clearly better than the alternatives, but, for reasons such as price, the quality difference will not be so marked as to eliminate every competitor. For example, although slightly more expensive, cable broadband services are considerably faster than similar services over telephone lines, but not enough to preclude entirely the existence of competing ISPs. The essential facilities doctrine applies to open access cases where the competitive handicap is considerable, but not so severe as to eliminate competition entirely. Under this rationale, courts should require access to communications services that have only inferior substitutes. The current case law hints at such an approach, but fails to adopt it wholesale.

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203 As an example, fixed wireless services are not yet dependable because of interference problems.
206 A typical cable broadband service costs between thirty and sixty dollars a month, while internet services over telephone wires cost between fifteen and twenty dollars a month. Prices, however, vary by region, and some ISPs offer their services for free. See generally Bruce Upbin, Free For All: One Day Any Company With a Brand Name May Offer Free Internet Access to Cozy Up To Customers. That Bodes Ill for America Online, 2000 Forbes 140 (May 1, 2000).
207 See Carl Weinschenk, Migrating Headaches—Before It Can Upgrade Its Dial-Up Base to Cable Modems AOL’s Got A Lot to Think About, tele.com (Jan 24, 2000):

Analysts agree that migrating existing and prospective AOL dial-up customers will be a highly price-sensitive undertaking. A recent Yankee Group Study found that 62 percent of U.S. PC owners were either interested or very interested in high-speed service. That number dropped to 40 percent when a $40 million price tag was added and respondents were asked whether they were interested or very interested in making the switch within 12 months.

208 See Lipsky and Sidak, 51 Stan L Rev at 1212 (cited in note 205).
209 See AT&T v City of Portland, 43 F Supp 2d 1146, 1149–50 (D Or 1999).
Another way to pose the same question is to consider whether competitors can duplicate the facility or product and the type of investment required to produce that facility.\textsuperscript{210} When sunk costs rather than variable costs constitute a substantial part of the total costs of the facility or product at issue, the competitors will typically face higher entry and exit barriers.\textsuperscript{211} Facilities requiring high sunk costs are more likely to be essential because competitive carriers will largely find such facilities too costly given the high level of risk associated with duplicating those investments. In these cases, the guidelines should support open access.\textsuperscript{212}

3. The facility's market share.

Lastly, the FCC guidelines should also ask whether the facility at issue has become the market standard or, at least, has achieved a critical share of the market. If the facility is competitors' sole means of access to the technology or to consumers, then the facility is necessary for the competitive carrier to succeed in the relevant market. Because this guideline requires complex factual judgments, a special master could determine whether an alleged monopolist controls access to a technology that has become a market standard.\textsuperscript{213} As in cases of monopolization, the FCC should articulate some baseline percentage of market penetration to determine whether a service option has become the market standard.\textsuperscript{214} If a product or service is not a market standard (or is unlikely to become a market standard), then the open access claim is invalid. This approach would be particularly tailored to the dynamic communications market, where monopoly power is an unsettled concept.\textsuperscript{215} This factor has the added advantage of

\textsuperscript{210} See id.
\textsuperscript{211} See id.
\textsuperscript{212} See generally Lipsky and Sidak, 51 Stan L Rev at 1212 (cited in note 205).
\textsuperscript{213} This requires an independent judgment of what constitutes a market standard. Something may be the market standard without having an extremely high consumer penetration rate. For instance, consumers may eventually want to migrate to DSL service because it is the fastest broadband technology, but because of sunk costs in other service options, these consumers may delay switching. If "market standard" means more than mere market dominance but also reflects consumer preference, DSL could be the market standard.
\textsuperscript{214} The courts could rely on Judge Hand's \textit{Alcoa} test in this area for guidance—85 percent of the market is enough market share to warrant intervention while 50 percent is not enough—for example, 75 percent of all internet consumers use cable. See \textit{United States v Aluminum Co of America} ("Alcoa"), 148 F2d 416 (2d Cir 1945).
placing the burden of defining an essential facility for the purposes of open access disputes squarely on the FCC or on experts rather than relying solely on the common law. In effect, courts will not be responsible for making specialized, highly technical judgments in an area where they lack expertise.

The challenge inherent in the above analysis is determining when a carrier plausibly has market power. In the high-tech telecommunications services industry, competition generally occurs under the guise of innovation. The next successful entrant will probably offer a new service or product. Competition then will occur among different service offerings and technologies, rather than being based purely on price. For example, cellular service has begun to compete with traditional local wire-line service.

This requires a reconsideration of what constitutes a competitor in the advanced telecommunications services market. Under the common-law essential facilities doctrine, courts have imposed a direct competitor requirement on parties seeking access. In the converging telecommunications marketplace, this requirement may stifle many valid claims, because competition is largely composed of competing technologies, instead of competing prices within a specific market sector or technology. There are few essential facilities cases that consider intermarket rather than intramarket competition. In its open access guidelines, the Commission should expand the competitor requirement to account for competition across many media. In effect, market definitions must reflect technological convergence in the telecommunications sector.

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<th>Footnote References</th>
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<td>216 Experts must also decide the relevant market in terms of product. For instance, it is not clear whether the proper market is “access to the internet” or “high-speed access to the internet.” Such decisions require considered factual determinations best made by the courts. See Robert H. Lande, Statement of Professor Robert H. Lande on America Online/Time Warner Merger, 2000 WL 11068894.</td>
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<td>217 This observation is consistent with the general conclusions of the Federal Trade Commission’s staff report on competition policy in high-tech and global markets. That report concludes that competition in particular market segments increasingly focuses on various dimensions of innovation. Telecommunications is an example of that kind of industry. See Pitofsky, Competition Policy (cited in note 13).</td>
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<td>218 Daniel Eisenberg, Dial C For Cheap: Cell-Phone Providers Aren’t Catering Just To the Elite Anymore, Time Digital 18, 18–19 (Mar 8, 1999) (finding that because cellular phone prices are dropping, consumers are beginning to substitute their wireless phones for wireline service).</td>
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<td>219 See notes 97–133 and accompanying text.</td>
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B. Industry Dynamism: Potential Regulatory Responses

Technological dynamism in the telecommunications sector should not altogether preclude antitrust enforcement. The Chairman of the FTC found that although the telecommunications market will eventually be competitive, serious risks of exploitation by a near monopolist persist:

Even if “eventually” is only 2 or 3 years away, there remains the concern that consumers will be exploited while we wait for the future to arrive . . . . Another antitrust concern . . . is that it is precisely in a dynamic marketplace that it becomes particularly important to insure that private arrangements do not impede the ability of new technologies to enter the market.220

The prospect of competition in a few years may not be enough to ensure healthy competition in the present market. Because research and development fuel technology markets, the barriers to entry are quite high, making it easier for incumbents to charge costly access prices.

As a practical matter, one of the most significant responsibilities for courts and regulators that deem a network monopoly an essential facility is the determination of access terms to that facility. Courts’ current interpretations of the doctrine may require the monopolist to grant open access to rivals on reasonable terms, but the cases provide little guidance as to what constitutes reasonableness.221 In theory, courts’ reliance on precedent should establish a functional policy, but in communications disputes the facts are complicated, the economics are contentious, and courts have varying levels of technological expertise.222

One of the major issues for competitive carriers is the price of interconnection.223 Plaintiffs will predictably dispute access prices, arguing that exorbitant charges are equivalent to a denial of access because they effectively prevent price competition and a

220 Pitofsky, Competition Policy, (cited in note 13).
221 See Otter Tail, 410 US at 373 (holding that a utility had to give access to its competitors when such action is “necessary or appropriate in the public interest”).
222 See id at 391–92 (Stewart concurring in part and dissenting in part) (arguing that courts lack the qualifications to regulate utilities).
223 See Michael Kerf and Damien Geradin, Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation: An Assessment of the United States, New Zealand and Australian Experiences, 14 Berkeley Tech L J 919, 956 (1999) (“However, it seems that the problem here is not that of granting access per se, but that of determining at what price access should be granted.”).
competitive rate of return.\textsuperscript{224} The FCC should use the power Congress granted it under the Act to develop a more precise rate structure that would apply only to facilities that courts deem essential. This rate structure should respond to two distinct and at times contradictory goals: (1) rewarding innovation, and (2) creating conditions supportive of new entrants.

1. FCC-defined licensing scheme for advanced services.

To ensure the development of both competition and innovation, the FCC should formulate licensing fees for facilities that courts classify as essential and thus subject to open access requirements under the guidelines. The access fees should reflect not only sunk costs, but should also include a premium based on the degree of risk assumed by the network incumbent in order to become the market leader.\textsuperscript{225} In effect, this approach would suggest that regulators follow the same approach as markets.\textsuperscript{226} Although creating a market-mimicking formula and, more generally, quantifying risk are tall orders, private and public entities have successfully met this challenge. For example, returns on stocks and bonds correlate positively with risk levels.\textsuperscript{227} Regulation should similarly compensate carriers for assuming risk.\textsuperscript{228} Monitoring rate terms imposes a smaller administrative burden on regulators than would more sweeping regulation.\textsuperscript{229}

Such an approach would depart from the method of price setting traditionally employed by state utility regulators. The traditional rate schedule calculates the utility's start-up costs, subtracts depreciation, and adds a rate of return sufficient to provide a reasonable return on investment.\textsuperscript{230} The modern telecommunications equivalent to these formulas is Total-Element Long-Range Incremental Cost ("TELRIC"), a formula devised by the FCC that attempts to approximate what it would actually cost a

\textsuperscript{224} See Soma, Forkner and Jumps, 13 Berkeley Tech L J at 605 (cited in note 20).
\textsuperscript{225} See Pitofsky, Antitrust Analysis (cited in note 60).
\textsuperscript{227} See id.
\textsuperscript{228} See generally id at 251 (noting that where competition and hence risk are minimal, regulators presume cost-based regulation of a natural monopoly).
\textsuperscript{229} See generally Frank P. Darr, Deregulation of Telephone Services in Ohio, 24 Akron L R 229, 231 (1990) (discussing the advantages of price regulation).
\textsuperscript{230} See Bell Atlantic-Delaware, Inc v McMahon, 2000 US Dist Lexis 440, *10 n 3 (D Del) (noting that the traditional pricing formula for utilities is rate-of-return pricing).
competitive firm to generate an unbundled network element.\textsuperscript{231} However, neither the traditional utility rate formula nor TELRIC suits the digital communications market; many dominant providers are no longer government-mandated monopolies and both formulas need to account for the risk inherent in competitive markets.\textsuperscript{232} Advanced service providers, whether former incumbents or not, should receive a premium that reflects their risk exposure.

In practice, any licensing proposal, no matter how compensatory, turns advanced service providers into common carriers (like the RBOCs), a status the FCC has, so far, been unwilling to impose on emerging services.\textsuperscript{233} However, as converged services become the market standard, regulatory intervention requiring open access will rest on a sounder basis because the market structure will be less tentative. The Act mandated the FCC to regularly conduct hearings on the need for open access in the advanced communications market precisely because the FCC, as the Commission itself has recognized, should apply regulatory solutions only where market forces alone are not enough to encourage competition.\textsuperscript{234}

VI. PROBLEMS WITH THE ESSENTIAL FACILITIES DOCTRINE AS APPLIED TO OPEN ACCESS DISPUTES

A. The Impact of the Doctrine on Innovation and Deployment

1. Effects on intellectual property rights.

In imposing open access requirements on next-generation service providers, regulators must consider whether such access


\textsuperscript{232} See id at 267 ("TELRIC-based prices are not unreasonable. However, as competition evolves, these returns may change. Nothing prevents review at a later time under new situations and a reexamination of TELRIC pricing."); Hausman and Sidak, 109 Yale L J at 458–60 (cited in note 59) (arguing that the FCC's rate formula is "analogous to a rule that would require pharmaceutical companies to sell their successful products to their generic competitors at incremental cost and would allow the pharmaceutical companies to recover their R&D and production costs on their successful new drugs, but to recover nothing on their unsuccessful attempts").

\textsuperscript{233} See Lathen, \textit{Broadband Today}, 1999 FCC Lexis 5099, *21 (cited in note 107). However, the \textit{Portland II} court's dicta views the Act as imposing common carrier obligations on cable broadband providers. See notes 130–33 and accompanying text.

\textsuperscript{234} See \textit{Inquiry Concerning High-Speed Access to the Internet}, GN Docket No 00-185 at 12 (cited in note 11).
ESSENTIAL FACILITIES DOCTRINE violates intellectual property rights. The facility essential for the delivery of advanced communications services will no longer be a mere wire line, but broadband services delivered via sophisticated software platforms and using fiber optic, satellite, cable, or wireless technology.\textsuperscript{235} The ability to seamlessly bundle and deliver a range of communications services to the end-user will be crucial to maintaining competitive viability.\textsuperscript{236} For example, a critical feature of an integrated service offering will most likely be a proprietary convergent billing system\textsuperscript{237} that enables providers to offer users an interactive service. The incumbent controlling the essential facility may maintain a patent right for the particular platform, enabling the monopolist to deny others the use of its facility. The essential facilities doctrine as applied under the open access guidelines would thus conflict with the bundle of rights attached to the monopolist's patent. The principles of the essential facilities doctrine underline this tension: the more an invention is unique and difficult to duplicate, and the greater the risk originally inherent in adoption, the greater the legal duty to provide open access.\textsuperscript{238}

Regulators should not grant open access claims where an intellectual property right is at stake, lest such grants undo the intellectual property regime. However, the FCC's approach to the local services market suggests that it may be willing to give competitive carriers access to proprietary elements.\textsuperscript{239} Unfortunately, if courts or the FCC use open access requirements to encroach upon patent rights, they may stifle innovation and infrastructure investment. Companies may hesitate to invest in research to create new communications technologies if courts could demand that they provide competitors access to their innovations.\textsuperscript{240} This problem is particularly salient for the development of new deliv-

\begin{itemize}
  \item \textsuperscript{235} Microsoft is investing in such platforms already. See generally Rebecca Buckman, \textit{Microsoft Buys 60\% of Japan's No. 2 Cable Firm}, Wall St J B5 (Apr 12, 2000).
  \item \textsuperscript{236} See Hausman and Sidak, 109 Yale L J at 431 (cited in note 59).
  \item \textsuperscript{237} A convergent billing system allows providers to place different services onto one billing system. Providers can give inter-service discounts. For example, a company could program its billing system to give customers free internet service once their wireless usage exceeded fifty dollars. Although no billing company has developed a convergent billing system yet, a few companies such as Savile are close.
  \item \textsuperscript{238} See Lipsky and Sidak, 51 Stan L Rev at 1219 (cited in note 205) (stating that because unique facilities cannot be duplicated, they are likely to be essential).
  \item \textsuperscript{239} See In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, 1999 FCC Lexis 5663, *59–60 (cited in note 55) (stating that the FCC will give competitive carriers access to proprietary network elements when necessary for competition, as further defined by considering the relevant market).
  \item \textsuperscript{240} See Bell Atlantic-Delaware, Inc v McMahon, 2000 US Dist Lexis 440, *11 (D Del).
\end{itemize}
ery methods for faster and more advanced broadband services, given the exorbitantly high cost of such research.

2. Effects on infrastructure investment.

This logic applies equally to investments in infrastructure. A company that makes extensive capital outlays to build an advanced digital network with a sophisticated switching interface does so in order to be the market leader. Companies will not be willing to make such expenditures if faced with the prospect of judicially-imposed open access requirements. Appearing before the House Judiciary Committee, a representative of AT&T argued that the essential facilities doctrine could substantially discourage infrastructure investment:

Since enactment of the Telecom Act, AT&T has led the telecommunications and cable industries in investing billions of dollars to upgrade cable facilities to provide internet and local telephone services... Preserving competitors' incentives to make these investments is not simply important in its own right. The likelihood of competitors pursuing risky and high-priced investments is slim if there are not any first mover benefits.

Wrongly applied, open access requirements will create a classic free rider problem. If competitive carriers can easily obtain access, companies may take a wait-and-see approach, effectively avoiding risk-taking altogether. Companies adopting such an approach intend to free ride on the investment and energy of their competitors. Such an approach neither encourages the rapid deployment of advanced services nor promotes competition.

241 See Robbins, Broadband and Consumer Access, Fed News Serv (cited in note 2) ("The mere suggestion from government that such risky investments could be subjected to old-fashioned cost-of-service regulation would have a chilling effect on going-forward investments and would slow the roll-out of these new advanced Internet services.").


243 See AT&T v Iowa Utilities, 525 US 366, 428–29 (1999) ("[A] sharing requirement may diminish the original owner's incentive to keep up or to improve the property by depriving the owner of the fruits of value-creating investment, research, or labor.").

244 See Michael K. Powell, Remarks By Michael K. Powell, Commissioner Federal Communications Commission, Before the Federal Communications Bar Association, <http://www.FCC.gov/speeches/powell/spmk902.html> (visited Mar 6, 2000) (cited in note 106) ("One great fear is that if we ordain cable an essential facility and begin to mandate a right of access on favorable terms, it may well stifle aggressive attempts to develop competing methods of bypassing the cable plant.").
B. Positive Consequences of the Doctrine on Innovation and Deployment

Open access, however, may encourage innovation in some circumstances. If a firm can exclude from the network all except the largest firms with the most economic and political power, it may also exclude technologically nimble upstarts. These young companies, eager to differentiate themselves from their well-known competitors, might develop and improve on existing technology and network arrangements. Without open access, many smaller companies will not get the opportunity to innovate so as to refine or actually better the initial technology.

Moreover, a licensing scheme that not only is cost-based, but also rewards incumbents for risk, does not discourage infrastructure construction. Under such a scheme, carriers will charge access rates that permit them to achieve a reasonable rate of return on their investments. Open access will initially advance the Telecommunications Act's goal of competition by enabling competitive carriers to determine where and how to build facilities. If building a network makes the new entrant more competitive than would purchasing services provisioned by a LEC, the new entrant will naturally adopt a facilities-based business plan as its long-term strategy.

In practice, LECs are deploying advanced services despite the threat of regulation. Although the FCC announced plans to mandate open access to portions of the incumbents' broadband facilities, LECs have nonetheless begun to offer broadband services in twenty-two of the top fifty metropolitan service areas. Despite the dismal predictions of LECs, open access does not nec-
essarily make infrastructure investment less attractive so long as the carrier making investments may reap reasonable profits from consumers or through open access. Thus, the LECs’ deployment of broadband in spite of the threat of regulation belies the argument that open access frustrates infrastructure investment.

1. The doctrine and free markets.

Plaintiffs seeking to invoke the essential facilities doctrine must establish how judicial use of the doctrine would constitute more efficient regulation than that provided by the market alone. Indeed, the deregulation of AT&T was a boon for consumers and competitors. In some senses, the market may in fact be the most efficient regulator of the communications industry. Free market principles are particularly compelling in high-technology markets where the industry is rapidly evolving. However, a wholesale rejection of regulation does compound the risk of monopolization in the telecommunications industry because it is based on network standards. Standardization heightens the risk of market concentration, which harms consumers by allowing carriers to charge higher prices and offer fewer service options.

Some commentators contend that free-market principles have already triumphed in the telecommunications industry. In this view, the conditions for robust competition are present in the current communications marketplace, eliminating the need for regulatory intervention. LECs have invested billions of dollars to deploy high-bandwidth DSL-capable loops. To keep pace, major long-distance carriers have similarly allotted millions of dollars to offer broadband access in most major markets. Satellite ven-

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253 See Posner, 23 Fordham Int'l L J at S17 (cited in note 17) ("Deregulation revealed an enormous heterogeneity of demands for telecommunications services, to which a newly competitive industry responded with imagination and alacrity. The direction of innovation changed dramatically, from reducing the cost of existing services to creating new services.").

254 See Lipsky and Sidak, 51 Stan L Rev at 1219 (cited in note 205).


256 Vito J. Acanelli, Orphan Bells: AOL-Time Warner Deal Leaves Baby Bell Unjustly Shunned; Time to Buy?, Barron's 17 (Jan 17, 2000) ("SBC Communications will spend $6 billion to make DSL available to 80% of its customers over the next three years . . . Even more ambitious is Bell Atlantic, which is looking to boost its DSL customer base to 500,000 this year, up from a recent 50,000. The Baby Bell aims to have DSL access available to 50% of its residential customers, or 10 million households, by April 1.").

257 See Robbins, Broadband and Consumer Access, Fed News Serv (cited in note 2). See also Toni Mack, Technology: Cheap Gamble: Sprint Enters the High-Stakes Game to
tures and fixed wireless systems are also emerging as potential contenders in the marketplace for broadband access. The Chairman of the FCC characterized the market as almost competitive:

> [t]he fact that different companies are using different technologies to bring broadband to residential consumers and that each existing broadband technology has advantages and disadvantages as a means of delivery to millions of customers opens the possibility of intermodal competition, like that between trucks, trains, and planes in transportation.

Under this view, competition among technologies can prevent the development of monopoly power.

Free markets might also be preferable because they typically have lower administrative costs. One fundamental failing of any licensing or regulatory scheme is that regulation is not self-executing. An impartial administrator, regulator, or judge would need to exercise supervisory control over access to ensure that ISPs and advanced communications carriers do receive open access as provided by the guidelines. In practice, this task will be enormous, and the Commission might better direct resources towards universal service or educational programs.

C. Obstacles to a Competitive Marketplace

Although the potential for technology-based competition exists, there are many obstacles that may prevent the development of a competitive marketplace. From a microeconomic standpoint,

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258 See, for example, AT&T's Breakthrough Wireless Technology New Alternative for Local Service, <http://www.att.com/press/0297/970225.pca.html> (visited Apr 29, 2000) (describing a fixed wireless system that will "connect a consumer's home to an AT&T digital switching center via a neighborhood antenna mounted on a utility pole or other structure. A single antenna will serve up to 2,000 homes. The only new equipment required on the customer's house is a transceiver about the size of a pizza box that can be mounted on the side or back of a house.").

259 See id; see also Scott Wooley, Telecoms Kiss that Duopoly Good-Bye, 2000 Forbes 135 (Feb 21, 2000) (describing major carriers' investments in wireless).

260 The Deployment of Advanced Telecommunications Services, 1999 FCC Lexis at 449.

261 See Pitofsky, Antitrust Analysis (cited in note 60).

262 Id.
it may not be efficient for each provider to construct facilities to connect its network to the homes of end-users.²⁶³ It is costly to reengineer a cable connection for broadband or to upgrade an access network for DSL.²⁶⁴ Because of these construction costs, implicit coordination among firms may streamline costs. A carrier may delay entry or not enter a market where there is already a broadband presence. In fact, in the cable industry, cable systems ordinarily only contract with one internet carrier for cable modem services.²⁶⁵ Thus a cable modem carrier faces effectively no competition once that carrier obtains a carrying contract from a particular cable system.

The potential for cross-technology competition does not alone establish that robust competition exists in the advanced telecommunications services market. Typically, the carriers deploying broadband services will be the former telephone and cable monopolists.²⁶⁶ Commentators have argued that a duopoly is likely in broadband, with the market being largely controlled by the incumbent RBOCs, cable providers, or AT&T.²⁶⁷ Because of their existing infrastructure and brand equity,²⁶⁸ former monopolists will enjoy a first-mover advantage in providing broadband.²⁶⁹ Early market penetration may be crucial because consumers will become locked in once they buy equipment such as cable boxes to gain broadband access. If the switching costs are too high to justify changing carriers for a slight rate decrease, then the market is likely to become more concentrated.

Moreover, incumbents have little incentive to provide access to their competitors.²⁷⁰ Most cable companies have not provided

²⁶⁴ See generally House Judiciary Committee Hearing on Internet Bills, 106th Cong, 1st Sess (June 30, 1999) (testimony of Mark C. Rosenblum, Vice President, Law and Chief Litigation and Federal Regulatory Counsel, AT&T), available at 6/30/99 WL Cong Test (no page) (stating that phone, cable, wireless, and utility will be investing billions of dollars to build broadband networks).
²⁶⁵ In the Matter of Applications for the Consent and Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor, to AT&T, Transferee, 14 FCC Rec 3160, *96 (1999).
²⁶⁶ See id at *97–98.
²⁶⁷ See id at *98–99.
²⁶⁸ Brand equity represents the value that a well-known brand adds to a product or service beyond the product's or service's functional worth. In other words, consumers value certain products highly because they trust the brand. With the brand AT&T, for example, consumers may be willing to pay more for AT&T's services than that of another carrier because they associate AT&T's brand with dependable service.
²⁶⁹ See In the Matter of Applications of Tele-communications, Inc. and AT&T, 14 FCC Rec 3160 at *98 (cited in note 265).
unaffiliated ISPs with access to their networks.271 Cable operators could readily thwart competition by electing to construct a closed proprietary network, making it difficult for unaffiliated ISPs or competitive carriers to connect to that network.272 If cable becomes the primary means of broadband access, the risk that cable operators would pursue exclusionary practices is great. Smaller ISPs would be foreclosed from the market, limiting consumer choice to ISPs or competitive carriers that are affiliated with the incumbent. The essential facilities doctrine provides regulators with one legal tool with which to ensure competition and consumer welfare.

CONCLUSION

The communications marketplace is dynamic. Developments in technology continually transform carriers’ products and service bundles. Although such rapid shifts might suggest that the market is self-correcting, such changes often occur at the margin of the industry. Even with the deployment of new technologies, incumbents can maintain dominant market positions. A major challenge for lawmakers is to strike a balance between preventing anticompetitive conduct and creating the incentives to innovate.

The FCC should promulgate open access guidelines inspired by the essential facilities doctrine to regulate the communications marketplace. In principle, courts, under the guidelines, should limit use of open access requirements to those cases where the facility is necessary for competition. In practice, however, the judiciary may so expansively interpret open access and so broadly define an essential facility as to incorporate nearly any business facility. Because of these risks, the FCC must articulate concrete guidelines for open access in order to encourage a more uniform and equitable application of the doctrine. As the communications marketplace continues to evolve and traditional conceptions of monopoly power become more elusive, courts’ and regulators’ use of open access to check market power in the communications sector will promote innovation and enhance consumer welfare.

271 Id at 78.
272 Lathen, Broadband Today, 1999 FCC Lexis 5099 at *61 (cited in note 107) (citing panelists who argued that cable would try to extend its monopoly because a “leopard does not change its spots”).